BEFORE THE METRO COUNCIL

FOR THE PURPOSE OF APPROVING THE ANCIENT FOREST PRESERVE DRAFT MASTER PLAN	))))	RESOLUTION NO. 96-2345 Introduced by Mike Burton, Executive Officer

WHEREAS, In July, 1992, through Resolution No. 92-1637, the Metro Council adopted the Metropolitan Greenspaces Master Plan which identified a desired system of natural areas interconnected with greenways and trails; and

WHEREAS, Preparing master plans for natural areas is a primary strategy for balancing public use of natural areas with protection of the natural values of the area; and

WHEREAS, Forest Park and surrounding environs was designated as a Greenspace of regional significance in the Greenspaces Master Plan and identified as a regional target area in the Open Space , Parks and Streams Bond Measure; and

WHEREAS; buffer protection of the Ancient Forest Preserve is called out as a specific objective in the Refinement Plan for the Forest Park Target Area (approved by Metro Council 2/96 by Resolution No. 96-2274A) and

WHEREAS, In 1993 Friends of Forest Park (FoFP), a non-profit organization, purchased the 38 acre Preserve and associated access easements for $630,000 for the purpose of creating a public park; and

WHEREAS, In March 1994, Metro Council authorized entering into a non-binding Memorandum of Understanding with Friends of Forest Park that stipulated conditions under which FoFP would consider transferring the Preserve and access easements to Metro; including that Metro develop a Master Plan for the Ancient Forest Preserve; and

WHEREAS, Metro Council FY 1995-96 budget appropriated funds to retain professional services to prepare an Ancient Forest Preserve Master Plan; and

WHEREAS, In April 1995, Metro Parks and Greenspaces Department entered into a contract with the consulting firm of Kurahashi and Associates to provide master planning services; and

WHEREAS, Various public involvement activities occurred throughout the development of the plan that resulted in broad public support of the project; and

WHEREAS, The Ancient Forest Preserve draft Master Plan (see Exhibit A)was available to interested public on May 1, 1996 for public review and comment; and

WHEREAS, On May 21, the Regional Parks and Greenspaces Parks Advisory Committee received public testimony on the draft Plan and voted unanimously to accept the draft Master Plan in its current form; now, therefore,

BE IT RESOLVED,

That the Metro Council approves and adopts the Ancient Forest Preserve draft Master Plan document in its entirety as shown in Exhibit A.

ADOPTED by the Metro Council this 13th day of June, 1996.

Jon Kvistad

Jon Kvistad, Presiding Officer

Staff Report

CONSIDERATION OF RESOLUTION NO. 96-2345, FOR THE PURPOSE OF APPROVING AND ADOPTING THE ANCIENT FOREST PRESERVE MASTER PLAN

May 22, 1996 Presented by: Jane Hart and Pat Lee

PROPOSED ACTION

Resolution No. 96-2345 requests the approval and adoption of the Ancient Forest Preserve Master Plan for a 38 acre parcel and associated access easements located north of Forest Park in the West Hills of unincorporated Multnomah County.

FACTUAL BACKGROUND AND ANALYSIS:

The Metropolitan Greenspaces Master Plan identifies Forest Park and its environs, including the Ancient Forest Preserve as a regionally significant natural area. In 1990 The Friends of Forest Park (FoFP), a 400 member nonprofit organization, initiated fundraising efforts to save the 38 acre Ancient Forest Stand from being clear cut. In 1993 the FoFP completed the purchase of the 38 acre parcel and related easements. from Agency Creek Management Co. for approximately $630,000.

Metro Council approved the Refinement Plan for the Forest Park Target Area in February 1996 which includes objectives for protecting the Ancient Forest Preserve. The Open Spaces Bond Measure provides $150,000 to Multnomah County for development of public parking, access trails and interpretive signs for the site.

FoFP has indicated an interest in transferring ownership of the Preserve and related access easements to Metro for management by the Regional Parks and Greenspaces Department. A Memorandum of Understanding (MOU) between FoFP and Metro was approved by the Metro Council in 1994 (Resolution No. 94-1918) that stipulated development of a Master Plan for the Ancient Forest Preserve and its related access easements. The MOU does not bind Metro or the FoFP to carry out the transfer. The Plan will provide guidance to Metro if both organizations determine a transfer is appropriate.

In April 1995, following a competitive bid process, Metro Regional Parks and Greenspaces Department retained the consulting firm of Kurahashi and Associates to perform master planning services for the Ancient Forest Preserve Master Plan. Public involvement activities included creation of an independent project advisory committee to provide input throughout the planning process, technical advisor's review of consultant reports, two community workshops, two questionnaires, a tour of the Ancient Forest, and meetings at request of interested citizens. FoFP has been an active project partner throughout development of the Plan.

On May 1, 1996 , the Ancient Forest Preserve Draft Master Plan was available for public review and comment. The public review comment period closed May 21. Five letters were received; four in clear support of the project concept, two requested parking be relocated from McNamee Road to Highway 30 (see Attachment 1).

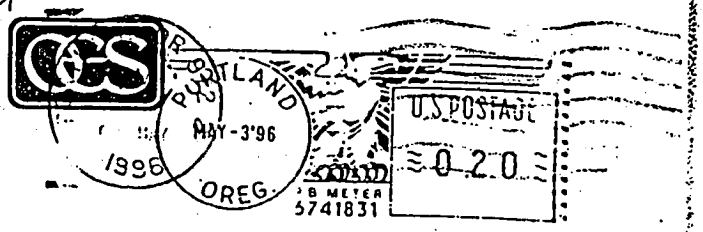
On May 21, the Regional Parks and Greenspaces Advisory Committee (RPAGAC) received public testimony on the draft Plan and voted unanimously to accept the draft Master Plan in its current form. Following Master Plan adoption, staff will return to Council at a later date for their determination as to whether or not Metro should accept the transfer of the Preserve from FoFP.

EXECUTIVE OFFICER RECOMMENDATION

The Executive Officer recommends adoption of Resolution No. 96-2345.

ATTACHMENT 1

Sue Knight
OREGON EPISCOPAL SCHOOL
6300 Southwest Nicol Road
Portland, Oregon 97223
(503) 246-7771



JANE HART
PROJECT MANAGER, PKS. & GRNSPCES
METRO
600 NE GRAND
PDX OR 97232

Dear Ms. Hart: 5-2-96

I have made several large contributions to Fds. of Forest Park to help purchase the Old Growth grove. I look forward to Metro's dedicated involvement in enabling public access, in an ecologically sound fashion, to the grove. Thank you! Sue Knight

Brian & Carmen Bice
19177 S.W. 35th Place
Lake Oswego, OR 97034

May 13, 1996

Mr. Don Morissette
Metro
600 NE Grand Ave.
Portland, OR 97232

Dear Mr. Morissette:

As members of the Friends of Forest Park, my family and I raised money and contributed funds to purchase the Old Growth Grove. We were and are convinced that the Friends of Forest Park has the best, most workable, and efficient plan for managing this priceless treasure in perpetuity.

As a businessman, I've been impressed by the structure of this private sector/public sector partnership. As a bureaucrat, you should be impressed that the private sector has come up with this enormous contribution, and is prepared to hand it over to the public for its use, and for the use of future generations.

Now, as I understand it, it's up to you and your colleagues to complete the job we began when we took our own cash out of our pockets to purchase this parcel. I strongly urge you (and, by copy of this letter, your colleagues) to do the right thing... adopt the plan, and move forward so we can all begin to enjoy and learn from this rare ecosystem.

So often these days we hear bureaucrats and politicians complain that everyone is looking for a handout, a free ride from government. When was the last time private citizens came up with a contribution of this magnitude, prepared to donate it for public use? It seems to me we need to encourage this kind of activity. By your example, you can do precisely that.

All of us who care about the Portland Metro area, and "vote the issue" will be eagerly following your decision in this matter.

Sincerely,

Brian E. Bice

cc:
E. Washington
M. Burton
J. Hart

May 13, 1996

Jane Hart
Metro
600 NE Grand Avenue
Portland, OR 97232

Dear Ms. Hart,

I am writing to urge your support of the Old Growth Adoption Project sponsored by Friends of Forest Park. My family was one of the early donors in this effort, in part to contribute to a memorial for my father, who roamed old growth forests and fished Northwest trout streams from 1910 to 1993.

So close to downtown Portland, this stand of timber will be a wonderful resource for school children. Visitors to the Portland area will also be thrilled to see an ancient Douglas Fir forest in its natural state.

This Old Growth Adoption Project seems like an inspiring model for collaboration between committed individuals and a government organization like Metro. Completing this project will be a feather in Metro's hat and another way for Portland to stand out as the greenest city in America.

Thank you for your support.

Sincerely,

Dale Allen
4122 NE 30th
Portland, OR 97211
288-1780

cc Ed Washington
Mike Burton

May 20, 1996

Att: METRO EXECUTIVES

RE: OLD GROWTH FOREST ACCESS

Please be advised that although our family support the 'old growth forest project, both financially and in spirit, I have some concerns about the access.

With the parking lot on McNamee Road, rather then down on Highway 30, it will increase the amount of traffic on our small winding road. Within the past 12 months, many new residences have been built, and we find the road is already at about triple what it was just 3 years ago. People are driving too fast, drifting accross the road, cutting the corners short and in general creating a hazard. More new vehicles visiting the old growth area, and continuing up McNamee from highway 30, to return to the city on Skyline will increase the hazards 10 fold.

Signs requesting that visitors enter and leave the newly created parking lot via hiway 30 would make sense. Of course, not all people will adhere to the sign, but some will. For every auto that enters and leaves on Highway 30, it will be a 'blessing to count' for the neighborhood.

A need for signs will be obvious. Another new 'bluebird sign' from Metro that says, "no dumping please, area maintained by friends and neighbors" would be greatly appreciated. Our street is clean now, and it would be nice to keep it that way. Signs do help and if we are to maintain the area in the same condition that it is now, then we will need help.

Will we have any garbage service? For the past several months I have sent all small trash with my own personal garbage service. With many more visitors, that may not be possible. I will do my best to keep the area clean, but help would greatly appreciated, as the additional cost of garbage service doubled or tripled gets expensive.

My sincere thanks to all who have worked so hard on this project. I am proud to be part of a community that cares enough to donate enough cash to make this unique experience a reality.

Dorinne J. Pedersen, Ronald Kalmbach and Kurt Kimsey
13555 N.W. McNamee Road
Portland, Oregon 97231

Phone: 286 4353

May 14, 1996

To Metro Councillors and Staff:

I am writing in regards to the draft master plan for the Ancient Forest Preserve. This is the second time that I am writing to you about this, the first time being in November 1995 when I sent you a letter and petition. After your receipt of this letter, Mr. Burton had written to me to get involved; well, when I did, it seemed like minds were already made up and nothing was going to change. Metro staff Jane Hart and Councilor Susan McLain came to my home to discuss my and my neighbors concerns. Apparently these concerns fell on deaf ears, since this was not mentioned in any of the "Public Involvement" sections of the plan. I feel like lip service was paid to me and the concerns I identified since none have been addressed by Metro. So here I am again, hoping that the public involvement process really does work, and that my concerns will be addressed.

First, I want to reiterate that my chief concern is the impact that parking on McNamee Road will have on the quality of life for its residents. I will restate that McNamee Rd. is designated by Multnomah County as a local street. The County states the function of local streets "is to serve local pedestrian, bicycle and automobile trips". The County obviously provides higher classifications which are intended to carry more traffic and access developments and parks. In other words, the function of McNamee Rd. is to serve local transportation needs, not as an access for a regional park. You put McNamee Rd. on the map for the entire region then you are disregarding the intent of the street hierarchy and signing away our quality of life.

There are potentially hazardous traffic conditions already existing on McNamee that will only be worsened by having parking for this regional park on it. Heading westbound on Hwy 30, when one turns onto McNamee it becomes dangerous if a car is heading down McNamee, as the site distance is blocked. There have been several near misses as the cars turning off Hwy 30 cannot see the car heading to Hwy 30 on McNamee. The second similar condition is when McNamee turns into one lane under the railroad tressel. With all the foliage around, it can be hard to see an oncoming car. Putting McNamee on the map to serve the region to access this park will only serve to exacerbate this dangerous situation and increase the number of car accidents here.

It is my understanding, after attending two public meetings about planning for the park, that there were several alternative locations for parking. One of them, on the base of Burlington Creek on Wapato Drive, was taken out of consideration because the residents there knew about this proposal, and actively organized to keep the parking off their street. According to the plan, "Two sites on Wapato Driver were analyzed...and eliminated due to neighborhood concern about increased traffic...". Unfortunately, McNamee residents did not have the knowledge that it was being considered for parking, and therefore were not as organized or vocal as those other residents. We do, however, share the same concern about increased traffic.

It appears that the most appropriate location for parking for a regional park is on a major street. In fact, one alternative location, Burlington-Northern/ODOT property off Hwy 30 is the alternative that makes the most sense. Not only is it on a state highway, but it also provides closer access to the park than the site on McNamee. Results from the "Design Options Questionnaire" handed out by Metro shows that almost three times as many people preferred the Highway 30 location over McNamee Rd. I've been told that basically because McNamee Rd. is cheaper to develop as a parking area that it would be chosen. How can we place a dollar figure on the negative impact this will have for McNamee residents?

I believe that again lip service was paid to developing "parking alternatives" when it seems that any other alternatives are pretty quickly ruled out. I was pretty much told that the parking location wasn't going to change last November, and frankly feel that this decision was made before the work on the plan began.

Residents on McNamee are also concerned about other repercussions of siting the parking on their road. While the number of parking spaces may be limited, there is no way for people to know that the spaces are full until they get there. It is likely that, after driving a minimum of one-half hour to get there, people will not turn around and go home, but rather park along the road wherever they can. They will likely find short cuts, one of which will be

trespassing on private property.

The plan estimates 8,000 to 10,000 people per year will visit the park. I believe the plan's underestimated the number of vehicles using the park. It says that from April to October, on weekends and holidays, we can expect 12 cars a day. Since there will be six parking spots, this means there will be up to two "shifts" a day. Let's say that the average time spent in the park is two hours. This would account for people using the park for four hours; I would guess that more people will be using the park, and that we could add two more "shifts" a day, doubling the plan's estimated number of people. I also believe the estimated number is low for weekdays and during the November to March months.

Recently McNamee Rd. has been feeling the pressures of growth. It has been experiencing an increase in traffic on the road resulting from development. A recent traffic study conducted by Multnomah County showed that 85% of traffic now on McNamee travel at 37 mph or less. Looked at another way, 15% of traffic now travel faster than 37 mph. These high speeds threaten pedestrians, bicyclists, and animals. Putting McNamee Rd. on the regional map will only serve to further heighten this danger. Frankly I am concerned for my and my friends and neighbors children who have no sidewalks and very little to no shoulder to walk on. Should Metro ignore our plea, we want assurance that some mitigation to the increase in traffic speeding caused by this siting, such as speed bumps, be provided (and not at the expense of property owners).

Finally, as was illuded to earlier, more and more people will be using McNamee should this plan go forward. McNamee has already been found to be a great place to litter. Everything from abandoned vehicles to illegal, toxic waste to used condoms and needles (the latter being at the gate to the Hampton property, where cars already park now) to robberies are occuring on McNamee. (There are also some "transients with wheels" who like to park along the road and spend the night.) Siting the parking on McNamee will lead to more of the same, and there is no way to prevent it. The plan says "The parking area, trail, and Preserve have been designated as 'garbage-free', meaning visitors will need to pack out everything they bring into the area.". Well, this is a lofty idea, but not very realistic. We have all seen time and time again what slobs we human beings are. Not only should garbage cans be provided, but I would add that a restroom should be available within the Preserve as well.

Speaking of people throwing things around, who will keep people from smoking and throwing their lit cigarette butts into the woods? This heavily wooded area is prime ground for a huge wildfire, particularly in the busy summer months. What provisions have been made to address fire safety? As far as I've seen, none. I believe this is a serious concern that needs to be addressed so that water will be available at the site.

Looking to the future, the Rails to Trails park will tie into this area. The likelihood of this parking area also serving this use will only serve to bring more and more people from throughout the metropolitan region (and tourists) to this once quiet, <u>local</u> residential street. Again, this will only serve to rapidly deteriorate the livability on our road.

Please reconsider siting the parking for this regional park on McNamee Rd., and place it in a more appropriate location, like on Highway 30. Thank you for your consideration.

Donna Green
Clifford Hamby
16238 NW McNamee
Portland, OR 97231

Resolution 96-2345, For the Purpose of Approving and Adopting the Ancient Forest Preserve Draft Master Plan.

Exhibit A: The Ancient Forest Preserve Draft Master Plan is too volumous to reproduce for the purposes of this agenda packet. Copies of this plan may be obtained by contacting the Regional Parks and Greenspaces Department.

Ancient Forest Preserve

Draft Master Plan

April 1996

METRO

Acknowledgments

METRO

Mike Burton, Executive Officer

Metro Council

Jon Kvistad, Presiding Officer
Patricia McCaig, Ruth McFarland, Don Morissette
Ed Washington, Susan McLain, Rod Monroe

Regional Parks and Greenspaces

Charles Ciecko, Director
Jane Hart, Project Manager
Janelle Geddes, Regional Park Supervisor

MULTNOMAH COUNTY

Board of County Commissioners

FRIENDS OF FOREST PARK

Cathy Turner, Project Liason
Gordy Jensen

ANCIENT FOREST PRESERVE ADVISORY GROUPS

Project Advisory Committee

Cathy Turner, Friends of Forest Park
Fred Nilsen, Portland Parks and Recreation
Jamey Hampton, Agency Creek Management Company
Seth Tane, Linnton Neighborhood Association
Julie Morrow, Burlington Neighborhood Resident

Technical Advisory Committee

Nancy Broshot Hamilton, Scientist, Linfield College
Marcy Houle, Wildlife Biologist / Author
Glenn E. Walthall, Biologist (retired)

Ancient Forest Preserve
Draft Master Plan

Prepared For:

Metro Regional Parks and Greenspaces
600 NE Grand Avenue
Portland, OR 97232

Funded By:

Metro Regional Parks and Greenspaces
Multnomah County Natural Areas Fund

Prepared By:

Kurahashi & Associates, Inc.
12600 SW 72nd Avenue
Tigard, OR 97223

Dave Walters, ASLA
Kendra Smith, Environmental Scientist
Dawn Uchiyama, Landscape Planner
Jim Sandlin, Landscape Planner

In Association with:

Adolfson Associates, Inc.
Mark G. Wilson, Horticulturalist
Ayn Shilisky, Forest Ecologist
Mark Hayes, Herpetologist

April 1996

Cover photo courtesy of Ancil Nance
Printed on recycled-content paper

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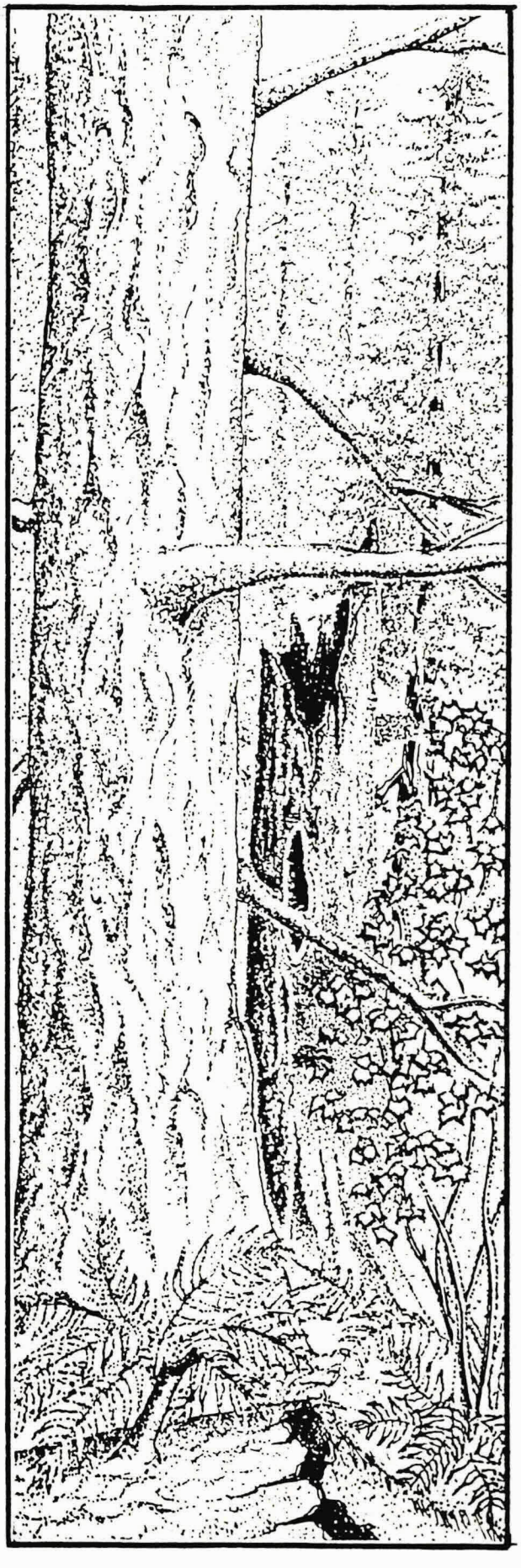
EXECUTIVE SUMMARY



Executive Summary

Background

In 1990 Friends of Forest Park embarked on a mission to save one of the last old growth forests in the Portland metropolitan region. Through intense fundraising efforts over three years, they were able to generate the funds needed to purchase the 38 acre parcel and related public access and conservation easements. Friends of Forest Park purchased the parcel and easements in 1993. Friends of Forest Park has indicated an interest in transferring ownership to Metro for management by the Regional Parks and Greenspaces Department. A Memorandum of Understanding approved by the Metro Council in 1995 stipulated the development of this Master Plan. The Plan will provide guidance to Metro if both organizations determine a transfer is appropriate.

Master Plan Development and Implementation

The Master Plan created for the Ancient Forest Preserve provides the guidance needed to successfully implement an environmentally sensitive park design. Community participation was the cornerstone of the planning process and will also be a valuable asset during the implementation. The Master Plan identifies goals and objectives; current site conditions; implementation phases, tasks and costs; long term management; and land acquisition concepts that are necessary to protect the Preserve's health and viability.

The Master Plan and implementation will achieve the following:

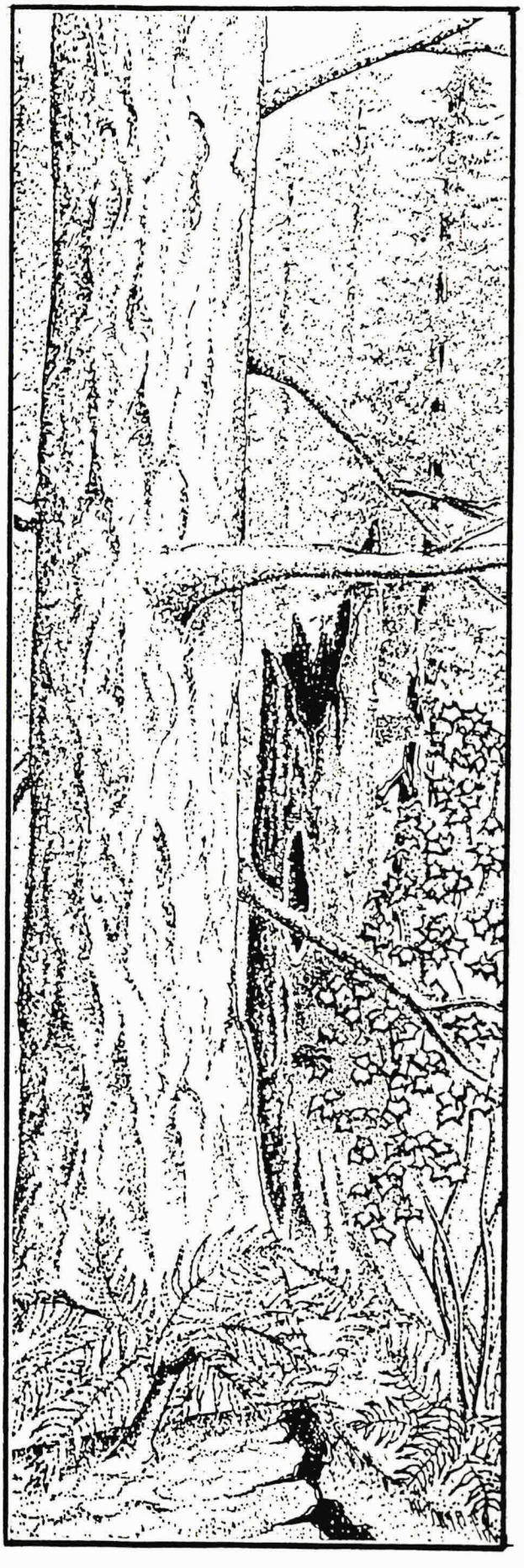
- Construction of a trail within the Preserve
- Construction of a trail to the Preserve (utilizing a portion of the Burlington Northern Right-of-Way or the Pacific Coast hiking trail easement)
- Development of a parking area and trailhead
- Development of interpretive signage for environmental educational purposes
- Trail and site maintenance and monitoring
- Development of a long term ecological monitoring program to further evaluate the health of the forest and determine the amount of human impact to the Preserve
- Watershed protection activities to buffer the Preserve and reduce further degradation of the forest community

Ecological Significance and Community Benefits

The Preserve serves as part of an ecological linkage that ties Forest Park, the Coast Range, and Burlington Bottoms wetlands. Maintaining linkages between natural areas is critical to assuring biological diversity in and adjacent to the urbanized environment. Development of public access to the Preserve will provide numerous benefits to the community including:

- Educational opportunities related to old growth forests, forest succession, wildlife corridors, watershed health and management
- Passive recreational opportunities (hiking, wildlife viewing) and connection to regional trail systems
- The opportunity to participate in trail construction and stewardship activities.

INTRODUCTION



Introduction

Upon entering an old growth forest of the Pacific Northwest coast, the giant trees and lush vegetation will capture the eye almost immediately. But to understand and appreciate the magnificence and complexity of an old growth forest one needs to use all the senses: sight, sound, smell and touch. The experience helps one to see the forest through the trees.

The Ancient Forest Preserve, located just 11 miles outside of Portland on the eastern slope of the Tualatin Mountain Range, was protected so that current and future generations could discover and appreciate an ecosystem that is increasingly rare in the region. With less than 10 percent of the original old growth of the Pacific Northwest remaining, the Preserve provides the opportunity to experience an old growth forest close to home.

On their way up to the Preserve hikers will venture through a logged hillside that has been replanted with Douglas-fir trees. The rugged terrain emphasizes water's role in shaping the landscape. It will be ten or more years before the hillside will begin to look like a forest again.

A view from within the Preserve

In comparison to the reforested area, the entrance to the Preserve is dramatic. The air is cool and the forest is dark. The trees here are many different ages and species, the vegetation is dense and lush. The contrast is much deeper than appearance.

As envisioned, a hike through the forested portion of the Preserve, will teach that an old growth forest isn't simply a stand of large, old trees. This forest is a complex ecosystem that relies not only on the large live trees, but downed rotting wood, standing dead trees or 'snags', and a diversity of plant and animal life that occupy their own space or 'niche' within the multilayered canopy.

Project Background

In 1990, the Friends of Forest Park (FoFP) , a 400 member nonprofit organization, initiated fundraising efforts to save a 38 acre parcel from being logged (called the Old Growth Adoption Project). By 1993 FoFP completed the purchase of the parcel and related easements from the Agency Creek Management Company. Over 4,400 people contributed more than $600,000 to protect this remnant old growth forest, called the Ancient Forest Preserve (Preserve) for the master planning process.

The will and determination of the community to save the Preserve lies partially in the fact that it is considered one of the last remaining pieces of old growth forest in the Portland Metropolitan Area. However, the Preserve also represents an important ecological link between several regionally significant natural areas. Located less than 2.5 miles from the northern most edge of Forest Park, the Preserve is part of a larger wildlife corridor that connects Forest Park, the Coast Range, and Burlington Bottoms wetlands (located at the base of the Preserve's watershed). Smith and Bybee Lakes, Howell Territorial Park, and the proposed Burlington Northern Rails to Trails project, are also in close proximity to the Preserve (see Figure 1).

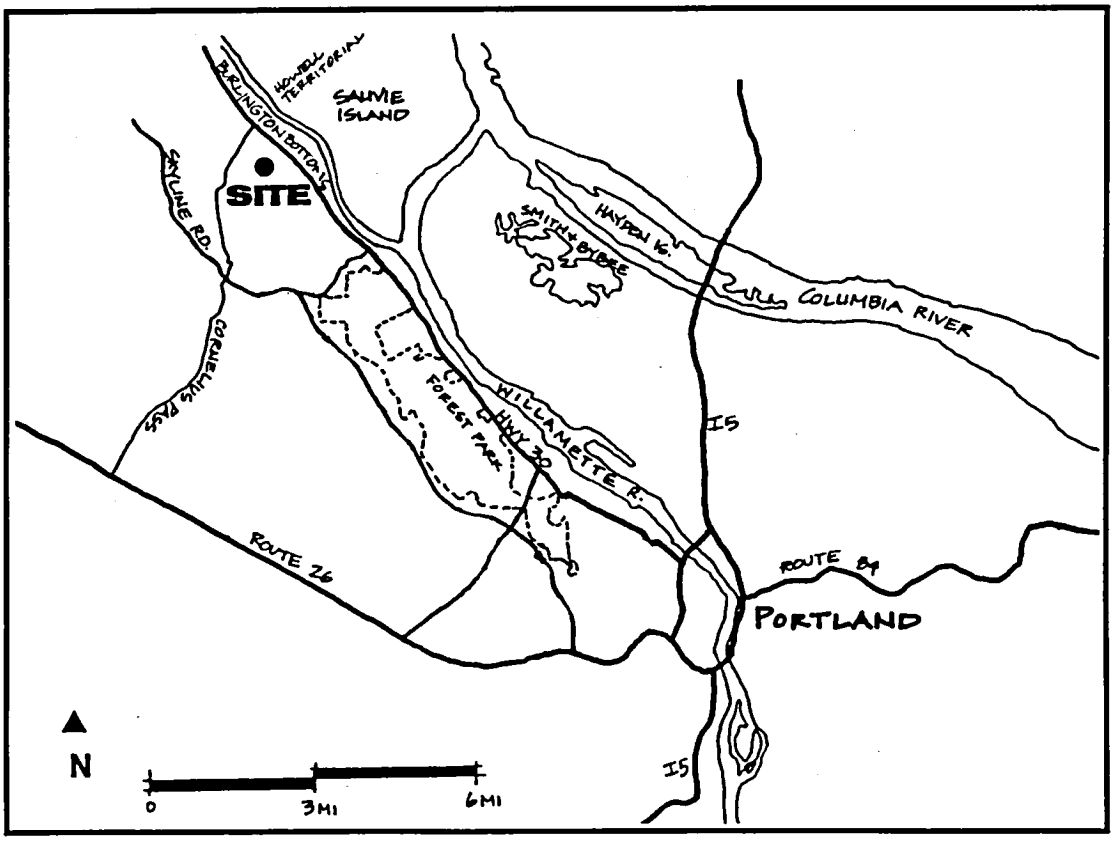


Figure 1: Vicinity map with regionally significant natural areas

Goals of the Plan

The following project goals were identified by the Project Advisory Committee to guide development of this Plan and the management of the Preserve.

- Preserve and maintain the integrity of the Ancient Forest Preserve in perpetuity
- Protect and strengthen the wildlife corridor connecting Forest Park and the Tualatin Mountains to the Coast Range
- Provide educational and passive recreational opportunities for the community

Planning Background

Metro developed the Metropolitan Greenspaces Master Plan to ensure a green legacy for future generations. It is a cooperative regional approach among public and private organizations to establish an interconnected system of natural areas, open spaces, trails, and greenways for wildlife and people throughout the metropolitan area. Among other resources, the Master Plan identified Forest Park, Burlington Bottoms, the Coast Range hiking trail (part of the "Greenway to the Pacific" planning concept), and a portion of the Burlington Northern rail corridor as regionally significant natural areas and trails. The Preserve is related to each of these resources either by proximity or direct trail linkages.

In March of 1994, Metro and FoFP entered into a Memorandum of Understanding (MOU), which stipulates the conditions under which the FoFP would consider transferring ownership of the Preserve and three access easements to Metro for the purpose of making it a public preserve. The MOU did not bind Metro or FoFP to carry out the transfer. However, it did stipulate that this Master Plan be developed for the parcel and related trail access. This Plan will serve as a basis for both organizations to resolve long term operations and ownership issues.

The Open Space, Parks, and Streams Bond Measure of May 1995 provides $150,000 for implementation of the Ancient Forest Preserve Master Plan. The funds are for the development of the parking area, the trail system (including bridges and boardwalks), and interpretive signage. These funds could be reallocated if this project is found to be unfeasible.

Land acquisition strategies have been addressed in the Forest Park Open Space Refinement Plan, adopted by the Metro Council in February, 1996. The specific acquisition and partnership objectives of the Forest Park Open Space Refinement Plan that relate to the Ancient Forest Preserve Master Planning process include:

- Provide a "corridor" sufficient for trail access from the north end of the [Forest] Park to the proposed Burlington Northern Rails to Trails project. (First priority).
- Protect additional lands along the corridor at the north end of the [Forest] Park, including a buffer for the Ancient Forest, through acquisitions, easements, and voluntary management agreements.(First Priority).

- Encourage Oregon Department of Transportation (ODOT) to establish a riparian crossing under Highway 30, linking the north [Forest] Park with the Burlington Bottoms wetlands (as part of the Highway 30 Corridor Plan). (Second priority).
- Establish rapport with private land owners in the area to explore opportunities for easements, timber management strategies, and common watershed protection. (Second priority).

Public Involvement

Meeting the needs and concerns of potential park users, surrounding land owners, and project partners, is critical to developing a balanced Plan. Public involvement was encouraged through the following actions:

- Creation of a mailing list of interested citizens
- Establishment of an independent Project Advisory Committee to provide ongoing review
- Technical Advisory Committee review of the Site Conditions section of the Plan
- Distribution of meeting notices to interested citizens
- Press releases regarding the planning process / meeting times
- Two public meetings to receive input on project direction and concept designs for the area
- Questionnaire results and meeting summaries mailed to public meeting participants
- Citizen meetings as requested
- Tour of the Preserve
- Distribution of draft Master Plan for public review and comment
- Presentation of the draft Master Plan to Metro Regional Parks and Greenspaces Advisory Committee (citizen testimony invited)
- Presentation of the final draft Master Plan to Metro's Regional Facility Committee(citizen testimony invited)
- Presentation of the final draft Master Plan to the Metro Council (citizen testimony invited)
- Distribution of the adopted Master Plan to interested citizens

Public involvement information including the results of the meeting questionnaires and the public meeting summaries are provided in the Appendix.

The Project Advisory Committee, was organized to provide ongoing planning input and guidance. Members included representatives of FoFP, Portland Parks and Recreation, Agency Creek Management Co., Linnton Neighborhood Association, and local citizens. Technical Advisors included local scientists familiar with the area, who provided feedback on the scientific aspects of the project. Green City Data (an environmental education program) also shared the results of their research within the Preserve.

CHAPTER ONE:
SITE ANALYSIS

Chapter One
Site Analysis

Definitions

The site analysis and master plan use several terms that are defined as follows:

- *Project Study Area* refers to the area bound by Burlington Bottoms and the Multnomah Channel to the northeast, McNamee Road to the northwest and southwest, and North Angell Brothers Creek (near the Angell Bros. Quarry) to the southeast.

- *Watershed* is in reference to the area within the Burlington Creek watershed which drains to Burlington Bottoms wetlands located along the Multnomah Channel across from Sauvie Island.

- *Preserve* refers to the 29 acres of old growth forest and the 9 acres of clearcut for a total of 38 acres.

- *Access Easements* refers to vehicular and pedestrian easements deeded to Friends of Forest Park by Agency Creek Management Co.

- *Project Site* refers to the 38 acre Preserve and its associated access easements.

- *Access trail* refers to the trail that will connect the parking site to the Preserve.

- *Gravel roads* refer to the existing privately owned roads that cross the watershed; the upper road runs along the forested edge of the Preserve and the lower road is approximately a half a mile down slope of the upper road.

Maps that accompany this chapter are grouped together at the end of the chapter.

Location

The study area is located approximately 11 miles northwest of downtown Portland near Highway 30 (Township 2 North, Range 1 West, Section 20). The study area encompasses approximately 500 acres and contains the entire Burlington Creek Watershed. A majority of the project site is situated in the center of the Burlington Creek Watershed (see Map 1).

Land Use

The project study area is primarily forest land which has been harvested occasionally since the early 1900's. Most recent harvesting occurred in the late 1980's. By 1994, a majority of the timber in the watershed, including 9 acres of the Preserve, was harvested and replanted. The land downstream of the Preserve to Highway 30 is managed as a commercial forest. The Burlington Bottoms wetland on the east side of Highway 30 is managed as a wildlife refuge. The rural center of Burlington is within a mile of the Preserve and is the closest community to the project site.

Three transportation corridors exist in the project study area; the Burlington Northern rail corridor, McNamee Road, and State Highway 30. An electric utility corridor crosses the project study area approximately 100 feet uphill from the Burlington Northern rail corridor.

Aerial view of the Ancient Forest Preserve and Study Area

Zoning

The entire project site and a majority of the study area is zoned for Commercial Forest Use (CFU) as shown on Map 2. According to Multnomah County Zoning Code, land within the CFU may be subdivided for residential development with a minimum lot size of 80 acres. No two contiguous lots may be built on (effectively enlarging lot area to 160 acres).

The community of Burlington is zoned Rural Center District. Some of the residential lots along Wapato Drive are within this land use zone. There are also residential lots on the west side of McNamee Road zoned Rural Residential.

Ownership

In 1992 Multnomah County approved a land division request filed by Friends of Forest (FoFP) Park that allowed FoFP to purchase the project site from the Agency Creek Management Company (see Bibliography in Appendix). The land division was approved based on the following conditions:

- The land would be used as a conservation area
- Development of a Park would require Multnomah County Planning Commission approval of a Community Service Use
- Trail access would originate on McNamee Road in the vicinity of the Burlington Northern rail corridor

Approximately one third of the land in the project study area is owned by Agency Creek Management Company and is being actively managed for timber production. The Agency Creek Management Company land (approximately 370 acres) is subject to a conservation easement that was acquired from the Friends of Forest Park. Specific provisions of the easement are described in more detail in the easement discussion below.

Another third of the land in the study area consists of several tax lots (sized to 19 acres or less). Parcels that border the Preserve's southern boundary are subject to a conservation easement that Friends of Forest Park acquired from Crown Pacific Ltd. prior to subdivision. Provisions of that easement are discussed below.

The remaining third of the study area is occupied by Burlington Bottoms wetland, owned by the Bonneville Power Administration and managed as a wildlife refuge by Oregon Department of Fish and Wildlife.

The following Rights-of-Way pass through the study area:

Owner	Right-of-Way
Oregon Department of Transportation	Highway 30
Burlington Northern Railroad Company	Burlington Northern
Bonneville Power Administration	Powerline
Multnomah County	McNamee Road

Friends of Forest Park Easements

Friends of Forest Park has acquired several access and conservation easements within the project study area (see Map 2 and Appendix).

Access Easements Associated with the Project Site

- A non-exclusive easement for constructing and maintaining a 6 foot wide portion of the Pacific Coast Range hiking trail. This easement extends from McNamee Road to Agency Creek Management Company's eastern boundary, in the area between the Burlington Northern ROW and the Bonneville Power ROW.

- A 100 foot wide pedestrian easement along Burlington Creek (50' to each side of center line of creek) for access to the Preserve (which connects to the Pacific Coast Range Hiking trail).

- Limited vehicular access for maintenance / emergency purposes only on the gravel road between McNamee Road and the Preserve.

Conservation Easement Acquired from Agency Creek Management Company

A conservation easement held by Friends of Forest Park, exists over approximately 370 acres of land adjacent to the north and east boundary of the Preserve. Under the easement, Agency Creek Management Company shall develop no more than 25 residential units and necessary access roads in any future subdivision of the land. Agency Creek Management Company must make a reasonable effort to configure development to leave as much of the reforested land as possible unaffected (except for timber management and harvest) and to allow for wildlife travel. Domestic animals are to be controlled on the homestead through the installation of fencing, leash, or bells (for cats). The easement does not restrict timber harvesting in the watershed, except within 50 feet of either side of the Burlington Creek. Details of the development restrictions are outlined in FoFP's Conservation Easement over the 370 acres of Agency Creek Management Company's property. *Note: Current Multnomah County zoning of the Commercial Forestry land only allows for 80 acre parcels. At the present time, the zoning regulations are more restrictive than the language in the conservation easement. If a zoning change occurred in the future, the conservation easement would limit development of the land to 25 residential units.*

Conservation Easement Acquired from Crown Pacific Company

The properties adjacent to the Preserve's southern edge are subject to a conservation easement that was negotiated by FoFP when the property was owned by Crown Pacific (Map 2). Under the Crown Pacific easement, FoFP has the right to enter the area for wildlife conservation purposes in cooperation with and approval of the land owner. Timber harvest is limited to trees smaller than 14 inches in diameter; all snags and large woody debris 14 inches and greater must be left. Clear cuts on these properties cannot exceed 10 acres and cannot occur where cutting on the same acre(s) has occurred within the previous seven years. The easement stipulates a no cut zone of 75 feet of either side of streams and requires a diversity of conifers be replanted following harvest activity. FoFP monitors the Crown Pacific easement.

Conservation Easement Acquired from Linnton Rock Corp.

In August of 1995, Friends of Forest Park acquired a conservation easement for land to the southeast of the project study area, owned by Linnton Rock Corp. and leased by Angell Brothers, Inc. The easement sets forth forest management and timber harvesting practices that will permanently protect approximately one third (147 acres) of the 397 acre quarry site (including North Angell Brothers Creek). The effect of this easement is to give interim protection to the wildlife corridor between Forest Park and the Coast Range in the vicinity of the quarry. No mining will occur on the 147 acres, no dwellings will be built, and as the forest regenerates, it will naturally succeed towards a Western old growth conifer forest. Following conclusion of allowed mining activities, the same conservation easement will apply on the other areas of the property. At that time, FoFP will have the right to place a pedestrian trail across the property, providing a vital link in the Greenway to the Pacific Coast hiking trail.

Site Access

There is currently no public access to the site. Public access will require parking and access trails.

Project Compliance with Americans with Disabilities Act (ADA)

A goal of the Ancient Forest Preserve is to provide visitors with an old-growth experience. Using the *Recreation Opportunity Spectrum* developed by the USDA Forest Service, any earthen access trail to and within the Preserve would be categorized as Semi-primitive Non-Motorized to Primitive. According to the design guidance book *Universal Access to Outdoor Recreation* (PLAE, Inc, 1993) the level of accessibility for the recreation trails associated with the project would be considered "difficult" to "most difficult." The exception to this case would be use of the Burlington Northern corridor as a trail. Accessibility along the rail corridor *only* would likely be classified as "easy" once the trail was improved for use.

Altering the landscape to achieve an easy to moderate level of accessibility would severely impact the natural resources that are being conserved for the purposes of education and passive recreation. Also, the high cost associated with providing an easier

level of accessibility would preclude the implementation of the project. In instances where a project cannot achieve universal access, similar experiences should be made available. Metro and the City of Portland provide similar old growth experiences at Oxbow Regional Park and on some of the paved trails at Forest Park. Both parks have an easier level of accessibility than the Ancient Forest Preserve. For the above reasons, the project's trail system will not be designed for universal access.

Parking

Multnomah County based its 1992 approval for the land division that created the 38 acre Preserve on a condition that pedestrian access to the Preserve would originate on McNamee Road near the Burlington Northern rail corridor. FoFP have an option (see Bibliography in Appendix) with Agency Creek Management Company to purchase a small parcel of land fronting McNamee Road that is adjacent to both the Burlington Northern rail corridor and the pedestrian access easement. This purchase would allow for development of trailhead parking.

Notwithstanding the 1992 land division provision for a McNamee Road parking location, the master planning process has analyzed other parking alternatives in the project study area.

Several factors considered in evaluating potential parking locations included: traffic safety and lot security, proximity to the Preserve and existing pedestrian easement, coordination with the Burlington Northern rails to trails project, zoning, cost of lot development, suitability of land for parking, safety of vehicle access, property ownership, and adjacent land uses.

Twelve parking area sites were evaluated (see Map 4). Upon preliminary review, the following parking options were dropped from consideration.

- *Multnomah County tax foreclosed lots.* These four sites (#1-4) are not located in areas that provide access to the Pacific Coast Range hiking trail easement or are not large enough to develop as a 5-6 car parking area.

- *Wapato Drive sites.* Two sites (#5-6) on Wapato Drive were analyzed in 1992 and eliminated due to neighborhood concern about increased traffic and the parking in front of their homes. A condition of approval for the land division that created the Preserve required that the Preserve be accessed from McNamee Road.

- *McNamee Road sites.* Two sites (#7-8) along McNamee Road were eliminated. One is located across from the entrance to the emergency access road leading to the Preserve. The site required crossing McNamee Road to get to the pedestrian easement. The second site was on the northeastern side of the trestle crossing over McNamee Road. This site was considered unsafe because of its proximity to a curve and its location would require crossing McNamee Road to get to the pedestrian easement.

The sites that were further reviewed include:

- *Highway 30 at the base of the Burlington Creek Drainage.* Tax maps for the site (#9) indicate that the property is owned by Agency Creek Management Co., with Burlington Northern owning the Right-of-Way (ROW) just to the west of the proposed parking location. An Oregon Department of Transportation (ODOT) Highway 30 Corridor Study (June 1995) recommends limiting new driveways off Highway 30 for safety purposes. The study also acknowledges the importance of providing access to recreational destinations and recommends using local roads for access where they exist.

- *Highway 30 at the Tunnel.* ODOT has access control (a covenant that prevents access off Highway 30) along the right-of-way at this location (#10), which prevents access to the lands adjacent to Highway 30.

- *Johnson Mill Road / Union Junction.* This site (#11) is on the opposite side of Highway 30 from the project area. A highway pedestrian crossing in this vicinity is not feasible.

- *McNamee Road near the wooden train trestle crossing.* This site (#12) is located approximately 300 feet uphill from where the railroad trestle crosses over McNamee Road. Analysis of this site supports the 1992 condition of approval for the Preserve requiring that pedestrian access originate at this location. This site is the best parking alternative for the following reasons:

- Traffic safety and lot security: Multnomah County Transportation Department staff (pers. comm.) have determined that there is adequate site visibility for traffic ingress and egress at the location. No pedestrian crossing of McNamee is necessary to reach the trail easement. McNamee Road is moderately traveled and the parking area will be visible from the road for security purposes.

- Proximity: A distance of approximately one mile separates the proposed parking area from the Preserve. Future access to the Burlington Northern ROW could easily be accomplished should the rail become a trail. This site location is consistent with the Burlington Northern Feasibility Study (see Bibliography in Appendix) concept of several small access points to the rails to trails project.

- Ownership and Cost: The site and surrounding property is currently owned by Agency Creek Management Company. FoFP secured an option agreement with Agency Creek Management Company to purchase the parking area site. The County owns a 60 foot Right-of-Way on McNamee Road. The driveway would begin 30 feet from the centerline. The cost of development for this site is significantly less than the other options due to it's location on McNamee Road rather than Highway 30.

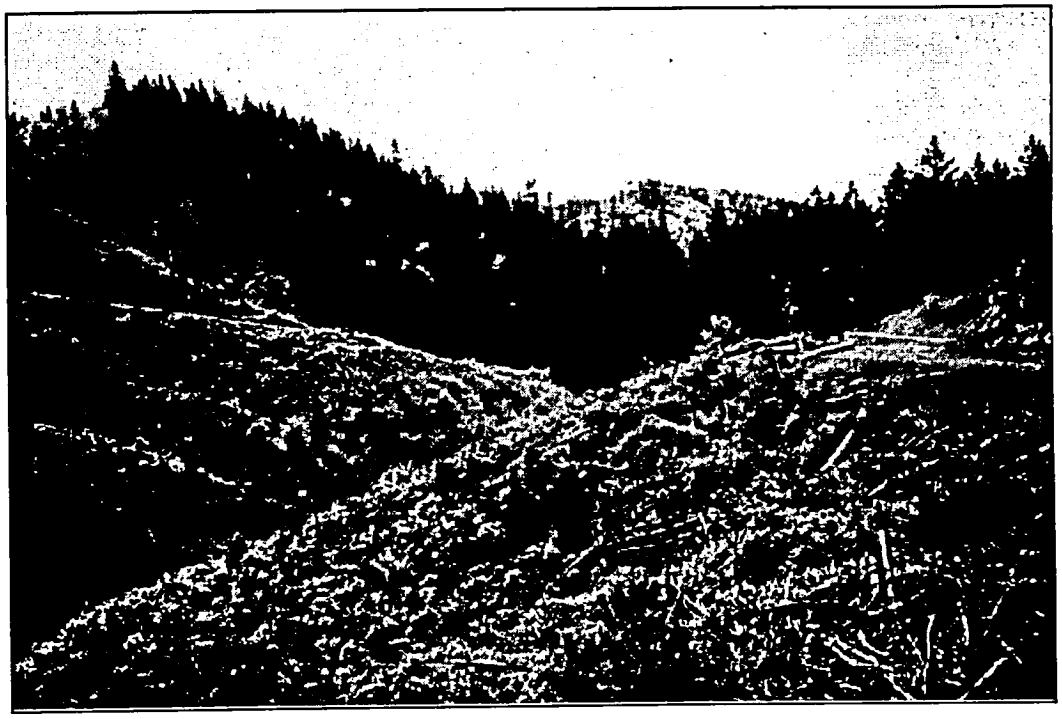
- Suitability of the Land: The site is moderately sloped and has been harvested and replanted. A parking area that will accommodate approximately five to six cars can be accommodated at this location.

Watershed and Topography

To understand how the project site fits into the context of its natural surroundings, it is necessary to discuss the characteristics of the entire watershed. Segments of the vehicular and pedestrian easements between McNamee Road and Burlington Creek are just outside of the watershed's northern boundary. However, the landscape characteristics of those easement segments are similar to that of the watershed.

The Burlington Creek watershed encompasses 350-375 acres that drain down to the Burlington Bottoms Wetland (see Map 1). The Preserve is located in the center of the watershed.

The topography of the watershed is typical of east slope Tualatin Mountain Range drainages. The slopes along the creek corridor range from 30 to 70 percent in many areas. A narrow floodplain exists along major portions of the creek corridor leading up to the Preserve; it is most prevalent on the northern side.



Southeastern view of the Preserve and the Burlington Creek watershed

The topography of the forested portion of the Preserve is more complex because it is located further up the watershed. There is a steep peninsula in the middle of the Preserve which splits Burlington Creek to the southwest and southeast (Map 5). Some of the slopes in this area exceed 100 percent.

Hydrology and Water Quality

The overall hydrologic condition of the watershed is relatively good compared with other watersheds of the Tualatin Mountain Range. The creek consists of a gravel /cobble / boulder channel and is intermittent (dries out in the summer). The riparian (creek-side) zone of the forested portion of the Preserve is in very good condition; there is little evidence of soil erosion. The creek corridor in the recently harvested areas is in fair to good condition. Culverts and small woody debris from timber harvesting have altered water flow and caused debris jams. Vegetation and debris that remains on harvested slopes has minimized erosion, except in areas where roads have been constructed.

The water quality of the creek is good. Stone fly, caddisfly, and mayfly larva (indicators of good water quality) were observed in the lower reaches of the creek. Only moderate to low levels of sediment were observed during site visits (low to moderate rainfall had occurred prior to the visits). The heavy rains of early 1996 have increased sedimentation in the creek (personal communication Broshot, 1996)

Alteration of the creek has occurred at three culvert locations: at the Highway 30 crossing, the lower gravel road, and the upper gravel road. These culverts alter water flow and impede animal migration. At the lower gravel road, a 48 inch culvert is located beneath the road fill but above the normal elevation of the creek. Consequently, the creek typically flows under the culvert through the rock fill. The lower gravel road is constructed on a fill which is approximately 200' wide by 100' high (see Figure 2 and Map 2).

Soils

According to the Soil Survey of Multnomah County (Soil Conservation Service, 1983) the Burlington Creek watershed is covered with Goble silt loam soil. A fragipan (hard "cement-like" layer) at 30 to 48 inches beneath the surface limits both water infiltration and rooting depth of trees. As a result, erosion and slide hazard is high and the trees are moderately susceptible to windthrow (blow-down). The forested areas of the Preserve revealed numerous debris avalanches which forest vegetation has stabilized. Small slides and bank failures have occurred in the harvested areas and along the roads.

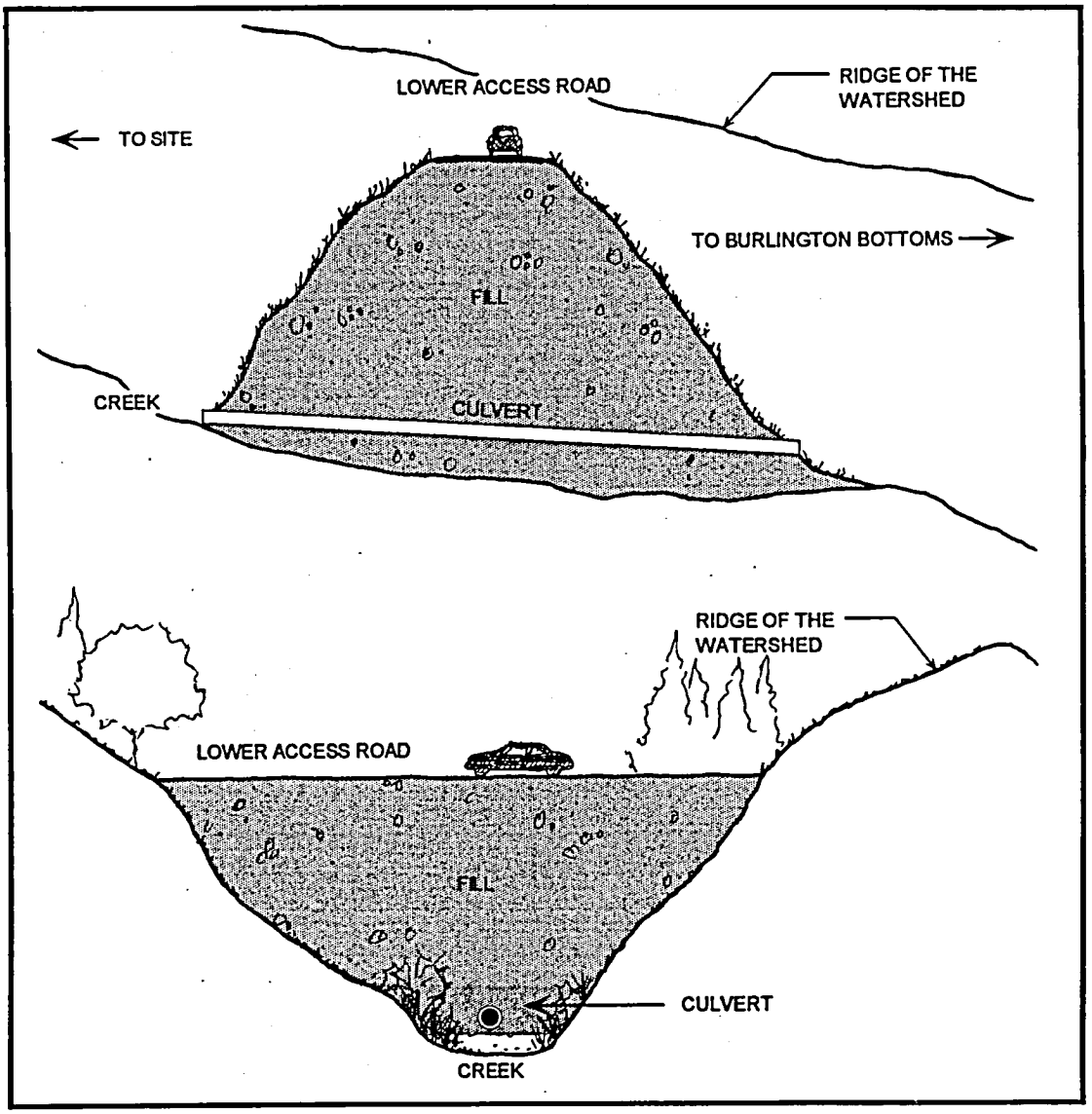


Figure 2: Cross sections of culvert and lower gravel road

Vegetation

There are four distinct vegetative communities in the watershed (see Map 5): Upland shrub-scrub (recently harvested hillside); immature riparian (recently harvested along the stream); Mature and old growth forest (forested portion of the Preserve); and mature riparian (forested portion of the Preserve). A complete list of the plant species observed in the watershed for all four vegetative communities is provided in Table 1.

Upland Shrub - Scrub Community

The upland shrub-scrub portion of the watershed is composed of seedling and sapling sized trees (Douglas-fir) and a thicket of shrubs where Himalayan blackberry and salmonberry dominate. Oceanspray, trailing blackberry, broad leaf pea, bracken fern, Scotch broom, fireweed, big leaved sandwort, pearly everlasting, catchweed bedstraw,

and orchard grass are also present along with a diversity of remnant forest plants. Woody debris (mostly small branches and trees) remains on the harvested portion of the site. A few deciduous trees from the pre-harvest forest are left along the lower portion of the drainage. The area was cut and replanted with Douglas-fir within the last five years.

Immature Riparian Community

The immature riparian zone consists of a similar thicket of vegetation as noted above, but with some red alder, bigleaf maple, willow species, and wetland plants growing near the edge of the creek. Small woody debris is present in and along the creek, often obscuring it from view.

Mature / Old Growth Forest Community

The mature and old growth forest is dominated by Douglas-fir, with western red cedar, bigleaf maple, western hemlock, grand fir and Pacific dogwood. Large woody debris is common, resulting from blowdown and root rot. Occasional snags of varying decay stages are found within the forest. As natural disturbance claim the larger firs, shade tolerant conifers (cedar and hemlock) will emerge. Consequently, the dominant tree species in the forest may change over time. Presently, the quality and abundance of forest species as well as the overall structure (plant and animal use of horizontal and vertical space) is greater near the Preserve's interior than the outer edge of the forest.

The shrub layer of the mature and old growth forest is dominated by dwarf Oregon grape, red huckleberry, western hazel, baldhip rose, vine maple, salal, cascara buckthorn, thimbleberry salmonberry and oceanspray. The ground layer consists primarily of swordfern, wood violet, inside-out flower, goose-grass, vanilla leaf, bracken fern, wall lettuce, Hooker's fairybells, three-leaved anemone, maidenhair fern, lady fern, deer fern, false lily-of-the-valley, false Solomon's seal, western star flower, and fringe cup.

Mature Riparian Community

The mature riparian zone within the forest is dominated by western red cedar and big leaf maple trees. Vine maple, thimbleberry, and salmonberry dominate the shrub layer. Western wahoo, maidenhair fern, strawberry, lady fern, piggy-back, Pacific waterleaf, candy flower, and an abundance of mosses and fungi dominate the ground cover beneath the canopy. The downed and decaying logs that lie across the stream provide structure, filter the water, create pools, stabilize the stream channel, and provide niches for species, especially mosses and invertebrates.

TABLE 1
PLANT SPECIES OBSERVED

Common Name	Scientific Name
Big Leaf Maple	*Acer macrophyllum*
Bitter Cherry	*Prunus emarginata*
Cascara	*Rhamnus purshiana*
Douglas-fir	*Pseudotsuga menziesii*
Pacific Yew	*Taxus brevifolia*
Pacific Dogwood	*Cornus nuttallii*
Red Alder	*Alnus rubra*
Western Hemlock	*Tsuga heterophylla*
Western Red Cedar	*Thuja plicata*
Beaked Hazelnut	*Corylus cornuta*
Black Raspberry	*Rubus leucodermis*
Black Twin-berry	*Lonicera involucrata*
Flowering Currant	*Ribes sanguineum*
Evergreen Blackberry	*Rubus laciniatus*
Himalayan Blackberry	*Rubus discolor*
Indian Plum	*Oemleria cerasiformis*
Inside-out Flower	*Vancouveria hexandra*
Cascade Oregon Grape	*Mahonia nervosa*
Tall Oregon Grape	*Mahonia aquifolium*
Oceanspray	*Holodiscus discolor*
Trailing Blackberry	*Rubus ursinus*
Red Elderberry	*Sambucus racemosa*
Red Huckleberry	*Vaccinium parvifolium*
Salal	*Gaultheria shallon*
Salmonberry	*Rubus spectabilis*
Scotch broom	*Cytisus scoparius*
Scouler's Willow	*Salix scouleriana*
Sitka Willow	*Salix sitchensis*
Snowberry	*Symphoricarpos albus*
Thimbleberry	*Rubus parviflorus*
Vine Maple	*Acer circinatum*
Wood Rose	*Rosa gymnocarpa*
Baneberry	*Actea rubra*
Bracken Fern	*Pteridium aquilinum*
Buttercup	*Ranunculus spp.*
Catchweed Bedstraw	*Galium aparine*
Common Groundsel	*Senecio vulgaris*
Common Vetch	*Vicia satvia*
Wild Ginger	*Asarum caudatum*
Red Stem Ceanthus	*Ceanothus sanguineus*
Mitrewort	*Mitella pentandra*
Twisted stalk	*Streptopus amplexifolius*
Wall lettuce	*Lactuca muralis*
Oak fern	*Gymnocarpium dryopteris*

Common Name	Scientific Name
Candy-flower	*Montia sibrica*
Star- Solomon's Seal	*Smilacina stellata*
Goat's beard	*Aruncus dioicus*
Waterleaf	*Hydrophyllum tenipes*
Common Yarrow	*Achillea millefolium*
Cooley's Hedge Nettle	*Stachys cooleyae*
Coral Root Orchid	*Corallorhiza spp.*
Creeping Buttercup	*Ranunculus repens*
Curly Dock	*Rumex crispus*
Deer Fern	*Blechnum spicant*
English Plantain	*Plantango lanceolata*
False Lily-Valley	*Maianthemus dilatatum*
False Solomon's Seal	*Smilacina racemosa*
Field Horsetail	*Equisetum arvense*
Fireweed	*Epilobium angustifolium*
Foamflower	*Tiarella trifoliata*
Fringecup	*Tellima grandiflora*
Hooker Fairybells	*Disporum hookeri*
Indian Pipe	*Monotropa uniflora*
Lady Fern	*Athyrium filix-femina*
Lanceleaf Springbeauty	*Claytonia lancelota*
Licorice Fern	*Polypodium glycyrrhiza*
Long Leaved Sandwort	*Arenaria macrophylla*
Maidenhair Fern	*Adiantum pedatum*
Pacific Bleedingheart	*Dicentra formosa*
Pearly Everlasting	*Anaphalis margaritacea*
Pig- a - Back Plant	*Tolmiea menziesii*
Sphagnum Moss	*Sphagnum spp.*
Strawberry	*Fragaria virginiana*
Sword Fern	*Polystichum munitum*
Western Trillium	*Trillium ovatum*
Twin Flower	*Linnaea borealis*
Vanilla Leaf	*Achlys triphylla*
Western Star Flower	*Trientalis latifolia*
Western Wahoo	*Euonymus occidentalis*
Three-leaved Anemone	*Anemone deltoidea*
Wire Lettuce	*Lactuca serriola*
Wood Violet	*Viola glabella*
Woodrush	*Luzula spp.*
Bluegrass	*Poa spp.*
Colonial Bentgrass	*Agrostis tenius*
Reed Canarygrass	*Phalaris arundinacea*
Smith's fairybells	*Disporum smithii*

Overall Vegetation Evaluation

Both the clear cut and forested areas of the watershed offer significant plant species diversity and abundance. The center of the forested portion of the Preserve has a higher quality of forest species. This is due to water abundance and lack of disturbance. The presence of older decaying downed logs, woody debris, and snags is also greatest within the interior. The composition of the vegetation across the entire watershed will change over time as the landscape continues to mature. The dominance of non-native species may slow the rate of forest succession. A more detailed scientific discussion regarding the conditions of the site is provided in the Technical Summary listed in the Bibliography of the Appendix.

Wildlife Usage and Habitat

The Preserve provides adequate cover, food, and water for diverse wildlife. The presence of large woody debris, snags, large live trees, and the stream increases the number of habitat niches available. According to the Northwest Hills Natural Areas Protection Plan (Portland Bureau of Planning, 1992) more than 80 bird species, 62 mammal species, eight salamanders, five frogs and several species of snakes and lizards are found in the Northwest Hills area. Many of these species are expected to use the habitats available within the Preserve. An evaluation of the watershed in 1994 using the Wildlife Habitat Assessment Method (developed by the City of Portland, Bureau of Planning) determined the watershed to have a range of scores between 24 - 57 and an average score of 33.4 out of a possible 108 points (Multnomah County Planning Division, 1994). Given the range of possible points, this score reflects a fair wildlife habitat quality. A more detailed discussion of the wildlife habitat is presented in *One City's Wilderness - Portland's Forest Park* (Houle, 1988) which documents the habitat functions and values of Forest Park and the Tualatin Mountain Range (see Bibliography in Appendix).

Mammals / Birds

Timber harvesting of the surrounding tracts has temporarily reduced the acreage of contiguous forest. The Preserve provides a resting place within the larger wildlife corridor that connects the Tualatin Mountains to the Coast Range. Numerous bird species utilize the Preserve interior as well as the harvested areas for nesting and feeding. The small size of the Preserve limits its ability to support species that prefer interior old growth environments (spotted owl, western red backed vole, Pacific giant salamanders, pine martens, etc.) A list of species observed and expected to be found at the site is provided in Table 2.

Herptiles

Due to the proximity of Burlington Bottoms Wetlands at the base of the watershed, an analysis of herptile (amphibian and reptile) habitat was conducted at the site. Two species of salamander were observed during the field reconnaissance, the clouded salamander and the ensatina. Both species are characteristic of second and old growth

coniferous forests. A Pacific giant salamander was identified on the edge of the Preserve (Engle, 1995).

The lack of significant still water habitat in the Preserve limits breeding opportunities for a variety of amphibians including: the northern red-legged frog, Pacific chorus frog, long toed salamander, northwestern salamander and rough-skinned newts. However, the presence of Burlington Bottoms at the base of the watershed and the fact that northern red-legged frogs, northwestern salamander, and rough-skinned newts are known to make significant migrations between breeding stillwater and post breeding forested upland habitat, suggests that these species could utilize the site. Recent timber harvest and road crossings impede migration between wetland and upland habitats (see Figure 2).

No reptiles were observed at the site, but four species may utilize the project site. These include the northwestern garter snake, the common garter snake, the rubber boa, and the northern alligator lizard.

Rare, Threatened and Endangered Species

No federally protected or state listed threatened or endangered species have been observed on the project site. A Green City Data crew observed a Pacific giant salamander (Engle, 1995) that is listed as rare by the State of Oregon. The Oregon State Land Board recognizes the listing of rare species and requires some level of protection for such species on a case by case basis.

Level I Environmental Site Assessment

A Level I Environmental Assessment was completed in June 1995 to determine if any hazardous materials were present on the project site. The site assessment consisted of a site survey of the property, an examination of the surrounding land uses, an evaluation of the property's physical features, and an historical review of the study area. No areas of contamination were found on the property.

TABLE 2
ANIMAL SPECIES POTENTIALLY PRESENT

Common Name	Scientific Name
Mammals	
Black Bear	*Ursus americans*
Roosevelt Elk	*Cervus elaphus*
C. Black-tailed Deer	*Odocoileus hemionus col.*
Coyote*	*Canus latrans*
Red Fox	*Vulpus vulpus*
Bobcat*	*Felis rufus*
Raccoon	*Procyon lotor*
Opossum	Dedelphis virginiana
Porcupine	*Erethizon dorsatum*
Spotted Skunk	*Spilogal putorius*
Striped Skunk	*Mephitis mephitis*
Mountain Beaver	*Aplodontia rufa rufa*
Douglas Squirrel*	*Tamiasciurus douglasi*
Snowshoe Hare	*Lepus americanus*
European Rabbit	*Oryctolagus cuniculus*
Mink	*Mustela vison*
Longtailed Weasel	*Mustela frenata*
Townsend's Chipmunk	*Eutamias townsendii*
Red-backed mouse	*Clethrionomys gapperi*
Deer Mouse	*Peromyscus maniculanus*
Vagrant Shrew	*Sorex vagrans*
Trowbridge's Shrew	*Sorex trowbridgei*
Townsend's Vole	*Microtus townsendii*
Shrew Mole	*Neurotrichus gibbsii*
Herptiles	
Rubber Boa	*Charina bottae*
Common Garter Snake	*Thamnophis sirtalis*
NW Garter Snake	*Thamnophis ordinoides*
Northern Alligator Lizard	*Gerrhonotus coeruleus*
Northwestern Salamander	*Ambystoma gracile*
Long-toed Salamander	*Ambystoma macrodactylum*
Pacific Giant Salamander*	*Dicamptodon tenebrosus*
Rough Skinned Newt	*Taricha granulosa*
Ensatina*	*Ensatina eschcholtzii*
W. Redbacked Salamander	*Plethodon vehiculim*
Pacific Chorus Frog	*Hyla regilla*
Tailed Frog	*Ascaphus truei*
Red Legged Frog	*Rana aurora*
Western Toad	*Bufo boreas*
Clouded Salamander*	*Aneides ferreus*
Dunn's Salamander	*Plethodon dunni*
Forest Birds	
Pileated Woodpecker	*Dryocopus pileatus*
Downy Woodpecker	*Picoides pubescens*
Hairy Woodpecker	*Piocoides villosus*
Cooper's Hawk	*Accipeter cooperii*
Sharp-skinned Hawk	*Accipeter striatus*
Western Screech-owl	*Otus kennicotti*
Common Crow	*Corvus brachyrynchos*
Stellar's Jay	*Cyanocitta stelleri*Northern
Flicker	*Coplaptes cafer*
Rufous Sided Towhee	*Pipilo erythrophthalmus*
American Robin	*Turdus migratorius*
Swainson's Thrush	*Catharus ustulatus*
Varied Thrush	*Ixoreus naevius*
Red-breasted Sapsucker	*Sphyrapicus ruber*
Brown Creeper	*Certhia americana*
Dark-eyed Junco	*Junco hyemalis*
Red Breasted Nuthatch	*Sitta canadensis*
Chestnut-backed Chickadee	*Parus rufescens*
Golden-crowned Kinglet	*Regulus satrapa*
Ruby-crowned Kinglet	*Regulus calendula*
MacGillivray's Warbler	*Oporornis tolmiei*
Fox Sparrow	*Passerella iliaca*
Purple Finch	*Carpodacus purpureus*
House Finch	*Carpodacus mexicanus*
Winter Wren	*Troglodytes troglodytes*
Pine Siskin	*Carduelis pinus*
Western Wood Pewee	*Contopus sordidulus*
Bushtit	*Psaltriparus minimus*
Ruffed Grouse	*Bonasa umbellus*
Solitary Vireo	*Vireo solitarius*
Pygmy owl	*Glaucidium gnoma*
Black-throated G. Warbler	*Dendroica nigrescens*
Western Tanager	*Piranga ludoviciana*
Shrub Birds	
Wilson's Warbler	*Wilsonia pusilla*
Orange-crowned Warbler	*Vermivora celata*
Red -Tailed Hawk	*Buteo jamaicenis*
Merlin	*Falco columbarus*
Song Sparrow	*Melospiza melodia*
House Sparrow	*Passer domesticus*
Barn Swallow	*Hirundo rustica*
European Starling	*Strumus vulgaris*
Violet-green Swallow	*Tachycineta thalassina*
Rufous Hummingbird	*Selasphorus rufus*
Bewick's Wren	*Thryomanes bewickii*
Cedar Waxwing	*Bombycilla cedrorum*
American Goldfinch	*Cardellus tristis*
California Quail	*Callipepla californica*
Common Yellow-throat	*Geothlypis trichas*
Red-necked Pheasant	*Phasianus colchicus*
Black-capped Chickadee	*Parus atricapillus*
White Crowned Sparrow	*Zonotrichia leucophrys*
Mourning Dove	*Zenaida macroura*
Hutton's Vireo	*Vireo huttoni*
Olive-sided Flycatcher	*Contopus borealis*
Western Flycatcher	*Empidonax spp.*

* Mammals and herptiles observed. All bird species listed have been observed at site.

Ecological Issues

The ecological health of the Preserve is driven by factors occurring throughout the watershed. This discussion identifies the ecological issues of the project site. The Master Plan chapter identifies ecological management actions that will help achieve the planning goals and objectives developed for the project.

Historic Disturbance Regimes

Prior to European settlement, the primary natural disturbance regimes in the region included high intensity, low frequency fires (100-400 year recurrence interval), windthrow, and localized insects and disease outbreaks. During episodes of no fire, windthrow and disease created pockets of landscape diversity by opening gaps in the forest.

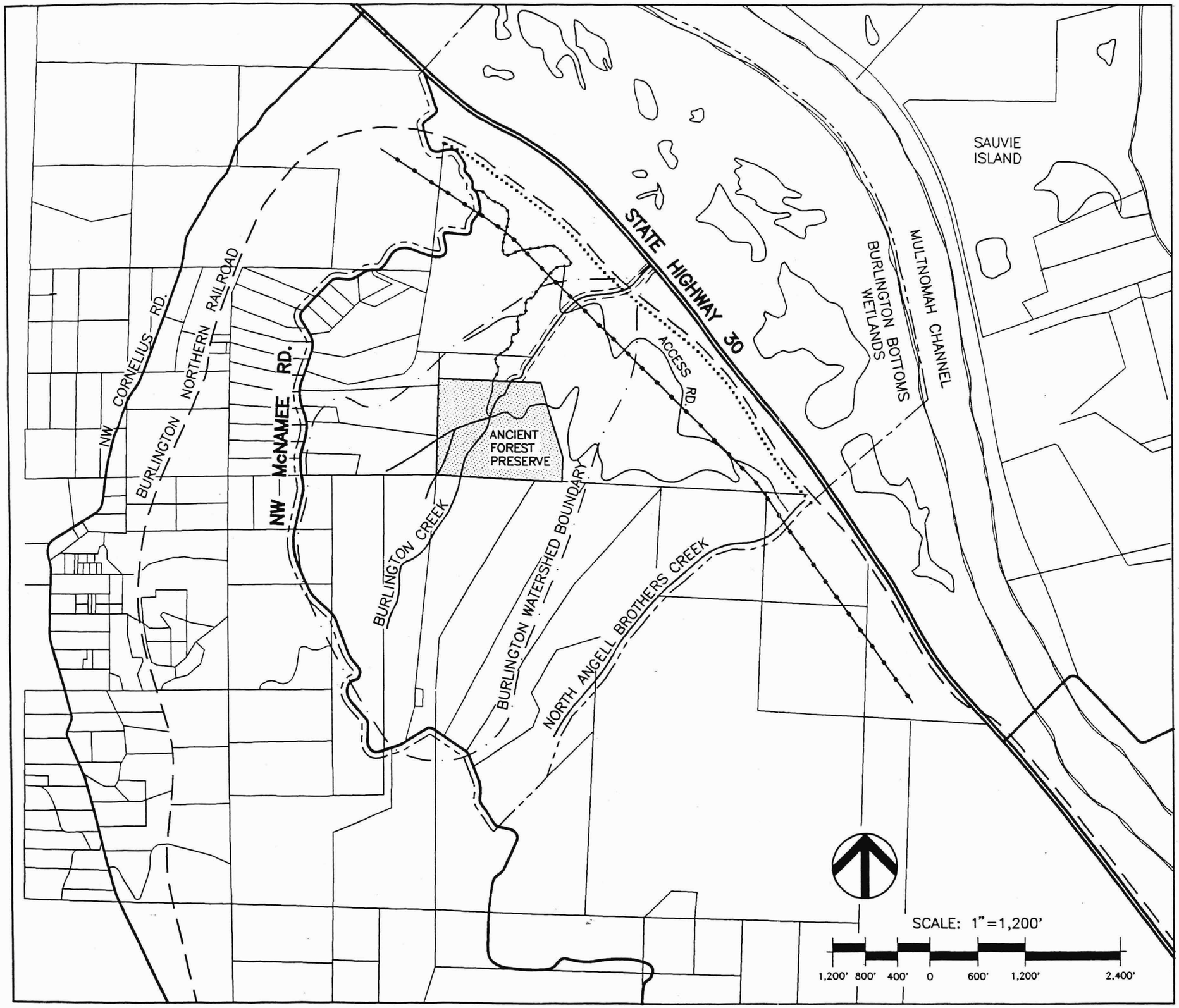
The forested portion of the Preserve shows signs of past harvesting activity (decaying stumps) and was impacted to some extent by the repeated fires recorded for the area between 1840 and 1951, when the last major fire burned 1,200 acres of Forest Park. One large Douglas-fir dated to approximately 450 years sets the starting date for the forest interior. Windthrow (particularly in winter of 94-95 and 95-96) and root rot has impacted the Preserve.

Landscape Fragmentation

The most recent disturbance in the study area has been timber harvesting. Timber harvesting along the entire Tualatin Range and the mining activities to the southeast of the study area have temporarily isolated the Preserve from the Coast Range and Forest Park. Highway 30 represents a major barrier between the upland watershed and its associated downstream wetland.

The habitat fragmentation that has resulted from timber harvest has altered light and wind intensities within the Preserve. Adjacent clear cuts can be seen from virtually all points within the Preserve. The effects of this disturbance include altered species composition, (allowing a greater representation of shade-intolerant species, wind-dispersed, and warmer/drier site species), and increased threats of windthrow. Some non-native invasive species such as Himalayan blackberry and wall lettuce have already begun to colonize the forested portion of the Preserve. As a result of this disturbance and the relatively small size of the Preserve even the interior old growth forest now functions as "edge" habitat.

The effects of habitat fragmentation will be reduced as new forest develops. Without the development of mature forest around the Preserve, it will not function as an interior old growth habitat and will continue to be threatened by windthrow hazard and altered species composition. To maintain interior habitat for old growth plant and animal species, a core of old growth forest must be maintained at least 200-300 feet (preferably more) from an edge with a significantly different forest structural stage or age.



PROJECT STUDY AREA

VEHICULAR SERVICE EASEMENT

PEDESTRIAN EASEMENT

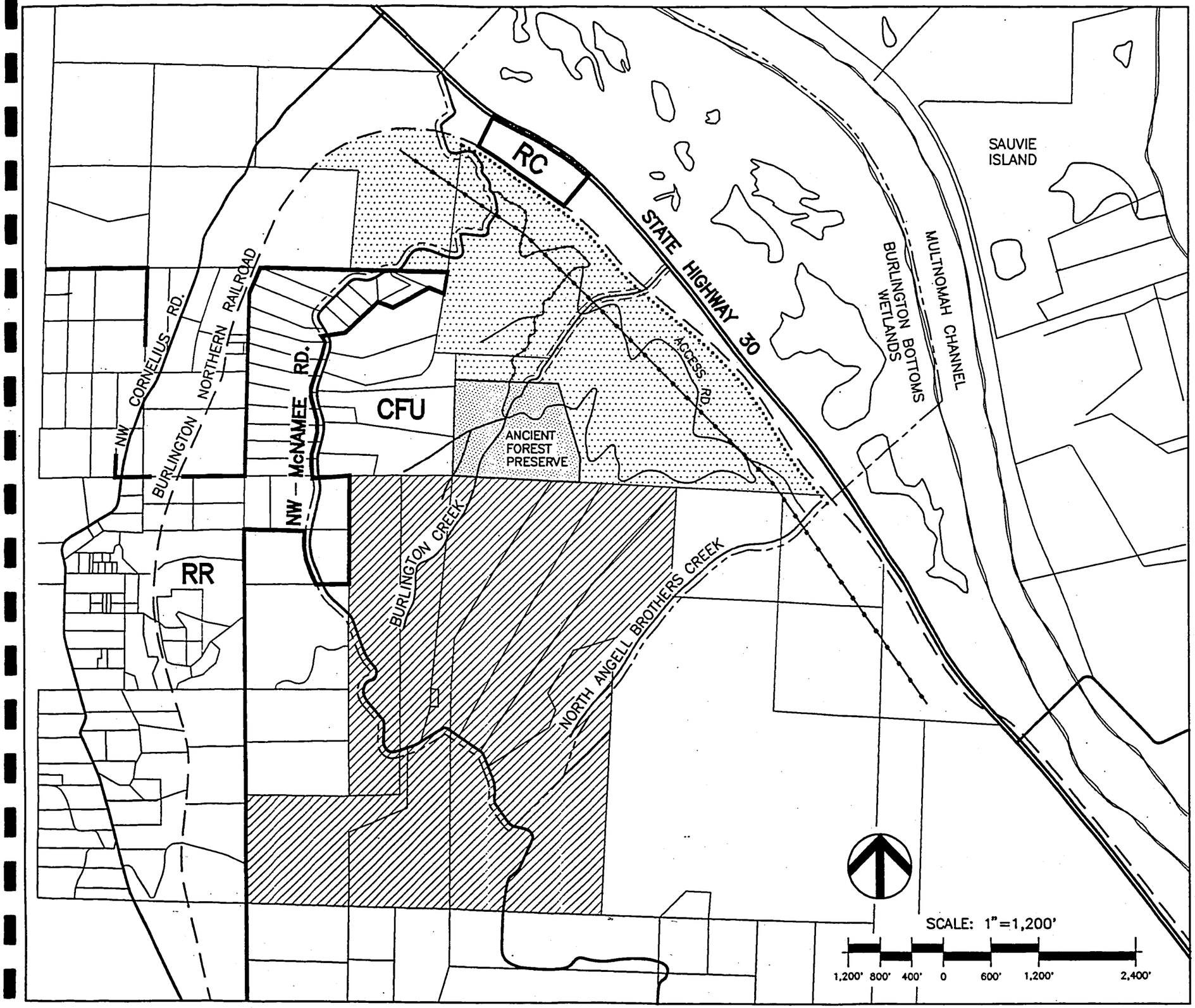
PACIFIC COAST RANGE HIKING TRAIL EASEMENT

BPA POWERLINE EASEMENT

BURLINGTON WATERSHED BOUNDARY

Ancient Forest Preserve

PROJECT STUDY AREA
MAP 1



CFU — COMMERCIAL FOREST USE

RR — RURAL RESIDENTIAL

RC — RURAL CENTER DISTRICT

PROJECT STUDY AREA

30' WIDE EMERGENCY VEHICULAR EASEMENT (15' TO EACH SIDE FORM CENTERLINE OF ROAD)

100' WIDE PEDESTRIAN EASEMENT (50' TO EACH SIDE FROM CENTERLINE OF CREEK)

6' WIDE PACIFIC COAST RANGE HIKING TRAIL EASEMENT

BPA POWERLINE EASEMENT

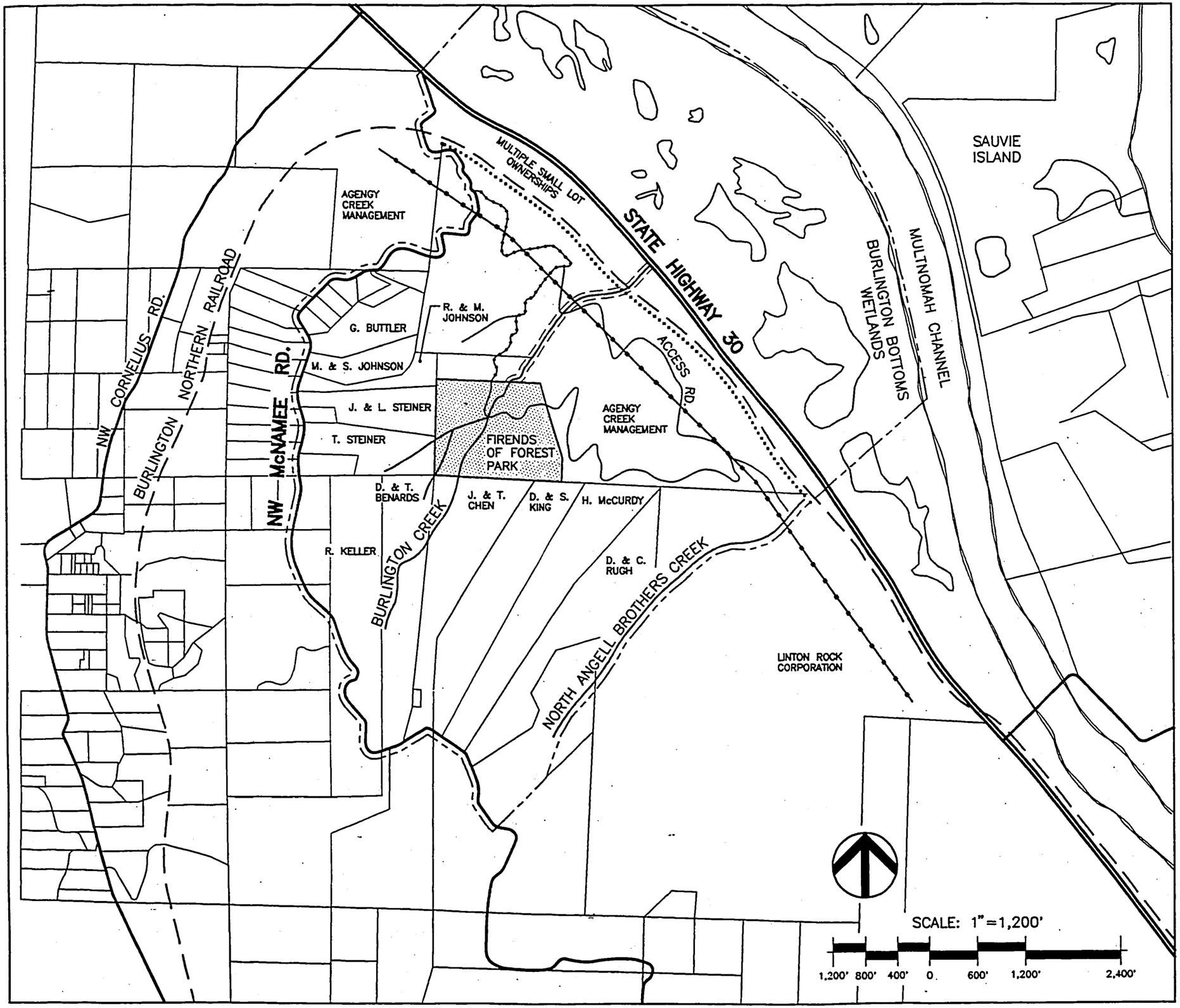
BURLINGTON NORTHERN RAILROAD

CROWN PACIFIC CONSERVATION EASEMENT

AGENCY CREEK MANAGEMENT CONSERVATION EASEMENT

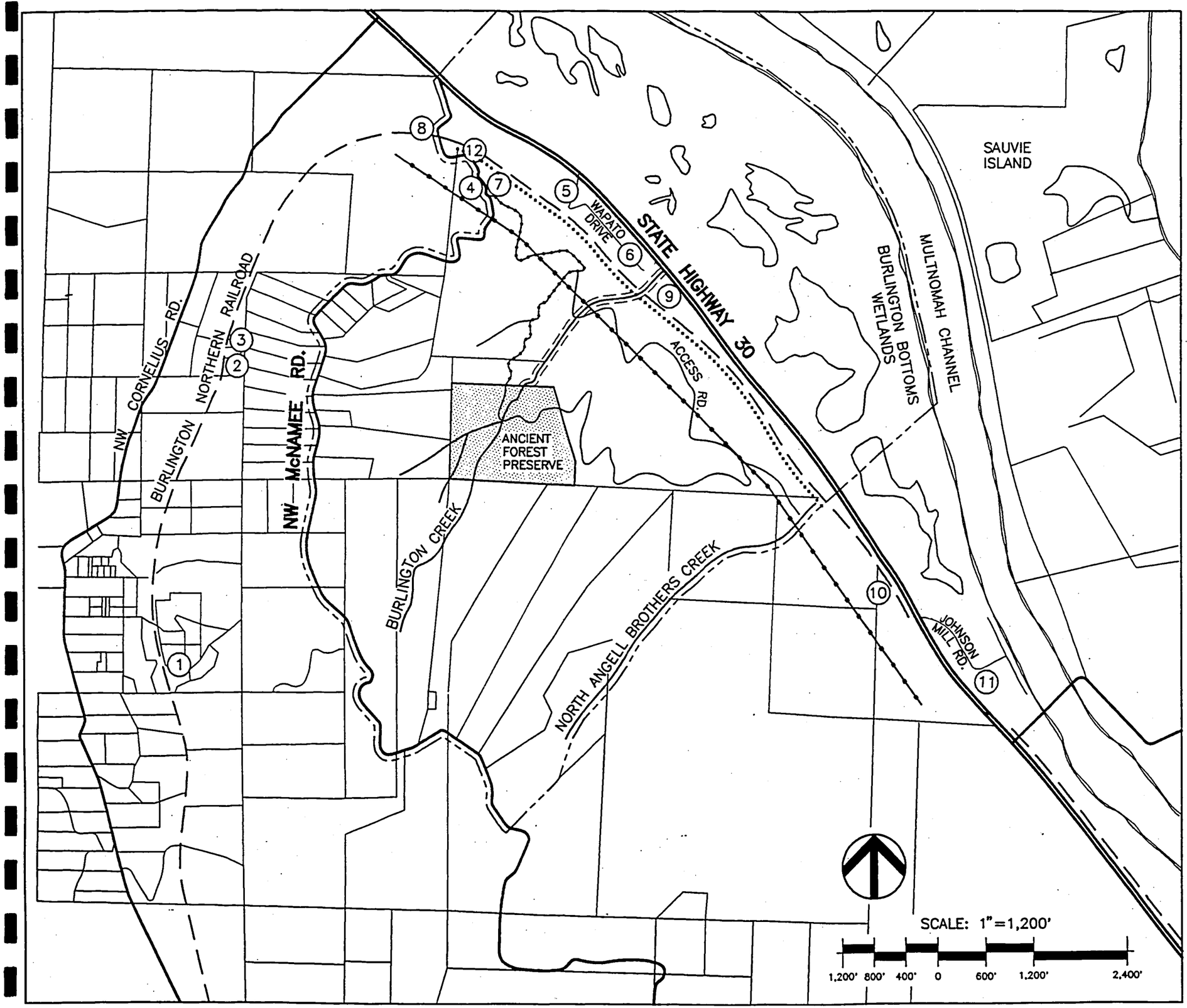
Ancient Forest Preserve

ZONING/EASEMENTS
MAP 2



Ancient Forest Preserve

LAND OWNERSHIP
MAP 3



PROJECT STUDY AREA

VEHICULAR SERVICE EASEMENT

PEDESTRIAN EASEMENT

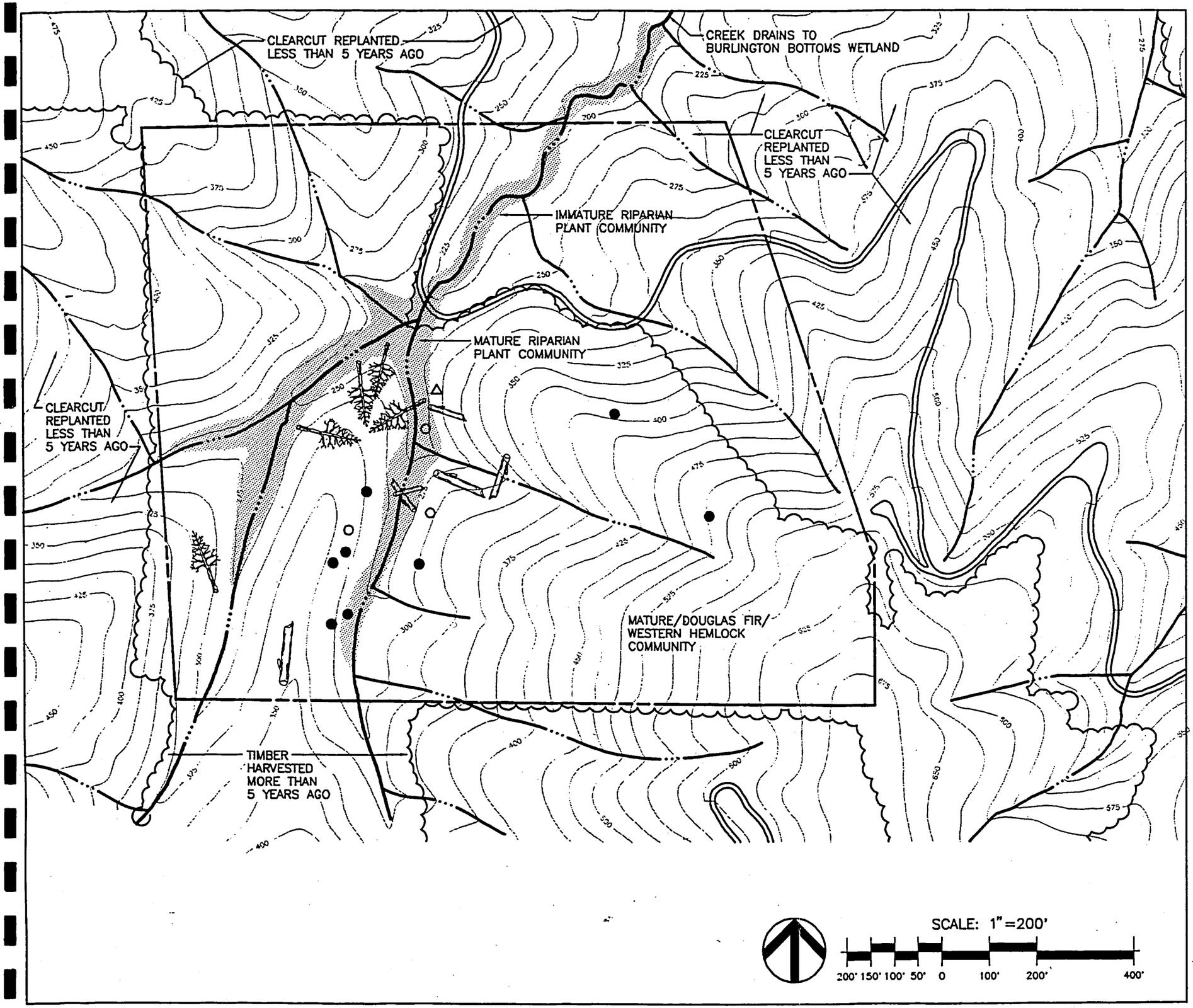
PACIFIC COAST RANGE HIKING TRAIL EASEMENT

BPA POWERLINE EASEMENT

(12) PARKING OPTION LOCATIONS (REFER TO TEXT FOR OPTIONS 1 THROUGH 12)

Ancient Forest Preserve

PARKING LOT OPTIONS
MAP 4



RECENT BLOWN DOWN TREES

OLDER DOWNED LOGS\ NURSE LOGS

OLD GROWTH TREES

SNAGS

NURSE STUMP

EDGE OF FOREST

RIPARIAN PLANT COMMUNITY

PRIMARY CREEK

SECONDARY CREEK

PROPERTY BOUNDARY

GRAVEL ROAD

Ancient Forest Preserve

NATURAL RESOURCES
MAP 5

CHAPTER TWO:
MASTER PLAN

Chapter Two
Master Plan

The Master Plan for the Ancient Forest Preserve was developed to guide Metro and Friends of Forest Park in the development and management of this unique natural resource.

The dynamic nature of forests and recent disturbances within the study area indicates continued change in the Preserve and study area. The creation of buffers around the Preserve will minimize impacts from natural ecological processes such as windthrow, fire, insects, disease, and landslides. Buffers will allow the Preserve to maintain resiliency to natural disturbance without significant changes in biodiversity. Biological linkages between the Preserve and other nearby natural area should be maintained and strengthened. Long term monitoring of the Preserve is recommended.

Project Goals and Recommended Actions

The vision for this project was developed by the Project Advisory Committee and approved by the public through the public participation process. The project goals developed through the vision guided the Master Plan development. The recommended actions listed below the goals will help Metro and FoFP achieve the goals of the project.

Goal 1: Preserve and maintain the integrity of the Old Growth Forest in perpetuity

Recommended Actions

- Provide controlled access to the Preserve; indirectly regulate the number of visitors to the old growth in order to reduce impact (small trailhead and parking area, minimal publicity)

- Construct a low impact trail to and within the Preserve. Minimize impact on species composition and forest structure, including impacts to fallen trees, soil productivity, etc. especially in drainages where mature and old growth forest development is greatest by using boardwalks and controlled access.

- Work with adjacent land owners to re-establish a buffer around property in order to minimize "edge effect".

- Re-establish the harvested portion of the Preserve by allowing forest succession.

- Monitor the condition of the Preserve and the surrounding watershed to document changes in plant and animal species abundance, diversity, trail width, water quality, erosion, etc.

- Monitor visitor impacts to trails and adjacent areas within the Preserve.

Goal 2: Protect and strengthen wildlife corridor connecting Forest Park to the Coast Range

Recommended Actions

- Improve the continuity of the drainage to allow migration between the Preserve and Burlington Bottoms wetlands (shade stream corridor, realign or remove culverts if feasible).

- Protect the Preserve by implementing objectives of Metro's February 1996 Open Space Refinement Plan for Forest Park.

Goal 3: Provide educational and passive recreational opportunities for the community

Recommended Actions

- Foster appreciation for old growth forests through signage located along the trail that addresses the value of the old growth forest, nurse logs, snags, big trees, etc.

- Promote understanding of forest succession and regeneration by utilizing the harvested portion of the Preserve in passive and interactive education efforts. Add large woody debris and encourage snag formation in the Preserve's clear cut to demonstrate their value in improving habitat structure and soil productivity.

- Encourage conservation and local school groups to utilize the Preserve as an outdoor learning area.

- Develop a volunteer stewardship program to assist with ongoing site management.

- Work with local residents to implement voluntary conservation measures on private lands.

Components of the Master Plan

Components of the plan include: parking, access to and within the site, Preserve buffering and protection, enhancement opportunities, environmental education, long term monitoring, and safety and security issues. Maps that accompany this chapter are grouped together at the end of this chapter. The Ancient Forest Master Plan is illustrated on Maps 7A & 7B. Key components of the Plan are discussed below.

Site Access

Estimated Visitor Usage of the Preserve
Prior to developing a concept design for the parking area and trails, estimates were made for the expected number of annual visitors to the Preserve. Trail head location, parking area size, trail type within the Preserve and educational programming all influence the amount of visitation and degree of impact to the Preserve. An estimate of visitor usage of the Preserve was calculated based on the following assumptions:

- 3 persons / car
- 6 car lot capacity
- 12 cars / day - April to October / weekends and holidays
- 8 cars / day - April to October / weekdays
- 6 cars / day - November to March / weekends and holidays
- 4 cars / day - November to March / weekdays

The estimated number of visitors is between 8,000 and 10,000 people per year.

Parking
The site will be accessed from McNamee Road off of Highway 30. The proposed parking area for the Ancient Forest Preserve is located on McNamee Road, approximately 250 feet uphill from of the Burlington Northern railroad trestle crossing over the road (see site #12 on Map 4). Multnomah County Transportation Department has determined that the site is eligible for development permits. FoFP have an option with Agency Creek Management Company to purchase the site in order to provide parking for the project.

Given the topography of the site and the desire to use the size of the parking lot to control visitor usage, the preliminary design concept provides parking for 5-6 cars (see Map 8 and Figure 3). Bus parking is not included because the recommended trail system to and within the Preserve is not designed to handle a 50+ person group. Oxbow Park and Forest Park are already available to accommodate higher use levels.

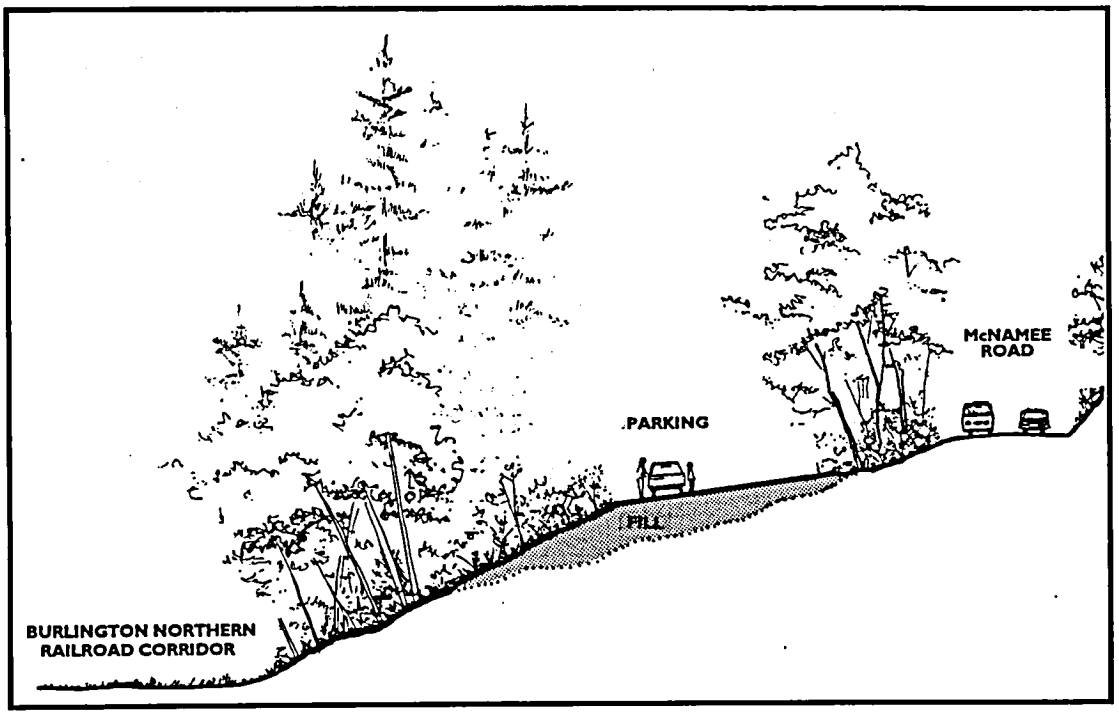


Figure 3: Cross section of proposed parking area

The construction of the parking area will require approximately 12,000 to 13,000 cubic yards of fill, which may be purchased or donated. The finished surface would consist of 8 inches of gravel. The slopes surrounding the parking area will need to be stabilized with plantings and erosion control fabric. Some of the existing plantings on the site may be salvaged and used for the stabilization.

Access Trail Design and Construction

To remain consistent with the goals and objectives of the Master Plan, trail construction should:

- Minimize erosion, including migration of sediment
- Avoid cutting the roots of trees and shrubs where feasible
- Discourage the use of mountain bikes on the trails by avoiding long, steep, clear runs
- Utilize water bars, and boardwalks in wet areas
- Moderate grade to the maximum extent possible
- Conduct synoptic survey for threatened and endangered species where trail disturbance will occur

Access Trail to the Preserve

Approximately 5000 linear feet of trail is needed to reach the Preserve from the proposed parking location (Map 7A). The proposed Burlington Northern Rails to Trails corridor is the preferred trail alignment for the first 2200 linear feet of trail from the

parking area. Using this existing corridor for a trail would be less expensive, reduce redundancy of trails, and be more environmentally sensitive. However, the Burlington Northern Railroad Company currently owns the corridor. This option will only be feasible if Metro purchases the corridor in the future. If purchased, interim trestle improvements would be required for safety purposes prior to using the corridor to access the Preserve. Full conversion from rails to trails would occur as funds for construction become available. The future trail would be asphalt, approximately 8-10 feet wide and universally accessible. Informational, safety, and regulatory signing would be provided along the length of the corridor. This trail section would be classified as "easy". The "most difficult" classification would occur where the trail turns up-slope towards the Preserve.

If the Burlington Northern corridor does not become available, visitors would hike from the trailhead along a 3 foot wide natural surface trail within the Pacific Coast hiking trail easement that is approximately 100 feet southwest (uphill) of the Burlington Northern ROW (Map 7A). The trail requires three minor drainage crossings and one major crossing (a wooden puncheon structure built close to the ground) before reaching the ridge of the watershed. From there, the trail gradually descends into the drainage, crosses the Burlington Creek on a boardwalk supported on footings and ascends up to where it crosses the lower gravel road. After crossing the road, the trail will switchback down into the drainage, cross the Burlington Creek on another boardwalk, and continue along the floodplain terrace on the northwestern side of the drainage. A place to rest and view interpretive signage would be available at the upper gravel road, just before the trail enters the forested portion of the Preserve (see Figure 4). The trail accessibility level would be classified as "difficult" to "most difficult."

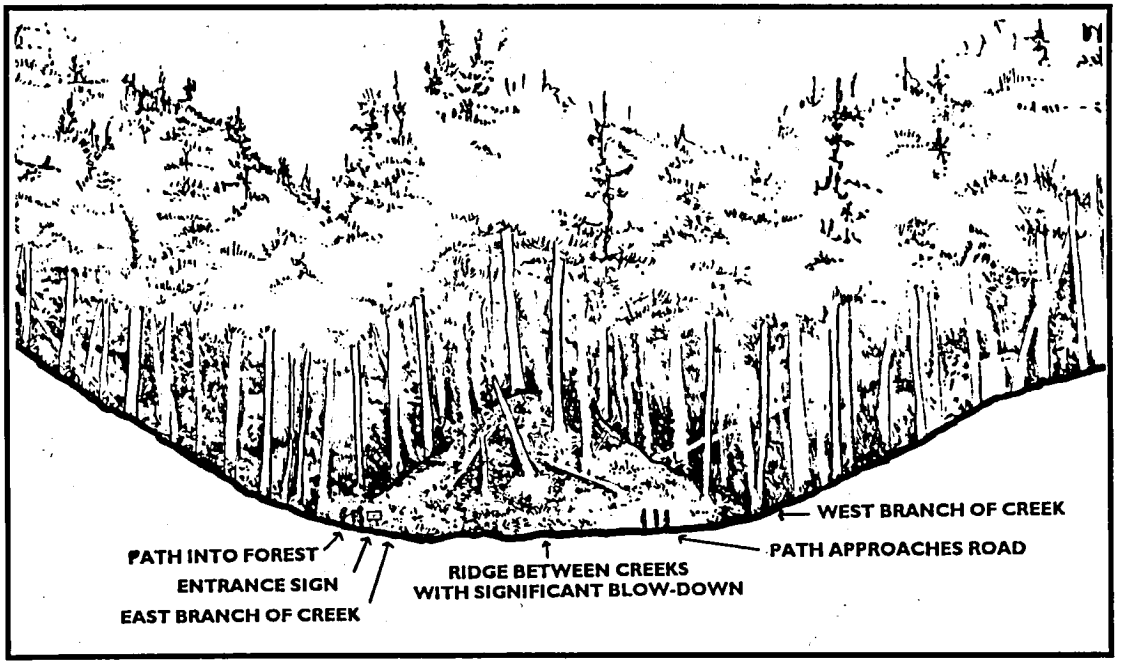


Figure 4: View of the entrance to the Preserve

Access Trail Within the Preserve (Forested Portion)

The suggested trail route within the forested portion of the Preserve was chosen so that visitors would have the opportunity to experience and learn about all the special features of an old growth forest, while minimizing impact to the resource (see Map 7B). The trail would take people to some of the "best" features the site has to offer including: snags, downed logs, nurse logs, large live trees, the creek, and views of multilayered canopy and lush vegetation (see Figures 5 & 6). A viewing platform at the top of the interior ridge provides the visitor with outstanding views and a place to sit, rest, and enjoy the forest.

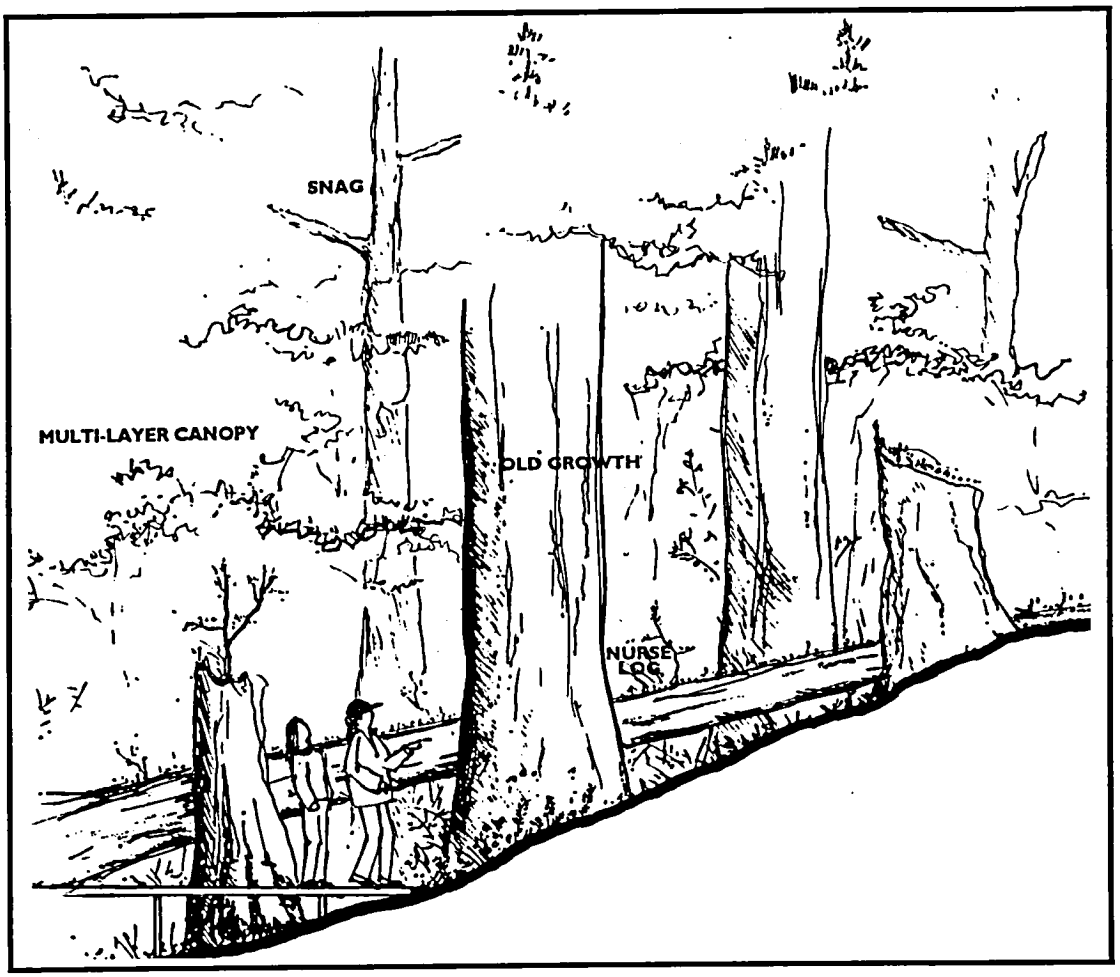


Figure 5: Views within the Preserve

The trail enters the mature forest from the upper gravel road and parallels the east side of the Burlington Creek to the center of the forested portion of the Preserve. The path turns southwest to cross over the creek floodplain and heads up the slope of the ridge which is covered with woody debris and dense vegetation. At the crest of the ridge, the trail continues deeper into the forest before ending at a viewing platform where a majority of the old growth trees exist. Approximately 650 linear feet of trail is needed to reach the viewing platform, which serves as the "destination point."

An elevated trail system within the entire forested portion of the Preserve was explored during the planning process. However, the cost of installing and maintaining such a trail was determined to be cost prohibitive for the project. A comparison study of trails used in similar settings in the Pacific Northwest (See Trail Alternatives Memo in Appendix) provided alternatives that will ensure that trail construction, use, and maintenance are sensitive to the resource. Table 3 shows the recommended trail types within the forested portion of the Preserve.

TABLE 3
TRAIL CHARACTERISTICS WITHIN FORESTED PRESERVE

Trail Type	Length (Feet)	Material
Earthen	225'	Native earth / wood chips
Turnpike	118'	Built up earthen trail with wood borders
Puncheon	120'	Non-elevated boardwalk
Stairs • Cut-in • Wooden	175'	 Log framed earthen stairs Elevated on piers

The boardwalk that crosses the creek would be supported on helical piers that drill into the ground like a cork screw, minimizing impact to the landscape and eliminating the use of cement within the forest. Either cut-in earthen stairs or wooden stairs on helical piers would be used to climb the slope to the top of the ridge. Stairs reduce erosion potential from drainage and keep people from wandering off the trail. Earthen stairs require some soil disruption during installation, but if properly designed, can be as environmentally sensitive as wooden stairs. Earthen stairs are less costly and easier to build than wooden stairs. The most appropriate design should be determined in the field. The level of accessibility for the trail within the forested portion of the Preserve would be classified as"most difficult."

Creating a loop trail was also explored during the planning process. However, the relatively small size of the Preserve limits opportunities to create a loop without significantly impacting the resource and visitor experience. Standing at the viewing platform on the ridge, one would be able to see and hear others on a path located along the far side of the drainages. As a result, the "solitude" element of a satisfactory visitor experience and the un-disrupted view of an old growth forest would be lost. Once the Preserve's buffers become well established and the ability of the site to withstand human impact can be determined, the option for a loop trail could be re-visited.

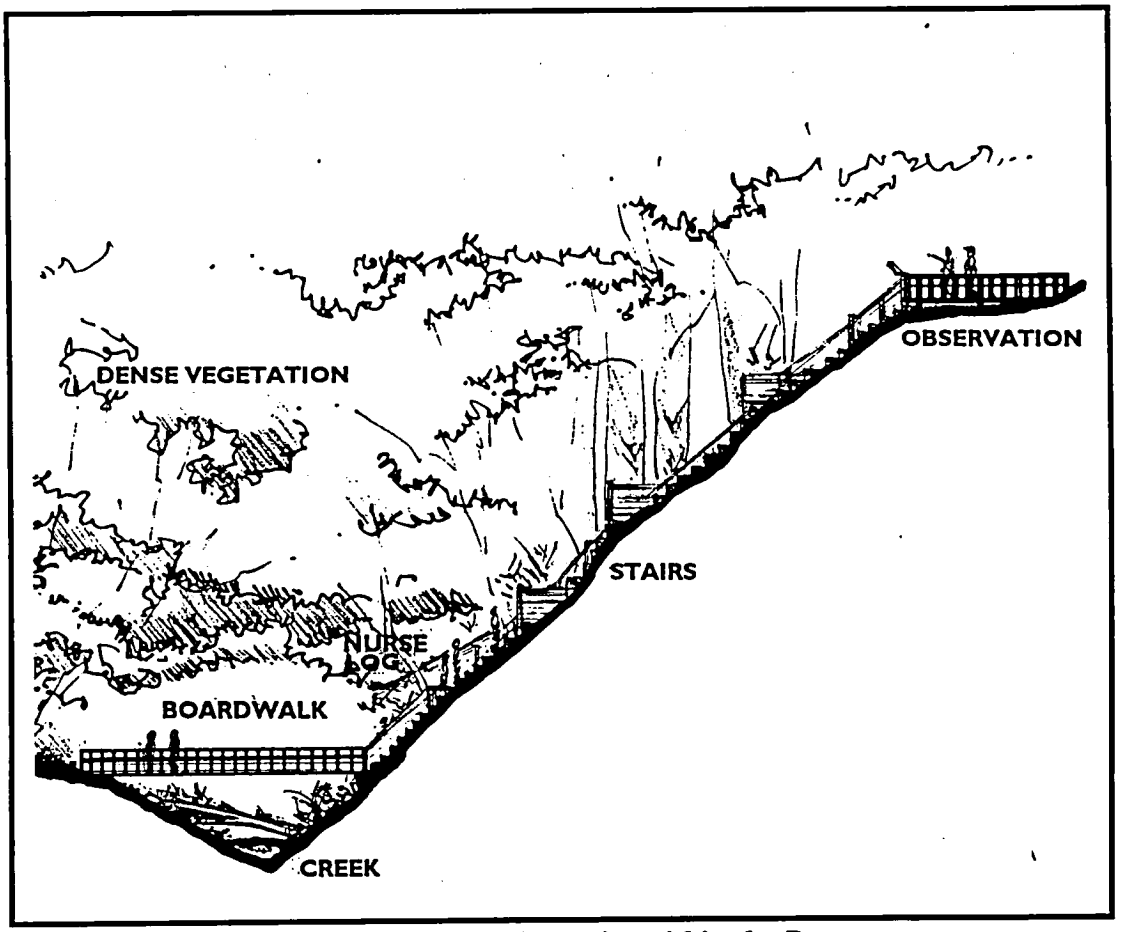


Figure 6: Path leading to the destination point within the Preserve

Environmental Education / Interpretation

Environmental education will be made available at the site through interpretive signage and subtly marked points of interest along the pathway between the parking area and the destination point within the Preserve. Topics likely to be covered include: forest succession, watersheds, creeks, ancient forest systems, plant identification, bird and other animal identification, and environmental stewardship. It is anticipated that one large interpretive sign will be located at the entrance to the forest at the upper gravel road. Two smaller signs, one at the viewing platform and the other at the parking area or trailhead off of Burlington Northern ROW, would also provide the hiker with information about the Preserve and its watershed. A few (4-8) small placards may point out snags, nurse logs, and tree species names. A plaque commemorating the donors of the Preserve will be provided by FoFP.

Following the construction of the trail within the forested portion of the Preserve, guided site tours will be made available. These tours will serve as the only method of visitation while the parking lot and access trail to the Preserve are constructed.

It is anticipated that a plan for educational programming will be developed for the site through Metro, to ensure proper utilization for educational purposes. Audubon currently has an Ancient Forest program that could include a visit to the Preserve.

Permitting / Zoning Changes

Due to the sensitivity of the Multnomah channel and the Burlington Bottoms wetlands, a Grading and Erosion Control permit is required if more than 50 cubic yards of soil are disturbed or if grading takes place within 100 feet of the bank of a watercourse. It is likely that the total trail construction and parking area development will disturb more than 50 cubic yards. A Hillside Development Permit is required in areas where the trail is located on steep slopes (greater than 25%) or when there are drainage changes or stream crossings. A Significant Environmental Concern permit must be obtained for construction of the trail when it is within 300 feet of Burlington Creek. Design review of the parking area, boardwalks, and stairs may be required by Multnomah County.

As identified in the Multnomah County land division approval that created the Preserve, development for a park requires planning commission approval for a Community Service Use. The parking area may also require conditional use approval by the planning commission.

Site Maintenance / Safety Monitoring

The managing entity for the project site would be responsible for regularly patrolling the parking area, maintaining the integrity of the trail system and signage, and visiting the Preserve in order to maintain a safe and clean environment. The parking area, trail, and Preserve have been designated as "garbage-free", meaning visitors will need to pack out everything they bring into the area. The parking area is close to the road, which provides greater visibility, thus better security. An access road is available to the Preserve for maintenance purposes, or in the event of an emergency. There will be no water, toilet, or trash receptacle available for this site.

Nine acres of replanted clear cut forest exist as part of the Preserve, along the northeastern boundary. It is recommended that the area be thinned in several years as the canopy begins to close and shade out the understory plants. The thinning will help speed forest succession and still provide adequate wind break for the existing forest.

Long Term Ecological Monitoring

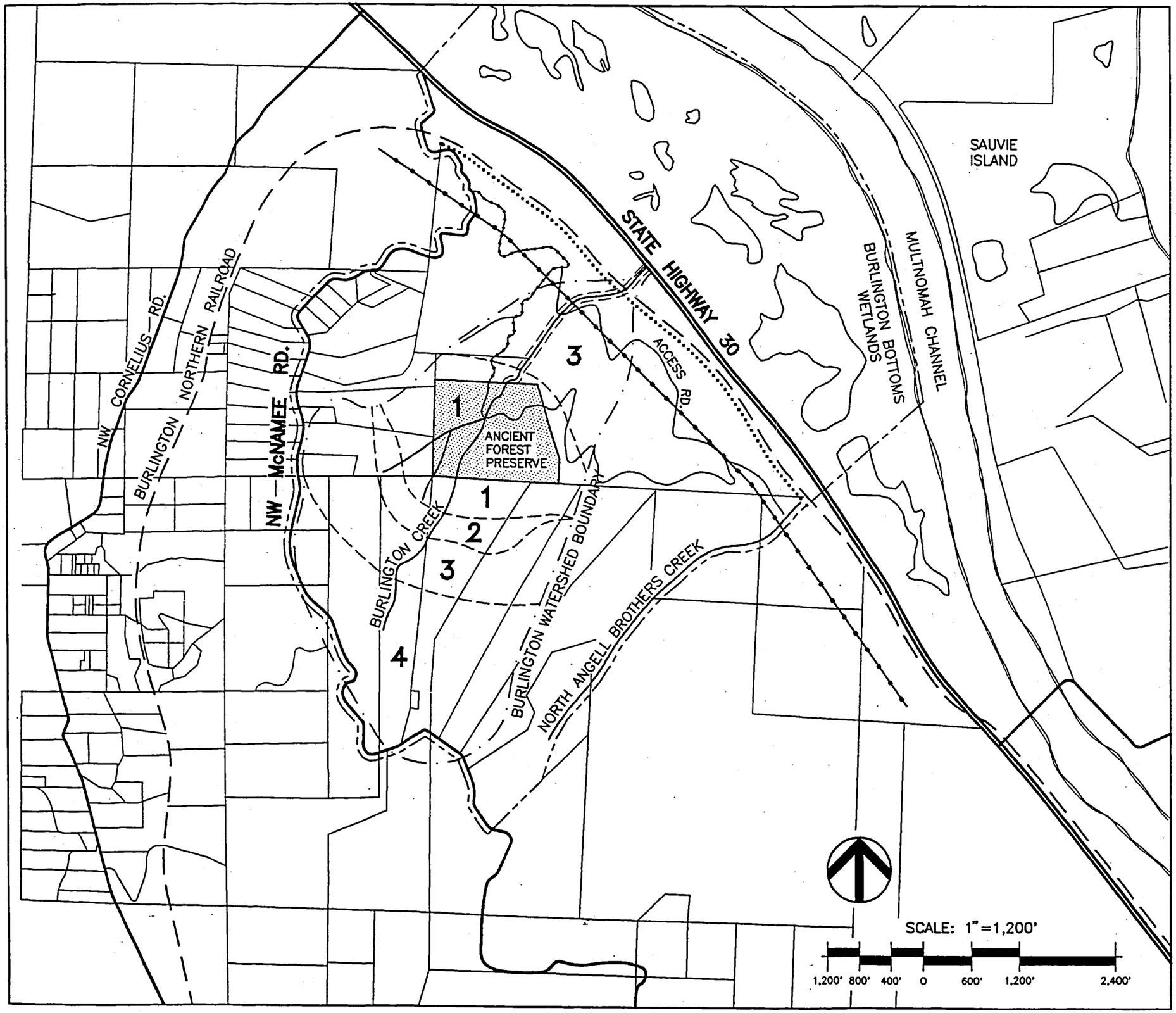
A long term monitoring plan that evaluates changes in species composition, wildlife habitat utilization, amount of human visitation, and visitor experience rating needs to be developed and implemented. Records of human visitation and visitor experience should be kept for this site. The information generated, along with recent scientific research in the Preserve, should be used to make management decisions at the site.

Compliance with the conservation easements in the project area is monitored by FoFP. Stewardship of this watershed by the neighbors will be a valuable contribution to the long term success of this project as a preserve.

Watershed Protection / Buffering

To achieve the goal of "preserving and maintaining the integrity of the old growth forest in perpetuity" the Preserve needs to be buffered by more forest to reduce "edge" effect. Map 6 shows buffer protection areas in the order of their priority. The following recommendations are consistent with the objectives of the Forest Park Open Space Refinement Plan adopted by Metro Council in February 1996 (see Bibliography in Appendix):

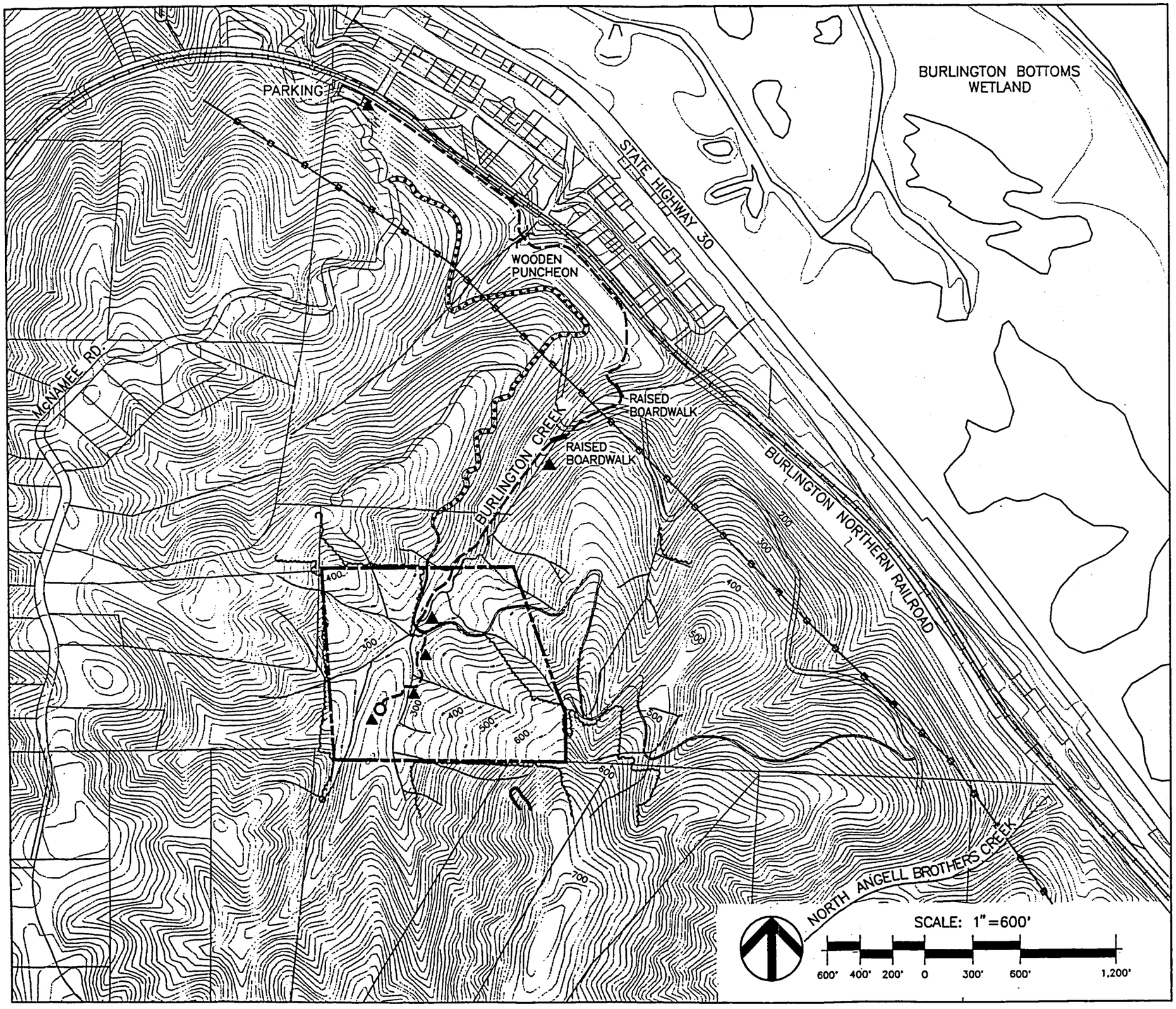
- Achieve buffer protection for the Preserve through land and easement acquisitions.
- Establish rapport with private landowners in the area to explore opportunities for easements, timber management strategies, and common watershed protection.
- Encourage appropriate land use in the watershed by advocation zoning regulations for large homestead lots of 80 acres or more. Pursue easements that require Best Management Practices for harvesting in areas that buffer the Preserve.
- If rare, threatened, and/or endangered species are found on the project site, implement management policies for species protection



1 HIGHEST PRIORITY BUFFER
2 SECOND PRIORITY BUFFER
3 THIRD PRIORITY BUFFER
4 FOURTH PRIORITY BUFFER
PROJECT STUDY AREA
VEHICULAR SERVICE EASEMENT
PEDESTRIAN EASEMENT
PACIFIC COAST RANGE HIKING TRAIL EASEMENT
BPA POWERLINE EASEMENT
BURLINGTON WATERSHED BOUNDARY

Ancient Forest Preserve

BUFFER ZONE PRIORITY
MAP 6



PROPOSED PEDESTRIAN TRAIL ROUTE

GRAVEL ROAD FOR EMERGENCY ACCESS / MAINTENANCE

BPA POWERLINE EASEMENT

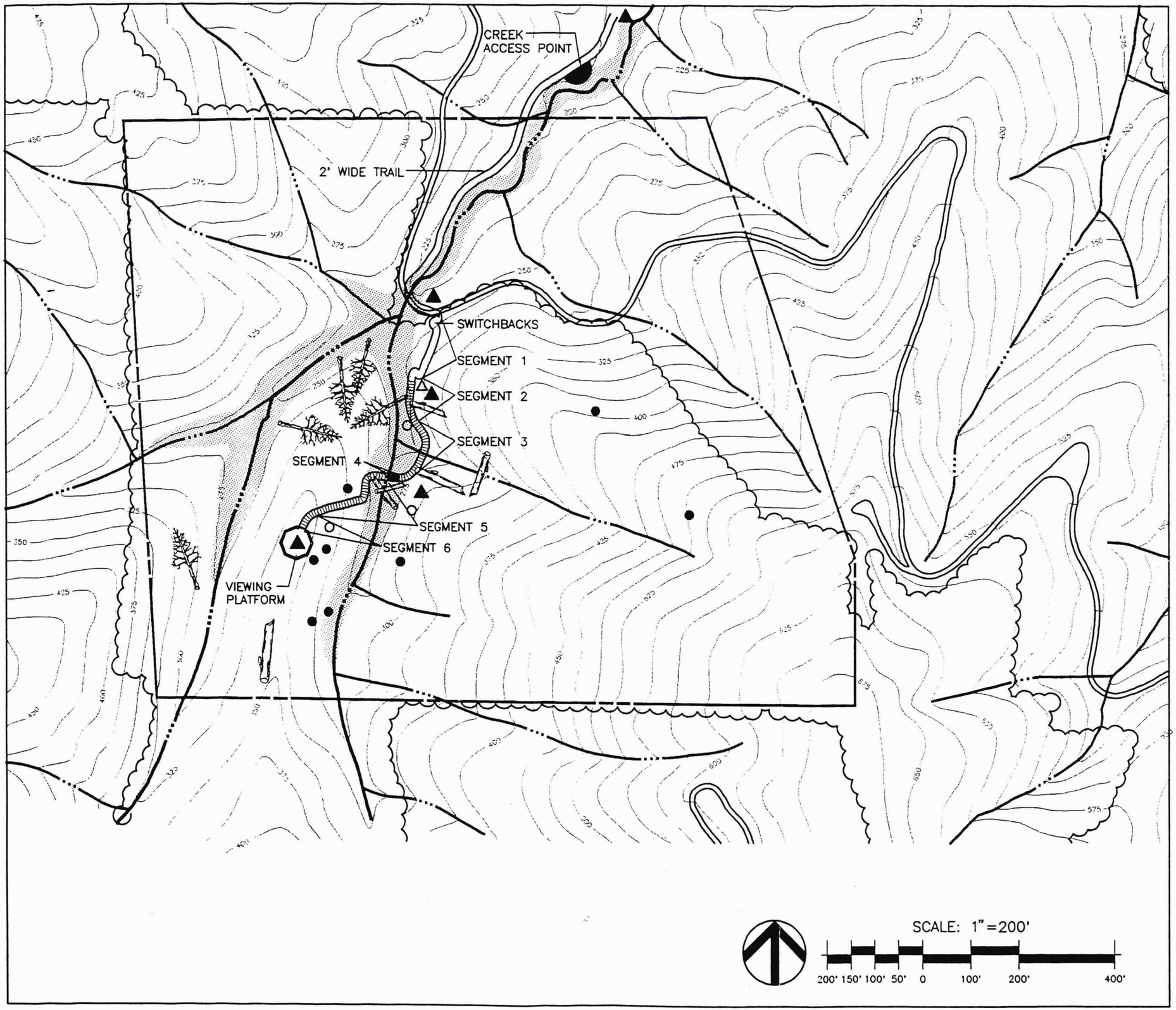
POTENTIAL INTERPRETIVE LOCATIONS

WOODEN PUNCHEON (GROUND LEVEL CROSSING)

RAISED BOARDWALK CROSSING

Ancient Forest Preserve

CONCEPT MASTER PLAN
MAP 7-A



POTENTIAL INTERPRETIVE LOCATIONS

RECENT BLOWN DOWN TREES

OLDER DOWNED LOGS\ NURSE LOGS

OLD GROWTH TREES

SNAGS

NURSE STUMP

EDGE OF FOREST

RIPARIAN PLANT COMMUNITY

PRIMARY CREEK

SECONDARY CREEK

PROPERTY BOUNDARY

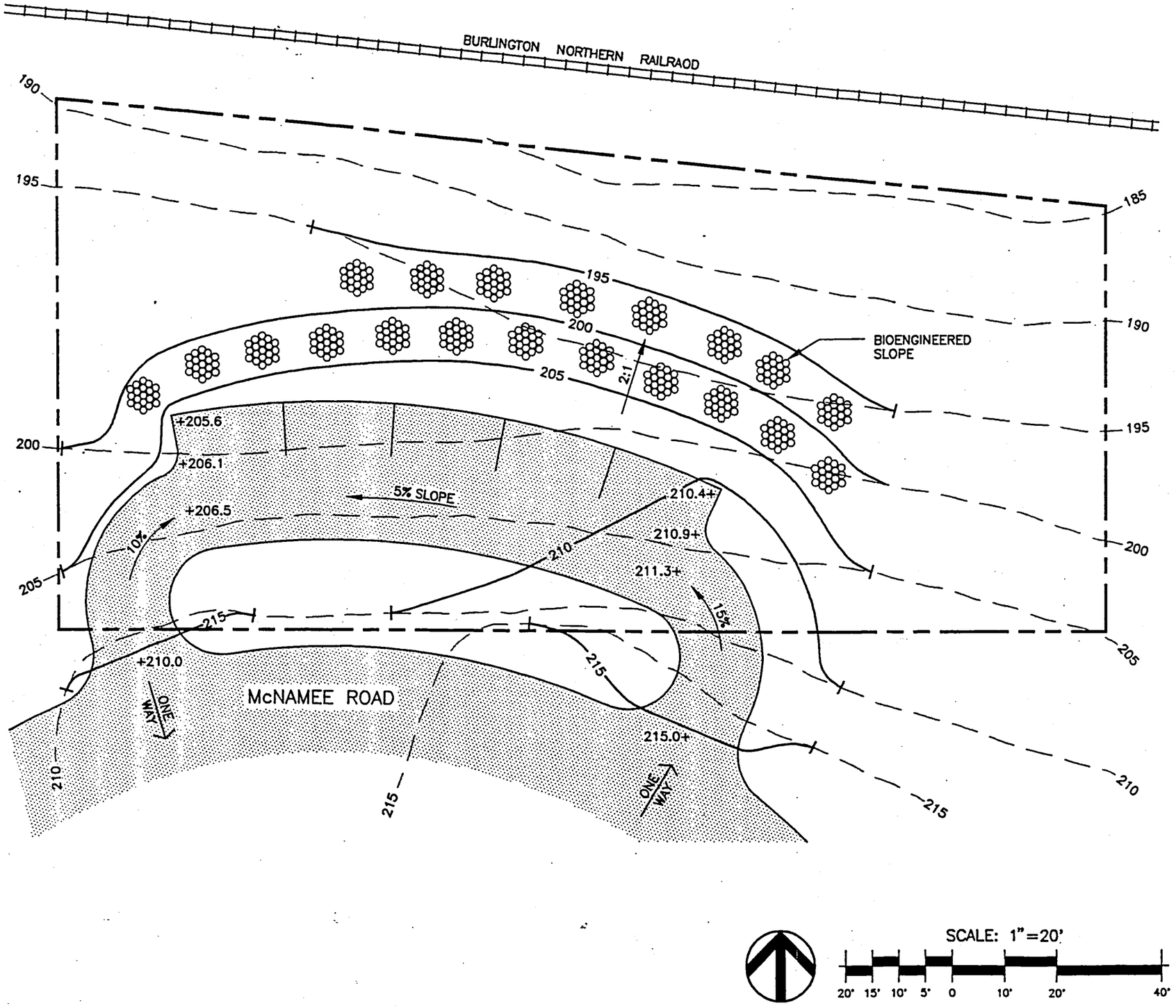
GRAVEL ROAD

TRAIL SEGMENT	LENGTH (FEET)	TRAIL TYPE
1	225'	EARTHEN
2	75'	PUNCHEON
3	120' 3'	TURNPIKE PUNCHEON
4	12'	BOARDWALK
5	175'	STAIRS
6	40'	PUNCHEON

Ancient Forest Preserve

CONCEPT MASTER PLAN
MAP 7-B

@ Metro



Ancient Forest Preserve

PARKING LOT DESIGN
CONCEPT MAP 8

@ Metro

CHAPTER THREE:
PLAN IMPLEMENTATION

Chapter Three
Plan Implementation

Converting the Ancient Forest Preserve into a publicly accessible destination, for passive recreational and educational opportunities, is the primary mission of this planning process. The 1995 Open Spaces Bond Measure provides funding for the implementation of this project. The purpose of this implementation plan is to assess the costs and phases associated with the project development, so that an informed decision about the future development can be made by Metro and other managing entities.

Implementation Tasks and Project Phases

Within each of the Master Plan components, several steps need to be taken to complete the implementation in a cost effective and efficient manner. These tasks and their phases are presented in Table 4.

The trail access that parallels the existing Burlington Northern Right-of-Way is recommended to be constructed last. This will provide time for the Rails to Trails project to get underway, possibly eliminating the need for the construction of the duplicate access trail between the parking area and the Burlington Creek drainage.

Implementation Costs

Estimated costs for site development are provided in Table 5. Site development costs are shown in the form of labor for design and construction, and construction materials. Standard designer and construction labor rates were used. However, the option of utilizing volunteers and service crews was also provided because using them can significantly reduce costs while promoting stewardship and environmental education. Estimated costs for annual operations and maintenance activities are in Table 6.

Funding for Implementation

With the passage of the Open Spaces Bond Measure, Metro has allocated $150,000 for the implementation of this Master Plan. The Wetlands Conservancy has expressed interest in the project and is willing to commit $5,000 in labor and $2,000 in plant materials. Friends of Forest Park have offered in kind volunteer services for trail construction and maintenance, long term monitoring and leading tours.

Additional funding for the implementation should be sought through partnerships and grants. EPA, the Governor's Watershed Enhancement Board, and the US Forest Service have funds set aside for watershed enhancement and protection projects. The significance of this site as an ecological link to other natural resource areas and proximity to regional trail systems, make it a prime candidate for funding.

TABLE 4
IMPLEMENTATION TASKS AND TIMING

Phases	Project Organization	Design/ Construct Parking	Design/ Construct Accessed Trail	Education/ Interpretation	Site Maintenance	Safety/ Security Monitoring	Ecological Monitoring	Watershed Protection Buffering
PHASE I **0 to 2 years**	1. Immediately following Master Plan approval, determine who will own & manage the Preserve. 2. Coordinate & contract work tasks as needed.	1. Determine permit requirements & approval process & prepare as necessary. 2. Determine boundary of parking site & survey. 3. Acquire parking area site.	1. Determine permit requirements & approvals process & prepare permit phasing schedule for all access trails. 2. Obtain trail/ route approval from Agency Creek Management Co. for trail to the Preserve. 3. Identify & flag precise location of access trail within Preserve (note boardwalk/ puncheon/ stair distances). 4. Survey trail location within Preserve & generate a base map. 5. Prepare design specifications for boardwalks, puncheon, & turnpike trail types. 6. Obtain site materials necessary for trail construction. 7. Construct access trail within Preserve.					Implementation ongoing through Open Space Refinement Process for Forest Park.

TABLE 4
IMPLEMENTATION TASKS AND TIMING (Cont.)

Phases	Project Organization	Design/ Construct Parking	Design/ Construct Accessed Trail	Education/ Interpretation	Site Maintenance	Safety/ Security Monitoring	Ecological Monitoring	Watershed Protection Buffering
PHASE II **2 to 4 years**			8. Repeat steps, 3, 4, 5, 6, & 7 for trail segment between Preserve & hiking trail easement.	1. Provide site tours of Preserve. 2. Prepare a self-guided brochure for use at site. 3. Coordinate educational efforts within Preserve with existing Audubon, Metro, BES & FOFP programs. 4. Coordinate program activities with schools, non-profit organizations, groups & clubs in region, as appropriate.	1. Repair trail tread, brush & clear trail once or twice per year. 2. Maintain drainages.		1. Collect baseline data to enable a subsequent comparison. 2. Coordinate with interested scientists to develop a long term monitoring plan. 3. Prepare findings on a two to three year cycle & identify changes in management policies as appropriate.	Implementation ongoing through Open Space Refinement Process for Forest Park.
PHASE III **4 to 5 years**		4. Complete topographic survey. Design parking area. 5. Clear site for construction & stabilize slopes. 6. Hire contractor to construct parking area.	9. Determine feasibility of obtaining Burlington Northern ROW within next few years. 10. If BN ROW purchased, proceed with interim improvements to parking area. 11. If BN ROW not purchased, develop trail segment along hiking trail easement to parking area.	5. Determine amount of signage appropriate for site. (See Table 5) 6. Design layout, prepare graphics & compose copy. Submit signage package for fabrication following content approval by interest parties. 7. Work with FOFP to develop a plaque to commemorate project donors. 8. Install completed signage according to design specifications.	1. Repair trail tread, brush & clear trail once or twice per year. 2. Maintain drainages. 3. Repair structures once per 5 years.	1. Enforce existing codes for misuse of public property. 2. Patrol parking area & Preserve on weekly or bi-weekly basis.		Implementation ongoing through Open Space Refinement Process for Forest Park.

TABLE 4
IMPLEMENTATION TASKS AND TIMING (Cont.)

Phases	Project Organization	Design/ Construct Parking	Design/ Construct Accessed Trail	Education/ Interpretation	Site Maintenance	Safety/ Security Monitoring	Ecological Monitoring	Watershed Protection Buffering
PHASE IV Ongoing					1. Repair trail tread, brush & clear trail once or twice per year. 2. Maintain drainages. 3. Repair structures once per 5 years.	1. Enforce existing codes for misuse of public property. 2. Patrol parking area & Preserve on weekly or bi-weekly basis.	Continue to prepare findings on a two to three year cycle and identify changes in management policies as appropriate.	Implementation ongoing through Open Space Refinement Process for Forest Park.

TABLE 5 ESTIMATED COSTS FOR SITE DEVELOPMENT		
Design/ Construct Parking Area		**$106,650**
Survey	12 hours @ $95 (2 person crew)	$1,140
Download survey data and map	12 hours @ $65 (eng. tech)	$780
Civil design	85 hours @ $70 (engineer)	$5,950
Permitting	33 hours @ $60 (land use planner)	$1,980
Construction Labor (approx 20% of materials)	250 hours @ $22.31 X 3 persons	$16,750
Construction Materials Clean fill (full price, hauled from off-site) Gravel Hydroseed and jute fabric	 12,400 cubic yards 13,020 square yards 10,000 sq ft	 $69,800 $8,500 $1,750
Design / Construct Access Trail <u>to</u> the Preserve		**$36,100 - $64,935**
Flag location (assuming some clearing by volunteers)	36 hours @$55 (scientist)	$1,980
Survey marked points	48 hours @$95 (2 person crew)	$4,560
Download survey data and map	24 hours @$65 (eng. tech)	$1,560
Construction Labor BOLI Labor I Contractor (6 person crew) **<u>OR</u>** Service Crew (8-10 person crew) Construction Admin Leader	 320 hours @ $22.31 X 6 =$42,835 40 days @ $350/10 hr day = $14,000 20 days @ $440/ 8 hr day	 $14,000-$42,835 $8,800
Construction Materials (3 foot wide trail) • Pressure treated puncheon crossing • Pressure treated boardwalk with footings	 10 linear feet @ $100 (2) 10-12 linear feet @ $175	 $1,000 $4,200
Design / Construct Access Trail <u>within</u> the Preserve		**$53,330 - $96,880**
Flag location	8 hours @ $55 (scientist)	$440
Survey marked points (no topo)	24 hours @ $95 (2 person crew)	$2,280
Download survey data and map	12 hours @ $65 (eng. tech)	$780

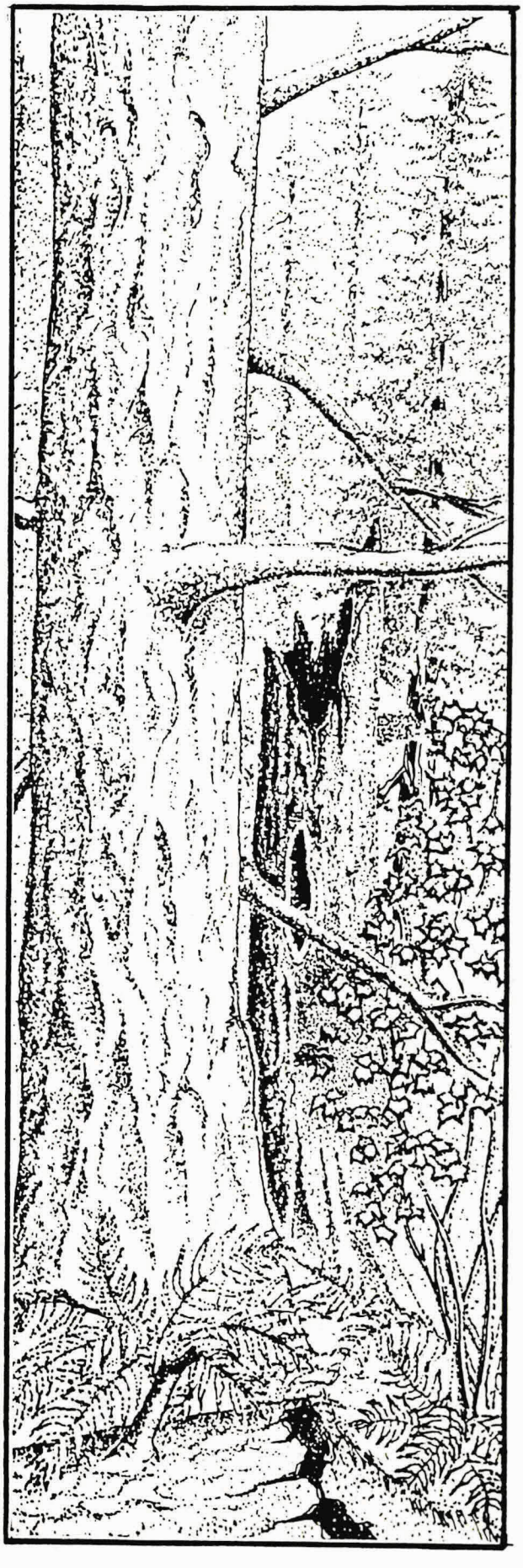
Construction Labor • BOLI Labor I Contractor (6 person crew) **OR** • Service Crew (8-10 person crew) • Construction Admin Leader	192 hours @ $22.31 X 6 = $25,700 **OR** 24 days @ $350/10 hr day = $8,400 12 days @ $440 / 8 hr day	 $8,400-$25,700 $5,280
Construction Materials (3 foot wide trail) • Pressure treated boardwalk with footings • Pressure treated puncheon trail • Turnpike • Platform • Pressure treated stairs with footings **OR** • Cut-in stairs	 10-12 linear feet @ $175 / foot 118 linear feet @ $100 / foot 120 linear feet @ $50 / foot 150 square feet @ $50 / sq foot 175 linear feet @ $200 / foot = $35,000 **OR** 175 linear feet @ $50 / foot = $8,750	 $2,100 $11,800 $6,000 $7,500 $8,750-$35,000
Environmental Education / Interpretation		**$19,200 - $20,200**
Design of Signage (3 signs + plackards)	114 hours @$70	$7,980
Material Cost • One large 30x 42 porcelain enamel • Two small 18x 24 porcelain enamel • 4-8 Plackards • Donor Sign • Installation Materials (wood, bolts, etc.)	 each $1250 each $250	 $3,500 $2,500 $1,000-$2,000 $2,000 $1,500
Installation Labor	2 persons, 2 days @ $22.31/ hour	$720
Permit Fees		**$1,900**
Community service Use Permit Hillside and Erosion Permit Design Review Other Misc.		$850 $350 $200 $500+
TOTAL		**$217,180-$288,665***

* Range reflects lowest (service crew rates / cut-in stairs) and highest (standard designer and construction labor rates / boardwalk and stairs) cost scenerios.

TABLE 6 ESTIMATED COSTS FOR ANNUAL OPERATIONS AND MAINTENANCE		
Site Maintenance		**$2,775**
Labor Cost • Brush / clear trails • Drainage maintenance • Tread Maintenance (earthen trails) • Minor yearly repair of structures	 2 X / yr / 2 staff (1.5 days @ $169) 3-4 x / yr / 2 people 1 X / yr / 2 people (2 days @$169) 2.5 days @ $169	 $255 $255 $340 $425
Material Costs	Misc. wood, gravel, tools	$1,500
Monitoring Site Conditions		**$5,335 - $6,925***
Safety and Security • Check parking lot / walk trail	85% ranger@ $21/hr; 15% RPS @ $24/ hr 38 trips per year = $123.5 hours **OR** 52 trips per year = $169 hours	$2,665-$4,255
Ecological Monitoring • Observe and record use impact on trails • Observe and record impact to Preserve	 Ranger 38 hrs @ $24/hr (see S/S) Scientist 2 X / yr @$440 / day	 $910 $880
Renewal and Replacement Account		**$1,000**
Annual Contribution	For boardwalk, signs, etc.	$1,000
Watershed Protection / Buffering		**$2,000**
Ongoing coordination (in conjunction with Bond Measure Land Banking)	Average 40 hours @$50.00 staff time / year	$2,000
TOTAL		**$11,110 -$11,820***

* Assumptions: Range shows cost difference between 38 ranger trips versus 52 trips per year.

APPENDIX



Contents of Appendix

BIBLIOGRAPHY

ANCIENT FOREST PROJECT BIBLIOGRAPHY

1. Site Analysis Technical Summary for Ancient Forest Master Plan

2. Deed for 38 acre parcel and related easements

3. *Level I Environmental Site Assessment, 38 Acre Parcel and Associated Easements, Old Growth Forest* (Hahn & Assoc., Inc., June 1995)

4. Multnomah County Code for Commercial Forest Use (Section 11.15.2042 - 11.15.2074

5. Multnomah County 1992 Land Division Decision for 38 acre subdivision to create Preserve.

6. February 11, 1996 option agreement between Friends of Forest Park to Agency Creek Management Company for parking area on McNamee Road.

7. Crown Pacific Conservation Easement language

8. Angell Bros. Conservation Easement language

9. *Burlington Bottoms Wildlife Mitigation Project* (Bonneville Power Administration, 7/94)

10. *Burlington Northern Rails to Trails Feasibility Study* (Metro, November 1995)

11. *One City's Wilderness - Portland's Forest Park* (Houle, 1988)

    Forest Park Natural Resources Management Plan (Portland Bureau of Planning, 1995)

12. *A Study of Forest Wildlife Habitat in the West Hills* (Lev, Fugate, Sharp, 1992)

13. *West Hills Rural Area Plan* (Multnomah County, 1995)

14. *Wildlife Habitat Assessment Method* (Portland Bureau of Planning 1994)

15. *Northwest Hills Natural Areas Protection Plan* (Portland Bureau of Planning, 1992)

16. Multnomah County Soils Map (Mult. Co. Conservation Service, 1983)

17. *U.S. Highway 30 Corridor Study* (ODOT, May 1995)

18. Metro Resolution No. 96-2274 Approving the Refinement Plan for Forest Park Target Area element of the Open space Implementation Work Plan (Adopted February 15, 1996)

MEMORANDUM OF UNDERSTANDING

BETWEEN

FRIENDS OF FOREST PARK AND METRO

MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding (MOU) is between **Friends of Forest Park (FOFP)**, an Oregon nonprofit corporation, and **Metro.**

A. FOFP is the owner of a parcel of 38 acres of real property (Old Growth Grove, or, Grove) located in Multnomah County and described in Exhibit B. The Grove is a biologically and historically unique remnant of the old growth forest that once covered much of the Portland area. The Grove was purchased by FOFP to preserve it in its natural state, to help protect the wildlife corridor connecting Forest Park to the Coast Range, and to provide the recreational, educational and other benefits that may be realized by having the grove open to public access, so long as such access does not endanger the Grove's viability and natural progression as an old growth forest.

B. FOFP has acquired certain perpetual access easements with the purchase of the Grove. These easements will provide access to the Grove, and could also form part of a future linkage to Forest Park and a larger regional trail system. Specific conditions, covenants, and restrictions related to the Grove and access easements are detailed in Exhibit C. In addition, certain conservation easements have also been acquired, which FOFP will retain, but which may in the future be transferred to Metro.

C. This MOU is entered upon for the purpose of making the Grove a public park, to be owned and maintained by Metro.

D. All understandings stipulated in this MOU are intended to continue to apply to any organization that succeeds FOFP for the purpose of providing stewardship for the Grove and its environs.

PROPERTY TRANSFER

FOFP intends to donate the Grove, with all related access easements, to Metro. If approved by the Metro Council, this transfer could occur within ***three months*** from the date this MOU has been approved by both parties. The deed of transfer will contain restrictions to ensure that the Grove be administered and maintained in perpetuity for the purposes stated in item A above. If Metro takes any action that compromises this purpose, or if a public park has not been substantially completed, with access and enjoyment available to the public, by three years from the date of completion of a management plan for the site, the property shall be returned to FOFP.

PARK RECREATION

1. FOFP and Metro, through its Regional Parks & Greenspaces Dept., will work cooperatively, before and after the transfer of ownership, to complete the creation of the public park. FOFP may take actions at its discretion, between now and the completion of the public park, that will accelerate and facilitate the mandated steps for establishing a public park if such actions are consistent with the development or implementation of an approved management plan and approved by Metro's Regional Parks & Greenspaces Dept. FOFP will also erect specific signage acknowledging the patrons of the park on or near the location of the parking site or trail head. FOFP will consult with Parks & Greenspaces before undertaking such actions, so that any actions will be consistent with the approved management plan and other applicable ordinances and regulations.

2. After the transfer of ownership, FOFP may contribute services or funds to be used for designated purposes associated with creation of a public park. Metro will create a special interest-bearing fund to hold contributions.

3. Metro shall accept, subject to deed restrictions and conditions, ownership of the Grove, and subject to appropriations by the Metro Council or the availability of other funds, pursue the development of a management plan, implementation of such plan, and assume maintenance and operation responsibilities upon completion. FOFP agrees to offer its assistance in efforts to secure necessary funds and other resources or materials which will be required for plan development and implementation.

4. FOFP shall defend, indemnify, and hold harmless Metro, its elected officials, employees, and agents from any and all claims which may arise or be related to ownership and management of the Grove and associated access easements until such time that ownership of the Grove and access easements are conveyed to Metro.

FRIENDS OF FOREST PARK

By _____
John Sherman, President

Date 8/7/95

METRO

By _____
Mike Burton, Executive Officer

Date 8/7/95

MEMORANDUM ON TRAIL DESIGN ALTERNATIVES

KURAHASHI
& ASSOCIATES, INC.

Civil Engineering
Water Resources
Landscape Architecture
Planning
Surveying

Date: April 10, 1996

To: Jane Hart, Project Manager
Metro Parks & Greenspaces

From: Dave Walters & Kendra Smith
Kurahashi & Associates, Inc.

Re: A) Re-evaluation of Trail Routing To and Within the Ancient Forest Preserve
B) Outcome of Research on Earthen Trails, Bridges and Boardwalks

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Per our modified scope of services, this memo documents the results of tasks 11 (re-evaluate access trail location between Burlington Northern and lower gravel road) and 15 (evaluate trail construction options within the Preserve) and outlines the proposed changes to the Ancient Forest Master Plan. Attached are the research notes from interviewing trail experts in the region and general contruction drawings for the various trail types discussed.

Trail to the Preserve

The following changes / added specifics are recommended for the trail to and within the Preserve. The dialog proceeds from the parking area trailhead to the Preserve.

- The trail to the Preserve will be a 3 foot wide earthen trail.
- Cross one minor drainage with a 4 foot long by 3 feet wide puncheon structure (primitive boardwalk on the ground) (Note #1 on map 1)
- Cross one larger drainage by staying on contour until reaching the northerly powerlines. Using a 6 foot long by 3 feet wide puncheon structure, cross the creek just to the north of the lines (Note #2 on map 1).
- Continue the trail over the crest of the watershed, half way between the logging road and Burlington Northern.
- As the trail turns southwest, it should gradually descend into the drainage, cross the creek, and gradually ascend the eastern slope, making an "S" curve trail. A 10-12 foot long by 3 feet wide boardwalk, elevated to 30 inches above the floodplain will be used to cross the creek. The trail will continue on the eastern slope until crossing over the lower gravel road (Note #3 on map 1)
- An approximately 50'-75' switchback on the southeast slope will be used to lower the trail back down into the drainage. A 10-12 foot long by 3 feet wide boardwalk, elevated to 30 inches above the floodplain will be used to cross the creek. (Note #4 on map 1)
- The trail will continue up to the upper logging road as previously discussed. Waterbars (logs across trail to direct water off) will be used in areas where there are minor drainage issues.

12600 S.W. 72nd Avenue, Suite 100
Tigard, Oregon 97223

503.968.1605
FAX 503.968.1105

Trail within the Preserve

The trail within the Preserve will be 3 feet wide with various surfaces and follow the same route as previously identified. The option ("B" on map 2) of running the trail straight up the center of the inner island is not recommended due to the 7+ newly fallen trees and their root wads that would need to be cut through to place a trail. The steepness of the grade would likely encourage gully erosion especially now that the area has less overstory protection. Additionally, taking this shortened route would eliminate a majority of the educational "points of interest" such as nurse logs, snags, woody debris in the creek, different habitats and plant communities present at the site.

The recommended trail route (option "A") provides the greatest opportunities for education and offers visitors the old growth experience they seek when they hike to the site. One recently fallen tree will need to be cut to pass the trail and one large rotting tree will need to be either cut through or ramped over.

Trail Type Research

According to those interviewed, there are several factors that determine what type of trail is used in various areas including:

- site condition (high quality to degraded) now versus what they want in the future
- drainage and water regime of the area the trail goes through
- slope, erosion potential of the soil, terrain
- sensitivity of the vegetation / geology
- expected or observed human usage and patterns

Most of the Parks use a combination of:

- Standard earthen trails
- Bridges (over creeks)
- Boardwalks (over wetlands)
- "Turnpike" built-up earthen trail with wood border and geotextile underneath (to contain migration of a trail, areas wet for a short period of time)
- "Puncheon" primitive, non-elevated boardwalk (for areas that are frequently wet or saturated)
- Stairs (in cases of steep grade or geology) less frequently used

In terms of cost, the bridges and boardwalks are the most expensive, followed by puncheon, turnpike and earthen trails. Site conditions, construction techniques, and human usage patterns dictate the average life expectancy for wooden trails (bridges, boardwalks, pucheon, stairs), which was frequently estimated at 20 years. Wooden trails are more expensive to maintain. Both earthen and non-earthen trails require annual maintenance. Controlling drainage is the biggest maintenance issue.

There are several instances where earthen trails were replaced with wooded trails due to the damage (compaction, excessive widths, un-focused use) caused by human visitation. Interviewees warned not to wait until the damage occurs if the resource is of significant value or if one knows the ground is sensitive to human foot traffic. Interpretation and education were both a factor in the decision to use wooden surface trails. However, these factors must be weighed with the cost of constructing and maintaining the system.

Other management issues noted by the interviewees included: keep a small trail head to control numbers of visitors, "pack it out" signage to encourage garbage free area, and mountain bikes on earthen trails is damaging especially in wet areas.

Given the information provided the following trail design within the Preserve is recommended (see map 2):
Earthen trail to point 1 (225')
Puncheon structure to point 2 (75')
Turnpike to point 3 with a three foot puncheon to cross over a minor drainage (120') +(3')
Boardwalk to point 4 to cross the creek (approximately 10-12 feet long by 3 feet wide, elevated 30" off the floodplain)
Cut in stairs with waterbars to point 5 (175') or elevated pressure treated stairs with footings
Puncheon trail with railings (for containment and protection of roots) to point 6 (40')
Platform with railing for viewing at trails end

This modified version reduces the non-earthen trail length by 295' (down from 425') for a total of 130'. The use of the more primitive puncheon trail on 165' of trail rather than elevated boardwalk will reduce cost initially and still provide protection of the resource where wetland impact and heavy compaction / migration are likely. The turnpike and stairs (cut-in or elevated on footings) will cost more than a simple earthen trail, but they will help reduce the potential widening of the trail. Switchbacks up the slope are not recommended given the slope needed to be traversed and the limited amount of area to do so. The cut stairs will climb up the slope as gradually as possible, with stopping points along the way. The platform is still recommended to protect the root structure of the trees and prevent unnecessary damage to the vegetation and soil as a result of human use at the top of the island. The proposed trail route and types will:

- Provide the most educational old growth experience possible
- Minimize the cutting of fallen trees
- Protect the soil surface and drainages from erosion.

We feel that this is the most appropriate compromise to the trail issue given the budget constraints. The cost savings with the new trail features, plus other revisions to the costs per our discussions are provided in the revised Implementation Cost Assumptions.

Ancient Forest Preserve Master Plan
Trail Research Notes

These notes reference general discussions with the interviewees. Notes 1-12 relate to the questions asked of each interviewee, which are also listed below.

Questions Asked

1. Do they utilize bridges and boardwalks, earthen trails? If so, why? (This gets a purpose of design.).
2. Did value of experience and educational opportunity weigh in decision to build boardwalk?
3. Are people more or less likely to stay on boardwalked or earthen trails? What about trails that are roped off and well defined?
4. How many people use the boardwalk/earthen trail per year?
5. If people wander from trail, is there environmental impact and of what magnitude?
6. Have there been cases where environmental impact was so serious that earthen trail was replaced by boardwalk?
7. What materials are boardwalks constructed of?
8. How frequently do they maintain bridges/boardwalks? Earthen trails?
9. What is the difference in the cost (based on materials and frequency of repair) for repairing and maintaining bridges/boardwalks versus earthen trails?
10. What materials, special features have proven effective for successful bridge/boardwalk and earthen trail construction and long term maintenance?
11. What is life expectancy of boardwalk?
12. What other management issues are faced by the Park as visitor use increases.

Responses

Olympic National Park, Washington
1.360.452.0330
Richard Handson, Trails Foreman
Unable to reach

Oregon Caves National Monument
1.503.592.2100
Sheri Forbes, Chief of Interpretives
The Big Tree - vegetation around the tree has been trampled. General Master Plan being developed calls for boardwalks and platforms to protect the tree and keep people contained.

John Roth, Resource Management Specialist
1. Have boardwalks in the cave and considering boardwalk around an old growth tree; concerned about compaction, both are main attractions. Earthen trails exist throughout the rest of the Park

with bridges in wet areas. Cross cutting a problem with the switchbacks.

2. Yes, interpretive signs used along elevated boardwalk areas. Also doing signage for cave entrance.
3. Put in barriers on earthen trails. Mt Rainier found that the only way to keep people on trails included signs and constant patrols. People stay on boardwalk, partly dependent on how elevated the system is.
4. Boardwalks in cave -80,000 people per year. Boardwalks and outside earthen trails- 10,000 per year
5. Varies on geology and vegetation - driest sites most impacted in their area due to geology
6. Considering replacing earthen trail with boardwalk around the big tree due to compaction and trampled vegetation. In the cave, replaced earthen trail with boardwalk
7. Wood, now replacing with fiberglass supports due to the geology in the caves. Wood will likely be used for outside boardwalk area
8. Just putting them in, mud tracking a problem in caves. Social trails a problem in switchback areas of earthen trail; need regular maintenance
9. Installed boardwalk is fiberglass, can't use wood in cave. Don't have a cost comparison. Obviously earthen trails are cheaper.
10. Consider using water bars for steps, would not recommend switchbacks
11. Unknown; guess around 20 years. Depends on sit conditions
12. Exotic species, horses,

Other comments: limit parking area size to help keep visitation low, education and signage important part of protecting the resource

Redwood National Park

1.707.464.6101

Randy Klien, Natural Resources Management x5201

Use boardwalks in wetland areas and on flat alluvial old growth areas where soil compaction a problem. Trees are being damaged due to compaction, top of tree roots are being damaged. Fences are being proposed to protect the trees. Found that boardwalks and platforms keep people on the trails.

Dick Mayle, Trails Foreman x5072 (on vacation)

Darrell Mason, Trails Staff

1. Terrain dictates what is used and location of trail; wetlands have boardwalks, streams have bridges; all season trail with high water should have a boardwalk.; Transition earth trails 10% grade or less, when forced to go steeper, do so only for short distance. For erosion and accessibility; cross slope 1-3%. Less grade increases longevity, utilize cross slope and waterbars.
2. Yes, like to interpret plants wildlife and wetlands; interpretive dictates location; less than 1000 feet of boardwalk in Park
3. Forced to stay on boardwalk, plain earthen trails allow people to migrate off. Information board to stay on trails in sensitive area are used.
4. Varies; some areas have high use some low
5. Ladybird grove has heavy soil compaction. Use waterbars to control winter rains - two to three

times a years for maintenance
6. No; boardwalk used when needed. Don't wait for resource to be degraded.
7. Wood, experimenting with plastics but there is question about their structural integrity
8. 20 years for boardwalk. Spot repair on 3-5 year basis for tread work of an earthen trail (use crushed gravel)
9. Comparing apples and oranges; earthen trail cheaper but it depends on the sensitivity of the resource
10. See note in 1
11. 20 years
12. None he could think of

Lost Lake Forest Service Campground

Dean Apostle, Head Landscape Architect 666.0674
Installed a boardwalk with interpretives around lost lake due to the impact on the resource from human visitation. Cost much higher than earthen trail, but it reduces damage to the resource. People more likely to stay on an elevated system than not.

Pilot Butte Forest Service Park
Wendy Harrett, Public Affairs 1.503.326.2966
referred questions to:
Barney Smith, Recreation Facilities Group Leader - 326-6726
Works in 20 US Forest Service areas in the region. Has experience with 20,000 miles of trail through Oregon and Washington

1. Bridge over creeks, boardwalk in heavily used areas, wetlands. Also use turnpike and puncheon trails. Turnpike-(filter fabric underneath, lay parallel pressure treated wood, stake down. Make sure little organic material under logs, sandy soil on pathway, import.
   Puncheon- log stringers on ground, decking is split planks; less expensive than boardwalks. Plastic used underneath because it holds up well but looks ugly.
   Maintenance of these depends on ground conditions; use treated timbers and rounds, cheaper to maintain 10-15 year life for the puncheon
   Use treated timbers- treated timber research found that alot of the compounds are fairly inert
2. Yes, lead people to fishing and viewing platforms
3. Boardwalks keep people on trail; always dealing with trail cutters on earthen trails. Snoqualmi National Park has a boardwalk through old growth, boardwalk is accessible; a low impact opportunity for people to walk through 1/2 mile trail; avoid cutting through logs, etc. used helical piers
4. N/A, varies depending on Park.
5. Depends on frequency of usage and site conditions. Multnomah Falls, have a hard time keeping people on trails plant thorny vegetation - make trail look like the easiest through the area.
6. In wet areas. In Alaska, replaced trails with boardwalks to protect ground. Some areas use a half log on two logs; use lots of stairs and boardwalks in Alaska. Stairs used in excess of 25-30% and greater, steeper than that you run into erosion. Recalls a rock wall holding people in at the top

of Pilot Butte
7. Wood, plastic
8. Yearly maintenance of all trails. Earthen trail easier and less expensive. Waterbars maintained more frequently than boardwalks. Boardwalks expensive to construct initially
9. See 8.
10. See 1.
11. 20 years.
12. Limit the size of the trail head, signs, intimidating people with steep slope will encourage only those truly interested, education of users

Columbia River Gorge Scenic Area
1.503.386.2333
Stan Hinatsu, Rec and Trails
1. No significant use of boardwalks; considered but decided against in most areas due to cost, use turnpike trails instead. Sensitive resource wetland areas use boardwalk. Determine how sensitive the resources to human foot traffic and make the decision from there. Also consider usage.
2. Yes, when used.
3. People stay on boardwalks; barriers, directed trails, and signage are used to reduce migration on earthen trails.
4. Don't know, do not have records of use.
5. Depends on the sensitivity of the site conditions
6. Mt St Helen's Lava Cast - sensitive vegetation; earthen trail replaced by boardwalk - dispersed use existed, wanted to concentrate use area and minimize damage.
   Lost Lake - receive heavy use, earthen trail replaced by boardwalk around the lake, interpretive trail. Olympia used boardwalk to interpret wetlands
7. Wood
8. Annual maintenance for all trail types
9. Boardwalks are expensive to build and maintain; turnpike or puncheon more cost effective, locate trail in area that they work.
10. Slopes greater than 50%, long switchbacks used or stairways. If cost a factor, use cut stairs into hill. Problems with erosion in cut stair trails, especially with steeper slopes.
11. 20 years
12. "Pack it out" message needs to be prominent, switchback cutting a problem, dog use

Stella Olsen Park
Jim Rapp, McKeever Morris 228.7352
History: Part of Cedar creek, historic core of Sherwood. Creek impacted by rural/urban development;
core has a boardwalk near Sherwood high school

1. Both. Drainage and visitor usage the decision factor. Mostly wetland/ riparian area was the reason behind why they chose a boardwalk. Moved trail away from creek edge. Dimension :6

feet wide, 400' of each of boardwalk and earthen trail.

2. Yes, partnership with youth corps, interpretive stations
3. Boardwalks people stay on. Earthen trail abandonment not successful until the last few years, when a viewing platform was built and cut off the use of the previous earthen path.
4. Not much use, primarily school groups
5. Creek bank compacted, informal trails, erosion heavy. Has taken three to four years to reduce impact of earthen trail and make it disappear. Runoff from the parking lot a problem.
6. Earthen trail was replaced by boardwalk at this site
7. Wood boardwalk. Footings backfilled with gravel
8. Maintenance reed canarygrass cutting back, once a year, wood fine three or four years, fixing problems after a year on the earth trail
9. Can't make a value comparison, materials donated, youth crew installed both boardwalk and trail
10. Tires worked great for erosion control, tire strips
11. Three years before flooding first impacted trail, vandalism destroyed view blinds, physically holding fine. Expect them to last 20 years under normal conditions
12. Decrease in damage due to focusing of trail; super highway for school kids; management problems declined. Some people were of the opinion that we shouldn't make it easy for people to get back into the site to view wetland areas.

Section 938 - Puncheon Walkways

DESCRIPTION

938.01 Work

This work consists of constructing hewn log, sawn lumber, or split plank puncheon walkways at locations SHOWN ON THE DRAWINGS or DESIGNATED ON THE GROUND. It shall include furnishing and installing all hardware, lumber, timbers, and logs.

MATERIALS

938.02 Requirements

All materials shall meet the requirements of the following section:

962-Material for Timber Structures

CONSTRUCTION

938.03 General

Log and plank puncheon walkways shall be constructed in accordance with Form FS-7700-93.

938.04 Excavation

Mud sills shall be buried to a depth whereby the top of the hewn log or plank is not higher than 6 inches above the surrounding ground. Elevation of the deck surface shall be the elevation of the trail grade at each end of the structure.

938.05 Log Stringers

The logs shall not be cut less than 12 feet in length unless the structure is less than 12 feet in length. Logs used for the puncheon walkway shall not be less than 8 inches in diameter prior to flattening the top. The bottom of the log shall be flattened to provide a 4-inch bearing surface at each mud sill. The final minimum thickness of the log at the sill shall not be less than 3 inches.

938.06 Sawn Plank Stringer

Planks shall not be less than 8 feet in length unless the structure is less than 8 feet in length. When shown in the SCHEDULE OF ITEMS, the planks shall be preservative treated.

938.07 Finished Walkway

Abutting ends of sections of log or plank puncheon walkways shall be at the same elevation. The entire structure shall be stable. The surface of the completed walkway shall not be sloped to either side. The grade of the walkway shall not exceed 1/4 inch per foot unless otherwise DESIGNATED ON THE GROUND.

MEASUREMENT

938.08 Method

The quantity to be paid for will be measured in accordance with Section 906.

PAYMENT

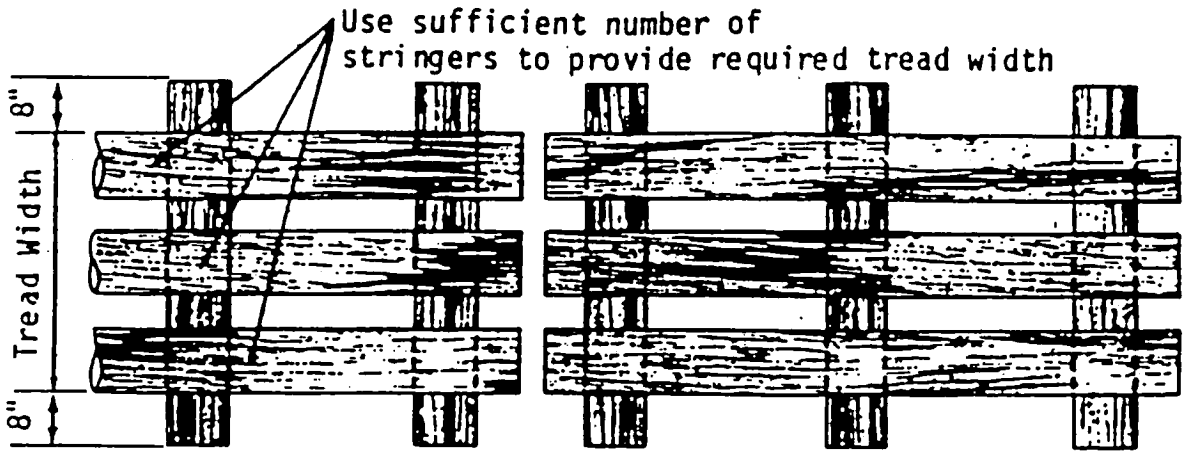
938.09 Basis

The accepted quantity will be paid for in accordance with Section 906 at the contract unit price for each pay item shown in the SCHEDULE OF ITEMS.

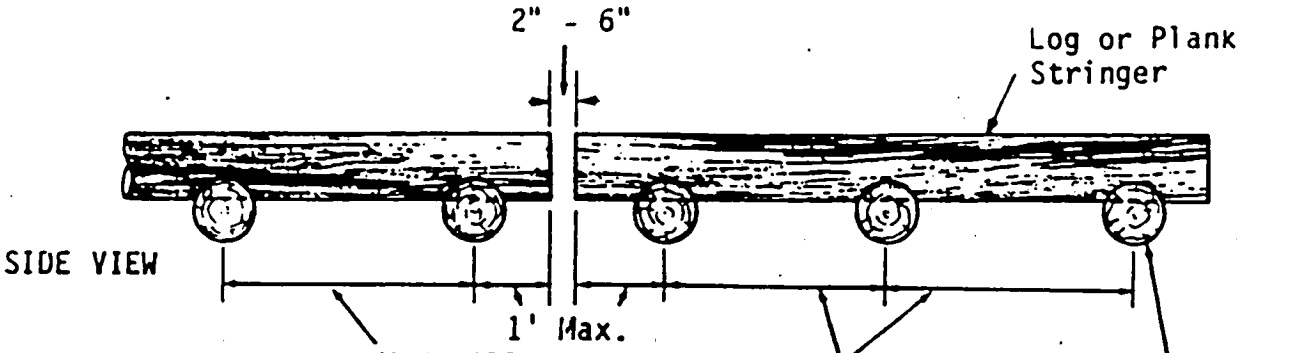
Payment will be made under:

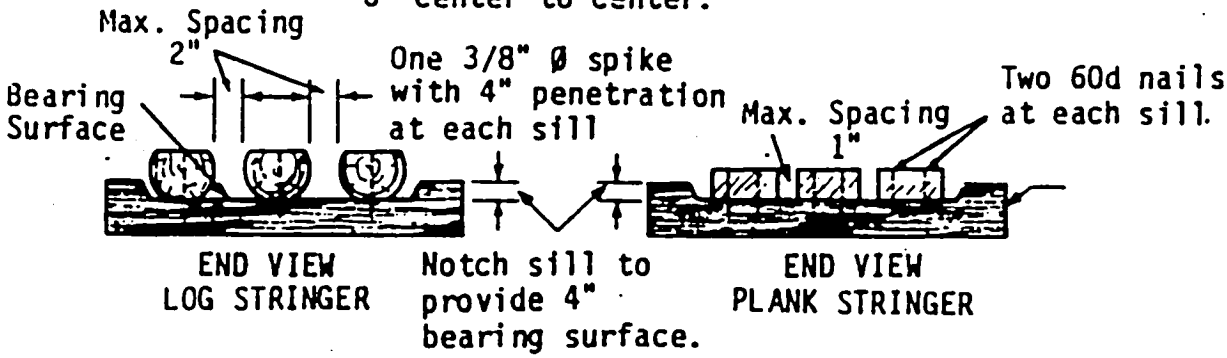
Pay Item		Pay Unit
938(01)	Puncheon Walkway - Log	L.F.
938(02)	Puncheon Walkway - Sawn Plank	L.F.
938(03)	Puncheon Walkway - Sawn Plank-Treated	L.F.

Puncheon Walkway



PLAN VIEW





Puncheon Walkways

Type	Species	Size
Mud Sill		
Log Stringer		
Sawn Plank Stringer		
Sawn Plank Treated Stringer		

Preservative Type ____
Min. Net Retention ____ Lb./C.F.

Section 933 - Trail Puncheon Bridges

DESCRIPTION

933.01 Work

This work shall consist of construction of puncheon bridges, supported by log stringers and sills at locations SHOWN ON THE DRAWINGS and DESIGNATED ON THE GROUND. It shall include furnishing and installing all hardware, lumber, timbers, and logs.

MATERIALS

933.02 Requirements

Materials shall meet the requirements of the following section:

962-Material for Timber Structures

CONSTRUCTION

933.03 General

Puncheon bridges shall be constructed in accordance with Form FS-7700-88.

Spike holes shall be predrilled when necessary to prevent splitting. Spikes shall be driven flush.

933.04 Mud Sills

Mud sills shall be buried to a depth whereby the combined height of stringers and decking is even with the trail grade. Mud sills shall be completely covered when practical. Mud sills shall be level and shall be notched to level the stringers.

933.05 Stringers

Stringers shall be cut not less than 12 feet in length and arranged in pairs of the same length and diameter. The stringers shall be pinned to the mud sills with 2 each 3/8-inch drift pins on each end. The drift pins shall have a minimum penetration of 4 inches into the mud sill.

Stringers shall be hewn to provide a 2-inch wide bearing surface for the decking.

933.06 Decking

Split-log decking shall be laid alternately with flat side down first, then round side down, ending with flat side down. When the round side is down, it shall be hewn to provide a 2-inch bearing surface. Each log shall be spiked to the stringer with a 3/8-inch diameter spike on each end.

Round-log decking shall be hewn to provide a 2-inch flat bearing surface on the stringer. Each log shall be spiked to the stringer with a 3/8-inch diameter spike on each end.

Split and sawn decking planks shall be laid on the stringers to provide bearing for the full width of the plank. Each piece of plank decking shall be spiked with two 3/8-inch diameter spikes at each end. Spikes shall penetrate stringers a minimum of 4 inches. Decking shall be laid or trimmed to give a straight line appearance to the edges of the structure.

933.07 Curb Logs

Logs shall be placed on top of the decking directly over the stringers. The logs shall be pinned with 3/8-inch steel drift pins. The drift pins shall be long enough to provide a minimum penetration of 4 inches into the stringers. The curb logs shall not be less than 10 feet in length unless the structure is less than 10 feet in length.

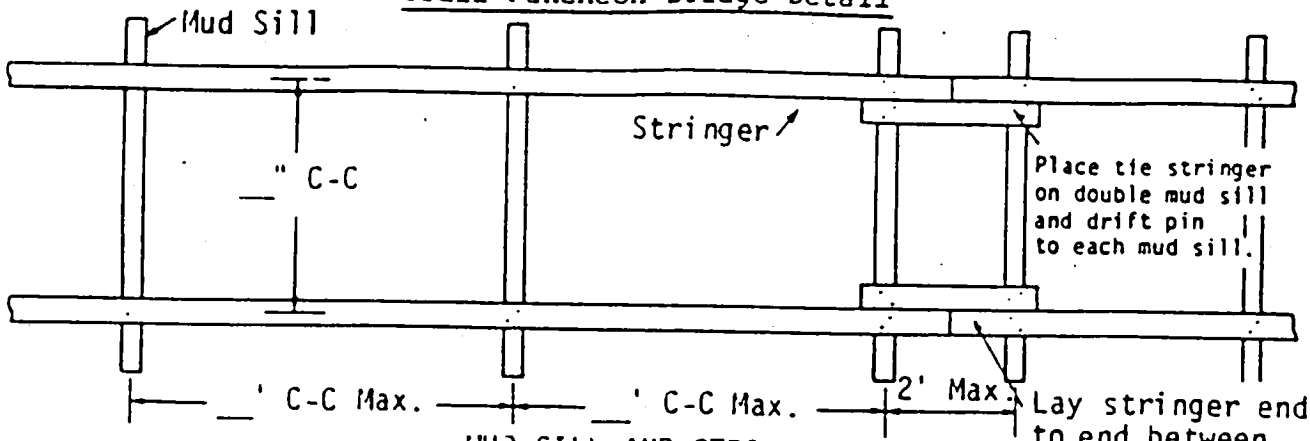
933.08 Bulkhead

At each end of the structure, a slab or plank, sufficiently wide to fill the space between the top of the deck and the bottom of the stringers, shall be set on edge and spiked securely to the ends of the stringers.

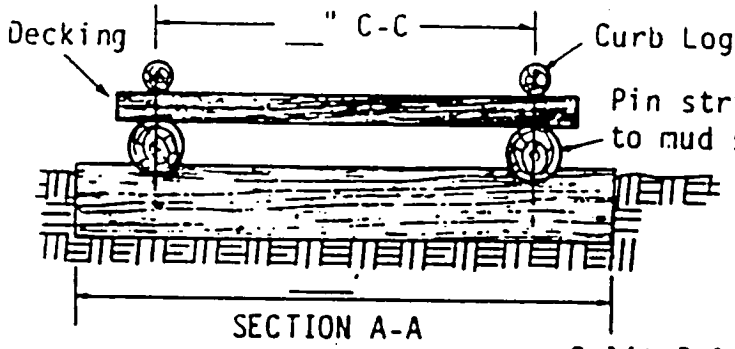
933.09 Approach Fill

The approach fills shall be constructed with compacted mineral soil and rock.

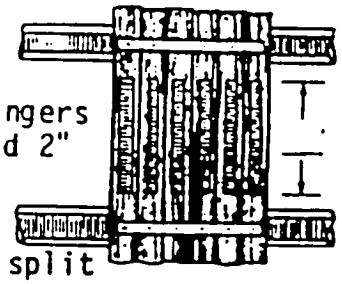
Trail Puncheon Bridge Detail



MUD SILL AND STRINGER LAYOUT

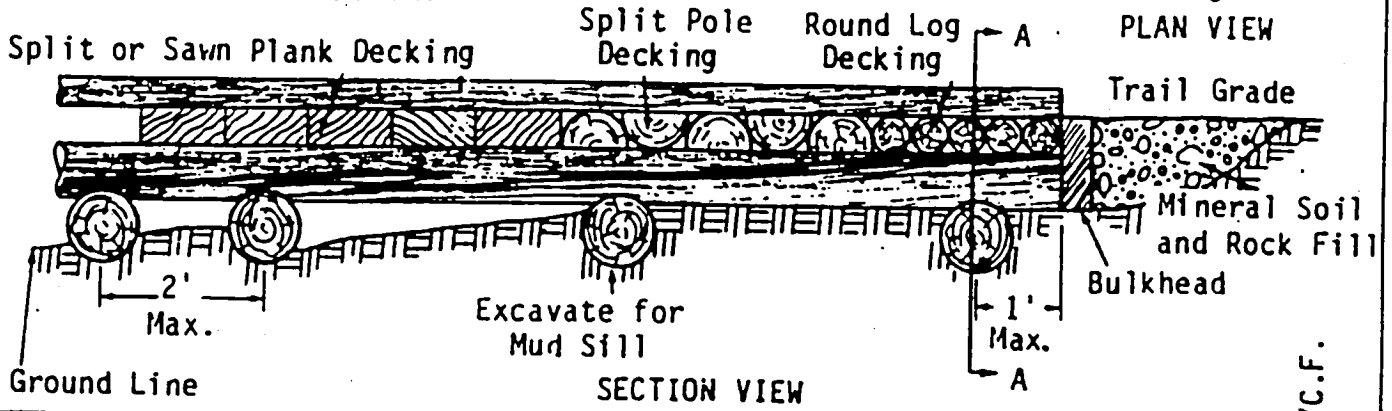


SECTION A-A



Hewn tread for split poles and round log decking

PLAN VIEW



SECTION VIEW

Function of Log	Species	Diameter	Length
Mud Sill			
Log Stringer			
Curb Log			
Bulkhead			
Type of Decking	**Species**	**Size**	**Length**
Rough Mill Sawn, Treated			
Rough Mill Sawn			
Split Plank or Field Sawn			
Round Log			
Split Pole			

Preservation Type ____ Lb./C.F.
Min. Net Retention ____

Section 913 - Turnpike

DESCRIPTION

913.01 Work

This work shall consist of constructing trail turnpike sections at locations SHOWN ON THE DRAWINGS and DESIGNATED ON THE GROUND. Work includes ditch excavation, placement of log or rock retainers, nonwoven or woven fabric, mineral soil, and other drainage features.

MATERIALS

913.02 Requirements

Materials shall meet the requirements of the following sections:

961-Stone and Rock
962-Material for Timber Structures
964-Geotextiles

CONSTRUCTION

913.03 Log or Rock Retainers & Backfill Material

Rocks, stumps, and other obstructions that would protrude above the turnpike tread shall be removed from the trailway.

Native logs or rocks called for in the SCHEDULE OF ITEMS shall be laid in a continuous row along each shoulder of the turnpike section. The two rows of logs or rocks shall be bedded to be stable and parallel and to give them approximately the same top elevation. Wooden stakes shall be driven along the outside edge of each row of logs.

The space between the two rows of logs or rocks shall be back-filled with compacted mineral soil to form a crown. Mineral soil from side ditches or borrow sources shall be used as backfill material.

913.04 Nonwoven or Woven Fabric

When called for in the SCHEDULE OF ITEMS, woven or nonwoven fabric shall be laid on the turnpike section before fill material is placed. The fabric shall be placed flat on the trailbed longitudinally down the centerline between and under the log or rock retainers. Joining pieces of fabric shall be overlapped 24 inches.

913.05 Side Ditches

Side ditches shall be constructed at locations SHOWN ON THE DRAWINGS and DESIGNATED ON THE GROUND and in accordance with Form FS-7700-70. Unusable material excavated from the ditches shall be uniformly spread outside of the trailway to depths not exceeding 4 inches. Placement of unusable material shall not obstruct drainage.

913.06 Drainage Control

Leadoff ditches shall be provided from side ditches on the lower side of the trail at points DESIGNATED ON THE GROUND or SHOWN ON THE DRAWINGS.

MEASUREMENT

913.07 Method

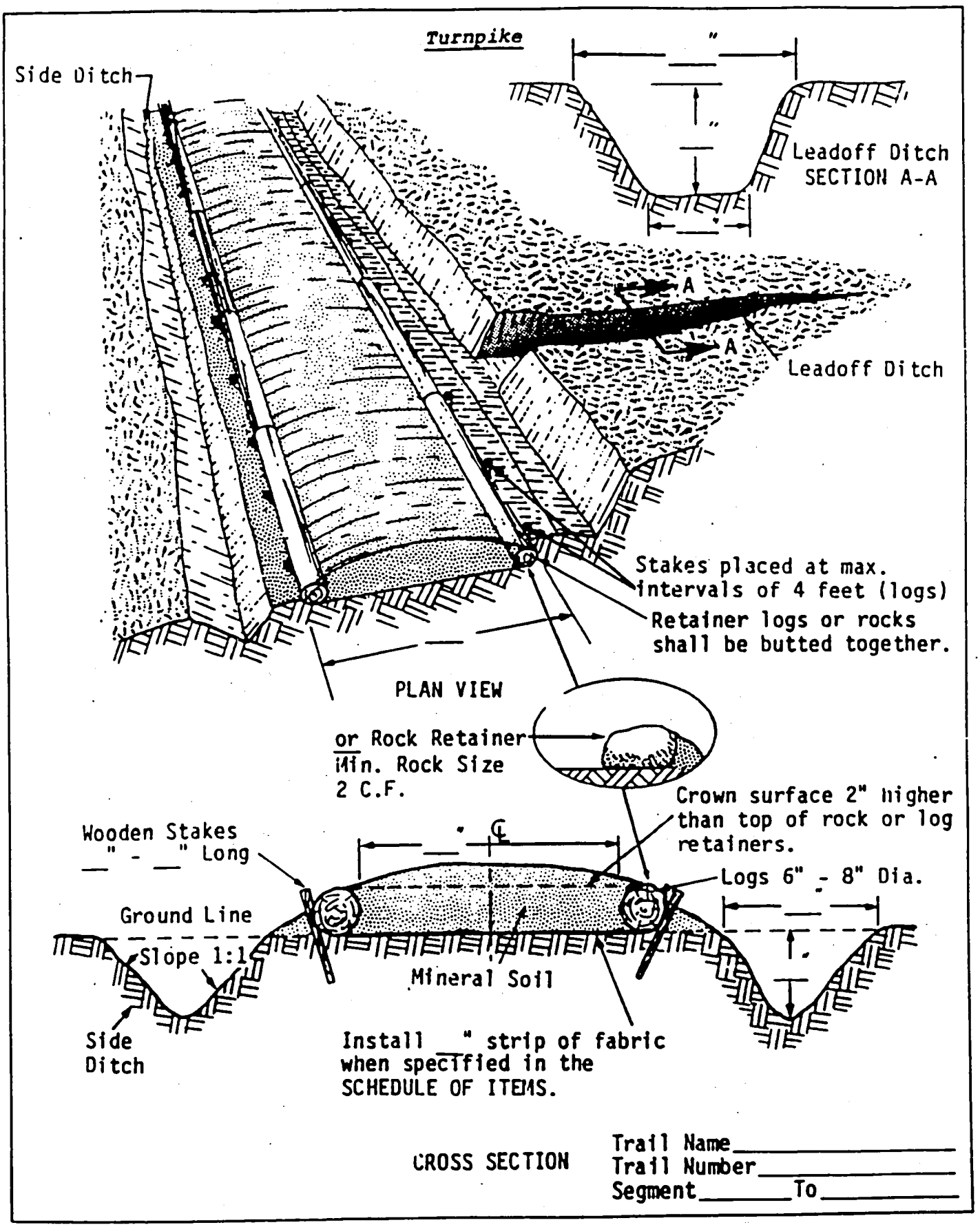
The quantity to be paid for will be measured in accordance with Section 906.

Unless listed in the SCHEDULE OF ITEMS, leadoff and side ditches will be considered incidental to other pay items and extra payment will not be given.

PAYMENT

913.08 Basis

The accepted quantities will be paid for in accordance with Section 906 at the contract unit price for each pay item shown in the SCHEDULE OF ITEMS.



CROSS SECTION

Trail Name_____
Trail Number_____
Segment_____ To_____

FS-7700-70 (6/84)

913
.08

Section 937 - Trail Stairways

DESCRIPTION

937.01
Work

This work consists of constructing log, rock, plank, crib-ladder, and pinned stairways and handrails as SHOWN ON THE DRAWINGS and DESIGNATED ON THE GROUND. This work shall include furnishing all hardware, lumber, and timbers.

MATERIALS

937.02
Requirements

Materials shall meet the requirements of the following sections:

961-Stone and Rock
962-Material for Timber Structures

CONSTRUCTION

937.03
General

Stairways shall be constructed in accordance with Forms FS-7700-91 and FS-7700-92. All backfill shall be compacted mineral soil. The stair run will vary depending on the ground slope but shall not be less than 10 inches.

937.04
Overlapping Rock Stairways

Steps shall be constructed from the bottom to the top. Single rocks shall form the entire tread and riser, and two or more contact points shall be made to provide stability.

937.05
Log Riser Stairways

Single logs shall be used for the entire riser.

937.06
Rock Riser Stairways

Rock risers shall be trenched into the soil to the depth necessary to provide stability. Single rocks shall be used to form the entire riser.

937.07
Pinned Stairway

When constructing preservative-treated pinned stairways, the rock base shall be cleaned of spalls, roots, soil, and other obstructions.

Two 5/8-inch holes shall be drilled into the treads from the bottom side to match the positions of the holes in the rock and provide for the correct position of the step. These holes shall not penetrate the top of the tread. The bottom surface of the treads shall be hewn so as to provide a firm, solid contact with the rock base. This contact need not be continuous but must provide a firm, solid bearing.

The tread shall then be placed on the reinforcing bars and driven down to its solid position.

937.08
Crib-Ladder Stairway

Preservative-treated crib-ladder stairways shall be constructed by laying two carriages parallel to each other and firmly supported their entire length to the dimensions SHOWN ON FORM FS-7700-92. The area behind the riser shall be backfilled with compacted mineral soil and sloped outwards.

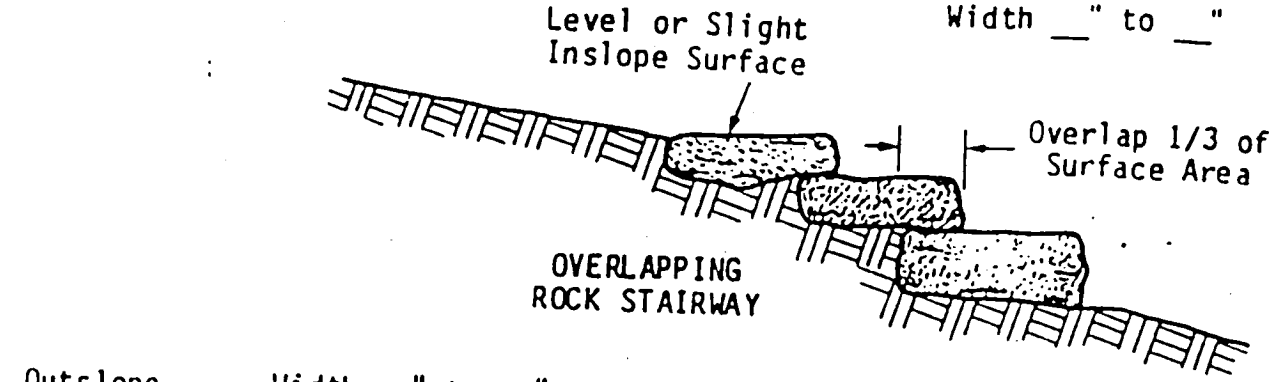
937.09
Plank Stairway

Preservative-treated plank stairways shall be constructed by laying two parallel carriages as DESIGNATED ON THE GROUND. Each carriage shall be a continuous member throughout its full length. The bottom of each carriage shall be firmly imbedded in the ground. Each carriage shall be supported by a sill at each end.

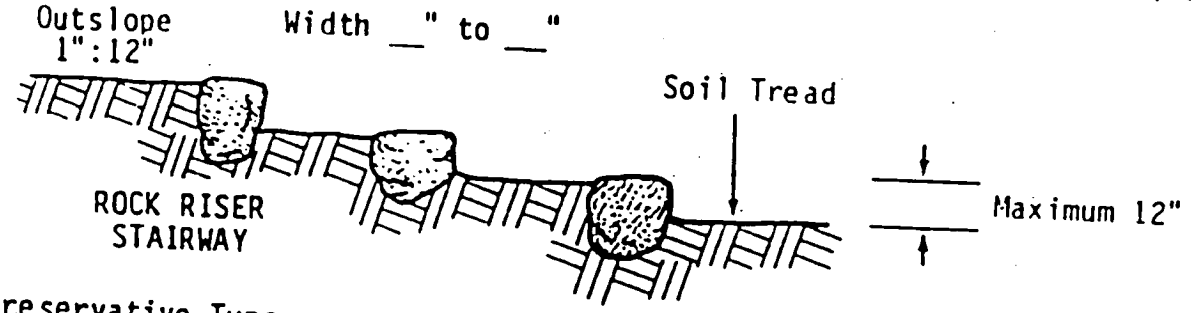
937.10
Handrails

When shown in the SCHEDULE OF ITEMS, handrails shall be constructed as SHOWN ON FORM FS-7700-92

Trail Stairways



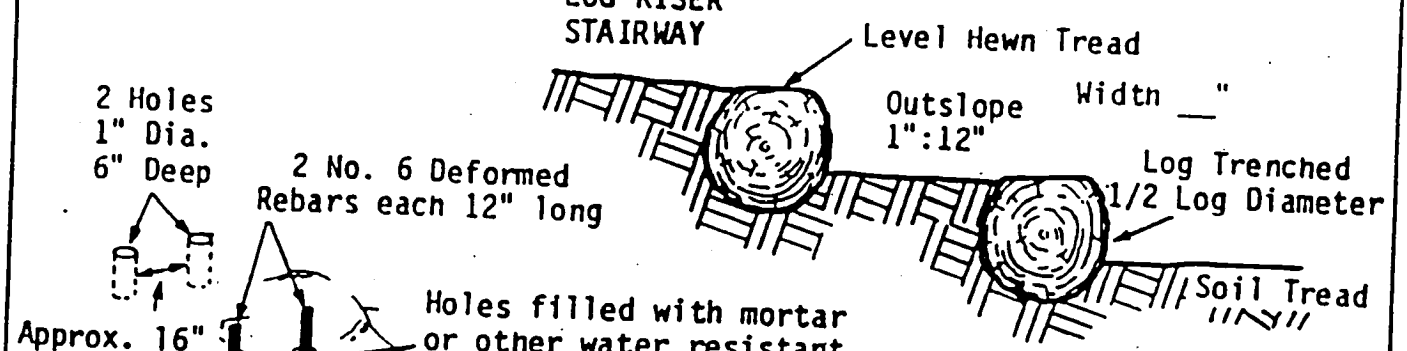
OVERLAPPING
ROCK STAIRWAY

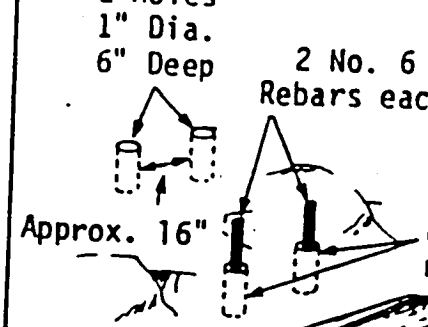


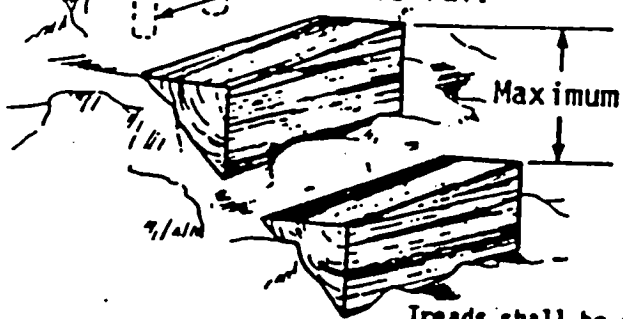
ROCK RISER
STAIRWAY

Preservative Type ____
Min. Net Retention ____ Lb./C.F.

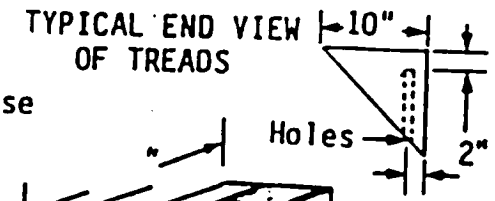
LOG RISER
STAIRWAY







PINNED STAIRWAY



Treads shall be shaped and placed over rebars to provide a firm, solid contact with the rock and should be approximately level or sloped very slightly in towards the rock.

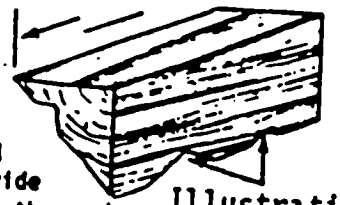
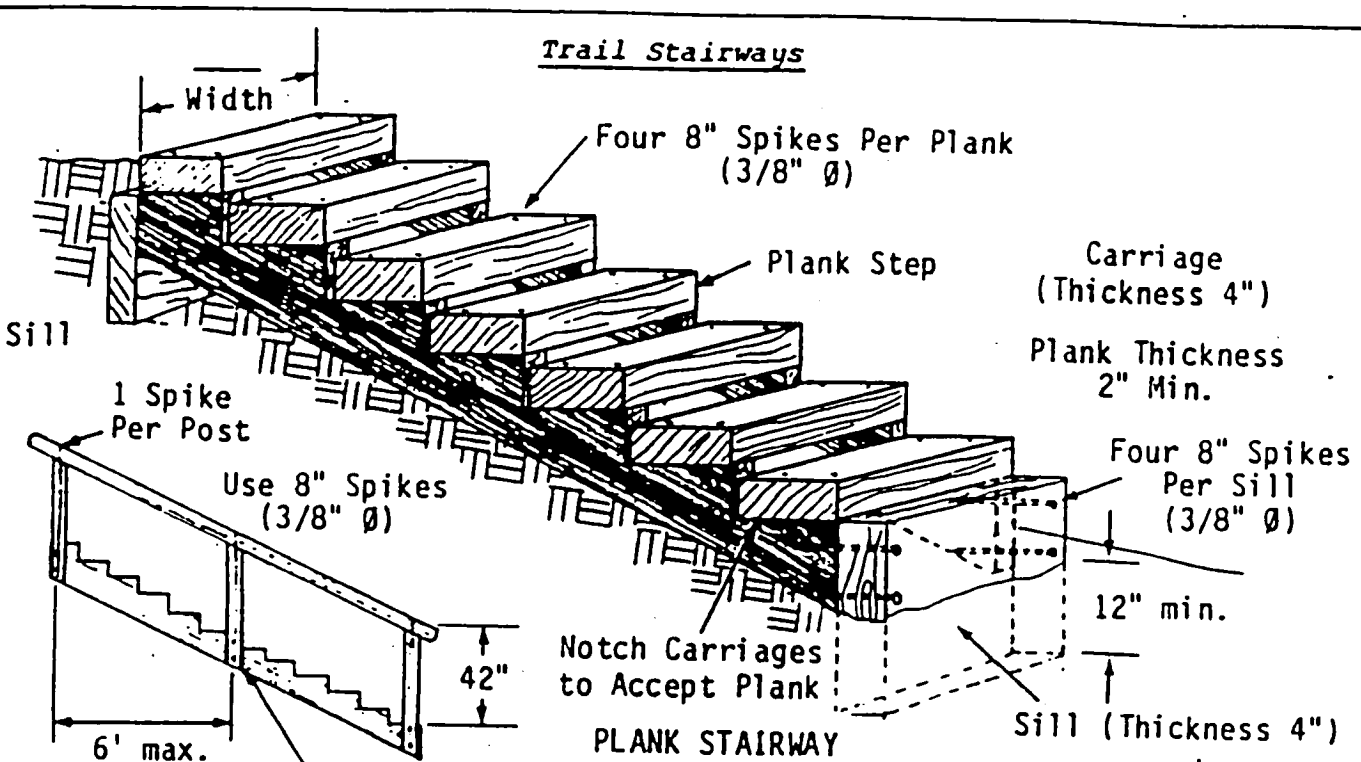
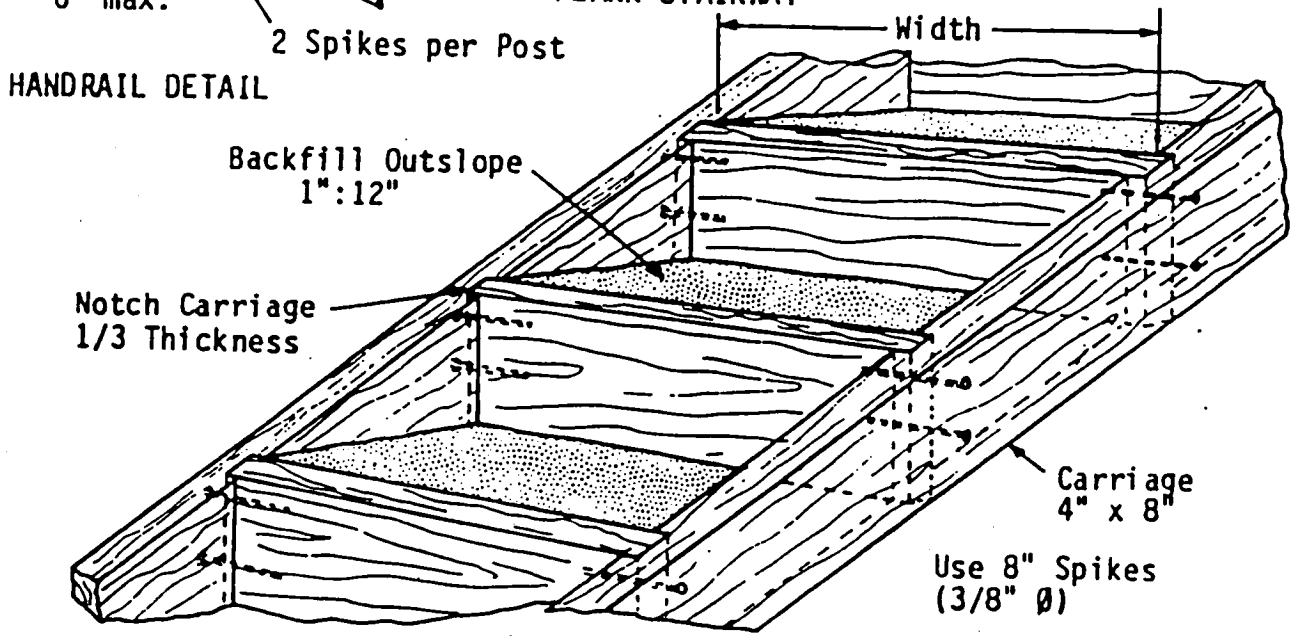


Illustration of axed surfaces to conform to rock base

Trail Stairways





CRIB-LADDER STAIRWAY

Stairway Dimensions

Location	Type	Rise	Width	Carriage Length

Preservative Type ____
Min. Net Retention ____ Lb./C.F.

93.1

Section 922 - Waterbars

DESCRIPTION

922.01 Work

This work consists of installing waterbars in the trailbed at locations SHOWN ON THE DRAWINGS and DESIGNATED ON THE GROUND. Work shall include excavation, backfill, and construction of rock spillways.

MATERIALS

922.02 Requirements

Materials shall meet the requirements of the following sections:

961-Stone and Rock
962-Material for Timber Structures

CONSTRUCTION

922.03 General

Waterbars shall be constructed in accordance with Form FS-7700-78.

922.04 Rock Waterbar

Rocks shall be tightly overlapped and embedded into the existing trailbed. Backfill material around the waterbar shall be compacted mineral soil. The tops of the waterbar shall be even and have no sharp points. Minimum rock size shall be 2 cubic feet.

The outslope of the trailbed on the upgrade side of the waterbar shall be a smooth plane that will form a gutter against the waterbar.

922.05 Log or Treated Timber Waterbars

A native log or a treated timber shall be completely embedded into the trailbed to form a waterbar across the trail. The top of the waterbar log shall be flush with the grade line of the trailbed on the downgrade side and be firmly compacted in place. In the absence of a backslope, the upgrade end of the log waterbar shall be anchored in the same manner as the downgrade end.

922.06 Surplus Material

Surplus excavation shall be spread below the trailbed at a depth not to exceed 4 inches. The surplus material shall be located so that it will not impede the flow of water away from the waterbar. Logs, debris, soil, rock, or other obstructions below waterbars that will impede flow away from the trailway shall be removed.

MEASUREMENT

922.07 Method

The quantity to be paid for will be measured in accordance with Section 906.

PAYMENT

922.08 Basis

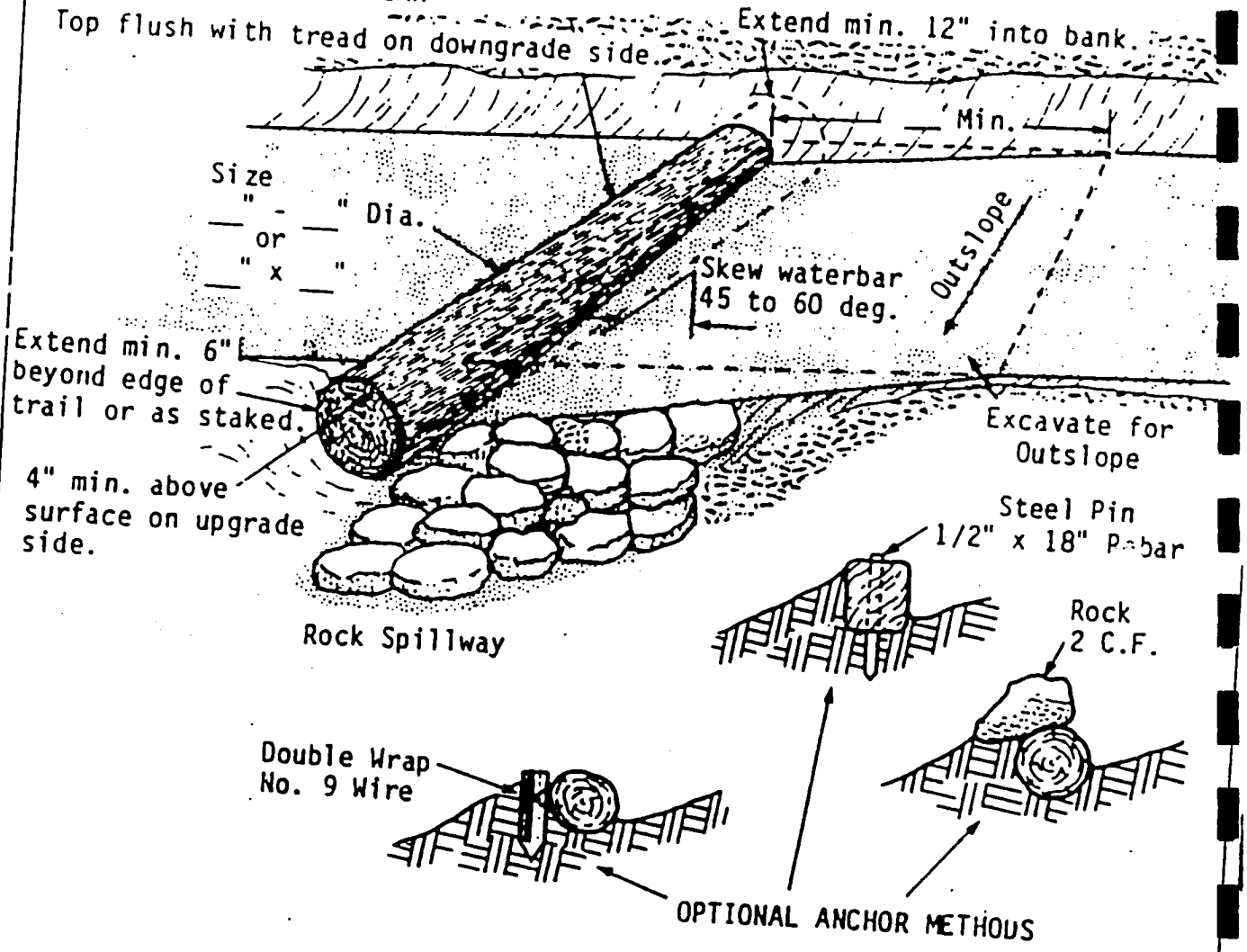
The accepted quantities will be paid for in accordance with Section 906 at the contract unit price for each pay item shown in the SCHEDULE OF ITEMS.

Payment will be made under:

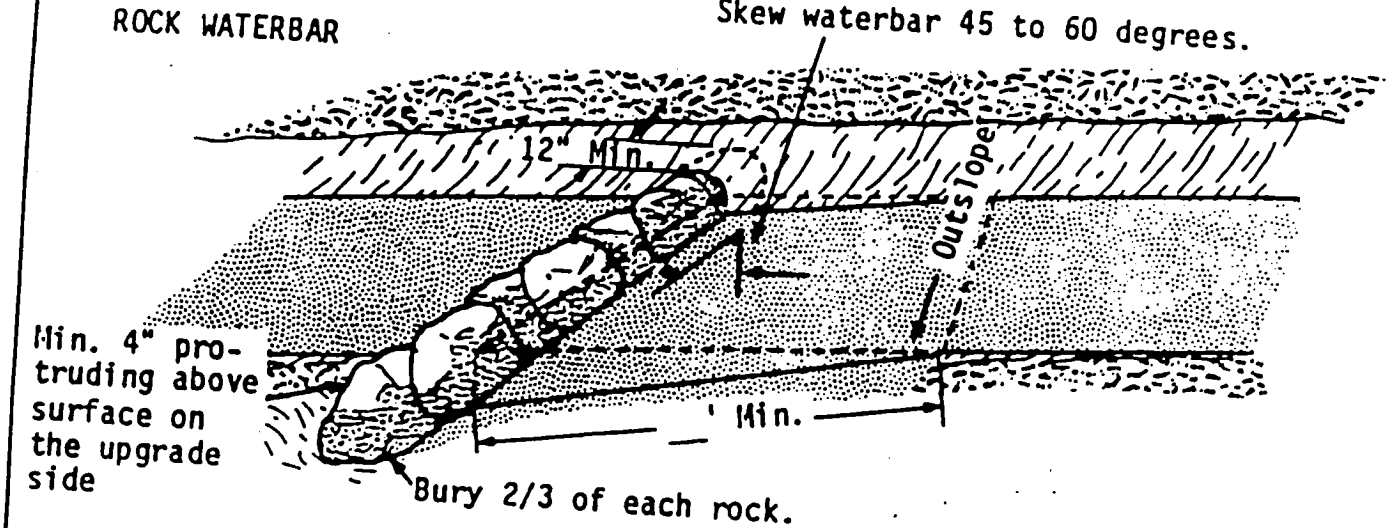
Pay Item		Pay Unit
922(01)	Native Log Waterbar	EA
922(02)	Rock Waterbar	EA
922(03)	Treated Timber Waterbar	EA

Waterbar

LOG AND TIMBER WATERBAR



ROCK WATERBAR



Section 915 - Trail Reconstruction

DESCRIPTION

915.01 Work

This work shall consist of reconstructing the trail. Work includes removing protruding rocks and roots, removing designated trees and stumps, removing slough and berms, filling ruts and troughs, reshaping backslopes, installing drainage dips, providing a finisned trail tread and constructing drainage ditches.

MATERIALS

915.02 Requirements

Materials shall meet the requirements of the following section:

961-Stone and Rock

CONSTRUCTION

915.03 Clearing & Grubbing

(a) All trees, brush, limbs and downed trees within the clearing limits SHOWN ON FORM FS-7700-72 shall be removed.

Limbs shall be cut flush with the tree trunk so as not to leave a protruding stub. Brush and small woody plants shall be cut flush with the ground surface.

Trees outside the clearing limits that are DESIGNATED shall be felled.

(b) Stumps within the trailbed shall be removed. Stump holes shall be backfilled with compacted mineral soil.

Stumps left within the clearing limits shall be cut flush with the ground. Stumps outside the clearing limits shall not exceed 12 inches in height.

(c) All felled trees, including DESIGNATED trees, shall be limbed to a 4-inch diameter top. All limbs, lopped tops, brush, and grubbed stumps and roots shall be scattered below the trailway and outside the clearing limits. Logs may be left on the uphill side of the trail if they are placed so that they will not move into the clearing limits.

Debris from clearing and grubbing operations shall not be placed in streams, water courses, snow ponds, lakes, or meadows or in a location that will impede flow through or from drainage facilities.

915.04 Rock & Root Removal

Rock and roots shall be removed in accordance with Form FS-7700-72. Material removed shall be scattered below the trailway, except in areas of excess trailbed width; rocks shall be windrowed against the backslope.

915.05 Slough & Berm Removal

Suitable slough and berm material within the trailway shall be used to reconstruct the trailbed and to develop the trail tread as SHOWN ON FORM FS-7700-73. Rocks and excess mineral soil that cannot be utilized shall be placed against the backslope in areas of excess trailbed width. In other areas, the material shall be spread evenly beyond and below the trailway at depths not to exceed 4 inches.

915.06 Fill Material

Ruts, troughs, and potholes in the trail tread that cannot be leveled and outsloped through performance of work in Subsection 915.05 shall be filled with compacted mineral soil and shaped in accordance with Form FS-7700-73. Mineral soil may be obtained from removed slough and berm material, from ditch excavation, or from approved borrow sources.

915.07 Installing Drainage Dips

Drainage dips shall be constructed at locations SHOWN ON THE DRAWINGS or DESIGNATED ON THE GROUND. Construction shall be in accordance with Form FS-7700-74.

A rock spillway shall be constructed in accordance with Section 923 at the water spillpoint when SHOWN ON THE DRAWINGS.

915.08 Ditches

The location of ditches will be SHOWN ON THE DRAWINGS or DESIGNATED ON THE GROUND. Ditches will be constructed in accordance with Subsection 912.10. Unsuitable excavated material shall be spread beyond the ditch to a uniform depth not exceeding 4 inches. Suitable material will be utilized in accordance with Subsection 915.06.

915.09 Stream Channel Cleaning

The channel areas to be cleaned of obstructions will be SHOWN ON THE DRAWINGS. Debris and rocks removed from the stream channel shall be scattered outside of the sideslopes of the stream channel and beyond the clearing limits.

915.10 Check Dams

Check dam construction shall be in accordance with details SHOWN ON FORM FS-7700-75.

Check dams for gullies shall consist of sound logs (10-inch minimum diameter) or of a row of stones (minimum size 2 cubic feet) placed across a gully in the trailbed with the ends securely embedded in the banks.

Check dams that serve as part of the trail tread shall be constructed to provide a step 6 to 10 inches high. The log shall be flattened on the top to provide a step. Backfill consisting of compacted mineral soil shall be placed and compacted to form a level trail tread.

915.11 Reshaping & Finishing Trailbed

The trailbed shall be outsloped 3/4 of an inch to 1-1/4 inches per foot of width, except for upper sections of switchbacks that shall be insloped 3/4 of an inch to 1-1/4 inches per foot of width and turnpike sections.

The trailbed shall be firm and smooth and finished to the width SHOWN ON FORM FS-7700-72 for all trail sections designated for rock and root removal, slough and berm removal, and fill material placement.

MEASUREMENT

915.12 Method

The quantity to be paid for will be measured in accordance with Section 906.

The following will be considered incidental to Clearing and Grubbing:

(a) Felling and disposal of designated trees outside the clearing limits, except when individual tree removal is included in the SCHEDULE OF ITEMS.

(b) Removing and disposing of stumps, except when individual stump removal is included in the SCHEDULE OF ITEMS.

Standing trees and stumps larger than 4 inches in diameter (measured 6 inches above the ground on the uphill side) will be measured and paid for separately when SHOWN ON THE SCHEDULE OF ITEMS. Otherwise, all trees and stumps designated for removal will be considered incidental to Clearing and Grubbing. Unless listed in the SCHEDULE OF ITEMS, consider the following incidental to Trail Reconstruction:

(a) Slough and Berm Removal.

(b) Drainage Dips.

Section 914 - Switchbacks

DESCRIPTION

914.01
Work

This work consists of construction of switchbacks, including turn sections, barriers, ditches, retaining walls, and approach sections as SHOWN ON THE DRAWINGS and at locations DESIGNATED ON THE GROUND.

MATERIALS

914.02
Requirements

Materials shall meet the requirements of the following sections:

961-Stone and Rock
962-Material for Timber Structures

CONSTRUCTION

914.03
General

Switchbacks shall be constructed in accordance with Form FS-7700- and as DESIGNATED ON THE GROUND.

914.04
Turn Sections

914
.01

The turn-section trailbed on the inside of the centerline and the entire trailbed of the upper approach section shall be in a cut. The backslope along the upper edge of the turn section shall be uniform with the backslope of the upper approach sections.

The lower half of the turn sections and lower approach section in rubble rock areas shall be constructed in accordance with Subsection 912.06.

When listed in the SCHEDULE OF ITEMS, retaining walls shall be constructed on slopes over 50 percent, in accordance with Section 934 or Section 935. Backslopes in rubble rock slide areas shall be stable. Unstable material and loose rocks shall be removed.

The lower half of the turn section and the lower approach section constructed on 30 to 50 percent sideslopes shall be constructed on a compacted fill.

914.05
Barriers

Barriers shall be constructed at each switchback, unless otherwise SHOWN ON THE DRAWINGS. The type of barrier as listed in the SCHEDULE OF ITEMS shall be in accordance with Section 953.

914.06
Ditches

A ditch shall be constructed on the upper approach section, unless otherwise SHOWN ON THE DRAWINGS.

MEASUREMENT

914.07
Method

The quantity to be paid for will be measured in accordance with Section 906.

PAYMENT

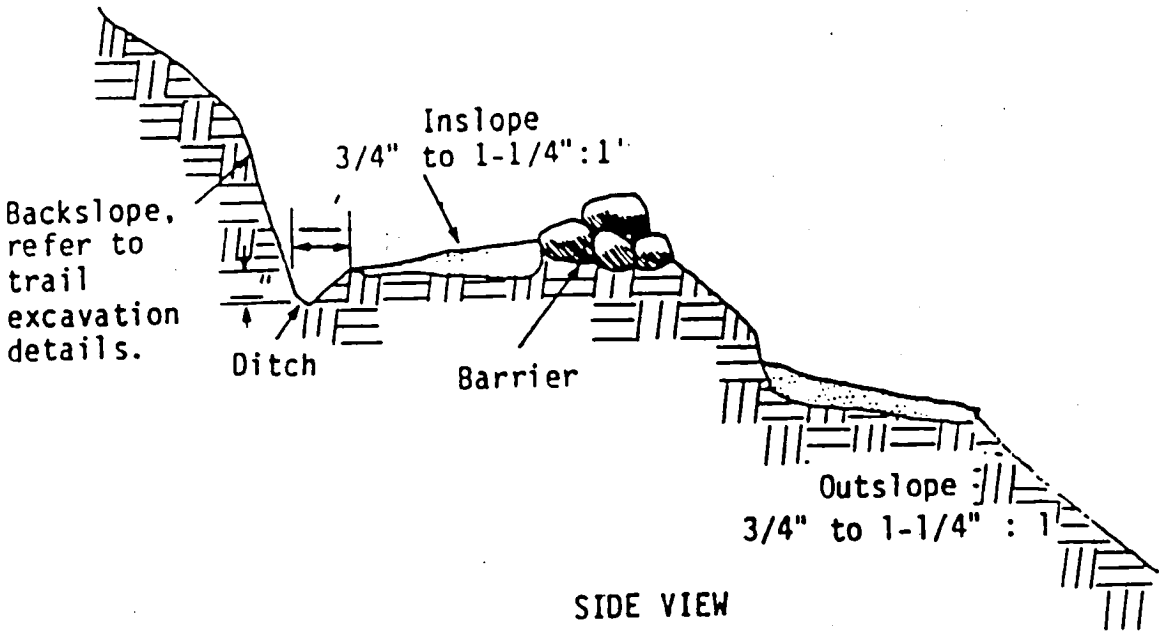
914.08
Basis

The accepted quantities will be paid for in accordance with Section 906 at the contract unit price for each pay item shown in the SCHEDULE OF ITEMS.

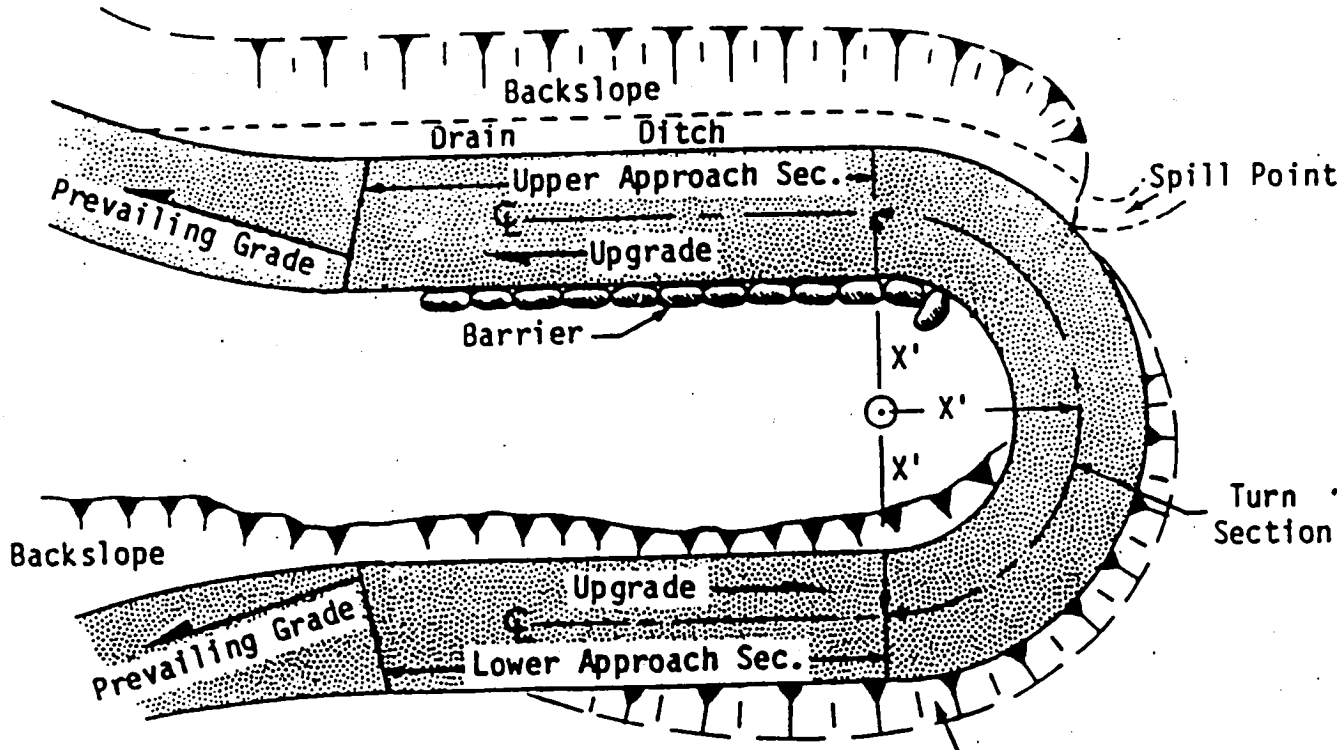
Payment will be made under:

Pay Item		Pay Unit
914(01)	Switchbacks	EA
914(02)	Ditch	

Switchback Details



SIDE VIEW



Radius (X') is denoted by staked markings at each individual site and as SHOWN ON THE DRAWINGS.

PLAN VIEW

FS-7700-71 (6/84)

Section 911 - Clearing & Grubbing

DESCRIPTION

911.01 Work

This work consists of clearing, grubbing, trimming, removing, and disposing of, or treatment of, live and dead timber, construction slash, and debris within the areas SHOWN ON THE DRAWINGS or DESIGNATED ON THE GROUND. This work shall include the removal and disposal of designated trees outside the clearing limits. Also included is the protection from injury or defacement of trees and other objects designated to remain and treatment or removal of damaged trees.

CONSTRUCTION

911.02 Clearing Limit

The area to be cleared shall be to the dimensions SHOWN ON FORM FS-7700-61 or 1 foot beyond fill or backslope catch points, whichever is greater.

911.03 Material To Be Cleared

All debris, trees, logs, limbs, branches, brush, plants, and other protruding obstructions within the clearing limits shall be removed and disposed of, except the following:

(a) Live, sound, and firmly rooted trees of the size SHOWN ON FORM FS-7700-61.

(b) Live brush, herbaceous plants, and trees between the trailway and the clearing limits that are less than 12 inches in height and less than 1/2 inch in diameter at ground line.

Except as provided above, all limbs and branches more than 1/2 inch in diameter that extend into the cleared area shall be cut flush with the tree trunks or stems or cut at the ground surface, as SHOWN ON FORM FS-7700-62.

911.04 Damaged Trees

Felling, cutting, and trimming methods shall not cause bark damage to standing timber. If damage does occur to standing trees, the injured area shall be treated with a coat of tree-surgery asphalt-based paint. Trees with major roots exposed by construction that are rendered unstable shall be felled and disposed of in accordance with Subsection 911.06.

911.05 Removal of Stumps

All stumps within the trailbed shall be removed. Stumps located between the edge of the trailbed and the edge of the trailway that cannot be cut flush with the finished slope, or are not tightly rooted, shall be removed.

911.06 Disposal of Clearing Slash, Logs, Stumps, Brush, & Roots

All felled trees, including designated trees outside the clearing limits, shall be limbed to a 4-inch diameter top.

All logs, limbs, lopped tops, brush, and grubbed stumps and roots shall be scattered on the downhill side of and outside the clearing limits, with the following exceptions:

(a) Limbs, brush, and lopped tops from trees felled on the uphill side of the clearing limits shall be scattered below the trailway, except where the sideslope above the trail is less than 10 percent such material may be scattered above the trail.

(o) Logs may be left on the uphill side of the trail if they are placed so that they will not move into the clearing limits.

Debris from clearing and grubbing operations shall not be placed in streams, water courses, snow ponds, lakes, meadows, or in a location that will impede flow through or from drainage facilities.

MEASUREMENT

911.07
Method

The quantity to be paid will be measured in accordance with Section 906.

The following will be considered incidental to other pay items, and extra payment will not be given unless listed in the SCHEDULE OF ITEMS:

(a) Removing trees with major roots exposed by construction.

(b) Removing or treating damaged trees.

PAYMENT

911
06

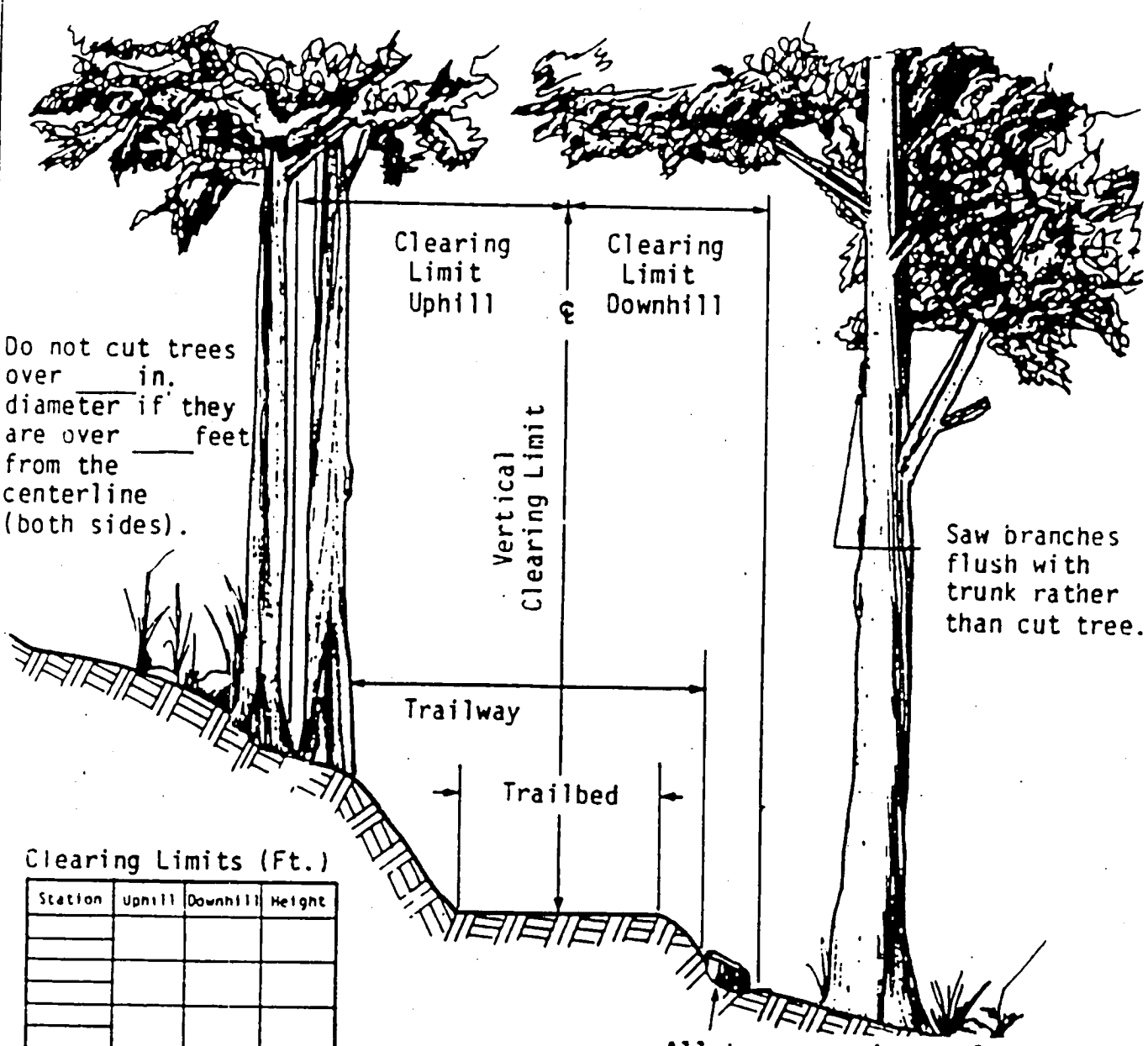
911.08
Basis

The accepted quantities will be paid for in accordance with Section 906 at the contract unit price for each pay item shown in the SCHEDULE OF ITEMS.

Payment will be made under:

Pay Item		Pay Unit
911(01)	Clearing and Grubbing	MI
911(02)	Clearing and Grubbing	STA
911(03)	Clearing and Grubbing	L.F.
911(04)	Clearing and Grubbing	L.S.
911(05)	Clearing	MI
911(06)	Clearing	STA
911(07)	Clearing	L.F.
911(08)	Clearing	L.S.
911(09)	Grubbing	MI
911(10)	Grubbing	STA
911(11)	Grubbing	L.F.
911(12)	Grubbing	L.S.
911(13)	Individual Removal and Disposal	EA
911(14)	Individual Removal and Disposal	L.S.

Clearing Limits



Clearing Limits (Ft.)

Station	Uphill	Downhill	Height

Stump Height Requirements* (Inches)

Stump Position	Side Slope	Uphill	Downhill
Stumps left in place between the trailway and clearing limits	Side slope less than 10%		
	Side slope over 10%		
Stumps outside the clearing limits	Side slope less than 10%		
	Side slope over 10%		

*All heights measured from uphill side of stumps.

Trail Name _____

Trail Number _____

FS-7700-61 (6/84)

PROJECT RELATED EASEMENTS

AFTER RECORDING RETURN TO:
Friends of Forest Park
PO Box 2413
Portland, Or. 97208

CONSERVATION EASEMENT

AGENCY CREEK MANAGEMENT CO., an Oregon corporation, Grantor, grants and conveys to THE FRIENDS OF FOREST PARK, an Oregon non-profit corporation, Holder, whose purposes and powers include retaining the natural, scenic or open-space values of real property and protecting natural resources, a perpetual Conservation Easement, as generally defined in Oregon Revised Statute 271.715(1) and as more particularly defined in the following provisions, to so much of the approximately 370 acre property described in Exhibit A, attached hereto and by this reference made a part hereof, as lies on the same side of the Burlington Northern Railroad tracks as the 38 acre parcel described in Exhibit B, attached hereto and by this reference made a part hereof, and which is being conveyed by Deed of even date herewith from Grantor to Grantee, but excluding the said 38 acre parcel from this Conservation Easement.

The Conservation Easement hereby conveyed is not intended to restrict Grantor's ability to obtain rural planned development status for or to obtain optimal net economic return from the property subject to this Conservation Easement. Grantor, however, shall make reasonable effort to configure development of the property subject to this Conservation Easement so as to leave as much reforested land as possible unaffected by development (always excepting, however, subsequent timber management and timber harvesting activities) and so as to allow a wildlife travel corridor or corridors across the property subject to this

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Conservation Easement to and from the City of Portland's Forest Park.

Grantor shall develop no more than 25 residential units and necessary access roads on the property subject to this Conservation Easement; such property shall otherwise be managed in accordance with provisions of the State Forest Practices Act or in accordance with any zoning provisions which may supersede application of the State Forest Practices Act. The Conservation Easement hereby granted shall apply differently depending on the character a particular portion of the property subject to this Conservation Easement has as a homestead or as private lands outside a homestead.

Each private lot developed on the property subject to the Conservation Easement shall have a five (5) acre homestead envelope ("the homestead") within which a dwelling house may be constructed. Fences that exclude wildlife will be permitted around and within each homestead. Dogs shall be permitted to roam freely within each homestead so long as dogs are effectively confined to the homestead. Cats outside a house shall be belled.

No wildlife excluding fence shall be constructed on the property subject to this Conservation Easement outside of a homestead. No unattended domesticated animals shall be allowed outside a homestead. Dogs outside a homestead must be under control of an accompanying person. Hunting on the property subject to this Conservation Easement shall be prohibited, except in cases where the landowner is forced to remove wildlife because it is a menace to people or is causing significant or repeated damage to

property within a homestead or to timber anywhere on the property subject to this Conservation Easement.

Delivery of this instrument to Holder and recordation of this instrument by Holder or at Holder's direction constitutes acceptance by Holder of this Conservation Easement.

DATED this 14 day of January, 1992.

AGENCY CREEK MANAGEMENT CO.

By John C Hampton
Its President

STATE OF OREGON)
) ss.
County of Washington)

Before me this 14th day of January, 1992, appeared the above **JOHN C. HAMPTON**, who said he was the President of **AGENCY CREEK MANAGEMENT CO.** and was authorized to execute and did execute the foregoing Conservation Easement as the free act and deed of said corporation.

Victoria J. Shaylor
Notary Public for Oregon
My commission expires: 9/03/92

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AFTER RECORDING RETURN TO:
Friends of Forest Park
PO Box 2413
Portland, Or. 97208

EASEMENT FOR COAST RANGE HIKING TRAIL

AGENCY CREEK MANAGEMENT CO., an Oregon corporation, Grantor, grants and conveys to THE FRIENDS OF FOREST PARK, an Oregon non-profit corporation, Grantee, a perpetual nonexclusive easement for purposes of constructing and maintaining a hiking trail, hereinafter referred to as the "Coast Range Hiking Trail," no more than six feet in width for use by Grantee's licensees. The right-of-way for the Coast Range Hiking Trail shall commence at the southern boundary of the property described in Exhibit A, attached hereto and by this reference made a part hereof, at a point approximately at the northwest corner of the undeveloped quarry on the adjacent property to the east and shall traverse the property described in Exhibit A along a mutually agreeable course down to a corridor defined by existing powerlines on the uphill side and the Burlington Northern Railroad tracks on the downhill side of the property described in Exhibit A. The Coast Range Hiking Trail shall then traverse northward along this corridor approximately paralleling the powerlines and shall extend to the northern boundary of the property described in Exhibit A, crossing Cornelius Pass Road within the bounds of such property. The Coast Range Hiking Trail shall traverse the property described in Exhibit A in a reasonably direct manner. Grantor shall have power and authority to veto the proposed initial location of the Coast Range Hiking Trail as it may be proposed by Grantee, but approval shall not be unreasonably withheld. After approval of the initial location by Grantor, the location of the Coast Range Hiking Trail may be

changed from time to time by Grantor to eliminate or to reduce interference between Grantor's subsequent uses and development of the property described in Exhibit A with uses of the Coast Range Hiking Trail. Any such change after the Coast Range Hiking Trail has been constructed, however, shall be at Grantor's expense and any relocation shall be to the same standard of construction as was the portion of the replaced trail.

Grantor shall have and retain rights (a) at Grantor's expense and with as little disruption to the Coast Range Hiking Trail as is reasonable to cross and to establish permanent crossings of the Coast Range Hiking Trail in locations reasonably necessary to develop and to use the property described in Exhibit A or to conduct timber management or timber harvesting activities on such property, subject, however, to the limitations imposed by the Conservation Easement conveyed by Grantor to Grantee of even date herewith and (b) to include area subject to the Coast Range Hiking Trail within boundaries of lots already platted, or as may hereafter be platted, but otherwise to leave the Coast Range Hiking Trail, as originally located or after relocation as permitted by the foregoing provisions, undisturbed and in natural condition and without impediment to pedestrian traffic even though such area may thereby be included in a homestead permitted by the aforesaid Conservation Easement.

DATED this 14 day of January, 199X.

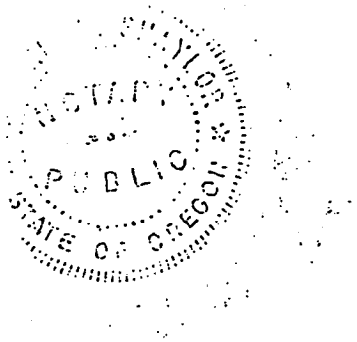
AGENCY CREEK MANAGEMENT CO.

By John C. Hampton
Its President

STATE OF OREGON)
) ss.
County of Washington)

Before me this 14th day of January, 1992, appeared the above-mentioned JOHN C. HAMPTON, who said he was the President of AGENCY CREEK MANAGEMENT CO. and was authorized to execute and did execute the foregoing Easement for Coast Range Hiking Trial as the free act and deed of said corporation.

Victoria J Shaylor
Notary Public for Oregon
My commission expires: 9/03/92



AFTER RECORDING RETURN TO:
Friends of Forest Park
PO Box 2413
Portland, Or. 97208

PEDESTRIAN EASEMENT

AGENCY CREEK MANAGEMENT CO., an Oregon corporation, Grantor, hereby grants and conveys to THE FRIENDS OF FOREST PARK, an Oregon nonprofit corporation, Grantee, a perpetual non-exclusive easement over and across a strip of land 50 feet on each side of the stream running from the lands described in Exhibit A, attached hereto and by this reference made a part hereof, to which the easement hereby granted is appurtenant in the direction of U.S. Highway 30 to the edge of the property described in Exhibit B, attached hereto and by this reference made a part hereof, excepting therefrom the lands described in Exhibit A, hereinafter referred to as "the retained property," for purposes of constructing and maintaining a pedestrian hiking trail for use by Grantee's licensees. The 100-foot wide strip is hereinafter referred to as the "Pedestrian Right-of-Way."

Neither Grantor nor Grantee shall have the right hereafter to harvest and remove timber from the Pedestrian Right-of-Way except that Grantee shall have the right to cut, but not to remove, standing or down trees incident to maintaining and making safe the pedestrian hiking trail.

Any pedestrian hiking trail hereafter constructed on the Pedestrian Right-of-Way shall be constructed and maintained at Grantee's expense. The pedestrian hiking trail can be located anywhere within the Pedestrian Right-of-Way depending on natural contours of land and natural resource preservation considerations as in Grantee's judgment will affect location of the pedestrian

hiking trail. Grantor consents to location of the pedestrian hiking trail outside the Pedestrian Right-of-Way at such places as will make the pedestrian hiking trail significantly less expensive to construct or to maintain or as are likely significantly to reduce physical difficulties to users of the pedestrian hiking trail. In the event that the pedestrian hiking trail is anywhere located outside the Pedestrian Right-of-Way, the location of the Pedestrian Right-of-Way shall be deemed shifted to accommodate to the actual location of the pedestrian hiking trail, but in no event shall the pedestrian hiking trail be located more than 100 feet from the centerline of said stream.

Grantor shall have and retain rights:

(a) at Grantor's expense and with as little disruption to the pedestrian hiking trail as is reasonable to cross and to establish permanent crossings of the Pedestrian Right-of-Way in locations reasonably necessary to conduct timber management or timber harvesting activities on the retained property and to develop and use the retained property as it may be developed subject to the limitations imposed by the Conservation Easement conveyed by Grantor to Grantee of even date herewith, and

(b) to include area subject to the Pedestrian Right-of-Way within boundaries of lots already platted, or as may hereafter be platted, but otherwise to leave the Pedestrian Right-of-Way undisturbed and in natural condition and without impediment to pedestrian traffic even though such area may be included in a homestead permitted by the aforesaid Conservation Easement.

DATED this 14 day of January, 1992.

AGENCY CREEK MANAGEMENT CO.

By: John C. Hampton
Its President

STATE OF OREGON)
) ss.
County of Washington)

Before me this 14th day of January, 1992, appeared the above mentioned **JOHN C. HAMPTON**, who said he was the President of **AGENCY CREEK MANAGEMENT CO.** and was authorized to execute and did execute the foregoing Pedestrian Easement as the free act and deed of said corporation.

Victoria J. Shaylor
Notary Public for Oregon
My commission expires: 9/03/92

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AFTER RECORDING RETURN TO:
Friends of Forest Park
PO Box 2413
Portland, Or. 97208

VEHICULAR EASEMENT

AGENCY CREEK MANAGEMENT CO., an Oregon corporation, Grantor, grants and conveys to THE FRIENDS OF FOREST PARK, an Oregon nonprofit corporation, Grantee, a perpetual nonexclusive easement for vehicular ingress to and egress from and appurtenant to the real property described in Exhibit A over a 30-foot wide roadway 15 feet on either side of the centerline of the existing road depicted on Exhibit B and described in Exhibit C, hereinafter referred to as "the Access Easement." Exhibits A, B, and C are attached hereto and made a part hereof.

Use of the Access Easement shall be limited to vehicular travel for the purpose of maintaining and caring for the real property described in Exhibit A and shall not be used by members of Grantee or by the general public for ingress to or egress from the real property described in Exhibit A except for such purposes.

Grantor shall retain the right to use the real property and the road hereby made subject to the Access Easement for all other purposes and to grant use of the road to any third party or parties particularly for ingress to and egress from lands owned by Grantor or by any third party or parties.

Neither Grantor nor Grantee shall have an obligation to repair and maintain the road subject to the Access Easement for use of the other party but each shall bear costs of maintenance in proportion to the use by each and in accordance with the guidelines provided by Oregon Revised Statutes 105.175; each shall be subject to the remedies provided by Oregon Revised Statutes 105.180.

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DATED this 14 day of January, 1992.

AGENCY CREEK MANAGEMENT CO.

By: John C. Hampton
Its President

STATE OF OREGON)
) ss.
County of Washington)

Before me this 14th day of January, 1992, appeared the above mentioned JOHN C. HAMPTON, who said he was the President of AGENCY CREEK MANAGEMENT CO. and was authorized to execute and did execute the foregoing Easement as the free act and deed of said corporation.

Victoria J. Shaylor
Notary Public for Oregon
My commission expires: 9/03/92

PUBLIC INVOLVEMENT INFORMATION

View design options for a special forest stand in the West Hills

Your comments are important!

What

Come to the second and final public meeting to let us know if your ideas and concerns are reflected in the site design options for this special forest stand.

When

7 to 9 p.m. Thursday, June 8

Where

The Linnton Community Center
10614 NW St. Helens Rd. (at 107th)
Meet downstairs in the gym

Sponsors

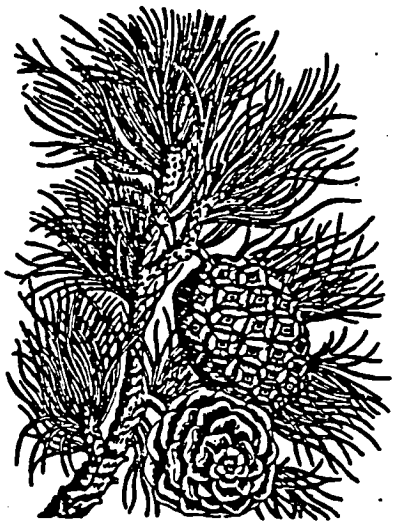
Metro Regional Parks and Greenspaces Department and the Friends of Forest Park.

For more information, call Jane Hart at Metro 797-1585.

Meeting Highlights

- Refine project goals and objectives.
- View and discuss design options for proposed uses in the forest stand.
- Review Project Advisory Committee Recommendations
- Brainstorm education and steward ship opportunities.
- Bring your ideas for a name for this special forest stand.

Refreshments will be served.



FRIENDS of FOREST PARK

Friends of Forest Park
Old Growth Adoption Project
P.O. Box 1015
Portland, OR 97207

Old Growth Grove Master Plan and Park Planning: Opportunities for Public Involvement

Dear Friend,

The Portland area's last old growth forest grove — the one that thousands of people like you helped save from chainsaws and clearcutting — is on its way to becoming a public park. Friends of Forest Park is pleased to announce that Metro, the Portland area's regional government, has contracted with the firm of Kurahashi & Associates, Inc., to produce a Master Plan that will guide the grove's future use and management as a public park.

The plan will be completed by late June or early July, and implementation of the plan will begin as soon as possible after that. In the process, we hope to involve all interested volunteers in trail-building and the restoration and planting of the 9-acres of clearcut forest land that was included in the purchase of the 29-acre old growth grove.

As one of the people who indicated an interest in park planning , offering professional services, or helping with trail-building, we want you to know about opportunities for your involvement and invite you to become involved in creating this wonderful public park. These public involvement opportunities are listed on the other side of this letter.

Friends of Forest Park and Metro are eager to have your help and input in developing the plan that will guide the old growth grove's future as a public park. To get involved, please call Dawn Uchiyama at Kurahashi & Associates, (503) 968-1605. Dawn is the project coordinator for this part of our effort, and will be happy to talk with you about any and all suggestions or skills you would like to contribute.

We hope you will also attend the first community planning meeting for our future park. The meeting will be **Wednesday, May 3, 1995**, 7 - 9 PM at the Linnton Community Center, 10614 NW St. Helens Road. At this meeting, a draft plan will be presented and public input, preferences and opinions will be gathered to include in revisions for the final plan.

Once the Master Plan is formulated, and then approved by Metro, we look forward to its implementation and completion. When that great day arrives, people will have the opportunity to experience an old growth forest just 20 minutes from downtown Portland.

And finally, thanks again for your help and generosity in making this possible. By working together, we accomplished an amazing grassroots conservation project — we saved the Portland area's last old growth forest grove from clearcutting so that current and future generations can enjoy its beauty and majesty. We hope to see you at the first community planning meeting on May 3rd.

Sincerely,

The Old Growth Adoption Committee

P.S. If you have any questions, comments or suggestions that you wish to discuss with Friends of Forest Park, please call Cathy at 244-9580, or Gordy at 735-0432. Thanks.

INSIDE:

UPDATE and PUBLIC INVOLVEMENT OPPORTUNITIES

for the culmination and completion of the OLD GROWTH ADOPTION PROJECT

FRIENDS of FOREST PARK

Old Growth Adoption Project
P.O. Box 1015
Portland, OR 97207

ADDRESS CORRECTION REQUESTED

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Opportunities for Public Involvement in Old Growth Park Planning:

• gathering historical information, pictures, photographs, articles, oral or written histories, etc. about the grove and surrounding area • documenting the process of developing the Master Plan and creating the park by attending relevant meetings and field outings and taking notes and photographs • helping to gather technical information and other data collection through field assessments or other research • helping to plan and staff community planning meetings • helping to develop and administer a survey for people attending community planning meetings so that the information can be incorporated into the Master Plan

Call Dawn Uchiyama at (503) 968-1605 to get involved. We welcome your input.
Please attend the public planning meeting, Wednesday, May 3, 1995,
7 - 9 PM at the Linnton Community Center, 10614 NW St. Helens Road.

SUMMARY FOR THE ANCIENT FOREST
SECOND PUBLIC MEETING
Thursday June 8, 1995 7 pm
Linnton Community Center

View Project Displays and Design Options

The public viewed the maps and photos as well as the design options developed by the Consultants, Metro, and the Project Advisory Committee.

Welcome and Project Overview

Metro Councilor Ed Washington welcomed the group with opening comments. Jane Hart, Metro's Project Manager reviewed the project background and the planning process to date. Jane explained the role Metro has played in managing and protecting old growth forests (like Oxbow Park) in the region. The agency is experienced with balancing preservation of natural areas while allowing appropriate public use. Kathy Turner of Friends of Forest Park introduced the Project Advisory Committee.

Consultant Presentations

Kurahashi & Associates, Inc. (KAI) Project Manager, Dave Walters, began the presentation by reviewing the outcome of the May 3rd public meeting and the questionnaire results. Dave asked the audience to review the goals and objectives noted on the new June 8 questionnaire and to fill it out before leaving the meeting.

The site analysis maps that were presented at the May 3rd meeting were summarized. The maps showed the forested area, the clearcut, zoning, surrounding land uses, project easements, and parking options. A show of hands determined that a majority of the audience had been to the site and/or attended the May 3rd public meeting. Kendra Smith of KAI, discussed the Burlington Creek watershed and its relationship to Burlington Bottoms and the Forest Park / West Hills / Coast Range wildlife corridor.

Since the May 3rd meeting the consultants narrowed 12 potential parking options down to four possible sites. Of the four sites, two are located on McNamee and two on Highway 30. The pros and cons of the four parking options were presented by Dawn Uchiyama of KAI and discussed with the audience. The consultants recommended that sites B-2 (on Highway 30 near the Burlington Northern tunnel) and M-2 (on McNamee between the trestle that goes over the road and the Hampton gate that serves as emergency access to the site) be further analyzed in the Master Plan.

Design options for pathways to the site and within the old growth forest were reviewed. The option of running the pedestrian easement to the site along the ridge-line versus a creekside trail was discussed. The creekside trail has a higher value from an aesthetic and education perspective. Given the width of

the floodplain terrace that exists along the creek, it is possible to locate the trail up to 100 feet away from the creek, effectively minimizing impact to the riparian zone. In areas of the floodplain where there is erosion, bioengineering methods could be applied. Areas that come close to or cross the creek would need to be elevated or boardwalked to protect the creek. Creek access area should be identified for interpretive and educational purposes.

The trail system within the old growth forest should attempt to remain on contour to minimize soil impacts or be boardwalked in high erosion areas. The carrying capacity (both ecological and social) of the site will determine where the trail will be located. It was explained that solitude is an important component to a satisfying visit and overcrowding would reduce the satisfaction of a visitors experience as well as affect wildlife. Dogs should not be allowed on the access trail or within the project site.

Mark Wilson, Environmental Horticulturalist discussed some of the opportunities available to manage the clearcut area on site for use as a windbreak (to reduce windthrow within the forest) and landlab for education purposes. He discussed the role of long term research and stewardship of the site as a necessary component to the restoration of the area. Mark suggested that an educational program be developed and long term research be coordinated by Metro or volunteers.

Public Input - Questions, Concerns, and Comments

The discussion of the various project elements generated much audience participation. The following is a listing of the major topics discussed and the resolutions suggested. Audience comments are listed first, followed by the response in italics from the consultants or Metro.

- It is important to maintain future linkage to Burlington Bottoms wetlands.
  Suggested that the culverts be altered to make the creek function as a migratory route once again.

- How will the buffer be brought back to protect the Stand?
  We will need to manage the surrounding land carefully, only time will bring back the buffer and protect the stand. We have to wait for natural succession to take its course. It is too labor intensive to remove the Himalayan blackberry that has taken over the clearcut.

- Concern that the parking option at the base of Burlington Creek is on the land of an individual in the audience.
  According to Multnomah County tax assessor maps, the parking site option located on the south side of the creek would be on land owned by Agency Creek Management Co.

- Parking at the base of Burlington Creek is not favored because it is across from the tavern and there could be vandalism at the site; safety and security issues; neighbors do not want it.
  Opinion acknowledged; suggested that M-2 and B-2 were more appropriate parking locations.

- Parking site at base of Burlington Creek too close to the project site; people should have to hike further to the site; a longer trail will reduce non-committed individuals.
  Opinion acknowledged.

- How are we going to deal with school buses and American Disabilities Act (ADA) issues?
  Buses will most likely drop the children off at the site; there are other locations in the area where they could park besides the designated parking area for the Stand. The Site will be ranked at the highest level of difficultly (primitive) under the US Forest Service standards for accessibility. With the goal of the site being to observe a natural setting, we can't destroy the natural setting to make it accessible. The ADA discussion will be fully explained in the Master Plan.

- Parking on McNamee could lead to people using Hampton's easement road.
  Opinion acknowledged.

- What is the status of the Rails to Trails project?
  Burlington Northern has not filed for abandonment yet, but most likely will in the future. Efforts will be made to coordinate this project with the rails to trails project, as long as the time frames are reasonably close to one another.

- Concerns that more people to the site equals garbage and restrooms.
  A decision has been made to make the site a garbage free zone as suggested by Councilor Washington. No restrooms are planned. The site is not meant to be a tourist attraction.

- Fire protection and emergency response are not available for the site. Metro should look to contract out the work.
  Point acknowledged.

- Is the site an old growth forest or a public park? Where are we on the spectrum?
  We are trying to achieve the qualities of both. Oxbow park is a place where a balance is struck. Park design will be in keeping with the scale and size of the parcel.

- The site should be preserved for the children; factor that into the planning.
  Opinion acknowledged and it was suggested that the educational opportunities are for everyone, including the children.

- There should be guided tours for education groups to regulate social capacity issues
  Opinion acknowledged and agreed upon by many. It could be similar to Audubon's educational program.

- Important to show people to what they want to see; they will go there regardless of whether there is a trail.
  Pathway type, interpretive signs, establishing respect and stewardship for the area could minimize wondering off the trails. Must balance the social wants with the ecological needs of the site.

- What about creek access and degradation to the system?
  We need to provide low impact access at certain points to satisfy curiosity; lack of such features at Balch Creek in Forest park has degraded the area significantly (along with the dogs).

- What if lightening strikes and the forest catches on fire?
  Acts of nature are unavoidable, but the Master Plan will address fire prevention / protection methods.

- Is there stream flow information for the creek?
  A visitor indicated that there are occasionally heavy flows. No formal gage data is known.

- What is the time frame for implementation?
  The plan is slated to be implemented over the next three years. The goal is not to rush the process but FOFP doesn't want the site to languish in bureaucracy. All necessary steps to protect the Stand will be adequately addressed before a trail system is installed.

- How many people do you want at the site and what time of year?
  We may determine the capacity on a seasonal basis if conditions prove to be more adverse than expected. This may further reduce impact to the creek corridor by reducing human visitation and impact during the rainy and breeding season.

- Consider asking Hampton to sell more property to increase buffers; land is cheaper now that it is logged.
  Opinion acknowledged. Discussions regarding management of surrounding land and buffer development are presently underway with Agency Creek Management Co.

Next Steps in the Planning Process

- Metro and the Consultant will further analyze costs and permit requirements for parking options B-2 and M-2, and make a recommendation to the Project Advisory Committee

- Trail design and locations will be based on protecting the integrity of the resource while providing a unique educational experience. They will be consistent with the site characteristics, goals and objectives, and public opinion

- The Project Advisory Committee will meet to review and comment on the direction of the Master Plan

- Consultant will prepare a draft Master Plan (from the technical memorandums produced) for Metro and Public Review

- RESULTS -
Design Options Questionnaire
The Ancient Forest Stand
Thursday, June 8, 1995 7 p.m.
Linnton Community Center

Master Plan Goals and Objectives

Goal 1: Preserve and maintain the integrity of the Old Growth Stand in perpetuity

Objectives
- Provide controlled access to the site, indirectly regulating the number of visitors to the old growth in order to reduce impact (small trailhead and parking area, low publicity)
- Construct a low impact pathway through the stand, leaving the remainder untouched
- Work with adjacent land owners to re-establish buffer around property
- Re-establish clearcut areas within the property by encouraging succession

Goal 2: Protect and strengthen wildlife corridor connecting Forest Park to the Coast Range

Objectives
- Design trails that do not impede animal migration
- Improve the continuity of the drainage to allow upstream migration
- Obtain conservation easements and purchase properties as they become available

Goal 3: Provide educational and passive recreational opportunities for the community

Objectives
- On a regular basis, monitor the condition of the stand, the clearcut and the surrounding environment to document changes
- Foster appreciation for project area through signage and experiences presented along trail
- Allow conservation groups to utilize the project area as an outdoor teaching area
- Develop and maintain a positive relationship with residents in the area
- Encourage cooperation with universities, ODFW and the State to support research in the project area
- Promote understanding of succession and forest regeneration opportunities in the clearcut

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1.0 Goals and Objectives

1.1 Do you support the Goals and Objectives? Yes- 17 No - 4

1.2 Additional Comments: Toughest question is target population/access/facilities; great opportunity for education & recreation & Metro to exhibit capabilities; elevate educational goals to a higher priority; could Metro condemn adjacent properties to conserve more; goals & objectives are conflicting, either it is preserved & protected or it is opened for recreation with all that goes with it; promote incentives for property owners to maintain properties in accordance with goals; can the trail surround the fragile area rather than go through it?

2.0 Public Parking Facilities

2.1 Of the four potential parking sites selected for further review, which do you feel is best suited to meet the needs of the park and the community?

___2___ **M-1** (originally proposed site off McNamee)

___4___ **M-2** (McNamee at the railroad trestle) None - 1

___5___ **B-1** (Burlington-Northern site at Burlington Creek)

___11__ **B-2** (Burlington-Northern/ODOT Property)

2.2 Do you have suggestions for other locations? B-1 is only "convenient" site for direct access; anywhere along Rails-to-Trails BN conversion (2); B-1 is ideal but residents object; along Hwy 30

2.3 Additional Comments: None of the above, more than a few people will be using trails (schools,etc.); citizens will walk to shortest distance making Burlington Creek best for long term; don't be too concerned with Rails-to-Trails deal, small parking area, deal with project NOW!; off-site shuttle on weekends, safety & security at parking site; if Metro succeeds with Rails-to-Trails, any parking will be impacted; B-2 is least conflicting, Metro needs to care about opinions outside of their jurisdiction, B-2 offers potential sharing with rails to trails

3.0 Path to Access Park

3.1 Of the two path options to access the park, which do you feel is most appropriate?

___12___ **A** (Along Burlington Creek)

___5___ **B** (Along the ridge northeast of the park) Neither - 1

3.2 Additional Comments: Easier grade; lessen impact on riparian habitat & more "dramatic" aspect of clearcut vs forest; which is steeper; minimize impact on creek; which ever has least impact on the area; from B-2; do not make it a destination, just a detour on "rails to trails"; B offers exceptional views & might be developed in cooperation with Burlington Bottoms

4.0 Path within Park

4.1 Of the two path options within the park, which do you feel is most appropriate?

___7___ **I** (enter the forest, stop at viewing point and return the same route)

___10___ **II** (enter the forest, stop at viewing point and loop back out) Neither - 1

4.2 Additional Comments: Add trails if needed later; any wet area crossed should be elevated; loop is more aesthetically & recreationally enjoyable; need "one way" traffic to minimize congestion; avoid "use" trails by creating formal trail; a loop will keep people from bumping into each other; might as well build loop since people are already there; less trail = less disturbance; no impact.

5.0 Name for the Park

5.1 Proposed names

_____ Old Growth Adoption Project	___4___ West Hills Ancient Forest
_____ Gladys McCoy Park	___3___ The Stand
___1___ West Hills Forest Preserve	___7___ Burlington Creek Forest Preserve
	___1___ Burlington Forest Preserve

5.2 Other Suggestions: Forest Park Ancient Trees; Metro Forest Preserve; West Hills Native Forest Preserve (2), Tualatin Mts. Native Forest Preserve

Tell us about yourself

Do you live within ten miles of the site? Yes - 16 No -5

Did you attend the last public meeting? Yes - 6 No -11

Any additional questions or comments?

No fire protection, slow police, no water or sanitary, increases vandalism, we don't want it in the (Burlington) neighborhood; connection to wetland with long culvert so amphibians have passage; options presented for active management of clear cut look very good which will maximize educational values, habitat values (etc.); coordinate development of Burlington Bottoms for wildlife viewing & minimize parking; thanks for all your work; all the conservation possible, please; liked idea of guided tours which seems like only way to protect it & provide educational opportunities; least disturbance the better, making it wheelchair accessible or any unnecessary pavement will detract from its uniqueness.

THANKS FOR YOUR PARTICIPATION!

The last stand

An ancient, perfectly kept natural wonder lies at the city's door, but few even know it's there

By JOE FITZGIBBON
for The Oregonian

For three years, Nancy E. Broshot kept the 800-year-old secret mostly to herself.

Alone in the shadows of huge conifers, she sketched, counted and measured trees that grew long before Columbus set off and accidently bumped into the new world.

Rarely-seen mosses, ferns and migratory birds were as familiar to her as family.

Now, she said, it's time to let others see the metropolitan area's last stand of old-growth forest.

"It's a low elevation old growth, and virtually nonexistent anywhere else — certainly not this close to an urban setting," Broshot said.

The 38-acre parcel, which includes 29 acres of old-growth forest and a 10-acre buffer of clear-cut, is a 10-minute drive from downtown, just past the Sauvie Island bridge. But steep trails, inexact maps and no-trespassing signs have kept most people at bay.

The virgin stand was saved after a two-year fundraising effort by the Friends of Forest Park. The conservation group bought the property for $630,000 from Agency Creek Management Co. and recently asked Metro to manage the regional treasure.

If Metro councilors approve a deed transfer, the agency will add the old-growth forest to its regional parks system.

Broshot, who is from Oregon City, is working with an advisory board appointed by Metro to find a way to open the forest to the public while protecting plants and wildlife.

The group and Metro planners propose an elevated walkway over parts of the fragile forest floor, and constructing a small parking lot on Northwest McNamee Road to limit the number of visitors.

Additional suggestions include public education and stewardship activities and setting up a long-term monitoring program.

"Over the past 10 years, sections around the stand have been logged heavily, and we've found invasive weed species growing nearby," Broshot said. "Clearly, the only way to change public attitude and gain support for preserving it is through education. And that means giving the public access to the area."

Because of the stand's proximity to the city, the Wisconsin native made it the subject of her doctoral dissertation at Portland State University.

"I went to Boston recently and couldn't find any open spaces," she said. "As a scientist I'm interested in the impact of urbanization on forests, but I have to say that living here has also made me feel the need to care for this wonderful treasure."

MARV BONDAROWICZ/The Oregonian

Nancy Broshot walks along a fallen tree in a recent addition to Forest Park that contains a stand of old growth.

Broshot said the smallness of the stand and its closeness to a large population center present unique challenges to conservationists.

Too much foot traffic could disrupt wildlife in the area and destroy its delicate ecosystem, she said. Elk, deer and migrating birds rely on the stand as a rest stop along an ever-shrinking wildlife corridor stretching to the coast and northward to Canada.

According to the U.S. Forest Service, an old-growth forest requires about 80 acres to regenerate itself. Smaller growths such as the Forest Park stand are vulnerable to windstorms, non-native plants and human activity.

"I'm not really a tree hugger," Broshot said. "But I can become a really big hugger when I think of how important it is to take care of this stand."

Jane Hart, project manager for Metro, said she expects to release a draft plan for managing the old-growth forest to the public for comment in January.

"We would also like to work with local landowners to get them involved in providing a buffer to protect the edge of the stand," Hart said.

Help plan an Ancient Forest Park in the West Hills

Now's the time to get involved!

What

Come to a kick off meeting to develop a master plan for an ancient forest park in the West Hills. Share your ideas about future public use and management of this very special place.

When

7 to 9 p.m.Wednesday, May 3

Where

The Linnton Community Center
16014 NW St. Helens Rd. (at 107th)

Sponsors

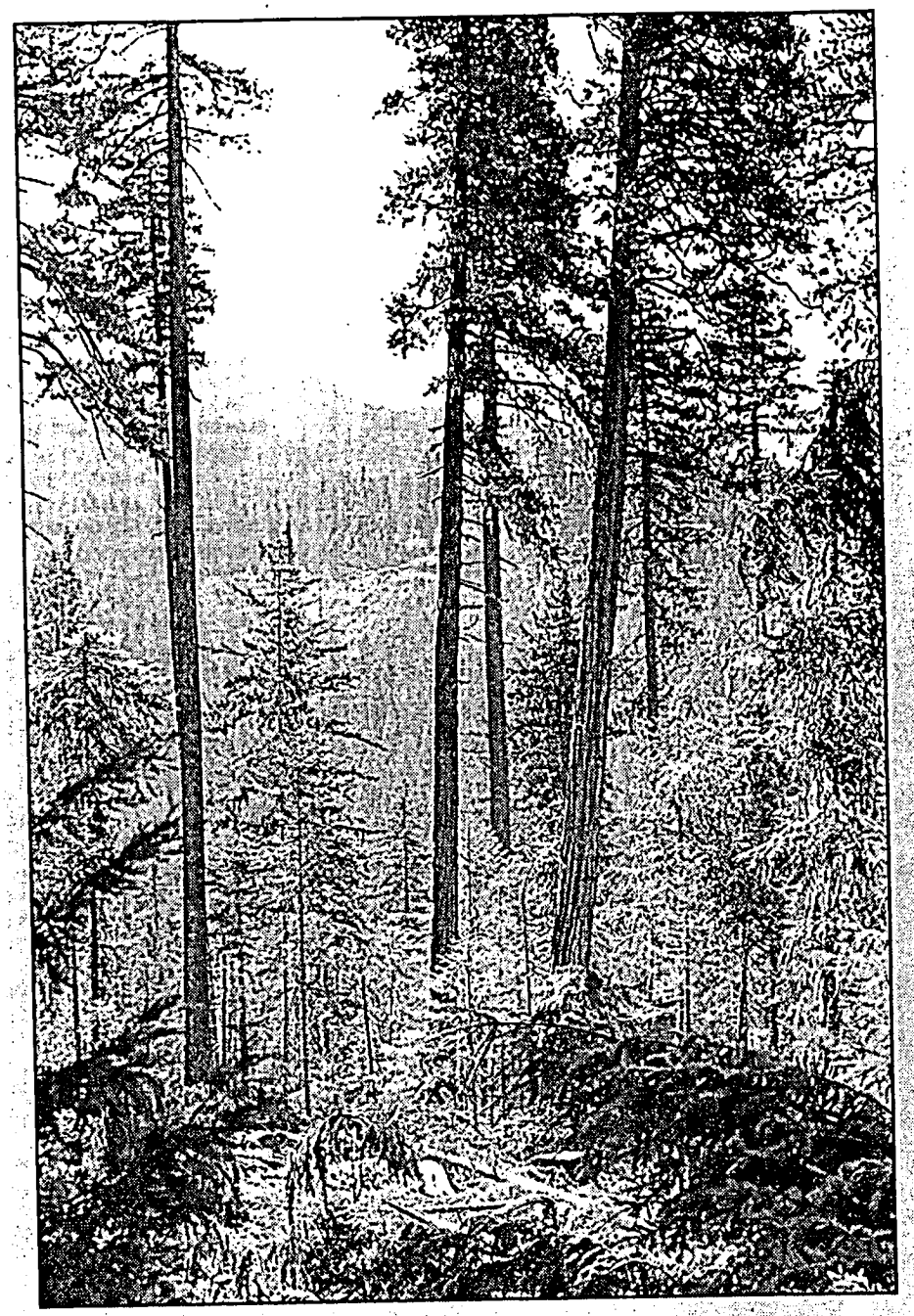
Metro Regional Parks and Greenspaces Department and the Friends of Forest Park.

For more information, call Jane Hart at Metro 797-1585.

Meeting Highlights

- Help guide development of the ancient forest park master plan with your ideas and comments.
- View maps and aerial photographs of the ancient forest stand study area.
- Share your verbal histories and old photographs of the ancient forest stand area.
- Meet the ancient forest park master plan project advisory committee.
- Learn about the next steps in the project and opportunities for your future involvement in the development of the master plan.

Refreshments will be served.



BEST BETS

Have an item for our calendar? Items may be submitted, at least two weeks in advance of the event, to Portland calendar, The Oregonian, 1320 S.W. Broadway, Portland, Ore. 97201; or, fax your suggestion to **294-5023.**

Ideas sought for public use of old-growth forest

Metro is looking for ideas to develop a master plan for public use of a stand of ancient forest. The Ancient Forest Stand is a parcel owned by Friends of Forest Park that the group plans to transfer to Metro. The tract is about a half-mile south of the intersection of St. Helens and McNamee roads.

Metro will gather ideas during a meeting from 7 to 9 p.m. Wednesday, at the Linnton Community Center, 10614 N.W. St. Helens Road. For more details, call 797-1585.

SUMMARY for the Ancient Forest Public Meeting

Wednesday, May 3, 1995 7-9 pm
Linnton Community Center, 10614 NW St. Helens Road

View Project Displays

Public viewed maps and photographs displayed throughout the meeting room and informally discussed the project with the Advisory Committee and consultants.

Welcome and Project Overview

Jane Hart, Metro's Project Manager gave a brief introduction and project history overview. Metro Councilor Ed Washington welcomed the group and shared his interest in the project.

Project Advisory Committee Introductions

Kathy Turner, Friends of Forest Park (FOFP)
Jamie Hampton, Hampton and Affiliates/Agency Creek Management
Julie Morrow, Burlington Neighborhood Resident
Fred Nilsen, Portland Parks and Recreation, Hoyt Arboretum
Seth Tane, Linnton Neighborhood Association

Consultant Presentations

The consultant team presented the goals of the Management Plan; natural resource issues of the site; related easements and land use of the site and adjacent properties.

Public Input - Questions, Concerns and Comments (An asterisk precedes the questions, comments and concerns voiced by the audience. Project team responses are in italics.)

* What is Agency Creek Management's intent with surrounding adjacent land? Conservation Easement on this parcel regulates residential development, but it is zoned as Commercial Forestry Use (CFU). *At this time it is not practical to consider development with CFU zoning; uncertain about what would happen if this zoning is overturned, there are too many unknowns.*

* What can we do in the 9 acre clear-cut? *Revegetate in accordance to a management plan developed by the project team.*

* Several people commented that they had not been to the site and felt they could not give much input without a site visit. *At this time there is no public access, but arrangements can be made to organize a group tour. (A sign-up sheet was sent around for those interested in participating in a tour.)*

* Six parking sites are proposed, are there any favored solutions? *All options are open for discussion, but each has good and bad points. Sites closest to the pedestrian access are most logical, but steep slopes, narrow roads and land ownership present challenges.*

* A recommendation was made to explore alternative pedestrian access routes other than the drainage corridor; every possible effort should be made to avoid a path in this sensitive area.

* Consider access from the north side? Also, are there easier routes, i.e. ADA accessible? *These issues will be addressed specifically in the design process.*

* Can we use the gated access road that leads to the site? *The access easement into the site was granted in the property purchase agreement with Agency Creek Management for emergencies and operations and maintenance purposes only.*

* What is the definition of passive recreation. *In this case, people walking; not bikes.*

* What about garbage? and restrooms? *There are no plans for facilities. (Ed Washington suggested we declare the site a garbage-free zone and the group agreed.)*

* It was noted the property owned by Linnton Rock Corp. provides a significant wildlife corridor. This June quarry owners and the planning agencies will decide which direction to carry out operations which could greatly affect the corridor. Also, it was suggested to contact other landowners in the wildlife corridor.

* Phased implementation of access to the site with careful monitoring was suggested. This phased approach should be clearly defined. Need to ask - what are the risks for survival of this system, what about wind throw? fire? over access/use? Examine the site in 5 year intervals as threats are reduced.

* Installing a trail soon was also suggested because people will visit the site anyway and may cause damage.
A minimal impact trail that closely follows the contours is being explored; an elevated boardwalk is also being considered. Suggestions to visit the Pacific Rim Park on Vancouver Island in Canada and the Mike Miller forest south of Newport as examples. Also consider guided tours only; and signage with trail maps that you pick up and return when leaving.

* Is there an easement for Agency Creek Management on the access road through the site? *The access road is the property of Agency Creek Management. FOFP was granted an easement to use it for emergencies and maintenance.*

* Recommendation to take a cautious preservation approach, consider a deferred implementation plan. Examine formulas for carrying capacity standards and link them with specific site conditions. How many clumps of moss can fall off a log before the system is affected?

* Will the public trust, especially that of the project donors, be violated if the project is deferred? T*he general understanding was that the land would be preserved as a public park. The specifics of implementation will be outlined in the Master Plan.*

* Newsletters and notices are helpful. Several commented that FOFP have been very effective in keeping people up to date on the project's progress.

* Security of the site is a concern - there is illegal trespassing now occurring on the access road.

* Consider the impacts to the Burlington Bottoms site when planning parking and trails. *Burlington Bottoms is recognized as a regionally significant greenspace and is identified as such in Metro's Greenspaces Master Plan (it is also inventoried as a Goal 5 resource in Multnomah County's Comp. Plan). Metro Parks & Greenspaces actively advocates protection of this site.*

* Consider the impact of traffic on McNamee if site is selected there for parking.

Next Steps in the Planning Process

☞ Metro and FOFP will look into arranging a site tour.

☞ An exit survey was distributed and attendants were asked to write their responses and comments. The surveys could be turned in at the end of the meeting or mailed to the consultant. There were also sign-up sheets for volunteers who wish to assist in the master planning process.

☞ The next public meeting is scheduled for June 8, 1995 at the Linnton Community Center. Meeting announcements will be distributed.

☞ The Advisory Committee will meet and consider the name of the site, the goals and objectives and the preliminary design of the Master Plan.

☞ The consultant's site analysis memorandums will be forwarded to volunteer technical reviewers for comment.

☞ The meeting minutes and questionnaire results will be mailed to meeting participants.

- RESULTS -
Analysis Questionnaire
The Ancient Forest Stand

Wednesday, May 3, 1995
7 pm at the Linnton Community Center

Preliminary Goals

- *Preserve and maintain the integrity of the Old Growth Stand in perpetuity*
- *Protect and strengthen the wildlife corridor connecting Forest Park to the Coast Range*
- *Provide passive recreational and educational benefits to the community*

8 RESPONSES

1.0 Regarding the Master Plan:

1.1 Do you support the Preliminary Goals? Yes- 8 No - 1

1.2 Additional Comments: provide inspirational icon for a greenway to the Pacific

2.0 Regarding the analysis:
Are there significant features you know of that were not identified and you feel are:

2.1 Worthy of preservation / conservation - creek w/access easement

2.2 Worthy of interpretation

2.3 Worthy of enhancement / restoration - 9-acre clear-cut - plant to protect old growth

2.4 Additional Comments: add hemlock & red cedar to Douglas Fir, emphasize "edge effect" from borders

3.0 Regarding trails and viewpoints:

3.1 In addition to the trails proposed in the granted easements, are there other trails you would like to see at / in / around the site? Yes - 2 No - 1
Where? place trail on road through property, postpone trail construction, would like to see the interior of the park

3.2 Should there be specific viewpoint destinations? Yes - 1 No - 2
To where and what will you see? viewpoints incidental and not the focus, should not be viewpoints - need to preserve trees

3.3 Additional Comments:

4.0 Low Impact Trail Design that preserves the natural character:

4.1 Do you favor a certain trail surface / width? Yes - 4 No - 0
Describe (4) elevated boardwalk, gravel, low impact, (2) 3' barkdust, interpretive signs

4.2 Are there any materials you would prefer to use for specific trails?
(2) cedar chips, elevated boardwalk

4.3 Additional Comments: keep trails at a minimum, as long as no visitors--no trails, use least invasive and most protective methods

5.0 Public Parking Facilities

5.1 Do you favor any of the identified locations for public parking? Yes-4 No - 0

5.2 Which alternative parking location do you favor ? A-0, B-0, C-2, D-4, E-2, F-0

5.3 Do you have any other locations you feel may work better? A is too far, B & C are on McNamee, Hwy 30 is closer for pedestrians, McNamee would be severely impacted by increased traffic & people would wander outside of Ancient Stand boundaries

5.4 Additional Comments: _____

6.0 Environmental Interpretation / Education Opportunities:

6.1 Do you have any suggestions for interpretive topics for this site? _____

6.2 Do you have any preferences regarding interpretive methods (signage, teaching tools)? like signs of Pacific Rim Nat'l Park on Vancouver Island, signage

6.3 Additional Comments: children need supervised access

7.0 Background about yourself:
Do you live within ten miles of the site? Yes- 4 No - 2

8.0 Please provide a list of any additional issues or concerns not considered and your view of the analysis and preliminary alternatives presented. notices of future meetings should be sent to the owners on McNamee, remove invasive species w/volunteers from FOFP, Mike Miller Forest in Newport is a good example of old growth w/one loop trail & brochures, have escorted tours only, phase in changes 5 yrs at a time, take your time, like the phased idea

NOTE: Please deposit your completed questionnaire in the collection box as you leave or mail to the following address by May 10, 1995.

David H. Walters
Kurahashi & Associates, Inc.
12600 SW 72nd Avenue
Tigard, OR 97223

THANKS FOR YOUR PARTICIPATION!

(Write Down Your Specific Questions Here)

How will garbage be addressed? restrooms?
Traffic management on McNamee?
How will Hampton property be closed off?

RESULTS AS OF MAY 12, 1995

OREGONIAN 5/6/95

growth preserve open to questions

By JOE FITZGIBBON
Special writer, The Oregonian

Conservationists want to open an 800-year-old treasure to the residents of Portland.

The treasure? Thirty-eight acres of old-growth forest that is an easy 10-minute drive from downtown Portland.

In the next few weeks, the Friends of Forest Park, a 300-member environmental group, and Metro, the area's regional government, hope to drum up support for a management plan that would preserve the stand for future generations while allowing Portland residents a close look at its riches.

"It's so unusual to have something of this quality so close to the city," said Metro Councilor Ed Washington. "I

Please turn to FOREST, Page D2

STEVE NEHL/1993/The Oregonia

Members of Friends of Forest Park inspect a fallen tree in the old-growth area near Portland. The Friends plan to work with Metro on a management plan that will allow people to visit the 38-acre area.

Forest: Donations preserve trees

■ Continued from Page D1

don't think we can praise enough those who had a hand in purchasing this land."

Friends of Forest Park announced the purchase of the Portland area's largest stand of old-growth forest this week. The stand is immediately west of Highway 30, between the St. Johns and the Sauvie Island bridges.

Deer, black bear and elk call the site home, while migrating birds and animals use the forest as a link to the wildlife corridor extending from Forest Park to the Coast Range.

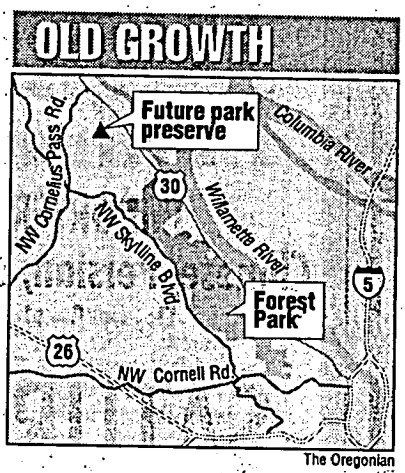
Friends of Forest Park bought the old-growth forest from Agency Creek Management Co. for $570,000.

For years, the company logged large tracts of land in the Portland hills and along the Oregon coast. Co-owner Jamie Hampton called the sale a "good business and environmental decision."

"If they had been just another business, we would have said, 'Why sell the land?' " said Hampton. "We think this is a good use of the land because everyone benefits."

The environmental group spent two years raising money for the purchase, mostly through appeal letters and personal contacts.

"We had over 3,500 contributors in what you'd call a real grass-roots campaign," said board member Carol Turner. "When you think that some of these trees were growing before Columbus landed, it's a miracle they are still here."



The Oregonian

The annoucement of the effort to come up with a management plan was made at a meeting during the week. Discussion among conservationists and area landowners centered on ways to allow the public to view the ancient forest without damaging its fragile ecosystem.

Members of an advisory board called for banning motorized vehicles and pets, creating a 75-foot buffer along its fragile stream, replanting native plants along neighboring clear cuts and constructing an elevated boardwalk trail system to the site.

NEW TREASURE

■ **WHAT:** Planning sessions aimed at writing a management plan for a newly purchased acreage of old-growth forest on Portland's northwest boundary.

■ **THE IDEA:** Figure out a way to keep the old-growth ecosystem vital while allowing people to visit it.

■ **WHEN:** Planners will hold a public meeting on June 8 at the Linnton Community Center to review a preliminary draft of a management plan. A final draft will be presented to Metro in July.

"I am concerned about people overrunning this valuable resource," said Seth Tane, a Linnton Community Association board member. "We all endorse opening it to the public, but some of us want a gradual phasing in of its use."

Residents with adjoining property added their support for the purchase, although a few grumbled over anticipated parking problems.

"I'm in favor of saving the old growth, but not at the expense of those of us who live in the area," said Julie V. Morrow, a 10-year resident of Portland's west hills. "There's no room for parking now off (Highway) 30, and I don't see how this is going to be resolved without affecting those of us who live nearby."