

THE CITY OF
PORTLAND



OREGON

OFFICE OF
PLANNING AND DEVELOPMENT

GARY E. STOUT
ADMINISTRATOR

BUREAU OF
PLANNING

ERNEST R. BONNER
DIRECTOR

424 S.W. MAIN STREET
PORTLAND, OR. 97204

PLANNING
503 248-4253

ZONING
503 248-4250

April 29, 1976

John Patton
Director of Intergovernmental Affairs
Department of Transportation
400 Seventh Street S.W.
Washington, D.C. 20590

Dear Mr. Patton:

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The location and direction of the following photographs are shown on the Project Drawing, Appendix J.

Photograph "A" is an overview of the project area looking southeast. On the left is Interstate Avenue, on the right Greeley Avenue, straight ahead is the interchange of I-405 and I-5, and extending off to the right to the west is the Fremont Bridge. Key point of this picture is that additional

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WILLIAM S. DIRKER
TRANSPORTATION COORDINATOR

WSD:ce

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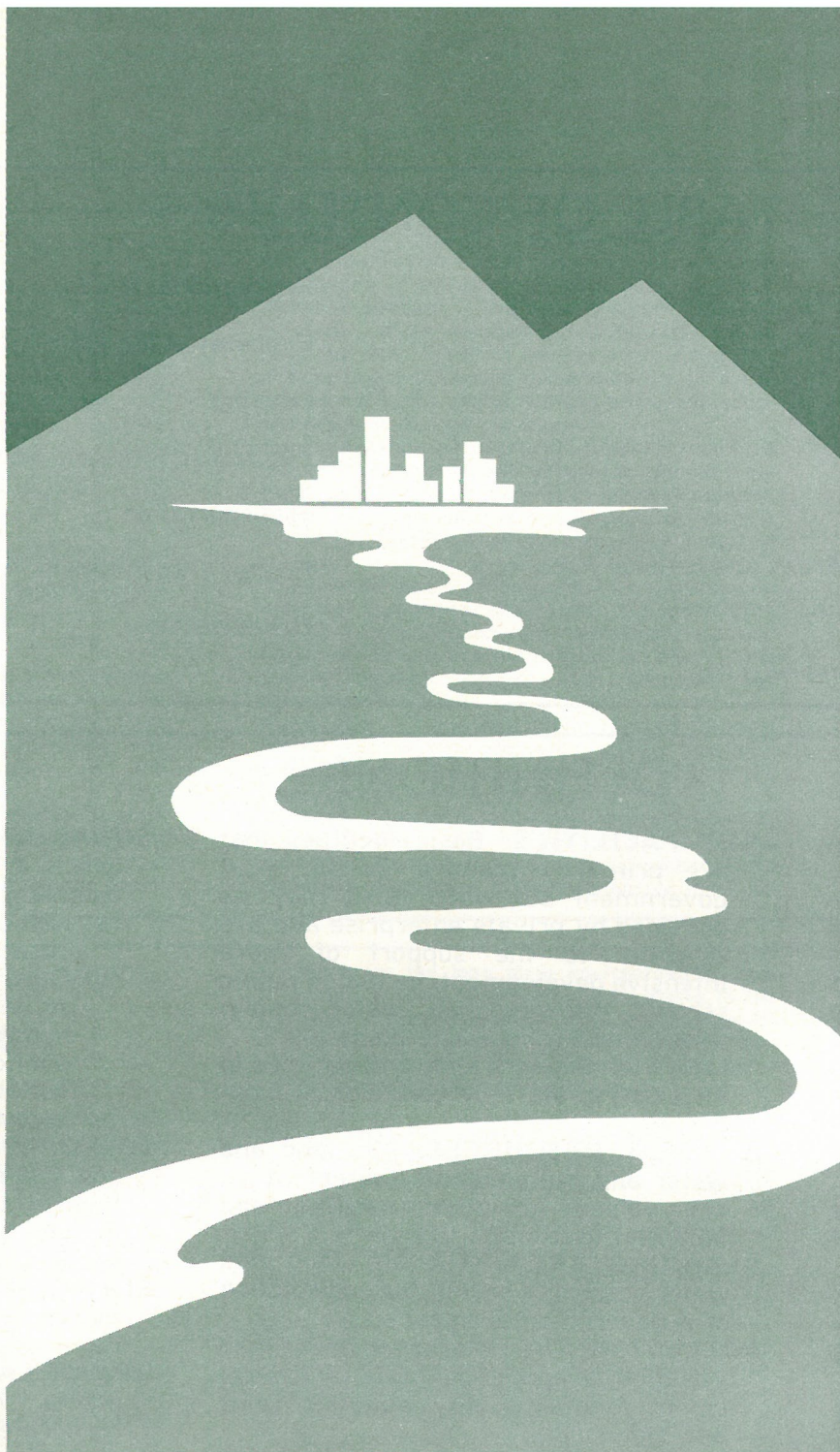
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Oregon Land Conservation And Development Commission



STATEWIDE PLANNING GOALS AND GUIDELINES

Adopted by the

Land Conservation
& Development Commission
December 27, 1974

Operative Date:
January 1, 1975

The preparation of this report was financed in part through a Comprehensive Planning Grant from the Department of Housing and Urban Development under the provisions of Section 701 of the Housing Act of 1954, as amended.

INTRODUCTION TO THE GOALS AND GUIDELINES

BACKGROUND

In 1973, the 57th Legislative Assembly adopted Senate Bill 100 (ORS Chapter 197), otherwise known as the 1973 Land Use Act. This represented the latest in a series of actions by the State of Oregon to promote comprehensive land use planning to assure the highest level of livability for its citizens. The Act provides for the coordination of local comprehensive plans through state standards and review. Furthermore, the statute mandated active citizen involvement in the on-going land use planning process at all governmental levels.

Until the 1973 Act, efforts in Oregon had been guided by ORS Chapter 215.515, enacted in 1969. That statute set forth broad goals and objectives for comprehensive physical planning. Although, the goals in the 1969 Act were not mandatory, they were made required interim goals under provisions of SB 100, Section 48.

To guide local comprehensive planning, the 1973 Act directed the Land Conservation and Development Commission (LCDC) to adopt statewide planning goals and guidelines by January 1, 1975. These planning goals, adopted by the LCDC, replace the interim goals and are regulations. The goals and guidelines are to be used by state agencies, cities, counties and special districts in preparing, adopting, revising and implementing comprehensive plans.

Using the ten broad goals and objectives from the 1969 law as a foundation, the LCDC expanded each and added forest lands; energy; citizen involvement; land use planning; and housing. The goal subjects include definitions, as well as, guidelines which provide alternative ways to accomplish the planning goals.

In developing the statewide land use goals and guidelines, LCDC conducted 56 public workshops in the Spring and Fall of 1974 to ascertain citizen attitudes and concerns about land use and comprehensive planning. In November and December, 1974, the Commission conducted 18 public hearings and a number of public work sessions on the drafts of the statewide goals. The goals and

guidelines were formally adopted December 27, 1974.

The Citizen Involvement goal was also adopted as an administrative rule on December 27, 1974 so that it would become effective January 25, 1975. This action was taken to assure that citizen involvement opportunities would be created throughout the plan review and development in 1975.

All goals are of equal importance. The order in which the goals are printed does not indicate any order of priority.

Comprehensive plans, and any ordinances or regulations implementing the plans, are to comply with the statewide goals by January 1, 1976. Extensions may be granted by the Commission in those situations where satisfactory progress is demonstrated.

FUTURE CHANGES

Substantive changes in the statewide planning goals and guidelines will be kept to a minimum so that governmental units will have an opportunity to incorporate the goals into their comprehensive plans.

The refinement of goals and guidelines will be on-going to assure that they reflect the State's current needs and provide for regional differences. The various needs of these areas will be incorporated into more specific regionalized goals and guidelines in the future.

GOAL-GUIDELINE DESCRIPTION

"Goals are intended to carry the full force of authority of the state to achieve the purposes... of the Act." Goals are regulations and the basis for all land use decisions relating to that goal subject.

"Guidelines... are suggested directions that would aid local governments in activating the mandated goals. They are intended to be instructive, directional and positive, but not limiting local governments to a single course of action when some other course would achieve the same result... guidelines are not intended to be a grant of power to the state to carrying zoning from the state level..." - The Senate Journal - 1973 -

Guidelines following most goals are divided into two sections -- planning and implementation. Planning guidelines relate primarily to the process of bringing plans into conformance with the goals. Implementation guidelines relate primarily to the process of carrying out the goals once they have been dealt with in the plans. Both of these sections are to be considered during the preparation of land use plans.

ACKNOWLEDGEMENTS

The Land Conservation and Development Commission and its Department gratefully acknowledge the steadfast participation of Oregon citizens in developing the statewide land use goals and guidelines. Through the sharing of their land use ideas and concerns, and through constant evaluation of the Commission's work, citizens of this state have taken a significant step in building a foundation for a more livable Oregon.

The Commission also acknowledges the contributions of several hundred technical advisors who helped bring together the concerns of Oregonians in many timely committee meetings and through their individual comments. Many worked tirelessly to assist in the completion of this important task and the Commission is indebted for their dedication and leadership.

The Land Conservation and Development Commission

L. B. Day
Chairman
Steven Schell
Vice Chairman

Commissioners

Dorothy Anderson Albert Bullier, Jr.
Richard Gervais Dr. Paul Rudy
James Smart

FOR FURTHER INFORMATION

For further information about the goals and guidelines, contact the Department of Land Conservation and Development, 1175 Court Street N.E., Salem, OR 97310, or phone 378-4926 (Salem).

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Agricultural Lands

Forest Lands

Open Spaces, Scenic and Historic Areas and Natural Resources

Air, Water and Land Resources Quality

Areas Subject to Natural Disasters and Hazards

Recreational Needs

Economy of the State

Housing

Public Facilities and Services

Transportation

Energy Conservation

Urbanization

DEFINITIONS

AGRICULTURAL LAND: See definition in Agricultural Lands Goal.

CARRYING CAPACITY: Level of use which can be accommodated and continued without irreversible impairment of natural resources productivity, the ecosystem and the quality of air, land and water resources.

CITIZEN: Any individual within the planning area; any public or private entity or association within the planning area, including corporations, governmental and private agencies, associations, firms, partnerships, joint stock companies and any group of citizens.

CONSERVE: To manage in a manner which avoids wasteful or destructive uses and provides for future availability.

CONSERVATION: The act of conserving the environment.

DEVELOP: To bring about growth or availability; to construct or alter a structure, to conduct a mining operation, to make a physical change in the use or appearance of land, to divide land into parcels, or to create or terminate rights of access.

DEVELOPMENT: The act, process or result of developing.

ENCOURAGE: Stimulate; give help to; foster.

IMPACT: The consequences of a course of action; effect of a goal, guideline, plan or decision.

INSURE: Guarantee; make sure or certain something will happen.

KEY FACILITIES: Basic facilities that are primarily planned for by local government but which also may be provided by private enterprise and are essential to the support of more intensive development, including public schools, transportation, water supply, sewage and solid waste disposal.

MAINTAIN: Support, keep and continue in an existing state or condition without decline.

NATURAL RESOURCES: Air, land and water and the elements thereof which are valued for their existing and potential usefulness to man.

PLANNING AREA: The air, land and water resources within the jurisdiction of a governmental agency.

POLLUTION: The violation or threatened violation of applicable state or federal environmental quality statutes, rules and standards.

PRESERVE: To save from change or loss and reserve for a special purpose.

PROGRAM: Proposed or desired plan or course of proceedings and action.

PROTECT: Save or shield from loss, destruction, or injury or for future intended use.

PROVIDE: Prepare, plan for, and supply what is needed.

PUBLIC FACILITIES AND SERVICES: Projects, activities and facilities which the planning agency determines to be necessary for the public health, safety and welfare.

QUALITY: The degree of excellence or relative goodness.

RURAL LAND: Rural lands are those which are outside the urban growth boundary and are:

- (a) Non-urban agricultural, forest or open space lands or,
- (b) Other lands suitable for sparse settlement, small farms or acreage homesites with no or hardly any public services, and which are not suitable, necessary or intended for urban use.

SOCIAL CONSEQUENCES: The tangible and intangible effects upon people and their relationships with the community in which they live resulting from a particular action or decision.

STRUCTURE: Anything constructed or installed or portable, the use of which requires a location on a parcel of land.

URBAN LAND: Urban areas are those places which must have an incorporated city. Such areas may include lands adjacent to and outside the incorporated city and may also:

- (a) Have concentrations of persons who generally reside and work in the area
- (b) Have supporting public facilities and services.

URBANIZABLE LAND: Urbanizable lands are those lands within the urban growth boundary and which are identified and

- (a) Determined to be necessary and suitable for future urban uses
- (b) Can be served by urban services and facilities
- (c) Are needed for the expansion of an urban area.

1

CITIZEN INVOLVEMENT

GOAL: To develop a citizen involvement program that insures the opportunity for citizens to be involved in all phases of the planning process.

The governing body charged with preparing and adopting a comprehensive plan shall adopt and publicize a program for citizen involvement that clearly defines the procedures by which the general public will be involved in the on-going land-use planning process.

The citizen involvement program shall be appropriate to the scale of the planning effort. The program shall provide for continuity of citizen participation and of information that enables citizens to identify and comprehend the issues.

Federal, state and regional agencies and special purpose districts shall coordinate their planning efforts with the affected governing bodies and make use of existing local citizen involvement program established by counties and cities.

The citizen involvement program shall incorporate the following components:

1. **Citizen Involvement** -- To provide for widespread citizen involvement.

The citizen involvement program shall involve a cross-section of affected citizens in all phases of the planning process. As a component, the program for citizen involvement shall include an officially recognized citizen advisory committee or committees broadly representative of geographic areas and interests related to land use and land use decisions. Citizen advisory committee members shall be selected by an open, well-publicized public process.

The citizen advisory committee shall be responsible for: assisting the governing body with the development of a program that promotes and enhances citizen involvement in land use planning, assisting in the implementation of the citizen involvement program and evaluating the process being used for citizen involvement.

If the governing body wishes to assume the responsibility for development as well as adoption and implementation of the citizen involvement program or to assign such responsibilities to a planning commission, a letter shall be submitted to the Land Conservation and Development Commission for the State Citizen Involvement Advisory Committee's review and recommendation stating the rationale for selecting this option, as well as indicating the mechanism to be used for an evaluation of the citizen involvement program. If the planning commission is used, its members shall be selected by an open, well-publicized public process.

2. **Communication** -- To assure effective two-way communication with citizens.

Mechanisms shall be established which provide for effective communication between citizens and elected and appointed officials.

3. **Citizen Influence** -- To provide the opportunity for citizens to be involved in all phases of the planning process.

Citizens shall have the opportunity to be involved in the phases of the planning process as set forth and defined in the goal and guidelines for Land Use Planning, including Preparation of Plans and Implementation Measures, Plan Content, Plan Adoption, Minor Changes and Major Revisions in the Plan and Implementation Measures.

4. **Technical Information** -- To assure that technical information is available in an understandable form.

Information necessary to reach policy decisions

shall be available in a simplified, understandable form. Assistance shall be provided to interpret and effectively use technical information. A copy of all technical information shall be available at a local public library or other location open to the public.

5. **Feedback Mechanisms** -- To assure that citizens will receive a response from policymakers. Recommendations resulting from the citizen involvement program shall be retained and made available for public assessment. Citizens who have participated in this program shall receive a response from policymakers. The rationale used to reach land use policy decisions shall be available in the form of a written record.

6. **Financial Support** -- To insure funding for the citizen involvement program. Adequate human, financial and informational resources shall be allocated for the citizen involvement program. These allocations shall be an integral component of the planning budget. The governing body shall be responsible for obtaining and providing these resources.

GUIDELINES FOR CITIZEN INVOLVEMENT GOALS

1. CITIZEN INVOLVEMENT

- A. A program for stimulating citizen involvement should be developed using a range of available media (including television, radio, newspapers, mailings and meetings).

- B. Universities, colleges, community colleges, secondary and primary educational institutions and other agencies and institutions with interests in land use planning should provide information on land use education to citizens, as well as develop and offer courses in land use education which provide for a diversity of educational backgrounds in land use planning.

(Continued on page 3)

1 CITIZEN INVOLVEMENT

(Continued from page 2)

C. In the selection of members for the Citizen Advisory Committee, the following selection process should be observed: citizens should receive notice they can understand of the opportunity to serve on citizen advisory committees; citizen advisory committee appointees should receive official notification of their selection; and, citizen advisory committee appointments should be well publicized.

2. COMMUNICATION

A. Newsletters, mailings, posters, mailback questionnaires, and other available media should be used in the citizen involvement program.

3. CITIZEN INFLUENCE

A. **Data Collection** - The general public through the local citizen involvement programs should have the opportunity to be involved in inventorying, recording, mapping, describing, analyzing and evaluating the elements necessary for the development of the plans.

B. **Plan Preparation** - The general public, through the local citizen involvement programs, should have the opportunity to participate in developing a body of sound information to identify public goals,

develop policy guidelines and evaluate alternative land conservation and development plans for the preparation of the comprehensive land use plans.

C. **Adoption Process** - The general public, through the local citizen involvement programs, should have the opportunity to review and recommend change to the proposed comprehensive land use plans prior to the public hearing process to adopt comprehensive land use plans.

D. **Implementation** - The general public, through the local citizen involvement programs, should have the opportunity to participate in the development, adoption and application of legislation that is needed to carry out a comprehensive land use plan.

The general public, through the local citizen involvement programs, should have the opportunity to review each proposal and application for a land conservation and development action prior to the formal consideration of such proposal and application.

E. **Evaluation** - The general public, through the local citizen involvement programs, should have the opportunity to be involved in the evaluation of the comprehensive land use plans.

F. **Revision** - The general public, through the local citizen involvement programs, should have the opportunity to review and make recommendations on proposed changes in comprehensive land use

plans prior to the public hearing process to formally consider the proposed changes.

4. TECHNICAL INFORMATION

A. Agencies that either evaluate or implement public projects or programs (such as, but not limited to, road, sewer, water construction, transportation, sub-division studies and zone changes) should provide assistance to the citizen involvement program. The roles, responsibilities and timeline in the planning process of these agencies should be clearly defined and publicized.

B. Technical information should include, but not be limited to: energy, natural environment, political, legal, economic and social data and places of cultural significance, as well as those maps and photos necessary for effective planning.

5. FEEDBACK MECHANISM

A. At the onset of the citizen involvement program, the governing body should clearly state the mechanism through which the citizens will receive a response from the policymakers.

B. A process for quantifying and synthesizing citizen's attitudes should be developed and reported to the general public.

6. FINANCIAL SUPPORT

A. The level of funding and human resources allocated to the citizen involvement program should be sufficient to make citizen involvement an integral part of the planning process.

2

LAND USE PLANNING

GOAL:

PART I - PLANNING: To establish a land use planning process and policy framework as a basis for all decisions and actions related to use of land and to assure an adequate factual base for such decisions and actions.

City, county, state and federal agency and special district plans and actions related to land use shall be consistent with the comprehensive plans of cities and counties and regional plans adopted under ORS 197.705 through 197.795.

All land use plans shall include identification of issues and problems, inventories and other factual information for each applicable state-wide planning goal, evaluation of alternative courses of action and ultimate policy choices, taking into consideration social, economic, energy and environmental needs. The required information shall be contained in the plan document or in supporting documents. The plans, supporting documents and implementation ordinances shall be filed in a public office or other place easily accessible to the public. The plans shall be the basis for specific implementation measures. These measures shall be consistent with and adequate to carry out the plans. Each plan and related implementation measure shall be coordinated with the plans of affected governmental units.

All land use plans and implementation ordinances shall be adopted by the governing body after public hearing and shall be reviewed and, as needed, revised on a periodic cycle to take into account changing public policies and circumstances, in accord with a schedule set forth in the plan. Opportunities shall be provided for review and comment by citizens and affected governmental units during preparation, review and revision of plans and implementation ordinances. Affected persons shall receive understandable notice by mail of proposed changes in plans or zoning ordinances sufficiently in advance of any hearing to allow the affected person reasonable time to review the proposal.

Affected Governmental Units -- are those local governments, state and federal agencies and special districts which have programs, land ownerships or responsibilities within the area included in the plan.

Affected Persons -- includes those owners of record of real property located within not less than 500 feet, exclusive of street areas, from the area subject to the proposed change.

Comprehensive Plan -- as defined in ORS 197.015(4). **Coordinated** -- as defined in ORS 197.015(4). Note: It is included in the definition of comprehensive plan.

Implementation Measures -- are the means used to carry out the plan. These are of two general types:

- (1) management implementation measures such as ordinances, regulations or project plans, and
- (2) site or area specific implementation measures such as permits and grants for construction, construction of public facilities or provision of services.

Plans -- as used here encompass all plans which guide land use decisions, including both comprehensive and single purpose plans of cities, counties, state and federal agencies and special districts.

PART II - EXCEPTIONS: When, during the application of the statewide goals to plans, it appears that it is not possible to apply the appropriate goal to specific properties or situations, then each proposed exception to a goal shall be set forth during the plan preparation phases and also specifically noted in the notices of public hearing. The notices of hearing shall summarize the issues in an understandable and meaningful manner.

If the exception to the goal is adopted, then the compelling reasons and facts for that conclusion shall be completely set forth in the plan and shall include:

- (a) Why these other uses should be provided for;
- (b) What alternative locations within the area could be used for the proposed uses;

- (c) What are the long term environmental, economic, social and energy consequences to the locality, the region or the state from not applying the goal or permitting the alternative use;
- (d) A finding that the proposed uses will be compatible with other adjacent uses.

PART III - USE OF GUIDELINES: Governmental units shall review the guidelines set forth for the goals and either utilize the guidelines or develop alternative means that will achieve the goals. All land use plans shall state how the guidelines or alternative means utilized achieve the goals.

Guidelines -- are suggested directions that would aid local governments in activating the mandated goals. They are intended to be instructive, directional and positive, not limiting local government to a single course of action when some other course would achieve the same result. Above all, guidelines are not intended to be a grant of power to the state to carry out zoning from the state level under the guise of guidelines. (Guidelines or the alternative means selected by governmental bodies will be part of the Land Conservation and Development Commission's process of evaluating plans for compliance with goals).

GUIDELINES:

1. PREPARATION OF PLANS AND IMPLEMENTATION MEASURES

Preparation of plans and implementation measures should be based on a series of broad phases, proceeding from the very general identification of problems and issues to the specific provisions for dealing with these issues and for interrelating the various elements of the plan. During each phase opportunities should be provided for review and comment by citizens and affected governmental units.

The various implementation measures which will be used to carry out the plan should be considered during each of the planning phases.

The number of phases needed will vary with the complexity and size of the area, number of people involved, other governmental units to be consulted, and availability of the necessary information.

Sufficient time should be allotted for:

- (a) collection of the necessary factual information
- (b) gradual refinement of the problems and issues and the alternative solutions and strategies for development
- (c) desires and development of broad citizen support
- (d) identification and resolution of possible conflicts with plans of affected governmental units.

2. REGIONAL, STATE AND FEDERAL PLAN CONFORMANCE

It is expected that regional, state and federal agency plans will conform to the comprehensive plans of cities and counties. Cities and counties are expected to take into account the regional, state and national needs. Regional, state and federal agencies are expected to make their needs known during the preparation and revision of city and county comprehensive plans. During the preparation of their plans, federal, state and regional agencies are expected to create opportunities for review and comment by cities and counties.

In the event existing plans are in conflict or an agreement cannot be reached during the plan preparation process, then the Land Conservation and Development Commission expects the affected governmental units to take steps to resolve the issues. If an agreement cannot be reached the appeals procedures in ORS chapter 197 may be used.

3. PLAN CONTENT

A. Factual Basis for the Plan

Inventories and other forms of data are needed as the basis for the policies and other decisions set forth in the plan.

This factual base should include data on the following as they relate to the goals and other provisions of the plan:

- (1) Natural resources, their capabilities and limitations
- (2) Man-made structures and utilities, their location and condition
- (3) Population and economic characteristics of the area
- (4) Roles and responsibilities of governmental units.

B. Elements of the Plan

The following elements should be included in the plan:

- (1) Applicable state-wide planning goals
 - (2) Any critical geographic area designated by the Legislature
 - (3) Elements that address any special needs or desires of the people in the area
 - (4) Time periods of the plan, reflecting the anticipated situation at appropriate future intervals
- All of the elements should fit together and relate to one another to form a consistent whole at all times.

4. FILING OF PLANS

City and county plans should be filed, but not recorded, in the Office of the County Recorder. Copies of all plans should be available to the public and to affected governmental units.

5. MAJOR REVISIONS AND MINOR CHANGES IN THE PLAN AND IMPLEMENTATION MEASURES

The citizens in the area and any affected governmental unit should be given an opportunity to review and comment prior to any changes in the plan and implementation ordinances. There should be at least 30 days notice of the public hearing on the proposed change. In determining the affected persons to receive notice by mail of proposed changes, renters should be considered among those affected. Also, in the event that all of the property within a single ownership is not included in the area to be changed, the boundary for those to receive notice by mail should be measured from the property line and not from the boundary line of the area to be changed.

When adopted, the changes should be suitably noted in a prominent place in the document, filed with the recorder, and copies made available to the public.

A. Major Revisions

Major revisions include land use changes that have widespread and significant impact beyond the immediate area such as quantitative changes producing large volumes of traffic; a qualitative change in the character of the land use itself, such as conversion of residential to industrial use; or a spatial change that affects large areas or many different ownerships.

The plan and implementation measures should be revised when public needs and desires change and when development occurs at a different rate than contemplated by the plan. Areas experiencing rapid growth and development should provide for a frequent review so needed revisions can be made to keep the plan up to date; however, major revisions should not be made more frequently than every two years, if at all possible.

The plan and implementation measures should be reviewed at least every two years and a public statement issued on whether any revision is needed. They can be reviewed in their entirety or in major portions. The review should begin with re-examining the data and problems and continue through the same basic phases as the initial preparation of the plan and implementation measures.

B. Minor Changes

Minor changes, i.e., those which do not have significant effect beyond the immediate area of the change, should be based on special studies or other information which will serve as the factual basis to support the change. The public need and justification for the particular change should be established. Minor changes should not be made more frequently than once a year, if at all possible.

6. IMPLEMENTATION MEASURES

The following types of measures should be considered for carrying out plans:

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2 LAND USE PLANNING

(Continued from page 3)

A. Management Implementation Measures:

- (1) Ordinances controlling the use and construction on the land such as building codes, sign ordinances, subdivision and zoning ordinances. ORS Chapter 197 requires that the provisions of the zoning and subdivision ordinances conform to the comprehensive plan.
- (2) Plans for public facilities that are more specific than those included in the comprehensive plan. They show the size, location and capacity serving each property but are not as detailed as construction drawings.

- (3) Capital improvement budget which sets out the projects to be constructed during the budget period.
- (4) State and federal regulations affecting land use.
- (5) Annexations, consolidations, mergers and other reorganization measures.

B. Site and Area Specific Implementation Measures

- (1) Building permits, septic tank permits, driveway permits, etc.; the review of subdivisions and land partitioning applications, the changing of zones and granting of conditional uses, etc.
- (2) The construction of public facilities (schools, roads, water lines, etc.)
- (3) The provision of land-related public services such as fire and police.

- (4) The awarding of state and federal grants to local governments to provide these facilities and services.
- (5) Leasing of public lands.

7. USE OF GUIDELINES FOR THE STATE-WIDE PLANNING GOALS

Guidelines for most state-wide planning goals are found in two selections -- planning and implementation. Planning guidelines relate primarily to the process of developing plans that incorporate the provisions of the goals. Implementation guidelines should relate primarily to the process of carrying out the goals once they have been incorporated into the plans. Techniques to carry out the goals and plans should be considered during the preparation of the plan.

3

AGRICULTURAL LANDS

GOAL: To preserve and maintain agricultural lands.

Agriculture lands shall be preserved and maintained for farm use, consistent with existing and future needs for agricultural products, forest and open space. These lands shall be inventoried and preserved by adopting exclusive farm use zones pursuant to ORS Chapter 215. Such minimum lot sizes as are utilized for any farm use zones shall be appropriate for the continuation of the existing commercial agricultural enterprise within the area. Conversion of rural agricultural land to urbanizable land shall be based upon consideration of the following factors: (1) environmental, energy, social and economic consequences; (2) demonstrated need consistent with LCDC goals; (3) unavailability of an alternative suitable location for the requested use; (4) compatibility of the proposed use with related agricultural land; and (5) the retention of Class I, II, III and IV soils in farm use. A governing body proposing to

convert rural agricultural land to urbanizable land shall follow the procedures and requirements set forth in the Land Use Planning goal (Goal 2) for goal exceptions.

Agricultural Land -- in western Oregon is land of predominantly Class I, II, III and IV soils and in eastern Oregon is land of predominantly Class I, II, III, IV, V and VI soils as identified in the Soil Capability Classification System of the United States Soil Conservation Service, and other lands which are suitable for farm use taking into consideration soil fertility, suitability for grazing, climatic conditions, existing and future availability of water for farm irrigation purposes, existing land use patterns, technological and energy inputs required, or accepted farming practices. Lands in other classes which are necessary to permit farm practices to be undertaken on adjacent or nearby lands, shall be included as agricultural land in any event.

More detailed soil data to define agricultural land may be utilized by local governments if such data permits achievement of this goal.

Farm Use -- is as set forth in ORS 215.203 and includes the non-farm uses authorized by ORS 215.213.

GUIDELINES:

A. Planning

1. Urban growth should be separated from

agricultural lands by buffer or transitional areas of open space.

2. Plans providing for the preservation and maintenance of farm land for farm use, should consider as a major determinant the carrying capacity of the air, land and water resources of the planning area. The land conservation and development actions provided for by such plans should not exceed the carrying capacity of such resources.

B. Implementation:

1. Non-farm uses permitted within farm use zones under ORS 215.213(2) and (3) should be minimized to allow for maximum agricultural productivity.
2. Extension of services, such as sewer and water supplies into rural areas should be appropriate for the needs of agriculture, farm use and non-farm uses established under ORS 215.213.
3. Services that need to pass through agricultural lands should not be connected with any use that is not allowed under ORS 215.203 and 215.213, should not be assessed as part of the farm unit and should be limited in capacity to serve specific service areas and identified needs.
4. Forest and open space uses should be permitted on agricultural land that is being preserved for future agricultural growth. The interchange of such lands should not be subject to tax penalties.

4

FOREST LANDS

GOAL: To conserve forest lands for forest uses.

Forest land shall be retained for the production of wood fibre and other forest uses. Lands suitable for forest uses shall be inventoried and designated as forest lands. Existing forest land uses shall be protected unless proposed changes are in conformance with the comprehensive plan.

In the process of designating forest lands, comprehensive plans shall include the determination and mapping of forest site classes according to the United States Forest Service manual "Field Instructions for Integrated Forest Survey and Timber Management Inventories - Oregon, Washington and California, 1974."

Forest Lands -- are (1) lands composed of existing and potential forest lands which are suitable for commercial forest uses; (2) other forested lands needed for watershed protection, wildlife and fisheries habitat and recreation; (3) lands where extreme conditions of climate, soil and topography require the maintenance of vegetative cover irrespective of use; (4) other forested lands in urban and

agricultural areas which provide urban buffers, wind breaks, wildlife and fisheries habitat, livestock habitat, scenic corridors and recreational use.

Forest Uses -- are (1) the production of trees and the processing of forest products; (2) open space, buffers from noise, and visual separation of conflicting uses; (3) watershed protection and wildlife and fisheries habitat; (4) soil protection from wind and water; (5) maintenance of clean air and water; (6) outdoor recreational activities and related support services and wilderness values compatible with these uses; and (7) grazing land for livestock.

GUIDELINES:

A. Planning:

1. Forest lands should be inventoried so as to provide for the preservation of such lands for forest uses.
2. Plans providing for the preservation of forest lands for forest uses should consider as a major determinant the carrying capacity of the air, land and water resources of the planning area. The land conservation and development actions provided for by such plans should not exceed the carrying capacity of such resources.

B. Implementation:

1. Before forest land is changed to another

use, the productive capacity of the land in each use should be considered and evaluated.

2. Developments that are allowable under the forest lands classification should be limited to those activities for forest production and protection and other land management uses that are compatible with forest production. Forest lands should be available for recreation and other uses that do not hinder growth.
3. Forestation or reforestation should be encouraged on land suitable for such purposes, including marginal agricultural land not needed for farm use.
4. Road standards should be limited to the minimum width necessary for management and safety.
5. Highways through forest lands should be designed to minimize impact on such lands.
6. Rights-of-way should be designed so as not to preclude forest growth whenever possible.
7. Maximum utilization of utility rights-of-way should be required before permitting new ones.
8. Comprehensive plans should consider other land uses that are adjacent to forest lands so that conflicts with forest harvest and management are avoided.

5 OPEN SPACES, SCENIC AND HISTORIC AREAS, AND NATURAL RESOURCES

GOAL: To conserve open space and protect natural and scenic resources.

Programs shall be provided that will: (1) insure open space, (2) protect scenic and historic areas and natural resources for future generations, and (3) promote healthy and visually attractive environments in harmony with the natural landscape character. The location, quality and quantity of the following resources shall be inventoried:

- Land needed or desirable for open space;
- Mineral and aggregate resources;
- Energy sources;
- Fish and wildlife areas and habitats;
- Ecologically and scientifically significant natural areas, including desert areas;
- Outstanding scenic views and sites;
- Water areas, wetlands, watersheds and ground-water resources;
- Wilderness areas;
- Historic areas, sites, structures and objects;
- Cultural areas;
- Potential and approved Oregon recreation trails;
- Potential and approved federal wild and scenic waterways and state scenic waterways.

Where no conflicting uses for such resources have been identified, such resources shall be managed so as to preserve their original character. Where conflicting uses have been identified the economic, social, environmental and energy consequences of the conflicting uses shall be determined and programs developed to achieve the goal.

Cultural Area -- refers to an area characterized by evidence of an ethnic, religious or social group with distinctive traits, beliefs and social forms.

Historic Areas -- are lands with sites, structures and objects that have local, regional, statewide or national historical significance.

Natural Area -- includes land and water that has substantially retained its natural character and land and water that, although altered in character, is important as habitats for plant, animal or marine life, for the study of its natural historical, scientific or paleontological features, or for the appreciation of its natural features.

Open Space -- consists of lands used for agricultural

or forest uses, and any land area that would, if preserved and continued in its present use:

- Conserve and enhance natural or scenic resources;
- Protect air or streams or water supply;
- Promote conservation of soils, wetlands, beaches or tidal marshes;
- Conserve landscaped areas, such as public or private golf courses, that reduce air pollution and enhance the value of abutting or neighboring property;
- Enhance the value to the public of abutting or neighboring parks, forests, wildlife preserves, nature reservations or sanctuaries or other open space;
- Promote orderly urban development.

Scenic Areas -- are lands that are valued for their aesthetic appearance.

Wilderness Areas -- are areas where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain. It is an area of undeveloped land retaining its primeval character and influence, without permanent improvement or human habitation, which is protected and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) may also contain ecological, geological, or other features of scientific, educational, scenic or historic value.

GUIDELINES:

A. Planning:

- The need for open space in the planning area should be determined, and standards developed for the amount, distribution, and type of open space
- Criteria should be developed and utilized to determine what uses are consistent with open space values and to evaluate the effect of converting open space lands to inconsistent uses. The maintenance and development of open space in urban areas should be encouraged.
- Natural resources and required sites for the generation of energy (i.e. natural gas, oil, coal, hydro, geothermal, uranium, solar and others) should be conserved and protected; reservoir sites should be identified and protected against irreversible loss.
- Plans providing for open space, scenic and historic areas and natural resources should consider as a major determinant the carrying capacity of the air, land and water resources of the planning area. The land conservation and development actions provided for by such plans should not exceed the carrying capacity of such resources.

5. The National Register of Historic Places and the recommendations of the State Advisory Committee on Historic Preservation should be utilized in designating historic sites.

6. In conjunction with the inventory of mineral and aggregate resources, sites for removal and processing of such resources should be identified and protected.

7. As a general rule, plans should prohibit outdoor advertising signs except in commercial or industrial zones. Plans should not provide for the reclassification of land for the purpose of accommodating an outdoor advertising sign. The term "outdoor advertising sign" has the meaning set forth in ORS 377.710 (23).

B. Implementation:

- Development should be planned and directed so as to conserve the needed amount of open space.
- The conservation of both renewable and non-renewable natural resources and physical limitations of the land should be used as the basis for determining the quantity, quality, location, rate and type of growth in the planning area.
- The efficient consumption of energy should be considered when utilizing natural resources.
- Fish and wildlife areas and habitats should be protected and managed in accordance with the Oregon Wildlife Commission's fish and wildlife management plans.
- Stream flow and water levels should be protected and managed at a level adequate for fish, wildlife, pollution abatement, recreation, aesthetics and agriculture.
- Significant natural areas that are historically, ecologically or scientifically unique, outstanding or important, including those identified by the State Natural Area Preserves Advisory Committee, should be inventoried and evaluated. Plans should provide for the preservation of natural areas consistent with an inventory of scientific, educational, ecological and recreational needs for significant natural areas.
- Local, regional and state governments should be encouraged to investigate and utilize fee acquisition, easements, cluster developments, preferential assessment, development rights acquisition and similar techniques to implement this goal.
- State and federal agencies should develop statewide natural resource, open space, scenic and historic area plans and provide technical assistance to local and regional agencies. State and federal plans should be reviewed and coordinated with local and regional plans.
- Areas identified as having non-renewable mineral and aggregate resources should be planned for interim, transitional and "second use" utilization as well as for the primary use.

6 AIR, WATER AND LAND RESOURCES QUALITY

GOAL: To maintain and improve the quality of the air, water and land resources of the state.

All waste and process discharges from future development, when combined with such discharges from existing developments shall not threaten to violate, or violate applicable state or federal environmental quality statutes, rules and standards. With respect to the air, water and land resources of the applicable air sheds and river basins described or included in state environmental quality statutes, rules, standards and implementation plan, such discharges shall not (1) exceed the carrying capacity of such resources, considering long range needs; (2) degrade such resources; or (3) threaten the availability of such resources.

Waste and Process Discharges -- refers to solid waste, thermal, noise, atmospheric or water pollutants, contaminants, or products therefrom. Included here also are indirect sources of air pollution which result in emissions of air contaminants for which the state has established standards.

GUIDELINES:

A. Planning:

- Plans should designate alternative areas suitable for use in controlling pollution including but not limited to waste water treatment plants, solid waste disposal sites and sludge disposal sites.
- Plans should designate areas for urban and rural residential use only where approval sewage disposal alternatives have been clearly identified in such plans.
- Plans should buffer and separate those land uses which create or lead to conflicting requirements and impacts upon the air, water and land resources.
- Plans which provide for the maintenance and improvement of air, land and water resources of the planning area should consider as a major determinant the carrying capacity of the air, land and water resources of the planning area. The land conservation and development actions provided for by such plans should not exceed the carrying capacity of such resources.
- All plans and programs affecting waste and process discharges should be coordinated within the applicable air sheds and river basins described or included in state environmental quality statutes, rules, standards and implementation plan.
- Plans of state agencies before they are adopted, should be coordinated with and reviewed by local agencies with respect to the impact of these plans

on the air, water and land resources in the planning area.

7. In all air quality maintenance areas, plans should be based on applicable state rules for reducing indirect pollution and be sufficiently comprehensive to include major transportation, industrial, institutional, commercial, recreational and governmental developments and facilities.

B. Implementation:

- Plans should take into account methods and devices for implementing this goal, including but not limited to the following: (1) tax incentives and disincentives, (2) land use controls and ordinances, (3) multiple-use and joint development practices, (4) capital facility programming, (5) fee and less-than-fee acquisition techniques, and (6) enforcement of local health and safety ordinances.
- A management program that details the respective implementation roles and responsibilities for carrying out this goal in the planning area should be established in the comprehensive plan.
- Programs should manage land conservation and development activities in a manner that accurately reflects the community's desires for a quality environment and a health economy and is consistent with state environmental quality statutes, rules, standards and implementation plan.

7 AREAS SUBJECT TO NATURAL DISASTERS AND HAZARDS

GOAL: To protect life and property from natural disasters and hazards.

Developments subject to damage or that could result in loss of life shall not be planned nor located in known areas of natural disasters and hazards without appropriate safeguards. Plans shall be based on an inventory of known areas of natural disaster and hazard.

Areas of Natural Disasters and Hazards -- are areas that are subject to natural events that are known to result in death or endanger the works of man, such as stream flooding, ocean flooding, ground water, erosion and deposition, landslides, earthquakes, weak foundation soils and other hazards unique to local or regional areas.

GUIDELINES:

A. Planning:

- Areas subject to natural hazards should be evaluated as to the degree of hazard present. Proposed developments should be keyed to the

degree of hazard and to the limitations on use imposed by such hazard in the planning areas.

- In planning for flood plain areas, uses that will not require protection through dams, dikes and levies should be preferred over uses that will require such protection.
- Low density and open space uses that are least subject to loss of life or property damage such as open storage, forestry, agriculture and recreation should be preferred in floodplains, especially the floodway portion. The floodway portion should be given special attention to avoid development that is likely to cause an impediment to the flow of floodwaters.
- Plans taking into account known areas of natural disasters and hazards should consider as major determinant, the carrying capacity of the air, land and water resources of the planning area. The land conservation and development actions provided for by such plans should not exceed the carrying capacity of such resources.
- Planning for known areas of natural disasters and hazards should include an evaluation of the beneficial impact on natural resources and the environment from letting such events naturally reoccur.

B. Implementation:

- Cities and counties not already eligible should qualify for inclusion in the National Flood Insurance Program, provided under the National Flood Insurance Act of 1968 (Public Law 90-448). The Act requires that development in flood-prone areas be appropriate to the probability of flood damage, and the danger to human life. The Flood Disaster Protection Act of 1973 (P.L. 93-234) and other pertinent federal and state programs should be considered. The United States Department of Housing and Urban Development should identify all flood and mud-slide prone cities and counties in Oregon, and priority should be given to the completion of flood rate maps for such areas.
- When locating developments in areas of known natural hazards, the density or intensity of the development should be limited by the degree of the natural hazard.
- When regulatory programs and engineering projects are being considered, the impacts of each should be considered.
- Natural hazards that could result from new developments, such as runoff from paving projects and soil slippage due to weak foundation soils, should be considered, evaluated and provided for.

8 RECREATIONAL NEEDS

GOAL: To satisfy the recreational needs of the citizens of the state and visitors.

The requirements for meeting such needs, now and in the future shall be planned for by governmental agencies having responsibility for recreation areas, facilities and opportunities: (1) in coordination with private enterprise, (2) in appropriate proportions and (3) in such quantity, quality and location as is consistent with the availability of the resources to meet such requirements. State and federal agency recreation plans shall be coordinated with local and regional recreational needs and plans.

Recreation Areas, Facilities and Opportunities -- provide for human development and enrichment, and include but are not limited to: open space and scenic landscapes; recreational lands; history, archeology and natural science resources; scenic roads and travelways, sports and cultural events; camping, picnicking and recreational lodging; tourist facilities and accommodations; trails; waterway use facilities; hunting; angling; winter sports; mineral resources; active and passive games and activities.

Recreation Needs -- refers to existing and future demand by citizens and visitors for recreation areas, facilities and opportunities.

GUIDELINES:

A. Planning:

1. An inventory of recreation needs in the planning

area should be made based upon adequate research and analysis of public wants and desires.

2. An inventory of recreation opportunities should be made based upon adequate research and analysis of the resources in the planning area which are available to meet recreation needs.

3. Recreation land use to meet recreational needs and development standards, roles and responsibilities should be developed by all agencies in coordination with each other and with the private interests. Long range plans and action programs to meet recreational needs should be developed by each agency responsible for developing comprehensive plans.

4. The planning for lands and resources capable of accommodating multiple uses should include provision for appropriate recreation opportunities.

5. The STATE COMPREHENSIVE OUTDOOR RECREATION PLAN could be used as a guide when planning, acquiring and developing recreation resources, areas and facilities.

6. When developing recreation plans, energy consequences should be considered, and to the greatest extent possible non-motorized types of recreational activities should be preferred over motorized activities.

7. Planning and provision for recreation facilities and opportunities should give priority to areas, facilities and uses that (a) meet recreational needs requirements for high density population centers, (b) meet recreational needs of persons of limited mobility and finances, (c) meet recreational needs requirements while providing the maximum conservation of energy both in the transportation

of persons to the facility or area and in the recreational use itself, (d) minimize environmental deterioration, (e) are available to the public at nominal cost, and (f) meet needs of visitors to the state.

8. Unique areas or resources capable of meeting one or more specific recreational needs requirements should be inventoried and protected or acquired.
9. All state and federal agencies developing recreation plans should allow for review of recreation plans by affected local agencies.
10. Comprehensive plans should be designed to give a higher priority to enhancing recreation opportunities on the public waters and shorelands of the state especially on existing and potential state and federal wild and scenic waterways and Oregon Recreation Trails.
11. Plans which provide for satisfying the recreation needs of persons in the planning area should consider as a major determinant, the carrying capacity of the air, land and water resources of the planning area. The land conservation and development actions provided for by such plans should not exceed the carrying capacity of such resources.

B. Implementation:

1. Plans should take into account various techniques in addition to fee acquisition such as easements, cluster developments, preferential assessments, development rights acquisition, subdivision park land dedication which benefits the subdivision, and similar techniques to meet recreation requirements through tax policies, land leases, and similar programs.

9 ECONOMY OF THE STATE

GOAL: To diversify and improve the economy of the state.

Both state and federal economic plans and policies shall be coordinated by the state with local and regional needs. Plans and policies shall contribute to a stable and healthy economy in all regions of the state. Plans shall be based on inventories of areas suitable for increased economic growth and activity after taking into consideration the health of the current economic base; materials and energy availability; labor market factors; transportation; current market forces; availability of renewable and non-renewable resources; availability of land; and pollution control requirements.

Economic growth and activity in accordance with such plans shall be encouraged in areas that have underutilized human and natural resource capabilities and want increased growth and activity. Alternative sites suitable for economic growth and expansion shall be designated in such plans.

Diversify -- refers to increasing the variety, type, scale and location of business, industrial and commercial activities.

Improve the Economy of the State -- refers to a beneficial change in those business, industrial and commercial activities which generate employment, products and services consistent with the availability of long term human and natural resources.

Areas Which Have Underutilized Human and Natural Resource Capabilities -- refer to cities, counties or regions which are characterized by chronic unemployment or a narrow economic base, but have the capacity and resources to support additional economic activity.

GUIDELINES:

A. Planning:

1. A principal determinant in planning for major industrial and commercial developments should be the comparative advantage of the region within which the developments would be located. Comparative advantage industries are those economic activities which represent the most efficient use of resources, relative to other geographic areas.

2. The economic development projections and the comprehensive plan which is drawn from the projections should take into account the availability of the necessary natural resources to support the expanded industrial development and associated populations. The plan should also take into account the social, environmental, energy and economic impacts upon the resident population.

3. Plans should designate the type and level of

public facilities and services appropriate to support the degree of economic development being proposed.

4. Plans should strongly emphasize the expansion of and increased productivity from existing industries and firms as a means to strengthen local and regional economic development.
5. Plans directed toward diversification and improvement of the economy of the planning area should consider as a major determinant, the carrying capacity of the air, land and water resources of the planning area. The land conservation and development actions provided for by such plans should not exceed the carrying capacity of such resources.

B. Implementation:

1. Plans should take into account methods and devices for overcoming certain regional conditions and deficiencies for implementing this goal, including but not limited to (1) tax incentives and disincentives; (2) land use controls and ordinances; (3) preferential assessments; (4) capital improvement programming; and (5) fee and less-than-fee acquisition techniques.
2. Plans should provide for a detailed management program to assign respective implementation roles and responsibilities to those private and governmental bodies which operate in the planning area and have interests in carrying out this goal and in supporting and coordinating regional and local economic plans and programs.

10 HOUSING

GOAL: To provide for the housing needs of citizens of the state.

Buildable lands for residential use shall be inventoried and plans shall encourage the availability of adequate numbers of housing units at price ranges and rent levels which are commensurate with the financial capabilities of Oregon households and allow for flexibility of housing location, type and density.

Buildable Lands -- refers to lands in urban and urbanizable areas that are suitable, available and necessary for residential use.

Household -- refers to one or more persons occupying a single housing unit.

GUIDELINES:

A. Planning:

1. In addition to inventories of buildable lands, housing elements of a comprehensive plan should, at a minimum, include: (1) A comparison of the distribution of the existing population by income with the distribution of available housing units by cost; (2) a determination of vacancy rates, both overall and at varying rent ranges and cost levels; (3) a determination of expected housing demand at varying rent ranges and cost levels; (4) allowance for a variety of densities and types of residences in each community;

and (5) an inventory of sound housing in urban areas including units capable of being rehabilitated.

2. Plans should be developed in a manner that insures the provision of appropriate types and amounts of land within urban growth boundaries. Such land should be necessary and suitable for housing that meets the housing needs of households of all income levels.

3. Plans should provide for the appropriate type, location and phasing of public facilities and services sufficient to support housing development in areas presently developed or undergoing development or redevelopment.

4. Plans providing for housing needs should consider as a major determinant the carrying capacity of the air, land and water resources of the planning area. The land conservation and development actions provided for by such plans should not exceed the carrying capacity of such resources.

B. Implementation:

1. Plans should provide for a continuing review of housing need projections and should establish a process for accommodating needed revisions.

2. Plans should take into account the effects of utilizing financial incentives and resources to (a) stimulate the rehabilitation of substandard housing without regard to the financial capacity of the owner so long as benefits accrue to the occupants; and (b) bring into compliance with codes adopted to assure safe and sanitary housing the

dwellings of individuals who cannot on their own afford to meet such codes.

3. Decisions on housing development proposals should be expedited when such proposals are in accordance with zoning ordinances and with provisions of comprehensive plans.

4. Ordinances and incentives should be used to increase population densities in urban areas taking into consideration (1) key facilities, (2) the economic, environmental, social and energy consequences of the proposed densities and (3) the optimal use of existing urban land particularly in sections containing significant amounts of unsound substandard structures.

5. Additional methods and devices for achieving this goal should, after consideration of the impact on lower income households, include, but not be limited to: (1) tax incentives and disincentives; (2) building and construction code revision; (3) zoning and land use controls; (4) subsidies and loans; (5) fee and less-than-fee acquisition techniques; (6) enforcement of local health and safety costs; and (7) coordination of the development of urban facilities and services to disperse low income housing throughout the planning area.

6. Plans should provide for a detailed management program to assign respective implementation roles and responsibilities to those governmental bodies operating in the planning area and having interests in carrying out the goal.

11 PUBLIC FACILITIES AND SERVICES

GOAL: To plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban and rural development.

Urban and rural development shall be guided and supported by types and levels of urban and rural public facilities and services appropriate for, but limited to, the needs and requirements of the urban, urbanizable and rural areas to be served. A provision for key facilities shall be included in each plan. To meet current and long-range needs, a provision for solid waste disposal sites, including sites for inert waste, shall be included in each plan.

A Timely, Orderly and Efficient Arrangement -- refers to a system or plan that coordinates the type, location and delivery of public facilities and services in a manner that best supports the existing and proposed land uses.

Rural Facilities and Services -- refers to facilities and services which the governing body determines to be suitable and appropriate solely for the needs of rural use.

Urban Facilities and Services -- refers to key facilities and to appropriate types and levels of at least the following: police protection; fire protection; sanitary facilities; storm drainage facilities; planning, zoning and subdivision control; health services; recreation facilities and services; energy and communication services; and community governmental services.

GUIDELINES:

A. Planning:

1. Plans providing for public facilities and services should be coordinated with plans for designation or urban boundaries, urbanizable land, rural uses and for the transition of rural land to urban uses.
2. Public facilities and services for rural areas should be provided at levels appropriate for rural use only and should not support urban uses.
3. Public facilities and services in urban areas should be provided at levels necessary and suitable for urban uses.
4. Public facilities and services in urbanizable areas should be provided at levels necessary and suitable for existing uses. The provision for future public facilities and services in these areas should be based upon: (1) the time required to provide the service; (2) reliability of service; (3) financial cost; and (4) levels of service needed and desired.
5. A public facility or service should not be provided in an urbanizable area unless there is provision for the coordinated development of all the other urban facilities and services appropriate to that area.
6. All utility lines and facilities should be located on or adjacent to existing public or private rights-of-way to avoid dividing existing farm units.
7. Plans providing for public facilities and services should consider as a major determinant and carrying capacity of the air, land and water resources of the planning area. The land conservation and development actions provided for

by such plans should not exceed the carrying capacity of such resources.

B. Implementation:

1. Capital improvement programming and budgeting should be utilized to achieve desired types and levels of public facilities and services in urban, urbanizable and rural areas.
2. Public facilities and services should be appropriate to support sufficient amounts of land to maintain an adequate housing market in areas undergoing development or redevelopment.
3. The level of key facilities that can be provided should be considered as a principal factor in planning for various densities and types of urban and rural land uses.
4. Plans should designate sites of power generation facilities and the location of electric transmission lines in areas intended to support desired levels of urban and rural development.
5. Additional methods and devices for achieving desired types and levels of public facilities and services should include but not be limited to the following: (1) tax incentives and disincentives; (2) land use controls and ordinances; (3) multiple use and joint development practices; (4) fee and less-than-fee acquisition techniques; and (5) enforcement of local health and safety codes.
6. Plans should provide for a detailed management program to assign respective implementation roles and responsibilities to those governmental bodies operating in the planning area and having interests in carrying out the goal.

12 TRANSPORTATION

GOAL: To provide and encourage a safe, convenient and economic transportation system.

A transportation plan shall (1) consider all modes of transportation including mass transit, air, water, pipeline, rail, highway, bicycle and pedestrian; (2) be based upon an inventory of local, regional and state transportation needs; (3) consider the differences in social consequences that would result from utilizing differing combinations of transportation modes; (4) avoid principal reliance upon any one mode of transportation; (5) minimize adverse social, economic and environmental impacts and costs; (6) conserve energy; (7) meet the needs of the transportation disadvantaged by improving transportation services, (8) facilitate the flow of goods and services so as to strengthen the local and regional economy; and (9) conform with local and regional comprehensive land use plans. Each plan shall include a provision for transportation as a key facility.

Transportation -- refers to the movement of people and goods.

Transportation Facility -- refers to one or more transportation facilities that are planned, developed, operated and maintained in a coordinated manner to supply continuity of movement between modes, and within and between geographic and jurisdictional areas.

Mass Transit -- refers to any form of passenger transportation which carries members of the public on a regular and continuing basis.

Transportation Disadvantaged -- refers to those individuals who have difficulty in

obtaining transportation because of their age, income, physical or mental disability.

GUIDELINES:

A. Planning:

1. All current area-wide transportation studies and plans should be revised in coordination with local and regional comprehensive plans and submitted to local and regional agencies for review and approval.
2. Transportation systems, to the fullest extent possible, should be planned to utilize existing facilities and rights-of-way within the state provided that such use is not inconsistent with the environmental, energy, land-use, economic or social policies of the state.
3. No major transportation facility should be planned or developed outside urban boundaries on Class I and II agricultural land, as defined by the U. S. Soil Conservation Service unless no feasible alternative exists.
4. Major transportation facilities should avoid dividing existing economic farm units and urban social units unless no feasible alternative exists.
5. Population densities and peak hour travel patterns of existing and planned developments should be considered in the choice of transportation modes for trips taken by persons. While high density developments with concentrated trip origins and destinations should be designed to be principally served by mass transit, low-density developments with dispersed origins and destinations should be principally served by the auto.
6. Plans providing for a transportation system should consider as a major determinant the carrying capacity of the air, land and water resources of the planning area. The land conservation

and development actions provided for by such plans should not exceed the carrying capacity of such resources.

B. Implementation:

1. The number and location of major transportation facilities should conform to applicable state or local land use plans and policies designed to direct urban expansion to areas identified as necessary and suitable for urban development. The planning and development of transportation facilities in rural areas should discourage urban growth while providing transportation service necessary to sustain rural and recreational uses in those areas so designated in the comprehensive plan.
2. Plans for new or for the improvement of major transportation facilities should identify the positive and negative impacts on: (1) local land use patterns, (2) environmental quality, (3) energy use and resources, (4) existing transportation systems and (5) fiscal resources in a manner sufficient to enable local governments to rationally consider the issues posed by the construction and operation of such facilities.
3. Lands adjacent to major mass transit stations, freeway interchanges, and other major air, land and water terminals should be managed and controlled so as to be consistent with and supportive of the land use and development patterns identified in the comprehensive plan of the jurisdiction within which the facilities are located.
4. Plans should provide for a detailed management program to assign respective implementation roles and responsibilities to those governmental bodies operating in the planning area and having interests in carrying out the goal.

13

ENERGY CONSERVATION

GOAL: To conserve energy.

Land and uses developed on the land shall be managed and controlled so as to maximize the conservation of all forms of energy, based upon sound economic principles.

GUIDELINES:

A. Planning:

1. Priority consideration in land use planning should be given to methods of analysis and implementation measures that will assure achievement of maximum efficiency in energy utilization.
2. The allocation of land and uses per-

mitted on the land should seek to minimize the depletion of non-renewable sources of energy.

3. Land use planning should, to the maximum extent possible, seek to recycle and re-use vacant land and those uses which are not energy efficient.
4. Land use planning should, to the maximum extent possible, combine increasing density gradients along high capacity transportation corridors to achieve greater energy efficiency.
5. Plans directed toward energy conservation within the planning area should consider as a major determinant the existing and potential capacity of the renewable energy sources to yield useful energy output. Renewable energy sources include water, sunshine, wind, geothermal heat and municipal, forest and farm waste. Whenever possible, land conservation and

development actions provided for under such plans should utilize renewable energy sources.

B. Implementation

1. Land use plans should be based on utilization of the following techniques and implementation devices which can have a material impact on energy efficiency:
 - a. Lot size, dimension and siting controls;
 - b. Building height, bulk and surface area;
 - c. Density of uses, particularly those which relate to housing densities;
 - d. Availability of light, wind and air;
 - e. Compatibility of and competition between competing land use activities; and
 - f. Systems and incentives for the collection, reuse and recycling of metallic and nonmetallic waste.

14

URBANIZATION

GOAL: To provide for an orderly and efficient transition from rural to urban land use.

Urban growth boundaries shall be established to identify and separate urbanizable land from rural land.

Establishment and change of the boundaries shall be based upon consideration of the following factors:

- (1) Demonstrated need to accommodate long-range urban population growth requirements consistent with LCDC goals;
- (2) Need for housing, employment opportunities, and livability;
- (3) Orderly and economic provision for public facilities and services;
- (4) Maximum efficiency of land uses within and on the fringe of the existing urban area;
- (5) Environmental, energy, economic and social consequences;
- (6) Retention of agricultural land as defined, with Class I being the highest priority for retention and Class VI the lowest priority; and,
- (7) Compatibility of the proposed urban uses with nearby agricultural activities.

The results of the above considerations shall be included in the comprehensive plan. In the case of a change of a boundary, a governing body proposing such change in the boundary separating urbanizable land from rural land, shall follow the procedures and requirements as set forth in the Land Use Planning goals (Goal 2) for goal exceptions.

Any urban growth boundary established prior to January 1, 1975 which includes rural lands that have not been built upon shall be reviewed by the governing body, utilizing the same factors applicable to the establishment or change of urban growth boundaries.

Establishment and change of the boundaries shall be a cooperative process between a city and the county or counties that surround it.

Land within the boundaries separating urbanizable land from rural land shall be considered available over time for urban uses. Conversion of urbanizable land to urban uses shall be based on consideration of:

- (1) Orderly, economic provision for public facilities and services;
- (2) Availability of sufficient land for the various uses to insure choices in the market place;
- (3) LCDC goals; and,
- (4) Encouragement of development within urban areas before conversion of urbanizable areas.

GUIDELINES:

A. Planning:

1. Plans should designate sufficient amounts of urbanizable land to accommodate the need for further urban expansion, taking into account (1) the growth policy of the area, (2) population needs (by the year 2000), (3) the carrying capacity of the planning area, and (4) open space and recreational needs.
2. The size of the parcels of urbanizable land that are converted to urban land should be of adequate dimension so as to maximize the utility of the land resource and enable the logical and efficient extension of services to such parcels.
3. Plans providing for the transition from rural to urban land use should take into

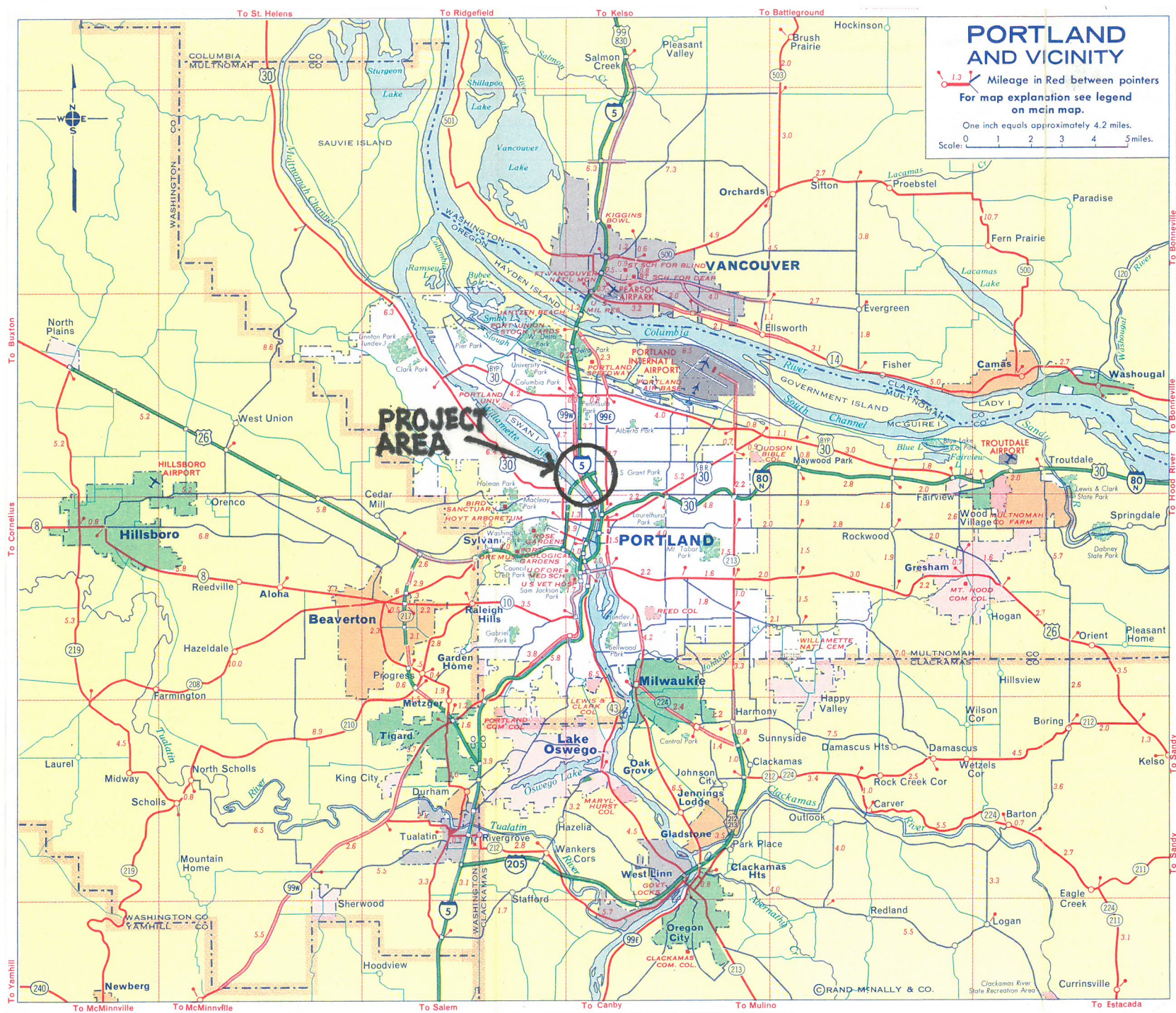
consideration as a major determinant the carrying capacity of the air, land and water resources of the planning area. The land conservation and development actions provided for by such plans should not exceed the carrying capacity of such resources.

B. Implementation Related:

1. The type, location and phasing of public facilities and services are factors which should be utilized to direct urban expansion.
2. The type, design, phasing and location of major public transportation facilities (i.e., all modes: air, marine, rail, mass transit, highways, bicycle and pedestrian) and improvements thereto are factors which should be utilized to support urban expansion into urbanizable areas and restrict it from rural areas.
3. Financial incentives should be provided to assist in maintaining the use and character of lands adjacent to urbanizable areas.
4. Local land use controls and ordinances should be mutually supporting, adopted and enforced to integrate the type, timing and location of public facilities and services in a manner to accommodate increased public demands as urbanizable lands become more urbanized.
5. Additional methods and devices for guiding urban land use should include but not be limited to the following: (1) tax incentives and disincentives; (2) multiple use and joint development practices; (3) fee and less-than-fee acquisition techniques; and (4) capital improvement programming.
6. Plans should provide for a detailed management program to assign respective implementation roles and responsibilities to those governmental bodies operating in the planning area and having interests in carrying out the goal.

Land Conservation & Development Commission
1175 Court Street N.E.
Salem, OR 97310

Address Correction Requested
Return Postage Guaranteed

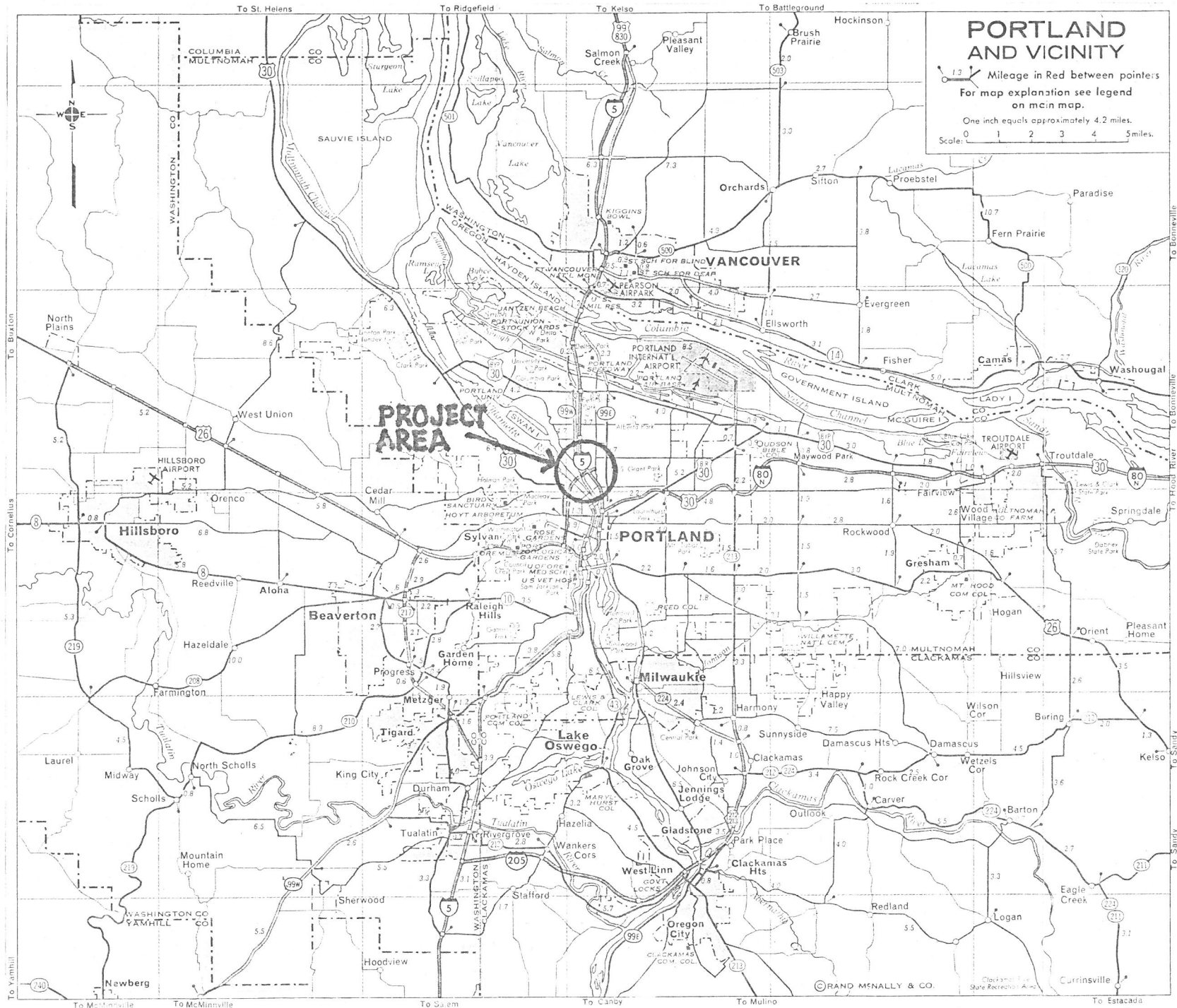


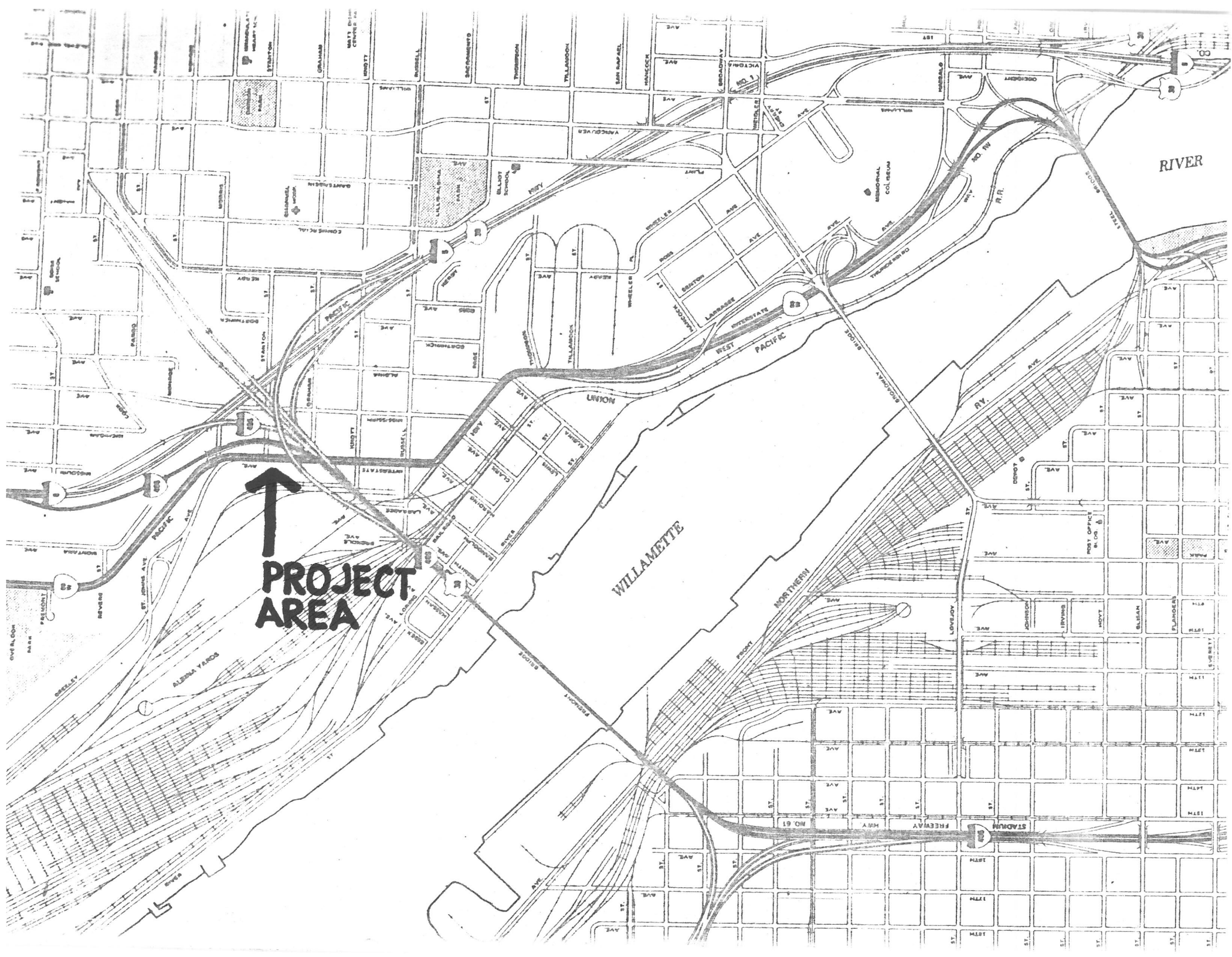
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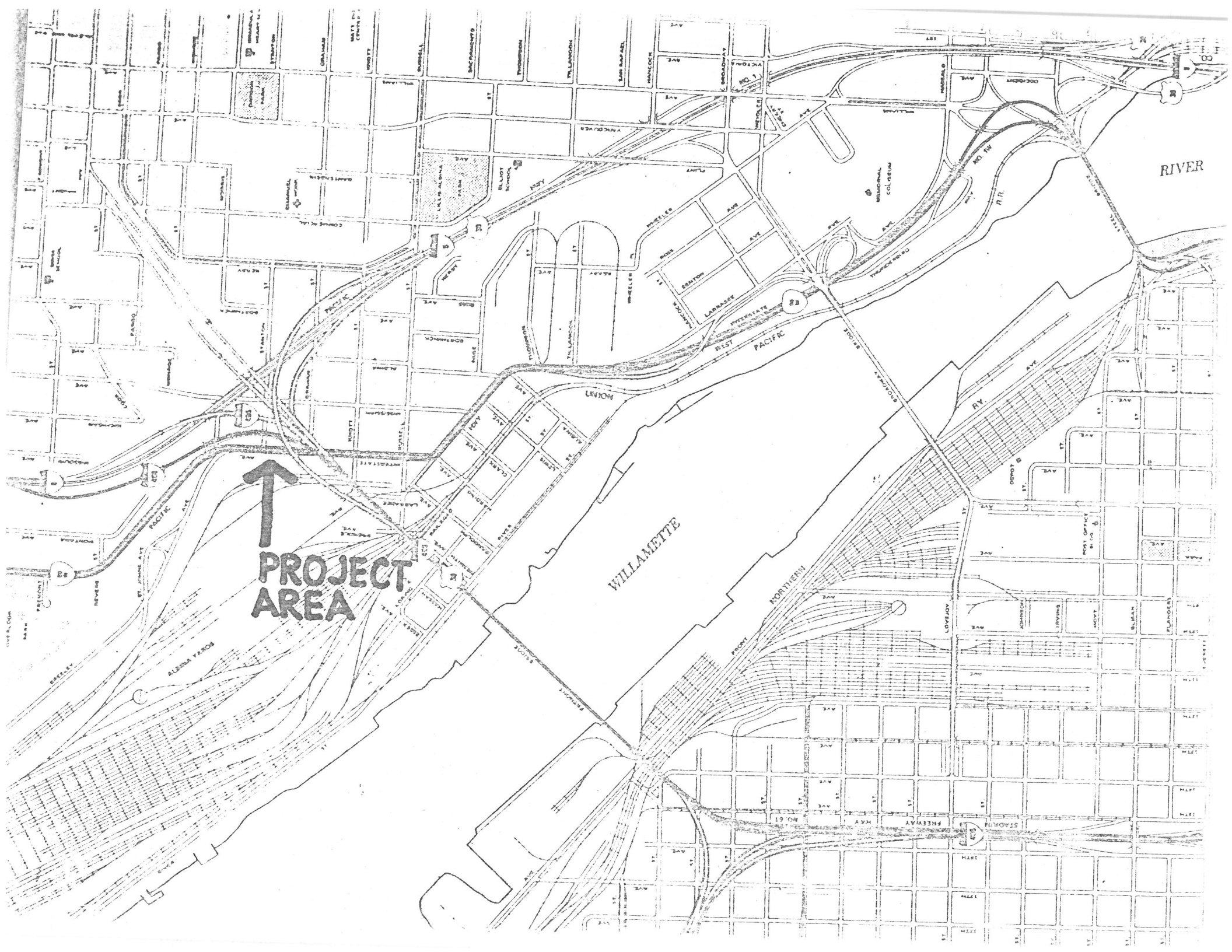
For map explanation see legend on main map.

One inch equals approximately 4.2 miles.

Scale: 0 1 2 3 4 5 miles.









U. S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
Room 412 Mohawk Building
222 S.W. Morrison Street
Portland, Oregon 97204

URBAN MASS TRANSPORTATION ADMINISTRATION

915 Second Avenue
Suite 3106
Seattle, Washington 98174

IN REPLY REFER TO

December 22, 1975

Mr. Phil Balsinger, Chairman
Board of Directors
Columbia Region Association of Governments
527 S.W. Hall Street
Portland, Oregon 97201

Mr. George M. Baldwin, Director
Oregon Department of Transportation
Highway Building
Salem, Oregon 97310

Through: Mr. G. L. Green, Division Administrator
Federal Highway Administration
Salem, Oregon

Mr. William A. Bulley
Director of Highways
Highway Administration Building
Olympia, Washington 98504

Through: Mr. P. C. Gregson, Division Administrator
Federal Highway Administration
Olympia, Washington

Subject: FHWA/UMTA Joint Certification of the Transportation Planning
Process in Portland, Oregon-Vancouver, Washington

Gentlemen:

On March 20, 1975 and April 30, 1975 the Federal Highway Administration (FHWA) and the Urban Mass Transportation Administration (UMTA), respectively, certified the urban transportation planning process, with limitations, until December 31, 1975. In July 1975 FHWA removed limitations on highway projects; we are now removing the limitations on projects in

Page 2

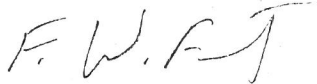
UMTA's April 30, 1975 certification action, with the exception of UMTA Section 16(b)(2) projects. Those Section 16(b)(2) projects will need to be included in the Transportation Improvement Program (TIP).

We would also like to remind you that in addition to the CRAG-endorsed TIP after January 1, 1976, a Transportation Systems Management element of the transportation plan and the inclusion of Transportation Systems Management element projects in the TIP are criteria for Federal assistance after March 30, 1976.

In addition, in keeping with the intent of the new Urban Transportation Planning regulations published in the September 17, 1975 Federal Register, we are removing the December 31, 1975 expiration date of those certifications. The planning process will remain certified under these conditions until another certification determination is made.

We expect to make our annual certification review early in 1976 based on information provided by CRAG, the two States, and the transit operators and inform you of the results. FHWA and UMTA will contact you concerning the information needed as a basis for that review.

Sincerely yours,



F. William Fort, Regional Chief
Urban Mass Transportation Administration



T. Dec, Director
Office of Planning and Research
Federal Highway Administration

cc: Lawrence A. Rice
Executive Director
CRAG

Memorandum

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

Box 300
Salem OR 97308

DATE: July 7, 1975

In reply
refer to: 1041PR/724.41

SUBJECT: Portland-Vancouver Urbanized Area Certification

FROM : G. L. Green, Division Engineer

TO : Mr. George M. Baldwin, Director
Oregon Department of Transportation
Salem, Oregon

Mr. Lybecker's March 20, 1975 certification letter to you concerning the transportation planning process in the subject area placed certain limitations upon the programming of Federal-aid highway projects in that area.

The Columbia Region Association of Governments Board of Directors adopted an interim transportation plan and authorized the release of the transportation improvement program by official resolutions on June 18, 1975. In view of these steps and positive action in connection with air quality consistency determination and correction of other deficiencies, our Regional office has lifted the limitation on programming of projects in the Portland-Vancouver urbanized area. Federal-aid highway projects may now be programed in conformance with normal Federal-aid procedures in this area.

Original signed by
R. M. Arenz
Plan. & Research Engr.
G. L. Green

cc:
Region (10PR.2)
Wash Div (1053PR)

RECEIVED
JUL 8 - 1975
PLANNING SECTION

NOTED
ROBERT E. ROYER



U. S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
Room 412 Mohawk Building
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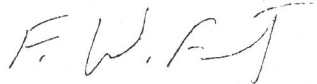
UMTA's April 30, 1975 certification action, with the exception of UMTA Section 16(b)(2) projects. Those Section 16(b)(2) projects will need to be included in the Transportation Improvement Program (TIP).

We would also like to remind you that in addition to the CRAG-endorsed TIP after January 1, 1976, a Transportation Systems Management element of the transportation plan and the inclusion of Transportation Systems Management element projects in the TIP are criteria for Federal assistance after March 30, 1976.

In addition, in keeping with the intent of the new Urban Transportation Planning regulations published in the September 17, 1975 Federal Register, we are removing the December 31, 1975 expiration date of those certifications. The planning process will remain certified under these conditions until another certification determination is made.

We expect to make our annual certification review early in 1976 based on information provided by CRAG, the two States, and the transit operators and inform you of the results. FHWA and UMTA will contact you concerning the information needed as a basis for that review.

Sincerely yours,



F. William Fort, Regional Chief
Urban Mass Transportation Administration



T. Dec, Director
Office of Planning and Research
Federal Highway Administration

cc: Lawrence A. Rice
Executive Director
CRAG

*Memorandum*Box 300
Salem OR 97308

DATE: July 7, 1975

In reply
refer to: 1041PR/724.41

SUBJECT: Portland-Vancouver Urbanized Area Certification

FROM : G. L. Green, Division Engineer

TO : Mr. George M. Baldwin, Director
Oregon Department of Transportation
Salem, Oregon

Mr. Lybecker's March 20, 1975 certification letter to you concerning the transportation planning process in the subject area placed certain limitations upon the programming of Federal-aid highway projects in that area.

The Columbia Region Association of Governments Board of Directors adopted an interim transportation plan and authorized the release of the transportation improvement program by official resolutions on June 18, 1975. In view of these steps and positive action in connection with air quality consistency determination and correction of other deficiencies, our Regional office has lifted the limitation on programming of projects in the Portland-Vancouver urbanized area. Federal-aid highway projects may now be programed in conformance with normal Federal-aid procedures in this area.

Original signed by
R. M. Arenz
Plan. & Research Engr.
G. L. Green

cc:
Region (10PR.2)
Wash Div (1053PR)

RECEIVED
JUL 8 - 1975
PLANNING SECTION

NOTED
ROBERT E. ROYER

INTERIM TRANSPORTATION PLAN

FOR THE *PORTLAND-VANCOUVER, METROPOLITAN AREA*

Columbia Region Association of Governments
527 S.W. Hall Street
Portland, Oregon 97201

Adopted by the Board of Directors of CRAG, Resolution #BD 750602
June 18, 1975

The preparation of this report has been financed in part by funds from the United States Department of Transportation, Urban Mass Transportation Administration, under the Urban Mass Transportation Act of 1964 as amended; and by funds from the Oregon Department of Transportation and the Washington State Department of Highways in cooperation with the Federal Highway Administration, US DOT.

Second Printing
July 25, 1975

COLUMBIA REGION ASSOCIATION OF GOVERNMENTS

INTERIM URBAN HIGHWAY SYSTEM

Legend:

CLASS 1	CLASS 2	CLASS 3	CLASS 4
FREEWAY	EXPRESSWAY	PRINCIPAL	MINOR
INTERSTATE	NON-INTERSTATE	ARTERIAL	ARTERIAL
COLLECTOR			

EXISTING	=====	=====	=====	=====
COMMITTED	=====	=====	=====	=====
PROPOSED	NONE	NONE	=====	=====

TRANSPORTATION STUDY AREA

Scale: 1/2 0 1
Miles

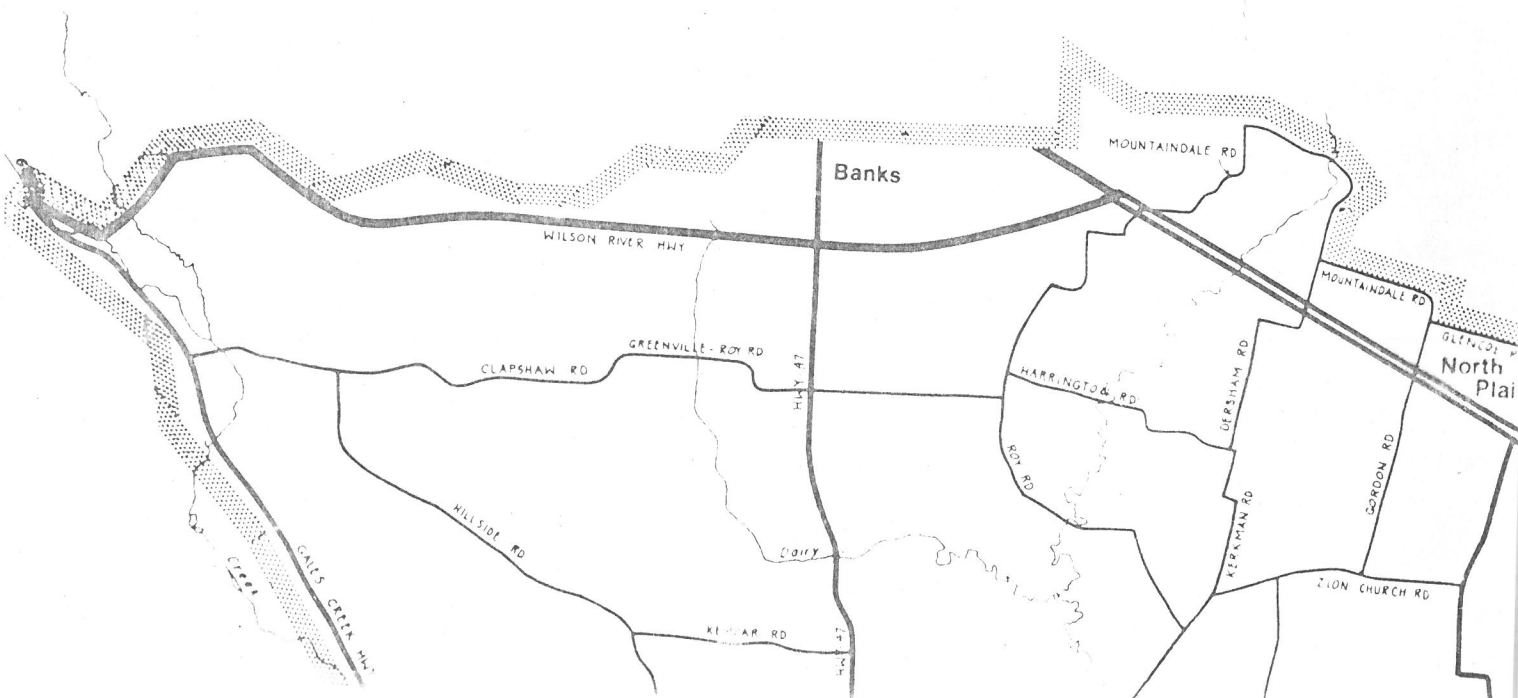
Date: _____
Dr'wn by: KGR NOV 75
Rev by: KGR JAN 76
Rev by: _____
Rev by: _____
Rev by: _____
Rev by: _____

CRAG Board Action: APPROVED

RESOLUTION#	Date:	Ex. Dir.	#	Date:	Ex. Dir.
ED 750602	6-18-75	<i>Frederick</i>			

Rev: _____	Rev: _____
Rev: _____	Rev: _____
Rev: _____	Rev: _____

CRAG
527 S.W. Hall St.
Portland, OR 97201
(503) 221-1646





TRANSPORTATION IMPROVEMENT PROGRAM

FOR THE
PORTLAND - VANCOUVER
METROPOLITAN AREA

COLUMBIA REGION ASSOCIATION
OF GOVERNMENTS
AUGUST 1975

ADOPTED ON AUGUST 28, 1975
BY RESOLUTION #BD 750801

TRANSPORTATION IMPROVEMENT PROGRAM

Federal Aid Urban System

FY 1976 ANNUAL ELEMENT

STATE OF OREGON

STATE OF OREGON																	
PROJECT TITLE	FAR	FISCAL YEAR										FUNDING DISTRIBUTION				TOTAL \$	
		1972	1973	1974	1975	1976	1977	1978	1979	1980	LOCAL \$		OTHER \$		FEDERAL \$		
											REGION	PORTLAND	STATE	TRI-MET	REGION	PORTLAND	
HOLGATE BRIDGE PE	6422					\$ 250,000						\$ 27,500	\$ 27,500			\$ 195,000	\$ 250,000
COLUMBIA BLVD PE	6444				\$ 100,000	\$ 100,000							\$ 22,000	\$ 22,000		\$ 156,000	\$ 200,000
COLUMBIA BLVD CONSTRUCTION	6445					\$ 900,000											\$ 900,000
BARBUR BLVD TRANSIT LANES	6446					\$ 33,000											\$ 33,000
FAU TRANSFER TO URBAN EXT	6447					\$ 100,000											\$ 100,000
FAU STUDIES	6448																\$ 275,000
TERMILLIGER BRIDGE AND APPROACHES PE	6449					\$ 104,300	\$ 104,300										\$ 244,140
CRAG DOWNTOWN STUDIES	6450					\$ 100,000											\$ 313,000
SIGNAL MODERNIZATION	6451					\$ 412,000											\$ 442,000
N GREELEY AVENUE	6452					\$ 240,000											\$ 187,200
N GOING/N BASIN INTERCHANGE	6453					\$ 240,000											\$ 240,000
NEW TRAFFIC SIGNALS	6454					\$ 80,000											\$ 240,000
SUNSET TRANSIT STUDY - FAU TRANSFER TO URBAN EXT	6455					\$ 109,000											\$ 169,000
BANFIELD TRANSIT STUDY - FAU TRANSFER TO URBAN EXT	6456					\$ 280,000											\$ 240,000
W BURNSIDE IMPROVEMENT	6457				\$ 56,400												\$ 44,000
HWY 212	6458				\$ 25,300	\$ 250,000	\$ 1,012,500	\$ 800,000	\$ 2,000,000	\$ 1,000,000			\$ 1,118,700	\$ 3,966,300	\$ 225,000	\$ 5,085,000	
82ND DRIVE	6459						\$ 288,000					\$ 31,500					\$ 238,000
BOONES FERRY ROAD	6460					\$ 90,000	\$ 918,000	\$ 319,000				\$ 146,600				\$ 1,039,800	\$ 1,333,000
KERR ROAD	6461						\$ 640,000	\$ 1,113,000				\$ 192,850				\$ 1,367,300	\$ 1,753,000
SW BARNES ROAD	6462					\$ 112,000	\$ 295,000	\$ 905,000				\$ 144,500				\$ 1,025,000	\$ 1,315,000
NW 185TH AVENUE	6463					\$ 113,000	\$ 295,000	\$ 475,000	\$ 430,000			\$ 144,500				\$ 1,025,000	\$ 1,315,000
SW GREENBURG ROAD	6464					\$ 241,000	\$ 256,000					\$ 55,000				\$ 399,000	\$ 500,000
SW 65TH/NYBERG ROAD	6465					\$ 32,000	\$ 38,000	\$ 800,000				\$ 96,000				\$ 584,000	\$ 876,000
SUBURBAN TRANSIT STATION - FAU TRANSFER TO URBAN EXT	6466					\$ 120,000											\$ 647,000
TRI-MET PARK & RIDE PROGRAM	6467					\$ 27,000	\$ 201,000	\$ 647,000									\$ 647,000
MISCELLANEOUS MINOR PROJECTS	6468																\$ 1,023,000
												\$ 30,000	\$ 112,500	\$ 112,500	\$ 798,000	\$ 214,000	\$ 274,000

FIGURE 1-12: FY 1976 - ACTUAL ELEMENT

PROJECT SUMMARY

APPLICANT AGENCY City of Portland
 ROUTE NAME N. Greeley Avenue FAU NO. 0895
 PROJECT TITLE Swan Island Access
 PROJECT LENGTH 1.5 miles PROJECT LOCATION See location map
 PROJECT DESCRIPTION Develop south bound spur route from Swan Island via N. Greeley Avenue to intersection with N. Interstate Avenue; thence, continuing southerly on proposed new ramps connecting to I-5, southbound, using an existing ramp stub of Fremont approach structure. Estimated project cost \$3½ million. Preliminary Engineering by OSHD.

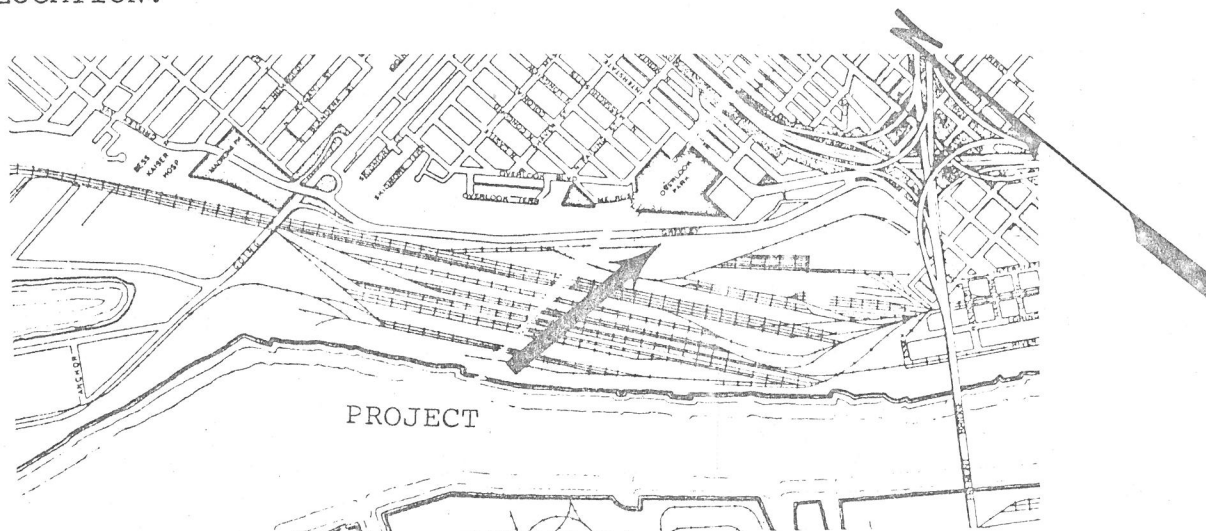
APPLICANT'S ESTIMATE OF PROJECT COST

ROADWAY WORK	\$	-
RIGHT OF WAY		-
TRAFFIC CONTROL		-
ILLUMINATION		-
STRUCTURES		-
RAILROAD		-
OTHER		-
PRELIMINARY ENGINEERING		240,000
TOTAL	\$	240,000

SCHEDULE AND FUNDING PLAN

	FY <u>76</u>	FY <u> </u>	FY <u> </u>	FY <u> </u>	FY <u> </u>	TOTAL
TOTAL	\$ 240,000					240,000
FHWA	\$ 187,200					187,200
UMTA	\$					
STATE	\$ 26,400					26,400
LOCAL	\$ 26,400					26,400
STATE BOND	\$					
	\$					

LOCATION:



COLUMBIA REGION ASSOCIATION OF GOVERNMENTS

Memorandum 15 April 76

To: TTAC

From: Dick Etherington

RE

Subject: Staff Recommendations on Proposed Revisions to the TIP
FY76 Annual Element

The CRAG staff recommends that the Transportation Technical Advisory Committee approve the attached revisions to the TIP FY76 Annual Element for adoption by the CRAG Board of Directors on April 22.

The revisions attached reflect further modifications to revisions originally approved for the April public hearings. These further modifications are recommended as a result of hearing testimony by the City of Portland and of work done by the TIP Subcommittee. Documentation of proposed changes is included in the attachment.

413 - White

PROPOSED REVISION TO FY 1976 ANNUAL ELEMENT
FEDERAL \$(000)

INDICATES CHANGE
FROM HEARINGS REVISIONS

FAU #	DESCRIPTION	1 ORIGINAL THRU 1976		4 HEARINGS REVISIONS		5 NOW PROPOSED AS OF 4/15/76		9
		REGION	PORTLAND	REGION	PORTLAND	REGION	PORTLAND	
1 0600	FOSTER/WOODSTOCK-89th to 106th	860	331	1191	348	903	348	1251
2 0265	KERR ROAD	59	--	59	--	56	--	56
3 0929	FRONT AVE PE-KITTRIDGE TO 26th	51	--	51	--	51	--	51
4 0064	NE HALSEY PE-70th to 80th AVES	--	12	12	23	--	23	23
5 0750	E. BURNSIDE/SANDY PE	--	160	160	160	--	160	160
6 0800	FREMONT BRIDGE CONN PE	--	287	287	287	--	287	287
7 0510	JOHNSON CREEK/BELL	74	--	74	--	101	--	101
8 --	CARTOOL @ 90A	266	--	266	--	348	--	348
9 --	82nd/GRAND-FAU TO FAUE	--	419	419	507	--	507	507
10 0640	POWELL BLVD SIGNALS-47th/69th	--	23	23	17	--	17	17
11 --	ECAP SIGNALS	266	--	266	--	137	--	137
12 0050	ALLEN BLVD-HALL TO ALICE & SIGNAL	186	--	186	--	186	--	186
13 --	BANFIELD HOV-FAU TO FAUE	441	460	901	460	441	460	901
14 --	BUS SUBSTATION-FAU TO UMTA	847	881	1728	963	925	963	1888
15 --	BUS PURCHASE-FAU TO UMTA	115	119	234	119	115	119	234
16 0005	RIVER/WINTER BRIDGE ROADS	913	--	913	--	1046	--	1046
17 0544	COLUMBIA BLVD-BORTHWICK TO UNION	468	--	468	--	480	--	480
18 0970	HAWTHORNE BRIDGE CONTROLS	250	--	250	--	421	--	421
19 0385	OATFIELD ROAD-82nd DR to LAKE	300	--	300	--	1025	--	1025
20 0495	LINWOOD AVE-KING TO HARMONY	29	--	29	--	218	--	218
21 0640	POWELL BLVD-92nd to AVA	499	--	499	--	601	--	601
22 0944	COLUMBIA BLVD PE-WCL TO OSWEGO	--	156	156	78	--	78	78
23 0944	COLUMBIA BLVD-OSWEGO TO BURR	--	702	702	780	--	780	780
24 --	BARBER BLVD TRANSIT-FAU TO FAUE	--	273	273	363	--	363	363
25 0970	BASIN/GOING INTCHG PE	--	187	187	187	--	187	187
26 --	SUNSET TRANSIT STUDY-FAU TO FAUE	111	115	226	115	111	115	226
27 --	BANFIELD TRANSIT STUDY-FAU TO FAUE	187	195	382	195	187	195	382
28 0068	BURNSIDE-2nd AVE to PARK	--	44	44	44	--	44	44
29 0390	HWY 212-I-205 to BORING PE	41	--	41	--	41	--	41
30 0175	BOONES FERRY-NADRONA TO JEAN	75	--	75	--	30	--	30
31 0035	NW 185th-BASELINE TO W. UNION	90	--	90	--	90	--	90
32 0068	SW BARNES RD-217 TO MULT CL	90	--	90	--	90	--	90
33 0150	SW 65th-NYBERG RD	30	--	30	--	30	--	30
34 0085	SW GREENBURG-HALL TO OAK	190	--	190	--	190	--	190
35 --	NEW TRAFFIC SIGNALS	--	132	132	78	--	78	78
36 0620	HOLGATE BRIDGE PE	--	195	195	94	--	94	94
37 0895	N. GREELEY AVE PE	--	187	187	187	--	187	187
38 --	FAU RECON STUDIES	--	78	78	78	--	78	78
39 --	CRAG DOWNTOWN STUDY	--	78	78	78	--	78	78
40 --		--	--	--	--	--	--	--
41	SUB-TOTAL THIS PAGE	6398	5034	11432	5161	7823	5161	12984
42								

*Subsequent to review by the CRAG Board of Directors, Tri-Net has requested an additional \$177,000 of Federal funds to cover increased cost of construction.

COMMENTS ON CHANGES
OCCURRING AFTER PUBLISHING HEARING MATERIALS

<u>LINE #</u>	<u>COMMENT</u>
<u>PAGE 1</u>	
12	Adjusts estimate to equate with that submitted to OSHD
14	Reflects actual bid estimate
17	Represents latest estimate of Multnomah County
18	Represents latest estimate of Multnomah and OSHD
19	Reflects actual bid and OSHD PE
21	Reflects OSHD estimate in status report of 4/1/76
22	Reflects actual obligated amount
24	Represents current OSHD estimate and Region/Portland split
25	Rescheduled to FY 77
29	HWY 212 deleted from urban system
30	Reflects actual obligated amount
31-34	Rescheduled to FY 77 - not possible to obligate in FY 76
35	Adjusts amount to that planned for implementation in FY 76
37-38	Rescheduled to FY 77 - not possible to obligate in FY 76
39	Deleted from program

PAGE 2

3	Reflects OSHD estimate
5	Reflects OSHD estimate
9	Reflects Region/Portland split

NOTE: Up-to-date FY 76 project estimates are needed in order to establish a firm baseline for preparation of FY 77 annual element.

PROPOSED REVISION TO FY 1976 ANNUAL ELEMENT (WASHINGTON)
TOTAL \$(000)

INDICATES CHANGE
FROM HEARINGS REVISIONS

	ORIGINAL THROUGH 1976			HEARINGS REVISIONS			S/C REVISIONS 4/15/76		
	1	2	3	4	5	6	7	8	9
DESCRIPTION	WSHD	CLARK CO	VANC	WSHD	CLARK CO	VANC	WSHD	CLARK CO	VANC
1. SR 5	5,984			1,460			1,460		
2. SR 14	182			117*			117		
3. SR 205	6,018			19,922			19,922		
4. SR 500	4,006			3,999			3,999		
5. SR 503	--			131*			131		
6. SR 140	--			75*			75		
7. SR 502	--			34*			34		
8. W.S.H.D. TOTAL	16,190			25,390			25,390		
9.									
10. Clark County 1976 Annual Element		900			900			900	
11. Vancouver Mall		--			1,020			1,020	
12. CLARK COUNTY TOTAL		900			1,920			1,920	
13.									
14. Vancouver 1976 Annual Element			1,515			1,515			1,515
15. 18th/Brandt Signal			--						
16. Evergreen/Columbia Signal			--			2			2
17. McFoughlin/Reserve Signal			--			4			4
18. VANCOUVER STREETS SUB-TOTAL			--			4			4
19.			1,515			1,525			1,525
20. Vancouver Transit Benches/Shelters			--						
21. Transit Center Feasibility			--			75			75
22. Transit System Operations			597			35			35
23. Transit Center Construction			800			646			646
24. VANCOUVER TRANSIT SUB-TOTAL			1,397			--			--
25.						756			756
26. VANCOUVER TOTAL			2,912			2,281			2,281
27.									
28.									
29. *Includes portions outside									
30. urbanized area.									
31.									
32.									
33.									
34.									
35.									
36.									
37.									
38.									
39.									

Amended by

141 358

138318

ORDINANCE NO. 138318

An Ordinance authorizing a change in Agreement No. 13863, between the Oregon State Highway Division, the Port of Portland and the City of Portland for the improvement of North Going Street and declaring an emergency.

The City of Portland ordains:

Section 1. The Council finds that, in the original Agreement No. 13863, North Going Street was scheduled to be widened to six lanes; that, at the request of the Council, the Traffic Engineer and the Planning Director have re-examined this solution and find that improvements on North Going Street afford an interim solution only; and that the same traffic capacity could be met as well with 5 lanes and certain changes as with 6 lanes, without unnecessary disruption of the surrounding residential neighborhood. The Council now directs that five lanes be constructed, subject to the following conditions:

1. That the recommendations contained in the Planning Director's report be accepted by the Council, such recommendations listed as follows:

- a. Council hereby adopts North Greeley-Interstate route to the Broadway-Weidler interchange with I-5 as a truck route for all trucks entering or leaving Swan Island between the hours of 7:00 p.m. and 6:00 a.m., and directs the City Traffic Engineer to prepare an ordinance to that effect for Council consideration.
- b. A physical barrier between roadway and sidewalk be included as part of the North Going contract wherever sidewalk is within four feet of the roadway.
- c. Council reaffirms its approval of the pedestrian overpass at North Concord and approves pedestrian activated signals with 35-second walking time at Interstate and Going and at Interstate and Alberta.
- d. Office of Planning and Development is hereby directed to ask the State Speed Control Board for re-evaluation of the present 40-mile speed limit on North Going and hereby requests the Traffic Safety Commission to carry on a program of communication with firms and employees on Swan Island stressing the importance of adherence to speed and safety regulations on North Going.

ORDINANCE No.

- e. Council hereby requests that no access to both Concord and Colonial be considered as part of the design of North Going Street.
- f. As a matter of policy, it will be the City's responsibility through the Office of Planning and Development, to formulate alternative second-access routes for consideration, such access, combined with North Going to provide maximum peak-hour capacity of 4,500 vehicles per hour.
- g. Council hereby requests the Port of Portland to prepare alternative plans consistent with capacity constraint established by policy.

2. That, because the present project is an interim solution only, a Swan Island Task Force is hereby created with the specific charge of developing a means of carrying out conditions f. and g. of the conditions stated above. This Task Force would be composed of the following:

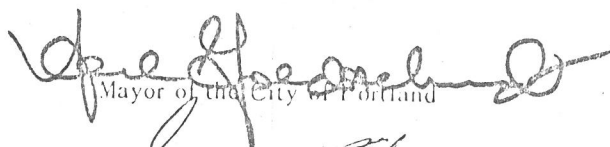
- 1. A member of the City Council
- 2. The Metropolitan State Highway Engineer
- 3. A member of the Port Commission
- 4. A member of the Swan Island business community
- 5. A member of the North Going residential community
- 6. A member of the North Portland Citizen's Committee
- 7. A representative of the unions
- 8. A member of Tri-Met Board

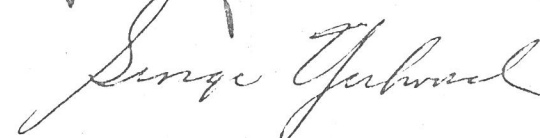
Section 2. Inasmuch as this Ordinance is necessary for the immediate preservation of the public health, peace and safety of the City of Portland in this: In order that the North Going Street plan may be implemented as quickly as possible; therefore, an emergency is hereby declared to exist, and this Ordinance shall be in force and effect from and after its passage by the Council.

passed by the Council, JUN - 5 1974

Commissioner McCreedy
CM:lw
June 5, 1974

Attest:


Mayor of the City of Portland


Auditor of the City of Portland

THE CITY OF
PORTLAND



OREGON

OFFICE OF
THE MAYOR

NEIL GOLDSCHMIDT
MAYOR

1220 S. W. FIFTH AVE.
PORTLAND, OR 97204
503 248-4120

August 16, 1974

Mr. Terry D. Schrunk
5407 North Houghton
Portland, OR 97203

Dear Terry,

Once more we have called on you for a public service and once more you have come through by agreeing to serve as Chairman of the Swan Island Task Force. You know this area and its problems and opportunities very well. Your willingness to undertake this assignment assures an equitable and effective solution.

Attached is a list of the Task Force members. Commissioner McCready will serve as liaison between the Council and the Task Force. Bill Lind of her office will provide the Task Force with staff support. Bill Dirker, City Transportation Coordinator, will coordinate the City bureaus' efforts.

A work program dated August 13th is attached for the guidance of the Task Force. Objective I and Program I are being dealt with by the establishment of a truck route. The second and third objectives and Programs II and III should be addressed by the Task Force.

I want to add my personal appreciation for your willingness to continue to handle the "tough ones" for the good of our City.

Sincerely,

Neil Goldschmidt

Encs.

bg

DRAFT LETTER

TO Swan Island Task Force

August 19, 1974

Dear _____:

I wish, by this letter, to confirm your appointment to the Swan Island Task Force. Former Mayor Schrunk has agreed to serve as Chairman and enclosed is a copy of my letter to him with attachments. This outlines the job we are asking the Task Force to do and the staff support available. You will be notified of Task Force meetings.

I appreciate your willingness to undertake this assignment. The realization of the opportunities presented and the solution of related problems can best be accomplished by the joint efforts of the several parties represented. I'm confident the results will be a credit to the City.

Sincerely,

Neil Goldschmidt
Mayor

CONNIE McCREADY
COMMISSIONER



DEPARTMENT OF
PUBLIC WORKS

CITY OF PORTLAND
OREGON

September 10, 1974

TO MEMBERS OF THE SWAN ISLAND TASK FORCE:

The first meeting of the Swan Island Task Force is scheduled for 2 p.m., Friday, September 20, in the Water Bureau Auditorium, 510 SW Montgomery. Attached is an agenda of items we will discuss at that time.

I look forward to seeing you on the 20th.

Sincerely,


Terry Schrunck
Chairman

bg

Enc.

RECEIVED
SEP 12 1974
City of Portland
Bureau of Planning

SWAN ISLAND TASK FORCE

2 p.m., Friday, September 20, 1974
Water Service Building Auditorium

AGENDA

Introduction

Chairman Schrunk

Brief History and Background

William S. Dirker
Transportation Coordinator

Outline of Program to Develop a
Compatible Going Street Access

Ernie Bonner
Planning Director

Long Range Program for Access
at Full Development

Chairman Schrunk

THE CITY OF
PORTLAND



OREGON

OFFICE OF
PLANNING AND DEVELOPMENT

GARY E. STOUT
ADMINISTRATOR

1220 S.W. FIFTH AVE.
PORTLAND, OR. 97204

9 September 1974

MEMORANDUM

TO: Mr. John Osburn, The City Attorney

FROM: William S. Dirker, Transportation Coordinator

SUBJECT: Request for Legal Advice

The Swan Island Task Force, under the chairmanship of Terry Schrunk, has been formed by the City to recommend solutions to the access problems to the Swan Island Industrial Park. Attached is a copy of their letter of appointment and the draft work program dated August 13. Under Program II and Program III are elements to develop methods of implementing whatever capital improvements are recommended. Some kind of assessment district, either voluntary or mandatory encompassing part or all of the Swan Island Industrial Park, has been suggested. Improvements contemplated undoubtedly will include some sort of redevelopment of the Going Street corridor and possibly the development of a second access to the area. These improvements may range in cost from 1 or 2 million dollars to 10 or 15 million dollars.

For the guidance of the Task Force we would appreciate your opinion as to the legal considerations and methods of creating some sort of a limited or general assessment district to finance such improvements.

Our first meeting of the Task Force is on Friday, September 20, and, if possible, we would like to have your report available to distribute to them at that time.

WSD:jcp

cc Commissioner McCreedy
Terry Schrunk
Bill Lind
Attachment - 1

SWAN ISLAND TASK FORCE

(Ordinance No. 138318)

Terry D. Schrunk, Chairman	5407 N. Houghton Portland, OR 97203
Patrick Sweeney, Port of Portland	700 NE Multnomah St. Portland, OR 97232 233-8331
Richard Ball, Swan Island Business Community	Freightliner 5400 North Basin Portland, OR 97217 285-5251
James Nolan, Union representative	Local 81 Teamsters Bldg. 1020 N.E. 3rd Portland, OR 97232 232-8171
Simon Stanich, Overlook Neighborhood	2027 N. Skidmore Court Portland, OR 97227 287-3810
Sharon Roso, N. Portland Citizens Comm.	10148 N. Allegheny Street Portland, OR 97203 286-5476
Ruth Hagenstein, Tri-Met Board	3062 S.W. Fairmont Blvd. Portland, OR 97201 246-5925
Robert Bothman, Highway Division	5821 N.E. Glisan Street Portland, OR 97213 238-8226
Robert Knipe, Oregon Trucking Assoc.	720 NE 12th Street Portland, OR 97232 233-7673
Robert Orr, Union Pacific	P.O. Box 8979 Portland, OR 97208 288-8221 Ext. 2591
Commissioner Connie McCready, City Hall	1220 S.W. 5th Portland, OR 248-4124

- Objectives:
1. To provide adjacent residences with relief from noise at least environmental and economic cost to others.
 2. To create a compatible environment for the Swan Island Industrial Park, including the Going Street access, without seriously reducing the housing inventory and at a reasonable cost to all parties.
 3. To foster the growth of the Swan Island Industrial Park as a place of employment by providing adequate access for goods and people consistent with the objectives above and to support a policy to reduce reliance on the single occupant auto for the home-to-work trip.

I. Evaluate effectiveness of a truck route via Greeley-Broadway-Weidler to achieve 1st objective.

A. Design Truck Route

1. Evaluate alternative routes - Traffic Engineer with Planning.
2. Determine what type or class of truck to be affected. BNE with Traffic Engineer, Police and truck operators.
3. Determine effective hours - Traffic Engineer with Planning, Memorial Coliseum and truck operators.
4. Determine probable safety and accident risks. - Traffic Engineer

B. Take before and after measurements of noise, traffic volumes and traffic conflicts along present and new truck routes. Identify affected residential units.

- Responsibility:
1. Noise - BNE
 2. Traffic - Traffic Engineer
 3. Residential Units - Planning

C. Prepare Map Illustrating Data - Planning

D. Establish Truck Route

- Responsibility:
1. Secure State approval - Traffic Engineer
 2. Prepare and install signing - Traffic Engineer with OSHD
 3. Notify truck operators -

II. Conduct Small Area Land Use Planning Project to Achieve 2nd Objective - Planning Bureau with Port

- A. Evaluate existing and projected conditions and identify points of incompatibility.

- B. Prepare a preliminary design of alternative facilities and land use plans to achieve a compatible condition.
- C. Evaluate alternative methods of implementing the designs.
- D. Prepare a program to implement the recommended method to achieve the plan.
- E. Implement the program by joint agreements with City, Port, State, Tri-Met, etc.
- F. Proceed with improvement of Going Street in accordance with Ordinance #138318
 - 1. Amend ordinance to provide for six 11' lanes
 - 2. Initiate sidewalk barrier design and construction, planning with City Engineer
 - 3. Initiate design and construction of pedestrian overpass at N. Concord Street. -- City Engineer
 - 4. Install traffic signals with 35 second walking time at Interstate and Going and at Interstate and Alberta -- Traffic Engineer
 - 5. Request re-evaluation of 40 mph speed limit on N. Going Street by State Speed Control Board -- Traffic Engineer
 - 6. Traffic Safety Commission initiate safety program with Swan Island companies -- Traffic Engineer
 - 7. Revise agreement with State Highway Division to reflect changes directed in Ordinance including no access to Concord and to Colonial Street from N. Going Street -- Traffic Engineer

III. Prepare a plan and initiate a program to achieve 3rd objective.

- A. Evaluate need for additional access
- B. Review past proposals
- C. Evaluate alternative second accesses
- D. Evaluate alternatives to a second access
- E. Recommend a program to achieve objective
- F. Establish Swan Island Task Force as specified in the Ordinance #138318 to accomplish conditions 1f and 1g of the ordinance consistent with the objectives of this work program -- Office of the Commission of Public Works

- "lf. As a matter of policy, it will be the City's responsibility through the Office of Planning and Development, to formulate alternative second-access routes for consideration, such access, combined with North Going to provide maximum peak-hour capacity of 4,500 vehicles per hour.
- lg. Council hereby requests the Port of Portland to prepare alternative plans consistent with capacity constraint established by policy. "
- H. Establish time schedule for this work program -- Office of Planning and Development

A G E N D A

SWAN ISLAND TASK FORCE MEETING

Friday, February 7, 1975, 1:30
Water Bureau Auditorium

1. Chairman reports what's happening with the January recommendation.
2. Report of Transit Sub-committee.
3. Report of Access Sub-committee.
4. Paul Herman on Noise.
5. Bergstrom update on traffic light, etc.

RECEIVED
JAN 31 1975
City of Portland
Bureau of Planning

WSL:bg
1/30/75

SWAN ISLAND TASK FORCE
(Ordinance No. 138318)

Commissioner Connie McCready, City Hall Chairman	1220 SW 5th Portland, Oregon 248-4124
Glenn Odell, Port of Portland	700 NE Multnomah Street Portland, Oregon 97232 233-8331 - 226-3921
Richard Ball, Swan Island Business Community	Freightliner 5400 North Basin Portland, Oregon 97217 285-5251
James Nolan, Union representative	Local 81 Teamsters Bldg. 1020 NE 3rd Portland, Oregon 97232 232-8171
Simon Stanich, Overlook Neighborhood	2027 N. Skidmore Court Portland, Oregon 97227 287-3810 - 226-9777
Barbara Jaeger, N. Portland Citizens Committee	7130 N. Wall Street Portland, Oregon 97203 285-4194
Herschel Tanzer, Tri-Met Board <i>3140 S.W. 98th - 643-1611</i>	520-SW Yamhill Portland, Oregon 97204 233-8373
Robert Bothman, Highway Division	5821 NE Glisan Street Portland, Oregon 97213 238-8226
Robert Knipe, Oregon Trucking Assoc.	Suite 400 1500 NE Irving Street Portland, Oregon 97232 233-7673
Robert Orr, Union Pacific	P. O. Box 8979 Portland, Oregon 97208 288-8221 Ext. 2591

Minutes of Swan Island Task Force Meeting
Friday, January 10, 1975
Water Service Building

Meeting called to order at 2:30 p.m. by Chairman Schrunk. Minutes of the meeting of December 6, 1974, were corrected by the Chairman as follows:

At the top of page 3 after the sentence ending "...to initiate this project." "The motion was approved unanimously by those present." The minutes as amended were approved by the Task Force.

A review of the status of the current Going Street widening project indicated that all items reported in the minutes of December 6th were on schedule as reported.

Bill Dirker reported on an investigation of City zoning requirements regarding parking. This indicated that City requirements were for a minimum number of parking spaces per type of land use and were generally much below those required by the Port in their development regulations. The City imposed no maximum limitation, but maximums were under the authority of the Department of Environmental Quality.

Pat Sweeney reported that in the sale last year to Hoffman of 13 acres for a general purpose building, the Port had applied a reduced standard of 250 spaces as an incentive for transit use for occupants of this building.

Bill Lind reported that the Task Force's recommendation for a preliminary engineering project to extend Greeley Avenue to I-5 had been processed through the City's Capital Improvements Committee and was scheduled to go to Council, informal conference, ~~tomorrow~~, January 14 and before formal Council for action on ~~Wednesday~~, January 16. It is noted that on January 16 the Council approved unanimously the attached resolution.

Bob Bothman, Chairman of the Access Relief Subcommittee presented that groups recommendations. The minutes of the subcommittee meeting of January 6 are attached. First recommendation was that preliminary engineering should be initiated on the Basin Street interchange plus a double lane access onto the freeway. The subcommittee recommended that this be considered as a separate, but related project to the Greeley extension and be undertaken as soon as possible, with consideration being given to the Port as source of local funding. It was noted that the Port needs to know the lot lines of the property required for such

an interchange so as to proceed with the development of the Port Center area. It was noted that interchange engineering would probably be done by City Forces. Recommendation number 1 of the subcommittee was approved by the unanimous vote of those Task Force members present. The Chairman will address a letter with this recommendation to the Commissioner-in-charge.

The Task Force reworded recommendation number two of the subcommittee as follows:

2. The City should undertake a small area land use planning project to create a compatible environment for the Going Street residential area and the access requirements for the Swan Island Industrial Park without seriously reducing the housing inventory and at a reasonable cost to all parties.

This recommendation was approved by a unanimous vote of those Task Force members present. It will be transmitted by the Chairman to the Commissioner-in-charge.

Bill Dirker has submitted an "Access Discussion Paper" dated January 10, 1975, for consideration of the Task Force. This evaluated the peak hour vehicle access restraints for various combinations of improvements. It did indicate that neither the Greeley extension nor the Basin Interchange alone expanded the capacity beyond 3,300 peak hour vehicles, but that taken together they raise the capacity to 4,500.

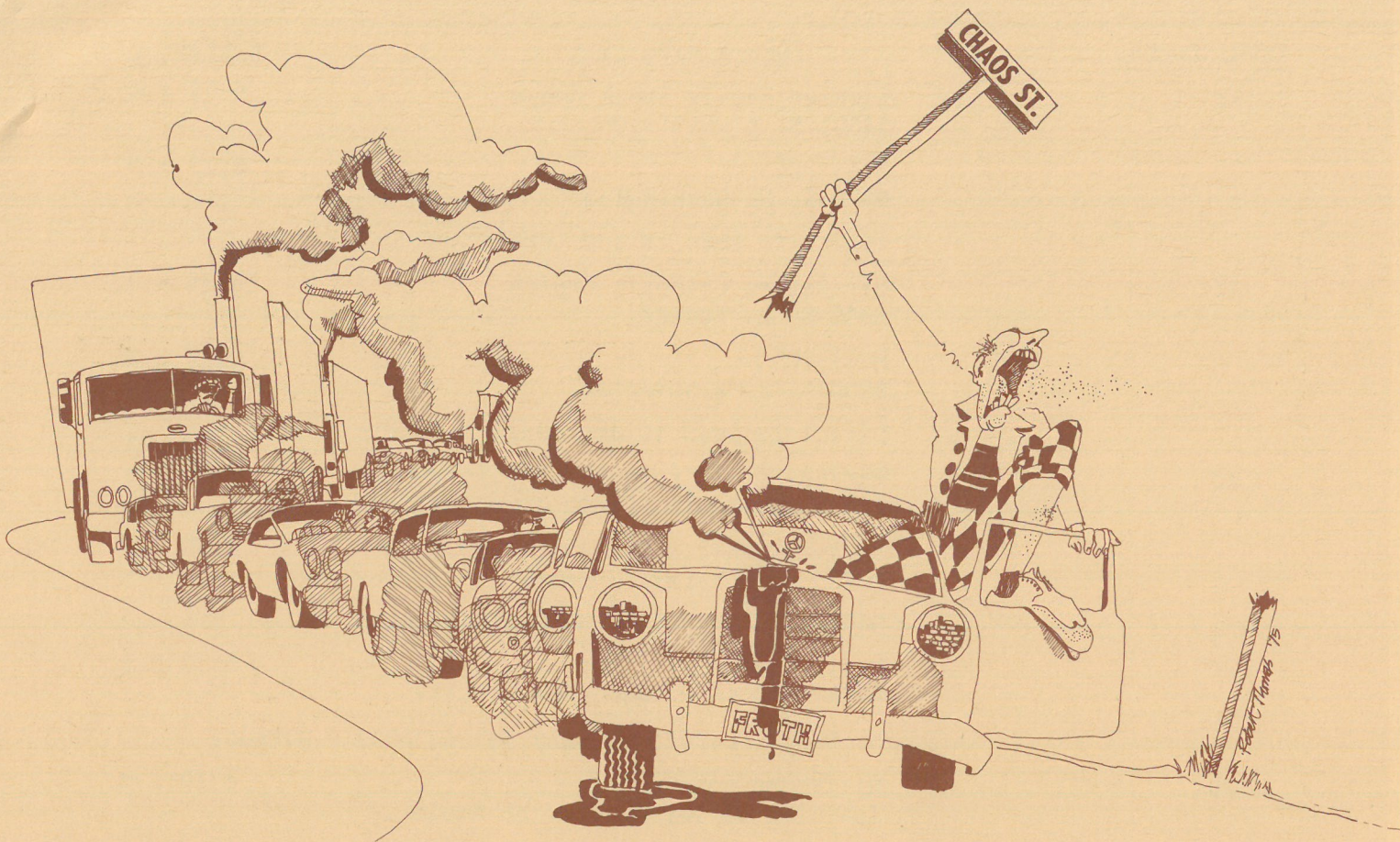
Dick Ball, Chairman of the Transit Committee, reported that the Tri-Met and CARPOOL marketing personnel will meet with the employers group January 22. The intent is that their supplementary park and ride lots will serve both car pool and bus users. He noted that the intent is to change transportation attitudes and that for the small-scale businesses characteristic of Swan Island, the initial step would be to get them into car pools and then into transit buses. The subcommittee recognizes that success requires strong management support not only for car pool and transit riders, but also for staggered work hours. Freightliner is now being served by four express buses, via Basin Avenue from Gresham, Oregon City, Foster Road and Hillsboro. Tri-Met can provide five more buses for this kind of service and they will discuss this with the employers group on the 22nd, possibly with direct service via Lagoon Avenue. Vehicle traffic counts and bus ridership counts will be taken before the 22nd meeting. It was commented that in many cases express buses can arrive as late as 7:30 a.m. and get back onto their regular peak hour runs. Although employment is down in the Freightliner plant, ridership has gone steadily up as a result of the cost of gasoline and other forces. It is the aim of the project to

reduce the traffic load by 1,000 cars within two years. Tri-Met noted that expansion of this project and other services depends upon the public response to their new fare structure and the availability of equipment.

Si Stanich reported that the representative from the North Portland Citizens Committee replacing Sharon Roso will be Barbara Jeagger, 7130 North Wall Street, Portland, 97203, phone 285-4194. It was reported that the subject of the Tri-Met representative will be discussed by Mr. Drummond, Chairman of the Tri-Met Board and Commissioner McCready.

Dick Speer reported that the meeting is scheduled for February 13 with the Traffic Engineer and Traffic Safety Personnel with the school parent representatives to further the safe route to school program. Si Stanich requested that as neighborhood representative they were still interested in the full development of Swan Island for the economic benefits it brought and this problem should be addressed at the next meeting. Chairman Schrunk asked that a full review of the costs of all proposals be undertaken at the next meeting. By vote of the Task Force the next meeting was scheduled for February 7 at 1:30 p.m. The meeting was adjourned.

BD:bn



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Duke

8213 n. denver, portland, oregon 97217

neighbors north

248-4524

1975 October VOLUME I, Issue VII

****The articles in this Newsletter are the responsibility of the persons submitting the articles.****

NORTH PORTLAND POLICE PRECINCT

By now you are aware that the City is proposing to move the North Portland Police Precinct from St. Johns to another location yet to be determined. The announcement was first made at a public meeting held in September. There will be other meetings held to discuss this issue and to gain the opinions of the general public. Let me quickly give you some background on the matter and then outline some questions yet to be resolved.

First, the move was precipitated by two factors:

- (1) the need for a more adequate facility in a more central location, and (2) the possible availability of Federal funds to pay for a new police facility.

The Federal funds may become available to the City this month. If this happens, the City must be prepared with a preliminary plan for the location and structure of a facility; and time is short.

Several questions arise about the possibility of the move:

- (1) When will the move occur?
- (2) Where will the new precinct be located? (Three locations are proposed.)
- (3) What will happen to the present precinct building (the old St. Johns City Hall) once the police move out?
- (4) What will be the effect on services provided by the police if the move occurs?
- (5) How much input will the citizens be allowed in determining the location of the new precinct?
- (6) Will precinct boundaries be changed?
- (7) Will the proposed annexation have any effect on the move?

These and other questions will be discussed at the Roosevelt Area Police Advisory Council meeting on October 28, 1975 at George School, 10000 N. Burr, 7:30 pm. Please attend, learn, and voice your opinion.

Mike Burton, Chairman
Roosevelt Area Police Advisory Council

ANNEXATION

Most of you have probably read a great deal about the proposed annexation of the Rivergate Industrial area and the Portland International Airport (PIA) to the City of Portland. The issue is one which should, and will be the subject of concern to the citizens of Portland and especially the people of North Portland for some time to come. The issue is complex, and one about which not all information has yet surfaced. As the issue becomes more and more public, debate will undoubtedly arise. There are certain factors which should be taken under consideration during this debate. Space alone would prevent me from addressing these questions here, but I would like to outline several items that are significant to the issue. I would like to address some of these:

-- The Proposal itself It is important to remember that the proposal

ANNEXATION (Continued)

unannexed area and were not, therefore, subject to City taxation at the time of development. Again, this point, if the City should decide to pursue annexation, is subject to negotiation.

-- Who gains; the City or the Port? This is, I suppose, the heart of the matter. The City is undertaking a study to determine the cost to the City should annexation come about. If the areas are annexed the City will have to provide police, fire, water and sewer services to both PIA and Rivergate. These services would, of course, cost the City. On the other hand, the City would gain the areas as an additional tax base. The question here is whether the tax gains would ultimately off-set the cost of services to be provided. That question is further complicated by the issue of the exempted properties with Port of Portland's proposal. As developed properties these developments would add the greatest tax base gain, if they were included. What, then, would be the gain if they remain exempted? The Port, I am certain, would be the first to admit that they would gain from annexation. With annexation, the Port would be relieved from providing services and this would most likely free capital for other development. Whether or not this is good or bad has already been the subject of some debate. It is important to remember that the Port is a public institution. Just how responsive or accountable the Port is to the public may be debated, but the fact is that the Port is charged with the public good.

-- What effect would Annexation have on North Portland? This is a many-faceted question. For example, should Kelley Point Park be deeded over to the City or should 'title' be held by the Port as is proposed? What effect will annexation have on the Smith and Bybee Lakes area? Will it affect the Columbia Slough? These are by no means minor issues and are ones that should be thoroughly explored.

-- Where from here? As mentioned earlier, the City is presently studying the proposal. A decision is some time away, but that is by no means license to sit back. There will be public hearings on the issue. The annexation question is closely tied to the development of Rivergate, and therefore jobs and income. This, coupled with the tax question, makes the issue of paramount importance. If possible, read the proposal** and the studies being conducted by the City.** This will take time, but time well spent. By any means, follow the question in the newspapers. Ask your City Commissioners where they stand on the issue. Ask your local legislators where they stand. Discuss the issues with your neighbors, crystalize your views and let the City and the Port officials know where you stand.

In this short space I can hardly do justice to all the issues surrounding the proposal. I can only urge that you undertake your responsibility in understanding and acting, and to stress that the annexation question is extremely important to North Portland, to you, and to the City.

**Copies available at 8213
N. Denver Avenue

Mike Burton, President
North Portland Citizens Committee

AT WITS END

by Erma Bombeck

I had a dream the other night that every volunteer in this country, disillusioned with the lack of compassion, had set sail for another country.

As I stood smiling on the pier, I shouted, "Good-bye, creamed chicken. Good-bye, phone committees. So long, Disease-of-Month. No more saving old egg cartons. No more getting out the vote. Au revoir, playground duty, bake sales and three-hour meetings."

As the boat got smaller and they could no longer hear my shouts, I reflected, "Serves them right. A bunch of yes people. All they had to do was to put

AT WITS END (Continued)

The home for the Aged was like a tomb. The blind listened for a voice that never came. The infirm were imprisoned by wheels on a chair that never moved. Food grew cold on trays that would never reach the mouths of the hungry.

All the social agencies had closed their doors, unable to implement their programs of scouting, recreation, drug control, Big Sisters, Big Brothers, YW, YM, the retarded, the crippled, the lonely, and the abandoned.

The health agencies had a sign in the window, "Cures for Cancer, Muscular Dystrophy, Birth Defects, Multiple Sclerosis, Emphysema, Sickle Cell Anemia, Kidney Disorders, Heart Diseases, etc. have been cancelled due to lack of interest."

The schools were strangely quiet with no field trips, no volunteer aids on the playground or in the classrooms. . . as were the colleges where scholarships and financial support were no more.

The flowers on church alters withered and died. Children in day nurseries lifted their arms but there was no one to hold them in love. Alcoholics cried out in despair, but no one answered and the poor had no recourse for health care or legal aid.

But the saddest part of the journey was the symphony hall which was dark and would remain that way. So were the museums that had been built and stocked by volunteers with the art treasures of our times.

I fought in my sleep to regain a glimpse of the ship of volunteers just one more time. It was to be my last glimpse of civilization . . . as we were meant to be.

SUCCESS BREEDS SUCCESS

The Bureau of Lighting has requested your help in identification of where street lights are needed in the North Portland area.

You did so well in identifying curb ramps in North Portland that another City Bureau is seeking your assistance.

A Lighting Tax Levy passed last year realizing 3.58 million dollars per year over the next ten years to solve our lighting problems. The assessed value breaks down to 74¢ per \$1,000 or \$7.40 per \$10,000 per year. Don't be shy--you have already committed payment on your taxes for the lighting.

Please take some time and advise this office of the specific corners where lighting is needed.

Contact: Jerry Mounce, 248-4524 8213 N. Denver Avenue

PORTSMOUTH COMMUNITY SCHOOL

Portsmouth Community School, located at 5103 N. Willis Blvd., began fall term classes October 6. Various classes and activities have been scheduled from volleyball, sewing, and yoga to tile painting, beginning knitting for left-handers, and rollerskating. Everyone is invited to take part in community school. Join in. We are interested in your ideas. What would you like your community school to offer? Volunteers are greatly needed.

PROJECT ABLE

It's another first for the Seniors North Committee. Oscar Robbins, a long time resident of North Portland who is very active in the St. Johns Christian Church and Seniors North Committee, has been appointed by Governor Straub to a one year term on the newly formed Governor's Committee on Aging. This is an important Committee for Oregon senior citizens, as the Committee will actually plan the implementation of the recently passed State legislation affecting senior citizens. North Portland is very lucky to have had a local resident appointed, as there are only twenty-one members. Our best wishes are with Oscar!

Sheila Driscoll, Coordinator
Project Able

We welcome Beach School, Portsmouth Community School and Unit Seven of the League of Women Voters utilizing the Neighbors North Newsletter.

If any of you or your organizations wish to show your calendar events and/or information in the Newsletter, please let us know. We have a target date of the tenth of the month for articles and meeting notices hoping to reach your homes by the 20th.

Contact: Jerry Mounce, 248-4524 8213 N. Denver Avenue

PARENT EDUCATION CLASSES AT BEACH SCHOOL --- 1710 N. HUMBOLDT

Classes will run from October 15 through November 19. The course is set up so parents may attend just one or all of the classes. The course is especially designed for friends and parents of Beach School students. Any interested parties may attend. Mr. Loveland of the Morrison Clinic will be the instructor. Classes will be held in the cafeteria from 7:30 to 9:00 pm. For additional information call Beach School - 285-4569

Donna Phillips
Beach School P.T.A.

YOUTH SERVICE CENTER

Did you have a good week? Great. You went to the game Saturday, a movie on Sunday, spent some time walking in the woods? Good . . . Glad to hear that.

You are just the person we are looking for. You see, there are many kids who have never been to a ball game, gone to a movie, or walked in the woods. The Big Brother-Big Sister program at the North Portland Youth Service Center is helping these kids. If you have fifteen hours a month to help a child and be a friend, call us at 285-0627. Ask for Phila Kaiser. You can make a difference in a child's life. Be a Big Brother or Sister.

Bill Knudsen, Director
Youth Service Center

STAR NEWS

For the interested stargazer who may have noticed a bright starlike object in the

ST. JOHNS Y.W.C.A.

The St. Johns Y.W.C.A., located at 8010 N. Charleston Avenue, has started fall program and offers a variety of activities for all ages.

A very important workshop that should be of prime interest to all who report activities to the news media was held Thursday, October 16 at 7:00 to 10:00 pm with Marcia Pry as the instructor. Marcia has taught this subject at Portland Community College, and she and her husband, Tom, own and operate the Sellwood Bee.

Classes with room for a few more students are the Monday morning sewing group that gives instruction in tailoring, mens wear, and sewing with knits; the Wednesday morning crochet, tatting and knitting class and the Thursday Thursday evening belly dance classes for beginners, intermediates and advanced dancers. The art class starts Tuesday, October 21 with instructor Emma Blankenship.

Workshops offered are: Purses and bags, denim embroidery, stitchery, apple-head dolls and car care. Classes in furniture refinishing and chair caning will start when six or more persons have registered.

The Koffee Klatch (for women raising children alone) meets Thursdays at 12:30 to 3:00 pm. Presently they are offering free classes in sewing, mending, and making over clothing to all who would like to learn these skills. There is no charge for this group. In case child care is needed, this will be provided (25¢ per child) and transportation for those living in St. Johns Woods and Columbia Villa. Call 286-3797 if you need a ride, or want child care.

St. Johns YWCA Quarternotes Chorus will start Monday, November 3 at 7:15 pm and is open to all who like to sing. Mrs. Olive (Jake) Kistner is the director.

There are teen clubs and drill teams open to all seventh and eighth grade girls in the North area and classes in ballet, jazz, acrobatics and baton for girls six years and up and drum classes for grade school boys and girls.

If you wish to be placed on the mailing list or for information on any YWCA program call 286-3797 or drop by the YWCA building at 8010 N. Charleston Ave.

Lorraine Furrer

TRANSITIONAL USE ZONING

A hearing has been set for the meeting which will commence at 2:00 pm, Wednesday, October 22, 1975, in the Council Chamber of City Hall, 1220 S.W. Fifth Avenue, on proposed amendment to the Planning and Zoning Code, to tighten the transitional use provision.

At present, where the side of a lot abuts a C2, C1, M3, M2 or M1 Zone, in R zones, duplexes are allowed. In A2.5, where the side of a lot abuts C2, C1 or M zoning, A1 density is permitted.

The Planning Commission recommends:

- 1) permitting no more than one two-family dwelling, with all other requirements of the R zone to apply, and
- 2) allowing no more than two units over A2.5 density, regardless of lot size.

The full text of the Planning Commission report and proposed amendment is available at the Planning Commission office, 424 S.W. Main Street, or Office of City Auditor, Room 202, City Hall.

HUMAN RELATIONS COMMISSION

There will be a meeting of the Metropolitan Human Relations Commission at 2:00 pm, Tuesday, October 21, 1975, in the Conference Room, 321 City Hall (1220 SW Fifth Ave.). Please note the new day and time of the meetings.

AGENDA

Roll Call

Approval of Minutes

City of Portland Affirmative Action Program - Alyce Marcus

Multnomah County Affirmative Action Program - Berna Plummer

Committee Reports:

* Education Committee - Sr. Mary Louise Volk

Report from Oregon Minority Teachers Association

* Housing - Charles Williamson

* Employment - Vern Pearson

For any additional information call Human Relations at 248-4187.

OVERLOOK

by Simon G. Stanich

NIGHTTIME TRUCK ROUTE: As you may or may not know, the truck route hearing in Salem has been rescheduled for October 29, 1975 at 10:00 am, so we still have to wait and see. This truck route is one of the last items that needs to be resolved, and is left from the ordinance of June 5, 1974. The Highway Department staff approves of the truck route. The Swan Island Task Force approves, and the City Council approves, so I don't know who's left to disapprove except the Holiday Inn, Coliseum Motel, Paramount Apartments, Independent Truckers, and United Parcel on the island. About three more weeks and we will know for sure.

SWAN ISLAND TASK FORCE: As I told you last time the Task Force is now ready to tackle the environmental aspects of Going St. on the Overlook Neighborhood. Whatever you may think, don't sell this Task Force short as they have done a tremendous job and will continue to do so. In view of the divergent views on the Task Force and their own particular interests, I always leave the meetings with a good sense of accomplishment. For instance, the Port of Portland has now come up with an in-depth study showing what their density of development on the island will be with Mocks Bottom open, the traffic that will be generated, all the ills attributed thereto, and how to help solve the traffic problems and the density of employment on the island. This report is what we, the City, and the neighborhood have wanted for a very long time. The Task Force has been studying, criticizing and giving input into the study since last July and is now finished and we gave it our stamp of approval at the last meeting. If any of you would like a copy of the report call and I will see if a few copies can be obtained. The office phone number is 228-9581, or I can be reached at 287-3810. One other thing of note that has come out at the Task Force is that the City Planning Department has applied (through HCD funding) for a planner to work on the Going Street Corridor for six months. We will know in about two weeks whether or not the application will be approved. Keep your fingers crossed, as an advocate planner is just what we need!

H.C.D. FUNDING: At the meeting on September 29, 1975 at Overlook House we had some insight from Mike Henniger from the office of Planning and Development, and the upshot of the whole thing was rather pessimistic, as our chances of tapping in on second year H.C.D. are almost zero. We won't give up on them, though, but we will try to come up with other funding areas and do our planning in a piece-meal fashion.

OFFICE OF NEIGHBORHOOD ASSOCIATIONS ORDINANCE

The Office of Neighborhood Associations, the City Bureau which governs the Neighbors North office, is funded by City Council until December 31, 1975.

City Council will hold a hearing October 29, 1975 at 7:00 pm in the City Council Chambers, 1220 SW Fifth, to listen and evaluate citizen concerns and suggestions for the Bureau.

All citizens are urged to attend and give your views.

- CALENDAR OF EVENTS -

October

18	9:00 am to 3:00 pm	Citizen Budget Workshop @ Water Services Bureau, 510 SW Montgomery
21	7:00 pm to 8:00 pm	Flu Shot Clinic @ Schrunk Towers 8832 N. Syracuse Avenue
21	2:00 pm	Metropolitan Human Relations Commission Meeting @ City Hall, room 321 (1220 SW 5th) (Note new day and time of meetings)
22	7:30 pm to 9:00 pm	Parent Education Classes @ Beach School Cafeteria, 1710 N. Humboldt
22	2:00 pm	Hearing on Amendment to the Planning & Zoning Code to tighten transitional use provision, City Council, 1220 SW Fifth Avenue
22	10:00 am to 3:00 pm	National Safety Council Defensive Driving Improvement. Sponsors: American Association of Retired Persons, St. Johns Chapter - Schrunk Towers, 8832 N. Syracuse
28	7:30 pm	Roosevelt Area Police Advisory Council Meeting Agenda: Relocation of North Precinct George School, 10000 N. Burr
28	7:30 pm	Mt. Hood Freeway Issue. HAND, Foster-Powell & Richmond Neighborhood Associations @ Richmond School, 2276 SE 41st
28	7:30 pm	Overlook Planning Meeting @ Overlook House 2829 N. Melrose Drive
29	10:00 am	Going Street Night Time Truck Route Meeting Department of Transportation Building Salem, Oregon
29	7:30 pm to 9:00 pm	Parent Education Classes @ Beach School Cafeteria, 1710 N. Humboldt
29	7:00 pm	Hearing on Office of Neighborhood Association Ordinance @ City Council Chambers, 1220 SW Fifth Avenue. All testimony encouraged.
29	10:00 am to 3:00 pm	National Safety Council Defensive Driving

- CALENDAR OF EVENTS -
(Continued)

November

- | | | |
|----|-----------------|---|
| 7 | 12:00 noon | S.O.S. Day. No host lunch with speaker Loren Kramer, Director of DEQ, @ King's Table, 8233 N. Syracuse. All day events in North Portland Schools. Watch the local newspaper for information. Contact: Sheila Driscoll, 286-8228 |
| 11 | 1:00 pm | Seniors North Monthly Meeting @ Schrunk Towers, 8832 N. Syracuse |
| 12 | 12:00 noon | Luncheon Party by Willis @ St. Johns YWCA 8010 N. Charleston - Tickets are \$1.50 and can be purchased in the YWCA office or from a YWCA Committee member. |
| 12 | 7:30 to 9:00 pm | Parent Education Classes @ Beach School Cafeteria, 1710 N. Humboldt |
| 13 | 7:30 pm | Beach PTA Monthly Meeting, Cafeteria |
| 17 | 7:00 to 8:00 pm | Pack 18 Cub Scouts Monthly Meeting, Beach School Auditorium |
| 18 | 7:30 pm | League of Women Voters, Unit 7, Meeting on Neighborhood Organizations @ 8213 N. Denver |
| 19 | 3:00 to 8:00 pm | N.C.A.C. Open House - New Location is 6965 N. Fessenden. Everyone interested in NCAC is welcome! |
| 19 | 7:30 to 9:00 pm | Parent Education Classes @ Beach School Cafeteria, 1710 N. Humboldt |

SWAN ISLAND TASK FORCE
COMPREHENSIVE REPORT

I. SCOPE OF WORK

Edit and publish a comprehensive report of the work of the Swan Island Task Force. This will include a record of the considerations and actions of the Task Force regarding:

- A. Access improvements
- B. Transit and Car Pool programs
- C. Port Development Policies
- D. Environmental considerations
- E. Broader regional transportation and economic considerations

This report should serve as a comprehensive guide to the various public and private activities related to this area. It will serve as a record of proposals considered and recommended or not recommended.

II. WORK PROGRAM

A. Historical Background

- 1. Ancient History - begin about 1920 when channel relocated, airport, shipyard.
- 2. Modern History - Port redeveloped shipyard to industrial park, freeways opened, previous studies and 2nd access proposals, Going Street improvements, increased traffic, neighborhood activity.

B. Establishment of the Task Force

- 1. Ordinance
- 2. Charge
- 3. Record - Meetings held, personnel participating

C. Problems Addressed

- 1. Access improvements
- 2. Transit and Car Pool programs
- 3. Port Development Policies
- 4. Environmental considerations
- 5. Broader regional transportation and economic considerations

- D. Solutions Considered (key word examples - not all-inclusive)
1. Various access routes - cost, benefits, citizen concern, etc.
 2. Direct Service, Bridge Transfer line extension, downtown shuttle, on-island shuttle, etc.
 3. Various land uses, densities, controls, land bank
 4. Noise
 5. Urban sprawl, energy conservation
- E. Recommendations (examples)
1. Earlybird express bus service
 2. FAU capital improvements
 3. Nighttime truck route
- F. Results
1. Truck route adoption
 2. FAU project priority

EPILOGUE

1. Comprehensive Approach - not single purpose
2. Brought conflicting interests into responsible relationship for a common purpose
3. Quality and tone set by Terry Schrunk

BD:ce

A POLICY
on
GEOMETRIC DESIGN
of
RURAL HIGHWAYS

1965

AMERICAN ASSOCIATION OF
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ment is hazardous in that most drivers do not expect succeeding curves to be in the same direction, the preponderant condition of succeeding curves in opposite directions developing a subconscious habit in drivers to follow them. Also, broken back alignment is not pleasing in appearance. Use of spiral transitions or else a compound curve alignment, wherein there is some degree of continuous super-elevation, is preferable for such conditions. The term broken back usually is not applied when the connecting tangent is of considerable length, say 1500 feet or more. But even in this case the alignment will not be of pleasing appearance when both curves are clearly visible for some distance ahead.

9. To avoid the appearance of inconsistent distortion the horizontal alignments should be coordinated carefully with the profile design. General controls for this coordination are discussed under a following heading of Combination of Horizontal and Vertical Alignment.

VERTICAL ALIGNMENT: PROFILES

Grades

Highways should be designed to encourage uniform operation throughout. Use of a selected design speed as previously discussed is a means toward values have been determined and agreed upon for many highway features but few conclusions have been reached on roadway grades in relation to design speed. Vehicle operating characteristics on grades are discussed under this heading and relations of grades and their lengths to design speed are developed.

Vehicle Operating Characteristics on Grades

Passenger Cars. Performance limitations of passenger cars on grades are not available in published form. Driving practices with respect to grades vary greatly, but there is general acceptance that nearly all passenger cars can readily negotiate grades as steep as 7 or 8 percent without appreciable loss in speed below that normally maintained on level highways, except for cars with high weight to horsepower ratios.

Studies show that operation on a 3 percent upgrade, compared to that on the level, has only a slight effect on passenger car free speeds. On steeper grades the speeds decrease progressively with an increase in the ascending grade. On downgrades passenger car speeds generally are slightly higher than on level sections but local conditions govern.

Trucks. The effect of grades on truck speeds is much more pronounced than on speeds of passenger cars. Current information indicates that the average speed of trucks on level sections of highway is approximately 6 mph less than the average speed of passenger cars. On downgrades, trucks show an increase in speed on grades up to about 5 percent and a decrease in speed on grades of about 7 percent or steeper, as compared to operation on the level. On upgrades, the maximum speed that can be maintained by a commercial vehicle is dependent primarily on the length and steepness of the grade and upon the ratio of the gross vehicle weight to the engine horsepower (weight-power ratio). Other variables that affect the average speed over the entire length of grade are the entering speed, wind resistance, and

skill of the operator. The latter two cause only minor variations in the average speed.

An extensive study²¹ of motor truck performance was conducted in 1938-41 to determine the separate and combined effects of roadway grade, tractive effort, and gross vehicle weight. This study was the forerunner of others which have been conducted over the years to determine the effect of length and steepness of grades on the speeds of trucks carrying various loads and powered by engines of various horsepower ratings.²²

The effect of rate and length of grade on the speed of a typical heavy truck, obtained from one such study in 1953, is shown in figure III-14. From the chart on the left of the figure it can be determined how far a truck, starting its climb from any speed up to 47 mph, travels up various grades or combinations of grades before a certain lower speed is reached. For instance, with an entering speed of 47 mph, the truck travels 1000 feet up a 6 percent grade before its speed is reduced to 25 mph. If the entering speed is 30 mph, the speed at the end of a 1000-foot long climb is about 8 mph. This is determined by entering the curve for 6 percent grade corresponding to 30 mph, for which the distance is 800 feet, and proceeding along it to the point where the distance is 1000 feet or more, or 1800 feet, for which the speed is about 8 mph, this being the maximum sustained speed for this truck on a 6 percent grade. The chart on the right in figure III-14 shows performance when the truck approaches the grade at or below crawl speed. The truck is able to accelerate to a speed of 10 mph or more only on grades of 3 percent or less. These total data serve as a valuable guide for design in appraising the effect of trucks on traffic operation for a given set of profile conditions.

Extensive studies on trucks conducted in 1948²³ show that travel time (and, therefore, speed) of trucks on grades is directly related to the weight-power ratio. Also, it has been determined that vehicles of the same weight-power ratio have similar operating characteristics. Hence this rating is of considerable assistance in studying the performance of trucks. Normally the weight-power ratio is expressed in terms of gross weight and net horsepower.²⁴ It has been found that trucks which have a weight-power ratio of about 400 have acceptable operating characteristics from the standpoint of the highway user. Such a weight-power ratio will assure a minimum speed of about 15 mph on a 3 percent upgrade. There is evidence that the automotive industry would find a weight-power ratio of this magnitude acceptable as a desirable goal in the design of commercial vehicles. There is also evidence that carrier operators are voluntarily recognizing this ratio as an

²¹ Hill Climbing Ability of Motor Trucks—C. C. Saal, Public Roads, May 1942.
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acceptable performance control in the loads placed on trucks of different power with the overall result that the weight-power ratio of trucks on highways has improved in recent years. This is illustrated by figure III-15, which compares such ratios as developed from information obtained in conjunction with nationwide brake performance studies conducted in 1949, 1955 and 1963.²⁵ This chart shows, for example, that for a gross vehicle weight of 40,000 pounds the average weight-power ratio decreased from about 360 pounds per horsepower in 1949 to about 310 in 1955 to about 240 in 1963. This decreased ratio means greater power and better climbing ability on upgrades.

The fact that most commercial vehicles are loaded and powered in a manner that yields a weight-power ratio of 400 pounds or less per horsepower is illustrated in figure III-16, which is based on 1963 data. This chart shows that all single unit trucks were so loaded as to result in a weight-power ratio below 400. It is only for a small percentage of semitrailer combinations and for that group of combination units comprised of full trailers and units with five or more axles (curve at right) that the ratio of 400 pounds per horsepower is exceeded in appreciable numbers. The latter types of combination units account for about 21 percent of the total vehicle miles of travel by all commercial vehicles on main rural highways, with the exception of two axle, single tired trucks.

Based on the data represented in figure III-16 and the distribution of vehicles by type as discussed in chapter II, it is evident that only about 5 percent of all dual tired commercial vehicles have a weight-power ratio of 400 pounds or more per horsepower. The remainder of the vehicles, being more lightly loaded in relation to their power, would be able to equal or exceed a speed of about 50 mph on a level grade, about 15 mph on a 3 percent grade, and about 8 mph on a 6 percent grade.

Since the trend shown in figure III-15 is toward lower weight-power ratios of trucks it may appear that the ratio of 400 in determining critical length of grade should be reduced. The 1963 studies, however, indicated also that as the number of axles increased, the weight-power ratio increased. Furthermore, while the percentage of large trucks is small there is a trend to increasing this percentage. Taking all factors into account, it seems prudent and on the safe side to use a weight-power ratio of 400 in determining critical length of grade.

Control Grades for Design

Maximum Grades. On the basis of the data in figure III-14 through III-16 and according to the grade controls now in use in a large number of States, it is possible to arrive at reasonable guide values for maximum grades for design. Maximum grades of about 3 percent are considered appropriate for a design speed of 80 mph. For a design speed of 30 mph, maximum grades generally are in the range of 5 to 12 percent, depending on topography, with an average of about 9 percent. If the more important highways only are considered it appears that a maximum grade of 7 or 8 percent would be representative for 30 mph design speed. Control grades for 40, 50, 60 and 70 mph design speeds are intermediate between the above extremes.

²⁵ Relationship Between Gross Weights and Horsepowers of Commercial Vehicles Operating on Public Highways—Wright and Tignor, October 1964, Bureau of Public Roads.

Table III-13 summarizes the maximum grade controls in terms of design speed for main highways, applicable on a nationwide basis. Maximum grades for highways of a secondary nature—below the main highway class of table III-13—may be about 2 percent steeper. In extreme cases, as at underpasses and bridge approaches, steeper grades for relatively short lengths may be considered.

TABLE III-13
RELATION OF MAXIMUM GRADES TO DESIGN SPEED
Main Highways

Type of topography	Design speed, mph									
	30	40	50	60	65	70	75	80		
Flat	6	5	4	3	3	3	3	3		
Rolling	7	6	5	4	4	4	4	4		
Mountainous	9	8	7	6	6	5	—	—		

The maximum design grade should be used infrequently rather than as a value to be used in most cases. At the other extreme, for short grades less than 500 feet and for one-way downgrades, the maximum gradient may be about 1 percent steeper than shown in table III-13. For low volume rural highways grades may be 2 percent steeper.

Minimum Grades. Flat and level grades on uncured pavements are virtually without objection when the pavement is adequately crowned to drain the surface laterally. With curbed pavements longitudinal grades should be provided to facilitate surface drainage. A minimum grade for the usual case is 0.5 percent but a grade of 0.35 percent may be used where there is a high type pavement, accurately crowned and supported on firm subgrade. Particular attention should be given to the design of storm water inlets and their spacing to keep the spread of water on the traveled way within tolerable limits. Roadside channels and median swales frequently require grades steeper than the roadway profile for adequate drainage. Drainage channels are discussed in chapter IV.

Critical Lengths of Grade for Design

Maximum grade in itself is not a complete design control. It is necessary also to consider the length of a particular grade in relation to desirable vehicle operation. The term "critical length of grade" is used to indicate the maximum length of a designated upgrade upon which a loaded truck can operate without an unreasonable reduction in speed. For a given grade, lengths less than "critical" result in acceptable operation in the desired range of speeds. If the desired freedom of operation is to be maintained on grades longer than "critical," design adjustments such as change in location to reduce grades or addition of extra lanes should be made. The data for critical length of grade are used with other pertinent considerations, such as traffic volume in relation to capacity, to determine where added lanes are warranted; see Climbing Lanes in chapter V.

To establish design values for critical lengths of grade, for which gradeability of trucks is the determining factor, data or assumptions are needed for the following:

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Table H-6

RELATION OF MAXIMUM GRADES TO DESIGN SPEED

Type of Topography	Design Speed, mph					
	30	40	50	60	65	70
	Grades in Percent					
	<i>Freeways</i>					
Flat		5	4	3	3	3
Rolling		6	5	4	4	4
Hilly		8	7	6	6	5
	<i>Arterial Streets</i>					
Flat	8	7	6	5		
Rolling	9	8	7	6		
Hilly	11	10	9	8		

not as objectionable, and in extreme cases it may be about 1 percent steeper than shown in table H-6.

Critical Lengths of Grade for Design

Maximum grade in itself is not a complete design control. It is also necessary to consider the length of a particular grade in relation to desirable vehicle operation. The term "critical length of grade" is used to indicate the maximum length of a designated upgrade upon which a loaded truck can operate without an unreasonable reduction in speed. For a given grade, lengths less than "critical" result in acceptable operation in the desired range of speeds. Where the desired freedom of operation is to be maintained on grades longer than "critical", design adjustments such as change in location to reduce grades or addition of extra lanes should be made. See the section on Climbing Lanes in this chapter. A separate climbing lane exclusively for slow-moving vehicles is preferred to the addition of an extra lane carrying mixed traffic. The large speed differential between trucks and passenger cars traveling upgrade in the same lanes greatly increases the accident potential. Climbing lanes are particularly important for freedom of operation on urban freeways where traffic volumes are high in relation to capacity. On older urban freeways and arterial streets with appreciable grades and no climbing lanes, it is a common occurrence for heavy traffic, which may otherwise move well, to queue up on grades.

Design values for critical lengths of grade were established in GDRH (page 195) based on the size and power of a representative truck or truck combination (design vehicle); the gradability data for this vehicle; the speed at entrance to critical length of grade; and a minimum speed on the grade, below which interference to following vehicles is considered unreasonable. A loaded truck with a weight-power ratio of approximately 400 was used as a

nationally representative truck. The speed of vehicles beginning at uphill climb approximates the average running speed of the highway. On most arterial streets where the running speed will be 40 mph or less, truck speeds of 20 to 35 mph are not unreasonably annoying to following drivers. On freeways, where the running speed is likely to be 50 mph or greater, trucks moving at 35 mph or less may be intolerable to following drivers.

The developed control basis for determining critical length of grades and the need for climbing lanes is normally a reduction of 15 miles per hour in speed of trucks below the average running speed. In those States having a minimum speed limit, this should also be considered as a criterion for providing climbing lanes.

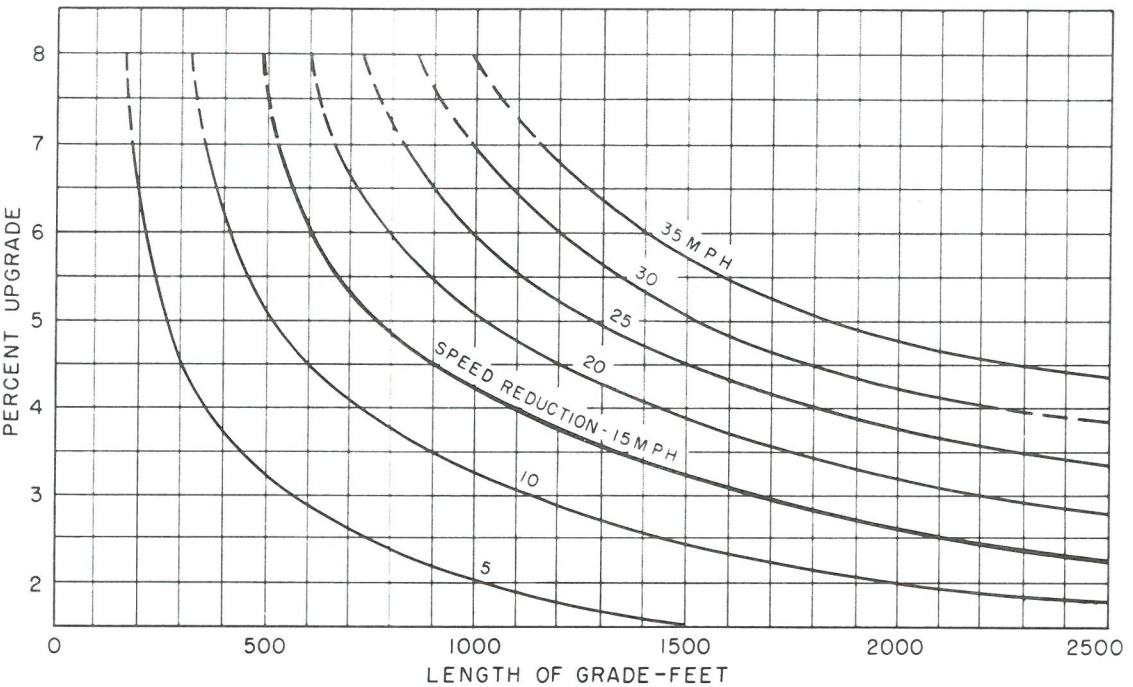
The relation between rate and length of grade for several reductions in speed is shown in figure H-3. The heavy curve for 15 mph speed reduction is used as the general design guide.

The 15-mph reduction applies where the approach to the grade is relatively level. Where the approach is on an upgrade, the probable approach speed is less, the reduction in speed to the tolerable minimum is less, and shorter lengths of grade are critical. Conversely, where the approach is on a downgrade, the probable approach speed is greater, the reduction in speed to the tolerable minimum is more, and greater lengths of grade are critical.

Where an upgrade is approached on a momentum grade, heavy trucks often increase speed, sometimes to a considerable degree, in order to make the climb on the upgrade at as high a speed as possible. This can be recognized in design by an increase in the applicable speed reduction. It remains for the designer to judge as to what extent the speed of trucks would increase at the bottom of the momentum grade above that generally found on level approaches. For most conditions a speed increase of 5 to 10 mph is appropriate. On this basis, the applicable speed reduction on upgrades preceded by momentum grades becomes 20 or 25 mph.

The critical lengths of grade in figure H-3 are derived as lengths of constant grades. Where a vertical curve is part of a critical length of grade, approximation must be made as to equivalent constant grade length. Where the condition involves vertical curves of types II and IV in figure H-4, and the algebraic difference in grades is not more than about six, the measurement of critical length of grade may be made between the vertical points of intersection (V.P.I.). On crest and sag vertical curves (types I and III), particularly where the algebraic difference in grades is appreciable, about one-quarter of the vertical curve length may be considered as part of the grade under consideration.

Steep downhill grades can also have a detrimental effect on capacity and safety on urban facilities with high traffic volumes and numerous heavy trucks. Although criteria are not established for these conditions, in some cases consideration should be given to providing a truck lane for downhill traffic.



CRITICAL LENGTHS OF GRADE FOR DESIGN

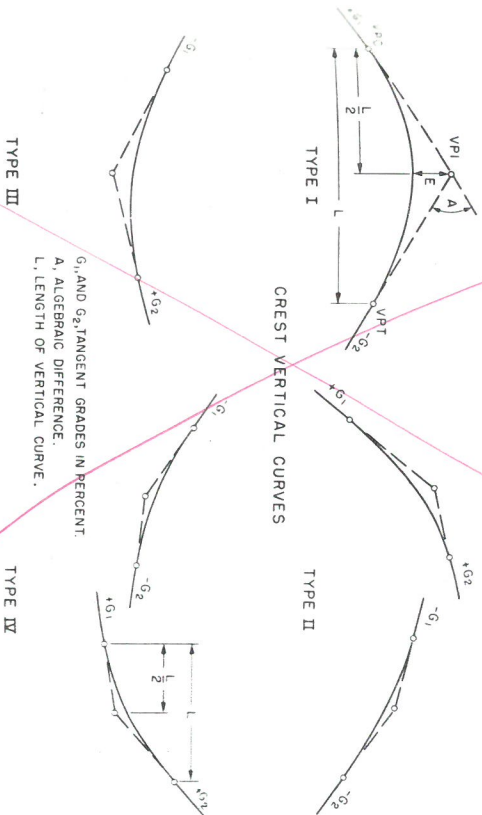
ASSUMED TYPICAL HEAVY TRUCK OF 400
POUNDS PER HORSEPOWER

Figure H-3

ample in application and should result in a design which is safe, comfortable operation, pleasing in appearance, and adequate for drainage. The major control for safe operation on crest vertical curves is the provision of ample sight distances for the design speed. Minimum stopping sight distance should be provided in all cases. Whenever economically and physically feasible, desirable stopping sight distances should be used.

Consideration of motorists' comfort requires that the rate of change of grade be kept within tolerable limits. This is most important in sag vertical curves where gravitational and vertical centrifugal forces act in the same direction. Appearance also should be considered. A long curve has a more pleasing appearance than a short one which may give the appearance of a sudden "break" in the profile due to the effect of foreshortening.

Drainage of curbed pavements on sag vertical curves, type III, figure H-4, requires careful profile design to retain a grade line of not less than 0.5 percent or, in some cases, 0.35 percent for the outer edges of the pavement.



TYPES OF VERTICAL CURVES

Figure H-4

General Considerations

Vertical curves to effect gradual change between tangent grades may be any one of the crest or sag types depicted in figure H-4. Vertical curves should be

For simplicity the parabolic curve with an equivalent vertical axis centered on the V.P.I. is usually used in highway profile design. The vertical offsets from the tangent vary as the square of the horizontal distance from the curve end (point of tangency). The vertical offset from the tangent grade at any point along the curve is calculated as a proportion of the vertical offset at the V.P.I., which is $AL/800$. The rate of change of grade to successive points on the curve is a constant amount for equal increments of horizontal distance, and equals the algebraic difference between intersecting tangent grades divided by the length of curve in feet, or A/L in percent per foot. The

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Trucks. The effect of grades on truck speeds is much more pronounced than on speeds of passenger cars. Current information indicates that the average speed of trucks on level sections of highway is approximately 6 mph less than the average speed of passenger cars. On downgrades, trucks show an increase in speed on grades up to about 5 percent and a decrease in speed on grades of about 7 percent or steeper, as compared to operation on the level. On upgrades, the maximum speed that can be maintained by a commercial vehicle is dependent primarily on the length and steepness of the grade and upon the ratio of the gross vehicle weight to the engine horsepower (weight-power ratio). Other variables that affect the average speed over the entire length of grade are the entering grade, wind resistance, and

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Main Highways

Type of topography	30	40	50	60	65	70	75	80
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Rolling	7	6	5	4	4	4	4	4
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The maximum design grade should be used infrequently rather than as a value to be used in most cases. At the other extreme, for short grades less than 500 feet and for one-way downgrades, the maximum gradient may be about 1 percent steeper than shown in table III-13. For low volume rural highways grades may be 2 percent steeper.

Minimum Grades. Flat and level grades on uncurbed pavements are virtually without objection when the pavement is adequately crowned to drain the surface laterally. With curbed pavements longitudinal grades should be provided to facilitate surface drainage. A minimum grade for the usual case is 0.5 percent but a grade of 0.35 percent may be used where there is a high type pavement, accurately crowned and supported on firm subgrade. Particular attention should be given to the design of storm water inlets and their spacing to keep the spread of water on the traveled way within tolerable limits. Roadside channels and median swales frequently require grades steeper than the roadway profile for adequate drainage. Drainage channels are discussed in chapter IV.

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	Grades in Percent					
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Rolling	9	8	7	6		
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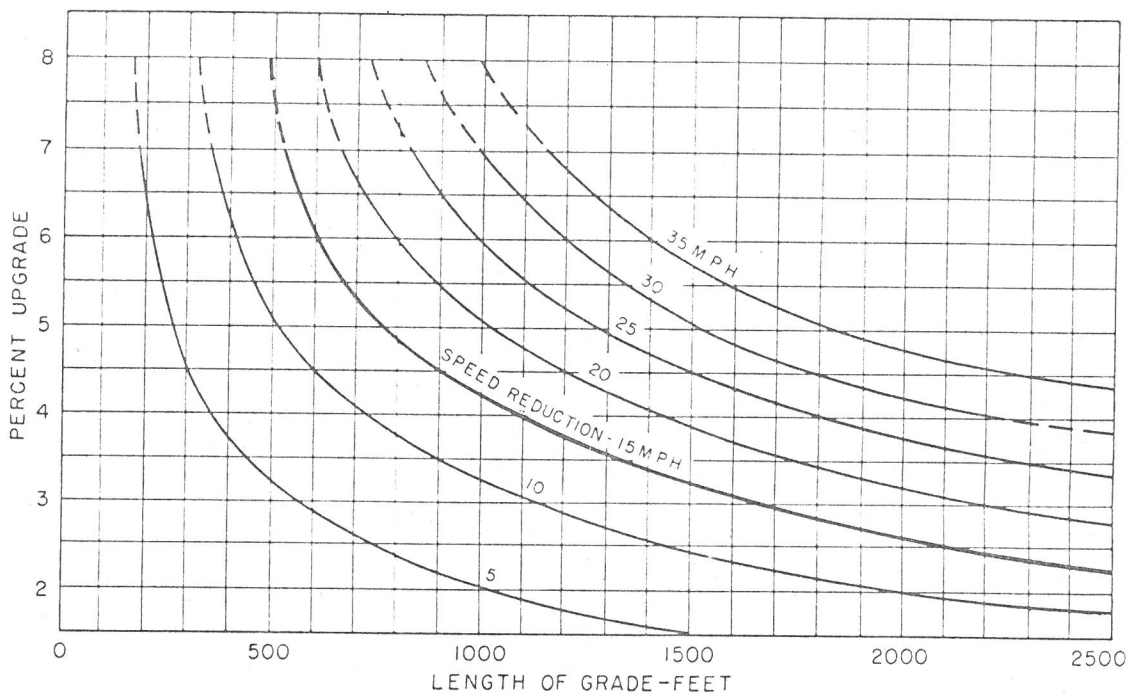
The relation between rate and length of grade for several reductions in speed is shown in figure H-3. The heavy curve for 15 mph speed reduction is used as the general design guide.

The 15-mph reduction applies where the approach to the grade is relatively level. Where the approach is on an upgrade, the probable approach speed is less, the reduction in speed to the tolerable minimum is less, and shorter lengths of grade are critical. Conversely, where the approach is on a downgrade, the probable approach speed is greater, the reduction in speed to the tolerable minimum is more, and greater lengths of grade are critical.

Where an upgrade is approached on a momentum grade, heavy trucks often increase speed, sometimes to a considerable degree, in order to make the climb on the upgrade at as high a speed as possible. This can be recognized in design by an increase in the applicable speed reduction. It remains for the designer to judge as to what extent the speed of trucks would increase at the bottom of the momentum grade above that generally found on level approaches. For most conditions a speed increase of 5 to 10 mph is appropriate. On this basis, the applicable speed reduction on upgrades preceded by momentum grades becomes 20 or 25 mph.

The critical lengths of grade in figure H-3 are derived as lengths of constant grades. Where a vertical curve is part of a critical length of grade, approximation must be made as to equivalent constant grade length. Where the condition involves vertical curves of types II and IV in figure H-4, and the algebraic difference in grades is not more than about six, the measurement of critical length of grade may be made between the vertical points of intersection (V.P.I.). On crest and sag vertical curves (types I and III), particularly where the algebraic difference in grades is appreciable, about one-quarter of the vertical curve length may be considered as part of the grade under consideration.

Steep downhill grades can also have a detrimental effect on capacity and safety on urban facilities with high traffic volumes and numerous heavy trucks. Although criteria are not established for these conditions, in some cases consideration should be given to providing a truck lane for downhill traffic.



CRITICAL LENGTHS OF GRADE FOR DESIGN

ASSUMED TYPICAL HEAVY TRUCK OF 400
POUNDS PER HORSEPOWER

Figure H-3

in application and should result in a design which is safe, comfortable operation, pleasing in appearance, and adequate for drainage. The major factor for safe operation on crest vertical curves is the provision of ample sight distances for the design speed. Minimum stopping distance should be provided in all cases. Wherever economically and physically feasible, desirable stopping sight distances should be used.

Consideration of motorists' comfort requires that the rate of change of grade be kept within tolerable limits. This is most important in sag vertical curves where gravitational and vertical centrifugal forces act in the same direction. Appearance also should be considered. A long curve has a more pleasing appearance than a short one which may give the appearance of a sudden "break" in the profile due to the effect of foreshortening.

Drainage of curbed pavements on sag vertical curves, type III, figure H-4, requires careful profile design to retain a grade line of not less than 0.5 percent or, in some cases, 0.35 percent for the outer edges of the pavement.

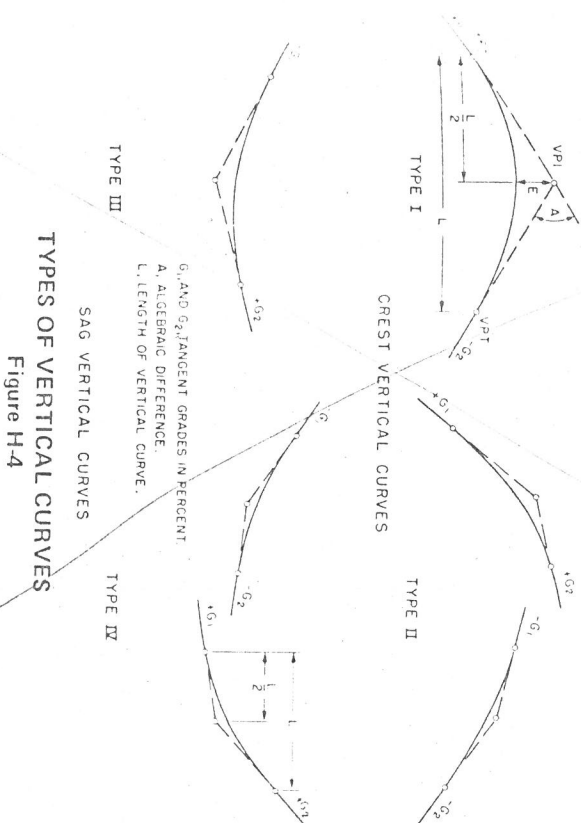


Figure H-4

General Considerations

Vertical curves to effect gradual change between tangent grades may be any one of the crest or sag types depicted in figure H-4. Vertical curves should be

Vertical Curves

For simplicity the parabolic curve with an equivalent vertical axis centered on the V.P.I. is usually used in highway profile design. The vertical offsets from the tangent vary as the square of the horizontal distance from the curve end (point of tangency). The vertical offset from the tangent grade at any point along the curve is calculated as a proportion of the vertical offset at the V.P.I., which is $AL/800$. The rate of change of grade to successive points on the curve is a constant amount for equal increments of horizontal distance, and equals the algebraic difference between intersecting tangent grades divided by the length of curve in feet, or A/L in percent per foot. The

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ings between vehicles that are climbing grades, and requiring longer spacings between vehicles descending grades, in order to maintain a safe headway.

3. Trucks with their normal loads travel at slower speeds up grades than on the level,

especially if the upgrade is long and steep. This is also true to some extent for passenger cars. Most passenger cars, however, can negotiate sustained 6 and 7 percent upgrades at speeds above that at which capacity occurs for the highway in question. Therefore,

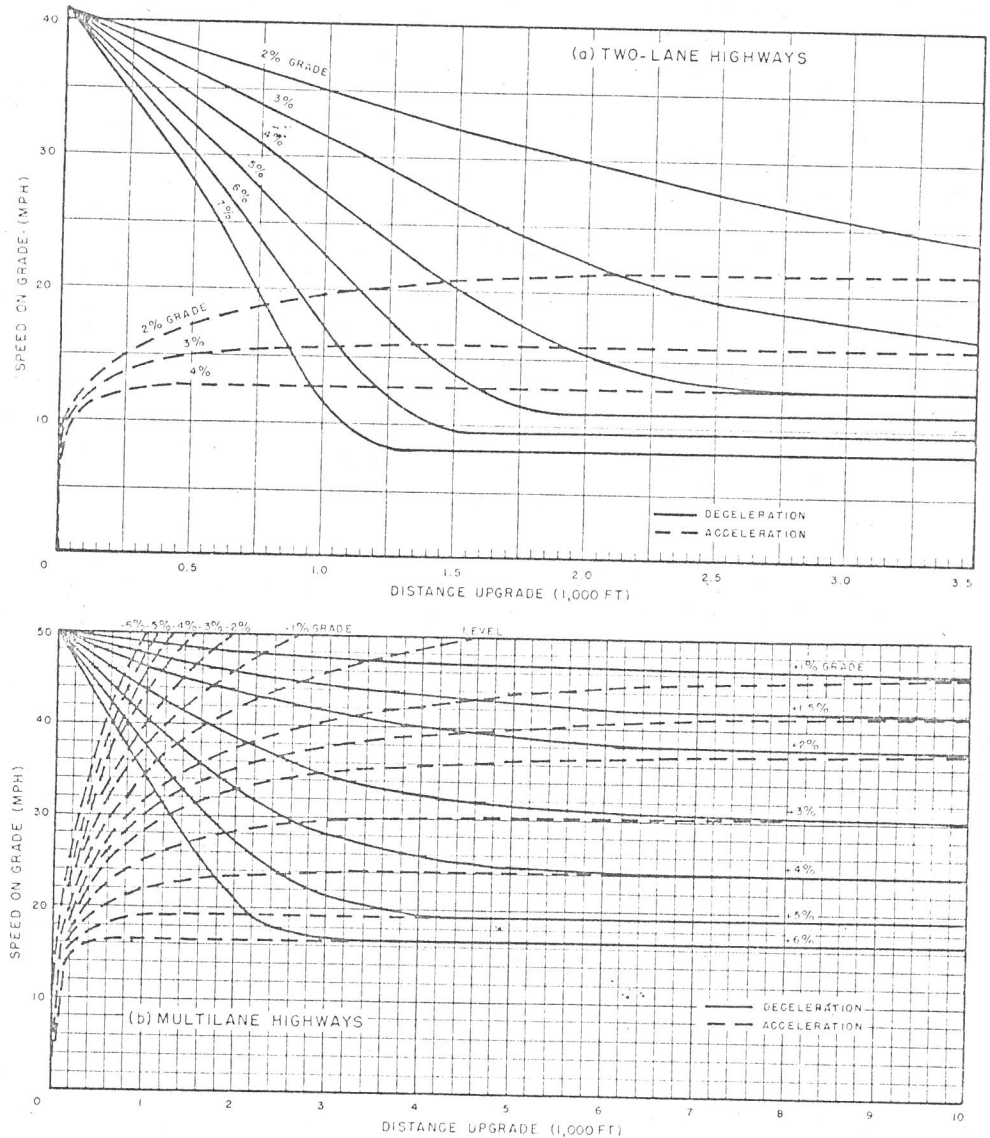


Figure 5.1. Effect of length and steepness of grade on speed of average trucks on (a) two-lane and (b) multilane highways.
(Source: Refs. 3, 4)

the effect of upgrades up to 7 percent on passenger car capacity is generally negligible. It is the effect of sustained steep upgrades on the speeds of trucks, and the resulting effect on capacity, with which this section is concerned.

The relationships between speed of trucks at the bottom of a hill, percentage of grade, and speed at any distance upgrade are shown in Figure 5.1 for two weight/power ratios. Figure 5.1a represents an approximate ratio of 325 lb per hp, considered typical of conditions on two-lane highways carrying a variety of types of trucks (3). Figure 5.1b shows conditions with an approximate ratio of 200 lb per hp, as found on many modern multilane highways carrying largely higher-powered long-haul trucking (4).

From these graphs, for the types of vehicles represented, it is possible to determine how far a vehicle, starting its climb from speeds up to 40 and 50 mph, respectively, can travel up various grades or combinations of grades before the sustained speed is reached. The solid curves indicate the performance that may be expected when the beginning speed is above the possible sustained or crawl speed. They are based on

the assumption that the truck enters the grade at about 50 mph for multilane and about 40 mph for two-lane highways. However, the curves also show the speed reduction due to any length and steepness of grade for other approach speeds. For example, given a typical two-lane condition and a 4 percent grade, if the approach speed is 35 mph (initial distance 400 ft), the speed at a point 1,000 ft up the grade will be 21 mph (final chart distance 1,400 ft).

The broken lines show what performance may be expected when starting on the hill or approaching the hill at a speed lower than the crawl speed, so that the vehicle accelerates to eventually reach the sustained crawl speed. These curves show that long distances are required to accelerate on grades when the approach speed is below the final sustained speed. For example, to change the speed of a typical truck on a two-lane road with a 3 percent grade from 15 mph to the sustained speed of 16 mph, an increase of only 1 mph, the vehicle would have to travel about 900 ft.

Practically any speed reduction by trucks will influence level of service to some degree. Capacity also will always be influenced by trucks to the extent that they take up more roadway space than passenger cars. Nevertheless, the additional influence of grades on capacity will not be felt until they cause truck speeds to fall below 30 mph, the approximate speed at which capacity is generally attained.

As an example, Table 5.4 gives the distance that trucks having a weight-power ratio of 325 lb per hp, considered typical for two-lane highways, can go up various grades before their speeds are reduced to 30 mph, assuming that they enter the grade at 40 mph. It follows that grades longer than those given in the table would have an adverse effect on the capacity of a highway because they would reduce the speeds of trucks that occur with considerable frequency to values below 30 mph.

The distances upgrade in Figure 5.1 are based on uniform grades. Where a vertical curve is part of a length of grade, approximation must be made as to equivalent uniform grade length. Figure 5.2 shows a variety of possible vertical curve configura-

TABLE 5.4--DISTANCE FROM BOTTOM OF GRADE AT WHICH SPEED OF TRUCKS^a IS REDUCED TO 30 MPH^b

GRADE (%)	DISTANCE FROM BOTTOM OF GRADE (FT)	VERTICAL CLIMB FROM BOTTOM OF GRADE (FT)
2	1,950	39
3	1,150	35
4	825	33
5	625	31
6	500	30
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^a Trucks having a weight-power ratio of 325 lb per hp.

^b Assuming an approach speed of 40 mph. Bad alignment, weak or narrow bridges, or other hazardous conditions at the bottom of the hill would make this approach speed unsafe.

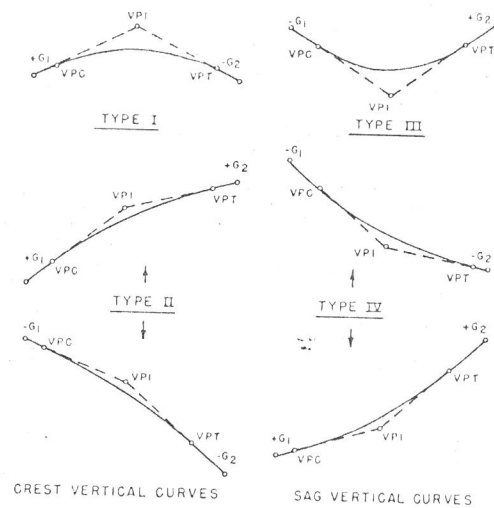


Figure 5.2. Types of vertical curves.
(Source: Ref. 12)

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Higher weight-horsepower ratios will, likewise, reduce the speed of trucks ascending grades and have an adverse effect on the capacity of a highway. Studies conducted by the Bureau of Public Roads clearly show that weight-horsepower ratios increase with an increase in gross weight (5, 6). Figure 5.3 shows the cumulative frequency distribution of weight-horsepower ratios for all commercial vehicles weighed, both empty

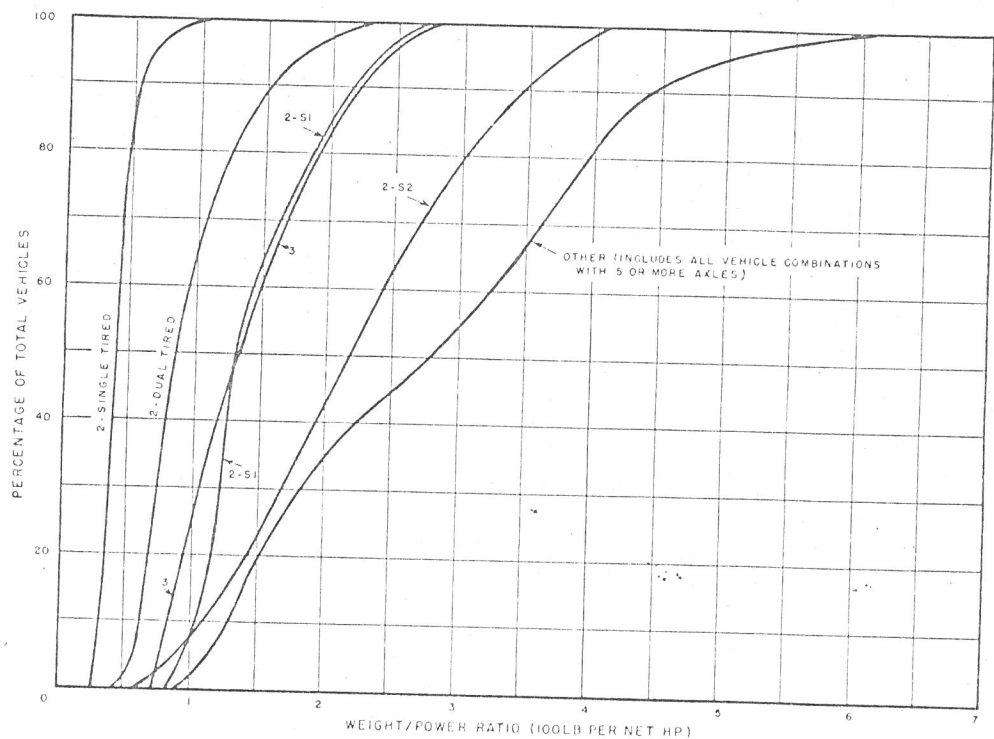


Figure 5.3. Cumulative frequency distributions of weight-power ratios for all commercial vehicles weighed in 1963 studies on major multilane highways.
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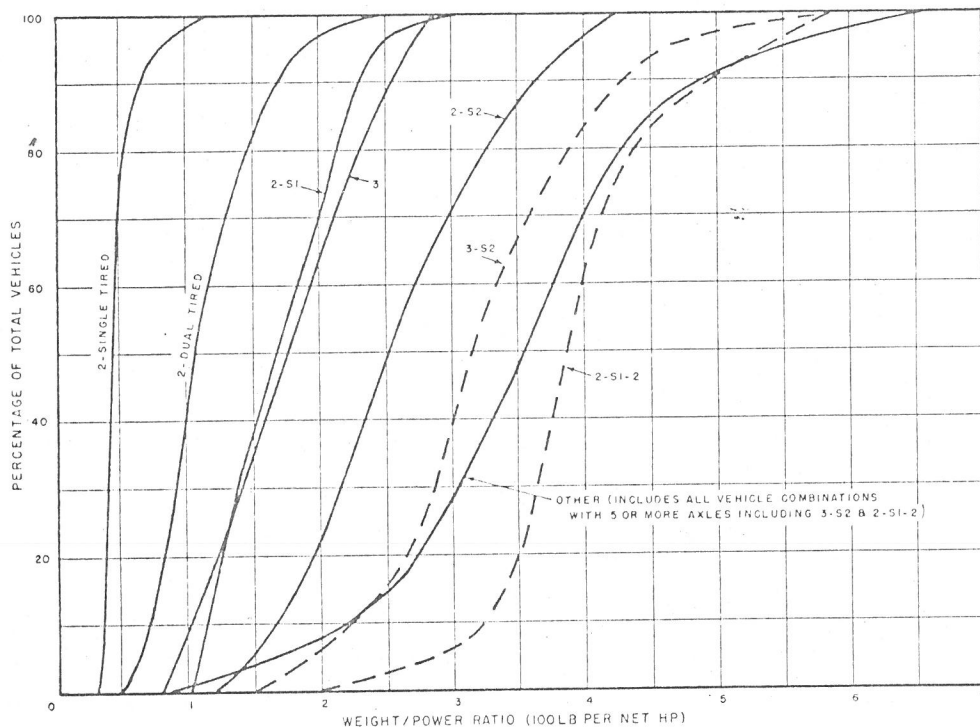


Figure 5.4. Cumulative frequency distributions of weight-power ratios for loaded trucks weighed in 1963 studies on major multilane highways.

(Source: Ref. 6)

and loaded, during special braking studies conducted in 1963. Figure 5.4 shows similar distributions for loaded trucks only. These curves show that the weight-power ratios of commercial vehicles vary considerably, depending on vehicle type, with a definite increase in weight-power ratios with an increase in the number of axles.

Although engine horsepower has more than tripled during the past 25 years, the overall vehicle performance has not improved as radically. Because increases in horsepower have been offset to a large extent by increases in gross weights, the average weight-horsepower ratio remains about two-thirds of its value 15 years ago.

In typical problem applications it is not the specific speed characteristics at every point on the grade that are directly needed. Rather, the average speed characteristics over grades of various steepnesses and

lengths are more useful, where available. Such relationships have been developed for typical two-lane highways (Fig. 5.5). For multilane highways such relationships are more complex and equivalent data are not yet available; alternate approaches to the problem are therefore used.

Knowing the effect of a particular grade on the speed of trucks does not in itself enable one to determine its effect on capacity. It is also necessary to know the influence which trucks and buses in the traffic flow have on volume and the effect of each in terms of equivalent passenger cars, or the "passenger car equivalent." Therefore, the information presented in this section is applied in conjunction with that given in the subsequent "Traffic Factors" section, under "Trucks," to determine the overall effects of trucks on grades on the capacity of a given section of highway.

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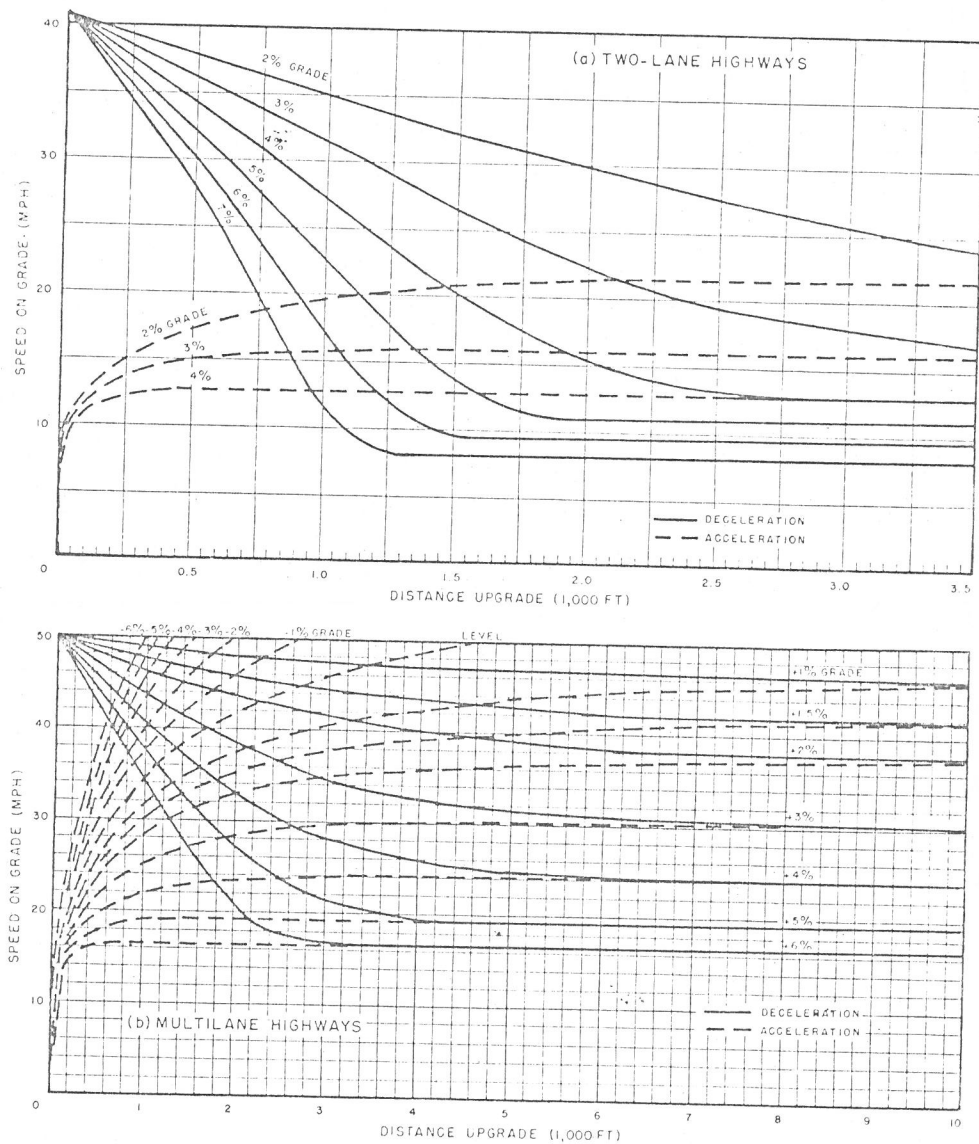


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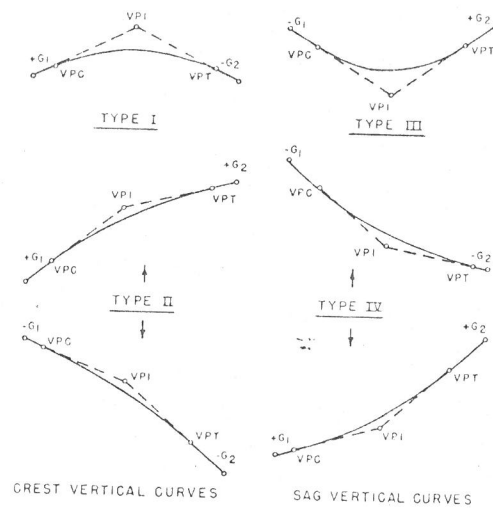


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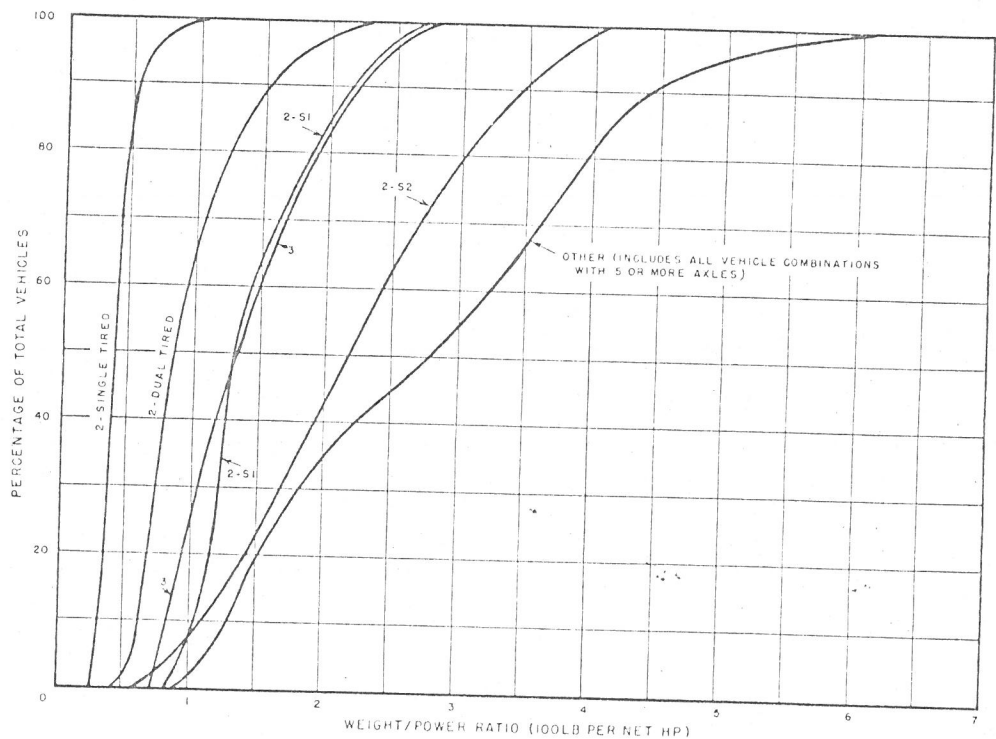


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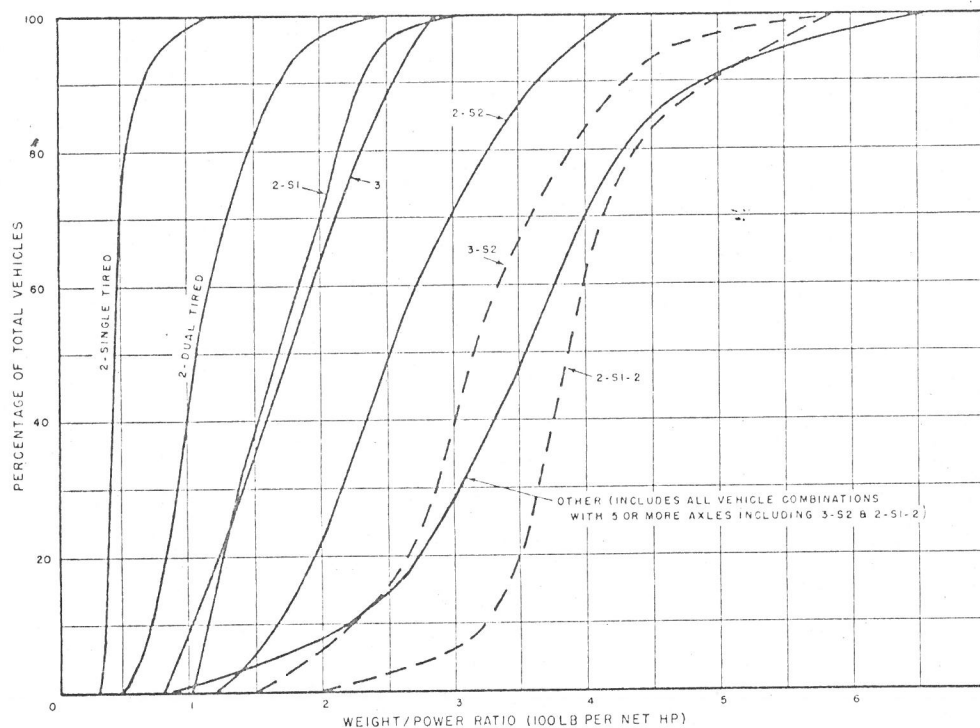


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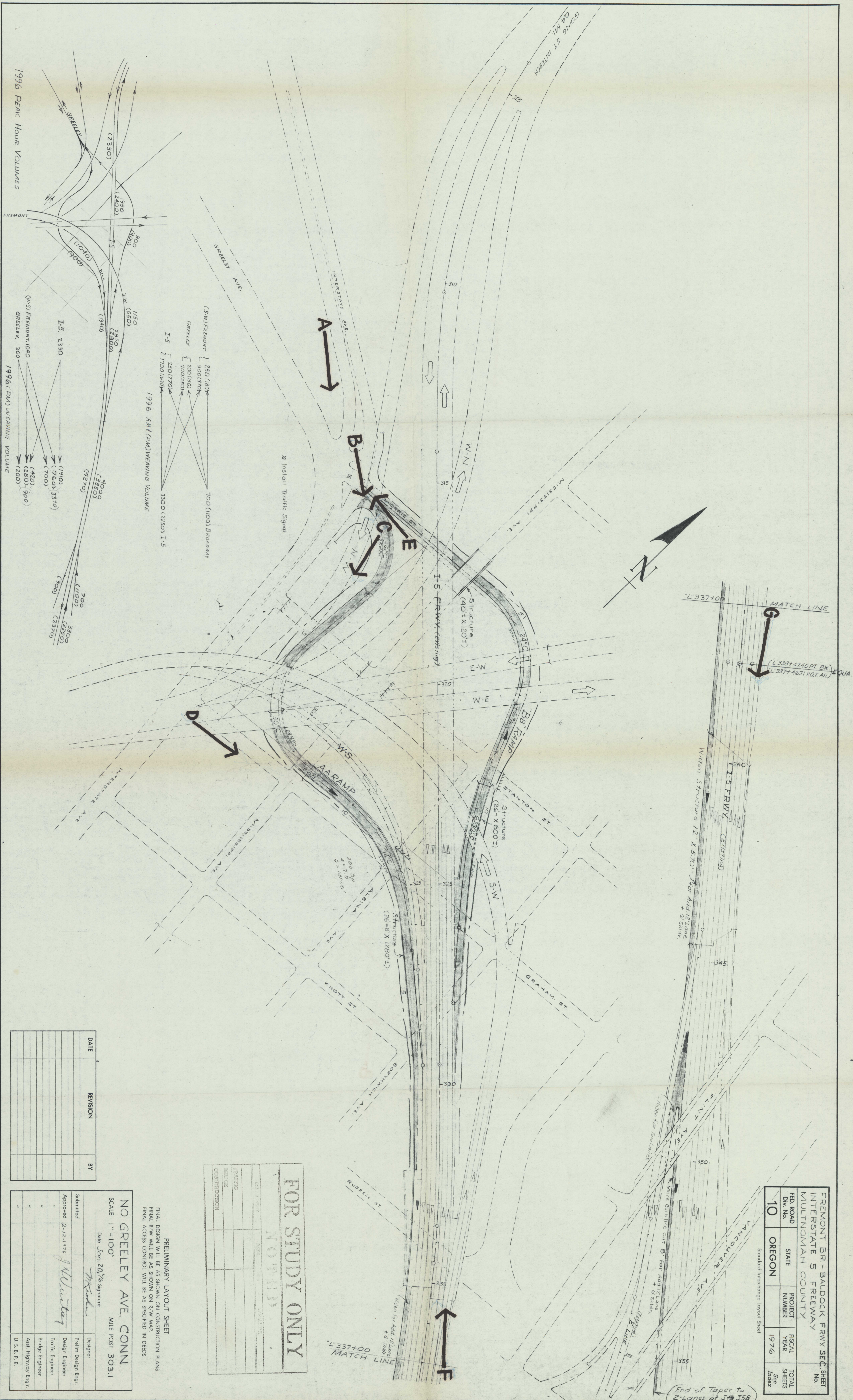
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FIREMONT BR. - BALDOCK FRWY. SEC. SHEET INTERSTATE 5 FREEWAY MULTNOMAH COUNTY				No.
FED. ROAD Div. No.	STATE	PROJECT NUMBER	FISCAL YEAR	TOTAL SHEETS
10	OREGON		1976	See Index

Standard Interchange Layout Sheet

End of Taper to
2-Lanes at Sta 358

FOR STUDY ONLY

FOR STUDY ONLY			
NO 00111			
DATE	NO 00111		
PLANT			
DEGR			
CONSTRUCTION			

PRELIMINARY LAYOUT SHEET

FINAL DESIGN WILL BE AS SHOWN ON CONSTRUCTION PLANS
FINAL R/W WILL BE AS SHOWN ON R/W MAP

FINAL ACCESS CONTROL WILL BE AS SPECIFIED IN DEEDS

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NO. GREELEY AVE. CONN.
SCALE 1" = 100' MILE POST 30

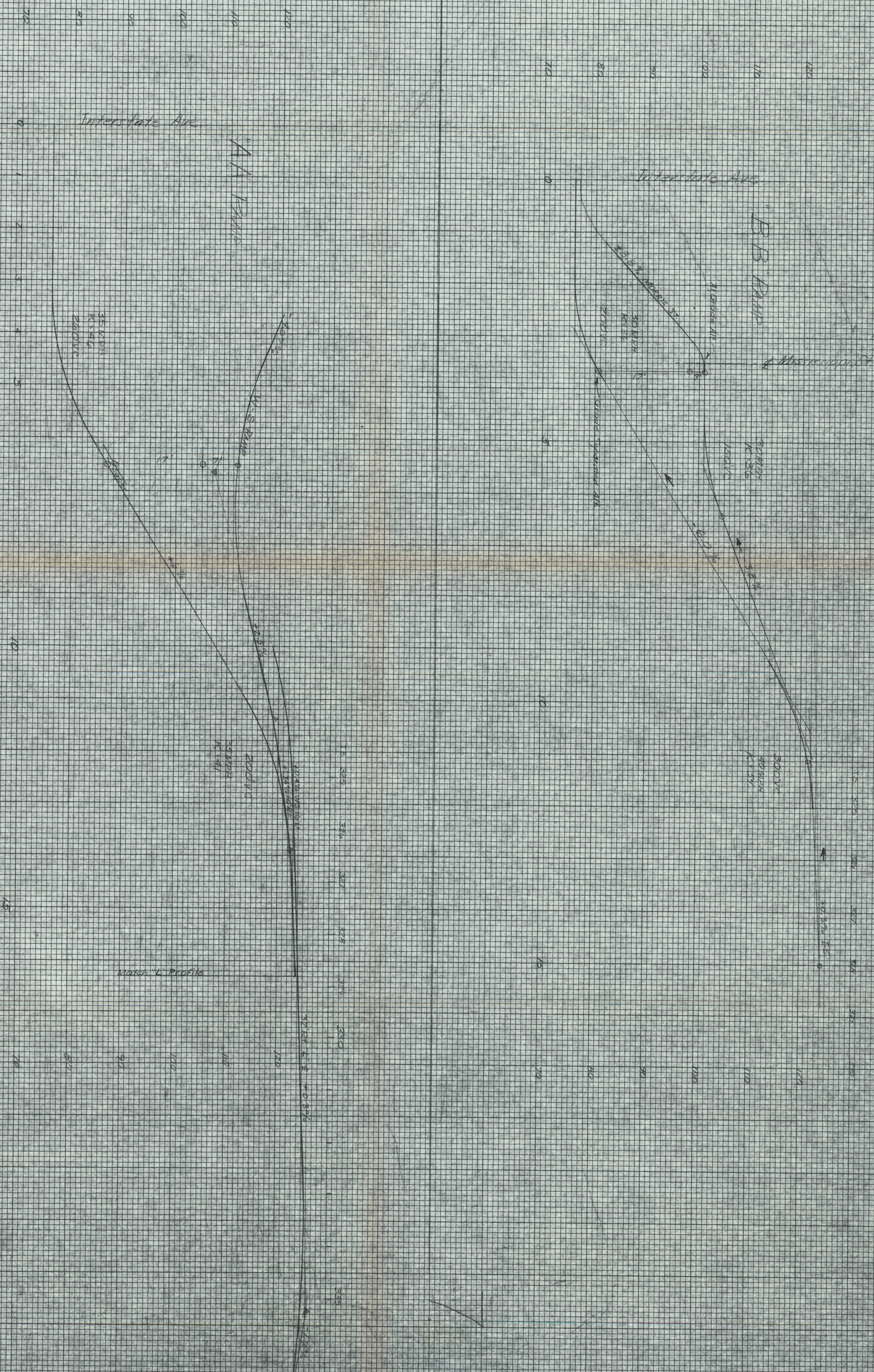
SCALE 1" = 100'

Date Jan. 20, 1906 Signature

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Submitted		Prelim Design Eng.
Approved	2-12-1976 <i>[Signature]</i>	Design Engineer
"		Traffic Engineer
"		Bridge Engineer
"		Asst. Highway Eng'r
"		U.S.B.P.R.

"		U.S.B.P.
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OREGON STATE HIGHWAY DEPT.
DESIGN OFFICE

PROJECT: EAST FIREMOUNT IN FIRCLE

SECTION: FIREMON 1 FIRE BATTALION FERRY

STATIONS: 15 IRWY
SCALE: 1" = 10,000'

DATE: Jan. 16, '76 BY: *W*

PROFILE FOR SLIP RAMPS -





B



C





E



F

