"There was a time in this fair land when the wild, majestic mountain stood alone against the sun... long before the Indian, the White man and the Misel..." (fr. Garden Lightfot). The "coming of the Reilroad" reasonably begins in the period somewhere between the 2nd Century B.C. and the 3td Century A.D., with the Greek mathematician and inventor, Heron of Alexandria, who made contrivances run by water, compressed air and oteam to turn a wheel (Columbia C. Encyclopedia). But these "engines" were no more than contrivances until 1769, when James Watt, a Saftish inventor and engineer was asked to repair Thomas Nieucomen's steem engineer and mode of the first practical solution to the harnessing of steem power. In 1826 the first practical solution to the harnessing of steem power. In 1826 the first U.S. Railroad "was a few miles of weedy track out of W. Quincy, Hass, its locomotives being horses and own" (Max Gurther, NY Times). Then a seff-fought man (only 52 DAYS of schooling), vested with many talents and named Feter Copper, built the first locomotive in the U.S. in 1829—an upright boiler on a flat car known as "Tom Thumb". Other engines and other names followed: "few kettle" and "Iron Horse"—the lafter really cought on. By 1837 the boilers were horizontal. (NY Times + Life Mag.) By then stories of the wealth and feedam of living in the far West" were firing men's hearts: "Some men looked in the riduce and wanted to see an Iron Road running from Sea to Sea, Over the mountains and over the plains..." (Lightfoot) There were very few who could accept such a dream but they came anyway by schooler found the Korn or by "prairie schooler" over the mountains and plains. But Congress was sold on the Kailpad Drewn and granted a wide right-of-way across the Condinent to provide for suitable of proment of the mountains and plains. The route went south to Sacramento from Omaha—the last spike driven in 1869.

Meanwhile, the caumill foun of Seattle was replacing and extending the oxen-powered lagging skid roads with little steam engines and rails also brought tround the Harn. Coal and other mineral deposits apteared to be in abundance in the Cascades and closer and the lugging railroads began to hook as with mines or targes on Lake Washington. One "iron road" headed south towards Walla but soon ran out of funds. The Northern Pacific began a spur line from the Columbia River northward and Seattle then made a generous bid of funds and waterfront property for an NP terminal here. But Tecoma was better suited for development as a railroad fown. Seattle renewed efforts to build its own road, headed for "the Pass" to Nalla Walla, to make its own connection with the Transcontinal Railroad. The rails "went broke" again - this time at the rich Renton mines - but the road become a financial success and began the process of tying the Pugal Sound hinterland to Seattle's part and fabrication facilities (fr. Roger Sale).

A twenty-six year old lawyer arrived in Seatlle in 1875 two years older than the town itself-his name was THOMAS BURKE. He was a business pioneer-speculator, "boomer" (of Seatlle's natural affibules + spirit), promoter and, most importantly, solicitor of and spokesmen for Eastern capital. Thomas was the son of an Irish tow migrant, born in a New York farmhouse, the eldest of five children. Afflicted with a partially crippled arm, form work was difficult; his alert intellegence and love of learning turned him towards a professional career. After the death of his mother the family moved to various form sites in lowa where he studied and did add jobs like gracery clerking. He enrolled in Ypsilanti Seminary-an experimental school with both classical and modern studies - where he developed his talent for oratory. Mixing classes and teaching he graduated and entered the Ann Arbor Law During but finances forced him to drop out. By reading law with a practizing afformed but finances forced him to drop out. By reading law with a practizing afformed he gained admittance to the bar. Served very briefly as city afformed of Mershall, Mich., because the town was "dood": boarded the new transcontinental train to San Francisco, then a steamer to Seattle. (fr. Rost C. Wesbit)

Through a series of deals the MP acquired the Seattle and "Walla Walla" RE around 1882 in an effort by Portland togain control of Puyet Saund ports and g

History: BUTIKE - GILMANN TRANS.

At this time another lawyer arrived in four: DANIEL HUNT GILMAN. Born in Maine (1845), he graduated from Columbia Law School in 1877 and went into law practise in New York City. Here he gained considerable commercial experience and acquaintence in Wall Street and other financial centers. He quickly became a close associate of Thomas Burke. Gilman was an inveterate optimist and a "shoe string" operator with a talent for keeping up appearances among managed people.

The Northern Pacific drove the last spike in the completion of the northern transcontinental railroad in 1883. He western ferminus was in Tacoma and the spur lines to Seattle and Portland were intended to drain the northwest through Tacoma - a plan that Seattle found to be inturiating. Besides, the service to Suattle was poor and the passenger and freight rates were exorbitant, generating even greater hostility. Then, when service stopped altogether, "Seattle" planted potatoes in the right-of-way and the NP restored service in fear of losing their Federal

franchise due to abandonment of the line (Gordon Newell).

In 1885, a group of twelve Seattle people, led by Thomas Burke and Daniel Gilman decided to have another try for a Seattle-based railroad - this time northward to Spokane and connecting to the Canadian Transcontinental Line of Sumas. Judge Burke sent Daniel Gilman "back cast" to secure financial support for their venture while he sought local support in the form of money, commercial and legal facilities attractive to Eastern railroad men. One valuable concession granted by Council was the creation of a man-made Railroad Avenue, on pilings all along the waterfront (Alaskan Way) to be used by all trains coming into Seattle: the inner and most valuable thirty-feet of the right-of-way sous given to Burke and Gilman for their new Road—the Seattle, Lake Shore and Eastern. They built a depot here, at Western and Columbia, and began laying tracks northward thru Interbay to Ballard, along the north shore of Lake Chion, through State School Lands (University of Washington, in spite of their objections to this intrusion thru their future campus: Judge Burke was a trustee. Danny Hall wasn't "moved" from its downtown location until 1895.) The rails continued around Union Bay with a spor to the logging town of Yesler (west shore of Leurethurst), then north elong Lake Klashington with a station at Pontiac (where the original Carkeck Park was developed in 1918: taken by the Feds in 1926 as part of the Sond Point Air Facility - itself abandoned and 176 acres granted to the City for a park in 1975.) Continuing slong the shoreline past other soumills slong the way (Puget Sound Mill, Maple Mill between Matthews Beach and "Lavilla" Station), a station and RR bunkhouse at the foot of (NE 117th St.) identified as "Lake" (the adjustent townsite becoming known as Lake City); a station at (NE 85% and 40th NE) was named Keith: immediately to the south (of 51st) was the crossing of Country Road (\*101) from Ravenna to Ponfrac: the Road crossed again at (NE 700) - site of the Pontiac Station. At Woodinville (founded by a former Scattleite, M.D. Woodin, partner with Seymour Wetmore in the forming and shoe making business) one spur went along the Sammamish Slavy to Squak (renamed Gillman and now Issaguah) and on to Snagualmie Falls; the other spur went northward to meet the Conscion Pacific, but funds and credit "ran out" of Lelington, just north of Everett-2 long way from Sumas on the border. Right-of-way property was largely the gifts of Seattle's citizens, determined to establish their independence -however, most of them condificated their deeds with provisions for hauling lags or reverting to them if the Railroad were not built within a year. A partial list includes G.M. Haller, J. H. Magraw, M. J. Carkeek, Estate of James Osbam, Puget Mill Go, etc. (Estelle Berteig, Roger Sale + R.C. Nesbit) The surveyor for the

railroad was Reginald Thompson, who later became City Engineer to undertake the Regrading of Seattle streets and hills, a major series of some 60 projects creating

considerable fame for Thompson and Seattle. (E. Berteig)

Another person who objected to Burke and Gilmenie S., L.S. + E. ER was Eupere Confield of Fairhaven (now Bellingham) who himself was building a railroad tem that town to Seattle. In order to stop Scattle's efforts to reach Canada, he obtained a Federal facility of the contained a Federal franchise to build any bridge across all rivers between Fairhaven and Scattle. Seattle was about to bridge the river at the town of Snohomish. Canfield's afterney boarded the train in Seattle to deliver the injunction to the Snohomish Country shall. Judge Burke hopped on the locomotive, unfitched it from the passenger cors and "went full bore "all the way to Snohomish. There the Judge asked his triend, the Sheriff if he and his deputies, didn't have to hunt for outlaws in the for north part of the county. The engine returned to Seattle, hitched up the care and went back to Shohomich, but the attorney found the Sheriff and deputies out on a lossifily starch party (David Suffia). The locamptive was named "Thomas Bucke" So Cenfield headed north but was stopped at the Border (Sumas) by the Canadian facilitie. During this time another railroad was crossing the U.S., but it was making

its way from fown to fown-rather than meeting unidensy with a golden spike. James Hill began building his Great Northern Ry from St. Paul in 1856. He sin slowly, ruthlessly and thoroughly, one section of ordine undir the towns extensioned or existing ones stablized and immigrants brought in it need. So he did not need to commit himself to any destinction until he had played town of spaint each wither, looking for the best possible deal. The west count forming was uncom-mitted: through Gilman he hired Judge Borke as his afterney. Hence, the Judge worked feverishly to get Seattle to give Hill anything he monted - especially up interference from city or state governments. Actually the Luays is a side-Jealous, for Seattle was where the people and facilities wheads existed. Made as Scattle wanted the transcontinental connection, they did not want to give the city to Hill. The best that the Judge could do was to secure the outer right. of. way for the GN and a shabby forminal of the foot of Calumbia Ct

Obviously James Hill was not pleased with the depart or its location but he was skilled in the game of "play off". His refusal to accept Federal Land Grants for his tupit-of-way gave him the freedom to disasse his route across the Continents including his route to Seaffle. Fill not acquired title to nine hundred thousand acres of NP Land Grant timberland which he sold to his St. Paul neighbor, Frederick Weyerhaeuser, conditioned by the provision that Hill would had this lumber back east to compete with Southern Pine (R. Sale + D. Soffia). The GN traces over laid from Everett south along the Projet Sound shoreline to Intercoy and Columbia

St. The first GN train arrived in 1893.

Although the "Buske-Gilman" railroad did not become the "niam line" to the francontinental it was northeless significant not only as a treight route connection between the GN and Puper Sound hinterland, but most importantly kept the City from being dominated and drained by Taconia. A further patential for the S.L. S. & E. RR was its anticipated commuter service to Seattle - but other applications of the engine, the electric trolley ear and the gasoline powered automobile - eausad this "dream" to burst. This dream was revived in 1974 but Metro Transif engineers felt it was unfeasable.

James Hill's waiting game paid off when Roth Thanpson became City Figurer. Thompson proposed a railroad tunnel under the city from Chion Street to the old tide flats south of King Street where Hill wanted to least a suitable depots The 5,142-foot long tunnel was completed in 1-104 for \$2,348,765 and the deport work of clock tower patterned after the Companile in Venice was built in 1900, the combined efforts of the GN, NP, Canadian Pacific and the Chicago Borlington and Quincy Filter Five years lafer the Oregon-Washington RR+ Novigation Co. and The Chicago, Milwaukee & St. Paul Ry built a depot across the street. Early-day trolley cans found needed

history: BURKE-GILMANI TRAIL

revenue by pulling a freight cat to or from or between business/farm communities. By 1894 this concept was developed into electric locomotives powerful enough to pull a train of freight/passenger cars. By 1917 the Chicago, Milwaukee, St. Paul + Pacific RR had completed the electrification of its entire route: 3,000 miles of trolley wire -a world's record at the time. By the 1930's diesel powered engines were replacing steam power and by 1974 had replaced the trolley system of the Milwaukee Road.

Having earned the title of "Empire Builder" by developing founs and trade centers as part of his Railroad system, James Hill did not stop when he "arrived" at Seattle. He looked across the Pacific; in 1896 the Japanese freighter Milke Mary docked of Pier S8, inaugurating international trade for Seattle. He developed Pier 88 and built two massive freighters for trade with the Orient. The "era of silk" was developed: a 135-16. bale was worth \$1000. But the market was speculative and insurance rates were high. James till was able to thingh ball "his Silk trains from Seattle to the New York mills with right. of way over every train-setting a transcontinental record of 73 hours coast-to-coast.

The Engine soon developed truck and simplone capabilities and began to eclipse the Iron Road: rails and track beds were a constant and costly maintenance especially for high speed trains. To compete with trucks, the railwast developed "piggyback" cars for having truck-trailers: as early as the late 1880's had havled farmers wagon on flot ears to New York City markets. Then came multi-level racks for having new passenger cars. Transcontinental buses and planes put passenger trains-and passenger steamers—into a deep decline. Mergers of railroads began in the 1980's: the largest U.S. Rail network rolled into action in 1970—the GN, NP (including the Burke-Gilman Road"), Chicago-Burlington & Quincy and the Spokane-Portland & Seattle RRs—a 24,487 mile system of rails to be known as the Burlington Northern. By not apposing the merger, the Milwaukee obtained rights to use BN rails. But these mergers were for freight: in 1970 more than 100 of the nations 500 passenger rail lines had filed petitions for disrontinuance of passenger service. So another system was born, chertered by the Federal Government to goerate virtually all intersity passenger railroad routes in the U.S., known as Amtrock.

Having hever become a part of the main-line transcontinental railroad into Scottle because Hill chose to come by way of Everett, the early-day importance of the "Burke-Gilman Road" began to decline with the conversion of the area from manufacturing-commercial plants to residential plus the increase of trucks handling most of the commercial accounts. This decrease in the use of five tracks together with the increased interest in Bicycle Paths led the League of America Wheelmen (Harry Coe of Scattle), the Park + Recreation and the Engineering Departments to discuss the possibility of a bikeway alongiste these tracks from the U.W. to the city limits in 1968. But the NP was non-committal, concerned with insurance liability of such a planas well as the proposed integer. The Lake City Journal wrote a story suggesting the wonderful patentials of the right-of-way as safe route to bikers and hikers. The idea kindled community interest. Estable Berteig repeated the suggestion in a community meeting. In 1970 the Fremont/Wallingford Communities staged a "walk-in" along the tracks, followed by a rally at Matthews Beach the following spring.

At this time the new BN system applied to the Interstate Commerce Commission of the abandonment (and sale of right of every) of the "Sumas Line". The City

history: BURKE-GILMAN TRAIL

immediately countered with a petition to ctay the proceedings to permit newtictions with the BN for seguistion of the right of visy for public purposes "as a reflection of the strong public spirit which created the railroad". But the EN's determination-and legal right-to sell the property brought strong protests from many groups: the Sierra Club's Puget Sound Group, the E/G Trail Park Committee, Federation of Western Outdoor Clubs, Mountaineers Inc., Seattle Audubon Society, Wn. Recreation + Trails Unlimited, Young Lawyers Lection - King Co. Box Asson, etc., setting off a lengthy and complicated series of negotiations and legal maneuverings between the City, ICC and BN. ICC placed on indefinite hold on the approval request. The result in 1973, was an exchange of property near the Port of Seottle Corsin Elevator (transferred to the City by BN in 1968) for the nine mile right-of-way, which, being of greater value than the submerged land, resulted in a significant 914 by BN to the City.

In the meantime, other interest groups had become involved in the proposed use of the right-of-way. The Purpt Sound Railway Historical Association, operating a 14 mile steam railway and exhibit of Sno justinie, Una, proposed relocating it's whole operation, using the "historic" trackage from University Village to Kenmare. This proposal met both approval and disdain by everyone concerned. The dispute was irrevocably solved when the city conditioned the agreement with BN for the City to buy the ties for \$34,000 and BN to remove the rails: 1973. Plans proceed for the development of the route as a hiseway t bikeway. Removal of the rails and ties was accomplished so quickly that it created a problem for the surveyors, who found that some property descriptions were referenced to the centerline of the tracks. During removal of the ties, some overe stolen before they could be secured in storage for use in the development of parks and playgrounds as retaining walls, steps and walkevers. Some ties were donated to the Wedgwood Elementary School; more than 175 bundles of 25 ties each were sold to 90 different individuals, organizations and Campanies.

The approved abandonment was from Latona Avenue to Kenmore - fute of the remainder of the route was left underided. Ownership Jonisdiction was split between Park and Recreation + Seattle Engr. Departments, University of Washington and The State of Washington; north from the City Limits (NE 145th St.) to Kenmore ownership was acquired by King County for development as part of the Trail-the County was given permission to continue the Trail from Kenmore onto the Cityowned Tot River Pipe Line right-of way. On the C.W. campur the Truit Connects with the Bike Route from Carkeek Pork to Green Lake to the compuse and thence south to Washington Park (Arboratum), south to Lake Washington Blud and the "Natl. Recreational Trail" from Nt. Baker in Soward Parks. Phase One of the P+R Depts development, completed in 1976, used all of the Forward Thrust funding allocated to this project. Additional funding will be sought to complete the project of path paving and planting plus other required improvements.

Originally identified as the "Builington-Northern Trail" the Big Trail Park Committee urged that the more historically significant name by officially adopted: it was in 1974.

Some interesting footnotes:
Attracted to a neat railway station Names Hill found the agent. Sam Kill. June stonsored Sam's education + Sam later became press of the GN. Sam built a mansion just was tot
Volunteer Park at 814 E. Highland Or.
Daniel Gilman's brother L.C., was also a lawyer + promoter of railroads. A G.P. Gilman
Was NW travel agent for the Union Pacific in 1869, the year transcontinental service opened.

GN Standard 18 GN Steam Locomoffice + Tender # 1246 (1907-1952): placed in Woodland Park in 1953.

NP Cabouse #13/3 (1913-1960): converted into comfort station at Woodland Park in 1961.

The major determinant of the geomorphology and topography of the area has been advancing and retreating glaciers that have inundated the Puget Lowland over the last two to three million years and have left the area basically as a series of north-south running troughs (ie. Lake Washington, Lake Samammish, etc.) and ridges (ie. Capitol Hill, etc.). The soils have developed almost entirely from unconsolidated materials that were deposited over local rock formations during the glaciations. Since depostion, weathering, biological processes, and other agents have acted on these materials to develop the soils as they now exist.

Different soil types have differing degrees of suitability for structural development, and there are certain characteristics which indicate whether or not a particular form of development will be structurally successful. Such factors as bearing capacity, drainage characteristics, shrink-swell characteristics, depth to bedrock, acidity or alkalinity, topography, etc., all are important in determining the developmental capacity of a particular soil type.

The Burke-Gilman Trail is primarily located within two major geological zones, except for a short portion immediately west of 25th Avenue N.E., where it crosses post-glacial alluvial deposits laid down by what was once Ravenna Creek. The two major zones are of <u>Vashon Till</u> and a formation designated as Older Clay Till and Gravel.<sup>2</sup>

Vashon Till, which extends from the intersection at 25th Avenue N.E. to immediately south of N.E. 70th Street, is a mixture of clay to gravel sizes and is the "hardpan" of common usage. It may contain occassional lenses of sand or gravel; is very difficult to excavate by hand; is of very low permeability; an excellent foundation material; and is stable both seismically and in terms of slide susceptibility. All of these characteristics are essentially favorable in terms of bikeway development, the only exception perhaps being the low permeability factor. Drainage is a problem along a major portion of the trail (see p.18), and a suitable drainage system which will carry run-off away from the trail development rather that allow it to pond along the edges will be necessary.

The <u>Older Clay Till and Gravel</u> has within it large, identifiable lenses of sand and gravel which have properties distinct enough to warrant designation as a separate but related sub-category (relatively stable, well-drained material). The larger category occurs in two major areas, from immediately south of N.E. 70th Street to Thorton Creek, and from approximately N.E. 110th Street to the end of the trail, and is basically similar to the <u>Vashon Till</u> except that it usually contains water and is highly susceptable to slides where it occurs on steep slopes. Groundwater

that has percolated down through the ground until it reaches an impermeable layer, usually clay or clay silt, has a tendency to saturate and "lubricate" the seam between the layers, which results in the top layer sliding. Within the first area mentioned above, actual slides have been recorded only in those areas of steepest slope, roughly between N.E. 75th Street and N.E. 90th Street. The primary factors<sup>3</sup> (in addition to the general instability of the material) in causing slides in the area have been the excavation at the toe of the slope along Sand Point Way, addition of fills to properties within or adjacent to the slide area, and surface/subsurface water conditions. Slides in the area are relatively minor in nature and generally take the form of gradual down-hill creep as evidenced by curved tree trunks on the slopes and leaning retaining walls at the toe of the slope. The primary implications in terms of bikeway design are in the form of providing for infrequent removal of slide debris from the trail.

The second area of the <u>Older Clay Till and Gravel</u> classification begins at approximately N.E. 110th Street, as mentioned above, and continues north to N.E. 145th Street. From N.E. 110th to approximately N.E. 123rd Street, the threat of sliding is relatively minimal, primarily because the bluff paralleling the trail on the west is generally less steep and is set back from the roadbed. North of N.E. 123rd Street, the bluff is steeper, closer to the roadbed, and thus the slide potential is a greater threat to trail development. There have been several slides onto the roadbed, both large and small, in this area.

The large lenses of sand and gravel mentioned previously (occurring within larger areas of <u>Older Clay Till and Gravel</u>) have essentially the same characteristics<sup>4</sup> as the larger classification with the exception that they are relatively stable on steep slopes and not subject to sliding. This material occurs primarily in a section from Thornton Creek north to approxmiately N.E. 110th Street.

For the most part, the existing surface of the roadbed, laid as a foundation for the railroad, is composed of sand and gravel, with a small amount of clay-silt binder. This surface averages 10 inches thick and 11-12 feet wide, and is "excellent, firm, dry, and stable," over 95% of the trail. The remaining 5% is either poorly drained or has been muddied or obstructed by recent sliding.

# DRAINAGE

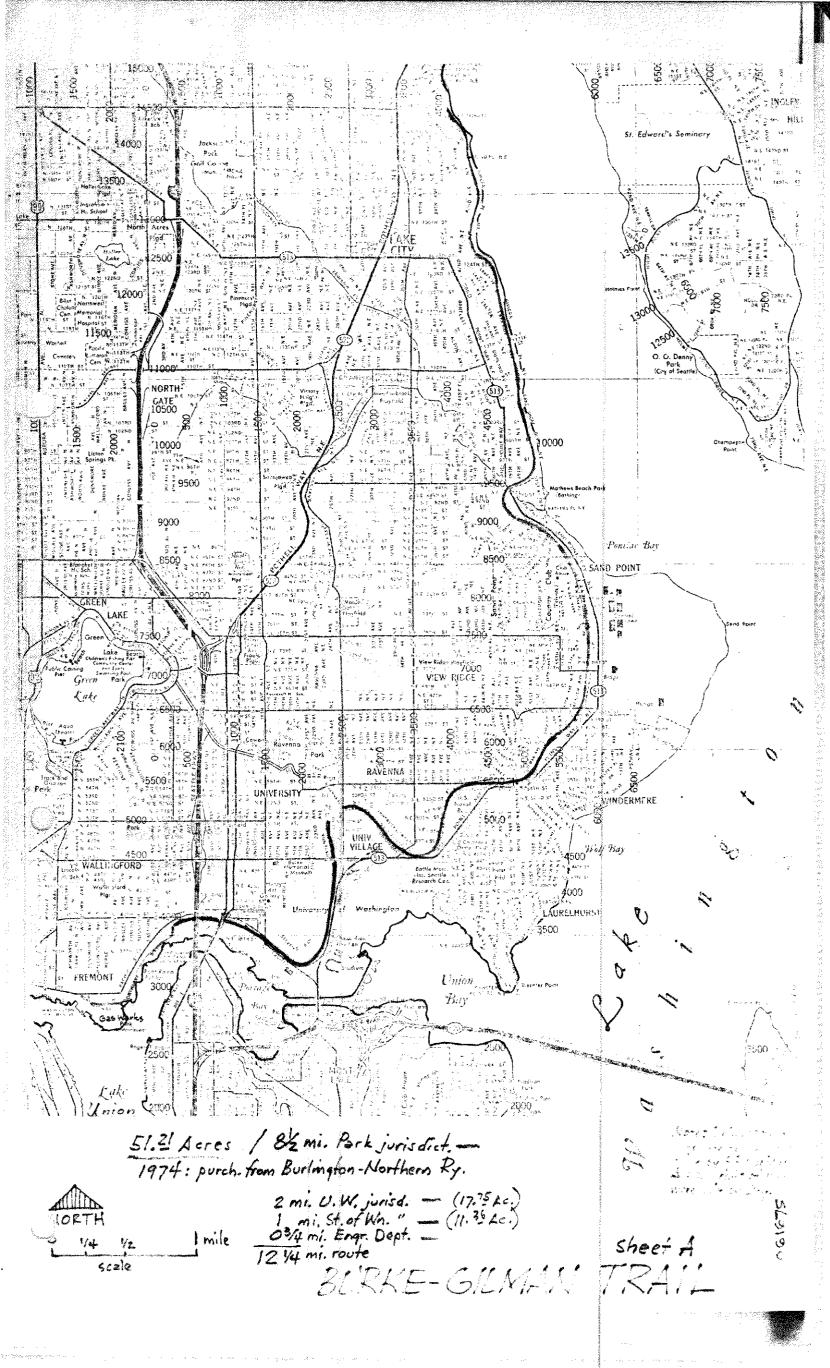
There are some drainage problems along a major portion of the trail, as mentioned earlier, which result primarily from inadequate maintenance of the existing drainage system. The existing ditches are generally either poorly defined physically or have been clogged by debris or vegetation. Groundwater seeping out from the bluffs above and running downhill is a major source of water on the trail (see p 18).

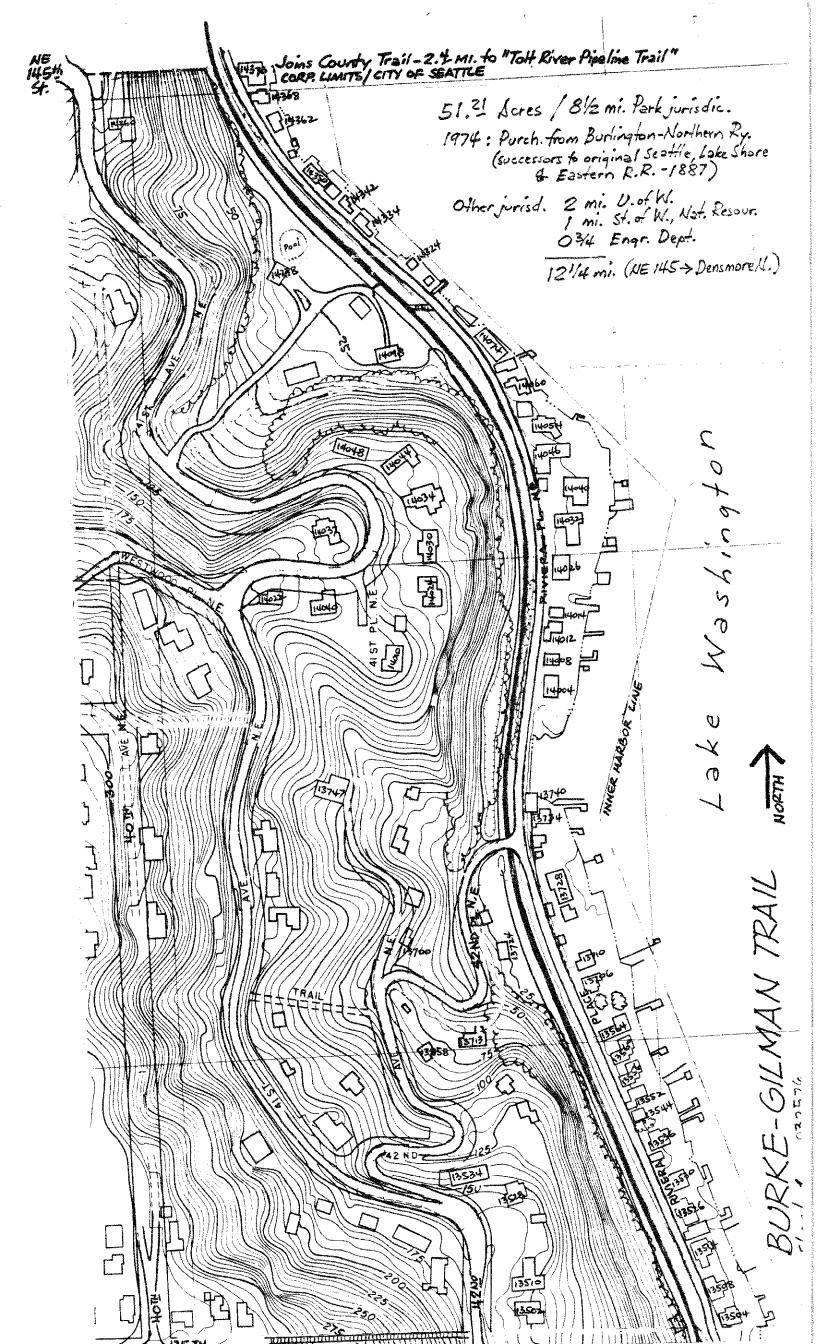
# **VEGETATION**

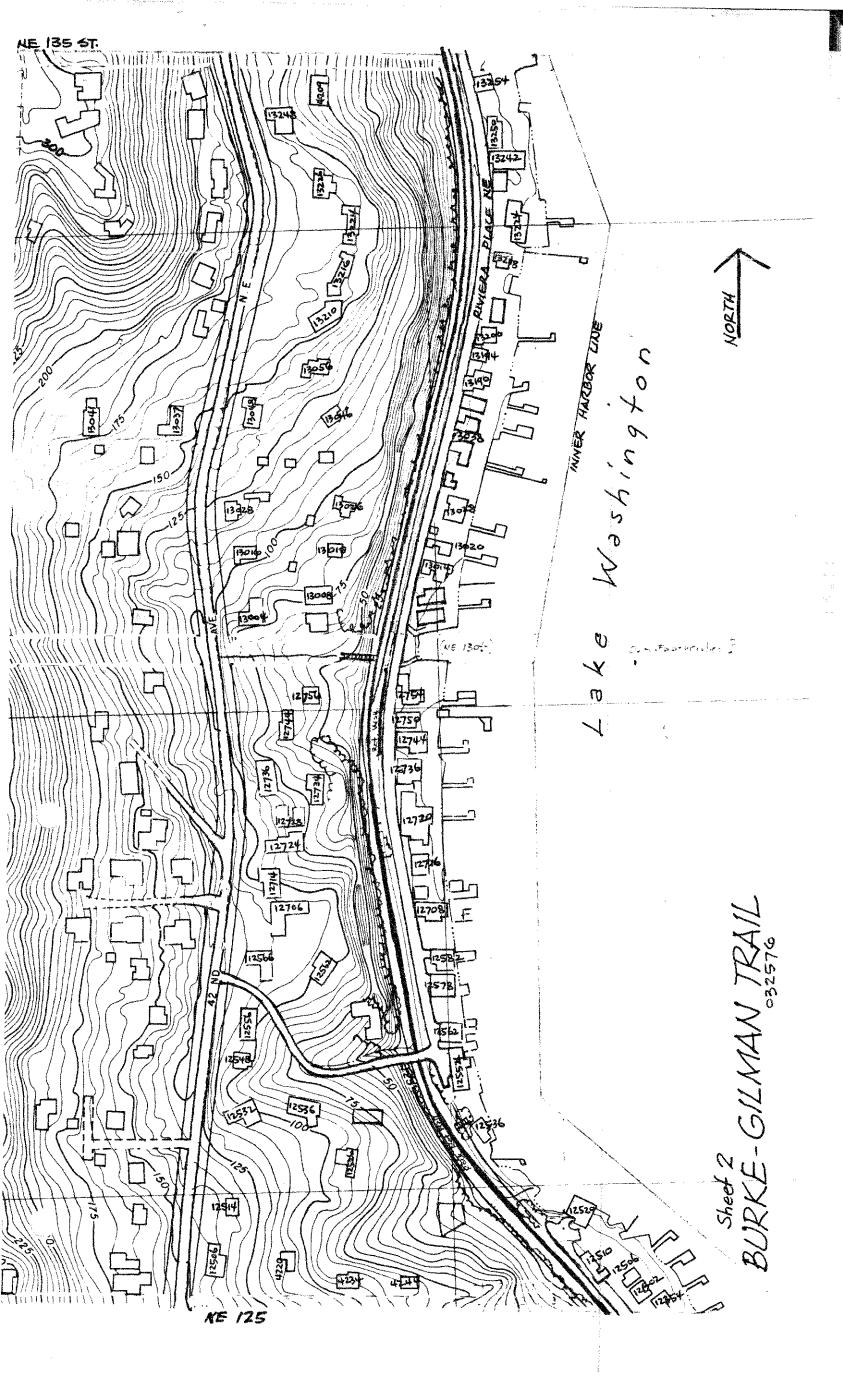
The Seattle area lies within the northern coniferous biome, part of what was once a vast evergreen forest region. Almost all of that original vegetation has been removed for various reasons, and vegetation today along the Burke-Gilman Trail is that which has been retained or planted by adjacent property owners. Some small to medium-sized trees have grown up along the roadbed itself since the railroad discontinued use of the line, and large trees remain on steep slopes where development of any sort has not yet occurred (the large majority of which are deciduous native types).

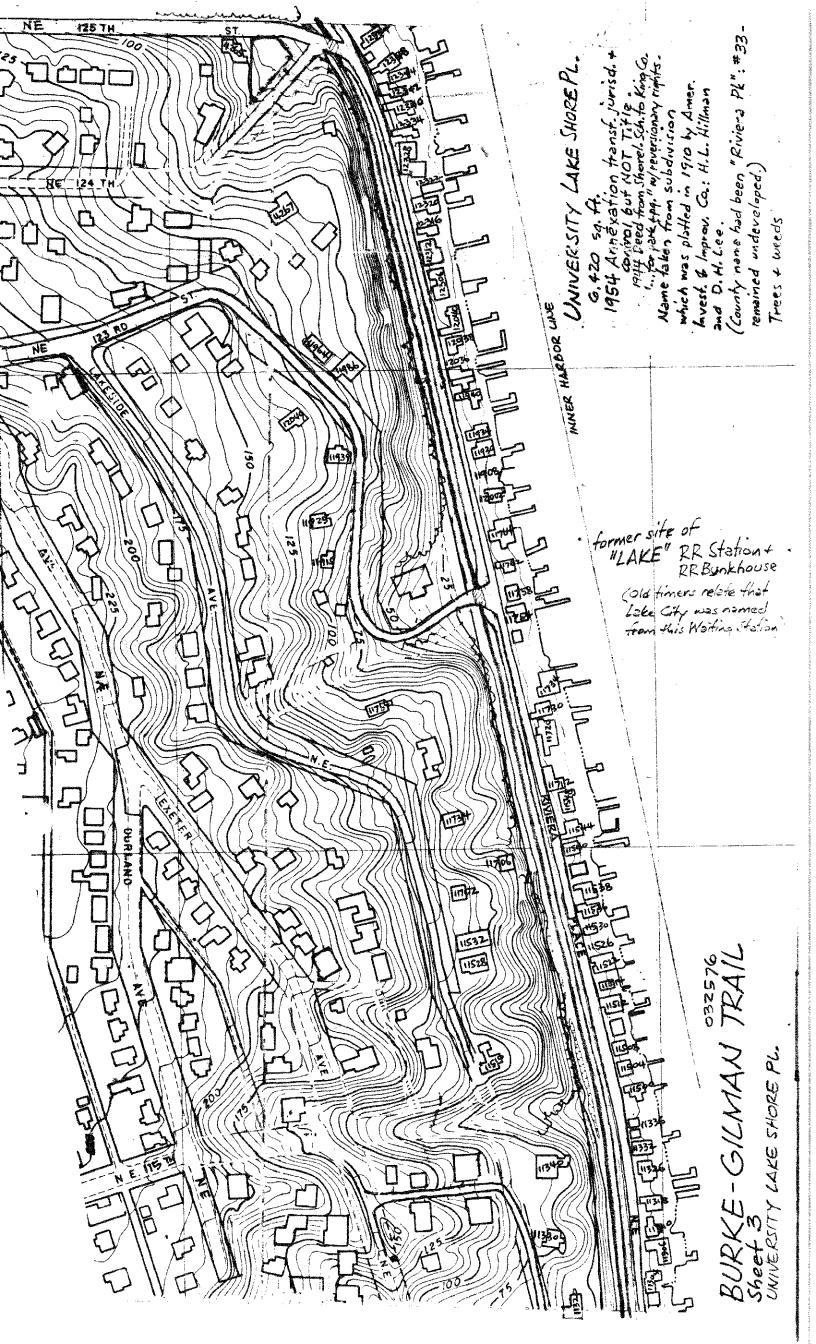
A great deal of that portion of the right-of-way which lies between the existing roadbed and adjacent properties is overgrown with thick weeds and vines, primarily blackberry (Rubus species). In some cases these are encroaching on the roadbed and require maintenance or removal, while in other areas they do not conflict with proposed trail use and in fact provide a barrier and a source of fruit for adjacent property owners.

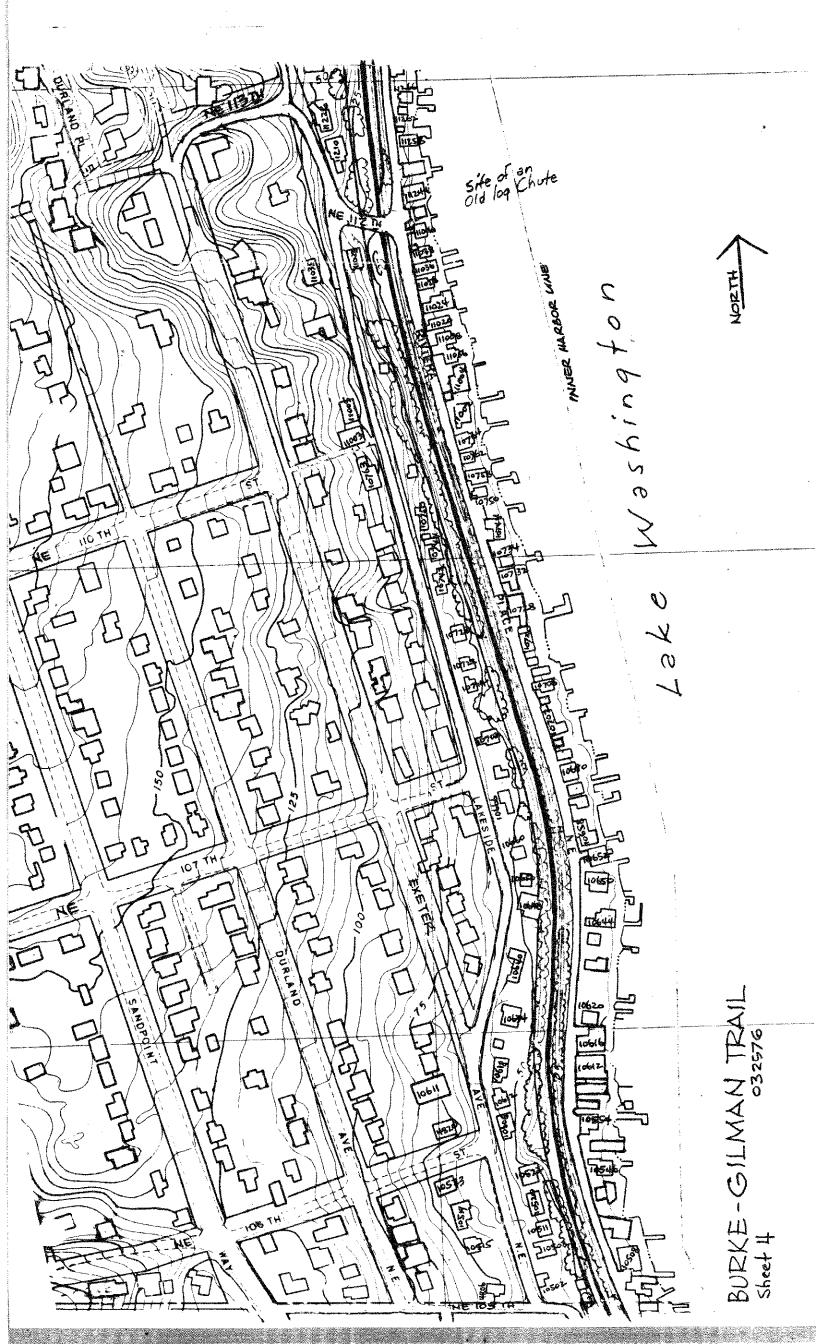
by EDWARD MACLEOD & ASSOCIATES
Landscape Architects/Land Plannecs
November 1975

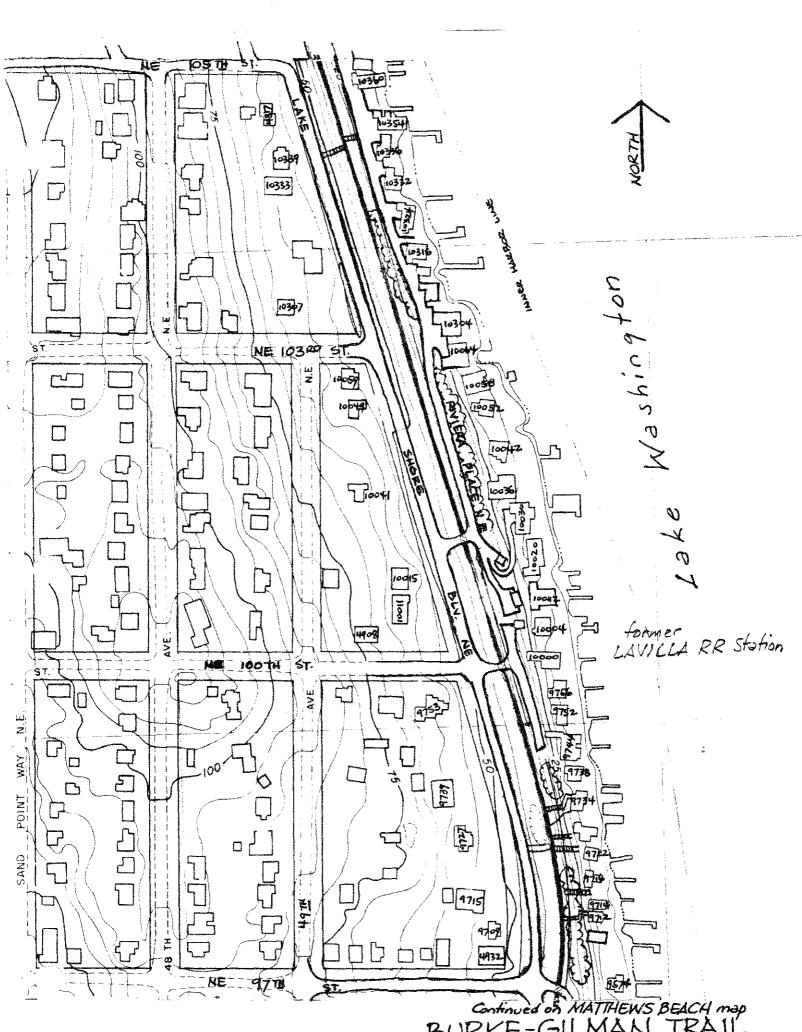




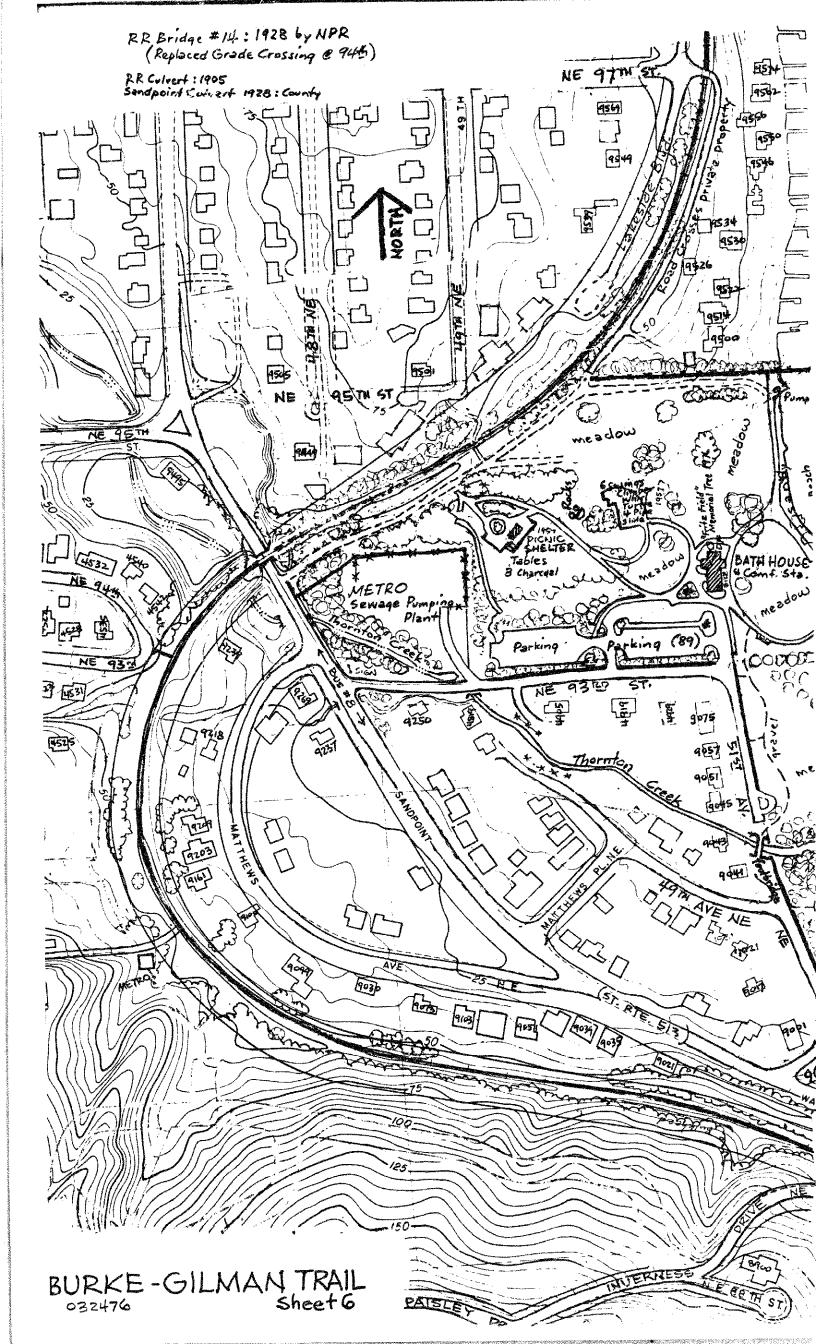


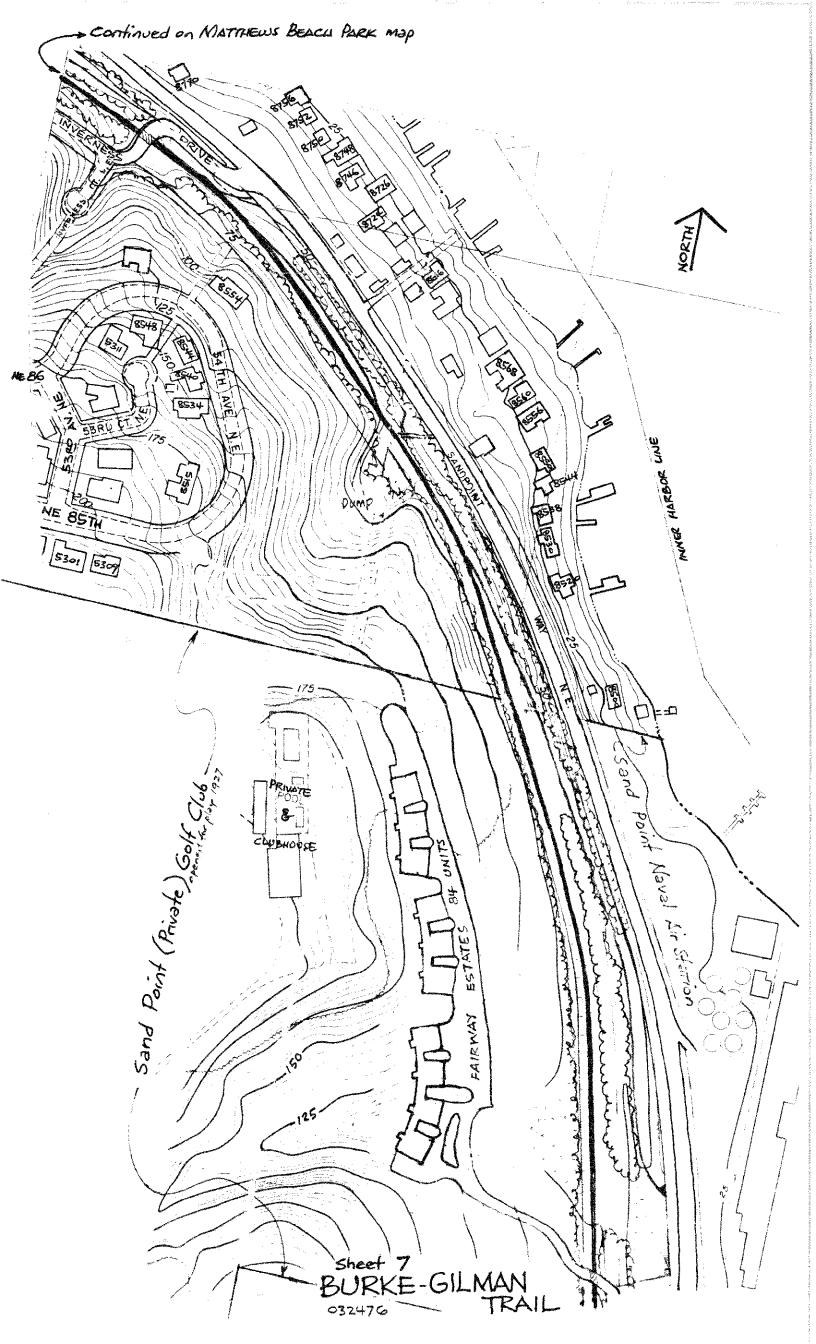


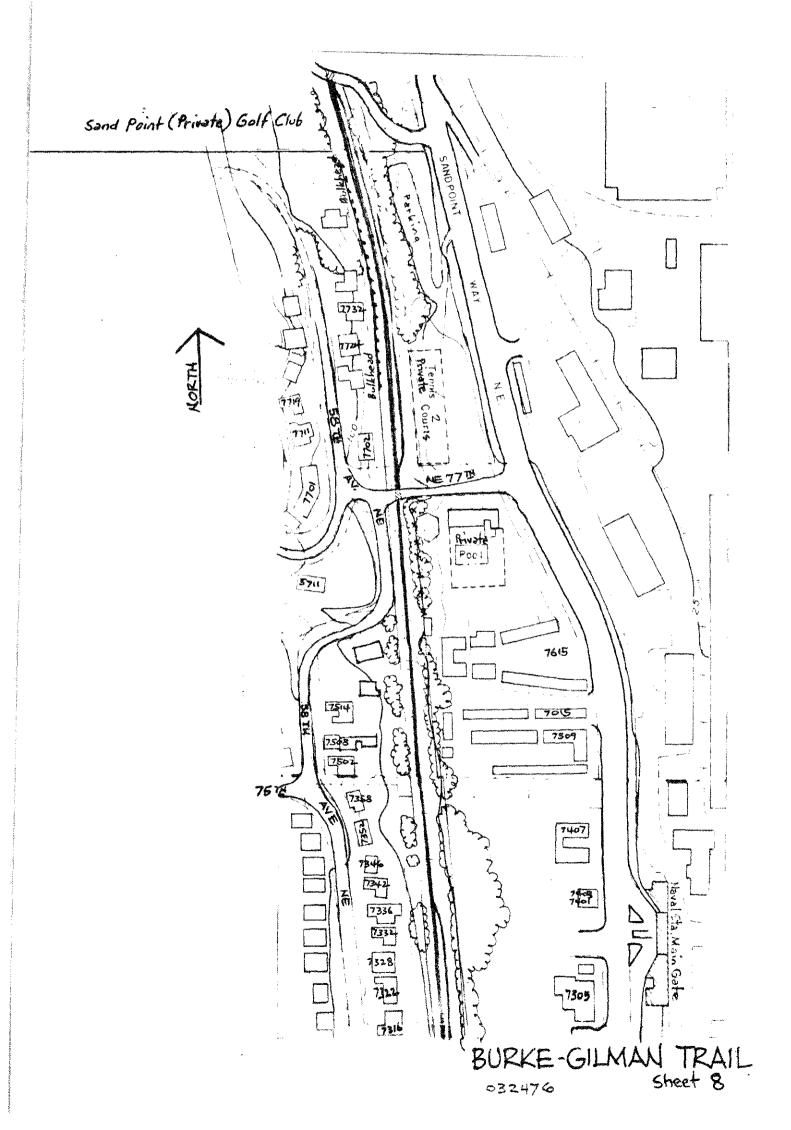


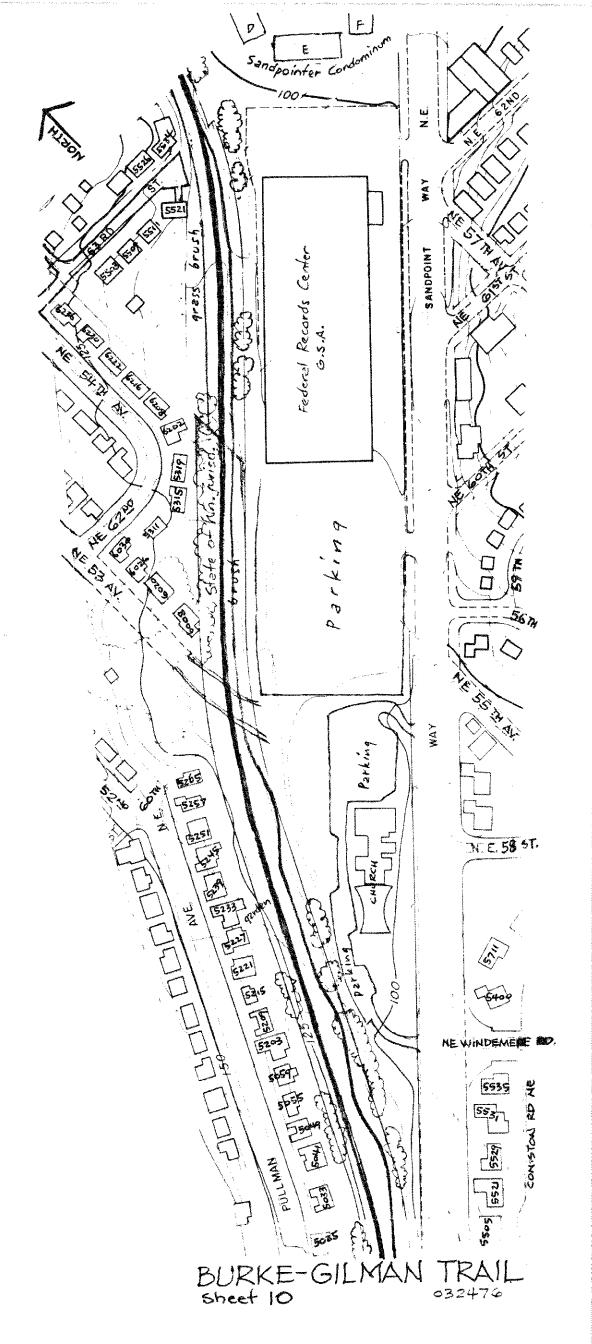


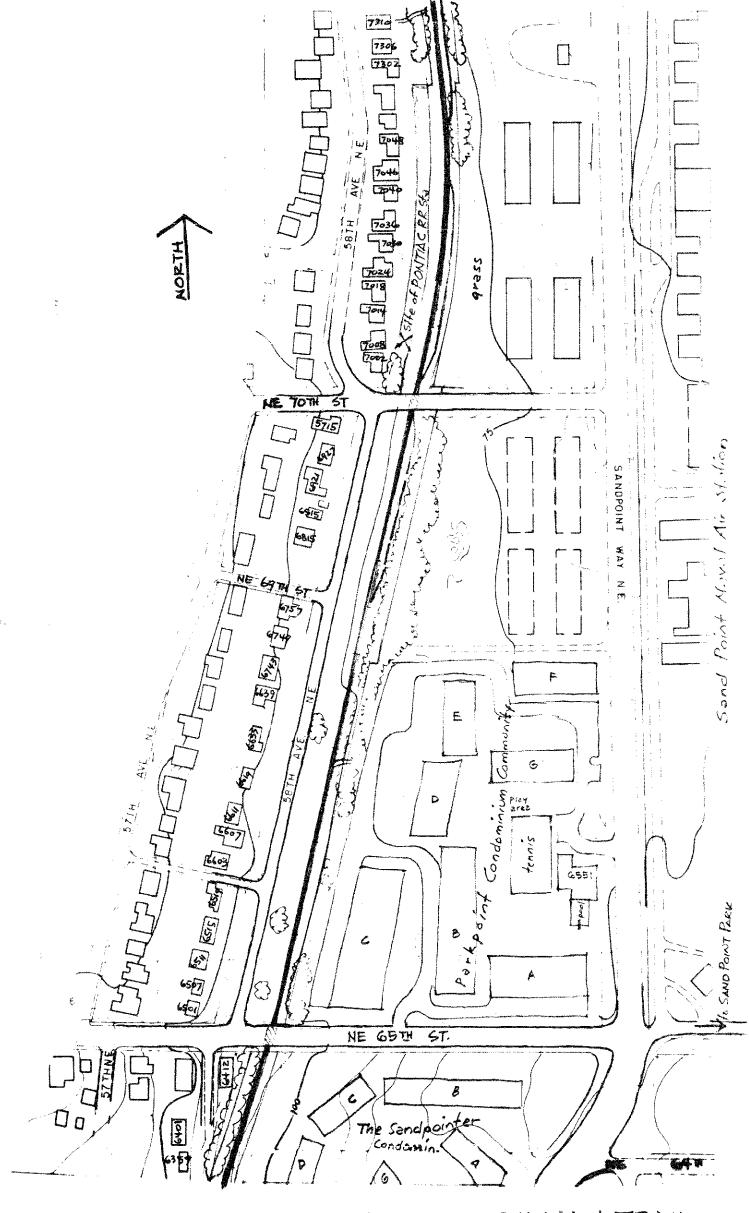
Continued on MATTHEWS BURKE-GILMAN



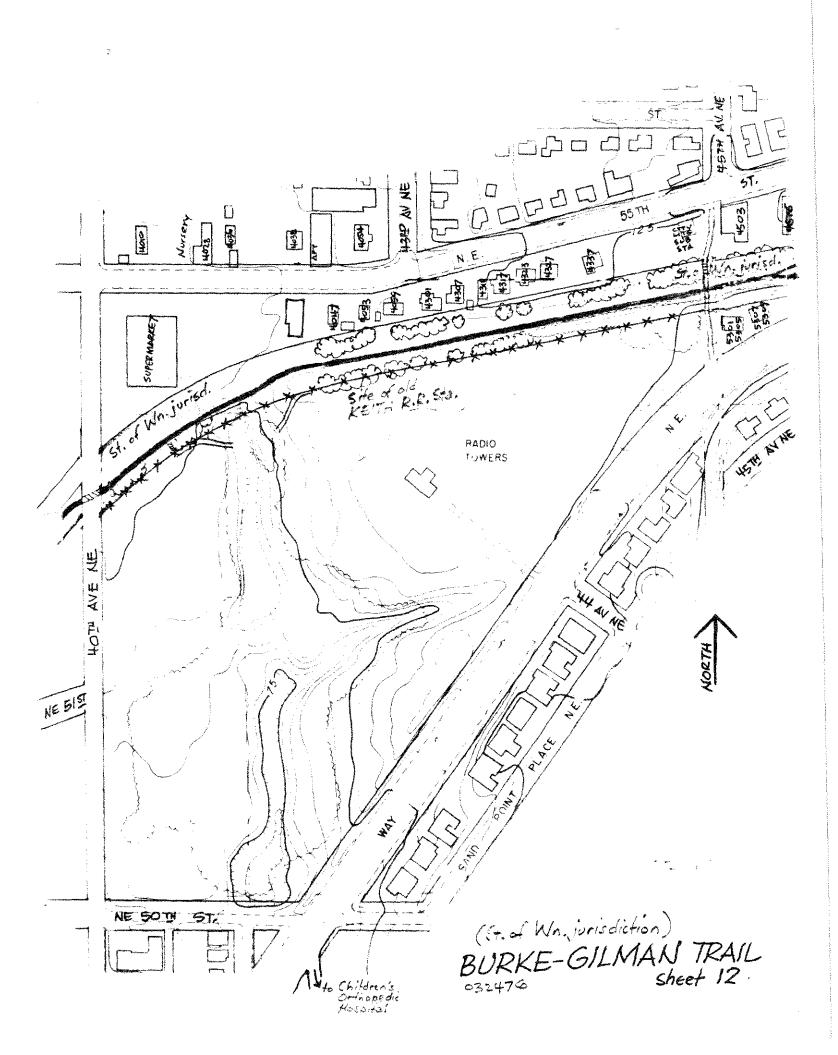


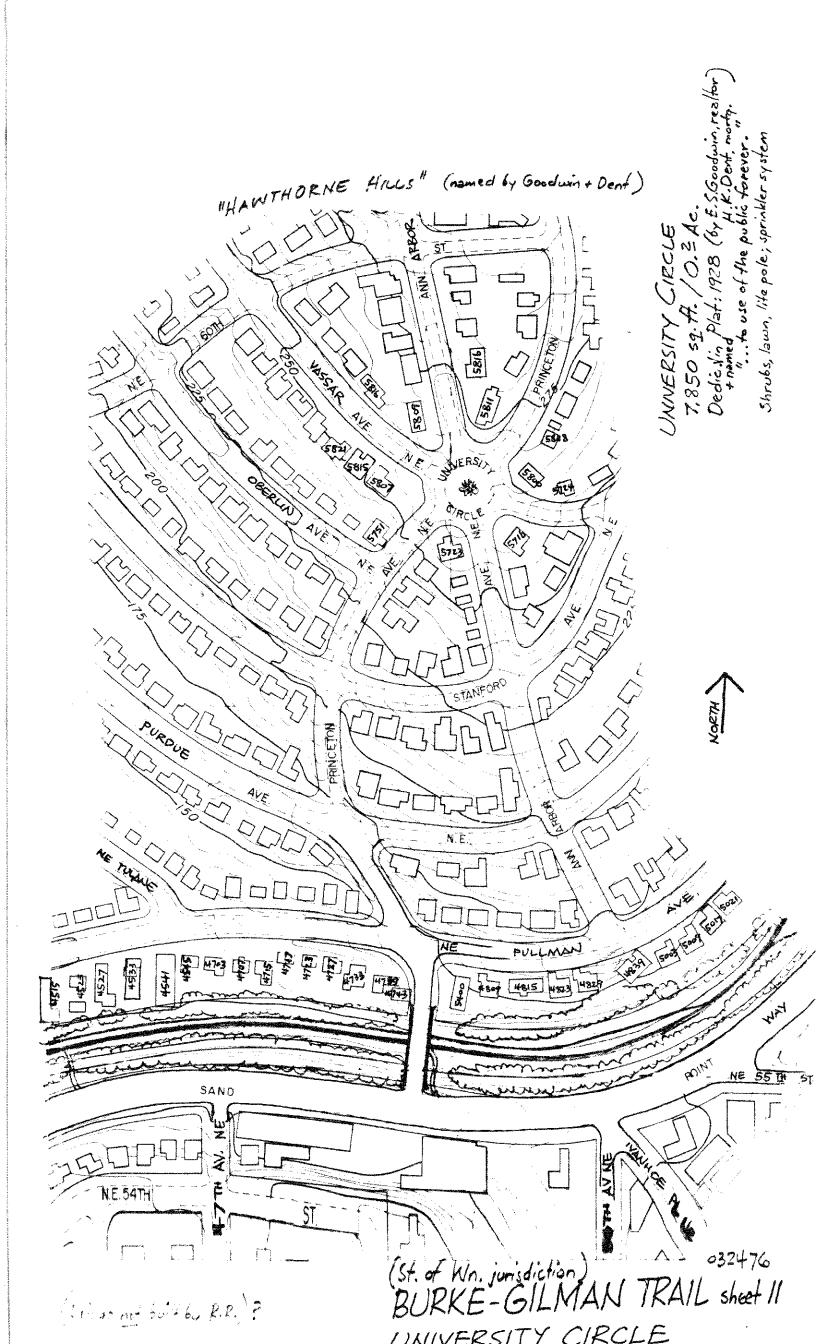


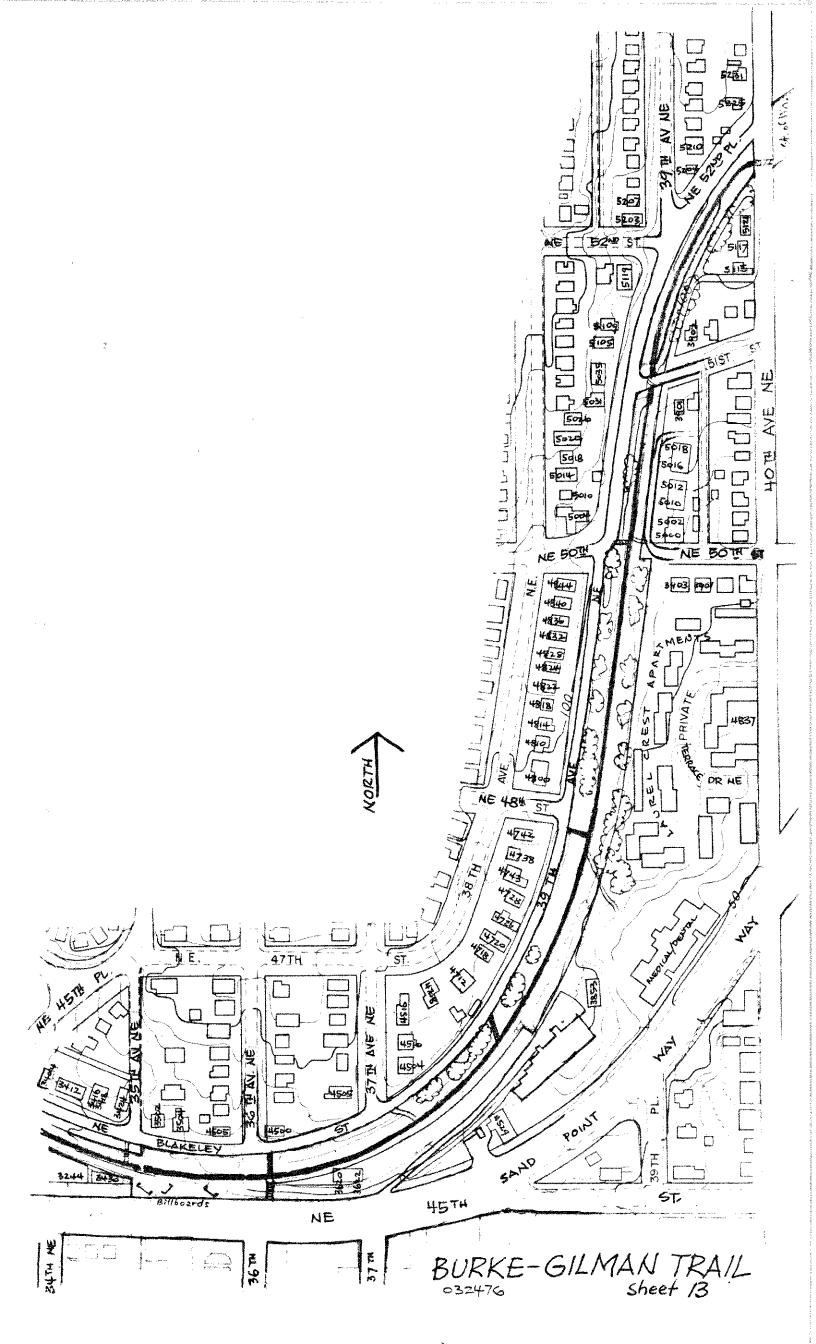


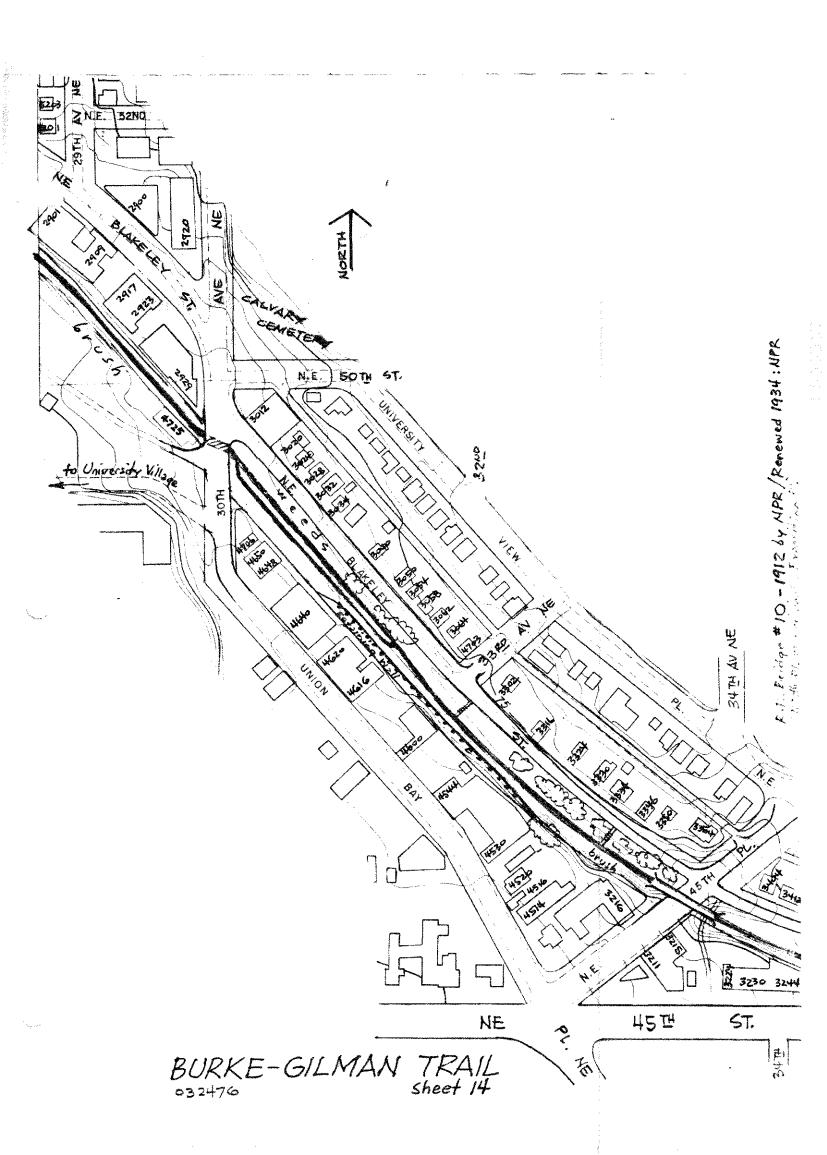


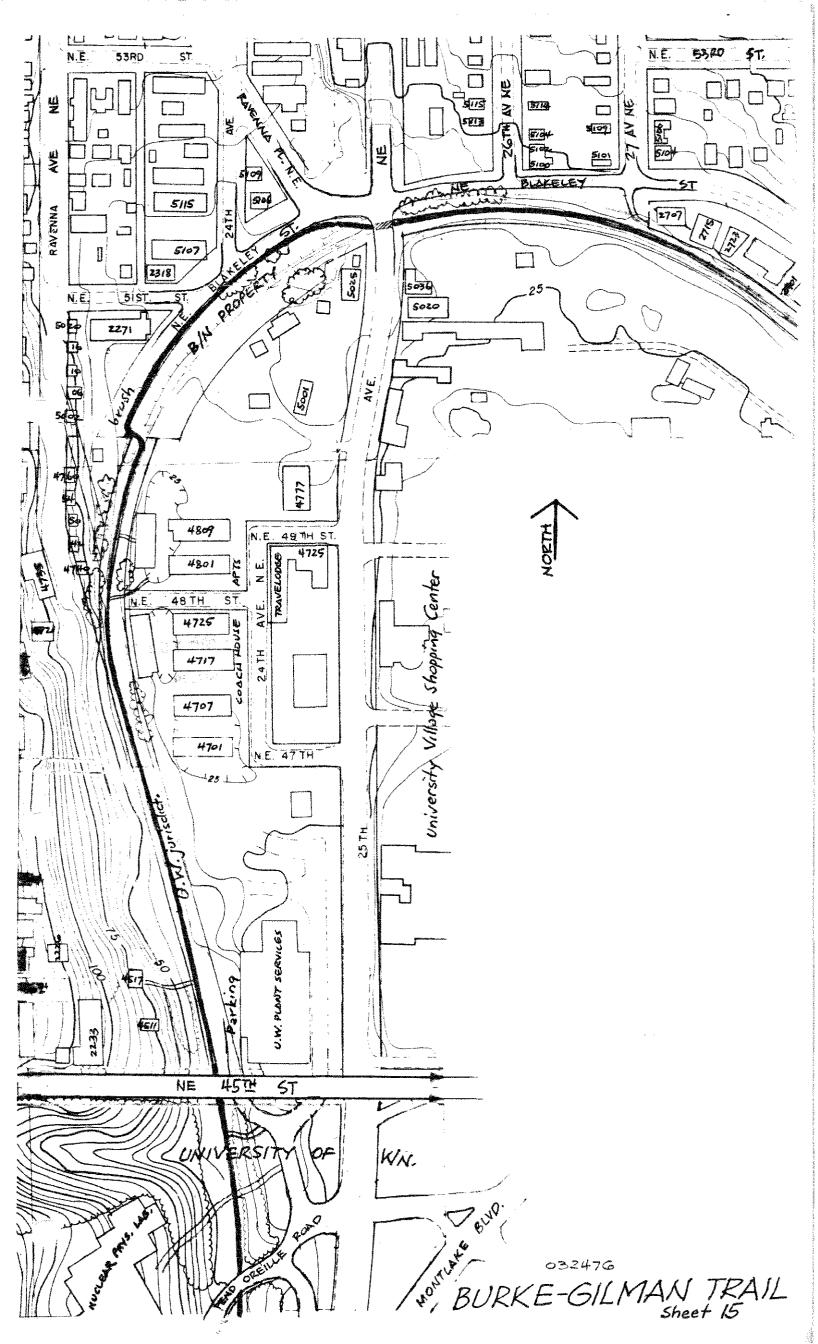
BURKE-GILMAN TRAIL
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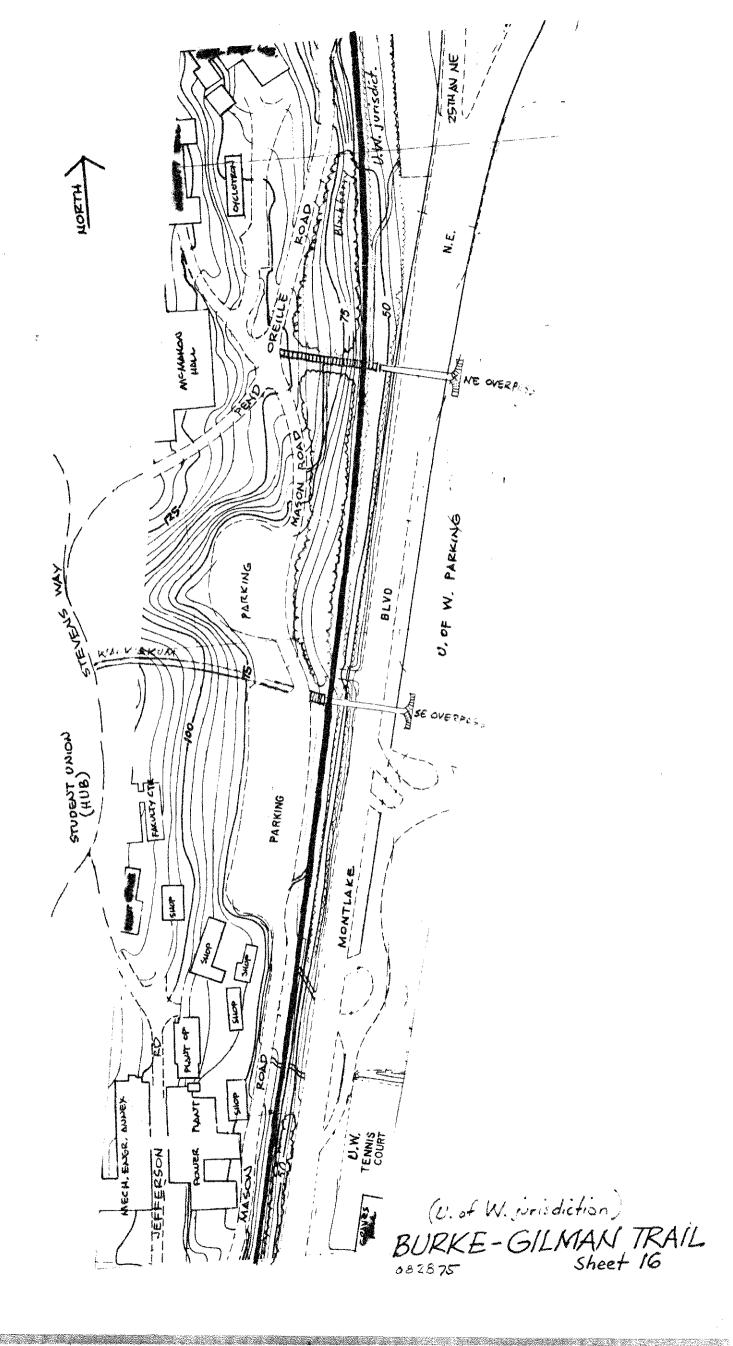


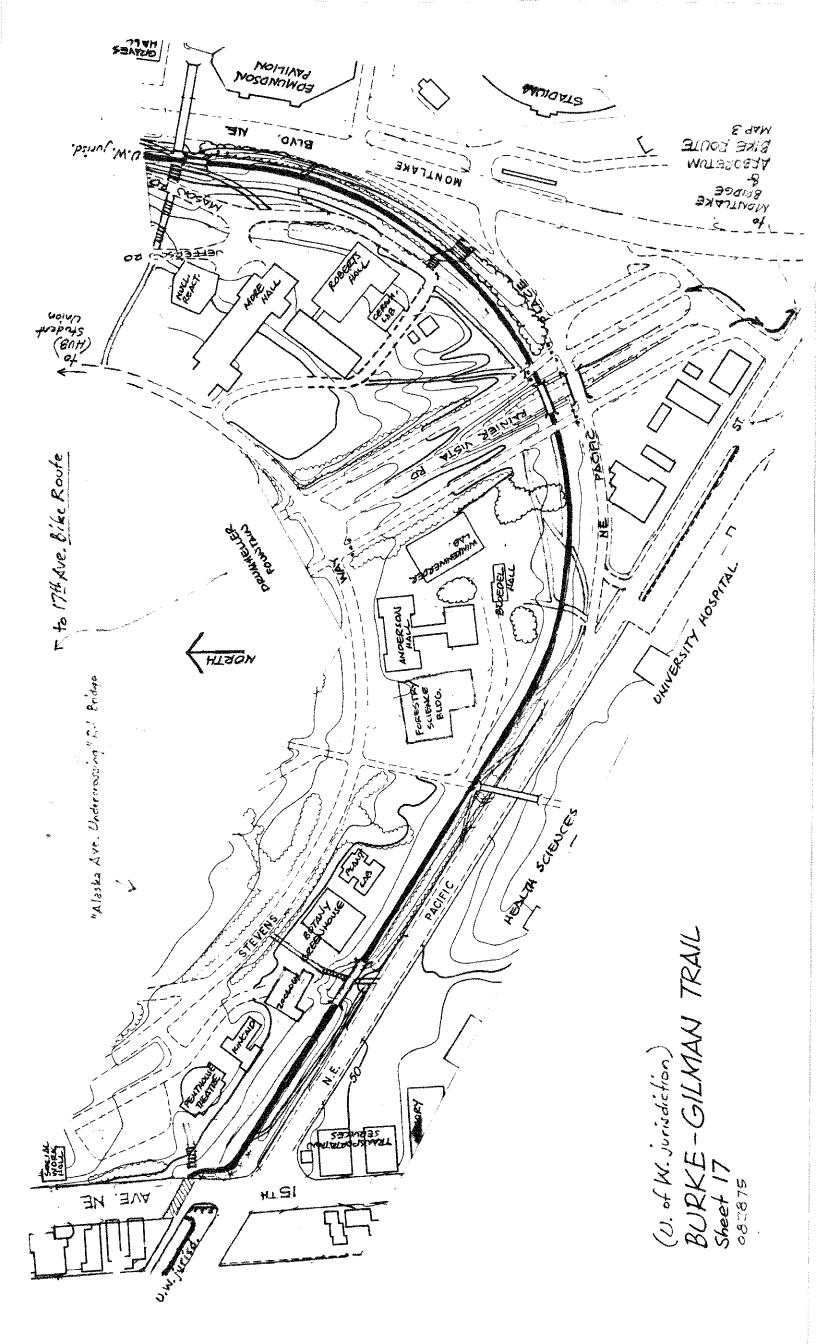


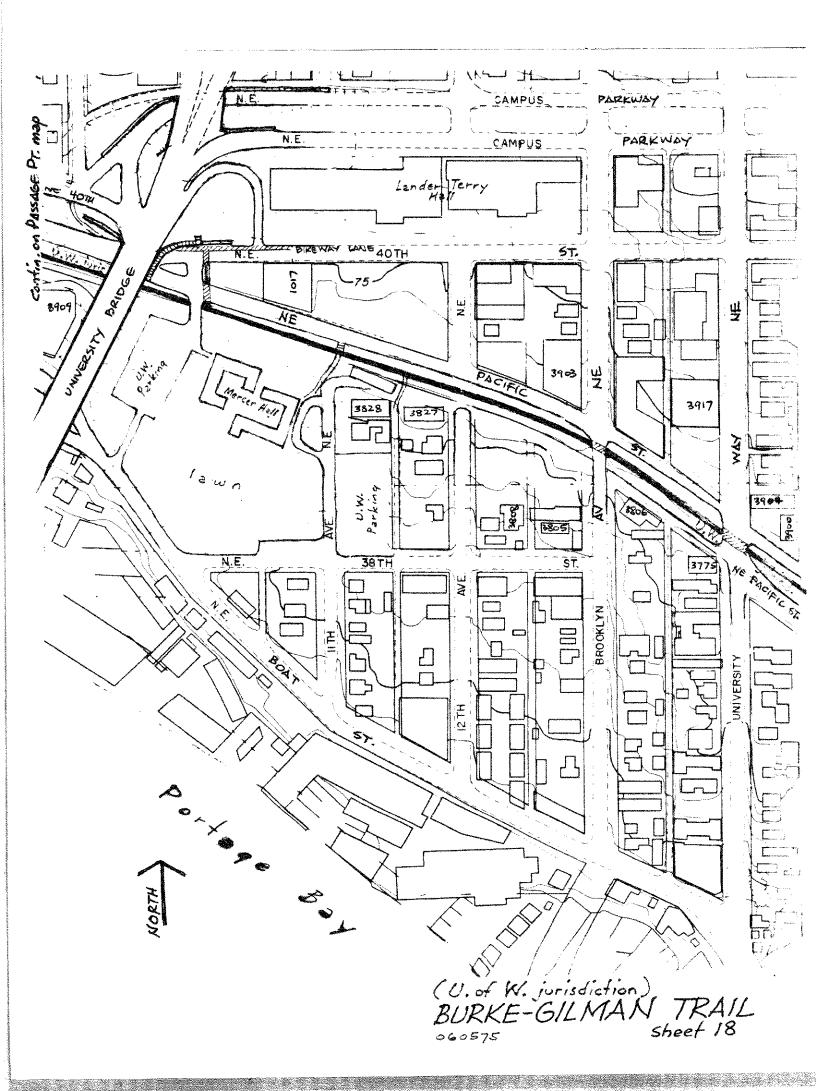


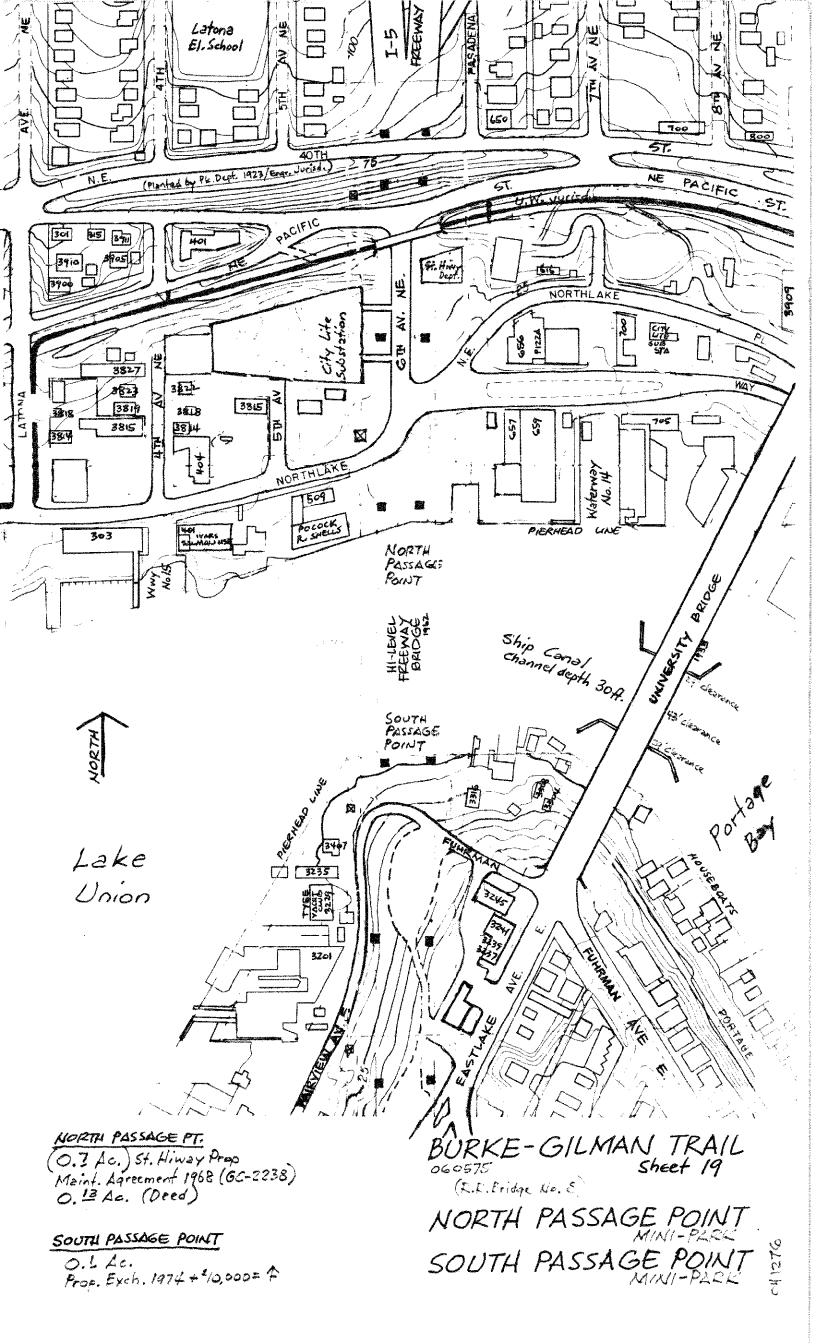


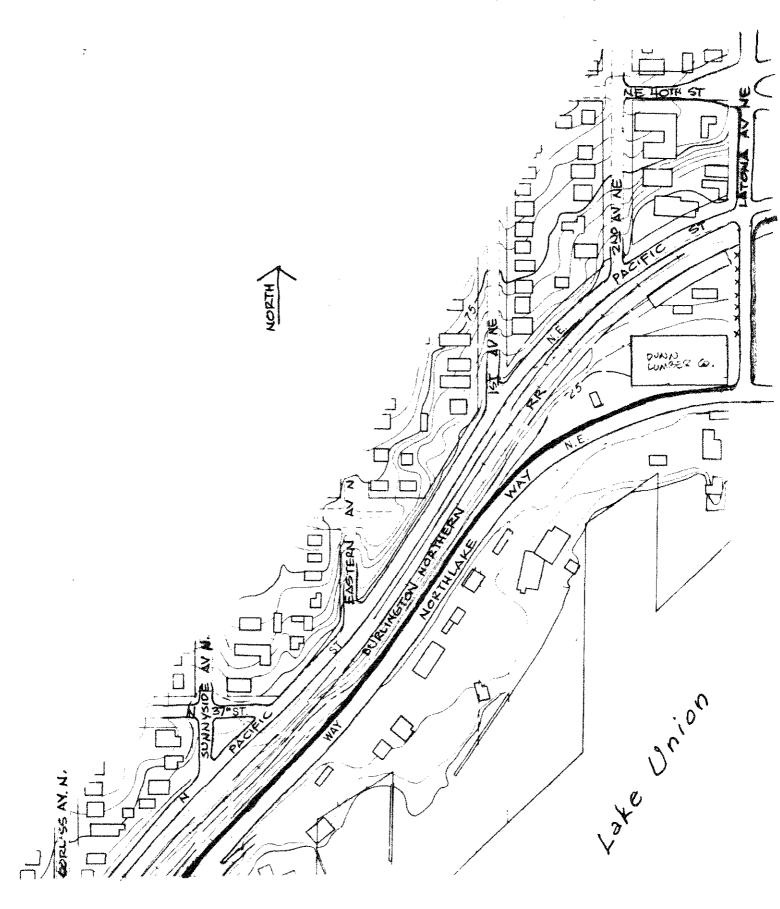




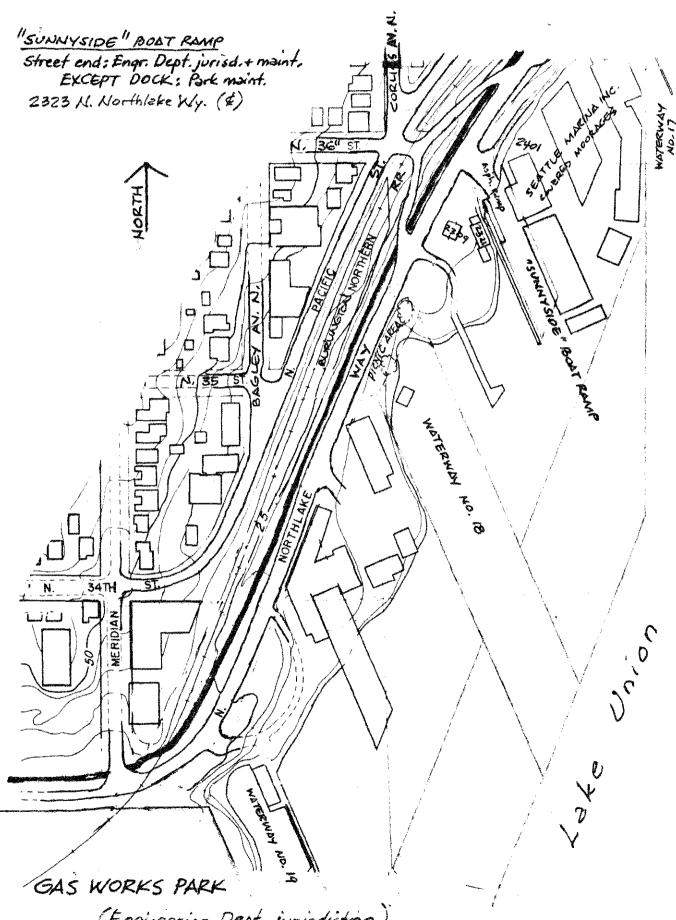








(Engr. Dept. jurisdiction)
BURKE-GILMAN to GAS WORKS PK. TRAIL
Sheet 20
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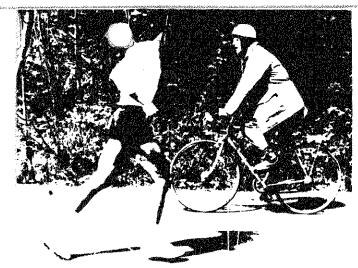


(Engineering Dept. jurisdiction)

BURKE-GILMAN to GAS WORKS PK. TRAIL

Sheet 21
060575

"SUNNYSDE" BOAT RAMP



# Seattle/King County Burke-Gilman Trail

## City of Seattle

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Seattle City Council Phyllis Lamphere, President George Benson

Michael Hildt Tim Hill Paul Kraabel

John R. Miller Randy Revelle Sam Smith

Jeanette Williams

Tom Wimmer, Chairman, Board of Park Commissioners Walter R. Hundley, Superintendent of Parks and Recreation John Vibber, Project Manager

# City of Seattle Department of Parks and Recreation

100 Dexter Avenue North Seattle, Washington 98109

### King County

John Spellman, Executive

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Paul Barden Ruby Chow Robert B Dunn Gary Grant R. R. (Bob) Greive

Mike Lowry Tracy J. Owen Bill Reams

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and Recreation