

Oregon State Highway Division

Location Section

FEASIBILITY REPORT

PROPOSED I-205 BIKEWAY

VICTOR D. WOLFE

Location Engineer

August, 1973

Accession #751

PREFACE

This is an evaluation of the feasibility of the I-205 bikeway from Foster Road, in Portland, Oregon, to the Lewis and Clark Highway, in Vancouver, Washington.

Numerals in brackets [] refer to the list of references cited at the end of the narrative.

TABLE OF CONTENTS

	Page
CONCLUSIONS	1
RECOMMENDATIONS	3
Chapter I. INTRODUCTION	4
Location	4
Origin of Concept	4
Environmental Considerations	4
Development of Concept	5
Estimated Cost.	5
Chapter II. BICYCLE PROLIFERATION	6
Sales and Ownership	6
Citizen Action	6
Potential Use	7
Chapter III. DEMAND	10
Types of Usage	10
Priorities	10
Public Desires	10
Chapter IV. SAFETY	12
Separation of Bicycle and Motor Vehicle Traffic	12
Accident Prevention	14
Signs, Signals, and Lighting	15
Chapter V. DESIGN DETAILS	16
Standard Width	16
Grades	16

	Page
Crossing Structures	16
Rest Areas	17
Configuration	18
Slopes and Cuts	18
Chapter VI. AUXILIARY USES	19
Maintenance	19
Pedestrian and Jogging Use	19
Chapter VII. ALTERNATES	20
Non-Action	20
Design Alternates	20
Route Alternates	21
REFERENCES	22
APPENDIX	23

LIST OF ILLUSTRATIONS

	<u>Following Page</u>
Figure 1. Sketch Map, Proposed I-205 Bikeway	5
Figure 2. Typical Sections, I-205 Bikeway	5
Figure 3. Planned Bikeways, Portland Urban Area	7

CONCLUSIONS

1. On the basis of per capita bicycle usage, a bikeway on this section of I-205 would have extensive use. Once constructed, traffic on the bikeway would tend to grow heavier due to the population increase in the area contiguous to the freeway.
2. Construction of the bikeway would divert some riders to non-motorized vehicles and thus create a potential for reducing air pollution and relieving traffic congestion in the vicinity of the freeway.
3. Local planning organizations and citizen action groups have urged construction of the bikeway.
4. There are numerous bicycle trip generators, especially schools, in the vicinity of the I-205 bikeway.
5. The bikeway could be used for auxiliary purposes, such as maintenance and pedestrian and jogging traffic.
6. A bikeway will prevent the neighborhood from being split into two disconnected parts.
7. Without a bikeway, bicycle traffic would be forced to continue sharing the roadway with automobile traffic on congested city streets, with attendant hazards. Separation of bicycle and automobile traffic therefore would provide a safer facility for automobiles as well as bicycles.
8. Sufficient right of way will be available in the freeway corridor to provide space for a bikeway without purchase of additional land.
9. The estimated cost of the bikeway is \$800,000, not including the bridge structure for the Columbia River Crossing. This is a relatively small

sum in comparison to the \$135 million required to complete the section of the freeway contiguous to the bikeway. FHWA Policy and Procedure Memorandum 21-23 authorizes Federal-aid participation in bicycle trail facilities and appurtenances that are part of a Federal highway project.

10. The bikeway is feasible from the standpoint of engineering design. It would provide a usable facility, with terminals accessible to users.
11. The bikeway would be operated and maintained by the Oregon State Highway Division as an integral part of the I-205 freeway.
12. The I-205 bikeway thus meets all the criteria of Paragraph 4, FHWA PPM 21-23, in that conditions for it are favorable; it would serve a public need; it would be constructed in conjunction with, and concurrently with, a Federal-aid highway project; it would be located and designed to provide improved safety conditions for motorists, bicyclists, and pedestrians by separating motorized and non-motorized traffic; it would constitute a usable facility; it would be maintained by a public agency; it would lie within the right of way of a Federal-aid highway; and there is reasonable expectancy that it would have sufficient use in relation to its cost to justify the expenditure of Federal-aid and other public funds on its construction and operation.

RECOMMENDATIONS

We recommend that:

1. A bikeway be included in the design of the I-205 freeway.
2. This bikeway be constructed in accordance with the design details included in Chapter V.
3. Construction of this bikeway be scheduled for the same time period as construction of the I-205 freeway.

I. INTRODUCTION

Location. The portion of Interstate Highway 205 under consideration consists of 9.2 miles of urban freeway, extending from Foster Road in Portland, Oregon, northward across the Columbia River to the Lewis and Clark Highway, Washington State Route 14, in Vancouver.

Origin of Concept. The I-205 freeway has been under study since 1964. The Federal Highway Administration approved the design of the freeway in January 1971, and the consulting firm of Sverdrup & Parcel submitted their preliminary design report on the proposed I-205 Columbia River Bridge in April 1971 [1]. In June of the same year, the Oregon State Legislature passed HB 1700, the Bikeways Bill, to encourage the development of bicycle trails and footpaths throughout the State. This furnished the impetus for a study of the feasibility of adding a bikeway to the I-205 bridge and the northern segment of the freeway. First Sverdrup & Parcel were retained to make a design study of the bridge portion of the bikeway, and submitted their report in January 1973 [2]. The Oregon State Highway Division then prepared an evaluation report of the bridge bikeway, which was completed in March 1973 [3], to be followed by this report, which evaluates the feasibility of the I-205 bikeway, as a whole, between Foster Road and the Columbia River crossing.

Environmental Considerations. A draft environmental impact statement was submitted by the Oregon State Highway Division and approved by the FHWA in October 1972 [4].

A bikeway built as an integral part of the freeway would divert some riders to non-motorized vehicles, and thus create a potential for reducing the air pollution and relieving traffic congestion in the vicinity of the

freeway. These beneficial impacts were additional considerations in the process of deciding to include the bike route in the freeway planning. Local planning organizations and citizen action groups also realized this possibility and urged favorable consideration of the I-205 bikeway.

Development of Concept. In order to make a bikeway a usable facility, it must have access to trip generators and city streets and must be designed so that the pavement and subbase, width, curves, grades, alignments, etc., are suitable for use by bicycle traffic. The I-205 bikeway's access to city streets and trip generators is shown in Figure 1. The typical sections proposed (Figure 2) are adequate from the design standpoint.

In most places the bikeway will be a Class I route, i.e., fully separated from the motor vehicle lanes of the freeway by a fence, guardrail, or wall. In some areas it may be necessary to construct a Class III bikeway by marking the route with signs on existing streets, especially in the vicinity of Rocky Butte, in order to keep within the right of way already acquired. In these sections of Class III bikeway, as safe a facility as possible will be provided.

We have planned a two-way bikeway with a width of eight feet, which is generally considered the minimum acceptable for a two-way facility. A width of ten feet would be more desirable, and may be constructed if conditions permit.

Estimated Cost. The preliminary estimated cost of the I-205 bikeway (not including the Columbia River crossing) is \$800,000, for the section running from Foster Road to the Columbia River. The cost of the bridge structure was estimated in Reference [3].

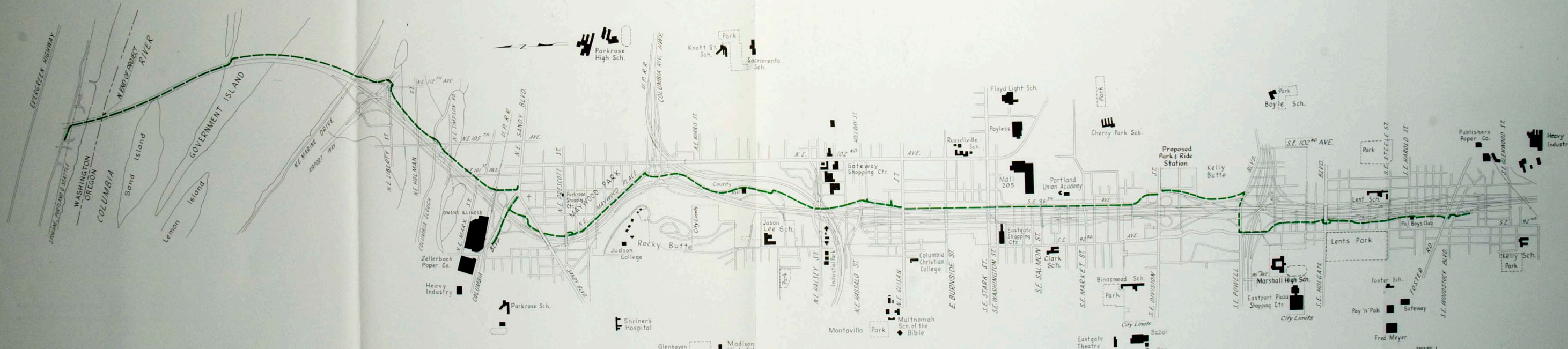
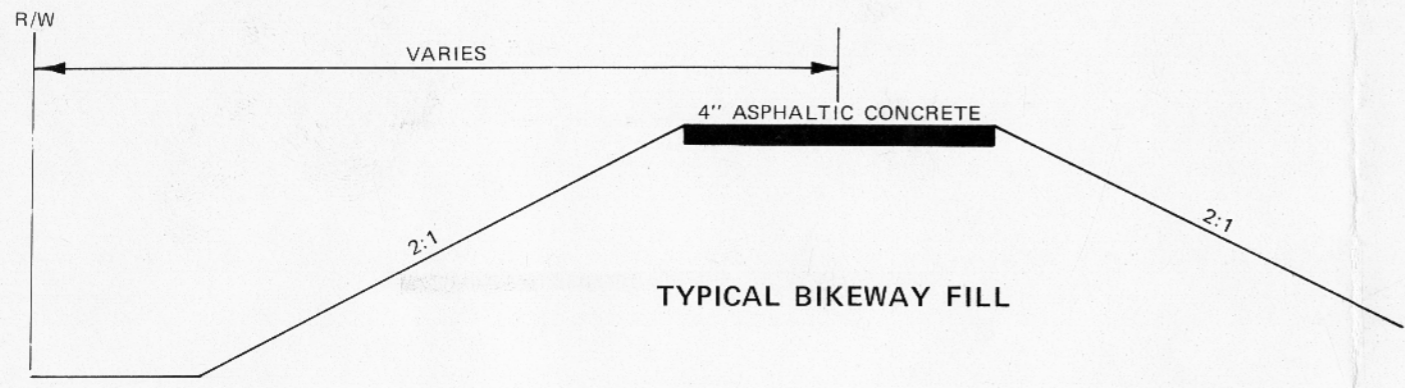
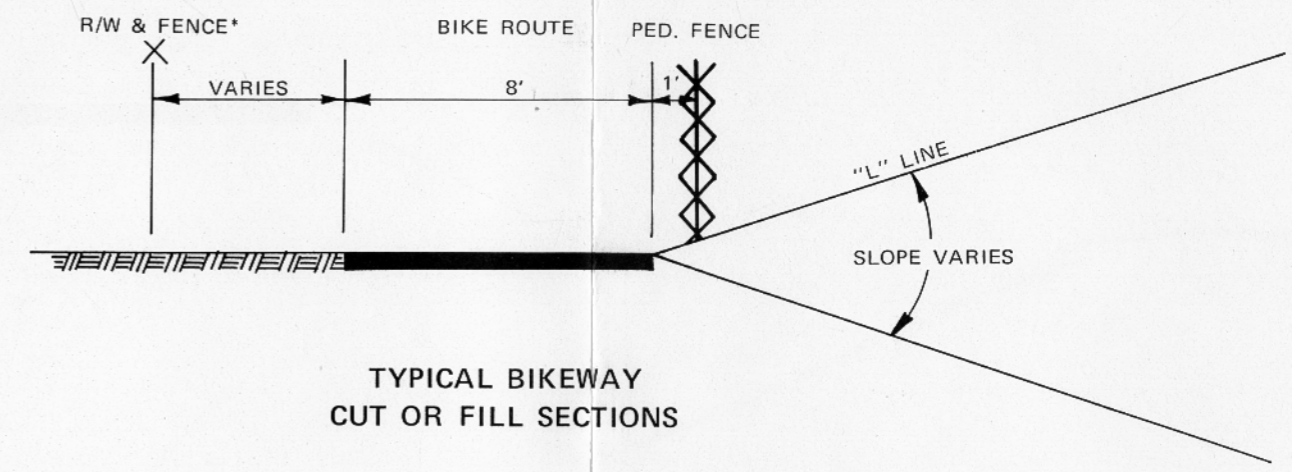


FIGURE 1
 OREGON STATE HIGHWAY DIVISION
SKETCH MAP
PROPOSED BIKEWAY
 INTERSTATE 205 - I-50N EAST PORTLAND FREEWAY
 MULTNOMAH COUNTY

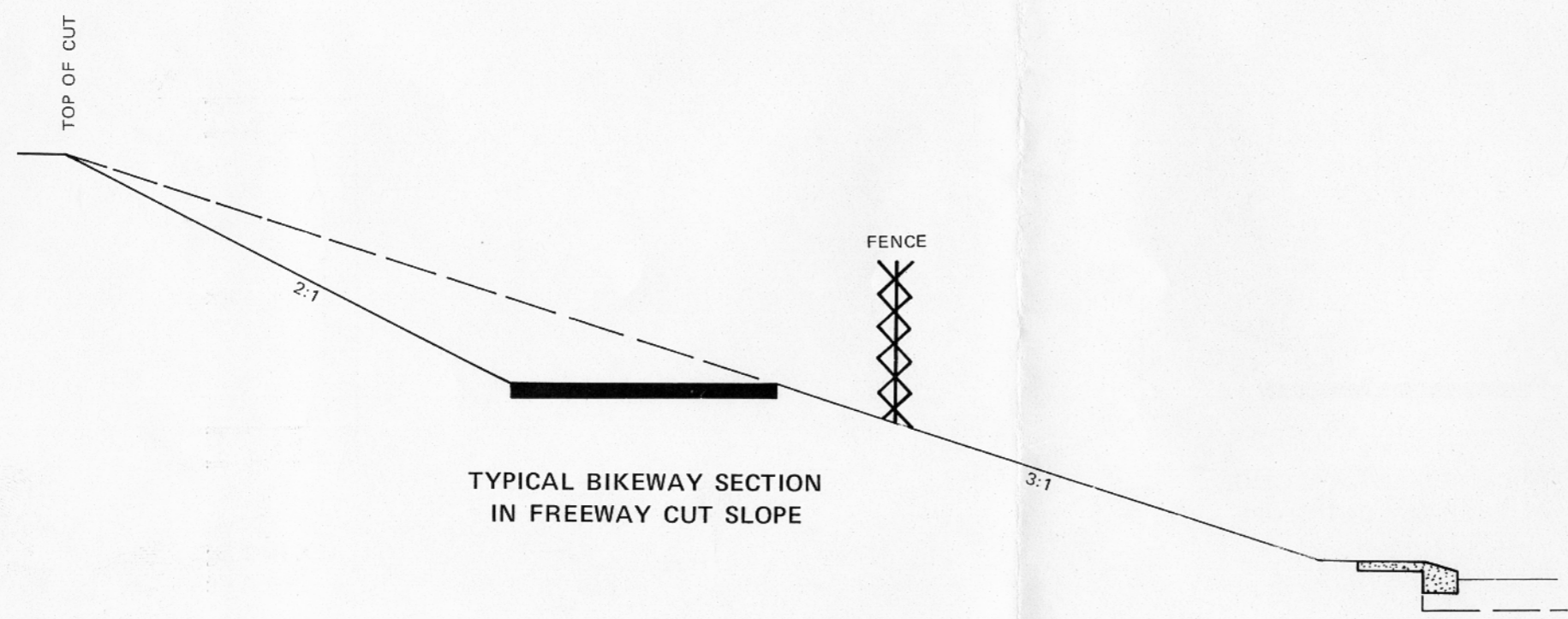


TYPICAL BIKEWAY FILL

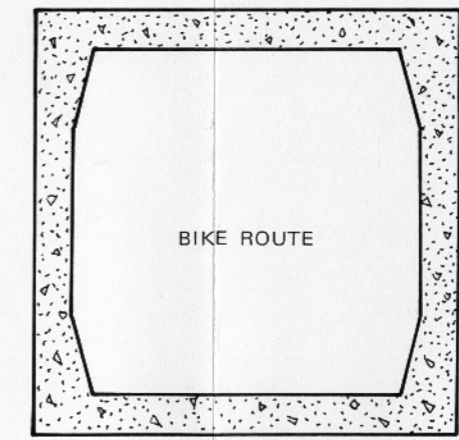


TYPICAL BIKEWAY CUT OR FILL SECTIONS

*NOTE: FENCE REQUIRED WHEN BIKE ROUTE ADJACENT TO PRIVATE PROPERTY



TYPICAL BIKEWAY SECTION IN FREEWAY CUT SLOPE



U'X-ING BOX STRUCTURE
12' W 10' H

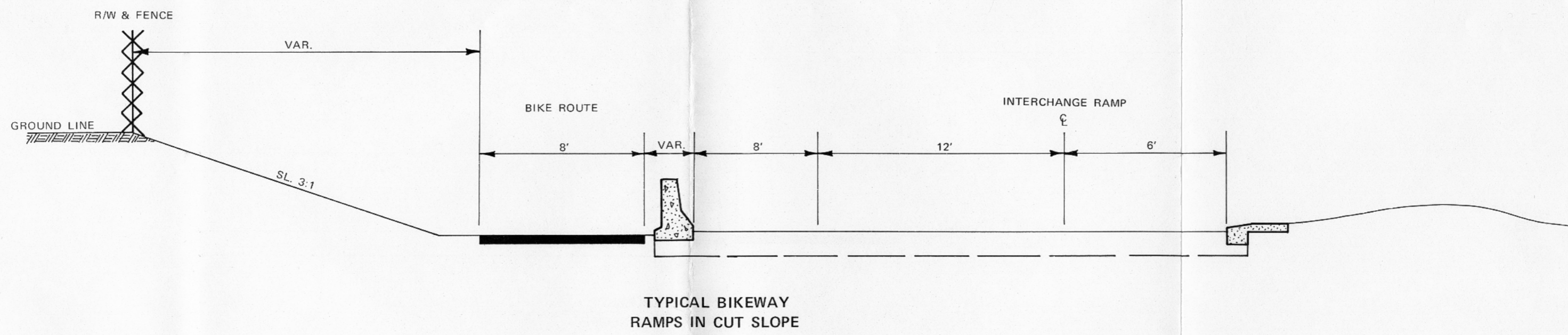
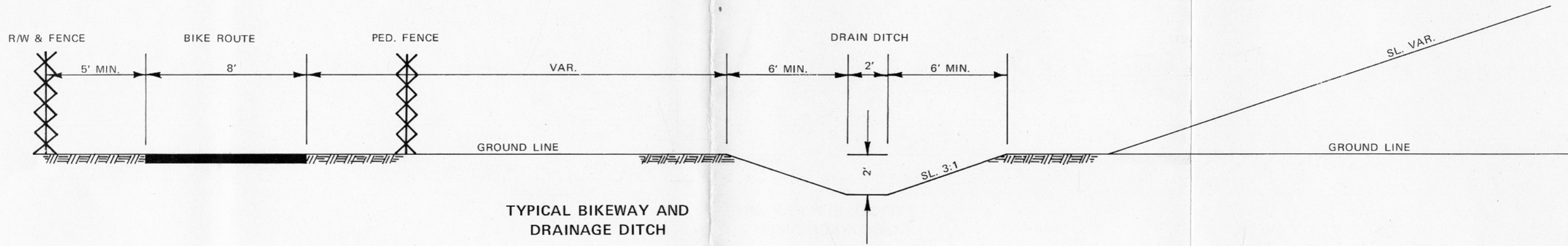
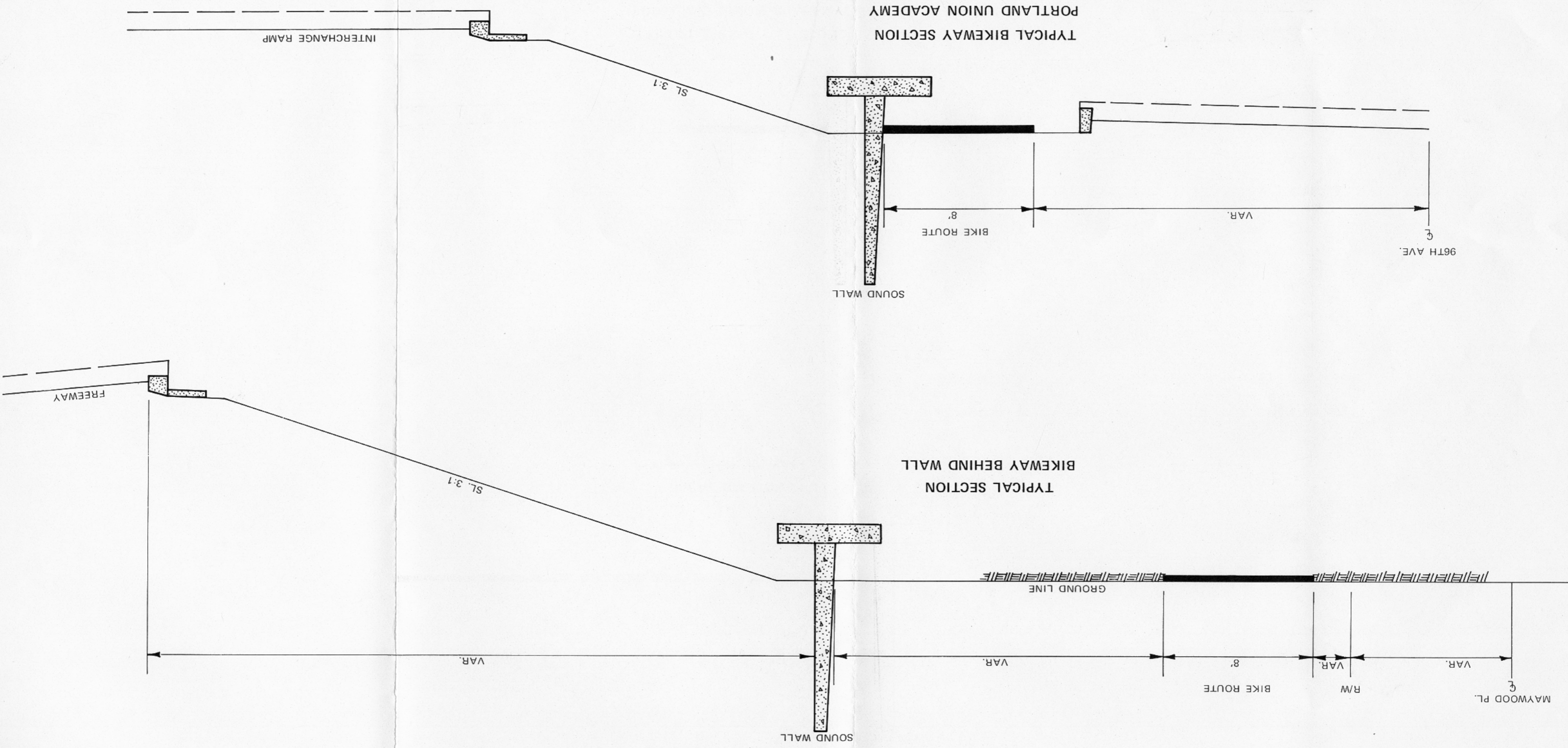


FIGURE 2, SHEET
TYPICAL SECTION
I-205 BIKEWAY



II. BICYCLE PROLIFERATION

Sales and Ownership. According to estimates by the Bicycle Institute of America, national sales reached a record 12 million bicycles in 1972 in contrast to the previous record sale of 8.5 million in 1971. It is estimated that there are now 78 million bicycles in the United States, which indicates that one person in three owns a bicycle.

Recreational possibilities, aerobic exercise, and the promise of a non-polluting form of transportation give the bicycle boom its vitality. The new ten-speed sprocket systems enable the cyclist to cope with hills and achieve prolonged average speeds of 10 to 15 miles per hour. The new wave of cyclists, no longer satisfied with dodging automobile and pedestrian traffic, insists on adequate bike routes.

Citizen Action. In every major Oregon city, bicycle groups have arisen and have been effective in convincing local and state legislators that bikeways are urgently needed. These groups usually include dedicated citizenry, college students and faculty, heart surgeons, and the like--people who know who to see and how to argue convincingly, who believe in their cause, and who are not easily discouraged.

In the City of Portland, the "Bicycle Paths Task Force" was appointed by the city council. The task force, an amateur group, formulated and published a master bikeway plan that became officially adopted as the City's master plan (Portland City Council resolution #31217).

In Multnomah County, a similar group has completed route plans for a county-wide master bikeway plan. The group is completing final drafts of the narrative portions of the plan, which will then be presented to the Multnomah County Board of Commissioners for adoption as the official county bikeway plan.

In Clark County, Washington, a completed bikeway plan has been submitted

to the Board of County Commissioners and its adoption is pending. The same plan will be submitted to the Vancouver City Council for approval.

These plans, and others in the Columbia Region Association of Governments (CRAG), have been coordinated under CRAG auspices, and can be incorporated into an overall CRAG area master bikeway plan with little or no modification. A map of bikeways proposed for inclusion in this plan is shown in Figure 3. Official approval of a CRAG master bikeway plan awaits official approval of individual master plans for every municipality in the entire CRAG area. It is noted that the plans of all municipalities bordering the I-205 bikeway have either reached final stages of completion or are actually complete.

Potential Use. The area within one mile of the I-205 freeway contains approximately 14,000 family dwelling units. If we accept the conservative estimate of three persons per family, and assume that one person in three now owns a bicycle, there should be about 14,000 bicycles housed in the area.

Population projections show a steady increase for Multnomah County, and the area in the vicinity of the bikeway may show an increase in population density in the future. Also, the very presence of the bikeway may encourage further proliferation of bicycles in the I-205 area. Typically, service stations, coffee shops, and motels become established on the properties surrounding freeway interchanges, while shopping centers are built on similar properties in urban areas; along suburban routes, single-family houses are built, in platted subdivisions [7]. The proposed I-205 freeway will be no exception to the rule that freeways encourage urban and suburban development, and therefore the number of bicycles in the area can be expected to increase after its construction.

PLANNED BIKEWAYS

PORTLAND, OREGON

MULTNOMAH, CLACKAMAS
WASHINGTON COUNTIES






URBAN AREA MAP

PREPARED BY THE
OREGON STATE HIGHWAY DIVISION
IN COOPERATION WITH THE

U. S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

November 1971

SCALE
4000 8000 12000 16000 FEET

-  PUBLIC AREAS
-  CENTRAL BUSINESS DISTRICT
-  URBAN AREA BOUNDARY 1971
-  URBANIZED AREA BOUNDARY 1970
-  CITY LIMITS

SOURCE:
COLUMBIA REGIONAL ASSOCIATION
OF GOVERNMENTS

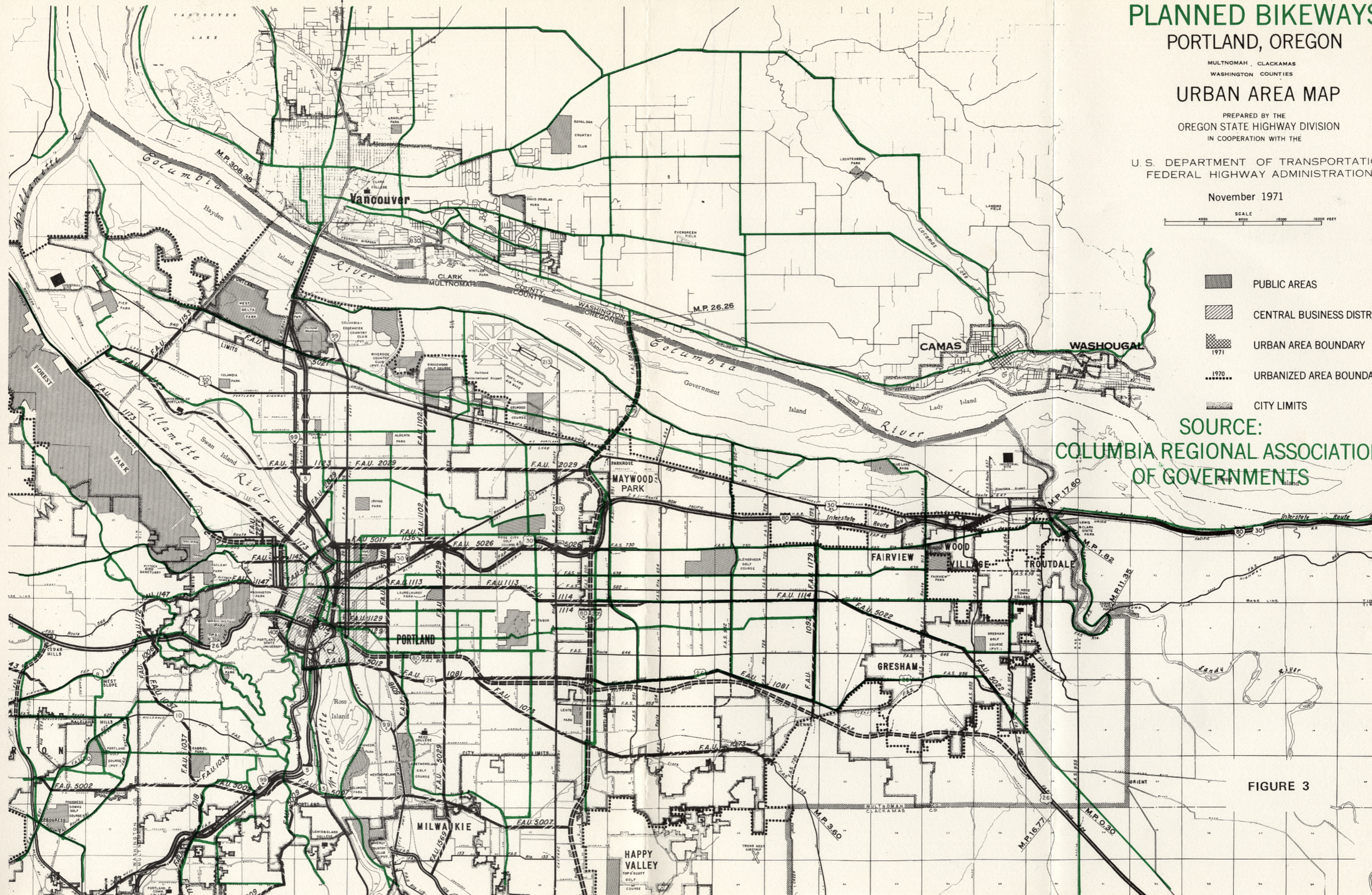


FIGURE 3

The area contiguous to the bikeway contains many schools, of all levels from primary to college, which are expected to be important trip generators. Both students and teachers of these schools could use the bikeway as a route between the schools and their homes. Among the most important public schools in the area are Parkrose, Knott Street, Sacramento, Jason Lee, Clark, Russellville, Binnsmead, Cherry Park, Lent, Kelly, and Boyle elementary schools; the Foster Primary Center; Floyd Light Middle School; and Madison, Marshall, and Parkrose high schools. Private schools in the area, of high school and college level and operated by various religious denominations, include Portland Union Academy, Columbia Christian College, Multnomah School of the Bible, and Judson College.

We have mentioned the usefulness of the bikeway as a means of access to schools; it would also allow access to many shopping centers and industrial parks, such as Zellerbach Paper Company, Owens Illinois, Gateway Shopping Center, Mall 205, and Publishers Paper Company (Figure 1). If employees of these enterprises rode to work on bicycles, it would relieve motor vehicle traffic congestion in East Portland. Shoppers, too, might find it more convenient to use the bikeway rather than to drive a car to the shopping centers. Also, Portland shopping centers now attract considerable trade from the State of Washington, and some of this traffic could be handled by the I-205 bikeway.

The proposed Mt. Hood Park and Ride Station, which adjoins the east side of the I-205 freeway, would also encourage the use of the bikeway for utility riding. This project is part of the Mt. Hood Freeway (I-80N). It consists of a parking lot for automobiles, motorcycles, and bicycles, which also serves as the eastern terminus of an express bus line to the Portland central business district on the west side of the Willamette River. The availability of a

bikeway would make it possible for persons residing in East Portland and employed in the CBD to ride from their homes to the station, park their bicycles there, and catch the bus to their places of work.

The recreational potential of the bikeway is also worthy of note. Numerous Portland city parks would be accessible from it, and the ride over the Columbia River bridge alone would provide a spectacular view. The northern terminus of the bikeway would give access to the city parks of Vancouver, Washington, and to Fort Vancouver National Historic Site, via county roads and city streets. The Mt. Hood Park and Ride Station would also enhance the recreational use of the bikeway. Out-of-town bicycle enthusiasts who have motor vehicles fitted with bike racks could drive in to the station, park there, spend the day sightseeing on their bicycles, and then return to their cars for the trip home.

III. DEMAND

Types of Usage. Bikeway usage is visualized as falling within two types, recreation and utility.

Recreational uses range from the neighborhood play of children, through family cycling on day trips, to long distance touring.

Utility cycling includes commuting and shopping trips by adults, trips by children riding to school, and trips made by messengers or delivery boys.

Priorities. The order of priorities among these uses is:

1. Commuting trips to school or work and messenger services;
2. Shopping trips;
3. Local recreational trips;
4. Touring.

Public Desires. The dense population of the service area, together with its many schools, shopping centers, parks, and churches, combine to create a natural potential for the bicycle mode of travel. All that is lacking, according to the representatives of the Portland Bicycle Paths Task Force and others, is a suitable place to ride. The map (Figure 1) illustrates the many trip generators in the proximate area. Because I-205 is an interstate route traversing a densely populated urban area interspersed with schools, parks, commercial establishments, and other trip destinations, it should accommodate all the various types of cycling listed above. The bikeway could be expected to satisfy multiple demands of all priorities.

Actions by local governments confirm the existence of public desires mentioned above. On January 13, 1972, the Board of County Commissioners of Multnomah County, Oregon, passed a resolution requesting that the Oregon State Highway Commission hold a public hearing to consider policy regarding the

location of pedestrian - bicycle paths within the rights of way of interstate highways, specifically mentioning the importance of I-205 and the Columbia River bridge as elements of a pedestrian-bicycle pathway system. Later, on December 5, 1972, the Board passed another resolution specifically requesting that State and Federal highway authorities include bicycle and/or pedestrian paths in conjunction with the I-205 freeway. The Portland City Council's resolution No. 31154 of December 7, 1972, also requested that bicycle and/or pedestrian paths be included in the plan for the I-205 freeway. A letter from the Portland Bicycle Paths Task Force, dated November 30, 1972 and addressed to the Oregon State Highway Commission, expressed a considerable public desire for a bicycle and pedestrian right of way on the I-205 freeway and bridge. The report of the Task Force, which included the I-205 bikeway and bridge as one of the bicycle routes recommended, was accepted as the Portland City Bikeway Plan by the Portland City Council in their Resolution No. 31217, dated April 13, 1973. Copies of these documents are included in the Appendix.

IV. SAFETY

Separation of Bicycle and Motor Vehicle Traffic. Recreational cyclists normally avoid streets and highways with a high volume of motor vehicle traffic. However, utility oriented cyclists (mainly commuters riding to and from work and students moving between school and home) are generally obliged to follow the same routes as automobile drivers to get to their destinations and return to their homes. DeLeuw, Cather & Co., in their bicycle circulation and safety study for the city of Davis, California [5], point out that arterial and collector streets are normally the most direct links between residential areas and activity centers of a community.

The utility oriented cyclist prefers to reach his destination with the least expenditure of energy and time. This type of bicycle rider also may be active at night and in inclement weather. These facts create a serious hazard of conflict between bicycles and motor vehicles. In a collision between a bicycle and an automobile, the bicycle and its rider have scant protection. The bicycle must also maintain forward motion in order to stay upright, while automobiles can stop without creating a hazard for their drivers in this situation. The normal operating speeds of bicycles are scarcely a fourth of those of motor vehicles operating on city streets, which is another potential cause of conflict if roadways are shared by these two modes of transportation. Bicycles lack many of the safety devices that are mandatory for motor vehicles: few have rear view mirrors and none have power turning signals. In addition, bicycles are inherently unstable vehicles and even a skilled rider may lose control of his bike. Unfortunately, a large percentage of bicyclists are juveniles, many of whom have not fully mastered the skills necessary for safe bicycling.

Psychological factors as well as physical factors contribute to the hazard of bicycle - motor vehicle conflicts. Motorists, being secure in their possession of a vehicle having a higher speed potential and a greater mass, often take an arrogant attitude toward bicyclists. They consider the bicycle an inferior vehicle which should always yield to their cars. Bicyclists, on the other hand, are often unwilling to yield space or right of way if it means losing momentum. These antagonistic desires may be the ultimate cause of many crashes between bicycles and motor vehicles.

Motor vehicle operators at least must comply with mandatory licensing procedures which include both written tests and practical demonstrations of driving skills and may have taken driver education courses. In this way their understanding of operating codes, signs, signals, and markings is presumably assured. Moreover, all motor vehicle operators are adults or near adult age, and thus are expected to behave rationally. Strict enforcement of motor vehicle codes and controls by law officers results in general compliance with them on the part of motor vehicle operators.

However, while bicyclists are also bound by the motor vehicle codes and traffic regulations, they often do not feel obliged to follow them. There is no licensing or testing program for bicyclists and the bicycle safety education programs now in effect reach only a fraction of the bicycle riding public. Hence, many cyclists probably do not understand the provisions of the motor vehicle code, and even those who do have some understanding of them often ignore them. This tendency is reinforced by the fact that prescribed courses of action are often opposed to the natural inclination of the bicyclist, and the enforcement of them, when bicycles are involved, is often lax and contradictory. For example, a motor vehicle operator expects to come to a complete stop at an intersection marked by a stop sign or red traffic signal, while a

bicyclist may not stop at all if he would lose momentum by doing so. Failure to give hand signals, unorthodox (and sometimes illegal) left turns, and moving in the opposite direction to motor vehicle traffic are all common violations of the code committed by cyclists.

Some bicyclists, perhaps vaguely aware of the hazards of sharing roadways with motor vehicles, have taken to riding on sidewalks. This only creates a new source of conflict with foot traffic.

A mixture of motor vehicle traffic, which depends on orderly and predictable behavior, with bicycle traffic, in which the traffic stream behavior is determined by the need to maintain momentum and minimize travel distances, obviously can only result in serious and hazardous conflicts. It is apparent that separate roadways for bicycles, or at least roadways that result in predictable traffic patterns and resolve conflicts with other modes of transportation, are urgently needed from considerations of bicycle safety and accident prevention.

Accident Prevention. Both motorists and cyclists have a tendency to feel uneasy and apprehensive in mixed traffic situations. Feelings of increased security are observed in areas where bicycle facilities are provided. This is especially true for Class I bikeways, which provide complete physical separation of motor vehicle and bicycle traffic.

The amount of statistical data available concerning the effect of separate bikeways on the accident rate is limited, and in most cases the data do not differentiate between the relative effectiveness of Class I, Class II, and Class III bikeways. However, at Davis, California, only two out of the 74 traffic accidents reported that involved bicycles over a two-year period occurred in the bike lanes [5]. Out of the three Davis street segments that had the highest bicycle accident rate per mile, two have no bike facilities and the third only partial provisions.

European studies generally indicate that the provision of bicycle lanes does benefit traffic safety. In Denmark, the rate of bicycle accidents per bike-mile on roadway sections with bike lanes is 40 percent lower than the rate on sections without bike lanes [6]. The use of bike lanes reduced mid-block accident rates by 60 percent. Intersection accident rates, however, remained about the same, showing the effect of mixed traffic situations, and indicating the desirability of using types of crossings that physically separate bicycle and motor vehicle traffic.

Considerations of accident prevention and improvement of traffic safety may be the most important factors in warranting separate bikeways. Cost-benefit determinations and other quantifications are scarcely practical at the microscale necessary for the decision-making process in bicycle facilities. The sense of security that a separate bikeway affords, and the availability of a choice of safely using the bicycle as an alternate transportation mode, are both valid factors that cannot easily be measured in statistical terms.

Signs, Signals, and Lighting. The bikeway will be marked by the standard bikeway signs described in "Footpaths and Bike Routes: Standards and Guidelines," published by the Oregon State Highway Division, revised August, 1973.

At certain points the bikeway will cross the ends of freeway access and exit ramps. Traffic at these crossings will be governed by signals and controllers.

The motor vehicle lanes and ramps of the freeway will be lighted by high-intensity luminaires. Since the bikeway will be close to the motor vehicle lanes, the overall lighting level from these fixtures alone should be adequate, even with allowances for a considerable increase in night bike traffic.

V. DESIGN DETAILS

Standard Width. The bikeway is proposed as a two-way paved path eight feet in width, according to standards of the Oregon State Highway Division ("Footpaths and Bike Routes: Standards and Guidelines", revised August 1973). Typical sections are shown in Figure 2.

Grades. Grades of the I-205 freeway will not exceed 3%. The bikeway grades may even be flatter for the most part, except through the interchanges, where the bikeway changes from one grade level to another. Some short runs with grades steeper than 3% will be required.

Crossing Structures. Four methods of crossing ramps, existing streets, and railways are proposed:

1. Grade crossings at signalized intersections;
2. Additions to proposed structures at overcrossings;
3. Separate culverts for undercrossings; and
4. Separate structures for overcrossings.

Grade crossings are utilized at:

N. E. Holman Boulevard
Columbia Boulevard (in combination with a structure addition)
N. E. Prescott Street
N. E. Hassalo Street
N. E. Glisan Street
N. E. Burnside Street
S. E. Stark Street
S. E. Washington Street
S. E. Market Street

S. E. Division Street

S. E. Powell Boulevard (in combination with widened structure)

S. E. Holgate Boulevard

S. E. Foster Road

S. E. Woodstock Boulevard

Overcrossing structures for which widening is proposed are located at:

Columbia Boulevard

Columbia Highway Interchange (north and south)

S. E. 92nd Street at Mt. Hood Freeway Interchange

Structures would be lengthened to allow the bikeway to pass beneath them at:

Sandy Boulevard (with separate culvert at the Northbound offramp)

N. E. Prescott Street

Union Pacific Railroad crossing

Separate overcrossing structures are proposed at the following places:

Airport Way

Columbia Slough

S. E. Salmon Street (special pedestrian overcrossing)

The map in Figure 1 shows these crossings.

Rest Areas. Provisions for rest areas will be considered in the final design. Rest areas should include turn-out space, a bench, a bike rack, and possibly a drinking fountain. In areas where sprinkling systems are installed, the addition of a drinking fountain would not be expensive, but might necessitate U. S. Public Service approval of the water supply. Coordinated landscaping of the interchanges could improve the aesthetic value of the rest area.

Configuration. Except for a few segments the bikeway will generally occupy the top of the slope in the cut sections and the toe of the slope in the fill sections (see typical sections, Figure 2). An access control fence, guard rail, or wall will separate the bikeway from the motor vehicle lanes of the freeway, although the bikeway will be constructed on freeway right of way. Thus in all cases it will be separated from the freeway, mostly separated from private property by a fence, and from city streets by a curb or other semi-barrier. In many places there may be a fence on both sides of the bikeway.

Slopes and Cuts. The slopes of cut banks will be 2:1 or flatter. This design will ensure that cuts are swept by airstreams to remove any pockets of smoke or toxic gases from the bikeway. It is important to maintain a high air quality in the vicinity of the bikeway, since inhalation of air pollutants could have a serious effect on the health of bikeway users. A consultant is now studying the general air quality in this area and his report is expected to be available in the near future. Insofar as possible, the bikeway will be constructed on high ground or high fill, which will avoid pockets of motor vehicle exhaust gases.

VI. AUXILIARY USES

Maintenance. The bikeway pavement would adequately support light maintenance vehicles (light sweepers, half-ton trucks, three-wheeler trucks, etc.) and could be used both as a roadway for such vehicles to maintain the bikeway itself, and for access to the motor vehicle lanes. However, as we have seen, a mixture of motor vehicle and bicycle traffic is not conducive to traffic safety. Therefore, maintenance vehicles would use the bikeway sparingly, when bicycle traffic is light, and operate at a safe speed.

Pedestrian and Jogging Use. The pavement and grading of the bikeway will be such as to make it suitable for pedestrian traffic and joggers.

VII. ALTERNATES

Non-Action. The bikeway will invite, facilitate, and properly regulate non-motorized traffic. Without it, bicycle traffic would be forced to use crowded avenues west and east of the freeway, sharing the roadway with automobile traffic. We have already discussed the hazards inherent in such practices. Also, there would be no other site for accommodating a north-south corridor for through bicycle traffic between 82nd and 102nd avenues.

Design Alternates. The design of the freeway is still in the preliminary stage, and changes may be made in interchanges and roadways during final design work or construction. Both the final design and final location of the bikeway may differ from those shown in Figure 1. In this event, the primary consideration in justifying a change in bikeway design or location would be the opportunity to provide better, safer facilities, viz., wider roadways, gentler grades, more complete separation between the bikeway and the lanes reserved for motor vehicles, safer crossings, longer sight distances, etc. An additional consideration would be an opportunity to reduce construction costs without compromising traffic safety. In no case would a design solution or location inferior to the original concept be accepted as a mere expedient.

Route Alternates. The corridor for the I-205 freeway has already been approved and most of the right of way needed has been acquired. Therefore, the only alternate routes feasible for the bikeway would be those following changes in the alignment of the main freeway. It is possible that such changes will be made during final design or construction work, but they would be relatively minor in scope.

REFERENCES

1. Sverdrup & Parcel and Associates, Inc., Preliminary Design Report for Proposed Interstate Route I-205 Columbia River Bridge, (for) Oregon State Highway Commission, April 11, 1971.
2. Sverdrup & Parcel and Associates, Inc., Supplemental Studies for a Pedestrian - Bicycle Path on the Proposed Interstate Route I-205 Columbia River Bridge, prepared for Oregon State Highway Commission, January 1973.
3. Oregon State Highway Division, Location Section, Evaluation Report, Proposed I-205 Columbia River Bridge Bikeway, March 1973.
4. U. S. Department of Transportation, Federal Highway Administration, I-205 Draft Environmental Impact Statement, Oregon State Highway Division, October 1972.
5. De Leuw, Cather & Co., Bicycle Circulation and Safety Study, City of Davis and University of California, August 1972.
6. Danish Council for Road Safety Research, Cykelstiers Betydning for Faerdselssikkerheden, Report 1, Government Printing Office, Copenhagen, Denmark, 1969.
7. Value Trend Studies-Residential Subdivisions Along Suburban Freeways, Greater Portland Area, Right of Way Division, Oregon State Highway Department, April 1961; p. 80, Sunset Freeway Report, Downtown Portland, Inc., March, 1960; Highway Research Board Bulletin 288: "Land Use and Development at Highway Interchanges", National Academy of Sciences, National Research Council, Washington D.C., 1961; p. 130-138, Studies of Highway Development and Geographic Change, Garrison, Berry, Marble, Nystuen & Morrill, University of Washington Press, Seattle, 1959; L.C.C.C.: 59-12045.

APPENDIX

Resolution of Multnomah County Board of Commissioners dated January 13, 1972

Resolution of Multnomah County Board of Commissioners dated December 5, 1972

City of Portland Resolution No. 31154 dated December 7, 1972

City of Portland Bicycle Path Task Force letter dated November 30, 1972

City of Portland Resolution No. 31217 dated April 13, 1973

File
C 37-71

- SENIOR PLANNER
 - ZONING SUPERVISOR
 - BLDG. DEPT. SUPER. *FOR*
 - URBAN PLANNER III *CLIFF*
 - ZON. & BLDG. EX. III
 - PLANS EXAM. III
 - STENO ADMIN.
 - S. ENO. ZONING
 - S. O. BLDG.
 - CIV. ENGR.
 - PLANNING
 - ZONING
 - BLDG.
 - INSPECTION
 - INSPECT.
- FILE* *COPY TO HARRIS*
ANSWER *01/16 TO SHARON*

BEFORE THE BOARD OF COUNTY COMMISSIONERS FOR
MULTNOMAH COUNTY, OREGON

In the Matter of Requesting a Hearing)
Concerning the Provision for PEDESTRIANS)
and BICYCLES Within the RIGHTS-OF-WAY of)
INTERSTATE HIGHWAYS)

The above-entitled matter is before the Board to consider requesting the Oregon State Highway Commission to hold a public hearing concerning the need for facilities for pedestrians and bicycles within the rights-of-way of interstate highways; and it appearing to the Board that:

WHEREAS, there exists a need for varied facilities of all types for transportation within the total system; and

WHEREAS, all freeways, and specifically I-205 and the Columbia River Bridge, serve as uninterrupted links across many neighborhoods and could have great importance as elements of a pedestrian-bicycle pathway system; and

WHEREAS, Chapter 376, Oregon Laws 1971, requires the State Highway Commission to spend reasonable amounts of its budget on bicycle trails and footpaths; and

WHEREAS, the State Highway Commission is considering review of its policy on location of transportation facilities; and the Board being fully advised in the premises, it is therefore

RESOLVED, DECLARED AND ORDERED that the Chairman of the Board of County Commissioners request the Oregon State Highway Commission to hold a public hearing to consider policy regarding the location of pedestrian-bicycle paths within the rights-of-way of interstate freeways.

January 13, 1972

BOARD OF COUNTY COMMISSIONERS
MULTNOMAH COUNTY, OREGON

(SEAL)

By M. JAMES GLEASON
Chairman

APPROVED AS TO FORM:

DEMOND D. CONNALL
District Attorney for
Multnomah County, Oregon

By PAUL G. MACKAY
Paul G. Mackey
Deputy District Attorney

RECEIVED

131
1123

BEFORE THE BOARD OF COUNTY COMMISSIONERS FOR

MULTNOMAH COUNTY, OREGON

C-37a-71

In the Matter of Requesting Inclusion)
of Bicycle and/or Pedestrian Paths in)
Conjunction with the I-205 Freeway.)

RESOLUTION

The above-entitled matter is before the Board to consider the adoption of the above-stated request; and

WHEREAS, Multnomah County has undertaken a program to design and implement a comprehensive local bicycle and pedestrian path system; and

WHEREAS, it has become apparent, as a result of this study, that there is a need for a major north-south path in the vicinity of the I-205 Freeway; and

WHEREAS, such a path is necessary in order to provide a vital connecting link in the over-all path system; and

WHEREAS, the explicitly stated policy of the Federal Highway Administration is to encourage multiple uses of highway rights-of-way to include, specifically, bicycle and pedestrian trails, it is therefore

RESOLVED by the Board of County Commissioners of Multnomah County that State and Federal Highway authorities be requested to include bicycle and/or pedestrian paths in conjunction with the I-205 Freeway.

December 5, 1972

BOARD OF COUNTY COMMISSIONERS
MULTNOMAH COUNTY, OREGON

(SEAL)

By M. JAMES GLEASON
Chairman

APPROVED AS TO FORM:

CHARLES S. EVANS
Charles S. Evans
County Counsel for
Multnomah County, Oregon

RECEIVED
DEC 20 1972
Multnomah County Planning Comm.

RESOLUTION NO. 31154

WHEREAS, The City of Portland has undertaken a program to design and implement a comprehensive local bicycle and pedestrian path system; and

WHEREAS, it has become apparent, as a result of this study, that there is a need for a major north-south path in the vicinity of the I-205 Freeway; and

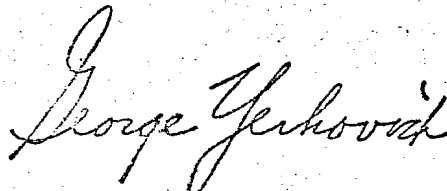
WHEREAS, such a path is necessary in order to provide a vital connecting link in the overall path system; and

WHEREAS, the explicitly stated policy of the Federal Highway Administration is to encourage multiple uses of highway rights-of-way to include, specifically, bicycle and pedestrian trails;

THEREFORE, be it resolved by the Portland City Council that State and Federal highway authorities be requested to include bicycle and/or pedestrian paths in conjunction with the I-205 Freeway.

Adopted by the Council

DEC 7 1972



Auditor of the City of Portland

Lloyd Anderson, Commissioner

WSL:bg
11/30/72

LLOYD ANDERSON
CITY COMMISSIONER



DEPARTMENT OF PUBLIC WORKS

ROOM 414, CITY HALL
1220 S. W. 5TH AVENUE
PHONE 228-6141

CITY OF PORTLAND
OREGON

November 30, 1972

Mr. Scott Colter
Oregon State Highway Division
Metro Section
5821 N.E. Glisan
Portland, Oregon

Dear Mr. Colter:

The City of Portland Bicycle Path Task Force wishes to state its continued and unswerving support for pedestrian and bicycle facilities on the I205 bridge and freeway, now in the planning stage.

This Task Force was appointed last November, 1971, by Portland City Commissioner Lloyd Anderson to prepare a comprehensive bicycle plan for Portland. The City will receive approximately \$50,000 per year from state highway funds for the implementation of such a plan. The Task Force has completed its report, which is now being prepared for publication and should be available in late December or early January. Our plan was presented at a public hearing on November 13, and was favorably received. The main criticism was that the plan did not provide enough bicycle routes. We enclose the agenda of the meeting and the documents that were distributed, including the Goals for Planning, and the Policies which we hope the City of Portland will adopt in order that bicycles will be a more viable means of transportation.

We are very concerned about the need for bicycle routes in the rapidly urbanizing area around the proposed I205 freeway, where the City and Multnomah County boundaries intermingle. City-county consolidation is inevitable, and will erase these boundaries. (The City-County Charter Commission is now holding public hearings.) We have

exchanged information and ideas with the Multnomah County Bicycle Task Force and coordinated our plans. Of our major bicycle routes, four will be continued by the County. These are Northeast Glisan, Southeast Woodward, Harrison and Lincoln, and Holgate-Harold Steele. Two others, Northeast Alamada and Northeast Schuyler-Grant-Tillamook, will lead to the County. We enclose copies of the reports recommending these routes. In addition, we are supporting efforts to provide a system of bicycle trails along the Columbia Slough and Marine Drive.

The easternmost route in our plan is 72nd-75th Avenue (copy enclosed). We have rejected 82nd as a bicycle route because of its congestion and lack of potential as a safe bicycle route. The I205 freeway would provide the only major north-south route east of 72nd Avenue for school children, shoppers, and commuters, as well as recreational riders. The freeway and bridge are being constructed for the use of the increasing populations in eastern Clark County and Multnomah County. A safe bicycle facility will increase the active, daily use of the thousands of new bicycles purchased in the last year. Cyclists at our two public hearings hammered away at the theme that a perfectly justified fear prevented them from using their bicycles more often. When we have a quiet, inexpensive, pollution-free means of transportation that promotes health and requires little space or pavement, we should encourage, not discourage, its use. The denial of access across the I205 bridge to cyclists and pedestrians would eventually have to be corrected. This would be at a far greater cost than is envisioned now.

We hope that you will convey our expressions of support and the documents certifying the need for bicycle facilities to the Federal Highway Administration.

Very sincerely,

Betty Barker

Betty Barker
Chairman, Bicycle Path
Task Force

RESOLUTION NO. 31217

WHEREAS the City Council has appointed the Bicycle Paths Task Force and charged it to produce a comprehensive bicycle pathways plan for the City of Portland and this charge has been fulfilled; and

WHEREAS the City of Portland is required by law to expend at least one per cent of its annual gas tax revenues on bicycle and pedestrian paths construction and bicycles serve as an increasingly important aspect of a balanced transportation system; and

WHEREAS the City Council has approved the First and Second Phase recommendations of the Bicycle Paths Task Force and these recommendations are being actively implemented; and

WHEREAS the document Bicycle Facilities For Portland: A Comprehensive Plan, prepared by the Bicycle Paths Task Force, constitutes a practical and workable plan for development of bicycle pathway facilities; and

WHEREAS additional citizen input will be necessary for implementation of this plan and for working with the City on bicycle related matters; and

WHEREAS it is imperative to maintain flexibility in response to engineering and legal requirements, public and neighborhood demand, and changing conditions for implementation of the comprehensive plan; now, therefore

BE IT RESOLVED that the City Council adopts the document Bicycle Facilities for Portland: A Comprehensive Plan as its guideline plan for bicycle pathway construction within the City of Portland with the understanding that changes should be made as needed by engineering and legal requirements, public and neighborhood demand, and changing conditions; and

BE IT FURTHER RESOLVED that the City Council extends its sincere appreciation to the Bicycle Paths Task Force for its contribution and service to the City of Portland and discharges the Bicycle Paths Task Force for completion of its duties as charged; and

BE IT FURTHER RESOLVED that the City Council direct the Mayor to appoint a seven person Citizens Bicycle Advisory Committee prior to June 1, 1973 to operate under the auspices of the Commissioner of Public Works and charged with the following duties:

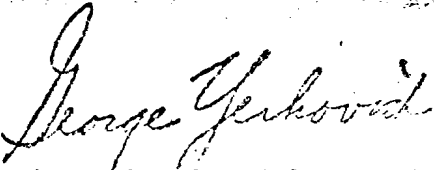
1. Assist the City with implementation of the comprehensive plan described in Bicycle Facilities For Portland: A Comprehensive Plan including review of design, priorities, public contact, and hearings.
2. Advise the City Council regarding bicycle related matters including City policies, bicycle parking, bicycle safety, and bicycle laws.

Adopted by the Council APR 12 1973

Commissioner Anderson

REW:bd

4/4/73


Auditor of the City of Portland