



MULTNOMAH COUNTY OREGON

BOARD OF COUNTY COMMISSIONERS
ROOM 605, COUNTY COURTHOUSE
1021 S.W. FOURTH AVENUE
PORTLAND, OREGON 97204

GLADYS McCOY • Chair • 248-3308
PAULINE ANDERSON • District 1 • 248-5220
GRETCHEN KAFOURY • District 2 • 248-5219
CAROLINE MILLER • District 3 • 248-5217
POLLY CASTERLINE • District 4 • 248-5213
JANE McGARVIN • Clerk • 248-3277

AGENDA OF
MEETINGS OF THE MULTNOMAH COUNTY BOARD OF COUNTY COMMISSIONERS
FOR THE WEEK OF
July 25 - 29, 1988

- Monday, July 25, 1988 - 1:30 PM - Work Session with City of Portland
City Council, regarding gang situation, Portland
Building, Second Floor, Conference Room C
- Tuesday, July 26, 1988 - 9:30 AM - Fair Opening
2060 N. Marine Drive
- Tuesday, July 26, 1988 - 1:30 PM - Informal Meeting Page 2
- Wednesday, July 27, 1988 - 10:00 AM - Finance Committee. . Page 3
- Thursday, July 28, 1988 - 9:30 PM - Formal. Page 4

Tuesday, July 26, 1988 - 1:30 PM
Multnomah County Courthouse, Room 602

INFORMAL

1. Informal Review of Bids and Request for Proposals:
 - a) High Volume Copier for District Attorney's Office
 - b) Herman Miller Parts/Accessories
 - c) Three Current Model Crew Bus Bodies
 - d) Development of Classification Compensation System
 - e) Direct Access Storage Sub-System for ISD
2. Briefing concerning Internal Audit Report #2-88
Administration of Support Services, Multnomah County
Sheriff's Office - Anne Kelly Feeney, County Auditor
3. Informal Review of Formal Agenda of July 28
4. Work Session regarding EMS Ambulance Plan, Request for
Credentials and Request for Proposals
5. Discussion of Economic Development Issues in Columbia Gorge
and other areas following informal - Commissioner Casterline

Wednesday, July 27, 1988 - 10:00 AM

FINANCE COMMITTEE

Multnomah County Courthouse - Conference Room B
Room 606

1. Indirect Costs - Linda Alexander
2. Savings Policy
3. Motor Vehicle Rental Tax - Dave Boyer
4. Downtown Economic Improvement District - Paul Yarborough
and Henry Miggins

Thursday, July 28, 1988 - 9:30 AM

MULTNOMAH COUNTY COURTHOUSE, ROOM 602

FORMAL AGENDA

REGULAR AGENDA

BOARD OF COUNTY COMMISSIONERS

- R-1 In the matter of the appointment of Glandion W. Carney to the Multnomah County Central Advisory Board, term ending June 30, 1989
- R-2 In the matter of the appointment of Harold Adams (term expiring March 15, 1992) and Peter Finley Fry (term expiring March 15, 1990) to the Multnomah County Planning Commission

DEPARTMENT OF ENVIRONMENTAL SERVICES

- R-3 Order in the matter of accepting Deed from the State of Oregon on N.W. Reeder Road for County Road Purposes

ORDINANCES - DEPARTMENT OF ENVIRONMENTAL SERVICES

- R-4 First Reading - An Ordinance amending Multnomah County Code Chapter 5.30 (Motor Vehicle Fuel Tax)

PUBLIC CONTRACT REVIEW BOARD

(Recess as the Board of County Commissioners and reconvene as the Public Contract Review Board)

- R-5 Order in the Matter of Exempting from Public Bidding Structural Steel Flame Straightening on the Stark Street Bridge by David L. Holt Company, Inc.

(Recess as the Public Contract Review Board and reconvene as the Board of County Commissioners)

DEPARTMENT OF GENERAL SERVICES

- R-6 In the matter of accepting the Data Processing Management Committee Recommendations
- R-7 Budget Modification Nondepartmental #2 making appropriation transfer in the amount of \$79,960 from General Fund Contingency to Nondepartmental Special Appropriations, to support new data processing projects, and requesting Board to authorize three new development projects: 1) Integration of CPMS/JAWS/SRMS (\$169,910); 2) Animal Control Field Services Tracking (\$70,280); and 3) Integrated Criminal Justice System Framework Project (\$51,000)

DEPARTMENT OF JUSTICE SERVICES

- R-8 Resolution in the Matter of Implementing an Integrated Criminal Justice Information System in Multnomah County

DEPARTMENT OF HUMAN SERVICES

- R-9 In the matter of ratification of an Intergovernmental Revenue Agreement with the State Mental Health Grant for FY 1988-89 (Amendment #15) for the County to receive additional \$649,303 to increase DD Case Management Staff and adjust subcontract services in MED, DD and A & D effective July 1, 1988
- R-10 Budget Modification DHS #1 receiving additional revenues in the amount of \$649,303 from State Mental Health Services to Social Services, various line items, to implement Amendment #15
- R-11 In the matter of ratification of three Intergovernmental Revenue Agreements with the City of Portland 1) to provide emergency shelter and related services to homeless youth (\$76,800); 2) to operate 24-hour, 7 day/week inebriate emergency response system (\$35,000); and 3) for support and administration of a homeless shelter program for the chronically mentally ill (\$52,000), all for period July 1, 1988 to June 30, 1989
- R-12 Budget Modification DHS #2 reflecting additional revenues in the amount of \$52,000 from the City of Portland to Social Services Divison, various line items, for partial operations of a shelter for homeless chronically mentally ill

ORDINANCES - DEPARTMENT OF HUMAN SERVICES

- R-13 Second Reading - An Ordinance relating to Food Service Inspection Fees, Swimming Pool License Fees, and Tourists and Travelers Facilities Inspection Fees, and amending MCC 5.10
- R-14 Continued Second Reading - An Ordinance adopting an Ambulance Service Plan and amending MCC 6.31.039 (Continued one week from July 21)

DEPARTMENT OF HUMAN SERVICES

- R-15 Order in the matter of approving a Request for Credentials and Requests for Proposals for Emergency Ambulance Service (Continued one week from July 21)

NOTE: Items R-14 and R-15 will be discussed at the same time

BOARD OF COUNTY COMMISSIONERS

- R-16 Resolution in the matter of Establishment of a Cooperative Partnership Among Columbia River Gorge National Scenic Area Counties to Create, Support and Promote Interpretive and Related Recreational Opportunities and Facilities throughout the Gorge

INFORMAL BRIEFING - FOLLOWING FORMAL SESSION

1. Briefing concerning procedures to be followed on August 2 regarding appeal by AA Ambulance

Thursday meetings of the Multnomah County Board of Commissioners are recorded and can be seen at the following times:
Thursday, 10:00 PM, Channel 11 for East and West side subscribers
Friday, 6:00 PM, Channel 27 for Rogers Multnomah East subscribers
Saturday, 12:00 PM, Channel 21 for East Portland and East County subscribers

0397C-15-18

BIDS



MULTNOMAH COUNTY OREGON

1
7/26/88

DEPARTMENT OF GENERAL SERVICES
PURCHASING SECTION
2505 S.E. 11TH AVENUE
PORTLAND, OREGON 97202
(503) 248-5111

GLADYS McCOY
COUNTY CHAIR

MEMORANDUM

RECEIVED
MULTNOMAH COUNTY
OREGON
PM 2:34

TO: Jane McGarvin, Clerk of the Board
FROM: Lillie Walker, Director, Purchasing Section
DATE: July 20, 1988
SUBJECT: FORMAL BIDS AND REQUESTS FOR PROPOSALS SCHEDULED FOR INFORMAL BOARD

The following Formal Bids and/or Professional Services Request for Proposals (RFPs) are being presented for Board review at the Informal Board on Tuesday, 7-26-88.

Bid/RFP No.	Description/Buyer	Initiating Department
B45-500-3029	High Volume Copier	DJS/District Attorney
	Buyer: Roger Bruno Ex. 5111	Contact: Lisa Moore Phone: 3133
B43-100-3028	Herman Miller Parts/Accessories	DES/Fac. Mgmt.
	Buyer: Roder Bruno Ex. 5111	Contact: Lennie Sobocinski Phone: 3322
B07-100-3032	(3) Current Model Crew Bus Bodies	DES
	Buyer: Roger Bruno Ex. 5111	Contact: Tom Guiney Phone: 5050

cc: Gladys McCoy, County Chair
Board of County Commissioners
Linda Alexander, Director, DGS
Caroline Miller, Commissioner

Copies of the bids and RFPs are available from the Clerk of the Board.

COUNTY BOARD OF
1988 JUL 20
MULTI...



MULTNOMAH COUNTY OREGON

DEPARTMENT OF GENERAL SERVICES

PURCHASING DIVISION
 2505 S.E. 11TH AVENUE
 PORTLAND, OREGON 97202
 (503) 248-5111

GLADYS McCOY
 COUNTY CHAIR

Formal Bids and Professional Services Requests for Proposals (RFPs) for Informal Board,
 Tuesday,

Continued . . .

Bid/RFP No.	Description/Buyer	Initiating Department
RFP# 8P0395	Development of Classification Compensation System Buyer: Franna Ritz Ex. 5111	DGS Contact: Susan Ayers Phone: 5015
RFP# 800385	Direct Access Storage Sub-System Buyer: Roger Bruno Ex. 5111	DGS/ISD Contact: Doug Fischer Phone: 3749
		Contact: Phone:
	Buyer: Ex. 5111	Contact: Phone:
	Buyer: Ex. 5111	Contact: Phone:

TO: DAILY JOURNAL OF COMMERCE

Please run the following Classified Advertisement as indicated below, under your "CALL FOR BID" section

MULTNOMAH COUNTY

Proposals Due: August 11, 1988 at 2:00 P.M.

Proposal No. B45-500-3029

Sealed proposals will be received by the Director of Purchasing, 2505 S.E. 11th Ave., Portland, OR 97202 for:

The purchase of a high volume copy machine

as per specifications on file with the Purchasing Director. No proposal will be received or considered unless the proposal contains a statement by the bidder as part of his bid that the requirements of ORS 279.350 shall be included. Multnomah County reserves the right to reject any or all proposals.

Specifications may be obtained at: Multnomah County Purchasing Section

2505 S.E. 11th Avenue

Portland, OR 97202

(503) 248-5111

Little M. Walker, Director
Purchasing Section

PUBLISH: July 28, 29 & Aug. 1, 1988

AD2:PURCH2

TO: DAILY JOURNAL OF COMMERCE

Please run the following Classified Advertisement as indicated below, under your "CALL FOR BID" section

MULTNOMAH COUNTY

Proposals Due: August 11, 1988 at 2:00 P.M.

Proposal No. B43-100-3028

Sealed proposals will be received by the Director of Purchasing, 2505 S.E. 11th Ave., Portland, OR 97202 for:

The purchase of Herman Miller Furnishings & Accessories on a
requirements basis for a period of one year with two, one year,
optional renewals

as per specifications on file with the Purchasing Director. No proposal will be received or considered unless the proposal contains a statement by the bidder as part of his bid that the requirements of ORS 279.350 shall be included. Multnomah County reserves the right to reject any or all proposals.

Specifications may be obtained at: Multnomah County Purchasing Section

2505 S.E. 11th Avenue

Portland, OR 97202

(503) 248-5111

Lillie M. Walker, Director
Purchasing Section

PUBLISH: July 28, 29 & Aug. 1, 1988

AD2:PURCH2

TO: DAILY JOURNAL OF COMMERCE

Please run the following Classified Advertisement as indicated below, under your "CALL FOR BID" section

MULTNOMAH COUNTY

Proposals Due: August 9, 1988 at 2:00 P.M.

Proposal No. B07-100-3032

Sealed proposals will be received by the Director of Purchasing, 2505 S.E. 11th Ave., Portland, OR 97202 for:

The purchase of three (3) new current model Crew Bus bodies

as per specifications on file with the Purchasing Director. No proposal will be received or considered unless the proposal contains a statement by the bidder as part of his bid that the requirements of ORS 279.350 shall be included. Multnomah County reserves the right to reject any or all proposals.

Specifications may be obtained at: Multnomah County Purchasing Section
2505 S.E. 11th Avenue
Portland, OR 97202
(503) 248-5111

Lillie M. Walker, Director
Purchasing Section

PUBLISH: July 28, 29 & August 1, 1988

AD2:PURCH2

TO: DAILY JOURNAL OF COMMERCE

Please run the following Classified Advertisement as indicated below, under your "CALL FOR BID" section

MULTNOMAH COUNTY

Proposals Due: August 9, 1988 at 2:00 P.M.

Proposal No. RFP# 800385

Sealed proposals will be received by the Director of Purchasing, 2505 S.E. 11th Ave., Portland, OR 97202 for:

Direct Access Storage Subsystem attached to an Amdahl 5860

Computer operating IBM OS/MVS

Multnomah County reserves the right to reject any or all proposals.

Specifications may be obtained at: Multnomah County Purchasing Section

2505 S.E. 11th Avenue

Portland, OR 97202

(503) 248-5111

Lillie M. Walker, Director
Purchasing Section

PUBLISH: July 28, 29 & August 1, 1988

Date Submitted
7-18-88

(For Clerk's Use)
Meeting Date 7/26/88
Agenda No. #2

*Audit Report
Studies Refs*

REQUEST FOR PLACEMENT ON THE AGENDA
SUBJECT: SHERIFF'S OFFICE AUDIT

Informal Only July 26, 1988
(date)

Formal Only _____
(date)

Department NON-DEPAETMENTAL Division COUNTY AUDITOR

Contact ANNE KELLY FEENEY Telephone 248-3320
(If informal, name of person making presentation)

Brief Summary (should include other alternatives explored, if applicable, and clear statement of rationale for the action requested):

Present Internal Audit Report #2-88 - Administration of Support Services Multnomah County Sheriff's Office.

REQUEST TIME CERTAIN

(IF ADDITIONAL SPACE IS NEEDED, PLEASE USE REVERSE SIDE)

ACTION REQUESTED:

- Information Only
- Policy direction
- Preliminary approval
- Approval

IMPACT:

- Personnel
- Fiscal/Budgetary
 - General Fund
 - Other _____

1988 JUL 19 AM 9:03
MULTNOMAH COUNTY OREGON
BOARD OF COUNTY COMMISSIONERS

SIGNATURES:

Department Head or County Commissioner *Ann Kelly Feeny*

Office of County Management _____

Office of County Counsel _____
(Ordinances, resolutions, agreements, contracts)

Department of Administrative Services _____
(Leases, surplus property, space, purchasing, etc.)

Department of Intergovernmental Relations _____
(Items with impact on other jurisdictions)

INTERNAL AUDIT REPORT #2-88
ADMINISTRATION OF SUPPORT SERVICES
MULTNOMAH COUNTY SHERIFF'S OFFICE

JULY 1988



MULTNOMAH COUNTY OREGON

Office of the County Auditor

Anne Kelly Feeney
County Auditor



ANNE KELLY FEENEY

COUNTY AUDITOR
ROOM 1500
PORTLAND BUILDING
PORTLAND, OREGON 97204
(503) 248-3320

MULTNOMAH COUNTY OREGON

July 18, 1988

TO: Fred Pearce, Sheriff
Gladys McCoy, County Chair
Pauline Anderson, Commissioner
Polly Casterline, Commissioner
Gretchen Kafoury, Commissioner
Caroline Miller, Commissioner

RE: Administration Of Support Services
Multnomah County Sheriff's Office

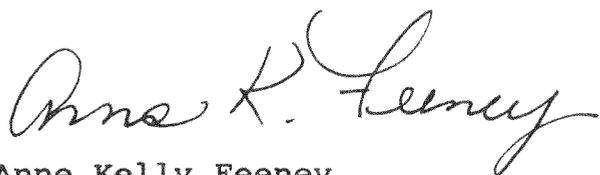
The attached Internal Audit Report (IAR #2-88) concerns the administration of certain support services of the Multnomah County Sheriff's Office (MCSO).

In summary, our audit work identified the need for increased direction within some support service functions. Our review disclosed that fiscal accountability among MCSO managers is minimal. Effective allocation of resources can be improved as can the distribution of management information.

Findings and recommendations contained in this report have been discussed with appropriate Sheriff's Office staff. Action was initiated during the course of the audit to address some of the issues discussed in the report. Plans are being developed to resolve the remaining matters.

We look forward to a written response from the Sheriff or his designee within four months stating what actions have been taken to resolve the issues raised in this report. We will expect a periodic written status report thereafter for any items that are not resolved within the four month timeframe.

We wish to acknowledge the staff of the Sheriff's Office for their cooperation and assistance during this audit.



Anne Kelly Feeney
Multnomah County Auditor

Attachment

Audit Team: Brad Rafish, Project Manager
Bobbie White, Operational Auditor

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RECOMMENDATIONS

RECOMMENDATION #1

MCSO SHOULD:

- A. COMBINE ALL SUPPORT SERVICE FUNCTIONS UNDER ONE MANAGER.
- B. COMBINE ITS PLANNING AND RESEARCH UNIT AND LIFE SAFETY/PROCEDURES FUNCTION.

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RECOMMENDATION #2

MCSO SHOULD DEVELOP ITS BUDGET IN ACCORDANCE WITH ITS ACTUAL FUNCTIONAL ORGANIZATION.

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RECOMMENDATION #3

MULTNOMAH COUNTY'S SHERIFF SHOULD SPECIFICALLY ESTABLISH THE ROLES VARIOUS SUPPORT SERVICE FUNCTIONS PLAY.

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RECOMMENDATION #4

MCSO SHOULD:

- A. ESTABLISH SPECIFIC MISSION STATEMENTS, GOALS AND OBJECTIVES, AND WORKPLANS FOR ITS VARIOUS FUNCTIONS.
- B. DEVELOP A PROCESS FOR REVISING AND UPDATING ITS GOALS AND OBJECTIVES.

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RECOMMENDATION #5

MCSO SHOULD REQUIRE ITS UNIT MANAGERS TO BE MORE PROACTIVE IN THE PLANNING OF THE BUDGET.

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RECOMMENDATION #6

MCSO SHOULD DEVELOP AND IMPLEMENT ADDITIONAL FISCAL ACCOUNTABILITY MEASURES FOR ITS PROGRAM MANAGERS.

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RECOMMENDATION #7

MCSO SHOULD:

- A. DEVELOP SPECIFIC PERFORMANCE STANDARDS FOR USE IN APPRAISALS OF ITS SUPPORT SERVICE EMPLOYEES.
- B. CONDUCT PERFORMANCE APPRAISALS ON A ROUTINE BASIS.

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RECOMMENDATIONS (CONTINUED)

RECOMMENDATION #8

THE MULTNOMAH COUNTY SHERIFF'S OFFICE SHOULD:

- A. PROVIDE FISCAL INFORMATION TAILORED TO THE NEEDS OF ITS MANAGERS.
- B. DEVELOP AND IMPLEMENT A METHOD TO DETERMINE WHAT INFORMATION IS NEEDED BY ITS MANAGERS.
- C. CONSISTENTLY PROVIDE TIMELY INFORMATION.
- D. DEVELOP POLICIES AND PROCEDURES WHICH REQUIRE PROPER DOCUMENTATION OF BACKGROUND AND SUPPORT DATA.
- E. ESTABLISH A SYSTEM TO IDENTIFY AND STORE INFORMATION
- F. SUBMIT ITS BUDGET ON TIME.
- G. ASSIGN CONTRACT ADMINISTRATION TO ITS FISCAL UNIT.

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RECOMMENDATION #9

FISCAL UNIT MANAGEMENT SHOULD DIVIDE RESPONSIBILITIES AMONG ITS STAFF.

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RECOMMENDATION #10

MCSO SHOULD CONTINUE TO INCREASE COMMUNICATION AND INVOLVEMENT WITH THE COUNTY'S BUDGET OFFICE.

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RECOMMENDATION #11

THE SHERIFF SHOULD SEEK THE MODIFICATION OF SECTION 2.30.300 (C) MCC TO REFLECT CURRENT PRACTICES.

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RECOMMENDATION #12

MCSO SHOULD DEVELOP WRITTEN PC POLICIES AND PROCEDURES AND INCLUDE:

- A. BACKUP REQUIREMENTS.
- B. PROGRAM DOCUMENTATION.
- C. SUPERVISORY REVIEW.

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MULTNOMAH COUNTY AUDITOR'S OFFICE
ADMINISTRATION OF SUPPORT SERVICES
MULTNOMAH COUNTY SHERIFF'S OFFICE

REPORT SUMMARY

This report is the result of our operational audit of certain support services of the Sheriff's Office. Our primary objective was to determine whether MCSO's Fiscal Unit was adequately performing its responsibilities. We also reviewed the Office's ability to provide direction to specific support service functions and determined whether program managers were fiscally accountable for their functions.

Our review indicated that certain support service functions were not operating in a manner which meet the needs of the Office. Little direction has been provided to these functions resulting in some necessary responsibilities being overlooked. Its current organizational structure is not organized according to functional lines.

BACKGROUND

The four major "functions" of the Multnomah County Sheriff's Office: Law Enforcement, Corrections, Civil Process, and Support Services, combine to provide a variety of services to residents of the County. Law Enforcement arrests lawbreakers, defends the County, and executes warrants. Corrections provides both detention and confinement facilities as well as a wide variety of non-custodial programs. Civil Process executes the orders of the courts and administers all warrants. Support services assist these functions in carrying out their responsibilities.

MCSO is managed by an elected Sheriff. The Office is currently organized along operational lines being defined as Operations and Corrections. Support service functions are allocated to both

"branches". The Office operates with an approximate budget of \$34 million.

Dramatic growth has occurred within MCSO in the past eight years. The Office as a whole has seen an increase of approximately 85% - most of it being in Corrections. Resolution 'A', agreed upon in 1983, significantly changing the focus of MCSO decreasing its sworn officers. The Office's primary emphasis is now on Corrections.

MCSO ORGANIZATION

Office-Wide Organization

Our review of the administration of various support services of the Multnomah County Sheriff's Office showed that MCSO is currently not structurally organized according to functional lines. Office-wide functions are primarily located within the Operations Branch while the majority of their time is devoted to Corrections. The present organizational structure does not enhance efficiency and is not necessarily meeting the Office's needs.

A reorganization of MCSO to combine all support services would increase the efficiency of the Office and eliminate many of the above mentioned concerns. A single support services division managed by one person would allow the Office to coordinate projects and allocate resources when needed.

Budget Organization

The FY88-89 budget process necessitated a number of changes for MCSO in the development of its budget. An agreement between the Sheriff and the Board of County Commissioners resulted in the "splitting" of Corrections and Law Enforcement to specifically identify costs of each. This agreement led to the allocation of all support service costs to each of the operations. As a result, each became a separate entity with no common link. This

organization has very little resemblance to the Office's actual structure.

To provide the Office with accurate information about costs of programs and the correct organizational structure, MCSO's budget should reflect its functional organization. Costs of support services can be allocated to each branch to identify actual costs of the function.

OFFICE-WIDE ADMINISTRATION

Our review of the Multnomah County Sheriff's Office showed that long-range strategic planning has taken place over the last five years. The Office has established its role and function within the County and region. However, little direction - establishment of roles, mission statements, goals and objectives, and procedures - has been provided to MCSO personnel by the Sheriff and his senior staff.

Guidance and Direction

MCSO top management has not provided its support service units with the level of guidance required to determine their precise roles within the Office. Specifically, the Fiscal and Planning and Research units have been given limited instruction into what their purpose within the Office actually is.

Without an adequate level of guidance and direction, Fiscal Management and Planning and Research personnel are unable to be responsive to the needs of the Office or others, nor are they able to assume the responsibility of acting in a support capacity. Both Units need to be provided specific identification of their primary responsibilities and allowed to function accordingly.

Mission Statements, Goals and Objectives, and Workplans

During our review, we found no mission statements, goals and objectives, or workplans for any MCSO function reviewed except for the Information Systems Unit.

Mission statements should be developed for each "function" of MCSO to identify the specific intent and reason for each. Goals and objectives should be quantifiable in terms of dollars or some other measure of accomplishment, as well as specifying dates for achievement. Workplans should provide detailed duties and responsibilities for persons involved.

Management Input

As part of our review, we attempted to determine what involvement division and unit managers had in the development of Office policy and, specifically, individual budgets. Communications with division and unit managers indicated that little proactive involvement in the formation of MCSO's budget took place for FY88-89.

MCSO should disburse ongoing financial information to its managers to allow each to be proactive in their approach to the budget. The solicitation of thoughts and comments as well as the involvement of each manager to a greater degree in the budget should occur.

Fiscal Accountability

Because few MCSO unit managers have been actively involved in the budget process, a high level of interest in fiscal accountability was not identified. Most program managers indicated that they had little knowledge of their budgets for FY88-89. Although managers are required to stay within their program budgets, we found little incentive to attempt to control costs, improve productivity, or identify cost-saving measures. Performance evaluations are not tied to fiscal duties, giving managers little reason to be conscious of these.

Performance Appraisals

During a limited review of two support service functions, we found that employee performance appraisals have not taken place for over 2.5 years within these units. Evaluations provide both the employee and management with comments on actual performance. Expectations are identified and an agreement reached. Appraisals allow methods to be produced to correct performance problems and develop potential.

FISCAL MANAGEMENT

Fiscal Management Duties

Our review of the fiscal management of MCSO revealed that specific financial duties have not been conducted on a regular basis. Distribution of management information within the Sheriff's Office has been minimal. Information which has been provided has not been adequate in meeting MCSO managers' needs. The Fiscal Unit has failed to complete and submit the budget on time for the last five years.

Reliance on One Person

During our review we found that the Fiscal Unit was relying solely on one person for most fiscal related information. All major budgetary duties, special projects, and projections of costs were the responsibility of this person. Budget development was, for the most part, performed by this person and little knowledge of the process was held by anyone else in the Office.

Fiscal Unit management must identify specific responsibilities of each person and allocate these duties accordingly. Appropriate distribution of responsibilities among staff will allow for the better accomplishment of necessary functions and reduce the reliance on one person.

Communication/Assistance

Although "active" communication and assistance between the Sheriff's Office and the County's Budget Office has been poor in the past, efforts to improve the situation have been identified. However, additional progress can be made.

Budget Requirements

Multnomah County Code 2.30.300 (c) requires the Sheriff to submit his budget through the Department of Justice Services (DJS) for review. We have found that the Sheriff has not complied with this mandate.

Although past Multnomah County Counsel opinions have identified separate administrative authority for the Sheriff from the County Executive, we also recognize that the Sheriff has been in noncompliance with established County Code. Modification of the existing Code should take place.

MICROCOMPUTERS

During our audit we reviewed PC general controls - those controls which relate to all data processing activities. General control areas included: documentation controls, physical security, access controls, and data and procedural controls. From this review we found that specific general controls were inadequate.

MCSO currently has no policies and procedures regarding its personnel's use of PC's. As shown by the above examples, the potential for major losses of data, the inability to process data, the potential for errors, and the lack of supervision ability all exist. Written policies and procedures, and a process to ensure actual implementation, will help ensure that major problems do not occur in the future.

CONCLUSIONS

Our audit has indicated that the administration of certain support services in the Multnomah County Sheriff's Office is not functioning at a level which promotes efficiency and effectiveness within the organization. During the time of our review, we found that some basic management practices were absent. As a result, many necessary responsibilities have been overlooked. Although the environment MCSO is currently operating in is difficult, its support service functions continue to be reactive rather than proactive.

We initially focused on the fiscal administration of the Sheriff's Office because of concerns identified during a preliminary survey and comments expressed by other County Departments. During our audit we identified other areas which warranted further review; specifically the ability to establish and administer Office direction and the adequacy of MCSO's current organizational structure. We found both areas to be in need of improvement.

MCSO management has not effectively addressed the needs of certain support units resulting in specific responsibilities not being accomplished. Support Services, specifically the Fiscal and Planning and Research Units, have been functioning with limited knowledge of their roles within MCSO or what is required of them. Currently, no single manager has the administrative responsibility of support services and little emphasis has been placed on their productivity. These units are located throughout MCSO and have not served the organization in the capacity they should.

Although staffing levels were not reviewed in all support service units, we looked specifically at the Fiscal Unit. With the recent reallocation of a Management Analyst to this Unit, the current needs of the organization should be met.

Long-range planning has taken place within the Office providing information about the future direction and function of MCSO. However, little direction - establishment of roles, mission statements, goals and objectives, and procedures - has been provided to MCSO personnel by the Sheriff and his senior staff.

The commitment to the establishment of specific direction for certain MCSO support services, combined with improved organizational structure, should help develop the Office into a more efficient, effective organization. Managers need to assume the responsibility for their various programs and be fiscally accountable. Adequate management information needs to be provided to program managers to allow for fiscal accountability.

Because the current Sheriff's term expires in 2.5 years, new management will inherit these basic problems we have identified unless they are addressed. The opportunity to establish a base for improved support services exists and should be given a high priority.

INTRODUCTION

Our performance audit of the administration of certain support services of the Multnomah County Sheriff's Office was conducted as a result of a preliminary survey completed in April 1988. Our survey initially identified two areas which warranted further review: Law Enforcement and Fiscal Administration. At the request of the Sheriff, an audit of the Fiscal Unit was initiated. We elected to expand this review and include other support service functions. This report summarizes the results of our performance audit.

AUDIT OBJECTIVES

The objectives of our performance audit were to:

1. determine if MCSO's Fiscal Unit is adequately performing its responsibilities;
2. determine if short- and long-range planning is taking place within MCSO;
3. determine if proper direction is provided to MCSO functions by top management;
4. determine if various program managers are fiscally accountable for their functions;
5. determine if the organizational structure of MCSO is conducive to efficient and effective management;
6. determine if current available management information is meeting the needs of MCSO managers; and
7. review compliance with applicable statutes, rules, etc.

SCOPE

Our audit focused primarily on the fiscal administration of MCSO and included typical management duties (accountability, planning, organization, etc.). We did not specifically look at "other" support functions such as Personnel, Payroll, Training, or Word Processing except to identify how they were organizationally located within the Sheriff's Office.

We reviewed specific administrative functions since fiscal year 1983-84. Although we reviewed budget information and expenditures, we did not conduct a financial audit.

As part of our audit work we examined MCSO's current organizational structure and operating policies and practices. We contacted other law enforcement agencies to gather information on their organizational structure. We interviewed Sheriff's Office personnel and reviewed all available documentation.

We did not include a review of Data Processing (DP) controls over the County's current finance system (LGFS) but did review general controls related to MCSO's use of personal computers.

COMPLIANCE

We reviewed compliance with State and County statutes, ordinances, and administrative rules as well as MCSO policies and procedures. We found an instance of noncompliance with County Code during our examination. This is discussed later in the report. For those items we did not specifically test for compliance, nothing came to our attention that would indicate significant instances of noncompliance.

AUDIT STANDARDS

Our audit was conducted in accordance with generally accepted governmental performance audit standards. Due professional care was exercised in examining records and verifying, to a reasonable extent, the findings contained within this report.

CHAPTER I
BACKGROUND

The Multnomah County Sheriff's Office provides a variety of services to residents of the County. As a law enforcement agency, MCSO's diverse responsibilities range from rural patrol to drug investigations. As a corrections agency, the Office houses, feeds, and sustains the general welfare of persons incarcerated in Multnomah County Correctional facilities. It also executes the process and orders of the courts, delivers warrants, and administers the County's Alarm Ordinance program through its Civil Section.

MCSO has seen dramatic growth in personnel in the past eight years - increasing approximately 85%. The majority of this growth has occurred in Corrections while sworn personnel have experienced a notable decrease. Resolution 'A', agreed upon in 1983, significantly changed the focus of MCSO. The transfer of approximately one-third of the Office's sworn personnel to the County's contiguous cities occurred. In addition, an increased emphasis on Corrections resulted.

MCSO FUNCTIONS

The Sheriff's Office contains four major "functions", each with its own diverse responsibilities.

Law Enforcement

MCSO carries out its statutory obligation to arrest law-breakers, defend the county against those who riot or otherwise endanger the public safety, and execute warrants through its Law Enforcement Branch. Approximately 80,000 people in Multnomah County are protected by the Sheriff's Office, as well as 93 miles of waterways. Volunteers also play a major part in the operations of the Office by participating in the Sheriff's Reserve, Aero Squad, Mounted Posse, and two Explorer Posts.

The Office's Motor Carrier Safety Unit inspects approximately 2500 trucks a year for various State safety requirements. Vice and Narcotics provides a deterrent to the continual growth of drug trafficking, prostitution, and pornography. The River Patrol provides search and rescue services as well as enforces State marine laws and regulations on the Columbia and Willamette Rivers.

Corrections

In August 1982, responsibility for the Corrections Branch was assumed by the Sheriff's Office. Correctional facilities under the jurisdiction of the Sheriff include Multnomah County Detention Center (MCDC), Multnomah County Correctional Facility (MCCF), Multnomah County Restitution Center (MCRC), the Courthouse Jail (CHJ), and in the near future the new 220 bed Multnomah County Inverness Jail (MCIJ). Over 1000 beds will be available by 1989.

The Corrections Branch is also responsible for a wide variety of inmate activities including counseling, pre-trial release programs, non-institutional supervision programs, and various monitoring programs. Each has been designed to reduce the in-custody inmate population.

Civil Process

Non law enforcement activities that are required by Oregon State law are carried out through MCSO's Civil Division. The Sheriff is mandated to execute the orders of the courts and administer all warrants delivered to him for that purpose.

Civil also supervises the sale of tax foreclosed properties through its Tax Title Unit, transports mentally ill persons who are subject to hearing by the Probate Court, and administers the County Alarm Ordinance.

Effective Fiscal Year 1988-89, Tax Title will be transferred to Facilities Management of the Department of Environmental Services.

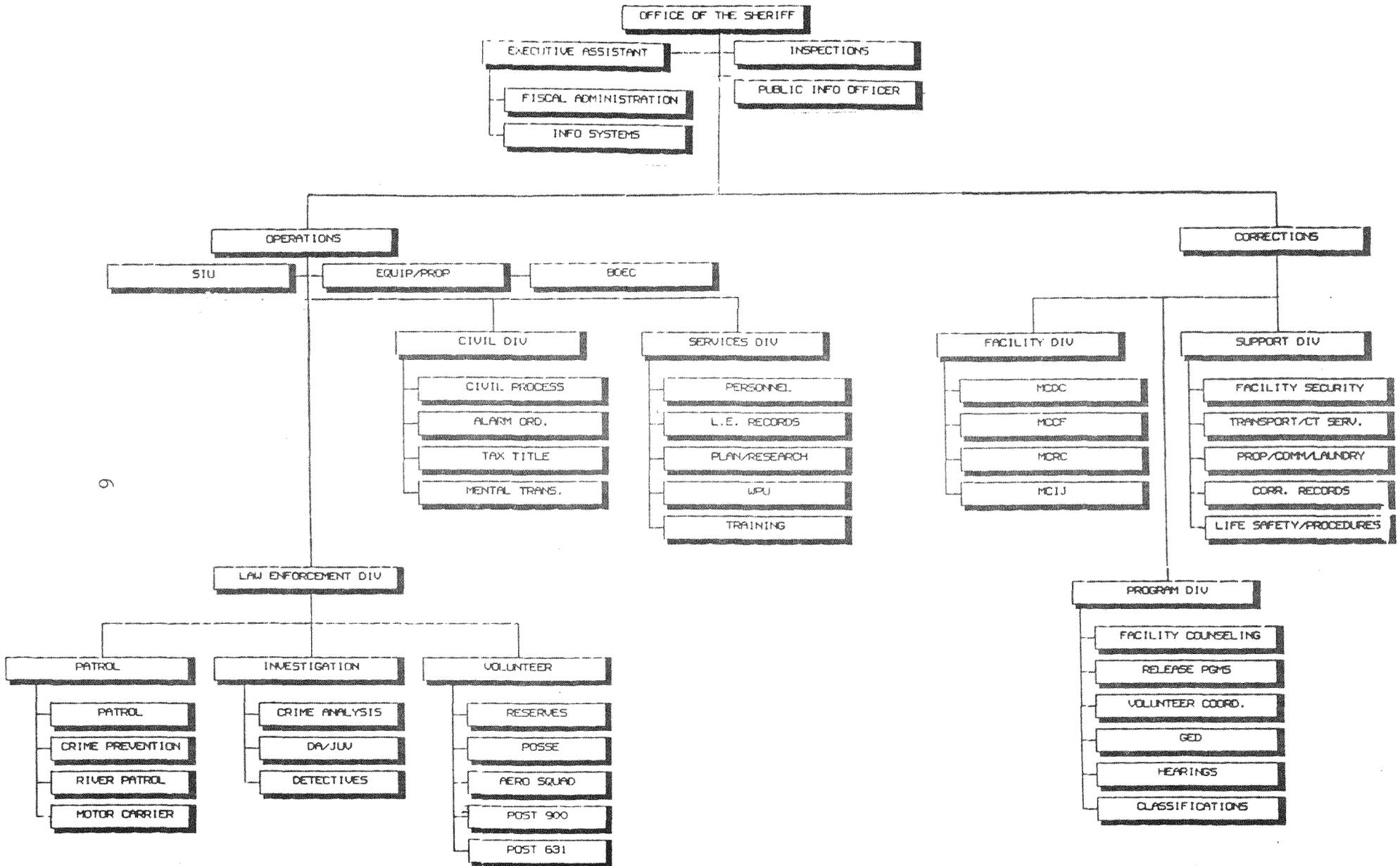
Support Services

MCSO Support Services have been designed to assist the previously stated functions in carrying out their varied responsibilities. Personnel, Planning and Research, Training, Word Processing, Police Records, Corrections Records, Fiscal, Information Systems, Life Safety/Procedures (Accreditation Function), and Equipment and Property each help to support Law Enforcement, Corrections, and Civil Process programs.

CURRENT ORGANIZATION

The Multnomah County Sheriff's Office is managed by an elected Sheriff, who is presently serving in the last of two terms allowed by County Charter. MCSO is currently organized along operational lines being defined as Operations and Corrections. Actual support services are allocated to both "branches" as well as within the Office of the Sheriff itself. The following chart depicts the current organization of the Multnomah County Sheriff's Office.

MULTNOMAH COUNTY SHERIFF'S OFFICE
 ORGANIZATIONAL CHART
 (As of 6/88)



Source: Multnomah County Sheriff's Office

Illustration 1

BUDGETS

The Sheriff's Office budget for FY 1988-89 is approximately \$34 million. The following charts list budgets for the past four fiscal years and the approved budget for FY 1988-89 for the Multnomah County Sheriff's Office:

**MCSO Budgets
(In Millions of Dollars)**

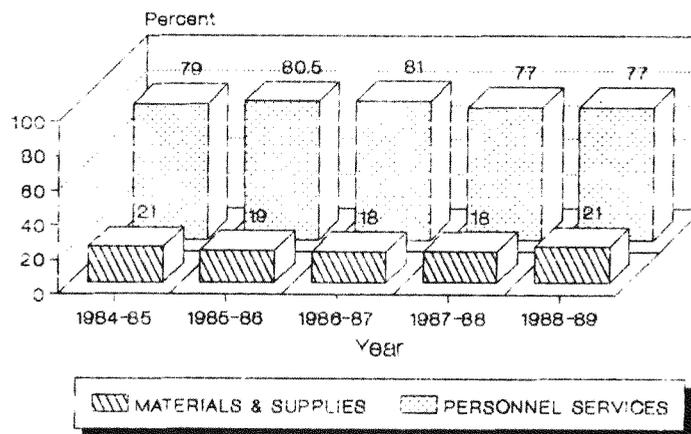
	1984-85	1985-86	1986-87	1987-88	1988-89
PS	\$16,457	\$15,846	\$19,219	\$24,714	\$26,544
M&S	4,309	3,742	4,306	5,838	7,326
CO	<u>14</u>	<u>95</u>	<u>173</u>	<u>1,573</u>	<u>447</u>
TOTAL	<u>\$20,780</u>	<u>\$ 19,683</u>	<u>\$23,698</u>	<u>\$32,125</u>	<u>\$34,317</u>

SOURCE: Multnomah County Adopted Budgets FY84-85 thru 1987-88, Approved Budget FY88-89

Illustration 2

MCSO operations are very labor intensive. On the average, 79% of its budget has been in personnel services. The following chart lists personnel services as a percent of MCSO's total budget for the last five fiscal years.

**PERSONNEL SERVICES
AS A PERCENT OF TOTAL MCSO BUDGETS**



Source: Adopted Budgets, FY 1984-89

Illustration 3

PERSONNEL

Sheriff's Office personnel have increased 31% since FY 1984-85, with the largest single increase in FY 1987-88 (27%). Almost 70% of MCSO employees are deputies and corrections officers. The chart below details MCSO personnel for the past five years.

**MCSO PERSONNEL
FY 1984-85 to 1988-89**

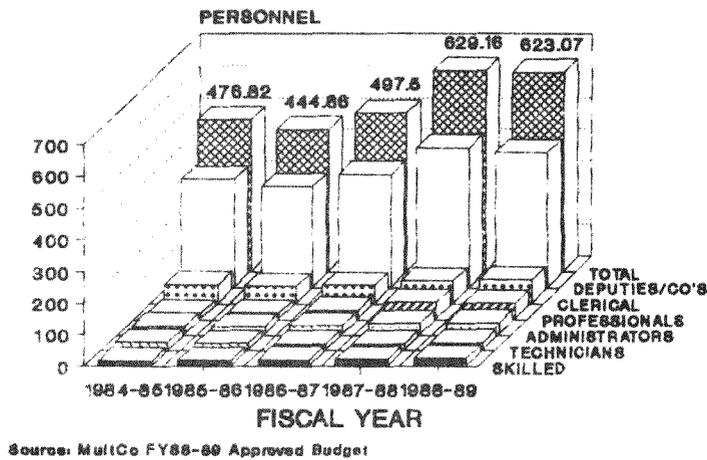


Illustration 4

AUDIT AREAS

Our audit focused on the effectiveness and efficiency of certain support services of the Sheriff's Office for the last five fiscal years. Our review concentrated on specific support functions which included the following:

Fiscal Unit

The Fiscal Unit is responsible for monitoring the Office's budget as well as all other typical accounting and financial functions including:

- o preparing the Office's annual budget;
- o administering accounts payable, purchasing procedures, and petty cash;
- o preparing monthly LGFS reports;

- o reconciling adopted and requested budget;
- o monitoring and directing all fiscal activities; and
- o tracking and monitoring all expenditures.

Currently four FTE are allocated to this function.

Planning and Research Unit

The Planning and Research Unit is responsible for the analysis of information to help plan for the future of the Office and to support the operations of MCSO. Three persons are charged with these duties.

The Unit researches, develops, publishes, and updates all the Office's Operational and Administrative Procedures and Work Rules. It also responds to requests for information from management and assists the Fiscal Unit in the development of the annual budget.

Life Safety/Procedures

Life Safety/Procedures is a one person function which is responsible for the preparation of the Corrections Operating Manual to meet the requirements of National Institute of Corrections (NIC) accreditation for the Multnomah County Detention Center. Duties include the development and updating of Corrections' policies and procedures and insuring that facility safety requirements are being followed.

The following chapters identify specific audit concerns and address each with recommendations for improvement.

CHAPTER II
MCSO ORGANIZATION

Our review of the administration of various support services of the Multnomah County Sheriff's Office showed that MCSO is currently not structurally organized according to functional lines. Office-wide functions are primarily located within the Operations Branch while the majority of their time is devoted to Corrections. The present organizational structure does not enhance efficiency and is not necessarily meeting the Office's needs.

MCSO's FY88-89 budget organization is also not consistent with its actual organization. This has caused confusion and inaccuracies, and has not provided MCSO with an effective method of accounting for costs.

OFFICE-WIDE ORGANIZATION

Typically, organizations are structured according to related operations. Resources are focused along functional lines such as activities, environment, and tasks, but still consider hierarchy, chain of command, and span of control. The ultimate goal is to establish an optimal combination of organizational characteristics to achieve desired outcomes.

Numerous factors affect the structure of an organization. The environment surrounding the organization, the extent of the delegation of responsibilities, the degree of control required to operate the organization, and the complexity of the organization itself all become elements in the actual design.

As shown in Illustration 1, the Sheriff's Office has organized its major responsibilities, Operations and Corrections, along functional lines, but has placed its various support services throughout the organization. The Sheriff's Executive Assistant

has recently assumed line function responsibilities while other integral units are located in the two branches and under various managers. No one person has assumed all support responsibilities for MCSO. As a result, the most effective allocation of existing resources has not occurred.

During our review, we found instances of requests for information being made directly to staff with no notification of unit managers. This has caused prioritized projects to be delayed and managers to have reduced direct control over the duties and responsibilities of their personnel.

Similar types of services are being performed by the Office's Planning and Research Unit and its Corrections Life Safety/Procedures Function. Both are currently performing like functions for different operations, but have very little communication and minimal coordination. As a result, procedures are being issued without advance notice and without being added to an Office-wide master list. In addition, a catalog of past procedures has not been maintained. No Corrections personnel currently reside in the Planning and Research Unit although approximately 80% of all activity in the Unit is related to Corrections.

MCSO management has stated that the Corrections Life Safety/Procedures Function will be combined with the Planning and Research Unit in the near future.

MCSO has also experienced difficulties in the distribution of information, completion of projects, and submission of its budget (see Chapter IV). These problems were experienced in part because no single manager was able to coordinate projects and responsibilities nor allocate support services personnel to effectively accomplish needed tasks.

As part of our review, we contacted other law enforcement agencies to gather information about how their functions were organized. Each indicated that support/administrative services were considered as specific functions of the organizations and thus were separated from law enforcement and corrections duties.

A reorganization of MCSO to combine all support services would increase the efficiency of the Office and eliminate many of the above mentioned concerns. A single support services division managed by one person would allow the Office to coordinate projects and allocate resources when needed.

RECOMMENDATION #1

MCSO SHOULD:

- A. COMBINE ALL SUPPORT SERVICE FUNCTIONS UNDER ONE MANAGER.**
- B. COMBINE ITS PLANNING AND RESEARCH UNIT AND LIFE SAFETY/PROCEDURES FUNCTION.**

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BUDGET ORGANIZATION

The FY88-89 budget process necessitated a number of changes for MCSO in the development of its budget. An agreement between the Sheriff and the Board of County Commissioners resulted in the "splitting" of Corrections and Law Enforcement to specifically identify costs of each. This agreement led to the allocation of all support service costs to each of the operations. As a result, each became a separate entity with no common link. This organization has very little resemblance to the Office's actual structure.

Confusion and inaccuracies have developed from this budget organization. The budget document, generally considered an informative guide to the costs of County departments, gives limited indication of true organization or costs. Support units

have been split between the two operations giving the impression that the Office actually has two units.

This budget organization does not provide MCSO with an effective method of accounting for costs. Six accounting levels are currently in place - the most in the County - which consist of 125 "roll-ups" (accounting entity summaries). A large amount of unnecessary and difficult work results for Fiscal Unit personnel.

To provide the Office with accurate information about costs of programs and the correct organizational structure, MCSO's budget should reflect its functional organization. Costs of support services can be allocated to each branch to identify actual costs of the function.

RECOMMENDATION #2

MCSO SHOULD DEVELOP ITS BUDGET IN ACCORDANCE WITH ITS ACTUAL FUNCTIONAL ORGANIZATION.

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CHAPTER III
OFFICE-WIDE ADMINISTRATION

Administration of a large multi-function office of over 620 persons requires numerous managerial tasks. Included are strategic planning, communications within the organization, identification of the purpose of the organization, establishment of specific goals and objectives, and the methods to achieve each.

Our review of the Multnomah County Sheriff's Office showed that long range strategic planning has taken place over the last five years. The Office has established its role and function within the County and region. However, little direction - establishment of roles, mission statements, goals and objectives, and procedures - has been provided to MCSO personnel by the Sheriff and his senior staff.

OFFICE DIRECTION

MCSO and its units currently have no specific mission statements, goals and objectives, or workplans in place or in use. Specific support units have been functioning without definite guidelines or knowledge of their role within the Sheriff's Office. Mid- and senior-level management have little input into the development or the direction of their roles within the Office. Managers of various programs within the Office have little fiscal accountability. The ability to measure performance and evaluate accordingly could not be identified.

Guidance and Direction

MCSO top management has not provided its support service units with the level of guidance required to determine their precise roles within the Office. Specifically, the Fiscal and Planning and Research Units have been given limited instruction into what their purpose within the Office actually is.

Numerous "typical" duties have been neglected by the Fiscal Unit. Concerns expressed by MCSO personnel as well as County Budget Office staff regarding the lateness of the budget, inadequate distribution of management information, and minimal communication, has resulted mainly from a fiscal staff which has insufficient information about its primary role or priorities.

Without an adequate level of guidance and direction, Fiscal Management and Planning and Research personnel are unable to be responsive to the needs of the Office or others nor are they able to assume the responsibility of acting in a support capacity. Both Units need to be provided specific identification of their primary responsibilities and allowed to function accordingly.

Staffing needs were also found to be a concern in the Fiscal Unit in the past five years. As stated previously, numerous financial duties have not been accomplished by the Unit. Although these concerns were identified by MCSO as early as FY 1982-83, we could find no specific budget requests for additional staff until FY 1987-88 - four years later. Management responsibilities include identifying staffing needs and attempting to resolve them.

RECOMMENDATION #3

MULTNOMAH COUNTY'S SHERIFF SHOULD SPECIFICALLY ESTABLISH THE ROLES VARIOUS SUPPORT SERVICE FUNCTIONS PLAY.

* * * * *

Mission Statements, Goals and Objectives, and Workplans

During our review, we found no mission statements, goals and objectives, or workplans for any MCSO function reviewed except for the Information Systems Unit. In addition, we found no indication that the use of these management tools was considered to be important. The FY88-89 budget process required each unit to identify specifically its mission as well as objectives. None

of the Office's managers interviewed indicated that mission statements or goals and objectives existed for their units. The assumption gathered from this is that the budget statements were provided only to satisfy requirements and not to function as management tools.

Mission statements, goals and objectives, and workplans can provide MCSO workgroups with quantifiable, measurable methods for operation. Specific actions for managers at various levels of the Office are identified through each and provide methods for the determination of accomplishment - not only what is to be accomplished, but how.

Mission statements should be developed for each "function" of MCSO to identify the specific intent and reason for each. Goals and objectives should be quantifiable in terms of dollars or some other measure of accomplishment, as well as specifying dates for achievement. Workplans should provide detailed duties and responsibilities for persons involved.

Once specific goals and objectives have been identified and implemented, MCSO needs to develop a method to periodically update and revise each. Changes in goals and objectives generally are based on revisions of direction, viewpoints, operating environment, and motivation of management. MCSO should recognize this and adjust its goals and objectives accordingly.

RECOMMENDATION #4

MCSO SHOULD:

- A. ESTABLISH SPECIFIC MISSION STATEMENTS, GOALS AND OBJECTIVES, AND WORKPLANS FOR ITS VARIOUS FUNCTIONS.**
- B. DEVELOP A PROCESS FOR REVISING AND UPDATING ITS GOALS AND OBJECTIVES.**

* * * * *

Management Input

As part of our review, we attempted to determine what involvement division and unit managers had in the development of Office policy and, specifically, individual budgets. Communications with division and unit managers indicated that little proactive involvement in the formation of MCSO's budget took place for FY88-89.

Unit managers were solicited for their needs regarding their specific budgets. However, few chose to be involved to the degree that ideas and changes, cost savings, and resource needs were identified.

Communication of budget issues has not taken place to a great degree at MCSO. We could not identify any formal method used by MCSO to inform its managers about the status of the Office's budget upon approval by the Board of County Commissioners until last year. Little fiscal information was found to have been distributed to MCSO managers.

MCSO should disburse ongoing financial information to its managers to allow each to be proactive in their approach to the budget. The solicitation of thoughts and comments as well as the involvement of each manager to a greater degree in the budget should occur.

RECOMMENDATION #5

MCSO SHOULD REQUIRE ITS UNIT MANAGERS TO BE MORE PROACTIVE IN THE PLANNING OF THE BUDGET.

Fiscal Accountability

Because few MCSO unit managers have been actively involved in the budget process, a high level of interest in fiscal accountability was not identified. Most program managers indicated that they had little knowledge of their budgets for FY88-89. Although managers are required to stay within their program budgets, we found little incentive to attempt to control costs, improve productivity, or identify cost-saving measures. Performance evaluations are not tied to fiscal duties, giving managers little reason to be conscious of these.

RECOMMENDATION #6

MCSO SHOULD DEVELOP AND IMPLEMENT ADDITIONAL FISCAL ACCOUNTABILITY MEASURES FOR ITS PROGRAM MANAGERS.

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Performance Appraisals

During a limited review of two support service functions, we found that employee performance appraisals have not taken place for over 2.5 years within these units. Evaluations provide both the employee and management with comments on actual performance. Expectations are identified and an agreement reached. Appraisals allow methods to be produced to correct performance problems and develop potential.

It is management's responsibility to help employees enhance performance and develop their abilities. Performance appraisals identify areas of deficiency and strength so that performance can be improved. In worst case situations, they document major concerns and serve as a basis for dismissal. Appraisals should also be scheduled on a regular basis.

The objectives of MCSO should be translated into specific responsibilities, indicators of performance, and individual goals

for support service units. These performance standards, including both measurable and non-measurable events, then become the foundation for evaluation.

RECOMMENDATION #7

MCSO SHOULD:

- A. DEVELOP SPECIFIC PERFORMANCE STANDARDS FOR USE IN APPRAISALS OF ITS SUPPORT SERVICE EMPLOYEES.**
- B. CONDUCT PERFORMANCE APPRAISALS ON A ROUTINE BASIS.**

* * * * *

CHAPTER IV
FISCAL MANAGEMENT

Successful fiscal administration of an organization requires distribution of information which enables managers to make informed decisions about programs under their supervision. It also requires that certain "typical" duties be performed on a routine basis. These duties include, among others: monitoring the annual budget, timely preparation of the budget, tracking expenses, and distributing necessary fiscal information to MCSO program managers.

Our review of the fiscal management of MCSO revealed that these financial duties have not been conducted on a regular basis. Distribution of management information within the Sheriff's Office has been minimal. Information which has been provided has not been adequate in meeting MCSO managers' needs. The Fiscal Unit has failed to complete and submit the budget on time for the last five years.

Other concerns in the operation of the Fiscal Unit were also identified. The Unit relies heavily on one person for most fiscal related information. In addition, communication and assistance between MCSO and the County Budget Office could be improved.

FISCAL MANAGEMENT DUTIES

Certain "typical" duties are required of the Fiscal Unit to perform its function adequately. These duties include:

- o monitoring the budget;
- o timely preparation of the budget;
- o monthly preparation of fiscal reports;
- o researching and preparing budget modifications;
- o tracking and monitoring equipment expenditures;

- o administering accounts payable, purchasing procedures, and petty cash;
- o monitoring and producing periodic reports on special budget items such as the Levy Budget, the Business Income Tax budget or the budget for the new jail facility;
- o reconciling adopted budgets with proposed budgets;
- o planning for fiscal needs of the MCSO;
- o preparing budgets on an ongoing basis; and
- o tailoring LGFS reports to meet Sheriff's Office needs.

Our review indicated that during our audit time frame the majority of these duties either were not taking place or were taking place to a minimal degree. MCSO management has recently taken steps to help improve the Fiscal Unit's ability to perform many of these functions through an increase in staffing. However, specific concerns, as explained below, need to be addressed.

Management Information

Management information within the Sheriff's Office consists of Local Government Finance System (LGFS) reports which are distributed by the County's Finance Division, monthly fiscal reports, and special reports completed as needed by Fiscal and Planning and Research Units. We have found that distribution of these reports is inconsistent and they are not providing enough information required for managing programs. Documentation of the sources of information and processes used to analyze data was also found to be limited on some reports from Planning and Research.

Certain financial needs and concerns have been identified among program managers, but little indication that these needs have been successfully addressed by upper-level management could be found. No formal system of input from managers has been developed to determine specifically what is needed or desired.

Types of Information Distributed

MCSO's Fiscal and Planning and Research Units do not consistently provide detailed information to its various division/program managers. The managers with whom we spoke indicated that the information they receive does not meet their needs. Specific concerns included the quality and timeliness of LGFS reports, identification of various unit costs, and cost summaries. Without adequate information, accountability cannot be required.

Determining Management Needs

No method to determine what fiscal information is desired or needed by various division/program managers could be found in use at MCSO. Management requested feed-back on the budget process by distributing a questionnaire to division managers in 1987. Although no summary was developed, management indicated that more budgetary knowledge was desired. Aside from this effort, no other attempt to specifically request comments, thoughts, and needs regarding fiscal requirements from program managers could be identified. Without a specific method, MCSO is unable to identify or provide the fiscal information which managers need to administer their programs.

Soliciting managers' needs allows them to better govern their function and ultimately increase productivity. It provides a method to ensure adequate fiscal information is being furnished to allow programs to function as intended.

Distribution of Data

Neither the Fiscal nor Planning and Research Units are consistently producing necessary management information. Only one report is actually produced by the Fiscal Unit - a monthly fiscal report - but it is not issued on a consistent basis. In FY87-88, seven monthly reports have been

distributed while in FY86-87, only four were completed. This does not give managers adequate information on a regular basis to monitor individual budgets nor does it provide a forum for holding managers accountable for their program expenditures.

Sufficient distribution of budget information, as well as other fiscal data, is necessary for the proper administration of the Sheriff's Office to take place. Managers must receive adequate information to enable them to manage effectively.

Documentation

During our review we found reports developed by the Planning and Research Unit which did not contain any documentation of background data. For example:

- o reports received by Planning and Research from other units or from external organizations were not dated upon receipt;
- o supporting statistical data - whether hand written or generated by the computer - were not titled or dated, resulting in the potential for data to be questioned;
- o sources of data were not identified on supporting documents, including background information.

Adequate documentation provides assurance to users of the reports that information contained within them is verified. Dating information and identifying the source from which it is received furnishes the necessary record for ensuring the accuracy of reports.

Data Retention

MCSO currently has no central storage process or function for information it produces and distributes. Planning documents, statistical analyses, and cost reports were found to be in various locations throughout the Office. As a

result, both staff and personnel outside of the organization are unable to obtain requested information. Misinformation and inaccurate conclusions have resulted. Duplication of documents - because personnel are unaware of their existence - also can occur.

A system to identify and store information produced by and for MCSO would help provide users with a method to determine what data is available.

Lateness in Budget Submission

The Sheriff's Office has been late in submitting its budget an average of 27 days for each of the last 5 years. No other Department or program has been as consistently late, as the illustration below indicates.

MULTNOMAH COUNTY Budget Submissions						
Days Between Due Date and Delivery						
	Sheriff	DJS	DGS	DES	NON	DHS
1988/89	29	0 DA - 14	0 DIR - 7	0	0	0
1987/88	23	0	0	0 AC - 5	0	0
1986/87	38	0	0 DIR - 25	0	0 EX - 30	0
1985/86	15	0	0 DIR - 23	0	0 EX - 22	0
1984/85	28	0		0	0	2

DA - District Attorney DIR - Director's Office
AC - Animal Control EX - Executive's Office

Source: MultCO Budget Office

Illustration 5

One of the specific objectives of our review was to determine why this had taken place. We were able to identify external reasons, such as excessive workloads, priorities, and allocation of resources, as well as other

considerations, that influenced budget submission for the last five years.

MCSO management, however, should realize the importance of submitting its budget on time to the County Budget Office. Because of the lateness of the budget in the past, little analysis of MCSO's budget takes place. Mistakes have been made, including duplication of dollars, deletion of costs, and accounting errors. Difficulty arises in understanding the Office's budget, which results in errors and confusion.

Contracts

The Fiscal Unit does not keep a "running" record of current or future contracts of the Office. No master list of contracts is maintained by the Fiscal Unit and little association with contracts currently takes place. Contracts are presently filed by an Office Assistant not associated with the fiscal management aspect of the Office.

During the development of the FY88-89 budget, an omission of a \$25,000 contract took place, the cost of which will have to be recovered from elsewhere in the approved budget. This resulted from the Fiscal Unit not administering contracts directly.

Contract monitoring was removed from the Fiscal Unit when its other responsibilities precluded it from performing the function adequately. With the addition of staff and better allocation of resources, Fiscal should have few problems with this responsibility.

RECOMMENDATION #8

THE MULTNOMAH COUNTY SHERIFF'S OFFICE SHOULD:

- A. PROVIDE FISCAL INFORMATION TAILORED TO THE NEEDS OF ITS MANAGERS.**
- B. DEVELOP AND IMPLEMENT A METHOD TO DETERMINE WHAT INFORMATION IS NEEDED BY ITS MANAGERS.**
- C. CONSISTENTLY PROVIDE TIMELY INFORMATION.**
- D. DEVELOP POLICIES AND PROCEDURES WHICH REQUIRE PROPER DOCUMENTATION OF BACKGROUND AND SUPPORT DATA.**
- E. ESTABLISH A SYSTEM TO IDENTIFY AND STORE INFORMATION**
- F. SUBMIT ITS BUDGET ON TIME.**
- G. ASSIGN CONTRACT ADMINISTRATION TO ITS FISCAL UNIT.**

* * * * *

RELIANCE ON ONE PERSON

During our review we found that the Fiscal Unit was relying solely on one person for most fiscal related information. All major budgetary duties, special projects, and projections of costs were the responsibility of this person. Budget development was, for the most part, performed by this person and little knowledge of the process was held by anyone else in the Office.

Because few others have the ability to duplicate or understand the specific process currently in use for budget development, the importance of this person is immense. If for some reason this person no longer was able to continue in MCSO, major problems would develop. Not only would budget development stall, but other daily fiscal duties would come to a standstill.

The recent reallocation of a Management Analyst to the Fiscal Unit should help eliminate the total reliance on one person. Fiscal Unit management must identify specific responsibilities of each person and allocate these duties accordingly. Appropriate distribution of responsibilities among staff will allow for the

better accomplishment of necessary functions and reduce the reliance on one person.

RECOMMENDATION #9

FISCAL UNIT MANAGEMENT SHOULD DIVIDE RESPONSIBILITIES AMONG ITS STAFF.

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COMMUNICATION/ASSISTANCE

Although "active" communication and assistance between the Sheriff's Office and the County's Budget Office has been poor in the past, efforts to improve the situation have been identified. However, additional progress can be made.

Limited communication and assistance between MCSO and the Budget Office has resulted in budgets which have contained errors, a lack of understanding on both sides, and time delays. With continued efforts to work on specific issues, these problems can be eliminated. The proper utilization of the County's Budget Office staff could allow increased assistance during the budget process, better analysis of the Office's budget, and increased knowledge of the Office by County functions and the general public. Questions raised by Commissioners could be addressed more adequately and quickly than in the past and a more accurate historical picture of the organization can be obtained.

RECOMMENDATION #10

MCSO SHOULD CONTINUE TO INCREASE COMMUNICATION AND INVOLVEMENT WITH THE COUNTY'S BUDGET OFFICE.

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BUDGET REQUIREMENTS

Multnomah County Code 2.30.300 (c) requires the Sheriff to submit his budget through the Department of Justice Services (DJS) for review. We have found that the Sheriff has not complied with this mandate.

The Sheriff has given as a reason for this omission the fact that he is an elected official, and as such should not submit his budget for review by an appointed manager who answers to the elected Chair - an administrative peer of the Sheriff.

Although past Multnomah County Counsel opinions have identified separate administrative authority for the Sheriff from the County Executive, we also recognize that the Sheriff has been in noncompliance with established County Code. Modification of the existing Code should take place.

RECOMMENDATION #11

**THE SHERIFF SHOULD SEEK THE MODIFICATION OF SECTION
2.30.300 (C) MCC TO REFLECT CURRENT PRACTICES.**

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CHAPTER V
MICROCOMPUTERS

Multnomah County Sheriff's Office has recently implemented automation within the Office in the form of personal computers (PC's). MCSO currently has PC's in the majority of its support functions including: Fiscal Management, Planning and Research, Information Systems, and Personnel. Uses range from data storage and analysis to word processing. As of this date, MCSO has 16 PC's.

In November 1987, MCSO developed an Information Systems Unit to address its need for a centralized support function for mainframe applications and new development, as well as to evaluate PC needs and administer their purchases and use. The Unit also is responsible for training and technical support of MCSO personnel on the use of microcomputers.

During our audit we reviewed PC general controls - those controls which relate to all data processing activities. General control areas included: documentation controls, physical security, access controls, and data and procedural controls. From this review we found that specific general controls were inadequate.

MCSO management indicated that these concerns are important and began to address them during our audit period. Back-up devices have been ordered.

WRITTEN POLICIES AND PROCEDURES

MCSO currently has no policies and procedures regarding its personnel's use of PC's. As shown by the above examples, the potential for major losses of data, the inability to process data, the potential for errors, and the lack of supervision ability all exist. Written policies and procedures, and a

process to ensure actual implementation, will help guarantee that major problems do not occur in the future.

PC BACKUP

Many users of PC's at MCSO currently do not backup information stored on harddisks. This was especially noted in the Fiscal Unit where all budget information is stored on its user's PC. In the event that the computer's harddisk was erased or destroyed, over three years of budgetary information would be lost. Reconstruction would be very difficult, possibly inaccurate, and would potentially take weeks. MCSO personnel indicated that this problem was known for some time but due to other priorities was not addressed.

MCSO management should require all information stored on PC harddisks to be routinely backed-up. Countless hours and numerous resources would be needed to reconstruct information currently on the PC's in the event of a loss - time and use of personnel that is unnecessary.

PROGRAM DOCUMENTATION

Documentation of programs developed by MCSO personnel was also found not to exist with some Office PC users. We could find no indication of any written definition of why specific developed programs were used, where information originated, or how certain applications work. The potential exists for unfamiliar users to be unable to process data in the absence of the primary user. Managers are also unable to supervise the processing of data due their lack of knowledge.

Well-defined general documentation should be required for any program developed by MCSO personnel. This will ensure that all applicable users will have an understanding of the program they are using and that management supervision can take place.

RECOMMENDATION #12

**MCSO SHOULD DEVELOP WRITTEN PC POLICIES AND PROCEDURES
AND INCLUDE:**

- A. BACKUP REQUIREMENTS.**
- B. PROGRAM DOCUMENTATION.**
- C. SUPERVISORY REVIEW.**

*** * * * ***

REPORT RESPONSES



Multnomah County Sheriff's Office

FRED B. PEARCE
SHERIFF

12240 N.E. GLISAN ST., PORTLAND, OREGON 97230

(503) 255-3600

MEMORANDUM

TO: ANNE KELLY FEENEY
Multnomah County Auditor

RECEIVED

FROM: FRED B. PEARCE
Sheriff

JUL 13 1988

Multnomah County Auditor

DATE: July 13, 1988

SUBJECT: RESPONSE TO INTERNAL AUDIT REPORT #2-88, SHERIFF'S OFFICE SUPPORT
FUNCTIONS

Thank you for the opportunity to respond to the draft report. As you are aware, this is the second year I have requested an audit of our Fiscal Unit.

As we emerge from six years of operational, organizational, budgetary and political turmoil, we look forward to a period of stability in which we can not only continue our successful long range planning efforts with the Board of County Commissioners, the Criminal Justice System and the State of Oregon but also focus more attention on work plans and the lack of personnel in our entire internal support structure. As we discussed with the Auditors, through the transfer of Corrections to the Sheriff's Office and the significant budget cuts in Law Enforcement beginning in 1982, as well as the growth in Corrections, we have sacrificed adequate support staff for desperately needed line functions, particularly Corrections Officers.

We acknowledge that reduced staffing in our Fiscal Unit, since the transition in 1983, has resulted in serious ongoing deficiencies in the operation of the unit. In fact, they have not been able to perform many typical duties and this capability is further diminished when I request "special projects" throughout the year, such as preparing new budgets for the Courthouse Jail, the Claire Argow Center, the Inverness Jail, the Restitution Center, etc. This is particularly difficult during the seven month budget season. It has virtually become a "crisis" unit.

We also agree that our managers need a working understanding of the County's Financial Accounting System (LGFS) -- a difficult and cumbersome system at best, and from which our fiscal people have to produce an interpretive report for our managers. Over the last two years, we have requested help from the County's Finance Division on the LGFS regarding program adjustments to meet our needs and training for our people. Although they have been responsive, their staffing limitations have precluded more than minimal support.

Since no support for an increase in Fiscal staff was forthcoming from the previous or present County administration and Board of County Commissioners, we separated the Personnel and Fiscal Units in March of 1987 so the manager could focus his efforts on fiscal duties. In addition, in 1988 I transferred a management analyst position to the Fiscal Unit, thereby increasing our "number crunchers" to two. An Office Assistant will also be hired to support the unit. I am confident that this added support will result in a timely budget submission.

With regard to specific recommendations:

RECOMMENDATION #1 - MCSO should: A) Combine all support service functions under one manager, and; B) Combine its planning and research unit and life safety/procedures function.

Although we agree that a traditional organizational structure most likely provides for functional responsibilities under a single manager, I have taken into account a number of factors which reflect the current administration of our support services, namely:

- Personnel
- Budget
- Environment
- Location
- Complexity
- Control
- Tasks

In fact, in the Corrections audit of 1986, the Auditor recommended separating the Corrections and Law Enforcement Records Units, which we did. For the immediate present, I believe that our current support services structure is best able to deal with our considerable work load and limited staff. However, because the County Executive has recently set a precedent by merging Policy Analysis, Long Range Planning and Fiscal Management, I will seriously examine a reorganization which could help us be more efficient and effective in these areas.

As I reported to the Auditors, following the completion of the Multnomah County Detention Center national accreditation process, the Corrections procedure function will be transferred to the Planning and Research Unit.

RECOMMENDATION #2 - MCSO should develop its budget in accordance with its actual functional organization.

We would agree that our budget should reflect our organization, as it has before this fiscal year. However, as is stated, the Board of County Commissioners felt that developing a separate budget for Law Enforcement and Corrections would provide them with a greater understanding of where our dollars were allocated. We certainly agree that a functional budget is a much better document to work with throughout the year in tracking expenditures as well as being more meaningful to the public. We will discuss this recommendation with the Board of County Commissioners.

RECOMMENDATIONS #3 THROUGH #10

These recommendations generally deal with organizational development activities and timely reporting which we agree have been reduced over the last six years. It is important to note that although our mission statements and objectives are identified in our budgets, our Law Enforcement operations, Corrections and Support Services have had to adjust to dramatic and constant changes over that period of time. These were years of considerable political and budgetary turmoil. Even though, for the last two years, we have formally requested critical training dollars for Corrections and this year for Information Systems as well, this was not supported in the County Executive's budget. However, please remember, the County Executive did reflect in her proposed budget the department's pleas for a restoration of support services throughout the County. It looks as though this may take years to accomplish for them and us.

However, now since the beginnings of a stable working environment exist in our office, work plans in our Fiscal and Information Systems will be finalized and we will move forward with developing such in other support units.

Our involvement with the County's Budget Office in the planning and preparation of our budget was substantial. In fact, because of the extreme complexity of developing "two new budgets" plus changing from a base line to a program budget, we requested assistance in the preparation of our budget from the County. Also, for the first time, the Chair invited us to be a part of her budget process which resulted in a greater shared understanding of the management issues we all face. We hope this process will continue.

RECOMMENDATION #11 - The Sheriff should seek the modification of section 2.30.300 (c) MCC.

Since the Sheriff's Office became elective and Corrections was transferred from the Department of Justice Services to us, I have not been asked by the Chair to submit my budget to anyone but the Chair. I will discuss this code change with her in the near future.

RECOMMENDATION #12 - The Multnomah County Sheriff's Office should develop written policies and procedures and include: A) Backup requirements; B) Program documentation; C) Supervisory review.

The Information Systems Unit was recently established to centralize and manage the maintenance and modification of our extensive mainframe applications housed in the County's Data Processing Center. This two person unit was also charged with developing and managing several complex and lengthy new systems development and implementation projects.

Managers began to make requests for personal computers not only to automate existing manual systems and data but to become more effective and efficient in planning, analysis, tracking and forecasting. We are pleased to finally be able to address this serious deficiency.

FEENEY

July 13, 1988

Page 4

We felt that introductory user training on the database, spreadsheet and word processing programs was the most important initial support for the PC's. Policies and procedures were verbally discussed. Written policies and procedures are part of the 1988-89 work plan.

Although most of our budget program is backed up on floppy disks, we have purchased a tape back up storage device. Other PC users have their work backed up on floppy disks and hard copies. Except for the single user Lotus program in the Fiscal Unit, software applications are documented. All PC's are in offices which are locked in the evening and new PC's have the capability of locked keyboards. I am extremely pleased by the incredible amount this small unit has been able to accomplish in such a short time.

And finally, because of the nature and implication of some of your recommendations, I request a full year, rather than every four months, to submit an update. This is additionally significant since the County does not, I understand, plan to fully implement strategic planning until the 1990-91 budget cycle.

I hope we may meet soon to discuss these issues.

FBP/jmt/8533A

REPORTS ISSUED BY MULTNOMAH COUNTY AUDITOR, BY DEPARTMENT
1980 through 1988 to-date

<u>DEPARTMENT</u>	<u>REPORT NUMBER*</u>	<u>ISSUE DATE</u>	<u>DEPARTMENT</u>	<u>REPORT NUMBER*</u>	<u>ISSUE DATE</u>
<u>ENVIRONMENTAL SERVICES</u>			<u>JUSTICE SERVICES (CONT):</u>		
Engineering:			District Court:		
Engineering Division	#4-83	11/22/83	Parking Fine Coll. F/U	#1-82	01/06/82
Fair & Exposition Center	#3-83	09/30/83	Civil Process	#C-80	12/30/80
Fair & Exposition Center	#B-83	10/10/83	Community Corrections	#1-80	04/29/80
Operations & Maintenance:			District Attorney:		
Fleet Mgmt. & Maint.	#2-82	04/14/82	Petty Cash Fund	#A-81	05/04/81
Veh.Rec.& Work Order	#A-82	04/21/82	Training Fund	#B-81	07/16/81
Road Maintenance	#4-82	07/15/82			
Special Report-Parks	#1-84	04/09/84	Juvenile Services:		
Blue Lake Park	#A-83	08/10/83	Court Trust Fund	#E-81	11/09/81
Cnty-Wide Grants Mgmt/CDBG	#A-85	03/21/85			
Housing Rehab Loan Program	#1-86	02/28/86	Medical Examiner:		
Glendoveer Golf Course	#2-87	09/09/87	Property Control, Finding		
			Fund & Imprest Funds	#2-83	05/04/83
<u>HUMAN SERVICES</u>			Sheriff's Office:		
Medical Access	#2-80	12/30/80	Law Enforcement Function	#6-82	12/17/82
Payroll Timekeeping	#C-82	08/31/82	Institutional Commissary	#1-83	06/09/83
MED/Residential Svcs	#3-84	10/24/84	Jail Admin-Infor.Systems	#2-86	09/08/86
Cnty-Wide Grants Mgmt/LIEP	#B-85	03/21/85			
Aging Services Division	#3-85	12/19/85	<u>NON-DEPARTMENTAL</u>		
Aging Services Division	#A-86	02/26/86	Reapportionment Plan	#AA-81	04/19/81
Juvenile Justice Division	#1-88	02/16/88	Charter Review	#BB-81	10/28/81
			Assessment & Taxation:		
<u>GENERAL SUPPORT SERVICES</u>			Internal Controls	#B-80	08/13/80
Data Proc.Svcs./ISD	#2-84	06/14/84	County-Wide Grants Mgmt.	#4-84	12/19/84
Operations DPA	#A-84	06/19/84	All Departments		
Non-Central Bank Accts.	#D-81	10/12/81	Board of Equalization	#1-85	02/01/85
Cash Fund Survey	#A-80	06/27/80	Elected Officials Reim-		
Risk Management	#3-87	10/21/87	bursable Expenses	#2-85	06/19/85
Purchasing:					
Contracting & Cen.Stores	#5-82	12/01/82			
Facilities & Property Mgmt:					
Construction Projects	#2-81	09/03/81			
Work Orders Proc.	#C-81	09/04/81			
Assessment & Taxation					
Personal Property Tax/					
Unsegregated Tax Fund	#1-87	05/18/87			
Collections Section	#3-86	12/12/86			
A&T/Collections Section	#B-86	12/18/86			
<u>JUSTICE SERVICES</u>					
Circuit Court:					
Indigent Defense	#1-81	02/18/81			
Unreported Rec.& Expend.	#3-82	05/20/82			

*Key to Report Numbers:

#2-80 = Internal Audit Report (IAR): Shown by numerical sequence and year of issue.
 #C-79 = Report to Management (RTM): Shown by single alphabet sequence and year of issue.
 #BB-81 = Special Report (SR): Shown by double alphabet sequence and year of issue.

DATE SUBMITTED _____

(For Clerk's Use)

Meeting Date 7/26/88
Agenda No. #22

Informal

REQUEST FOR PLACEMENT ON THE AGENDA

Subject: Economic Development briefing

Informal Only* 7-26-88
(Date)

Formal Only _____
(Date)

DEPARTMENT Board of Commissioners DIVISION _____

CONTACT Commissioner Casterline TELEPHONE 5213

*NAME(S) OF PERSON MAKING PRESENTATION TO BOARD _____

BRIEF SUMMARY Should include other alternatives explored, if applicable, and clear statement of rationale for the action requested.

Briefing concerning Economic Development in the Columbia Gorge and other County areas

(IF ADDITIONAL SPACE IS NEEDED, PLEASE USE REVERSE SIDE)

ACTION REQUESTED:

INFORMATION ONLY PRELIMINARY APPROVAL POLICY DIRECTION APPROVAL

INDICATE THE ESTIMATED TIME NEEDED ON AGENDA _____

IMPACT:

PERSONNEL

FISCAL/BUDGETARY

- General Fund

Other _____

BOARD OF COUNTY COMMISSIONERS
1988 JUL 21 PM 12:15
MULTNOMAH COUNTY OREGON

SIGNATURES:

DEPARTMENT HEAD, ELECTED OFFICIAL, or COUNTY COMMISSIONER: Polly Casterline

BUDGET / PERSONNEL _____ / _____

COUNTY COUNSEL (Ordinances, Resolutions, Agreements, Contracts) _____

OTHER _____
(Purchasing, Facilities Management, etc.)

NOTE: If requesting unanimous consent, state situation requiring emergency action on back.

BOARD RETREAT

What Should Be the County's Role in Economic Development?

- I. Multnomah County's role now.
 - A. County Code MCC 11.08.010 amended 6/9/88 planning in place of EDAC.
 1. Economic Development Advisory Commission p. 1 and 2.
 2. EDAC and BCC criteria for state economic development revenue bond projects. 11.08.250 p. 11-42 and p. 11-43.
 3. Criteria for approval by EDAC and BCC of Oregon Business Development Fund loans E.D.D. p. 11-47 and p. 11-48.
 - B. Other funds for economic development projects needing BCC approval.
 1. C.D.B.G.
 2. C.D.D.
 3. E.D.D.
 4. U.D.A.G. - May, 1988, exhibits.
 5. O.T.A.
 6. P.D.C.
 - C. Planning Department.
 1. Monitor economic development in light of County's Comprehensive Plan recorded with L.C.D.C.
 2. By nature a reactive role.
 - D. Federal Columbia River Gorge Scenic Area Act.
 1. Dual role in the Act.
 - a. Preservation of Scenic beauty.
 - b. Limited economic development.
 - . Continued use.
 - . Tourist related use.
 - . Designated areas for economic development.
 - . Commercial.

BOARD RETREAT

What Should Be the County's Role in Economic Development?

Page 2

2. County planning department must adopt the Bi-State Gorge Commission's final management plan which creates an overlay to our present planning code. The Board of County Commissioners must approve this.

E. County's present stance.

1. CDBG Grants usually go to predominantly moderate--low income projects and other government infrastructure needs.
2. Multnomah County has no overall plan for economic development in the Gorge or in Mid- and East County. Board approval for the creation of a Columbia Gorge National Scenic Area comprehensive plan is needed.
3. Multnomah County is the only county included in the Gorge Act which does not actively promote economic development in the legislated area. The Columbia Gorge Act does not recognize any designated urban area in the Gorge area of Multnomah County. That limits the Springdale/Corbett, Bridal Veil, Dodson, Troutdale, Warrendale areas' ability to develop what is allowable under the Gorge Act because there is not a legal entity other than the County to collect and dispense funds pursuant to the act.

II. Board of County Commissioners decisions on what actions they will support. Casterline's comments on creating a constructive and comprehensive concept for completion in century 21 within the Columbia Gorge and the Central and East Multnomah County communities. Discussion and direction.

A. Assume a pro-active role in economic development.

1. Establishing Task Forces, appointed by the Board of County Commissioners, where appropriate; e.g. Rockwood, East County, East County cities, Corbett/Bridal Veil, Dodson . . . for citizen discussion of economic needs and possibilities.
2. Focus on what people can do in economic development.
3. County assume role of a facilitator.
 - a. Bringing key people together to solve a problem or create and plan for economic development. My office.
 - b. Assist in development of funding packages.

BOARD RETREAT

What Should be the County's Role in Economic Development?

Page 3

4. Reinstate the EDAC as in Multnomah County code? ??
 5. Work actively with PDC, State EDD, CDD.
- B. Multnomah County and the Columbia Gorge Act -- action needed?
1. Work with the Federal government and local government to change Act making Corbett area an urban area or special designation in final management plan..
 - a. Would allow more opportunities in economic development and funding.
 2. Work with owner and operator of Bridal Veil Mill.
 - a. Either mill stays and operates as a mill or--
 - b. Mill moves -- Cascade Locks in Hood River County or Troutdale. County efforts for mill to stay in Multnomah County. ?
 - c. Site of mill if it moves developed as a staging area for Multnomah Falls, etc. and/or a scenic area theme tourist development. (Camp 18)
 - d. Bed and Breakfast village at Bridal Veil -- compatible with mill site development.
 - e. Work on funding for Bridal Veil.
- C. What is going on now in Gorge?
1. Working with a consortium of the six counties to promote interpretive services to the National Scenic Area.
 2. Working with all six counties on emergency planning a management in the Gorge.
 3. Monitoring the amount of land taken off tax rolls and its impact on Gorge area schools and the reduction in timber revenues. Try to replace lost tax revenues for schools with increase in economic development. Legislative action need on timber receipts issue.
 4. Working with smaller cities and the Chamber of Commerce to develop and promote a variety of tourist-related businesses and funding for them. Big and small enterprises. Working with legislative finance counsel, Senator Otto, Representative Kotulski.

BOARD RETREAT

What Should be the County's Role in Economic Development?

Page 4

Unless Multnomah County acts positively and readily, the Gorge area will become a further depressed area, schools will have a crisis on their hands, and property taxes will increase to absorb the reduction in property from the tax rolls.

Multnomah County should protect the right to a livelihood for those living and working in the Gorge by providing assistance in facilitating access to information on opportunities for allowable economic development, funding sources, and stability for the schools.

What is needed most is a planning effort with all six counties in the Gorge to create a regional strategy.

A regional approach is a must if the Gorge is to realize an enhanced scenic experience for tourists and all of us. We do not want over-development or underdevelopment. This balance can be achieved through cooperation, studying the area, evaluation, planning, etc. all within the parameters of the Act.

Ideally, I think the County should budget for planning and staff in this area. We have received \$20,000 from the State which went to Multnomah County Planning Dept. for staff work in the Gorge. We should agree to assist, support, encourage, work toward dialogues with citizens, governments, funders, etc. Staff time is needed both in planning and my office.

In the long run, it means satisfied citizens, a beautiful county, and more money for all of us.

0821L

scl

June 17, 1988

ECONOMIC DEVELOPMENT ADVISORY COMMISSION

11.08.010 Definitions. As used in this chapter, unless the context requires otherwise:

- (A) "Board" means the Multnomah County Board of Commissioners.
- (B) "Commission" means the Economic Development Advisory Commission established in MCC 11.08.020.
- (C) "DED" means the Oregon Department of Economic Development.
- (D) "Director" means the Planning Manager of Multnomah County, Department of Environmental Services.
- (E) "EDAC" means the Multnomah County Economic Development Advisory Commission.
- (F) "EDC" means the Oregon Economic Development Commission.
- (G) "Indirect increase in employment" means jobs created outside the applicant's business and in the local area as a result of the additional economic activity generated from the Economic Development Revenue Bond project.
- (H) "Statewide Planning Goals" means the Oregon Land Conservation and Development Commission (LCDC) planning goals. [Ord. 138 s. 2 (1977); Ord. 282 s. 3 (1981)]

11.08.015 Policy and purpose. The Board of County Commissioners finds that there is a need to develop coordinated long range objectives, strategies, work programs and projects designed to maintain a stable and diversified local economy, create new and continuous employment opportunities, attract private capital investment, coordinate economic development with land use and other planning undertaken by the county and other cities within the county and coordinate the activities of public agencies with private industries and organizations to maximize the positive impacts of economic development and that planning, coordination and implementation of economic development can best be achieved through the creation and operation of a county-wide Economic Development Advisory Commission. [Ord. 138 s. 1 (1977); Ord. 479 s. 1 (1985)]

11.08.020 Economic Development Advisory Commission. The Economic Development Advisory Commission is established as the economic development advisory body to the board. [Ord. 138 s. 3 (1977)]

11.08.030 Powers and duties of the commission.

(A) The commission shall:

(1) Have such powers and duties as are required for eligibility for technical and financial assistance from the U.S. Department of Commerce, Economic Development Administration (EDA), under the Public Works Economic Development Act of 1965, 42 U.S.C. sec. 3121, as amended, including, but not limited to.

(a) Preparation and recommendation to the board of an Overall Economic Development Plan for Multnomah County, coordinated with the jurisdictions Comprehensive Land Use Plan and updated and reported to the board annually;

(b) Selection and recommendation to the board of economic development programs and projects in Multnomah County eligible for Economic Development Administration assistance and implementation, monitoring, assessment and annual reports to the board on the status of those programs and projects; and

(c) Coordination of the activities of public agencies with private industries and organizations involved in economic development activities affecting the Overall Economic Development Plan for Multnomah County.

(2) Advise the board and the Multnomah County Planning Commission, on request, concerning economic development matters relating to the Comprehensive Plan or otherwise affecting unincorporated Multnomah County.

(3) Advise the appropriate city councils and planning commissions, on request, concerning economic development matters relating to the comprehensive plans or otherwise affecting that jurisdiction.

(4) Exercise such other powers and perform such other duties as may be given to the commission by law.

(B) The commission shall have no regulatory powers over the activities of private persons. Its function shall be solely advisory, coordinative and promotional.

[Ord. 138 s. 10 (1977); Ord. 479 s. 2 (1985)]

11.08.040 Membership.

(A) The commission shall consist of 15 members, who shall be selected for appointment as provided in MCC 11.08.040(B) and

and the action taken by the EDAC. The Board shall next receive testimony from the applicant and by other persons having a substantial interest in the application.

(D) At the conclusion of the hearing, the Board shall either approve or deny the application. The action shall be in the form of a resolution similar in form to that adopted by the EDAC. The decision shall promptly be filed with the Clerk of the Board, and mailed to the applicant.

(E) Rehearing by the Board shall be allowed, if at all, within ten business days after the decision has been filed with the Clerk of the Board. Rehearing shall be allowed only on motion of a Board member who voted with the majority in the initial decision, and shall not be available on motion of a party.
[Ord. 282 s. 8 (1981)]

11.08.250 EDAC and Board approval criteria for state economic development revenue bond projects.

(A) The project must be on the Oregon Economic Development Commission's eligible activity list. First priority in Multnomah County shall be given to the following types of projects:

- (1) Manufacturing or other industrial production;
- (2) Agricultural development or food processing and fisheries;
- (3) Development or improved utilization of natural resources;
- (4) Scientific testing including, but not limited to, medical, clinical and engineering testing services;
- (5) Convention and trade centers which serve a cross-section of the general public;
- (6) Product distribution facilities;
- (7) Transportation or warehousing;
- (8) Timber production or processing;
- (9) Construction of buildings for corporate headquarters.

(B) An application shall comply with:

(1) The Comprehensive Land Use Plan (or the Statewide Planning Goals if the plan has not been acknowledged by LCDC), the Economic Development Plan, and plan implementation ordinances of the unit of government having jurisdiction over the site in question; and

(2) Multnomah County's Overall Economic Development Plan and plan implementation ordinances; and

(3) Multnomah County's Equal Employment Opportunity as indicated in MCC 11.08.255;

(4) Multnomah County's Economic Development Revenue Bond as adopted by Ordinance No. 282 (MCC 11.08.010, 11.08.220 through 11.08.260).

(C) An applicant must assert, in writing, that Economic Development Revenue Bond financing is necessary for expansion or location in the County at this time (i.e., without such financing, the project would not be undertaken).

(D) An applicant must demonstrate that:

(1) The project will result in the creation of permanent employment opportunities, competitively available for all Multnomah County residents, or will prevent a substantial direct reduction in total employment by the applicant, in Multnomah County. "Permanent employment opportunities" are long-term, full time jobs, including such jobs in seasonal industries. Jobs related solely to the construction of the economic development revenue bond project shall not be considered permanent employment opportunities.

(2) A substantial proportion of new jobs created, excluding managerial/supervisory, shall be entry-level positions. Entry level positions are those requiring less than two years of training or work experience or combination thereof. The objective is that approximately 50 percent of new non-managerial/supervisory positions created will be entry level.

(3) The amount of bond issue per new or retained job shall be reasonable for the industry. The word "retained" refers to those jobs which, but for the Economic Development Revenue Bond, would be lost.

(4) The project will result in one of the following:

(a) More of the applicant's total production expenditures being made locally;

(b) More of the production processes taking place locally;

(F) A copy of the Board order shall be promptly sent by the Clerk of the Board to the applicant and Financial Program Manager of the Oregon Economic Development Department.

(G) Rehearing by the Board shall be allowed, if at all, within 10 business days after the decision has been filed with the Clerk of the Board. Rehearing shall be allowed only on motion of a Board member who voted with the majority in the initial decision, and shall not be available on motion of an applicant.
[Ord 408 s. 6 (1983)]

11.08.550 Criteria for approval of Oregon Business Development Fund Loans.

(A) The project must be on the Oregon Economic Development Department's eligible activity list. Eligible projects are to result in the development, promotion, or facilitation of one or more of the following activities:

- (1) Manufacturing or other industrial production;
- (2) Agricultural development or food processing;
- (3) Aquacultural development or seafood processing;
- (4) Development or improved utilization of natural resources;
- (5) Convention facilities and trade centers;
- (6) Tourist facilities other than retail or food service businesses;
- (7) Transportation or freight facilities; and
- (8) Other activities representing a new technology or type of economic enterprise that the Oregon Economic Development Commission determines is needed to diversify the economic base of an area other than office buildings, corporate headquarters, retail businesses, shopping centers, food service facilities.

(B) An application shall also comply with the Comprehensive Land Use Plan, the Overall Economic Development Plan and applicable plan implementation sections of this code.
[Ord. 408 s. 7 (1983)]

3

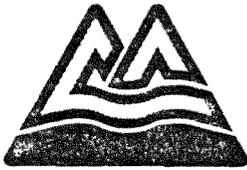


EXHIBIT I to 11.08.255

MULTNOMAH COUNTY OREGON

DIVISION OF PLANNING AND DEVELOPMENT
2115 S.E. MORRISON
PORTLAND, OREGON 97214
(503) 248-3591

DONALD E. CLARK
COUNTY EXECUTIVE

EQUAL EMPLOYMENT OPPORTUNITY AGREEMENT

The applicant agrees that in consideration of the issuance of Oregon Economic Development Revenue Bonds or inclusion in the Oregon Economic Lagging Area Program the applicant will not unlawfully discriminate against any employee or applicant for employment because of sex, age, race, creed, color, national origin, physical or mental handicap, or previous employment status with respect to the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship.

The applicant will send to each labor union or representative of workers with whom applicant has a bargaining agreement or other contract or understanding, a notice advising the labor union or workers' representative of the applicant's commitment to the Multnomah County Equal Employment Opportunity Agreement and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

The applicant for Oregon Economic Development Revenue Bonds and/or the Oregon Economic Lagging Area Tax Credit Program shall submit Form MC-DES 1 to the Oregon Economic Development Commission and Multnomah County Department of Environmental Services, Division of Planning and Development at the time of filing of application for determination of Oregon Industrial Revenue Bond and/or Economic Lagging Area project eligibility.

The applicant for Oregon Industrial Revenue Bonds shall submit Form MC-DES 2 to the Oregon Economic Development Commission and Multnomah County Department of Environmental Services, Division of Planning and Development, at the 6-month anniversary of final expenditure of Oregon Industrial Revenue Bond sale proceeds.

The applicant for the Oregon Economic Lagging Area Tax Credit Program shall submit Form MC-DES 2 to the Oregon Economic Development Commission and Multnomah County Department of Environmental Services, Division of Planning and Development, at the end of each fiscal year for which Oregon Economic Lagging Area Tax Credits are claimed.

The applicant for Oregon Economic Development Revenue Bond Program and/or the Oregon Economic Lagging Area Tax Credit Program who generates ten or more new positions as a result of the utilization of the above mentioned program(s) will submit form MC-DES 3 to the Oregon Economic Development Commission and Multnomah County Division of Planning and Development at the time of filing of the first MC-DES 2 form.



GLADYS McCoy, Multnomah County Chair

Room 134, County Courthouse
1021 S.W. Fourth Avenue
Portland, Oregon 97204
(503) 248-3308

January 29, 1988

John Bonham, Director
Community Planning and Development
U.S. Dept. of Housing & Urban Development
520 S.W. Sixth Avenue
Portland, OR 97204

RE: Preapplication Request for UDAG Eligibility Determination

Dear Mr. Bonham:

Multnomah County requests determination of eligibility prior to submission of a full application for federal Urban Development Action Grant funds.

Enclosed are Standard Form 424 and Part V in accordance with program regulations. This preapplication provides documentation and discussion of Multnomah County's performance in providing housing for persons of low-and-moderate income and providing equal opportunity in employment and housing for low-and-moderate income persons and members of minority groups.

We look forward to working with you on this program. If you need more information or we can assist your review of this material, please contact me or Cecile Pitts of the Community Development Division (248-5000).

Yours truly,

Gladys McCoy, Chair
Board of County Commissioners

CP:cak

Enclosures

D105/47711

An Equal Opportunity Employer

B

MEMORANDUM

DATE: February 12, 1988

TO:

FROM: Cecile Pitts

RE: Urban Development Action Grant

According to Regional Development Trends, published by the Metropolitan Services District, 20,200 jobs were lost to east Multnomah County between 1980 and 1985. One of our goals as County Government is to assist local businesses create or retain jobs in the east county area.

In December, Multnomah County received notice that it qualified for participation in the federal Urban Development Action Grant program (UDAG). The purpose of UDAG is to assist communities experiencing economic distress to stimulate economic development activity. An example of a local UDAG project is the Yamhill Market Place reconstruction.

UDAG projects are typically \$3-\$5 million. The program has a matching requirement of \$2.50 in private funds for every UDAG dollar invested. UDAG assistance is usually loans which can recycle into an on-going economic development program.

Multnomah County competes with the rest of the nation for these funds. It is a complicated process to develop a successful proposal. The County, through the Community Development Division, is actively working to use the UDAG to create jobs in the east county area.

Urban Development Action Grant

February 12, 1988

Page 2

The UDAG process includes two steps: preapplication and full application. The preapplication requests formal and full determination of eligibility. It focuses on demonstrated results in providing assisted housing and employment opportunities to persons of low-and-moderate income and members of minority groups.

Full applications to assist an economic development project are accepted three times a year.

Review criteria include: area need, number of jobs created for lower-income persons, the amount of private match, and need for the UDAG funds.

This program is a public/private partnership.

cak

Urban Development Action Grant

April 19, 1988

1. Multnomah County is applying for County eligibility under the federal Urban Development Action Grant program (UDAG).
2. The purpose of UDAG is to assist communities experiencing economic distress to stimulate economic development activities.
3. Communities are eligible for UDAG funds based on various distress factors such as population loss, unemployment, poverty, and age of housing.
4. Projects are reviewed in a nationwide competition. This review considers seriousness of distress and various project merits such as job creation and amount of leveraged funds. Competitive projects include motels, restaurants, office buildings and retail space. The Yamhill Market Place in Portland used some UDAG funding.
5. About one third of the UDAG funds are set aside for review on project merit only. Multnomah County does not rank high in the program distress factors so this is important to our projects.
6. Our most likely success will be from the project merit competition. Typically these are larger projects which are primarily financed with Industrial Revenue Bonds.

UDAG acts to waive the capital expenditure limitation of the Industrial Revenue board. An example project financing schedule is:

UDAG	750,000	(5%)
IRB	10,000,000	(67%)
Other	<u>4,250,000</u>	(28%)
	15,000,000	

7. UDAG is not the answer to economic development financing needs to East County communities, but it is a resource for larger projects. UDAG projects can be effective at highlighting the strengths and opportunities of this area.



*File
Economic Development
M.D.A.G.*

U.S. Department of Housing and Urban Development

Portland Office, Region X
520 Southwest Sixth Avenue
Portland, Oregon 97204-1596

MAY 3 1988

①
Good
News

Jane Burda, Program Manager
Multnomah County Community Development
2115 S.E. Morrison St.
Portland, OR 97214

Dear Ms. Burda:

SUBJECT: Urban Development Action Grant Program
Determination of Eligibility - Recertification

Your request for a Determination of Eligibility to participate in the Urban Development Action Grant (UDAG) program has been approved. Multnomah County has been determined eligible by demonstrating results in providing equal opportunity in housing and employment for low and moderate income persons and members of minority groups.

Employment

As of June 1987, the County workforce was comprised of 1,890 full-time employees, 220 (11.6 percent) of which were minorities. Table 16 of 1980 Census of General Population Characteristics reports that Multnomah County has an 11.6 percent minority population. Therefore, Multnomah County meets the "generally reflects test." The County also meets the "significant progress" test in that 99 (11.9 percent) minorities were employed out of a total 829 full-time permanent new hires in a two-year period from 1986 to 1987.

Since the County has a workforce of more than 100 persons, it must meet the test to show that minorities are reasonably represented throughout the workforce. Using EEO-4 data for 1987, it was computed that the average salary for all County employees was \$23,751.55. Minority employees earned an average salary of \$21,636.98, 91 percent of the overall salary. A government entity is found eligible if the minority average is at least 90 percent of the total workforce average salary. The County is eligible in employment.

Housing

The County reported a total of 1,150 housing units, 240 (20.8 percent) of which are occupied by minorities which exceeds the minority need identified in the Housing Assistance Plan (HAP) and representation in the population. The County is eligible in housing.

Part V of the preapplication is enclosed which reflects the minimum levels of distress currently met by your County, according to criteria published in the Federal Register.

To maintain your eligibility, the City must request recertification annually, prior to November 30 of each year. When requesting recertification, submit your latest EEO-4 form or comparable data on employment and recent information on City's efforts and results in providing equal opportunity in employment and housing.

If you have any questions or need assistance during your full project application, please contact Joy Hirl, Economic Development Specialist, at (503) 294-7012.

Very sincerely yours,


for R. C. Brinck
Manager

Enclosure



MULTNOMAH COUNTY OREGON

DIVISION OF PLANNING & DEVELOPMENT/2115 S.E. MORRISON/PORTLAND, OREGON 97214

May 27, 1988

M E M O R A N D U M

To: Chris Moir and Polly Casterline

From: Lorna Stickel, *LS*

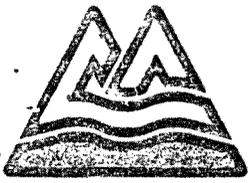
Subject: Corbett Area and Columbia Gorge

I offer the following comments in regard to the Memo of April 8, 1988, about economies and the Corbett Area as they are affected by the Columbia Gorge NSA.

I. The Current Situation.

In general I feel that the "economic" problems of the Corbett area must be first put into their proper perspective and second must be carefully addressed within the proper framework. The County has been a strong supporter of the Gorge legislation as the benefit to the larger population for recreation and economic spinoffs are substantial. The County has had restrictive planning designations in the area east of the Sandy since 1977 when the area was designated large lot zoning for agriculture and forest with very small areas for rural residential and rural centers. The purpose of this planning was to discourage growth and uses that more appropriately belong inside the Urban Growth Boundary. Some limited opportunities were left open for rural services for the rural population and some tourist commercial development. A provision was made in 1977 to allow cottage industry only in rural centers. The growth in Corbett has been primarily in the area of single family homes, with very few new businesses locating or even inquiring about locating there. The employment base in the Corbett area is very small. Almost all uses except single family require special land use approvals.

Some information is known about the area east of the Sandy as a whole because it has been one census tract since at least the 1950 Census. The population has grown as follows:



MULTNOMAH COUNTY OREGON

DIVISION OF PLANNING & DEVELOPMENT/2115 S.E. MORRISON/PORTLAND, OREGON 97214

May 27, 1988

M E M O R A N D U M

To: Chris Moir

From: Lorna Stickel, *LS*

Subject: Gorge Economic Development Paper

Attached is the economic development paper as promised. If you have no strong objections to the thrust of this paper, I would recommend titling it "Thoughts on Economic Development Potentials for Multnomah County East of the Sandy River" by the Multnomah County Division of Planning and sending it on to the following:

- 1). ERA Consultants
- 2). Friends of the Gorge
- 3). Board of County Commissioners
- 4). Pam Christian, Troutdale
- 5). Chris Rogers
- 6). Pat Brothers, President of NMCCA
- 7). Ted Davenport
- 8). Isabelle Ryan
- 9). Thersa Kasner

A cover letter could be sent from your office calling for the first gathering of this group. I have assigned Gary Clifford on the staff to cover the economic development assessment on the Gorge. Mark Hess is covering the recreation assessment. You might copy me at home on the meeting dates - I could start to attend after about mid-July, just to keep my oar in the water.

Good Luck

LS:sec/1132M

<u>1950</u>	<u>1960</u>	<u>1970</u>	<u>1980</u>	<u>1985 Est.</u>
2,300	2,428	2,729	3,633	3,796

The growth pattern indicates that the area had a fairly steady rural population prior to 1970, but at that point as rural lifestyles became more popular and incomes increased in the metropolitan area, the growth was much greater after 1970. Growth levels were predicted by a 1974 Crown Point Land Use Study to be as follows for 1990: High, 4,200; Medium, 3,700; Low, 3,200. Obviously by the time the 1990 Census is done two years from now, the population will be in the high range as predicted in 1974. This is a little surprising considering that in 1974 the restrictive natural resource zoning program was not factored in to the estimate. The area has an average of 3.04 people/dwelling unit and a medium value for housing (as of 1980) of \$73,700 which is much above the County average. The household income levels were shown in the 1980 census as follows:

\$0 - 1,000	148	13%
\$10,000 - 20,000	381	33%
\$20,000 - 30,000	326	28%
\$30,000 +	294	26%

The average income level for Corbett is \$21,354 whereas the County average was \$15,082. The education levels in Corbett in 1980 were:

Less than HS	411	17%
HS	999	42%
College (1-3 yrs)	573	24%
Grads +	<u>376</u>	16%
	2,359	

From this information some things are fairly clear about the Corbett area. The population is small, but it has grown considerably since 1970. The housing stock is above average in value, overall, as are the income levels, the education levels and the family size than the County-wide population.

The County's 1988 rural land use inventory indicates that the Columbia Gorge National Scenic Area (NSA) has 642 residences located in the Multnomah County part, excluding the Troutdale City limits. If one uses the average of 3.04 people/dwelling unit that means a potential population inside the NSA of 1,952 or about 51% of the population east of the Sandy River (excluding Troutdale). The land use inventory also indicates that there are the following types of other uses: 14 commercial/office uses, 6 industrial, 21 public service, and 2 others. Within the two rural centers that have more than one use, other than residential, the uses are as follows:

Corbett

Public Service

Fire Station, Post Office, 3 Schools,
2 Utility Offices. (7 Uses)

Commercial/Office

Hardware store, grocery store, floral and gift store, rv park and campground, Insurance office, Corbett Electronics, 1 bed and breakfast (proposed), 2 Real Estate office, (8 uses).

Industrial

Coyote Archery, Willamette Lab, Columbia Lab, GB Industries, Norvmolds (5 Uses)

Norv's mold

Bridal Veil

Public Service - Post Office

Commercial - Restaurant and Store

Industrial - Lumber Company

Non-Profit Private - Convent and Cemetery

Other economic uses outside these rural centers do exist in the Multnomah County NSA area, but they are limited. There are the Corbett Station uses of a restaurant (Royal Chinook Inn) and store, two non-profit camp and retreat centers, private boat ramp (Dodson), Multnomah Falls Lodge, and some fruit stands and a new bed and breakfast (proposed).

The Corbett area within the NSA is basically a bedroom community or a rural residential community. Although the 1980 census data does not appear to be available on the place of work, it is reasonable to assume that a great majority of the jobs held by people living in Corbett are within the Portland Metropolitan Urban Growth Boundary, which is less than 30 minutes away for most people. The Corbett area is not isolated from the State's major employment sector; as are other parts of the Gorge. In fact, the major economic impact of recreational aspects of the Gorge has been and will continue to be felt by the Portland area. Corbett has suffered from this situation of residential growth, a lot of public land and few economic development opportunities within the area in that they have a small tax base for their school system, and high demands for service levels. This situation is not unlike that in Orient, west of the West Hills, Sandy and on Sauvie Island. However, these other districts have chosen to solve their low tax base by using a school system that does not try to provide the entire K-High School program. They either share facilities with other districts (particularly high school seniors) or they have merged with larger districts. The County did provide in its plan for some economic diversity opportunity in the Rural Centers by allowing cottage industries up to 20 employees, or 40 for expansion of an existing use. The current examination of Oregon Planning Goals and Policy and what urban uses should be allowed outside Urban Growth Boundaries may or may not alter this situation. The issue in Corbett is whether the tax base situation should dictate uses that more legitimately belong inside Urban Growth Boundaries or whether there are other opportunities to solve the taxing problems while retaining the resource character of the area and the protection goal of the NSA Act.

II. Economic Development Opportunities in the NSA.

From a theoretical planning perspective and based upon past County policy, the provision of "jobs or businesses" in rural areas in the area east of the Sandy should not try to imitate a mini-urban area. When the population has ample job opportunities so close by, the need cannot be justified on that basis. So far, the major basis for encouraging industrial use has been the tax base problem and personal desire, not the attributes of the location, market area, labor pool access, or adequate public services to attract industry. The success of locating "cottage industries" over the last ten years is indicative of this. Providing the opportunity does not make it happen. In the NSA legislation, new industrial uses outside of urban areas is prohibited. This cuts out the ability to locate new cottage industries in the rural centers of Corbett, Bridal Veil, Dodson and Warrendale. The impact of this prohibition is difficult to judge, since little activity has occurred to locate these uses before the Gorge Act came into place.

The primary question is whether it is now appropriate to encourage more industrial uses to locate in Corbett, Bridal Veil, Dodson or Warrendale. It is clear that they cannot locate under the current Gorge legislation. The alternatives to the prohibition is to take one or more of these communities out of the NSA boundary, either by defining them as urban under the Act or moving the boundary so as to exclude them (the latter is really only an alternative for Corbett). Doing either of these things will then subject the communities to Oregon Planning Goals which are not clear at this point as to the status of non-resource industrial uses outside Urban Growth Boundaries. It is just as likely that the Oregon Goals and Guidelines will be interpreted very soon to restrict the amount of growth appropriate for rural areas. It may be more realistic to evaluate what is reasonable for economic development within the Gorge NSA Act and make attempts to further that type of development in the Management Plan. In any case, it is not proper planning to consider the "economic development" of this area as if it were independent of the urban area to the west. It may also be that other solutions to the taxing issue need to be explored at the local level. It would take some substantial change in the residential to industrial/commercial land mix to affect the mill rate in any substantial way.

Other rural areas of Multnomah^{MA} County which are in similar situations of land base (e.g., Sauvie Island, West Hills, Orient and Bonneville) have much lower rates due to different structuring of their district services to fit the limitations of a rural environment.

What then would be the Corbett opportunities, assuming that the NSA boundary remains as it is. One option, of course, is to try and pursue cottage industry in the Springdale area, which is outside the NSA, and is in an RC designation. Until any State changes are required, Springdale can continue to have zoning that allows these uses. Beyond this, the area inside the NSA should concentrate on those uses which do not affect the first purpose of the Gorge Act and which achieve the second purpose to support the economy. This means that in some locations there would be little or no effect on Gorge scenic, cultural, recreational, and natural resources and that some growth could be allowed. The Corbett rural center itself would seem to be a low impact area with the exception of the Old Columbia River Highway resource. Uses which are allowed in the County RC (except for industrial uses) should be allowed there. Other uses outside the RC zone which are in low impact areas of the General Management areas should also be allowed if they support the resource lands or are allowed under the Zoning Code.

*3 letters
on line*

The unknown, however, is the extent to which the existence of the Gorge resources and the Scenic Area itself will promote uses that otherwise would not be feasible. Recreation based economies often are seasonal by nature. Those that can successfully extend their seasons often have a climate conducive to year-around uses, or they have multiple attractions that draw on different market sectors (such as skiing in winter and hiking, camping, fishing and boating in the summer). The Gorge does have some limitations in this area, primarily due to climate and the type of uses now most in demand or use there. However, the Corbett area has the advantage of being proximate to the largest visitation source in the Gorge, which is the Portland/Vancouver area. It may be possible that season of use could be extended if uses were located in Corbett or at Bridal Veil that would draw visitors and provide under cover activities. The one aspect of visitation to these two centers in particular that could be enhanced is the visual aspect of these communities. The development of an architectural theme, better delineated road areas, landscaping, etc. could increase the use of these centers beyond places that are largely driven through to get to places elsewhere. The increase in visitor stops at Corbett does not have to be accomplished at the expense of more traffic continuing east on the Columbia Highway during peak periods, simply cashing in on those trips already passing through. However, in the off-season these new uses could serve to increase visitation traffic at the lower count times. The types of uses which Corbett could look to would include lodging, camping, restaurants, crafts sales and gifts, tied in with summer agricultural sales for specialty items, equipment rental, and Old Highway interpretation. The theme of the Old Highway could and should be worked in to any theme developed for this site.

There are also other historic structures located along the Old Highway which have development potential for some tourist commercial areas so long as these are not altered from their historic status. There may be the potential for more retreat centers along the Menucha or Crestview model. Bridal Veil's potentials are somewhat limited by the access limits off I-84 and the impacts to traffic flow on the Old Highway. The mill site should be studied for its potential to tie in to recreation uses and support the economy if that site ceases to be used for mill purposes. The areas there could easily be a combination of public ones (tied in to the Falls) and private. The potential is great here to improve the appearance of this area and to support new economic use of the site.

A couple of opportunities for the Corbett area are to utilize a co-op approach, which is used to some extent by the Friends of Vista House in their gift shop. This could be done in the area of specialty agricultural produce. Although the agricultural base of the area east of the Sandy is somewhat limited, there are a number of hobby farms there where specialty products either are or could be grown. Currently blueberries and raspberries are grown and sold. A co-op approach with a single outlet in Corbett could be utilized to sell these products and other agricultural products from the region to again take advantage of the traffic already on the Highway. Crafts sales seem to be an untapped market also and this could be done through one commercial outlet in Corbett, supported by true "cottage industry" creation of the products in home.

Within the special management areas new economic development opportunities are limited to those allowed by the recreation assessment. These are being studied as a part of the economic assessment and will be added to the recreation assessment. The Bridal Veil mill site falls into this category. The SMA areas in Multnomah County are largely public and here the main development would largely be public facilities, although concessionaire arrangements currently take place at Multnomah Falls, one of the largest employers in the area, and at Vista House with volunteer. The one area of potential is the east Sandy River Delta which is privately owned. There are potentials here for much greater public use of this site to spread use from areas along the Sandy and Columbia that are too heavily used currently. Private sector use of this site would be possible, but structural improvements would have to be carefully planned due to the flood plain that covers much of the site. Camping in this area is a possibility, where it could not be seen from the highway or rivers, but be close to all these amenities if waste disposal can be done safely. This is also an area with great potential for increased river access, which is limited in much of the rest of the Multnomah County stretch, until one reaches the Dodson/Warrendale area. The Dodson/Warrendale Special Purchase Unit is another place where increased public or private recreation facilities could be planned because of good highway access and a large area of lesser slope land. The difficulty in this area is the conflict between residential uses and public uses in close proximity at this site. Potentials for this area do exist and they should be studied once the public purchase extent is better known. The area has river access (no beaches), hiking and camping potentials.

One additional private sector initiative that could be taken by Corbett area business people, potential businesses, and volunteers would be to form a tourism alliance. This group could provide the networking often needed to sell the area's businesses and public attractions. This could result in brochures, driving tours, tape tours, maps and event/tour scheduling and other tie-ins to the Portland convention trade.

III. Public Sector Actions.

There are some public sector initiatives that could be taken to enhance the economy of the area east of the Sandy. These things include the following:

- A). The development of an orientation center at the area selected by Multnomah County. This could be the entry point that alerts travellers to what is ahead and then aids in their distribution.
- B). A traffic management study of the Old Columbia River Highway. This should include the development of adequate signage for the Highway.
- C). Integration of Gorge marketing through the tourism bureaus of Oregon and Washington.
- D). The assistance of the County with the Corbett (east of the Sandy) community to develop some themes for economic enhancement within the purposes of the Columbia Gorge NSA Act.

To detail the latter point the County could recommend that a coalition of people be formed from NEMCA, Friends of the Gorge, the County's Gorge Commission representative, Board staff, Troutdale staff or Council, and Planning staff. This group should then work on the development of an economic theme from the Corbett area, within the limitations pointed out in this paper. Areas of concentration should be the Corbett and Bridal Veil rural centers and then on other areas where some tourism potential exists. It is recommended that this group concentrate on how economic development can be accomplished within the structure of the Gorge NSA Act and its funding opportunities. The County can provide some very limited funds for postage, printing, typing and consultant development of architectural themes for the town sites or other potential use areas. These funds would be budgeted by the Planning Division and through the Board. In addition, the Planning Division has also budgeted to complete an updated land use survey in the Gorge and an analysis of what development potentials exist under the current zoning scheme for the NSA in the County to provide some comparisons for the Management Plan analysis and land use designations.

LS:sec/1132M

Polly

8 July 1988

Mr. Richard Benner
Columbia Gorge Bi-State Commission
P.O. Box 730
White Salmon, WA 98672

Dear Mr. Benner:

Following extensive conversations with East Multnomah County constituents; Multnomah County Commissioner, Polly Casterline; Bi-State Commissioner, Kris Olson Rogers; Multnomah County Planning Director, Lorna Stickel; I feel the need to register concern and regret concerning Economic Research Associate's (ERA) Economic Opportunity Study. Multnomah and Clark Counties were all but omitted from the draft presented to the Economic Development Sub-Committee on Thursday, July 7, 1988, in Hood River.

If we are going to be successful at promoting the Columbia Gorge National Scenic Area as a total REGION, we need to do so now.

ERA did an excellent job in identifying the economic potential of Hood River, Wasco, Skamania and Klickitat Counties and the CRGNSA urban areas. However, major impacts of Public Law 99-663 fall on residents of Northeast Multnomah County.

All of the assessments need to include all six counties and their "special" circumstances. The draft prepared by ERA is unacceptable for Multnomah County purposes. Suggestions were made at yesterday's meeting to "footnote" Clark and Multnomah County in the body of the document. This does not change the fact that great pockets of information are missing that would benefit the Bi-State Commission in their decision-making process.

Some omissions from the document are:

Accurate figures for agricultural and forest lands ie: Reynolds property/
cattle ranching

Multnomah County (within the CGNSA)
contains no designated urban area

Details of the property tax (schools)
Problems and possible solutions

Accurate perception of the cost of
living in East Multnomah County (as
well as the rest of the CRGNSA)

Accurate demographic figures and
explanation

Failure to identify Bridal Veil as a
"rural center (RC Rural Center
zoning)" who is significant in the area
demographics

Inaccurate industry and light industry
figures and replacement problems and
costs

Failure to mention area amenities--
international airports and small craft
airports, recreational rentals, etc.

Identification of the percentage of the
current 3.8 million visitors to the NSA
that only visited Multnomah County

Importance of Multnomah and Clark
Counties as a Staging Area for the rest
of the CRGNSA

No mention of the economic impact of
properties purchased by the U.S.F.S.

The economic impact of the new Portland
Convention Center

Above, again, are only a few of the significant omissions.

A possibility that you have mentioned to Kris Rogers is that
the Corbett area would be amenable to a special designation in
the Final Plan as a "Commercial Center". Presently, the
absence of Corbett's having an "Urban Area" status is
problematic; and therefore, would act as a vehicle to handle
some of this community's problems. This is the sort of issue
that should have been addressed in the assessment.

An extreme area of concern to us is the lack of attention to the possibilities and limitations of the Bridal Veil Area and the mill--as well as some succinct economic possibilities for the Corbett/Troutdale area.

Lorna Stickel assures me that there was enough information from her office to establish a credible assessment of the East Multnomah County/National Scenic Area. It is my assumption that ERA was provided with a considerable amount of raw data from Multnomah County Planning, area residents and business people, as well as information from other assessments that have been completed.

I have enclosed Lorna's Economic Opportunity Paper and the Davenport/Ryan Northeast Multnomah County Tourist Scenic Interface. (Please see highlighted areas.)

Sincerely,

Chris Moir
Multnomah County

0849L -3-

cc: Ray Matthew
Kris Olson Rogers
Lorna Stickel
Ted Davenport
Norman Baker, ERA

Enclosures 2

*file
Gorge*

GORGE SAFETY COMMITTEE

Meeting Minutes: June 29, 1988

Meeting commenced 1:30pm.

Ass't. Chief Semrad introduced self, provided brief overview of purpose for meeting. Impact of Gorge visitors on the Emergency Response Agencies has not been addressed by Gorge Commission in their recent studies. Although the Commission does not have responsibility for safety planning, the Emergency Response community should make its concerns known to the Commission as it begins to formulate a Management Plan for the Gorge.

Semrad recommended the agencies collectively examine their respective programs and see where additional planning is needed. Ability to easily cross jurisdictional boundaries for emergency support could be a problem. Need for additional funding may also surface. Semrad recommends developing a "Gorge Safety Committee" and having it present its findings to the Gorge Commission, with recommendations to the Management Plan.

All members introduced themselves, stating organizations they represent and purpose for being at meeting.

Pat Brothers asked what the potential impact of visitors was. Kris Olson-Rogers (Gorge Commission) said it could be as high as four times the resident population. Semrad felt it could be 500,000 plus visitors. Dan Troglin (Army Corps of Engineers) said they have 1.5 million visitors annually at the Bonneville Dam.

Sheriff Blaisdell (Skamania County) felt bi-state agreements were important and should have legislative sanction. Chris Moir (Multnomah County) said softening the jurisdictional boundaries for ease of emergency assistance was a goal. Gorge Area should be treated as region.

Sheriff Labrousse (Wasco County) encouraged group to keep program at local level. Federal agencies could assist in funding, but the planning is a local responsibility. Blaisdell said responsibility for search & rescue and "traffic management" lies with the existing law enforcement agencies.

Semrad recommended a steering committee be developed to oversee the planning program and act as executive officers to the Gorge Safety Committee. Specifically, the steering committee will be responsible to assist sub-committees with direction, consolidate reports, seek solutions to shortfalls identified in safety plan, present Gorge Commission with a report and request appropriate assistance as a unified, collective group, and provide past incident analysis of significant events in the Gorge.

Steering Committee Membership -

Dan Semrad (The Dalles Fire Department)
Pat Brothers (Northeast Mult. County community Ass'n.)
Lt. Russell Thiess (Oregon State Police)
Art Labrousse (Wasco County Sheriff)
Penny Malmquist (Multnomah County Emergency Services)
Don Brashers (Klickitat Fire Commissioner)
Ray Blaisdell (Skamania County Sheriff)
Ed Murray (Washington State Patrol)
Joanne Fairchild (Life Flight)

Three committees were proposed: 1) Water, 2) Transportation, 3) Dispersed Recreation/Wildland.

Watersport issues:

Rescue, Emergency Medical Services support, Training and Education programs for users, Training and Education programs for response personnel, jurisdictional constraints, major incidents planning, law enforcement.

Committee:

Brian McCavitt (Army Corps of Engineers)
Clay Piper (Wasco Co. S.O.)
Mike Grossie (Skamania Co. S.O.)
Curt Hanson (Oregon Water Safety Council)
Tom Davis (Mult. Co. EM)
Pete Kingsley (Skyline Hospital)
Dennis Mason (Clark/Skamania Dive Team)

Transportation Issues:

Law Enforcement (traffic management/violations), jurisdictional response, training/education, Hazmat and major incidents response, Emergency Medical and Rescue.

Committee:

Joanne Fairchild (Life Flight)
Tom Davis (Mult. Co. EM)
Hugh Holte (Wasco Co. EM)
Richard Morgan (OSP)
Gary Crow (Wasco Co. S.O.)
Kurt Rorbacher (Skyline Hospital)
Pete Bentley (White Salmon FD)

Dispersed Recreation/Wildland Issues:

Search & Rescue, Fire suppression, Law enforcement, Major incident planning, multi-jurisdiction response, Emergency Medical Support

Committee:

Jim Thacker (Mult. Co. S.O.)
Nancy Sourek (Skamania Co. S.O.)
Terry Skattergood (Wasco Co. S.O.)
Pete Bond (OSP)
Mike Christie (Portland Mountain Rescue)
Major Hyde (304th Air Rescue)
Chuck Bowman (Mult. Co. Fire Dist.#14)

Committees were charged with setting a meeting date to begin work on their topic. Committees should report back to entire Gorge Safety Committee at its Sept. meeting.

Next entire Gorge Safety Meeting is set for September 21, 1988, at 1:30pm. The place will be announced. =

Watersport meeting - August 11, 1988, 10:00AM Bonneville Project Office, Bonneville, OR

Dispersed recreation/Wildland meeting - August 2, 1988, 10:00am, Multnomah Co. S.O. (122nd & Glisan)

Transportation meeting - August 2, 1988, 1:00pm, White Salmon Fire Dept. white Salmon, WA

Meeting adjourned at 3:45pm

Also enclosed for your information is a memo from Mark Deutchman, MD.

Subject: Impact of National Scenic Area on Emergency Medical Services in the Columbia Gorge

To: Gorge ~~Council~~ ^{Safety Committee} meeting 6/29/88

From: Mark Deutchman M.D. White Salmon WA.
Klickitat County Medical Program Director
Physician Advisor to Skyline Ambulance Service
Managing Partner, Mid-Columbia Family Physicians P.S.

The following is an incomplete list of concerns about how the National Scenic Area may impact EMS in the Gorge from the viewpoint of Klickitat county. Advance notice for this meeting was too short to bring the subject to the attention of our entire EMS council which would also include fire and law enforcement but these agencies should also be polled.

- 1) Columbia River - Increased watersport users especially boardsailors access the river from many unimproved sites. If such persons get injured they may be a long way from a means to call for help and may be unable to describe their location. Unimproved access sites lead to highway and railroad hazards as parking space is limited or nonexistent. A lack of toilet facilities and trash disposal sites is a sanitation problem. Development of boardsailing launch sites may create a conflict with sportfishermen and treaty indian fishing access.
- 2) White Salmon River - The WS river is increasingly used for rafting and kayaking. Unprepared rafters are surprised by the low year-round water temperature and easily become hypothermic if swamped. No system is in place for individuals to locate their position along the river to guide emergency responders to a given site (eg: mile markers). No good system of designation of access sites to the river (which may involve crossing private land) is available to emergency response teams. Emergency responders may lack certain rescue tools and skills (rock climbing, ropes, baskets) to effect rescue out of the WS river gorge.
- 3) Klickitat River - Identical concerns as for WS river. This river has claimed many lives over the years.
- 4) General comment: Although the Gorge is beautiful its waterways and forests include many isolated areas and unforgiving conditions. In particular the cold water and high cliffs make rescue difficult and medical help challenging or impossible. Visitors to the Gorge would be well-served to be strongly cautioned about these hazards and to exercise preventive measures rather than count on rescue.



**Prepared by
The Portland Office of Transportation**

**Earl Blumenaur
Commissioner of Public Works**

**Felicia Trader
Director, Portland Office of Transportation**

Patricia Bugas-Schramm, Project Manager

Marlene J. Farnum, Project Manager

Samy Fouts, Graphics

Emily Wied, Graphics

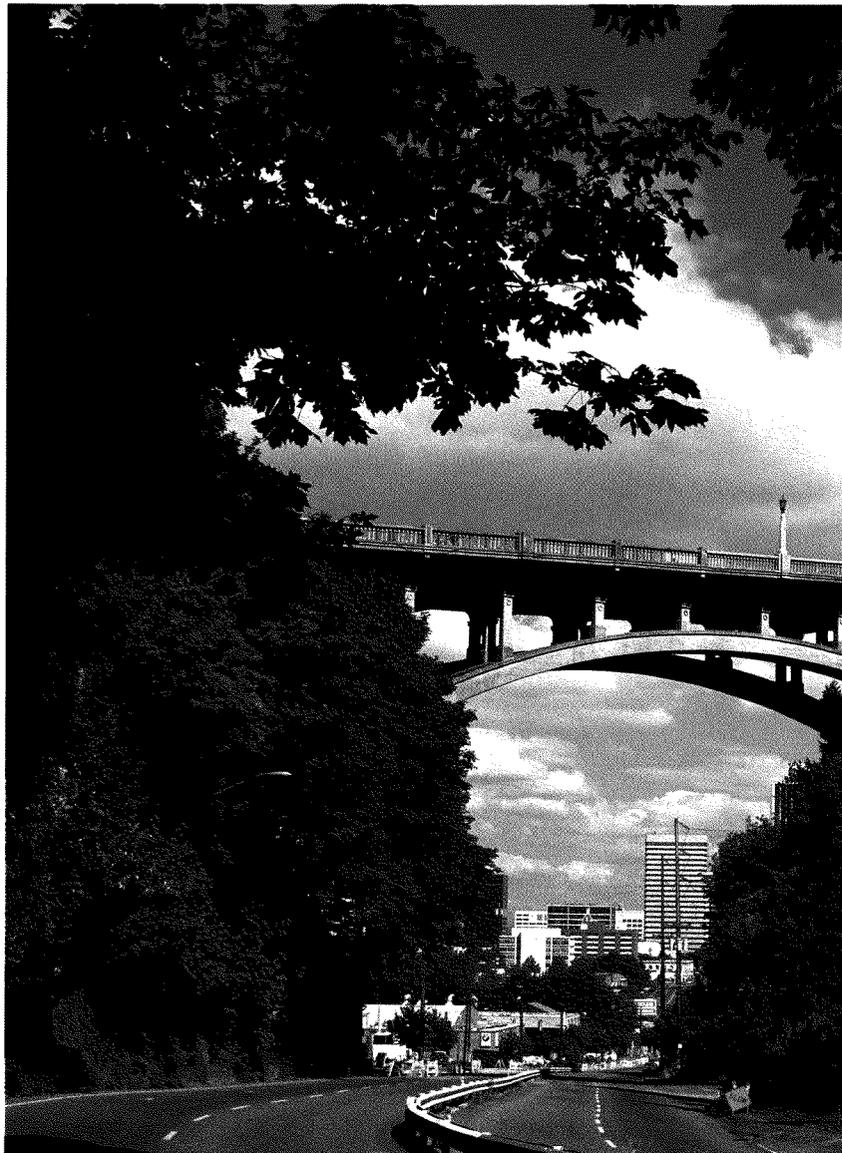
Donna Beck, Word Processor



**PORTLAND'S TRANSPORTATION SYSTEM:
STATUS AND CONDITION REPORT**



**JULY 1988
TECHNICAL APPENDIX**



*A view of the Vista Bridge looking east toward downtown Portland.
Photo by Larry Jones.*

PORTLAND'S TRANSPORTATION SYSTEM: STATUS AND CONDITION REPORT

**JULY 1988
TECHNICAL APPENDIX**

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INTRODUCTION

The July 1988 Status and Condition of Portland's Transportation System Report is based on the technical information contained in this appendix. All analyses of data can be found in the report. The appendix serves two (2) purposes: first, to provide the back-up information for the summary statements in the report and second, to compile information which assesses the repair and preservation needs of Portland's transportation system. Information was gathered from the four (4) bureaus of the Portland Office of Transportation (PDOT).

ATTACHMENT 1
BICYCLE CORRIDOR NETWORK

The original 22 corridor network is composed of:

North Portland Corridor
Albina Corridor*
Upper Northeast Corridor*
Lower Northeast Corridor
Central Corridor*
Upper Southeast Corridor*
Lower Southeast Corridor*
Reed-Hawthorne Corridor*
Inner North-South Corridor
Mid North-South Corridor
Outer North-South Corridor
Northwest Corridor
Washington Park Corridor
Council Crest Corridor
Beaverton-Hillsdale Corridor*
Barbur Corridor
Far Southwest Corridor
Boones Ferry Corridor
West North-South Corridor
Greenway North Corridor
Greenway Southeast Corridor
Greenway West Corridor*

*Indicates corridor that has been either partially or totally completed.

Source: City of Portland, Bureau of Transportation Engineering,
7/88.

Table 1
HISTORICAL COMPARISON OF
IMPROVED STREETS BY TYPE OF SURFACE
(In Lane Miles)

TYPE	APRIL 1, 1984 *		JULY 1, 1988	
	NUMBER	PERCENT	NUMBER	PERCENT
ARTERIALS				
Hard Surface	673	99	1,028	99
Oil Gravel	3	1	9	1
SUBTOTAL	676	100%	1,037	100%
LOCAL				
Hard Surface	1,662	88	2,094	88
Oil Gravel	228	12	298	12
SUBTOTAL	1,890	100%	2,392	100%
ALL STREETS				
Hard Surface	2,335	91	3,122	91
Oil Gravel	231	9	307	9
SUBTOTAL	2,566	100%	3,429	100%
<p>*Before implementation of a 1983 intergovernmental agreement with Multnomah County that transferred the responsibility of county roads within the city to the City of Portland and that agreed the city would annex parts of urban, unincorporated east Multnomah County.</p>				

Source: City of Portland, Bureau of Maintenance, 7/88.

Table 2
IMPROVED STREETS
TOTAL BACKLOG VALUE
1988-89

MILES	ACTIVITY	ESTIMATED COST
80.2	Major Rehabilitation/Reconstruction	\$ 18,045,000
77.5	Structural Overlay	5,425,000
135.7	Preservation Overlay	8,142,000
156.1	Slurry Seal	2,497,600
449.5 Miles		\$ 34,109,600

Source: City of Portland, Bureau of Maintenance, 7/88.

Table 3

FIVE YEAR BACKLOG PROJECTIONS

BACKLOG WITH ANNEXATION AND MID-COUNTY SEWER WORK:

YEAR	WORK PROGRAM		ANNX. MILES	ANNEXED BACKLOG		SEWER MILES	SEWER* BACKLOG		NORMAL DETERIORATION		ENDING MILES	ENDING BACKLOG	
	MILES	\$ MILL		MILES	\$ MILL		MILES	\$ MILL	MILES	\$ MILL		MILES	\$MILL
86/87											1,577	538	41.7
87/88	62	3.7	3	-	-	-	-	-	60	2.9	1,580	536	40.3
88/89	90	5.3	32	10	0.4	39	21	1.4	80	3.8	1,612	557	40.6
89/90	92	5.4	32	10	0.4	20	10	0.6	82	3.9	1,644	567	40.2
90/91	94	5.5	32	10	0.4	10	5	0.3	84	4.0	1,676	572	39.4
91/92	96	5.7	32	10	0.4	22	11	0.7	86	4.1	1,708	583	39.0

Page 5

BACKLOG DUE TO NORMAL DETERIORATION:

YEAR	WORK PROGRAM		NORMAL DETERIORATION		ENDING MILES	ENDING BACKLOG	
	MILES	\$ MILL	MILES	\$ MILL		MILES	\$ MILL
86/87					1,577	538	41.7
87/88	62	3.7	60	2.9	1,580	536	40.3
88/89	90	5.3	80	3.8	1,612	526	38.8
89/90	92	5.4	82	3.9	1,644	516	37.3
90/91	94	5.5	84	4.0	1,676	506	35.8
91/92	96	5.7	86	4.1	1,708	496	34.2

Source: City of Portland, Bureau of Maintenance, 7/88.

Table 4
MILES OF STREET SURFACE TREATMENT
(In 28' Width of Road Equivalent Mile)

SURFACE	FISCAL YEAR ACTUAL								
	79-80	80-81	81-82	*	83-84	**	85-86	86-87	87-88
HARD SURFACE									
Resurface	45.5	50.4	64.8	34.7	40.7	42.0	37.3	47.6	57.3
Slurry	8.5	12.6	13.3	13.8	11.7	14.2	14.3	14.6	16.4
Reconstruction ***	14.9	15.4	19.2	23.6	5.2	0.0	0.0	0.0	3.5
Subtotal	68.9	78.4	97.3	72.1	57.6	56.2	51.6	62.0	77.2
OIL/GRAVEL SURFACE	17.8	3.7	4.9	4.6	6.6	9.4	9.4	13.9	9.8
TOTAL	86.7	82.1	102.2	76.7	64.2	65.6	61.0	76.1	87.0
* Mid-year budget reduction. ** 189 Mi inventory increase due to county road transfer and annexation *** FAIX funding source									

Source: City of Portland, Bureau of Maintenance, 7/88.

Table 5

HISTORICAL COMPARISON OF UNIMPROVED STREETS

AREA	LANE MILES			
	1985	1986	1987	1988
Eastside	65.44	85.62	101.88	102.48
Westside	56.26	62.89	57.98	57.67
TOTAL	121.70	148.51	159.86	160.15

Source: City of Portland, Bureau of Maintenance, 7/88.

Table 6

**UNIMPROVED STREET INVENTORY AND
COST OF IMPROVING TO STANDARD**

East Side	51.24 miles X \$649,400/mile * =	33,275,256
West Side	28.84 miles X \$844,600/mile * =	24,354,041
TOTAL	80.07 miles	57,629,297

* ESTIMATED CONSTRUCTION COSTS		
	East Side	West Side
** Roadway	\$ 67 per lineal ft.	\$ 82 per lineal ft.
Drainage	25 per lineal ft.	38 per lineal ft.
Engineering	31 per lineal ft.	40 per lineal ft.
	\$123 per lineal ft.	\$160 per lineal ft.
	or \$649,400 per mi.	or \$ 844,600 per mi.
<p>* Unit costs were developed from an average of street improvement projects using current construction cost information for the respective areas.</p> <p>** Roadway and drainage costs are from contracted work. Engineering costs are from Bureau of Transportation Engineering work.</p>		

Source: City of Portland, Bureau of Transportation Engineering, Inflated by 4%, 7/88.

Table 7
IMPROVED STREETS
STREET AND DRAINAGE REPLACEMENT VALUE*
(1988 Inventory)

87-88 INVENTORY	LANE MILES	LINEAL MILES	DRAINAGE* VALUE	STREET VALUE	TOTAL VALUE	
					DOLLARS	PERCENT
Arterial	1,037	426	191,188,800	449,856,000	641,044,800	42
Curb	852	338	191,188,800	356,928,000	548,116,800	
No Curb**	185	88	0	92,928,000	92,928,000	
Local	2,392	1,196	202,076,160	694,636,800	896,712,960	58
Curb	1,971	986	202,076,160	572,668,800	774,744,960	
No Curb**	421	210	0	121,968,000	121,968,000	
TOTAL	3,429	1,622	393,264,960	1,144,492,800	1,537,757,760	100%

* Assumptions: Average cost of streets includes grading, paving, curbs, sidewalks, inlets, leads, preliminary engineering, construction engineering, and a 4 1/2% construction contingency. Does not include signs, landscaping, signals or street lights.

Arterials: \$200/L.F., or \$1,056,000/mile, for street and \$85/L.F., or \$448,800/mile, for storm drainage. Locals: \$110/L.F., or \$580,800/mile, for streets and \$32/L.F., or \$164,960/mile, for storm drainage.

** Streets with no curb are not considered to have drainage facilities in place; therefore drainage value is not calculated for this part of the inventory.

Source: City of Portland, Bureau of Transportation Engineering 7/88.

Table 8
SELECTED STREET MAINTENANCE PROGRAM COSTS*
FY 1983-84 THROUGH 1987-88

STREET MAINTENANCE	FISCAL YEAR ACTUAL COSTS				
	1983-84	1984-85	1985-86	1986-87	1987-88
St. Resurfacing (Overlay, A.C., O.G., Slurry Seal)	\$1,602,590	\$1,578,491	\$2,549,961	\$1,999,567	\$2,587,827
Patching (Utility & Maint., Hot Patching)	876,631	971,479	946,654	1,047,766	1,308,777
Base Repair (Various types)	857,519	957,919	866,876	976,375	1,128,098
Reconstruction	26,822	15,557	4,650	8,320	1,513
Cold Milling (Typical: Prior to Resurfacing)	93,895	113,181	86,289	125,002	167,148
Oil Gravel Streets (Prep., Reshape, Seal Coat, Patch.)	220,046	271,241	97,821	209,447	172,254
Pavement Management System	105,976	144,635	239,338	505,744	516,066
Other Maints. Act. (Crack Seal, Shoulders, Other Paving, etc.)	333,860	398,510	538,469	663,857	864,976
TOTAL	\$4,117,339	\$4,451,013	\$5,330,058	\$5,536,078	\$6,746,659

* Costs for supervision, training, or emergency work are not included.

Source: City of Portland, Bureau of Maintenance, 7/88.

Table 9
SIDEWALKS, CORNERS AND CURBS
REPLACEMENT VALUE
1988

INVENTORY *	LINEAL MILES	SQUARE FEET	COST PER FOOT	REPLACEMENT VALUE
Sidewalks	2,450	77,603,328	\$ 3.82	\$ 296,447,713
Corners		8,067,200	3.97	32,026,784
Curbs	2,524	13,327,776	12.75	169,929,144
TOTAL				\$ 498,403,641
*Assumptions: 6 feet wide sidewalks 10' x 10' corners				

Source: City of Portland, Bureau of Maintenance, 7/88.

Table 10
STRUCTURE RATING SYSTEM

	POINTS
I. STRUCTURE (Points: Bridges 40 / Walls 55)	
A. Bridge Substructure	0-40
B. Bridge Superstructure	0-40
C. Bridge Deck	0-40
D. Retaining Wall Face Condition	0-55
E. Retaining Wall Slope	0-55
F. Retaining Wall Foundation Settlement	0-55
II. FUNCTIONAL SERVICEABILITY (Points: Bridges 30 / Walls 15)	
A. ADT/Lane	0-15
B. Hydraulic Adequacy	0-15
C. Vertical and Horizontal Underclearances	0-15
D. Vertical and Horizontal Clearances	0-10
E. Deck/Road Condition	0-5
F. Narrow Section	0-5
G. Sidewalk Required	0-5
H. Bicycle Lane Required	0-5
I. Vertical and Horizontal Alignment	0-5
III. SAFETY (Points: 10)	
A. Safe Load Capacity	0-10
B. Accidents	0-10
C. Guardrail	0-5
D. Handrail	0-5
IV. COMMUNITY NEEDS (Points: 10)	
A. Functional Classification	2-6
B. People Served	0-5
C. Transit Route	0-4
D. Detour Length	0-5
E. Community/Citizen Support	0-5
F. Bicycle Corridor	0-2
V. ECONOMICS (Points: 10)	
Ratio of Replacement Annual Cost to Maintenance Annual Cost	0-10

Source: Structural Capital Evaluation Project, City of Portland, Bureau of Transportation Engineering, 12/86.

Table 11

STRUCTURE DESCRIPTIVE RATING SYSTEM

RATING	DEFINITION	BRIDGES			RETAINING WALLS		
		Overall Rating	Deficiency Points		Overall Rating	Deficiency Points	
			Structural	Functional		Structural	Functional
Very Good	No defects; minimal maintenance required; normal traffic	Over 75	0	0-10	Over 75	0	0-2
Good	Minor defects; potential for minor repairs; normal traffic	66-75	5	11-15	66-75	5	3-5
Fair	Moderate defects; satisfactory with normal maintenance; potential major repairs required; minor effect on traffic	56-65	10-15	16-25	56-65	10-15	6-10
Poor	Major defects; major repairs required; reduced traffic	46-55	20-30	26-30	46-55	20-30	11-15
Very Poor	Major defects; major rehabilitation or replacement required; inadequate for traffic	Below 46	40	None	Below 46	40-55	None

Table 12
ASSESSMENT OF STRUCTURAL INVENTORY

BRIDGE SUMMARY				
	Description	Number	% of Total	Cumulative Replacement Cost (Millions)
OVERALL	Very Good	46	40%	\$ 19.08
	Good	32	28%	46.01
	Fair	21	18%	16.81
	Poor	11	10%	5.47
	Very Poor	5	4%	4.36
	Total		115 *	100%
STRUCTURE	Very Good	32	28%	\$ 21.38
	Good	46	40%	34.99
	Fair	31	27%	34.47
	Poor	6	5%	0.88
	Very Poor	0	0%	0.00
	Total		115 *	100%
FUNCTIONAL	Very Good	64	56%	\$ 54.39
	Good	26	22%	18.54
	Fair	18	16%	13.58
	Poor	7	6%	5.22
	Very Poor	0	0%	0.00
	Total		115 *	100%
* The main report subtracts from this assessment 3 railroad bridges, and adds 9 new and annexed bridges for a total of 121 bridges.				

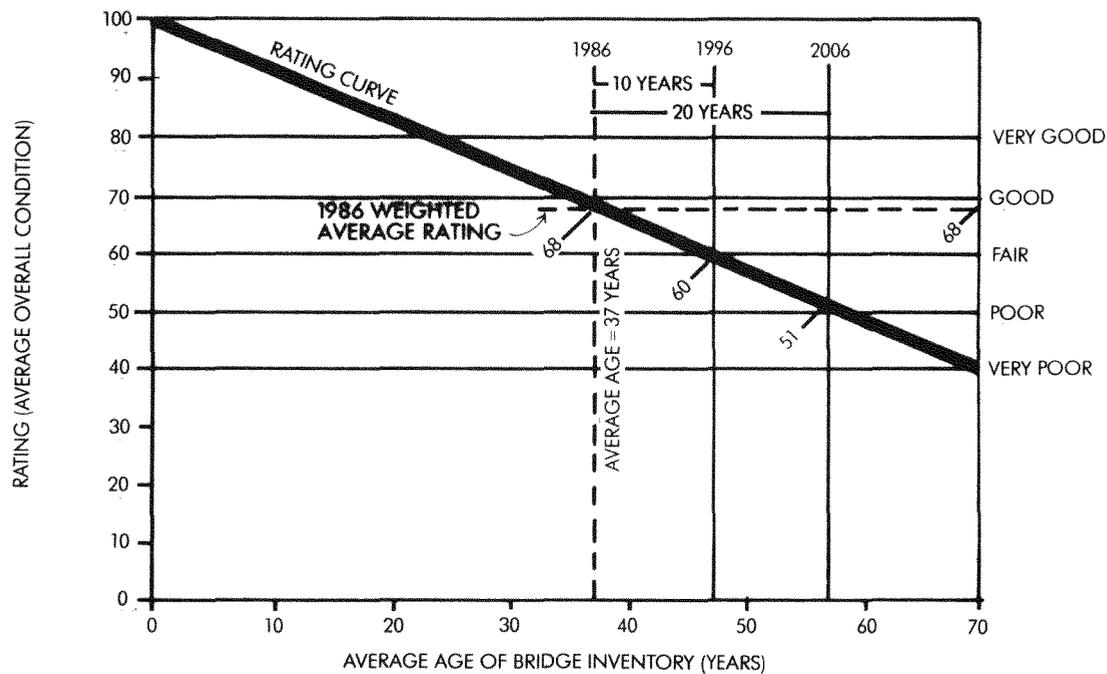
Source: Structural Capital Evaluation Project Report, City of Portland, Bureau of Transportation Engineering, 12/86.

Table 12 continued
ASSESSMENT OF STRUCTURAL INVENTORY

RETAINING WALL SUMMARY			
	Description	Number	% of Total
OVERALL	Very Good	147	88%
	Good	16	10%
	Fair	4	2%
	Poor	0	0%
	Very Poor	0	0%
	Total		167
STRUCTURE	Very Good	78	47%
	Good	78	47%
	Fair	9	5%
	Poor	2	1%
	Very Poor	0	0%
	Total		167
FUNCTIONAL	Very Good	42	25%
	Good	91	54%
	Fair	33	20%
	Poor	1	1%
	Very Poor	0	0%
	Total		167*
*The main report adds 26 annexed retaining walls for a total of 193 walls.			

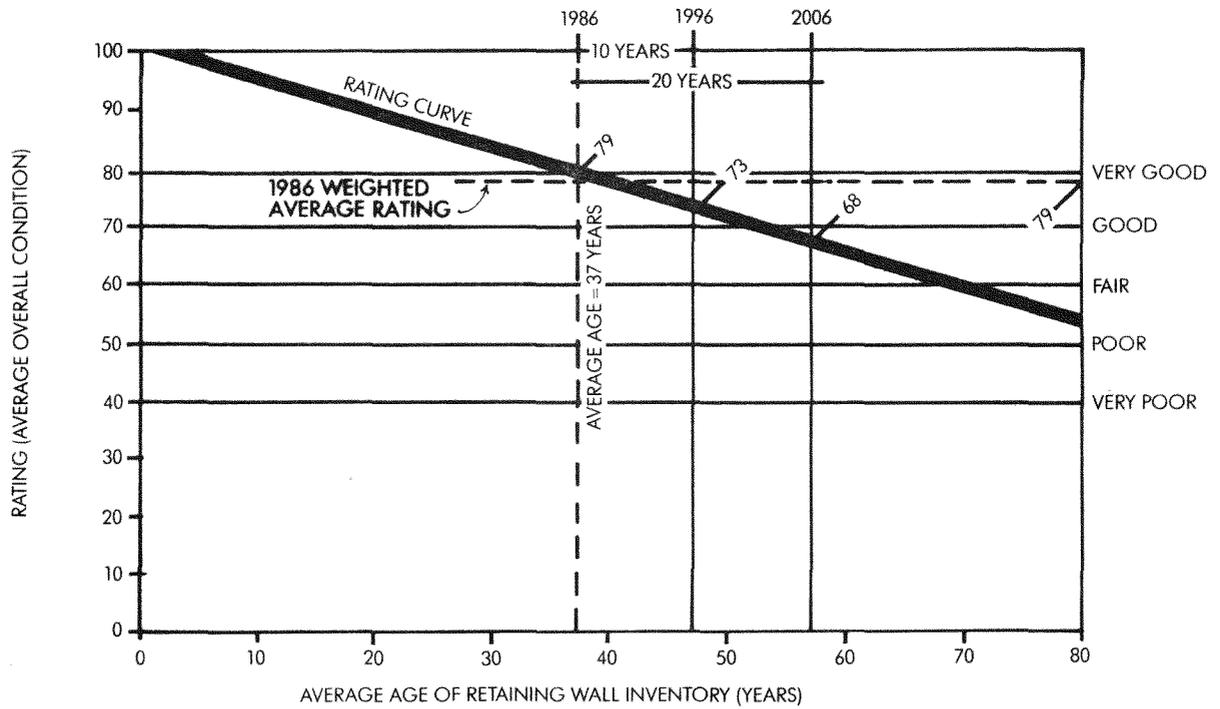
Source: Structural Capital Evaluation Project, City of Portland, Bureau of Transportation Engineering, 12/86.

Figure 1
CURRENT AND PROJECTED BRIDGE CONDITIONS



SOURCE: STRUCTURAL CAPITAL EVALUATION
 CITY OF PORTLAND, BUREAU OF TRANSPORTATION ENGINEERS
 12/86

Figure 2
CURRENT AND PROJECTED RETAINING WALL CONDITIONS



SOURCE: STRUCTURAL CAPITAL EVALUATION
 CITY OF PORTLAND, BUREAU OF TRANSPORTATION ENGINEERS
 12/86

Table 13

PORTLAND BRIDGE REPLACEMENT COST AND AGE INVENTORY

STRUCT NO.	PORTLAND RATING	ODOT RATING	ROUTE CARRIED	LOCATION	REPLACEMENT COST	APPROX * AGE
B1	57	72.8	N Burgard Street	Viaduct over UP Railroad S of Terminal Rd.	\$ 690,000	57-36
B2	68	56.2	Incinerator Road	Bridge over Columbia Slough	1,700,000	30
B3	53	52.4	NW 2nd	100' S 102nd Street	210,000	25
B4	85	----	Ped X Over Swift Blvd.	At George School at Midway Avenue	160,000	18
B5	78	79.7	NE Claremont Street Viaduct	At Woodlawn Park	145,000	13
B6	70	80.4	N Vancouver	Over UP Railroad at Farragut Park	1,540,000	58
B7	53	97.0	N Willamette Blvd.	W of Washburne	100,000	46
B8	83	70.8	NE 21st Avenue	Over Columbia Slough	650,000	13
B9	49	67.0	NE 33rd	Over Lombard and Railroad	3,745,000	58
B10	79	79.8	NW Kittridge Avenue	Over UP Railroad between Yeon Avenue & NW Front	2,770,000	19
B11	79	----	N Greeley	Over Going at Bess Kaiser Hospital - Ped X	116,000	21
B12	66	92.7	N Going	Over Railroad - Swan Island Viaduct	1,220,000	57-11
B13	67	97.1	N Greeley	Over Going at Madrona Park	430,000	57-11
B14	72	45.3	NW Alexandra Avenue	N of Gordon	1,170,000	6t
B15	60	51.8	NW Thurman Street	Between 32nd Street and 29th Street	1,750,000	82
B16	77	97.1	NE 33rd	Over Banfield	1,500,000	63-2
B17	83	79.6	Maywood Drive	Semi-viaduct at NW Maywood Drive & Burnside	370,000	53
B18	73	79.6	Maywood Drive	Semi-viaduct at Melinda	425,000	53
B19	80	64.4	Sheffield Drive	Semi-viaduct S of Elevator	240,000	46
B20	67	----	Ped Overpass	SW Spring Street to St. Helens Court	125,000	49
B21	78	83.0	NE Halsey	Over Banfield	965,000	2
B22	73	83.2	NE 74th Avenue	Over Banfield	795,000	70-2
B23	71	67.1	NW Lovejoy	Ramp to Broadway Bridge over Railroad	5,685,000	59
B24	70	80.5	NW 10th	Ramp to Broadway Bridge	2,000,000	59
B25	67	78.4	NW 12th	Over Banfield	1,400,000	77-29
B26	78	78.4	NW 21st	Over Banfield	1,680,000	75-2
B27	70	93.6	28th	Over Banfield	3,000,000	79-2
B28	70	97.0	39th	Over Banfield	2,225,000	2
B29	65	93.2	47th	Over Banfield	1,270,000	2

* More than one age indicates partial replacement.

Table 13 - continued

PORTLAND BRIDGE REPLACEMENT COST AND AGE INVENTORY

STRUCT NO.	PORTLAND RATING	ODOT RATING	ROUTE CARRIED	LOCATION	REPLACEMENT COST	APPROX * AGE
B30	64	82.0	53rd	Over Banfield	1,200,000	70-2
B31	59	92.0	60th	Over Banfield	1,400,000	70-2
B32	86	----	N Going Street	Ped Overpass Beach School	220,000	12
B33	63	67.9	NE Glisan Street	Between 90th and 91st	480,000	76
B34	85	90.1	SW Champlain	Semi-viaduct at Fairview Blvd.	65,000	36
B35	71	79.6	SW Osage	Semi-viaduct W of Green	275,000	58
B36	64	77.3	SW Vista Avenue	Semi-viaduct S of Madison over Jefferson	2,900,000	61
B37	61	73.9	SW Canyon Road	Over SW Jefferson Street, N Crossing	450,000	60
B38	51	71.9	SW Canyon Road	Over SW Jefferson Street, S Crossing	550,000	60
B39	88	----	Market Street Drive	Semi-viaduct at Vista Avenue	80,000	62
B40	88	----	SW Montgomery	Semi-viaduct at 19th	130,000	75
B41	48	83.3	SW Vista Avenue	Semi-viaduct N of 19th	560,000	73
B42	46	----	SW Greenway	At Talbot	450,000	38
B43	70	----	Ped Overcrossing	Over Front at SW Hooker	325,000	40
B44	74	93.2	SE Holgate	W of 23rd Over SP Railroad	2,270,000	5
B45	82	----	Pedestrian Br. (Wood)	SW 25th Avenue at Martha	100,000	33
B46	93	----	Pedestrian Br. (Wood)	SW 45th to SW Admiral Court	9,500	7
B47	78	73.1	SE 158th Avenue	Over Johnson Creek	275,000	49-14
B48	82	85.2	SE 159th Avenue	Over Kelly Creek	235,000	13
B49	40	10.3	Burlingame Br. Over	Over I-5 (Baldock Freeway)	3,290,000	59
B50	35	51.8	SE Bybee Blvd.	Over McLoughlin	1,900,000	53-44-77
B51	80	72.1	SE 142nd Avenue	Over Johnson Creek	135,000	49-8
B52	98	----	SE Brooklyn Street	Pedestrian Overpass	95,000	11
B53	92	92.0	SE Lambert Street	Over Crystal Springs Creek	150,000	32
B54	91	96.8	SE Nehalem Street	Over Crystal Springs Creek	90,000	33
B55	90	82.7	SE Umatilla Street	Over Johnson Creek	160,000	48-8
B56	47	77.2	SE Tacoma Street	Over Johnson Creek	245,000	53
B57	65	58.0	SE Harney Street	Over Johnson Creek	270,000	39-10
B58	83	75.9	SE Ochoco Street	Over Johnson Creek	255,000	40

* More than one age indicates partial replacement.

Table 13 - continued

PORTLAND BRIDGE REPLACEMENT COST AND AGE INVENTORY

STRUCT NO.	PORTLAND RATING	ODOT RATING	ROUTE CARRIED	LOCATION	REPLACEMENT COST	APPROX * AGE
B59	58	----	SE Bybee Blvd.	Over Crystal Springs Creek - Culvert	13,000	N/A
B60	88	----	SE 23rd & Glenwood	Over Crystal Springs Creek - Culvert	11,000	N/A
B61	79	----	SE Tacoma	Over Crystal Springs Creek - Culvert	13,000	N/A
B62	87	----	SE Tenino Street	Over Crystal Springs Creek - Culvert	8,500	37
B63	87	----	SE Umatilla Street	Over Crystal Springs Creek - Culvert	11,000	N/A
B64	88	82.0	SE Sherrett Street	Over Crystal Springs Creek - Culvert	23,000	76
B65	54	----	SW Vista Avenue	Near SW Hillcrest Drive Vaulted Sidewalk	450,000	N/A
B66	80	----	SE Reedway	E of SE 26th Avenue - Bike Structure	11,000	11
B67	72	100.0	SE Flavel Street	At SE 92nd Avenue over Johnson Creek	730,000	12
B68	72	100.0	SE 92nd Avenue	At SE Flavel Street over Johnson Creek	650,000	12
B69	93	87.5	Mocks Bottom Overcrossing		1,550,000	6
B70	86	83.8	SW 56th Avenue	Over Fanno Creek	80,000	7
B71	85	----	SE 9th Avenue	At Powell Blvd.	120,000	7
B72	88	----	Bridlewood Pedestrian Bridge		12,500	5
B75	61	68.3	NE 42nd Avenue	Over Portland Highway and Railroad	1,220,000	10
B76	67	63.5	N Burgard	Over Railroad	595,000	10
B77		94.0	NE Lombard	At NE Marine Drive	430,000	
B78	70	91.6	N Columbia Blvd.	Over BN Railroad	2,650,000	49
B79	72	97.8	N Columbia Blvd.	Over Columbia Way (Portland Road)	1,170,000	28
B80	58	76.4	SE Foster Road (N Side)	Over Johnson Creek	160,000	78
B80A	70	83.3	SE Foster Road (S Side)	Over Johnson Creek	265,000	19
B81	62	65.8	SW Capitol Highway	Over Bertha Blvd.	740,000	76
B82	59	80.0	SW Capitol Highway	Over Multnomah Blvd.	955,000	17
B83	69	84.0	NE 33rd Avenue	Over Marine Drive	560,000	72
B84	75	84.0	NE 33rd Avenue	Over Columbia Slough	540,000	50
B85	81	85.4	NE 92nd Avenue	Over Columbia Slough	370,000	27
B86	68	70.7	NE 138th Avenue	Over Columbia Slough	530,000	28
B87	52	90.7	SE Tacoma Street	Over Railroad	690,000	26
B88	59	90.9	SE Tacoma Street	Semi-viaduct over Johnson Creek	32,000	30

* More than one age indicates partial replacement.

Table 13 - continued

PORTLAND BRIDGE REPLACEMENT COST AND AGE INVENTORY

STRUCT NO.	PORTLAND RATING	ODOT RATING	ROUTE CARRIED	LOCATION	REPLACEMENT COST	APPROX * AGE
B89	60	67.5	SE 112th Avenue	Over Johnson Creek	370,000	18
B90	68	90.9	SE 45th Avenue	Over Johnson Creek	345,000	72
B91	73	79.7	SE Deardorf Road	Over Johnson Creek	160,000	40
B92	33	41.6	N Portland Road	Over UP Railroad	850,000	60
B93	37	44.7	NE 47th Avenue	Over Columbia Slough	500,000	5
B94	87	80.5	NE Sunderland Road		110,000	55
B95	45	34.0	SE 106th	Over Johnson Creek	245,000	33
B96	55	34.0	SE 108th	Over Johnson Creek	255,000	17
B97	64	46.6	SE 110th	Over Johnson Creek	290,000	40
B98	62	49.3	SE Lambert Street	Over Johnson Creek	175,000	40
B99	76	71.2	SE 122nd Avenue	Over Johnson Creek	605,000	40
B100	79	----	NE Marine Drive Pedestrian Tunnel		32,000	28
B101		71.9	W Burnside Tunnel		1,270,000	N/A
B102			W Rocky Butte Tunnel		2,120,000	
B103	73	97.8	NE Columbia Blvd.	Over 33rd Drive	530,000	N/A
B105	87	96.0	Rivergate - N Lombard	Over Slough, Changes to Marine Drive	1,060,000	24
B106	59	----	SE Foster	Culvert Near 162nd	53,000	3
B107	61	----	SE Flavel	Culvert at Railroad	21,000	41
B108	76	58.6	SW Hoffman	Semi-viaduct	35,000	58
B109	88	----	NE 122nd Avenue	Pedestrian Near Sacramento Street	135,000	21
B115	94	99.9	NE 105 Frontage Road	S of Holman Street	600,000	3
B116	83	91.3	NE 105 Frontage Road	N of NE Marx Street	465,000	3
B117	63	56.6	N. Vancouver Avenue	Over Columbia Slough	2,400,000	52
B119	75	----	N Marine Drive	N Portland Blvd. - Culvert	70,000	13
B120	88	----	SE Division Street	SE 85th - Ped Overpass	135,000	24
B121		97.1	NW Cornell Road	West of Tunnel	580,000	2
B122		97.1	NW Cornell Road	West of Tunnel	570,000	2
B123		97.1	NW Cornell Road	2nd Bridge West of Tunnel	670,000	2
B124		97.1	NW Cornell Road	3rd Bridge West of Tunnel	900,000	2

* More than one age indicates partial replacement.

Table 13 - continued

PORTLAND BRIDGE REPLACEMENT COST AND AGE INVENTORY

STRUCT NO.	PORTLAND RATING	ODOT RATING	ROUTE CARRIED	LOCATION	REPLACEMENT COST	APPROX * AGE
B125			NW Cornell Road - East	W of 30th Avenue	2,860,000	3
B126		87.4	N Columbia Blvd.	Over Railroad	2,060,000	2
B127			NW Cornell Road - West		1,450,000	48
B128		91.5	NW Everett Street	Between Front Avenue & First Street	525,000	2
B129			NW 26th Avenue	Front to Yeon	3,700,000	2
* More than one age indicates partial replacement.					TOTAL	97,976,500

Source: Structural Capital Evaluation Project, City of Portland, Bureau of Transportation Engineering, 12/86; updated. Bureau of Transportation Engineering, 7/88.

Table 14

PORTLAND RETAINING WALL INVENTORY

STRUCT NO.	PORTLAND RATING	ROUTE CARRIED	LOCATION	REPLACEMENT COST
R1	79	NW 1st Street & NW 108th Avenue		\$ 36,450
R2	80	N Woolsey Avenue	On N Willamette Blvd.	53,950
R3	77	N Washburn	On N Willamette Blvd.	24,450
R4	75	N Chase	On N Willamette Blvd.	20,150
R5	75	N Wabash	On N Willamette Blvd.	13,500
R6	75	N Portland Blvd.	On N Willamette Blvd.	29,150
R7	65	150' S of N Holman Street	On N Willamette Blvd.	30,700
R8	87	N Melrose Drive		13,150
R9	84	N Fremont Street	At N Interstate	117,000
R10	82	NW Thurman Street & NW Grodon St.		4,500
R11	94	NW Aspen		36,000
R12	78	N Thompson Street	On N Interstate	26,300
R13	86	NW Macleay Blvd.	Near Chula Vista Place	363,400
R14	85	NW Macleay Blvd.	Near NW Rainier Terrace	53,100
R16	87	NW Albermarle Terrace	East Wall	9,900
R17	60	NW Cornell Road & NW Marshall		9,000
R18	75	NW Cornell Road	S of Stair S-57	160,150
R19	84	NW Pettygrove Street	Near NW Cornell Road	36,750
R20	80	NW Cornell Road	S of Stair S-54	18,450
R21	78	NW Westover Drive	NW 25th Place	102,950
R22	80	NW Glisan Street	NW Front Avenue	39,500
R23	84	N Trenton	At N Bayard	35,000
R24	87	NW Maywood Drive	W Burnside	10,150
R25	84	NW Macleay Blvd	NW Beuhla Vista Terrace	109,700
R26	76	SW Tichner Drive	SW Marconi Avenue	16,200
R27	81	SW Tichner Drive	To W Burnside	131,650
R28	92	SW Champlain Drive	West	189,850
R29	92	SW Champlain Drive	Middle	18,000
R30	92	SW Champlain Drive	East	24,300
R31	85	NW Macleay Blvd.	Near W Burnside	19,800

Table 14 - continued

PORTLAND RETAINING WALL INVENTORY

STRUCT NO.	PORTLAND RATING	ROUTE CARRIED	LOCATION	REPLACEMENT COST
R32	85	NW Macleay Blvd.	Near NW Imperial Terrace	\$ 162,350
R33	90	NW Macleay Blvd.	Near NW Mildred	64,400
R34	87	NW Imperial Terrace	Calument Terrace	27,000
R35	88	NW Santanita Terrace	NW Hermosa Blvd. (Lower)	15,150
R36	90	NW Santanita Terrace	NW Hermosa Blvd. (Upper)	41,400
R37	88	Upper SW Cactus Drive		62,300
R38	81	SW 20th Avenue	Salmon N Wall	70,200
R39	86	SW 20th Avenue	Salmon S Wall	128,100
R40	78	NW 24th Avenue	NW Westover Road	13,500
R41	78	SE Ankeny	SE 3rd	38,600
R42	74	SE Stark	SE 62nd	15,200
R43	93	SW Evergreen Terrace	On Upper Cascade Drive	5,600
R44	81	SW Montgomery Drive	SW Clifton Street	147,850
R46	94	SW Carter Lane		10,150
R47	81	SW Montgomery Drive	SW Prospect Drive	33,850
R48	87	SW Prospect Drive		112,400
R49	59	1783 SW Montgomery Drive		65,850
R50	92	End of SW 18th	SW Jackson	10,500
R51	82	SW Upper Hall Street	SW Hall Street	122,750
R52	83	SW Upper Hall Street	At W Side and Down SW Upper Hall Street	584,000
R53	87	SW Georgia Place		54,700
R54	83	SW Vista Avenue	From SW Isabella Street to SW Patton Road	105,150
R55	88	SW Terrace Drive	Starting at SW Gerald Avenue	208,800
R56	71	SW Vista Avenue	Starting at SW Spring Street	91,100
R57	77	SW Ravenswood Drive	Starting at SW Corona Avenue	124,200
R58	92	SW Hillcrest Drive		27,050
R59	93	SW Elizabeth Street	Ending at SW 16th Avenue	36,350
R60	83	SW Corona Avenue	SW Ravens View Drive	9,000
R61	78	SW Browadway Drive	Starting at SW Edgewood	44,050
R62	87	SW Cardinell Drive	Below Stair No. 100	10,125

Table 14 - continued

PORTLAND RETAINING WALL INVENTORY

STRUCT NO.	PORTLAND RATING	ROUTE CARRIED	LOCATION	REPLACEMENT COST
R63	87	SW Cardinell Drive	At Stair No. 101	\$ 71,250
R64	88	SW Myrtle Street	At SW 15th Avenue	16,900
R65	86	SW Davenport Street	SW Chelmsford Avenue	9,000
R66	87	1201 SW Rivington Drive		35,100
R67	87	1133 SW Rivington Drive		39,500
R68	83	1225 SW Rivington Drive		25,200
R69	87	1035 SW Rivington Drive		21,950
R70	93	SW Davenport Lane		15,650
R71	81	SW Buckingham Avenue	At SW Elevator Street	211,600
R72	87	SW Myrtle Drive		35,100
R73	93	SW Hoffman Avenue	Top of Stair No. 102	12,600
R74	87	SW Hoffman Avenue	Near SW Elevator Street	49,000
R75	75	SE Division Street	Between SE 6th and SE 7th	276,400
R76	88	2672 SW Talbot Road		8,650
R77	93	SW Summit Drive		30,600
R78	74	SW Greenway Avenue	Starting at House No. 2869	239,450
R79	75	SW Greenway Avenue	Starting 130' S of SW Patton Road	198,000
R80	72	SW Sam Jackson Road		52,950
R81	82	SW Broadway Drive		99,100
R82	84	US Veterans Hospital Road	Near SW Whitaker Street	1,800
R83	77	SW Barbur Blvd.	Top of Stair No. 115 on Whitaker Street	39,000
R84	80	SW Barbur Blvd.	At End of Gibbs Street	63,000
R85	82	SW Hooker Street	SW Kelly Avenue	57,600
R86	82	SW Water Street	On SW Kelly Avenue	129,600
R87	81	SE Brooklyn Street	Under E End of Ross Island Bridge	162,350
R88	76	SE Clinton Street	W End at SE 10th Avenue	123,500
R89	88	SW Himes Street	Below Dead End of SW Wapato Avenue	55,700
R90	93	SW Mt. Adams Drive	66 L.F.	11,850
R91	93	SW Mt. Adams Drive	90 L.F.	16,200
R92	88	SW Mt. Adams Drive	150 L.F.	27,000

Table 14 - continued

PORTLAND RETAINING WALL INVENTORY

STRUCT NO.	PORTLAND RATING	ROUTE CARRIED	LOCATION	REPLACEMENT COST
R93	75	SW Bancroft	At SW 4th Avenue	\$ 137,300
R94	93	3976 SW Condor Avenue		9,100
R95	87	SW Condor	At Barbur Blvd.	97,200
R96	88	SW Viewpoint Terrace	Barbur Blvd.	74,600
R97	77	SW Barbur Blvd.	W Side at SW Bancroft Street	94,150
R98	88	SW Condor Avenue	SW Condor	29,450
R99	82	3944 SW Condor Avenue		51,650
R100	79	SW Dosch Road	SW Beaverton Highway	30,375
R101	92	SW Hessler Drive	SW Northwood Avenue	30,700
R102	83	SW Corbett Avenue	From SW Florida - N	504,000
R103	88	SW 5th Avenue	At SW 4th Avenue (Under Burlingame Bridge)	7,900
R104	88	NW Rio Vista Terrace		335,500
R105	78	67th	NE Glisan	36,000
R106	83	NE Halsey	Off Ramp at Sandy Interchange	304,700
R107	88	NE Wisteria Drive	NE 49th Avenue	32,050
R108	85	SW Broadway Drive	At Sheridan	54,700
R109	75	SW Broadway Drive	At Hoffman Avenue	80,200
R110	88	NW Irving Avenue	Near NW Pittock Road	30,700
R111	75	NW St. Helens Road	At NW Hoge Avenue	184,700
R112	79	NW St. Helens Road	Between NW Hoge Avenue	364,600
R113	80	NW St. Helens Road	NW Harbor Blvd.	200,800
R114	75	NW St. Helens Road	N of NW Bridge Avenue	317,400
R115	90	N Kerby Avenue	Near Ross Road	103,050
R116	87	N Missouri Avenue	At N Going	162,000
R117	87	2772 SW Talbot Road		14,400
R118	82	2748 SW Talbot Road		42,500
R119	81	SW Montgomery Drive	Buena Vista Drive	81,350
R120	88	SW Montgomery Drive	Buena Vista Drive	22,300
R121	87	SW Evergreen Lane		52,650
R122	92	NW Luray Terrace		30,700

Table 14 - continued

PORTLAND RETAINING WALL INVENTORY

STRUCT NO.	PORTLAND RATING	ROUTE CARRIED	LOCATION	REPLACEMENT COST
R123	78	SW Vista Avenue		\$ 273,400
R124	76	1341 SW Broadway Drive	60'	10,800
R125	81	1440 SW Broadway Drive	75'	22,800
R126	83	SE End	At Holgate Bridge	325,950
R127	93	SW Cascade Drive	(Not Yet Constructed)	43,200
R128	76	SW Broadway Drive	E of No. 982	11,250
R129	76	SW Broadway Drive	30' - E of No. 1020	3,400
R131	89	19th & Mason	43.5' and 23' - Walls	7,500
R132	89	18th & Mason	40' - Wall	4,500
R133	82	NW Gordon Street	Alexandria Avenue - 100'	18,100
R134	79	SW Dosch Road	75' at 3210	22,800
R135	61	SW Patton Road	100' at 2829	18,000
R136	82	SW Sam Jackson Road	110'	33,400
R137	85	SW 1st Avenue at Burnside	East 83'	18,350
R138	83	Sam Jackson Road	50' - Concrete Rubble Wall	15,200
R139	94	SW Broadleaf Drive	at SW 18th Place	43,400
R140	83	SW Barbur Blvd.	180' - SW Gibbs	20,250
R141	83	SW Barbur Blvd.	160' - SW Whitaker	18,000
R142	83	SW Barbur Blvd.	220' - SW Curry	39,600
R143	83	SW Barbur Blvd.	33' - SW Pennoyer	5,950
R144	83	SW Barbur Blvd.	260' - SW Condor	46,800
R145	78	SW Barbur Blvd.	244' - SW Terrace	135,900
R146	92	SE 145th Avenue	168'	79,000
R147	79	N Willamette Blvd.	71' - Near Wellesley Avenue	11,700
R148	81	W Burnside Street	Retaining Wall (N Side at NW Macleay Blvd.	59,250
R149	76	W Burnside Street	Retaining Wall (S Side) at SW Tichner Drive	36,800
R150	81	SW Tichner Drive	Retaining Wall at W Burnside Street	99,100
R151	79	SW Salmon Street	135' - Wall	15,200
R152	82	NE 122nd Avenue	260' - E Side at UP Railroad	114,100
R153	83	NE 122nd Avenue	228' - E Side, S of Sandy	69,250

Table 14 - continued

PORTLAND RETAINING WALL INVENTORY

STRUCT NO.	PORTLAND RATING	ROUTE CARRIED	LOCATION	REPLACEMENT COST
R154	74	SW Barnes Road	120'	\$ 30,000
R155	81	NE Columbia Blvd.	280'	49,000
R156	81	NE Columbia Blvd.	185'	23,125
R157	85	SW Patton Court	90'	6,750
R158	85	NE 39th	175' at Halsey	21,875
R159	85	NE 39th	165' at Halsey	41,250
R159A	85	NE 39th	165' at Halsey	41,250
R160	89	SW Montgomery Drive	631'	126,200
R161	94	SW 10th	81' at Grover Street	16,200
R162	88	Rocky Butte Road	765'	439,875
R163	88	Rocky Butte Road	85'	12,750
R164	88	Rocky Butte Road	600'	300,000
R165	88	Rocky Butte Road	130'	32,500
R166	81	W Burnside	845' Near Tichner	211,250
R167	81	W Burnside	90' - E of R166	22,500
R168	82	E Burnside	140' at 118th Avenue	28,000
R169	83	SW Garden Home Road	278' at 42nd	69,500
R170		NW Cornell Road	East of Tunnel	112,500
R171		NW Cornell Road	1st Well West of Tunnel	21,250
R172		NW Cornell Road	2nd Well West of Tunnel	21,250
R173		NW Cornell Road	3rd Well West of Tunnel	51,250
R174		NW Cornell Road	Uphill Side	17,000
R175		NW Cornell Road	Near Mile Post No. 1	42,500
R176		NW Cornell Road	1/4 Mile East of NW 53rd	37,500
R177		NW Cornell Road	53rd	15,000
R178		NW Cornell Road	1/4 Mile West of 53rd	56,250
R179		NW Cornell Road	700' East of Thompson Road	50,000
R180		NW Cornell Road	250' West of Thompson Road	60,000
R181		NW 53rd	Cornell Road	20,000
R182		NW Thompson Road		75,000

Table 14 - continued
PORTLAND RETAINING WALL INVENTORY

STRUCT NO.	PORTLAND RATING	ROUTE CARRIED	LOCATION	REPLACEMENT COST
R183		NE Rocky Butte Road		\$ 7,600
R184		NW Germantown Road		12,500
R185		NW Germantown Road	200' above Lilac Avenue	37,500
R186		NW Germantown Road	Uphill Side	37,500
R187		NW Germantown Road	3 Miles from Mile Post No. 1	35,000
R188		NW Cornell Road	Semi-Viaduct	40,000
R189		NW Cornell Road	Semi-Viaduct	65,000
R190		SW Patton		25,000
R191		NW Front	Glisan Street	40,000
R192		NW Front	Glisan Street	50,000
R193		SW Scholls Ferry Road	SW Scholls Ferry Road at SW Sheridan Court	45,000
R194		SW Scholls Ferry Road	SW Scholls Ferry Road at SW Sheridan Court	20,000
R195		NW Cornell Road	300' West of NW 53rd	55,000
			TOTAL	13,922,275

Source: Structural Capital Evaluation Project, City of Portland, Bureau of Transportation Engineering, 12/86;
Updated, Bureau of Transportation Engineering, 7/88.

Table 15

STRUCTURE CAPITAL IMPROVEMENT PROGRAM

Funding Level A (\$1,000)

NO.	LOCATION	YEAR									
		88-89	89-90	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98
B93 B95 B96	NE 47th over Columbia Slough SE 106th over Johnson Creek SE 108th over Johnson Creek	350 (65)* (65)*									
B3 B45 B92	NW 2nd near 107th SW 25th Ped Bridge N Portland Road over Railroad	260 95	590								
RB1 RB2 RB3	N Willamette Blvd. over Railroad N Lombard over Railroad N Fessenden over Railroad		55 55 55								
R154 B50 B2	SW Barnes SE Bybee over McLoughlin Incinerator Road Bridge		30	1,630	1,560						
B86 B103 B15	NE 138th over Columbia Slough NE Columbia over 33rd NW Thurman					445 270	2,270				
B101 B117	Burnside Tunnel N Vancouver over Columbia Slough							1,900			1,510
TOTAL - 11,075		705	785	1,630	1,560	715	2,270	0	1,900	0	1,510
Note: Update of the above will be available by the end of 1988 and included in next year's report. *Improved using gas tax funds.											

Source: Structural Capital Evaluation Project, City of Portland, Bureau of Transportation Engineering, 12/86, updated 10/88.

Table 15 continued
STRUCTURE CAPITAL IMPROVEMENT PROGRAM
Funding Levels A, B and C (\$1,000)

NO.	LOCATION	YEAR									
		88-89	89-90	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98
B93 B95 B96	NE 47th over Columbia Slough SE 106th over Johnson Creek SE 108th over Johnson Creek	350 65 65									
B3 B45 B92	NW 2nd near 107th SW 25th Ped Bridge N Portland Road over Railroad	260 95	590								
RB1 RB2 RB3	N Willamette Blvd, over Railroad N Lombard over Railroad N Fessenden over Railroad		55 55 55								
R154 B50 B2	SW Barnes SE Bybee over McLoughlin Incinerator Road Bridge		30	1,630	1,560						
B29 B86 B103	NE 47th over Banfield NE 138th over Columbia Slough NE Columbia over 33rd					960 445 270					
B15 B19 B117	NW Thurman Street SW Sheffield N Vancouver over Columbia Slough						2,270	30 1510			
B44 B101 B31	Holgate over Railroad Burnside Tunnel NE 60th over Banfield								2200	1900	1010
B33 B56 B87	NE Glisan at 90th SE Tacoma over Johnson Creek SE Tacoma over Railroad										90 65 360
B88 B106 B108	SE Tacoma over Johnson Creek SE Foster near 162nd SE Flavel at Railroad										35 50 25
TOTAL - 16,030		835	785	1,630	1,560	1,675	2,270	1,540	2,200	1,900	1,635
Note: Update of the above will be available by the end of 1988 and included in next year's report.											

Table 16

STRUCTURE CAPITAL IMPROVEMENT PROJECT DESCRIPTIONS

BRIDGE NO.	PROJECT	TO BE DONE	COST ESTIMATE
B2	Incinerator Road Bridge near Columbia Blvd.	Remove and replace existing deteriorating concrete and steel structure supported by timber piling with a permanent concrete structure.	\$ 1,560,000
B3	NW 2nd near NW 107th Bridge	Remove the existing deteriorating timber bridge and replace with a reinforced concrete bridge with a greater load capacity.	260,000
B15	NW Thurman Street near 31st Avenue	Replace or restore existing timber and steel structure with sub-standard load capacity to provide capacity for current loads.	2,270,000
B19	Sheffield Drive semi-viaduct near Hoffman Street	Replace existing semi-viaduct (partial bridge) with sub-standard load capacity with a new structure to provide capacity for current loads.	30,000
B29	NE 47th over Banfield	Widen existing two-lane structure to provide four traffic lanes for increased traffic capacity.	960,000
B31	NE 60th over Banfield	Widen existing two-lane structure to provide four traffic lanes for increased traffic capacity.	1,010,000
B33	NE Glisan at 90th	Widen existing semi-viaduct to provide one additional lane of traffic to provide additional traffic capacity.	90,000
B44	SE Holgate Street near 18th Avenue	Widen existing four lane structure to provide six traffic lanes for increased traffic capacity.	2,200,000

Table 16 continued

STRUCTURE CAPITAL IMPROVEMENT PROJECT DESCRIPTIONS

BRIDGE NO.	PROJECT	TO BE DONE	COST ESTIMATE
B45	SW 25th near Marth Pedestrian Bridge	Remove a deteriorating timber pedestrian bridge and replace with a precast pre-stressed concrete bridge.	\$ 95,000
B50	SE Bybee Blvd. over McLoughlin Blvd.	Widen and raise or replace existing two-lane structure to provide four traffic lanes and improved clearance over McLoughlin Blvd.	1,630,000
B56	SE Tacoma over Johnson Creek	Widen existing two-lane bridge to provide four traffic lanes for increased traffic capacity.	65,000
B86	NE 138th Avenue over Columbia Slough	Remove and replace existing deteriorating timber bridge with a new permanent concrete structure with increased load capacity.	445,000
B87	SE Tacoma over Railroad	Widen existing two-lane bridge to provide four traffic lanes for increased traffic capacity.	360,000
B88	SE Tacoma over Johnson Creek	Widen or replace existing semi-viaduct to provide one additional traffic lane for increased traffic capacity.	35,000
B92	N Portland Road over UP Railroad	Remove and replace a deteriorating, narrow concrete bridge with a wider, concrete bridge with increased load capacity.	590,000
B93	NE 47th Avenue over Columbia Slough	Remove and replace a deteriorating timber/concrete bridge with a permanent reinforced concrete structure with a greater load capacity.	350,000

Table 16 continued

STRUCTURE CAPITAL IMPROVEMENT PROJECT DESCRIPTIONS

BRIDGE NO.	PROJECT	TO BE DONE	COST ESTIMATE
B101	West Burnside Tunnel	Construct a new two-lane tunnel adjacent to the existing tunnel to provide four traffic lanes for increased traffic capacity.	1,900,000
B103	NE Columbia Blvd, over 33rd Drive	Widen existing four-lane bridge to provide six traffic lanes for increased traffic capacity.	270,000
B106	SE Foster near 162nd Avenue	Extend existing concrete box culvert to permit two additional traffic lanes for increased traffic capacity on existing two-lane road.	50,000
B107	SE Flavel at Railroad	Extend existing concrete box culvert to permit two additional traffic lanes for increased traffic capacity on existing two-lane road.	25,000
B117	N Vancouver Avenue over Columbia Slough	Replace deteriorating timber supported portion of this structure with a permanent concrete structure.	1,510,000

Table 16 continued

STRUCTURE CAPITAL IMPROVEMENT PROJECT DESCRIPTIONS

BRIDGE NO.	PROJECT	TO BE DONE	COST ESTIMATE
RB1	N. Willamette Blvd. over BN Railroad	Remove and replace a sub-standard bridge railing with a new railing that meets current standards.	55,000
RB2	N Lombard Street over BN Railroad	Remove and replace a sub-standard bridge railing with a new railing that meets current standards.	55,000
RB3	N. Fessenden Street over BN Railroad	Remove and replace a sub-standard bridge railing with a new railing that meets current standards.	55,000
R154	SW Barnes Road near W Burnside	Remove and replace a deteriorating timber retaining wall supporting SW Barnes Road near W Burnside and SW 48th Avenue with a concrete retaining wall.	30,000
Note: Update of the above will be available by the end of 1988 and included in next year's report.			

Source: Structural Capital Evaluation Project, City of Portland, Bureau of Transportation Engineering, 12/86.

Attachment 2

CONDITION OF HARBOR WALL

The harbor wall on the west bank of the Willamette River in downtown Portland is a large concrete gravity retaining wall built on sand and gravel filled timber cribbing and was completed in 1929. During and after construction of the wall, the amount of settlement and movement eastward toward the river was monitored. By 1933 - 34 the rate of vertical settlement and eastward movement had slowed and essentially stopped. Current inspection of the general condition of the wall and abutting improvements reveal no signs of distress in the structure although some of the sidewalk at the north end has settled due to consolidation of the backfill behind the wall. The timber cribs that are the foundation of the wall are continually inundated in fresh water so they will not deteriorate and have an indefinite service life.

In February 1933 the motorship Titana rammed the harbor wall near the foot of SW Ash Street and broke the timber cribbing below the water surface for a vertical distance of about seventeen feet. This allowed the sand and gravel fill in the cribs to spill out into the river causing a void approximately 20 feet deep, 50 feet wide and 22 feet tall to develop under the concrete portion of the wall. The wall settled 0.02 feet (approximately 1/4 inch) right after the damage with no additional long term settlement and no detectable lateral incident movement. The remarkable stability of the structure as demonstrated by this incident shows that it would require a major disaster to cause catastrophic failure of the wall.

Vertical settlement of the wall has been periodically monitored and varies throughout the length of the wall. The rate of settlement is continuing to decrease and the total magnitude of the worst settlement is within normal expected limits for nearly sixty years since construction.

In conclusion, the condition of the harbor wall is very good with excellent prospects for a useful service life of indefinite duration.

Source: City of Portland, Bureau of Transportation Engineering,
7/88

Table 17
SELECTED STRUCTURAL MAINTENANCE COSTS
FY 1982-83 through 1987-88

STRUCTURES	FISCAL YEAR				
	1983-84 Budget	1984-85 Actual	1985-86 Actual	1986-87 Actual	1987-88 Actual
Bridges	\$454,748	\$ 381,347	\$ 469,433	\$571,837	\$721,822
Stairs	69,579	99,030	101,448	122,292	114,476
Fence & Guardrail	52,440	209,867	119,712	138,074	199,316
Retaining Walls	88,824	110,843	195,067	168,378	114,523
Tunnels	0	1,909	30,147	48,675	0
Trash Racks	0	35,635	28,704	26,806	84,198
Street Furniture	0	60,405	13,706	0	92,079
TOTAL	\$665,591	\$899,036	\$958,217	\$1,076,062	\$1,326,414

NOTE: Costs for supervision, training, or emergency work are not included.

Source: City of Portland, Bureau of Maintenance, 7/88.

Table 18
**TRAFFIC SIGNAL
 INVENTORY AND CONDITION HISTORY
 1985 - 1988**

INTERSECTION HARDWARE	1985		1986		1987		1988	
	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT
GOOD	514	66	602	69	634	69	571	62
FAIR	164	21	174	20	184	20	239	26
POOR	101	13	96	11	101	11	111	12
TOTAL	779	100%	872	100%	919	100%	921	100%

INTERSECTION CONTROLLERS	1985		1986		1987		1988	
	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT
GOOD	506	65	575	66	615	67	599	65
FAIR	70	9	96	11	92	10	83	9
POOR	203	26	201	23	211	23	239	26
TOTAL	779	100%	872	100%	919	100%	921	100%

Source: City of Portland, Bureau of Traffic Management, 7/88.

Table 19

NUMBER OF INTERSECTION SIGNAL HARDWARE REACHING USEFUL LIFE

DATE REMODELED	YEAR FOR REPLACEMENT	NUMBER OF INTERSECTIONS REACHING USEFUL LIFE		REPLACEMENT RATES														
				REDUCED			EXISTING			IMPROVED LEVEL #1			IMPROVED LEVEL #2			IMPROVED LEVEL #3		
				This Year	Cumulative	Rate	Cum	Dif	Rate	Cum	Dif	Rate	Cum	Dif	Rate	Cum	Dif	Rate
prior to '84	1988	115	115	0	0	115	12	12	103	15	15	100	25	25	90	30	30	85
1964	1989	5	120	0	0	120	12	24	96	15	30	90	25	50	70	30	60	60
1965	1990	14	134	0	0	134	4	28	106	15	45	89	25	75	59	30	90	44
1966	1991	24	158	0	0	158	4	32	126	15	60	98	25	100	58	30	120	38
1967	1992	19	177	0	0	177	4	36	141	15	75	102	25	125	52	30	150	27
1968	1993	24	201	0	0	201	4	40	161	15	90	111	25	150	51	30	180	21
1969	1994	15	216	0	0	216	4	44	172	15	105	111	25	175	41	25	205	11
1970	1995	19	235	0	0	235	4	48	187	15	120	115	25	200	35	30	235	0
1971	1996	31	266	0	0	266	4	52	214	15	135	131	25	225	41	20	255	11
1972	1997	52	318	0	0	318	4	56	262	15	150	168	25	250	68	30	285	33
1973	1998	34	352	0	0	352	4	60	292	15	165	187	25	275	77	40	325	27
1974	1999	19	371	0	0	371	4	64	307	15	180	191	25	300	71	35	360	11
1975	2000	34	405	0	0	405	4	68	337	15	195	210	25	325	80	30	390	15
1976	2001	24	429	0	0	429	4	72	357	15	210	219	25	350	79	30	420	9
1977	2002	47	476	0	0	476	4	76	400	15	225	251	25	375	101	30	450	26
1978	2003	71	547	0	0	547	4	80	467	15	240	307	25	400	147	45	495	52
1979	2004	29	576	0	0	576	4	84	492	15	255	321	25	425	151	55	550	26
1980	2005	21	597	0	0	597	4	88	509	15	270	327	25	450	147	45	595	2
1981	2006	62	659	0	0	659	4	92	567	15	285	374	25	475	184	20	615	44
1982	2007	45	704	0	0	704	4	96	608	15	300	404	25	500	204	65	680	24
1983	2008	38	742	0	0	742	4	100	642	15	315	427	25	525	217	45	725	17
1984	2009	55	797	0	0	797	4	104	693	15	330	457	25	550	247	35	760	37
1985	2010	101	898	0	0	898	4	108	790	15	345	553	25	575	323	55	815	83
1985	2011	10	908	0	0	908	4	112	796	15	360	548	25	600	308	90	905	3
1987	2012	13	921	0	0	921	4	116	805	15	375	545	25	625	296	14	919	2

NOTES:

1. Assumes a 25 year life.
2. The "Dif" column shows how many intersections are beyond their rated life during that year.
3. The total number of intersections in the City is 921.

Source: City of Portland, Bureau of Traffic Management, 7/88.

Table 20

SYSTEM RATING & ANNUAL COSTS FOR REPLACEMENT OF INTERSECTION SIGNAL HARDWARE

YEAR FOR REPLACEMENT	REPLACEMENT RATES																													
	REDUCED						EXISTING						IMPROVED LEVEL #1						IMPROVED LEVEL #2						IMPROVED LEVEL #3					
	COST		RATING %				COST		RATING %				COST		RATING %				COST		RATING %				COST		RATING %			
	ANNUAL \$	Cumulative \$	G	F	P	ANNUAL \$	Cumulative \$	G	F	P	ANNUAL \$	Cumulative \$	G	F	P	ANNUAL \$	Cumulative \$	G	F	P	ANNUAL \$	Cumulative \$	G	F	P	ANNUAL \$	Cumulative \$	G	F	P
1988	\$0	\$0	62%	26%	12%	\$540,000	\$540,000	63%	26%	11%	\$675,000	\$675,000	63%	26%	11%	\$1,125,000	\$1,125,000	64%	26%	10%	\$1,350,000	\$1,350,000	65%	26%	9%					
1989	\$0	\$0	60%	27%	13%	\$561,600	\$1,101,600	62%	27%	10%	\$702,000	\$1,377,000	63%	27%	10%	\$1,170,000	\$2,295,000	65%	27%	8%	\$1,404,000	\$2,754,000	66%	27%	7%					
1990	\$0	\$0	58%	29%	15%	\$194,888	\$1,296,288	59%	29%	12%	\$730,080	\$2,107,080	61%	29%	10%	\$1,216,800	\$3,511,800	64%	29%	6%	\$1,460,160	\$4,214,160	66%	29%	5%					
1991	\$0	\$0	53%	29%	17%	\$202,476	\$1,498,764	57%	29%	14%	\$759,283	\$2,866,363	60%	29%	11%	\$1,265,472	\$4,777,272	64%	29%	6%	\$1,518,566	\$5,732,726	66%	29%	4%					
1992	\$0	\$0	48%	32%	19%	\$210,575	\$1,709,338	52%	32%	15%	\$789,655	\$3,656,018	56%	32%	11%	\$1,316,091	\$6,093,363	62%	32%	6%	\$1,579,309	\$7,312,035	65%	32%	3%					
1993	\$0	\$0	41%	38%	22%	\$218,998	\$1,928,336	45%	38%	17%	\$821,241	\$4,477,258	50%	38%	12%	\$1,368,735	\$7,462,097	57%	38%	6%	\$1,842,481	\$8,954,517	60%	38%	2%					
1994	\$0	\$0	37%	39%	23%	\$227,757	\$2,156,093	42%	39%	19%	\$854,090	\$5,331,349	49%	39%	12%	\$1,423,484	\$8,885,581	56%	39%	4%	\$1,423,484	\$10,378,001	60%	39%	1%					
1995	\$0	\$0	35%	39%	26%	\$236,868	\$2,392,961	40%	39%	20%	\$888,254	\$6,219,603	48%	39%	12%	\$1,480,423	\$10,366,005	57%	39%	4%	\$1,776,508	\$12,154,509	61%	39%	0%					
1996	\$0	\$0	28%	43%	29%	\$246,342	\$2,639,303	34%	43%	23%	\$923,784	\$7,143,387	43%	43%	14%	\$1,539,640	\$11,905,645	53%	43%	4%	\$1,231,712	\$13,386,221	56%	43%	1%					
1997	\$0	\$0	24%	42%	35%	\$256,196	\$2,895,499	30%	42%	28%	\$960,735	\$8,104,122	40%	42%	18%	\$1,601,226	\$13,506,871	51%	42%	7%	\$1,921,471	\$15,307,692	55%	42%	4%					
1998	\$0	\$0	19%	42%	38%	\$266,444	\$3,161,943	26%	42%	32%	\$999,165	\$9,103,287	37%	42%	20%	\$1,665,275	\$15,172,145	49%	42%	8%	\$2,664,440	\$17,972,131	55%	42%	3%					
1999	\$0	\$0	13%	46%	40%	\$277,102	\$3,439,045	20%	46%	33%	\$1,039,131	\$10,142,419	33%	46%	21%	\$1,731,886	\$16,904,031	46%	46%	8%	\$2,424,640	\$20,396,772	53%	46%	1%					
2000	\$0	\$0	2%	54%	44%	\$288,186	\$3,727,231	10%	54%	37%	\$1,080,687	\$11,223,115	24%	54%	23%	\$1,801,161	\$18,705,192	38%	54%	9%	\$2,161,393	\$22,558,165	45%	54%	2%					
2001	\$0	\$0	1%	52%	47%	\$299,713	\$4,026,944	9%	52%	39%	\$1,123,925	\$12,347,040	24%	52%	24%	\$1,873,208	\$20,578,400	39%	52%	9%	\$2,247,849	\$24,806,014	47%	52%	1%					
2002	\$0	\$0	0%	48%	52%	\$311,702	\$4,338,646	8%	48%	43%	\$1,168,882	\$13,515,922	24%	48%	27%	\$1,948,136	\$22,526,536	41%	48%	11%	\$2,337,763	\$27,143,778	49%	48%	3%					
2003	\$0	\$0	0%	41%	59%	\$324,170	\$4,662,816	7%	42%	51%	\$1,215,637	\$14,731,559	24%	42%	33%	\$2,026,061	\$24,552,598	41%	43%	16%	\$3,846,911	\$30,790,688	50%	44%	6%					
2004	\$0	\$0	0%	37%	63%	\$337,137	\$4,999,952	7%	40%	53%	\$1,264,262	\$15,995,821	24%	41%	35%	\$2,107,104	\$26,659,701	41%	43%	16%	\$4,635,629	\$35,426,317	53%	44%	3%					
2005	\$0	\$0	0%	35%	65%	\$350,622	\$5,350,574	7%	38%	55%	\$1,314,833	\$17,310,654	24%	40%	36%	\$2,191,398	\$28,851,089	41%	43%	16%	\$3,944,499	\$39,370,815	55%	45%	0%					
2006	\$0	\$0	0%	28%	72%	\$364,647	\$5,715,221	7%	32%	62%	\$1,367,426	\$18,678,080	24%	35%	41%	\$2,279,044	\$31,130,133	41%	39%	20%	\$1,823,235	\$41,194,050	54%	41%	5%					
2007	\$0	\$0	0%	24%	76%	\$379,233	\$6,094,454	7%	27%	66%	\$1,422,123	\$20,100,203	24%	32%	44%	\$2,370,205	\$33,500,338	41%	37%	22%	\$6,162,534	\$47,356,584	58%	40%	3%					
2008	\$0	\$0	0%	19%	81%	\$394,402	\$6,488,856	7%	24%	70%	\$1,479,008	\$21,579,211	24%	29%	46%	\$2,465,014	\$35,965,352	41%	36%	24%	\$4,437,024	\$51,793,608	59%	39%	2%					
2009	\$0	\$0	0%	13%	87%	\$410,178	\$6,899,035	7%	18%	75%	\$1,538,168	\$23,117,380	24%	25%	51%	\$2,563,614	\$38,528,966	41%	32%	27%	\$3,589,060	\$55,382,668	60%	36%	4%					
2010	\$0	\$0	0%	2%	98%	\$426,565	\$7,325,620	7%	8%	86%	\$1,599,695	\$24,717,075	24%	16%	60%	\$2,666,159	\$41,195,125	41%	24%	35%	\$5,865,549	\$61,248,217	63%	28%	9%					
2011	\$0	\$0	0%	1%	99%	\$443,649	\$7,769,269	7%	7%	86%	\$1,663,683	\$26,380,758	24%	16%	60%	\$2,772,805	\$43,957,930	41%	26%	33%	\$9,882,098	\$71,230,315	71%	29%	0%					
2012	\$0	\$0	0%	0%	100%	\$461,395	\$8,230,663	7%	6%	87%	\$1,730,230	\$28,110,988	24%	16%	59%	\$2,883,717	\$46,851,647	41%	27%	32%	\$1,614,882	\$72,845,197	69%	31%	0%					

NOTES:

- The cost for each intersection replacement = \$45,000 Inflation factor = 4%
- As of 7/1/88 the overall existing rate is:
 62% good (0 to 15 years old)
 26% fair (16 to 25 years old)
 12% poor (greater than 25 years old)

Source: City of Portland, Bureau of Traffic Management, 7/88.

Table 21

NUMBER OF TRAFFIC SIGNAL CONTROLLERS REACHING USEFUL LIFE

YEAR FOR REPLACEMENT	NUMBER OF CONTROLLERS REACHING USEFUL LIFE		REPLACEMENT RATES														
			REDUCED			EXISTING			IMPROVED LEVEL #1			IMPROVED LEVEL #2			IMPROVED LEVEL #3		
			This Year	Cumulative	Rate	Cum	Dif	Rate	Cum	Dif	Rate	Cum	Dif	Rate	Cum	Dif	Rate
1988	240	240	0	0	240	18	12	228	20	20	220	30	30	210	50	50	190
1989	23	263	0	0	263	10	22	241	20	40	223	30	60	203	50	100	163
1990	16	279	0	0	279	10	32	247	20	60	219	30	90	189	50	150	129
1991	9	288	0	0	288	10	42	246	20	80	208	30	120	168	50	200	88
1992	8	296	0	0	296	10	52	244	20	100	196	30	150	146	50	250	46
1993	29	325	0	0	325	10	62	263	20	120	205	30	180	145	45	295	30
1994	33	358	0	0	358	10	72	286	20	140	218	30	210	148	40	335	23
1995	22	380	0	0	380	10	82	298	20	160	220	30	240	140	45	380	0
1996	23	403	0	0	403	10	92	311	20	180	223	30	270	133	22	402	1
1997	53	456	0	0	456	10	102	354	20	200	256	30	300	156	50	452	4
1998	38	494	0	0	494	10	112	382	20	220	274	30	330	164	42	494	0
1999	54	548	0	0	548	10	122	426	20	240	308	30	360	188	54	548	0
2000	66	614	0	0	614	10	132	482	20	260	354	30	390	224	66	614	0
2001	294	908	0	0	908	10	142	766	20	280	628	30	420	488	80	694	214
2002	13	921	0	0	921	10	152	769	20	300	621	30	450	471	100	794	127

NOTES:

1. The life for a solid state controller is assumed to be 15 years.
2. The life for an electro-mechanical controller is assumed to be 25 years.
3. The "Dif" column shows how many intersections are beyond their rated life during that year.

Source: City of Portland, Bureau of Traffic Management, 7/88

Table 22

SYSTEM RATING & ANNUAL COSTS FOR REPLACEMENT OF TRAFFIC SIGNAL CONTROLLERS

YEAR FOR REPLACEMENT	REPLACEMENT RATES																													
	REDUCED						EXISTING						IMPROVED LEVEL #1						IMPROVED LEVEL #2						IMPROVED LEVEL #3					
	COST			RATING %			COST			RATING %			COST			RATING %			COST			RATING %			COST			RATING %		
	ANNUAL \$	Cumulative \$		G	F	P	ANNUAL \$	Cumulative \$		G	F	P	ANNUAL \$	Cumulative \$		G	F	P	ANNUAL \$	Cumulative \$		G	F	P	ANNUAL \$	Cumulative \$		G	F	P
1988	\$0	\$0	65%	9%	26%	\$117,000	\$117,000	66%	9%	25%	\$130,000	\$130,000	67%	9%	24%	\$195,000	\$195,000	68%	9%	23%	\$325,000	\$325,000	70%	9%	21%					
1989	\$0	\$0	61%	10%	23%	\$67,600	\$184,600	64%	10%	26%	\$135,200	\$255,200	65%	10%	24%	\$202,800	\$397,800	68%	10%	22%	\$338,000	\$663,000	72%	10%	18%					
1990	\$0	\$0	59%	11%	20%	\$70,304	\$254,904	62%	11%	27%	\$140,608	\$405,808	65%	11%	24%	\$210,912	\$608,712	69%	11%	21%	\$351,520	\$1,014,520	75%	11%	14%					
1991	\$0	\$0	56%	12%	18%	\$73,116	\$328,020	61%	12%	27%	\$146,232	\$552,040	65%	12%	23%	\$219,348	\$828,050	69%	12%	18%	\$355,581	\$1,380,101	78%	12%	10%					
1992	\$0	\$0	50%	17%	12%	\$76,041	\$404,061	56%	17%	26%	\$152,082	\$704,122	61%	17%	21%	\$228,122	\$1,056,183	67%	17%	16%	\$380,204	\$1,760,305	78%	17%	5%					
1993	\$0	\$0	46%	18%	10%	\$79,082	\$483,143	53%	18%	25%	\$158,165	\$862,287	59%	18%	22%	\$237,247	\$1,293,430	66%	18%	16%	\$355,871	\$2,115,176	78%	18%	3%					
1994	\$0	\$0	40%	21%	8%	\$82,246	\$565,389	48%	21%	31%	\$164,491	\$1,026,778	56%	21%	24%	\$246,737	\$1,540,167	63%	21%	16%	\$328,983	\$2,445,159	77%	21%	2%					
1995	\$0	\$0	32%	25%	4%	\$85,538	\$650,925	42%	25%	32%	\$171,071	\$1,197,849	51%	25%	24%	\$256,607	\$1,798,774	59%	25%	15%	\$384,910	\$2,930,069	75%	25%	0%					
1996	\$0	\$0	1%	55%	44%	\$88,957	\$739,882	11%	55%	34%	\$177,914	\$1,375,763	21%	55%	24%	\$266,871	\$2,053,645	31%	55%	14%	\$195,705	\$3,025,774	45%	55%	0%					
1997	\$0	\$0	0%	50%	50%	\$92,515	\$832,397	11%	50%	38%	\$185,031	\$1,560,794	22%	50%	28%	\$277,546	\$2,341,191	33%	50%	17%	\$162,576	\$3,488,351	49%	50%	0%					
1998	\$0	\$0	0%	46%	54%	\$96,216	\$928,613	11%	48%	41%	\$192,432	\$1,753,226	22%	49%	30%	\$288,648	\$2,629,839	33%	50%	18%	\$404,107	\$3,892,457	48%	52%	0%					
1999	\$0	\$0	0%	40%	60%	\$100,065	\$1,028,677	11%	43%	46%	\$200,129	\$1,953,355	22%	45%	33%	\$300,194	\$2,930,032	33%	47%	20%	\$249,392	\$4,141,849	49%	51%	0%					
2000	\$0	\$0	0%	33%	67%	\$104,067	\$1,132,744	11%	37%	52%	\$208,134	\$2,161,489	22%	40%	38%	\$312,201	\$3,242,233	33%	43%	24%	\$317,004	\$4,458,853	50%	50%	0%					
2001	\$0	\$0	0%	1%	99%	\$108,230	\$1,240,974	11%	6%	83%	\$216,460	\$2,377,949	22%	10%	68%	\$324,689	\$3,566,923	33%	14%	53%	\$398,818	\$4,858,471	54%	23%	23%					
2002	\$0	\$0	0%	0%	100%	\$112,559	\$1,353,533	11%	6%	83%	\$225,118	\$2,603,066	22%	11%	67%	\$337,677	\$3,904,800	33%	16%	51%	\$519,503	\$5,377,974	59%	27%	14%					

NOTES:

1. The estimated cost per controller: \$5,500 to replace an entire controller and cabinet.
\$3,000 to replace just a type 170 controller.

2. As of 7/1/88 the overall existing rate is:
55% good (0 to 10 years old)
3% fair (11 to 15 years old)
25% poor (greater than 15 years old)

3. Inflation factor: 4%

Source: City of Portland, Bureau of Traffic Management, 7/88

Table 23

REPLACEMENT RATE, ANNUAL COSTS, RATING & SINKING FUND PAYMENTS OF STREET LIGHTING LUMINAIRES*

YEAR	NUMBER OF STREET LIGHTS TO BE REPLACED		COST - IN DOLLARS		RATING			ANNUAL SINKING FUND PAYMENTS	PAYMENT AND PREVIOUS BALANCE	INTEREST	ENDING CUMULATIVE FUND BALANCE	CUMULATIVE		
	THIS YEAR	CUMULATIVE	ANNUAL	CUMULATIVE	G	F	P					PAYMENTS	INTEREST	PAYMENTS & INTEREST
1988	5,050	5,050	\$967,500	\$967,500	91%	7%	2%	\$967,500	\$967,500	\$58,050	\$58,050	\$967,500	\$58,050	\$1,025,550
1989	3,300	8,350	\$732,000	\$1,699,500	98%	0%	2%	\$732,000	\$790,050	\$47,403	\$105,453	\$1,699,500	\$105,453	\$1,804,953
1990	300	8,650	\$275,808	\$1,975,308	98%	1%	1%	\$275,000	\$380,453	\$22,827	\$127,472	\$1,974,500	\$128,280	\$2,102,780
1991	300	8,950	\$286,840	\$2,262,148	99%	0%	1%	\$287,000	\$414,472	\$24,868	\$152,500	\$2,261,500	\$153,149	\$2,414,649
1992	300	9,250	\$298,314	\$2,560,462	100%	0%	0%	\$298,314	\$450,814	\$27,049	\$179,549	\$2,559,814	\$180,197	\$2,740,011
1993	200	9,450	\$36,500	\$2,596,962	100%	0%	0%	\$293,213	\$472,762	\$28,366	\$464,629	\$2,853,027	\$208,563	\$3,061,590
1994	0	9,450	\$0	\$2,596,962	100%	0%	0%	\$304,942	\$769,571	\$46,174	\$815,745	\$3,157,969	\$254,737	\$3,412,707
1995	0	9,450	\$0	\$2,596,962	100%	0%	0%	\$317,140	\$1,132,884	\$87,973	\$1,200,857	\$3,475,109	\$322,710	\$3,797,819
1996	0	9,450	\$0	\$2,596,962	100%	0%	0%	\$329,825	\$1,530,682	\$91,841	\$1,622,523	\$3,804,934	\$414,551	\$4,219,485
1997	0	9,450	\$0	\$2,596,962	100%	0%	0%	\$343,018	\$1,965,542	\$117,932	\$2,083,474	\$4,147,952	\$532,484	\$4,680,436
1998	0	9,450	\$0	\$2,596,962	100%	0%	0%	\$356,739	\$2,440,213	\$146,413	\$2,586,626	\$4,504,691	\$678,897	\$5,183,588
1999	0	9,450	\$0	\$2,596,962	100%	0%	0%	\$371,008	\$2,957,634	\$177,458	\$3,135,092	\$4,875,699	\$856,355	\$5,732,054
2000	0	9,450	\$0	\$2,596,962	86%	14%	0%	\$385,849	\$3,520,941	\$211,256	\$3,732,197	\$5,261,548	\$1,067,611	\$6,329,159
2001	0	9,450	\$0	\$2,596,962	72%	28%	0%	\$401,283	\$4,133,480	\$248,009	\$4,381,489	\$5,662,831	\$1,315,620	\$6,978,451
2002	0	9,450	\$0	\$2,596,962	59%	41%	0%	\$417,334	\$4,798,823	\$287,329	\$5,086,752	\$6,080,165	\$1,603,549	\$7,683,714
2003	0	9,450	\$0	\$2,596,962	58%	42%	0%	\$434,027	\$5,520,780	\$331,247	\$5,852,027	\$6,514,192	\$1,934,796	\$8,448,988
2004	0	9,450	\$0	\$2,596,962	57%	43%	0%	\$451,388	\$6,303,415	\$378,205	\$6,681,620	\$6,965,581	\$2,313,001	\$9,278,582
2005	0	9,450	\$0	\$2,596,962	38%	62%	0%	\$469,444	\$7,151,064	\$429,064	\$7,580,128	\$7,435,025	\$2,742,065	\$10,177,090
2006	0	9,450	\$0	\$2,596,962	25%	75%	0%	\$488,222	\$8,068,350	\$484,101	\$8,552,451	\$7,923,247	\$3,226,166	\$11,149,412
2007	0	9,450	\$0	\$2,596,962	20%	80%	0%	\$507,751	\$9,080,201	\$543,612	\$9,603,813	\$8,430,997	\$3,769,778	\$12,200,775
2008	0	9,450	\$0	\$2,596,962	9%	91%	0%	\$528,061	\$10,131,874	\$607,912	\$10,739,786	\$8,959,058	\$4,377,690	\$13,336,748
2009	0	9,450	\$0	\$2,596,962	2%	98%	0%	\$549,183	\$11,288,969	\$677,338	\$11,966,308	\$9,508,241	\$5,055,028	\$14,563,269
2010	6,750	16,200	\$2,399,543	\$4,996,505	16%	84%	0%	\$571,150	\$12,537,458	\$752,247	\$10,890,163	\$10,079,391	\$5,807,276	\$15,886,667
2011	6,750	22,950	\$2,495,524	\$7,492,029	29%	71%	0%	\$593,996	\$11,484,159	\$689,050	\$9,677,684	\$10,673,388	\$6,496,326	\$17,169,713
2012	6,250	29,200	\$2,403,098	\$9,895,127	41%	59%	0%	\$617,756	\$10,295,441	\$617,726	\$8,510,069	\$11,291,144	\$7,114,052	\$18,405,196
2013	560	29,760	\$559,826	\$10,454,952	42%	58%	0%	\$642,467	\$9,152,536	\$549,152	\$9,141,862	\$11,933,611	\$7,663,204	\$19,596,815
2014	570	30,330	\$644,599	\$11,099,552	43%	57%	0%	\$668,165	\$9,810,028	\$588,602	\$9,754,030	\$12,601,776	\$8,251,806	\$20,853,582
2015	9,320	39,650	\$4,454,804	\$15,554,356	62%	38%	0%	\$694,892	\$10,448,922	\$626,935	\$6,521,053	\$13,296,668	\$8,878,741	\$22,175,409
2016	6,000	45,650	\$3,328,561	\$18,882,917	75%	25%	0%	\$722,687	\$7,343,740	\$440,524	\$4,455,804	\$14,019,355	\$9,319,365	\$23,338,721
2017	2,800	48,450	\$1,964,750	\$20,847,667	80%	20%	0%	\$751,595	\$5,207,399	\$312,444	\$3,555,093	\$14,770,950	\$9,631,809	\$24,402,750
2018	5,050	53,500	\$3,137,987	\$23,985,654	91%	9%	0%	\$781,659	\$4,336,751	\$260,205	\$1,458,969	\$15,552,609	\$9,892,015	\$25,444,624
2019	3,300	56,800	\$2,378,059	\$26,363,713	98%	2%	0%	\$812,925	\$2,271,894	\$136,314	\$30,149	\$16,365,534	\$10,028,328	\$26,393,862

- NOTES: 1. All luminaires are assumed to have a 30-year life.
 2. As of 7/1/88 the overall rating of the street lighting system is:
 84% Good (0-20 years old)
 14% Fair (21-30 years old)
 2% Poor (older than 30 years)
 3. Assumed annual inflation rate = 4%
 4. Assumed return on investment = 6%
 5. Annual Sinking fund Payment in 1988 \$ is = \$241,000
 (The annual payment at this rate starts in 1993. The payment in earlier years (1988-92) is equal to the the annual cost.)

Source: City of Portland, Bureau of Traffic Management, 10/88.

*Assumes a capital sinking fund is established.

Table 24

SIGN INVENTORY REPLACEMENT VALUE

TYPE OF SIGN	EST. NO.	COST PER SIGN	TOTAL
Street Name	39,885	\$ 17.68	\$ 705,167
Parking	35,800	29.24	1,046,792
Traffic Control	21,900	39.73	870,087
TOTAL	97,585		\$ 2,622,046

Note: A Traffic Signing Inventory is being compiled.
Information will be updated in 1989.

Source: City of Portland, Bureau of Maintenance; Bureau of Traffic Management, 1/86; Office of the Transportation Director, 4% Inflation Update, 7/87.

Table 25

**IMPROVEMENT CATEGORIES
FOR
HIGH ACCIDENT / HIGH CONGESTION LOCATIONS**

CATEGORY	DESCRIPTION	IMPROVEMENT	ACCIDENT REDUCTION FACTOR RANGE	COST RANGE
I	Minor Operational Modifications	Signing (warning and/or directional) Striping (minor) and delineators Signal timing changes Turn prohibitions	.20 - .40 .20 - .30 .05 - .10 .20 - .40	\$ 500 - 1,000 500 - 1,000 100 - 500 200 - 1,000
II	Major Operational Modifications	Add a lane (Left turn w/o signal phase) Add a signal phase Modernize/improve signal (actuation, (lenses, etc.) Signal interconnect (coordination)	.19 - .58 .20 - .40 .10 - .31 .05 - .25	500 - 2,000 2,000 - 10,000 1,000 - 10,000 5,000+
III	Minor Construction	Add a new signal Widen for one or more lanes	0.00 - .80 .20 - .40	50,000 - 100,000 20,000 - 100,000
IV	Major Construction	Major widening with new signal Alignment, cross-section improvements Multiple signal project Corridor improvements	.20 - .43 .20 - .40	100,000 + 100,000 +
V	Major Transportation Project	Major structure or other projects involving more than traffic solutions		1,000,000 +

Source: City of Portland, Bureau of Traffic Management, 7/88.

Table 26

ANNUAL FUNDING LEVELS FOR INTERSECTION MODIFICATION

FUNDING LEVELS		I N T E R S E C T I O N			
		TOTAL	"A"	"B"	"C & D"
I	Do Nothing Alternative Maintenance Only	\$ 0	\$ 0	\$ 0	\$100,000
II	Current 1988-89 funding level	292,000 100%	56,600 19%	66,000 23%	169,400 58%
III	Hold funding for "C"	584,900 100%	71,600 12%	336,500 57%	176,800 31%

Source: City of Portland, Bureau of Traffic Management, 7/88.

Table 27
TRAFFIC GROWTH FACTORS

TRIP GROWTH RATES			
Trip Type	1983	2005	% Of Total Growth
Home-Based Work	619,000	928,000	49.2
Home-Based Other	1,163,900	1,687,100	45.0
Non Home Based	806,400	1,234,100	53.0
TOTAL TRIPS	2,589,300	3,849,300	48.7
Annual Growth: 2.2% per year			
From 1986 Metropolitan Service District Regional Traffic Plan			

BASE CONDITIONS		
1988 Total Street Miles	= 1,581 *	*Includes city streets only. Does not include state highway and freeway system.
Total Miles to be annexed	= 161	
Total Projected Street Miles = 1,742		

NUMBER OF INTERSECTIONS AT EACH LEVEL					
	A	B	C	TOTAL	UNITS
No of Intersections	28	232	1,395	1,655	Intersections
Annex Growth Rate	0.02	0.13	0.65	0.82	Int per street mile
Traffic Growth Rate	0.70	4.70	25.30	30.70	Int per year added
Annual Accident	323	1,795	3,399	5,516	---
Accident Per Int.	11.1	7.8	2.4	3.3	---

UNIT COSTS, SAVINGS AND ACCIDENT REDUCTION						
Level	Construction Cost		Annual Savings		Annual Acc. Reduced	
	Average	Maximum	Average	Maximum	Average	Maximum
A	\$28,330	\$60,330	\$18,870	\$27,400	2.40	3.50
B	5,500	56,600	5,750	13,800	0.74	1.70
C	1,000	2,000	2,875	6,900	0.37	0.85

NOTE: 1. Unit Costs and Unit Savings are from an average of minimum and maximum countermeasures as determined from a 1984 study by URS Corp.
2. Annual savings is adjusted for present worth by multiplying the number of intersections and by the PW factors of 4.33 (5% for 5 years).

COMPARE LEVELS A-C WITH SYSTEM 1984-87 Accident Data	
Total System Accidents	50,200
Total A-C Accidents	22,065
Percent of System	44.1%
Total System Intersections	13,000
Total Major Intersections	1,655
Total % of System	12.7%

Source: City of Portland, Bureau of Traffic Management, 7/88.

Table 28

DISTRIBUTION OF REPORTED ACCIDENTS SUMMARY
(1984 - 1987 Annual Average)

TYPE	CATEGORY	NUMBER PER INTER-SECTIONS	% OF		NUMBER OF ACCIDENTS	% OF		CONDITION
			SUBTOTAL	TOTAL		SUBTOTAL	TOTAL	
A	Critical	28	1.7	0.2	323	5.9	2.6	Poor
B	Need	232	14.0	1.8	1,800	32.6	14.4	Fair
C	Other	1,395	84.3	10.7	3,398	61.5	27.2	Good
SUBTOTAL		1,655	100.0	12.7	5,521	100.0	44.2	
D	Local	11,345	0.0	87.3	6,984	0.0	55.8	
TOTAL		13,000±	100.0	100.0	12,500	100.0	100.0	

NOTES: 2.0% of the total number of intersections are in fair or poor condition. They contribute 17.0% of the total system's accidents, or 8.5 times their "share" of accidents. Among all major intersections, their share is 2.2 to 1. Local service streets contain about 88% of all the city's intersections and about 56% of the accidents. However if this is distributed uniformly over all "D" category intersections, the result is about .6 accidents per year per intersection. This is compared to 3.3 accidents per year per intersection in the A, B, and C categories (an 5.6:1 ratio).

Source: City of Portland, Bureau of Traffic Management, 7/88.

Table 29
LEVEL "A" and "B" INTERSECTIONS
Level "A" Intersections

#	LOCATION	ACCIDENTS				PEOPLE				ANNUAL SUMMARY				AVG. ANNUAL ACC. COST	AVG. ANNUAL ENTERING VOLUME	ACC. RATE (acc./mill. veh.)	ACC. COST RATE (acc. cost per mill. veh.)
		TOTAL	FATAL	INJURY	PROPERTY	TOTAL	FATAL	INJURY	PROPERTY	1984	1985	1986	1987				
		A	A	M	D	E	E	E	E								
40 N	BUFFALO ST & INTERSTATE AVE	21	0	13	8	0	18	6	3	3	9	\$50,980	7,000	2.38	\$23,120		
56 E	BURNSIDE ST & 60TH AVE	64	0	30	34	0	54	23	13	13	15	\$155,915	24,500	2.07	\$20,203		
74 SE	CLINTON ST & 11TH AVE	23	0	5	18	0	6	6	6	4	7	\$21,555	8,700	2.10	\$7,865		
75 SE	CLINTON ST & 39TH AVE	60	0	43	17	0	67	15	16	9	20	\$185,958	25,800	1.85	\$22,881		
81 NW	COUCH ST & 4TH AVE	24	0	10	14	0	18	3	10	8	3	\$52,765	6,500	2.93	\$25,770		
94 NW	EVERETT ST & 16TH AVE	61	0	33	28	0	58	16	12	14	19	\$164,930	22,000	2.20	\$23,799		
96 NW	EVERETT ST & 22ND AVE	27	0	12	15	0	18	5	9	9	4	\$53,063	10,200	2.10	\$16,515		
97 NW	FLANDERS ST & 21ST AVE	31	0	10	21	0	15	10	7	9	5	\$46,748	7,100	3.47	\$20,902		
98 SE	FLAVEL ST & 82ND AVE	43	1	23	19	1	39	13	9	7	14	\$170,953	31,150	1.10	\$17,422		
104 SE	FOSTER RD & 96TH AVE	47	0	26	21	0	41	10	9	10	15	\$116,948	13,000	2.87	\$28,559		
108 NE	FREMONT ST & 57TH AVE	27	1	15	11	1	36	5	13	3	6	\$160,473	24,900	0.86	\$20,459		
118 NE	GLISAN ST & 148TH AVE	41	2	20	19	3	41	12	15	5	9	\$296,353	24,000	1.36	\$39,200		
125 NW	GLISAN ST & 16TH AVE	46	0	22	24	0	33	10	13	14	9	\$96,240	18,300	1.99	\$16,695		
127 NE	GRAND AVE & HALSEY ST	84	0	43	41	0	87	17	15	41	11	\$247,098	22,000	3.03	\$35,656		
142 SE	HAUTHORNE BLVD & 7TH AVE	24	2	14	8	3	29	8	5	4	7	\$260,680	18,550	1.03	\$44,612		
152 NW	HOYT ST & 10TH AVE	30	0	8	22	0	13	4	9	10	7	\$41,645	7,100	3.35	\$18,621		
154 N	INTERSTATE AVE & PORTLAND BLVD	78	0	35	43	0	51	11	21	27	19	\$150,493	29,500	2.10	\$16,195		
160 N	KILLINGSWORTH ST & WILLIAMS AVE	40	0	26	14	0	46	13	8	10	9	\$128,365	18,200	1.74	\$22,391		
161 N	LOMBARD ST & VANCOUVER AVE	59	0	28	31	0	51	18	12	20	9	\$146,923	26,100	1.79	\$17,871		
178 SE	MORRISON BR.- W. END & GRAND/BELMONT INT.	86	0	34	52	0	49	18	24	18	26	\$147,770	38,000	1.80	\$12,345		
211 NE	SCHUYLER ST & 7TH AVE	22	0	12	10	0	18	8	6	3	5	\$51,575	4,250	4.11	\$38,525		
219 SE	STARK ST & 12TH AVE	38	0	20	18	0	31	10	11	5	12	\$89,055	13,700	2.20	\$20,636		
222 SE	STARK ST & 7TH AVE	23	0	7	16	0	14	6	4	8	5	\$42,560	9,000	2.03	\$15,012		
224 SE	STARK ST & 99TH AVE	69	0	29	40	0	47	35	6	18	10	\$138,800	23,400	2.34	\$18,831		
233 NW	THURMAN ST & 24TH AVE	24	0	13	11	0	19	8	7	2	7	\$54,573	7,900	2.41	\$21,930		
240 SE	WASHINGTON ST & 100TH AVE	55	0	21	34	0	30	18	13	19	5	\$91,115	20,600	2.12	\$14,041		
243 SE	WASHINGTON ST & 82ND AVE	71	0	32	39	0	53	11	19	23	18	\$154,703	31,200	1.81	\$15,741		
245 SE	WASHINGTON ST & 99TH/1205 NB EXIT	51	0	24	27	0	35	5	10	7	7	\$102,533	20,000	2.02	\$16,275		
259 SE	WOODWARD ST & 10TH AVE	22	0	6	16	0	9	6	3	6	7	\$29,060	4,300	4.06	\$21,454		
29 INTERSECTIONS		1,291	6	614	671	8	1,026	330	308	329	299	\$18,210	17,826	2.25	\$8,617		
X's		100.0	0.5	47.6	52.0			26.1	24.3	26.0	23.6	(1000's)					

*Accident Occurrences: Injury = # of accidents that involved injuries.
 PDO = # of accidents that involved property damage only.

Source: City of Portland, Bureau of Traffic Management, 7/88.

Table 29 - continued

CONGESTION LOCATIONS
Level "A" and Level "B" Congestion Intersections

Congested intersections are considered separately from accident locations. The justification (capacity analysis, benefit-cost analysis) is significantly different than when analyzing an accident situation. However, work to improve either an accident or congestion location, in some cases, will improve both aspects of traffic operations (safety and capacity).

The level of congestion for a particular intersection is determined from the change in approach speed as modeled by the City's regional travel forecast model, EMME/2. Specific measures of congestion such as delay or level of service are not readily available system wide at this time.

Level "A"

INTERSECTION		RELATIVE CONGESTION	ACCIDENT CATEGORY
SE POWELL BLVD.	& 39th AVE.	94.8	B
SE POWELL BLVD.	& MILWAUKIE AVE.	94.8	-
SE MCLOUGHLIN BLVD.	& TACOMA ST.	80.8	B
SE BELMONT ST.	& GRAND AVE.	70.3	A
E BURNSIDE	& UNION AVE.	68.5	B
E BURNSIDE	& SANDY/12th AVE.	60.5	B
SW BEAVERTON-HILLSDALE	& SCHOLLS FERRY RD.	60.3	-

Level "B"

INTERSECTION		RELATIVE CONGESTION	ACCIDENT CATEGORY
SE POWELL BLVD.	& 92nd AVE.	59.0	B
N MARINE DR.	& UNION AVE.	59.0	-
SW BARBUR BLVD.	& CAPITAL HWY.	57.5	B
W BURNSIDE	& 23rd AVE.	56.0	-
NE GRAND AVE.	& WEIDLER ST.	50.5	B
SW ARTHUR ST.	& 1ST AVE.	50.0	B
SE STARK ST.	& 122ND AVE.	46.0	B
SW MULTNOMAH BLVD.	& CAPITOL HWY.	29.0	-
NE KILLINGSWORTH	& COLUMBIA BLVD.	24.8	-

Relative Congestion is the sum of the percentage drops in speed for each approach to the intersection.

Source: City of Portland, Bureau of Traffic Management, 7/88.

Table 29 - continued
 LEVEL "A" and "B" INTERSECTIONS
 Level "B" Intersections

#	LOCATION	-- PEOPLE --																ANNUAL SUMMARY				AVG. ANNUAL ACC. COST	AVG. ENTERING VOLUME	ACC. RATE (acc./mill. veh.)	ACC. COST RATE (acc. cost per mill. veh.)
		ACCIDENTS								K I M I J L U L R E E D D								1984	1985	1986	1987				
		T O A L	F A A L	I A N J	P A D O	K I M I J L U L R E E D D	K I M I J L U L R E E D D	K I M I J L U L R E E D D	K I M I J L U L R E E D D																
1 N	AINSWORTH ST	&	INTERSTATE AVE	27	0	12	15	0	22	10	5	7	5	\$63,863	16,400	1.31	\$12,362								
2 NE	AIRPORT WAY	&	122ND AVE	20	0	9	11	0	19	10	3	3	4	\$54,573	10,500	1.51	\$16,500								
3 NE	AIRPORT WAY	&	82ND AVE	31	0	14	17	0	23	9	6	10	6	\$67,158	37,000	0.66	\$5,762								
4 N	ALBERTA ST	&	ALBINA AVE	24	0	15	9	0	27	5	5	7	7	\$75,578	16,100	1.18	\$14,902								
5 N	ALBERTA ST	&	INTERSTATE AVE	22	0	11	11	0	16	8	7	2	5	\$46,473	17,000	1.03	\$8,678								
6 N	ALBERTA ST	&	WILLIAMS AVE	25	0	7	18	0	11	10	4	4	7	\$35,055	14,500	1.37	\$7,675								
7 NE	ALBERTA ST	&	UNION AVE	48	0	27	21	0	51	5	5	22	16	\$143,948	29,000	1.31	\$15,758								
8 N	ALBINA AVE	&	LOMBARD ST	21	1	10	10	1	17	6	4	4	7	\$108,875	24,600	0.68	\$14,050								
9 SW	ALDER ST	&	3RD AVE	20	0	10	10	0	18	5	4	6	5	\$51,575	24,000	0.66	\$6,822								
10 SW	ALDER ST	&	4TH AVE	20	0	10	10	0	11	6	1	4	9	\$32,675	20,000	0.79	\$5,187								
11 SE	ANKENY ST	&	12TH AVE	29	0	8	21	0	12	8	6	6	9	\$38,648	41,700	0.55	\$2,942								
12 SE	ANKENY ST	&	GRAND AVE	22	0	7	15	0	12	7	7	4	4	\$36,863	30,000	0.58	\$3,901								
13 SW	ARTHUR ST	&	1ST AVE	20	0	4	16	0	5	6	4	5	5	\$18,260	19,600	0.81	\$2,958								
14 SW	BARBUR BLVD	&	22ND AVE	26	0	11	15	0	14	8	7	4	7	\$42,263	18,400	1.12	\$7,292								
15 SW	BARBUR BLVD	&	24TH AVE	22	0	10	12	0	14	5	2	9	6	\$41,370	20,700	0.84	\$6,345								
16 SW	BARBUR BLVD	&	60TH AVE	23	0	16	7	0	27	2	4	11	6	\$74,983	32,000	0.57	\$7,439								
17 SW	BARBUR BLVD	&	64TH AVE	33	0	18	15	0	29	8	12	8	5	\$82,763	32,000	0.82	\$8,211								
18 SW	BARBUR BLVD	&	BERTHA BLVD	33	0	17	16	0	26	14	12	7	0	\$74,960	24,900	1.05	\$9,557								
19 SW	BARBUR BLVD	&	CAPITOL HWY	61	0	23	38	0	36	14	13	22	12	\$108,505	38,200	1.27	\$9,017								
20 SW	BEAVERTON-HILLSDALE	&	SHATTUCK RD	28	0	14	14	0	19	8	8	6	6	\$55,465	25,500	0.87	\$6,905								
21 SE	BELMONT ST	&	11TH AVE	36	0	16	20	0	29	9	12	9	6	\$84,250	27,600	1.04	\$9,691								
22 SE	BELMONT ST	&	20TH AVE	26	0	14	12	0	29	6	4	8	8	\$81,870	19,900	1.04	\$13,061								
23 SE	BELMONT ST	&	39TH AVE	36	0	13	23	0	17	5	7	12	12	\$52,743	37,600	0.76	\$4,453								
24 SE	BELMONT ST	&	7TH AVE	22	0	8	14	0	14	9	3	4	6	\$41,965	18,600	0.94	\$7,162								
25 SW	BOOMES FERRY RD	&	TERWILLIGER BLVD	26	0	7	19	0	11	7	7	6	6	\$35,353	19,100	1.08	\$5,876								
26 SW	BOUNDARY ST	&	CORBETT AVE	20	0	8	12	0	12	4	5	5	6	\$35,970	11,300	1.40	\$10,105								
27 N	BROADWAY	&	VANCOUVER AVE	38	0	14	24	0	20	8	3	13	14	\$61,140	31,300	0.96	\$6,201								
28 N	BROADWAY	&	WILLIAMS AVE	54	0	21	33	0	33	19	10	10	15	\$98,918	38,600	1.11	\$8,135								
29 NE	BROADWAY	&	21ST AVE	21	0	10	11	0	18	8	1	4	8	\$51,873	14,000	1.19	\$11,762								
30 NE	BROADWAY	&	33RD AVE	24	0	8	16	0	15	4	7	4	9	\$45,260	39,900	0.48	\$3,601								
31 NE	BROADWAY	&	39TH AVE	47	0	19	28	0	26	36	5	5	1	\$78,530	47,900	0.78	\$5,205								
32 NE	BROADWAY	&	7TH AVE	25	0	8	17	0	12	5	10	6	4	\$37,458	21,500	0.92	\$5,531								
33 NE	BROADWAY	&	GRAND AVE	48	0	15	33	0	21	11	14	14	9	\$66,518	40,000	0.95	\$5,279								
34 NE	BROADWAY	&	UNION AVE	42	0	23	19	0	41	9	8	13	12	\$116,353	55,000	0.61	\$6,716								
35 NE	BROADWAY	&	VICTORIA AVE	34	0	12	22	0	18	8	13	8	5	\$55,145	35,000	0.77	\$5,002								
36 NW	BROADWAY	&	COUCH ST	23	0	10	13	0	14	6	4	6	7	\$41,668	18,633	0.98	\$7,099								
37 NW	BROADWAY	&	DAVIS ST	41	0	11	30	0	15	9	10	8	14	\$49,425	20,000	1.63	\$7,845								
38 NW	BROADWAY	&	FLANDERS ST	20	0	9	11	0	13	4	3	6	7	\$38,373	19,850	0.80	\$6,137								
39 SW	BROADWAY	&	MADISON ST	20	0	7	13	0	10	2	3	12	3	\$30,868	15,800	1.00	\$6,202								
41 E	BURNSIDE	&	10TH AVE	21	0	8	13	0	15	8	6	3	4	\$44,368	32,000	0.52	\$4,402								
42 E	BURNSIDE	&	122ND AVE	43	0	23	20	0	32	14	10	17	2	\$92,350	34,300	0.99	\$8,547								
43 E	BURNSIDE	&	47TH AVE	26	0	16	10	0	21	9	5	8	4	\$59,675	19,400	1.06	\$9,765								
44 E	BURNSIDE	&	53RD AVE	22	0	12	10	0	18	9	5	7	1	\$51,575	15,400	1.13	\$10,632								
45 E	BURNSIDE	&	6TH AVE	27	0	8	19	0	10	6	10	5	6	\$32,653	32,000	0.67	\$3,239								
46 E	BURNSIDE	&	82ND AVE	25	0	14	11	0	22	10	2	7	6	\$62,673	36,300	0.55	\$5,481								
47 E	BURNSIDE	&	8TH AVE	20	0	7	13	0	9	6	6	5	3	\$28,168	33,000	0.48	\$2,710								
48 E	BURNSIDE	&	9TH AVE	24	0	11	13	0	18	9	7	4	4	\$52,468	32,000	0.60	\$5,205								
49 E	BURNSIDE	&	UNION AVE	43	0	22	21	0	36	6	12	9	16	\$103,448	59,600	0.57	\$5,510								
50 W	BURNSIDE	&	11TH AVE	24	0	12	12	0	19	8	4	6	6	\$54,870	27,000	0.71	\$6,451								
51 W	BURNSIDE	&	2ND AVE	28	0	12	16	0	19	10	4	10	4	\$56,060	48,150	0.46	\$3,696								
52 W	BURNSIDE	&	BROADWAY	27	0	13	14	0	15	6	7	5	9	\$44,665	41,000	0.52	\$3,458								
53 E	BURNSIDE ST	&	20TH AVE	53	0	28	25	0	46	10	19	12	12	\$131,638	29,200	1.44	\$14,312								
54 E	BURNSIDE ST	&	28TH AVE	41	0	20	21	0	34	14	7	10	10	\$98,048	19,000	1.71	\$16,382								
55 E	BURNSIDE ST	&	39TH AVE	44	0	19	25	0	32	11	11	12	10	\$93,838	42,150	0.83	\$7,068								
57 E	BURNSIDE ST	&	GRAND AVE	74	1	32	41	1	51	17	21	21	15	\$209,898	55,000	1.07	\$12,115								
58 W	BURNSIDE ST	&	14TH AVE	31	0	17	14	0	23	9	7	7	8	\$66,265	33,600	0.73	\$6,261								
59 W	BURNSIDE ST	&	19TH AVE	24	0	8	16	0	13	7	4	6	7	\$39,860	32,000	0.60	\$3,954								
60 W	BURNSIDE ST	&	21ST AVE	29	0	17	12	0	23	4	7	6	12	\$65,670	33,300	0.69	\$6,261								
61 W	BURNSIDE ST	&	3RD AVE	37	0	26	11	0	36	8	9	11	9	\$100,473	39,000	0.75	\$8,178								
62 W	BURNSIDE ST	&	9TH AVE	38	0	18	20	0	29	13	9	8	8	\$84,250	39,000	0.77	\$6,858								
63 SE	BYBEE BLVD	&	17TH AVE	35	0	14	21	0	23	9	6	8	12	\$68,348	26,900	1.03	\$8,066								
64 SW	CAPITOL HWY	&	POMONA ST	27	0	16	11	0	24	4	9	7	7	\$68,073	21,800	0.98	\$9,913								
65 SW	CAPITOL HWY	&	TERWILLIGER BLVD	29	1	8	20	1	17	8	6	7	8	\$111,850	26,900	0.86	\$13,200								
66 SW	CARUTHERS ST	&	4TH AVE	31	0	15	16	0	15	4	10	9	8	\$45,260	23,600	1.04	\$6,088								

Table 29 - continued
 LEVEL "A" and "B" INTERSECTIONS
 Level "B" Intersections

#	LOCATION	ACCIDENTS												PEOPLE				ANNUAL SUMMARY	AVG. ANNUAL ACC. COST	AVG. ENTERING VOLUME	ACC. RATE (acc./mill. veh.)	ACC. COST RATE (acc. cost per mill. veh.)
		T O T A L				F A T A L				I N J U R I E D				1984	1985	1986	1987					
		A	A	M	D	L	L	J	O	D	E	D	D									
67 SW	CARUTHERS ST & 5TH AVE	24	0	12	12	0	15	15	5	4	0	\$44,070	35,000	0.54	\$3,997							
68 SE	CENTER ST & 82ND AVE	21	0	10	11	0	20	8	6	4	3	\$57,273	29,000	0.57	\$6,270							
69 SW	CLAY ST & 13TH AVE	33	0	15	18	0	22	8	9	11	5	\$64,755	22,700	1.15	\$9,056							
70 SW	CLAY ST & 1ST AVE	21	0	7	14	0	8	8	1	6	6	\$25,765	18,800	0.89	\$4,351							
71 SW	CLAY ST & 4TH AVE	21	0	10	11	0	18	4	5	7	5	\$51,873	27,300	0.61	\$6,032							
72 SW	CLAY ST & 6TH AVE	25	0	10	15	0	15	11	6	4	4	\$44,963	22,000	0.90	\$6,488							
73 SW	CLAY ST & FRONT AVE NB	25	0	12	13	0	15	7	8	3	7	\$44,368	43,700	0.45	\$3,223							
76 SE	CLINTON ST & 50TH AVE	21	0	10	11	0	15	4	5	4	8	\$43,773	12,300	1.36	\$11,298							
77 N	COLUMBIA BLVD & VANCOUVER AVE	33	0	19	14	0	31	13	11	4	5	\$87,865	33,400	0.78	\$8,351							
78 NE	COLUMBIA BLVD & 47TH AVE	22	0	11	11	0	17	4	9	4	5	\$49,173	19,300	0.90	\$8,088							
79 NE	COLUMBIA BLVD & UNION AVE	27	0	16	11	0	28	12	5	6	4	\$78,873	38,650	0.55	\$6,478							
80 SW	COLUMBIA ST & FRONT AVE NB	20	0	8	12	0	11	6	4	6	4	\$33,270	28,200	0.56	\$3,745							
82 N	DENVER AVE & LOMBARD ST	24	0	15	9	0	22	4	7	7	6	\$62,078	21,000	0.91	\$9,384							
83 N	DENVER AVE & PORTLAND BLVD	20	0	10	10	0	15	2	3	9	6	\$43,475	25,000	0.63	\$5,521							
84 SE	DIVISION ST & 11TH AVE	25	0	12	13	0	20	6	7	9	3	\$57,868	19,100	1.04	\$9,618							
85 SE	DIVISION ST & 12TH AVE	33	0	17	16	0	23	8	8	9	8	\$66,860	20,050	1.31	\$10,586							
86 SE	DIVISION ST & 39TH AVE	38	0	20	18	0	33	12	4	11	11	\$94,455	36,000	0.84	\$8,329							
87 SE	DIVISION ST & 50TH AVE	31	0	15	16	0	21	8	8	7	8	\$61,460	23,700	1.04	\$8,233							
88 SE	DIVISION ST & 52ND AVE	34	0	18	16	0	33	9	7	8	10	\$93,860	18,000	1.50	\$16,554							
89 SE	DIVISION ST & 60TH AVE	24	0	12	12	0	18	5	1	11	7	\$52,170	23,000	0.83	\$7,201							
90 SE	DIVISION ST & 76TH AVE	21	0	10	11	0	18	4	7	5	5	\$51,873	24,000	0.69	\$6,861							
91 SE	DIVISION ST & 82ND AVE	57	0	30	27	0	46	15	14	15	13	\$132,233	49,200	0.92	\$8,532							
92 SE	DUKE ST & 82ND AVE	27	0	16	11	0	26	8	3	6	10	\$73,473	29,500	0.73	\$7,907							
93 NW	EVERETT ST & 14TH AVE	32	0	19	13	0	30	5	7	12	8	\$84,868	18,400	1.38	\$14,642							
95 NW	EVERETT ST & 18TH AVE	20	0	11	9	0	18	3	2	7	8	\$51,278	11,350	1.40	\$14,342							
99 SE	FOSTER RD & 52ND AVE	40	0	13	27	0	14	7	10	12	11	\$45,833	29,300	1.08	\$4,966							
100 SE	FOSTER RD & 72ND AVE	30	0	15	15	0	21	7	8	7	8	\$61,163	22,700	1.05	\$8,554							
101 SE	FOSTER RD & 82ND AVE	47	0	27	20	0	39	16	6	16	9	\$111,250	49,100	0.76	\$7,193							
102 SE	FOSTER RD & 92ND AVE	46	0	20	26	0	31	9	8	11	18	\$91,435	22,000	1.66	\$13,194							
103 SE	FOSTER RD & 94TH/1205 SB EXIT	33	0	15	18	0	20	2	10	3	9	\$59,355	23,550	1.11	\$8,001							
105 SE	FOSTER RD & HOLGATE BLVD	20	0	9	11	0	14	3	7	3	7	\$41,073	28,000	0.57	\$4,657							
106 SE	FRANCIS ST & 39TH AVE	22	0	12	10	0	16	7	3	6	6	\$46,175	23,000	0.76	\$6,373							
107 NE	FREMONT ST & 122ND AVE	32	0	16	16	0	23	1	0	5	6	\$66,860	29,400	0.86	\$7,220							
109 NE	FREMONT ST & 82ND AVE	27	0	12	15	0	19	9	5	8	5	\$55,763	26,900	0.80	\$6,581							
110 NE	FREMONT ST & UNION AVE	38	0	19	19	0	31	12	11	5	10	\$89,353	30,400	0.99	\$9,331							
111 SW	FRONT AVE & 15 NB EXTO HARBOR DR	22	0	7	15	0	7	1	9	11	1	\$23,363	28,000	0.62	\$2,649							
112 SW	FRONT AVE NB & MARKET ST	31	0	11	20	0	16	7	8	8	8	\$49,150	31,500	0.78	\$4,953							
113 SW	GARDEN HOME RD & OLESOW RD	22	0	7	15	0	11	10	7	3	2	\$34,163	25,800	0.68	\$4,204							
114 SE	GLADSTONE ST & 39TH AVE	36	0	15	21	0	25	5	5	16	10	\$73,748	21,700	1.32	\$10,789							
115 NE	GLISAN ST & 102ND AVE	27	0	13	14	0	20	13	8	6	0	\$58,165	42,600	0.50	\$4,335							
116 NE	GLISAN ST & 102ND AVE	48	0	21	27	0	33	26	16	12	13	\$97,133	42,600	0.89	\$7,238							
117 NE	GLISAN ST & 122ND AVE	29	0	18	11	0	29	10	6	8	5	\$81,573	48,800	0.47	\$5,307							
119 NE	GLISAN ST & 39TH AVE	24	0	10	14	0	12	10	9	3	2	\$36,565	33,500	0.57	\$3,465							
120 NE	GLISAN ST & 53RD AVE	20	0	10	10	0	16	2	4	9	5	\$46,175	15,900	1.00	\$9,219							
121 NE	GLISAN ST & 60TH AVE	21	0	9	12	0	11	9	2	4	6	\$33,270	28,400	0.59	\$3,719							
122 NE	GLISAN ST & 82ND AVE	56	0	31	25	0	41	22	9	17	8	\$118,138	45,650	0.97	\$8,216							
123 NE	GLISAN ST & 1205 NB EXFR STARK	23	0	12	11	0	16	0	1	10	12	\$46,473	28,500	0.64	\$5,177							
124 NE	GLISAN ST & 1-205 SB EXTO GLISAN	22	0	15	7	0	27	0	0	12	10	\$74,983	26,000	0.67	\$9,155							
126 NW	GLISAN ST & 22ND AVE	26	0	14	12	0	27	4	11	8	3	\$76,470	16,500	1.25	\$14,713							
128 NE	GRAND AVE & MULTNOMAH ST	22	0	8	14	0	9	7	2	6	7	\$28,465	28,800	0.61	\$3,138							
129 NE	GRAND AVE & WEIDLER ST	46	0	15	31	0	25	11	13	15	7	\$76,723	40,200	0.91	\$6,059							
130 SE	GRAND AVE & CLAY ST	20	0	10	10	0	21	5	6	4	5	\$59,475	30,000	0.53	\$6,315							
131 SE	GRAND AVE & STARK ST	27	0	14	13	0	21	5	6	6	10	\$60,568	31,300	0.68	\$6,143							
132 N	GREELEY AVE & PORTLAND BLVD	29	0	17	12	0	33	5	9	6	9	\$92,670	23,000	1.00	\$12,791							
133 NE	HALSEY ST & 102ND AVE	35	0	11	24	0	20	1	4	10	20	\$61,140	44,900	0.62	\$4,323							
134 NE	HALSEY ST & 122ND AVE	36	0	18	18	0	28	12	7	6	11	\$80,955	44,900	0.64	\$5,724							
135 NE	HALSEY ST & 47TH AVE	34	0	18	16	0	22	9	12	8	5	\$64,160	20,400	1.32	\$9,984							
136 NE	HALSEY ST & 60TH AVE	20	0	12	8	0	25	2	7	5	6	\$69,880	31,050	0.51	\$7,145							
137 NE	HANCOCK ST & 33RD AVE	20	0	9	11	0	11	7	3	8	2	\$32,973	25,000	0.63	\$4,187							
138 NE	HASSALO ST & UNION AVE	31	0	17	14	0	22	12	14	4	1	\$63,565	25,000	0.98	\$8,072							
139 SE	HAWTHORNE BLVD & 11TH AVE	42	0	20	22	0	34	12	7	17	6	\$98,345	21,000	1.59	\$14,867							
140 SE	HAWTHORNE BLVD & 12TH AVE	22	0	9	13	0	18	5	3	9	5	\$52,468	24,500	0.71	\$6,799							
141 SE	HAWTHORNE BLVD & 39TH AVE	48	0	26	22	0	44	11	8	17	12	\$125,345	39,800	0.96	\$9,998							
143 SE	HAWTHORNE BR - E END & GRAND/HAWTHORNE INT.	23	0	7	16	0	9	12	0	5	6	\$29,060	41,700	0.44	\$2,212							

Table 29 - continued
 LEVEL "A" and "B" INTERSECTIONS
 Level "B" Intersections

#	LOCATION	ACCIDENTS										ANNUAL SUMMARY				AVG. ANNUAL ACC. COST	AVG. ENTERING VOLUME	ACC. RATE (acc/veh.)	ACC. COST (acc. cost per mill. veh.)		
		T O T A L				F A L L				K I L L		D E A T H		1984	1985					1986	1987
		L	L	J	O	L	L	J	O	D	D										
144 SE	HAMTHORNE BR - E END	&	UNION/CLAY-OFF RAMP	41	0	16	25	0	23	13	7	9	12	\$69,538	31,300	1.04	\$7,053				
145 SW	HAMTHORNE BR - W.END	&	FRONT NB CONN. EBD	27	0	12	15	0	18	9	5	6	7	\$53,063	23,100	0.93	\$7,292				
146 SE	HOLGATE BLVD	&	17TH AVE	39	0	21	18	0	38	11	8	10	10	\$107,955	33,000	0.94	\$10,385				
147 SE	HOLGATE BLVD	&	26TH AVE	44	0	20	24	0	29	11	13	10	10	\$85,440	27,900	1.25	\$9,722				
148 SE	HOLGATE BLVD	&	39TH AVE	28	0	14	14	0	21	7	4	7	10	\$60,865	27,800	0.80	\$6,950				
149 SE	HOLGATE BLVD	&	72ND AVE	21	0	10	11	0	15	3	5	5	8	\$43,773	13,400	1.24	\$10,370				
150 SE	HOLGATE BLVD	&	82ND AVE	62	0	30	32	0	44	18	14	20	10	\$128,320	38,300	1.28	\$10,636				
151 SE	HOLGATE BLVD	&	92ND AVE	31	0	16	15	0	25	4	3	16	8	\$71,963	23,200	1.06	\$9,847				
153 N	INTERSTATE AVE	&	LOMBARD ST	45	1	22	22	1	30	13	16	10	6	\$147,545	32,000	1.12	\$14,637				
155 SW	JEFFERSON ST	&	13TH AVE	31	0	13	18	0	23	5	5	11	10	\$67,455	22,600	1.09	\$9,475				
156 SW	JEFFERSON ST	&	4TH AVE	25	0	12	13	0	17	6	4	6	9	\$49,768	23,800	0.83	\$6,638				
157 N	KILLINGSWORTH	&	VANCOUVER AVE	32	0	15	17	0	29	8	9	8	7	\$83,358	19,500	1.30	\$13,571				
158 NE	KILLINGSWORTH	&	42ND AVE	40	0	21	19	0	32	11	6	10	13	\$92,053	20,300	1.56	\$14,396				
159 NE	KILLINGSWORTH	&	UNION AVE	26	0	16	10	0	22	8	4	8	6	\$62,375	32,600	0.63	\$6,074				
162 N	LOMBARD ST	&	WOOLSEY AVE	25	0	15	10	0	31	6	9	4	6	\$86,675	17,500	1.13	\$15,723				
163 NE	LOMBARD ST	&	UNION AVE	32	0	16	16	0	26	6	8	10	8	\$74,960	28,500	0.89	\$8,350				
164 SW	MACADAM AVE	&	BOUNDARY ST	21	0	14	7	0	18	6	7	6	2	\$50,683	35,000	0.48	\$4,597				
165 SW	MACADAM AVE	&	TAYLORS FERRY RD	23	0	6	17	0	8	4	6	9	4	\$26,658	38,700	0.47	\$2,187				
166 SE	MADISON ST	&	7TH AVE	24	0	12	12	0	24	5	5	8	6	\$68,370	14,000	1.36	\$15,503				
167 SW	MADISON ST	&	1ST AVE	23	0	12	11	0	20	4	5	7	7	\$57,273	15,000	1.22	\$12,121				
168 SW	MARKET ST	&	13TH AVE	45	0	18	27	0	25	9	14	12	10	\$75,533	23,500	1.52	\$10,204				
169 SW	MARKET ST	&	1ST AVE	30	0	14	16	0	20	5	9	6	10	\$58,760	19,700	1.21	\$9,469				
170 SW	MARKET ST	&	4TH AVE	34	0	17	17	0	24	9	14	6	5	\$69,858	25,700	1.05	\$8,629				
171 SE	MCCLOUGHLIN BLVD	&	17TH AVE	40	0	21	19	0	40	13	8	15	4	\$113,653	50,600	0.63	\$7,130				
172 SE	MCCLOUGHLIN BLVD	&	HOLGATE BLVD	21	0	9	12	0	12	3	10	4	4	\$35,970	44,000	0.38	\$2,595				
173 SE	MCCLOUGHLIN BLVD	&	TACOMA ST	42	0	17	25	0	25	11	14	13	4	\$74,938	49,600	0.67	\$4,796				
174 SE	MILWAUKIE AVE	&	POWELL BLVD	39	0	21	18	0	32	8	12	14	5	\$91,755	55,700	0.56	\$5,230				
175 SE	MORRISON BR - E. END	&	GRAND/MORRISON INT.	43	0	20	23	0	29	10	9	15	9	\$85,143	47,300	0.72	\$5,714				
176 SE	MORRISON BR - E. END	&	GRAND/MORRISON INT.	35	0	25	10	0	47	11	4	8	12	\$129,875	47,300	0.59	\$8,717				
177 SW	MORRISON BR - W. END	&	ALDER/2ND INT.	28	0	5	23	0	5	2	5	11	10	\$20,343	21,600	1.03	\$2,990				
179 SE	MORRISON ST	&	7TH AVE	36	0	15	21	0	24	6	8	10	12	\$71,048	25,600	1.12	\$8,810				
180 SW	MULTNOMAH BLVD	&	45TH AVE	20	0	13	7	0	26	4	7	7	2	\$72,283	20,100	0.79	\$11,416				
181 SW	MULTNOMAH BLVD	&	15 SB CONN. (MERGE)	28	0	10	18	0	12	10	7	4	7	\$37,755	13,800	1.61	\$8,685				
182 NE	OREGON ST	&	UNION AVE	20	0	11	9	0	17	3	3	7	7	\$48,578	27,000	0.59	\$5,712				
183 N	PORTLAND BLVD	&	VANCOUVER AVE	20	0	12	8	0	21	4	4	5	7	\$59,080	15,150	1.05	\$12,380				
184 SE	POWELL BLVD	&	10TH AVE	23	0	10	13	0	14	3	10	5	5	\$41,668	43,000	0.42	\$3,076				
185 SE	POWELL BLVD	&	13TH PL	21	0	15	6	0	22	4	7	5	5	\$61,185	41,150	0.41	\$4,720				
186 SE	POWELL BLVD	&	21ST AVE	42	0	19	23	0	30	15	2	10	15	\$87,843	40,000	0.83	\$6,972				
187 SE	POWELL BLVD	&	26TH AVE	57	1	28	28	1	47	11	8	20	18	\$195,230	42,100	1.07	\$14,722				
188 SE	POWELL BLVD	&	28TH AVE	21	0	15	6	0	21	3	4	9	5	\$58,485	35,800	0.47	\$5,186				
189 SE	POWELL BLVD	&	33RD AVE	26	0	13	13	0	16	5	11	4	6	\$47,068	37,000	0.56	\$4,038				
190 SE	POWELL BLVD	&	39TH AVE	67	0	24	43	0	29	11	14	23	19	\$91,093	56,000	0.95	\$5,164				
191 SE	POWELL BLVD	&	50TH AVE	22	0	10	12	0	14	8	4	4	6	\$41,370	40,000	0.44	\$3,283				
192 SE	POWELL BLVD	&	52ND AVE	24	0	14	10	0	24	7	9	4	4	\$67,775	28,025	0.68	\$7,677				
193 SE	POWELL BLVD	&	82ND AVE	58	0	34	24	0	51	13	17	13	15	\$144,840	49,600	0.93	\$9,270				
194 SE	POWELL BLVD	&	92ND AVE	35	0	18	17	0	24	9	8	8	10	\$69,858	40,600	0.68	\$5,462				
195 SE	POWELL BLVD	&	I-205 NB RAMPS	29	0	14	15	0	17	8	4	9	7	\$50,363	24,000	0.96	\$6,662				
196 NE	PRESCOTT ST	&	82ND AVE	23	0	12	11	0	20	6	6	7	4	\$57,273	25,600	0.71	\$7,102				
197 SW	ROSS ISL BR - W. END	&	FRONT CONN - MACADAM	24	0	6	18	0	7	6	4	11	3	\$24,255	28,200	0.68	\$2,730				
198 SW	ROSS ISL BR - W. END	&	FRONT TO POWELL EBD	48	0	13	35	0	20	17	9	10	12	\$64,413	28,200	1.35	\$7,251				
199 SW	ROSS ISL BR - W. END	&	KELLY/CORBETT/MACAD.	62	0	28	34	0	34	16	15	27	4	\$101,915	59,850	0.82	\$5,406				
200 SW	ROSS ISL BR. - W. END	&	E/W MERGE GORE AREA	72	0	27	45	0	37	21	9	22	20	\$113,288	59,850	0.95	\$6,009				
201 SW	SALMON ST	&	13TH AVE	21	0	10	11	0	17	7	3	7	4	\$49,173	18,600	0.90	\$8,393				
202 NE	SANDY BLVD	&	105TH AVE	21	0	10	11	0	21	0	6	6	9	\$59,973	32,200	0.52	\$5,913				
203 NE	SANDY BLVD	&	20TH AVE	28	0	12	16	0	23	8	5	9	6	\$66,860	34,300	0.65	\$6,188				
204 NE	SANDY BLVD	&	28TH AVE	24	0	11	13	0	19	3	9	6	6	\$55,168	23,950	0.80	\$7,313				
205 NE	SANDY BLVD	&	39TH AVE	51	0	14	37	0	17	16	7	13	15	\$56,908	35,600	1.14	\$5,075				
206 NE	SANDY BLVD	&	42ND AVE	22	0	10	12	0	11	8	2	4	8	\$33,270	31,100	0.56	\$3,396				
207 NE	SANDY BLVD	&	47TH AVE	44	0	22	22	0	29	10	15	11	8	\$84,845	27,800	1.26	\$9,689				
208 NE	SANDY BLVD	&	57TH AVE	36	0	21	15	0	34	11	7	11	7	\$96,263	30,600	0.93	\$9,987				
209 NE	SANDY BLVD	&	82ND AVE	29	1	9	19	1	13	6	10	7	6	\$100,753	30,900	0.74	\$10,351				
210 NE	SANDY BLVD	&	BURNSIDE/12TH	22	0	6	16	0	9	9	3	9	1	\$29,060	42,900	0.41	\$2,150				
212 SW	SHERIDAN ST	&	5TH AVE	21	0	3	18	0	3	6	4	6	5	\$13,455	24,000	0.69	\$1,780				
213 NE	SISKIYOU ST	&	122ND AVE	26	0	8	18	0	11	3	12	6	5	\$35,055	25,000	0.83	\$4,451				

Table 29 - continued
 LEVEL "A" and "B" INTERSECTIONS
 Level "B" Intersections

#	LOCATION	ACCIDENTS												ANNUAL SUMMARY				AVG. ANNUAL ACC. COST	AVG. ANNUAL ENTERING VOLUME	ACC. RATE (acc/ mill. veh.)	ACC. COST RATE (acc. cost per mill. veh.)
		Y O A T				F A I P				L L J D				1984	1985	1986	1987				
		T	O	A	T	F	A	I	P	L	L	J	D								
214	NE SKIDMORE ST & 122ND AVE	36	0	20	16	0	36	5	4	10	17	\$101,960	30,350	0.94	\$10,665						
215	SE SPOKANE ST & 131H AVE	20	0	8	12	0	13	7	3	5	5	\$38,670	14,000	1.13	\$8,769						
216	SE STARK ST & 102ND AVE	62	0	24	38	0	39	27	13	12	10	\$116,605	29,800	1.65	\$12,422						
217	SE STARK ST & 111H AVE	20	0	7	13	0	12	8	3	3	6	\$36,268	11,000	1.44	\$10,467						
218	SE STARK ST & 122ND AVE	47	0	20	27	0	37	14	11	13	9	\$107,933	57,500	0.65	\$5,959						
220	SE STARK ST & 39TH AVE	36	1	18	17	1	31	8	6	15	7	\$148,758	38,300	0.75	\$12,330						
221	SE STARK ST & 60TH AVE	27	0	13	14	0	20	6	9	5	7	\$58,165	19,800	1.08	\$9,326						
223	SE STARK ST & 82ND AVE	42	0	27	15	0	41	8	10	11	13	\$115,163	40,200	0.83	\$9,094						
225	SE STARK ST & 1205 SB EXFR GLISAN	24	0	16	8	0	29	0	0	13	11	\$80,680	28,000	0.68	\$9,147						
226	SE STEELE ST & 39TH AVE	24	0	15	9	0	26	9	4	8	3	\$72,878	21,000	0.91	\$11,017						
227	SE TACOMA ST & 131H AVE	29	0	14	15	0	20	5	7	7	10	\$58,463	34,200	0.67	\$5,427						
228	SE TACOMA ST & 17TH AVE	32	0	16	16	0	28	3	8	9	12	\$80,360	29,600	0.86	\$8,619						
229	SE TACOMA ST & 9TH AVE	27	0	15	12	0	22	8	6	6	7	\$62,970	30,700	0.70	\$6,512						
230	SW TAYLORS FERRY RD & TERWILLIGER BLVD	43	0	15	28	0	21	9	7	11	16	\$65,030	31,200	1.09	\$6,617						
231	SW TERWILLIGER BLVD & TROY ST	23	0	11	12	0	13	5	6	6	6	\$38,670	21,300	0.86	\$5,763						
232	NW THURMAN ST & 22ND AVE	33	0	4	29	0	4	6	11	11	5	\$19,428	32,700	0.80	\$1,886						
234	NE UNION AVE & COUCH ST	21	0	7	14	0	13	5	4	6	6	\$39,265	21,600	0.77	\$5,771						
235	NE UNION AVE & WEIDLER ST	25	0	11	14	0	15	4	3	13	5	\$44,665	55,200	0.36	\$2,569						
236	SE UNION AVE & STARK ST	21	0	6	15	0	8	5	1	7	8	\$26,063	26,000	0.64	\$3,182						
237	NE US GRANT PL & 33RD AVE	31	0	17	14	0	30	5	7	11	8	\$85,165	27,600	0.89	\$9,796						
238	N VANCOUVER AVE & WEIDLER ST	42	0	11	31	0	19	7	8	9	18	\$60,523	38,000	0.88	\$5,056						
239	NW VAUGHN ST & 22ND AVE	26	0	10	16	0	17	6	5	6	9	\$50,660	30,500	0.68	\$5,273						
241	SE WASHINGTON ST & 102ND AVE	57	0	30	27	0	37	15	14	21	7	\$107,933	30,500	1.48	\$11,234						
242	SE WASHINGTON ST & 103RD DR	20	0	6	14	0	9	0	0	11	9	\$28,465	27,000	0.59	\$3,347						
244	SE WASHINGTON ST & 92ND AVE	34	0	14	20	0	30	12	4	11	7	\$86,950	20,000	1.35	\$13,802						
246	N WEIDLER ST & WILLIAMS AVE	41	0	16	25	0	22	13	10	7	11	\$66,838	27,550	1.18	\$7,702						
247	NE WEIDLER ST & 102ND AVE	26	0	17	9	0	29	2	12	6	6	\$80,978	30,700	0.67	\$8,374						
248	NE WEIDLER ST & 15TH AVE	22	0	14	8	0	23	8	3	5	6	\$64,480	20,800	0.84	\$9,841						
249	NE WEIDLER ST & 21ST AVE	23	0	10	13	0	17	7	5	1	10	\$49,768	28,300	0.65	\$5,583						
250	NE WEIDLER ST & 3RD AVE	41	0	17	24	0	33	10	11	11	9	\$96,240	21,900	1.49	\$13,951						
251	NE WEIDLER ST & 7TH AVE	21	0	11	10	0	20	6	5	7	3	\$56,975	23,800	0.70	\$7,600						
252	NE WEIDLER ST & 9TH AVE	29	0	13	16	0	18	8	10	7	4	\$53,360	24,000	0.96	\$7,058						
253	NE WEIDLER ST & 15 NB EXTO WEIDLER	22	0	7	15	0	13	9	3	4	6	\$39,563	30,300	0.58	\$4,145						
254	N WILLIAMS AVE & FREMONT ST	21	0	13	8	0	25	4	4	10	3	\$69,880	17,400	0.96	\$12,749						
255	SE WOODSTOCK BLVD & 39TH AVE	32	0	17	15	0	29	3	7	11	11	\$82,763	20,200	1.26	\$13,007						
256	SE WOODSTOCK BLVD & 82ND AVE	37	0	14	23	0	32	15	3	12	7	\$93,243	34,600	0.85	\$8,555						
257	SE WOODSTOCK BLVD & 92ND AVE	33	0	15	18	0	21	10	7	9	7	\$62,055	18,100	1.45	\$10,884						
258	SE WOODSTOCK BLVD & 94TH/1205 SB EXIT	29	0	14	15	0	24	4	8	6	7	\$69,263	22,700	1.01	\$9,686						
260	SE WOODWARD ST & 82ND AVE	24	0	13	11	0	22	5	6	7	6	\$62,673	27,800	0.69	\$7,157						
231	INTERSECTIONS	7,180	7	3,312	3,861	7	5,160	1,846	1,610	1,968	1,741	\$15,896	29,565	0.89	\$9,218						
		X's	100.0	0.1	46.1	53.8		25.8	22.5	27.5	24.3	(1000's)									

Source: City of Portland, Bureau of Traffic Management, 7/88.

Table 30
**INCREASE IN "MAJOR" AND/OR "CRITICAL" INTERSECTIONS
OVER 20 YEARS GIVEN THREE FUNDING LEVELS
LEVEL I: MAINTENANCE FUNDING ONLY**

Year	Miles Added	Total System Miles	"A" Level Intersections			"B" Level Intersections			"C" Level Intersections			Totals for A+B+C Int's		
			Int's. Added	Total Int's.	# Acc.	Int's. Added	Total Int's.	# Acc.	Int's. Added	Total Int's.	# Acc.	Int's. Added	Total Int's.	# Acc.
1988	0.0	1,580.6	---	28.0	323	---	232.0	1795	---	1395.0	3399	---	1,655	5516
1989	2.0	1,582.6	0.7	28.7	330	5.4	237.4	1837	32.6	1427.6	3478	38.7	1,694	5645
1990	31.8	1,614.4	1.2	29.8	344	9.8	247.2	1913	58.9	1486.5	3622	69.9	1,764	5878
1991	31.8	1,646.2	1.2	31.0	358	9.8	257.0	1989	58.9	1545.5	3765	69.9	1,833	6111
1992	31.8	1,678.0	1.2	32.2	371	9.8	266.8	2064	58.9	1604.4	3909	69.9	1,903	6344
1993	31.8	1,709.8	1.2	33.4	385	9.8	276.6	2140	58.9	1663.3	4052	69.9	1,973	6577
1994	32.2	1,742.0	1.2	34.6	399	9.9	286.5	2216	59.3	1722.6	4197	70.3	2,044	6812
1995	.	.	0.6	35.2	406	5.1	291.6	2256	30.9	1753.4	4272	36.6	2,080	6934
1996	.	.	0.6	35.8	413	5.1	296.7	2296	30.9	1784.3	4347	36.6	2,117	7056
1997	.	.	0.6	36.4	420	5.1	301.9	2336	30.9	1815.1	4422	36.6	2,153	7178
1998	.	.	0.6	37.1	427	5.1	307.0	2375	30.9	1846.0	4497	36.6	2,190	7300
1999	.	.	0.6	37.7	434	5.1	312.1	2415	30.9	1876.8	4572	36.6	2,227	7422
2000	.	.	0.6	38.3	441	5.1	317.3	2455	30.9	1907.7	4648	36.6	2,263	7544
2001	.	.	0.6	38.9	449	5.1	322.4	2494	30.9	1938.5	4723	36.6	2,300	7666
2002	.	.	0.6	39.5	456	5.1	327.5	2534	30.9	1969.4	4798	36.6	2,336	7788
2003	.	.	0.6	40.1	463	5.1	332.7	2574	30.9	2000.3	4873	36.6	2,373	7910
2004	.	.	0.6	40.8	470	5.1	337.8	2614	30.9	2031.1	4948	36.6	2,410	8032
2005	.	.	0.6	41.4	477	5.1	342.9	2653	30.9	2062.0	5023	36.6	2,446	8154
TOTALS			13.4	610.9	7,041	110.9	5,062	39,161	667.0	30,434	74,144	791.3	36,107	120,347

Source: City of Portland, Bureau of Traffic Management, 7/88.

Table 30 - continued
 INCREASE IN "MAJOR" AND/OR "CRITICAL" INTERSECTIONS
 OVER 20 YEARS GIVEN THREE FUNDING LEVELS
 LEVEL II: EXISTING FUNDING

Year	"A"		"B"		"C"		TOTAL		Annual Accident Change	% Change From Base				
	# Int.	Subtotal	# Acc.	# Int.	Subtotal	# Acc.	# Int.	Subtotal			# Acc.			
1988	---	28	323	---	232	1795	---	1395	3399	---	1655	5516	0	---
1989	2	25	290	12	223	1725	70	1362	3317	84	1610	5332	-313	-5.55
1990	2	25	286	12	229	1770	70	1424	3470	84	1678	5527	-351	-5.98
1991	2	25	283	12	235	1815	70	1487	3623	84	1746	5722	-390	-6.38
1992	2	24	279	12	240	1861	70	1550	3777	84	1815	5916	-428	-6.75
1993	2	24	275	12	246	1906	70	1613	3930	84	1883	6111	-466	-7.09
1994	2	24	272	12	252	1951	70	1676	4084	84	1952	6307	-505	-7.41
1995	2	23	262	12	253	1960	70	1711	4169	84	1987	6391	-543	-7.83
1996	2	22	251	12	255	1970	70	1746	4253	84	2022	6474	-581	-8.24
1997	2	21	241	12	256	1979	70	1781	4338	84	2057	6558	-619	-8.63
1998	2	20	231	12	257	1988	70	1816	4423	84	2093	6642	-658	-9.01
1999	2	19	221	12	258	1997	70	1850	4508	84	2128	6726	-696	-9.38
2000	2	18	211	12	259	2006	70	1885	4593	84	2163	6809	-734	-9.73
2001	2	17	201	12	260	2015	70	1920	4678	84	2198	6893	-772	-10.08
2002	2	17	191	12	262	2024	70	1955	4762	84	2233	6977	-811	-10.41
2003	2	16	180	12	263	2033	70	1990	4847	84	2268	7061	-849	-10.73
2004	2	15	170	12	264	2042	70	2024	4932	84	2303	7144	-887	-11.05
2005	2	14	160	12	265	2051	70	2059	5017	84	2338	7228	-926	-11.35
	34	4,004	204		33,092	1,190		72,721	1,428		109,818	-10529	-8.75 %	
	34 WORKED ON			204 WORKED ON										
	26 MOVED FROM A TO B			67 MOVED FROM B TO C										
	13 NEW A'S ADDED			111 NEW B'S ADDED										
	14 NET REMAINING IN 'A'			265 NET REMAINING IN 'B'										

Source: City of Portland, Bureau of Traffic Management, 7/88.

Table 30 - continued
**INCREASE IN "MAJOR" AND/OR "CRITICAL" INTERSECTIONS
OVER 20 YEARS GIVEN THREE FUNDING LEVELS
LEVEL III: INCREASED FUNDING**

Year	"A"			"B"			"C"			TOTAL			Annual Accident Reduction	% Change From Base
	# Int.	Subtotal	# Acc.	# Int.	Subtotal	# Acc.	# Int.	Subtotal	# Acc.	# Int.	Subtotal	# Acc.		
1988	---	28	323	---	232	1795	---	1395	3399	---	1655	5516	0	---
1989	4	22	250	55	167	1294	70	1358	3307	129	1547	4851	-794	-14.06
1990	4	20	229	55	162	1253	70	1417	3451	129	1598	4932	-946	-16.09
1991	4	18	208	55	157	1211	70	1475	3595	129	1650	5014	-1098	-17.96
1992	4	16	187	55	151	1170	70	1534	3738	129	1702	5095	-1249	-19.69
1993	4	14	166	55	146	1129	70	1593	3882	129	1754	5176	-1401	-21.30
1994	4	13	145	55	141	1088	70	1653	4026	129	1806	5259	-1553	-22.80
1995	4	10	118	55	131	1010	70	1683	4101	129	1824	5229	-1705	-24.59
1996	4	8	90	55	121	933	70	1714	4176	129	1843	5199	-1857	-26.31
1997	4	5	63	55	111	855	70	1745	4251	129	1861	5169	-2008	-27.98
1998	4	3	35	55	101	778	70	1776	4327	128	1880	5139	-2160	-29.59
1999	4	1	8	55	90	700	70	1807	4402	127	1898	5110	-2312	-31.15
2000	3	0	0	60	73	565	70	1838	4477	133	1911	5043	-2501	-33.15
2001	2	0	2	65	53	412	70	1869	4552	137	1922	4966	-2700	-35.22
2002	2	-1	-8	65	38	297	70	1899	4627	137	1937	4916	-2871	-36.87
2003	1	0	2	65	23	177	95	1905	4642	161	1928	4820	-3089	-39.06
2004	1	0	0	65	7	56	95	1936	4717	161	1943	4773	-3258	-40.57
2005	1	-0	-1	60	-2	-13	125	1937	4719	186	1935	4705	-3449	-42.30
=====														
	54		1,491	985		12,915	1,295		70,990	2,331		85,396	-34951	-29.04 %
	54 WORKED ON			985 WORKED ON			985 WORKED ON							
	41 MOVED FROM A TO B			325 MOVED FROM B TO C			325 MOVED FROM B TO C							
	42 NEW A's ADDED			345 NO. B's REDUCED			345 NO. B's REDUCED							
	0 NET REMAINING IN 'A'			-2 NET REMAINING IN 'B'			-2 NET REMAINING IN 'B'							

Source: City of Portland, Bureau of Traffic Management, 7/88.

Table 31
AVAILABLE PARKING SPACES
CENTRAL BUSINESS DISTRICT, JULY 1988

PARKING SECTOR	PARKING SPACES					
	ON-STREET *		OFF-STREET**		TOTAL	
	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT
A	1,013	43	1,324	57	2,337	5.7
B	883	33	1,785	67	2,668	6.5
C	495	22	1,743	78	2,238	5.5
D	969	26	2,820	74	3,789	9.3
E	1,277	14	8,063	86	9,340	22.8
F	259	10	2,331	90	2,590	6.3
G	706	8	8,131	92	8,837	21.5
H	206	17	1,168	83	1,374	3.4
J	509	15	2,765	85	3,274	8.0
K	19	1	3,613	99	3,632	8.9
L	265	31	578	69	893	2.1
TOTAL	6,601	16.1%	34,227	83.9	40,901	100.0%
* Includes truck loading (994 spaces) and other restricted spaces (238 spaces).						
** Does not include 2,275 exempt hotel and residential spaces.						

Source: City of Portland, Bureau of Traffic Management, 7/88.

Table 32
CENTRAL BUSINESS DISTRICT ON-STREET PARKING INVENTORY
July 1988

PARKING SECTOR	LONG-TERM *	90-MIN**	30-MIN***	15-MIN	TRUCK LOADING ZONE	OTHER	TOTAL
A	360	131	174	19	326	0	1,013
B	417	194	101	25	127	19	883
C	28	233	94	29	99	12	495
D	139	503	153	57	95	22	969
E	2	482	386	143	221	43	1,277
F	16	104	95	18	25	1	259
G	4	293	198	87	58	66	706
H	137	12	31	8	16	2	206
J	302	128	42	5	26	6	509
K	0	0	19	0	0	0	19
L	140	42	15	0	1	67	265
TOTAL	1,545	2,125	1,308	391	994	238	6,601
<p>*Includes 1,417 long-term meters, undesignated spaces and motorcycle spots. **Includes 107 experimental 3-hour meters. ***Includes 101 signed times.</p>							

Source: City of Portland, Bureau of Traffic Management, 7/88.

Table 33

HISTORICAL CENTRAL BUSINESS DISTRICT ON-STREET METERED
PARKING SPACE INVENTORY ¹

	NOV '78	NOV '79	SEPT '80	SEPT '81 ²
Long-Term	5,538	1,899	1,890	1,928
Short-Term		3,762	3,607	3,617
Truck Loading Zone	920	946	879	897
Other	210	245	272	429
TOTAL	6,668	6,852	6,648	6,871

	NOV '82 ³	JUL '83	OCT '84	NOV '85
Long-Term	1,798	1,712	1,498	1,431
Short-Term	3,876	3,799	3,815	3,606
Truck Loading Zone	939	962	954	928
Other	410	429	436	414
TOTAL	7,023	6,902	6,703	6,379

	JAN '86 ⁴	JULY '87 ⁵	JULY '88
Long-Term	1,434	1,612	1,545
Short-Term	3,642	3,849	3,824
Truck Loading Zone	908	1,001	994
Other	525	212	238
TOTAL	6,509	6,674	6,601

- 1 Inventory based on Sections 1-6; Meters not sorted by type.
- 2 First inventory based on Sections A-L.
- 3 New on-street count when new meter mechanisms installed.
- 4 Includes counts in unmetered periphery; meter replacement along Light Rail Transit route and South Waterfront.
- 5 First inventory generated from computer; more precise count.

Source: City of Portland, Bureau of Traffic Management, 7/88.

Table 34

CENTRAL BUSINESS DISTRICT
PEAK HOUR USE OF PARKING SPACES
BY SECTOR*

PARKING SECTOR	ON-STREET	OFF-STREET
A	81%	71%
B	68%	84%
C	59%	79%
D	78%	67%
E	90%	79%**
F	96%	81%
G	88%	92%
H	88%	91%
J	95%	91%
K	N/A	63%
L	88%	40%

*Peak hour 11:00 a.m. - 1:00 p.m.
**Does not include Morrison Park East & West.

Source: City of Portland, Bureau of Traffic Management, Parking Survey, May - June 1988.

Table 35
PARKING METER INVENTORY* REPLACEMENT VALUE
July 1988

METER TYPE	EST. NO.	COST PER METER**	TOTAL
Double	2,673	\$750	\$ 2,004,750
Single	923	400	369,200
TOTAL	6,269 individual meter heads		\$ 2,373,950

* Includes meters outside The Downtown Parking and Circulation Policy boundaries.

**Meter costs vary significantly depending on volume of purchase and timing mechanism.

Source: City of Portland, Bureau of Traffic Management, 7/88.

Attachment 3

TRANSPORTATION FUNDS

FY 89 REVENUE ASSUMPTIONS: \$57.5 MILLION

1. Includes all direct expenditures for the Bureau of Transportation Engineering, the Bureau of Traffic Management, the Bureau of Maintenance and the Office of the Transportation Director.
2. Includes all direct expenditures for Special Appropriations, including Senior Citizen Sidewalk Program, Towing Refund Program, and Stock Account.
3. Excludes interagencies between Transportation Operation Fund bureaus.
4. Excludes interagencies between the Street Lighting Fund and the Transportation Operating Fund.
5. Excludes intrafund interagencies.
6. Excludes cash transfers between the Transportation Operating Fund and the Transportation Construction Fund.
7. Excludes cash transfers between the Transportation Operating Fund and the Street Lighting Fund.
8. Includes \$7.6 million in reserves for the Street Lighting Fund in FY89 and \$6.0 million in reserves for FY90. It is assumed that all reserves/contingency will be expended in FY90.
9. Excludes reserves for State Tax Street Fund and Parking Meter Fund.
10. Includes all service reimbursements for Bureaus outside PDOT except Sewage Construction and Disposal interagencies.
11. Includes all federal grants and other government agency grant contribution projects in the Arterial/Collector Program and the City Transit Program. Does not include grant leverage for freeway and regional highway system.
12. Includes all HCD and LID (property owner) grants and non-budgeted HCD and LID revenues.

Source: City of Portland, Office of the Transportation Director, 7/88.

Attachment 4

TRANSPORTATION FUNDS FY89 APPROPRIATION EXPENDITURES ASSUMPTIONS

1. The portions of the FY89 budget devoted to Operations and Maintenance, Repair and Preservation, Construction and Expansion are based on FY88 percentages for these categories of work. FY88 percentages are derived from Cost of Service Model.
2. R&P includes budgeted structural and Street Light CIP projects, the Signal Improvement Project, reconstruction, and paving.
3. C&E includes all budgeted Construction projects except those designated R&P. Leveraged funds are included for Arterial/Collector Program and the City Transit Program (not including the North Terminal Project).

Source: City of Portland, Office of the Transportation
Director, 7/88

Table 36
TRANSPORTATION REVENUE HISTORY
 (Dollars in Millions)
 1987 - 1989

SOURCE	1986-89		1987-88		1988-89	
State Highway Trust Fund	\$ 8.2	14.4%	\$10.0	16.5%	\$13.1	22.8%
City County Agreement	5.8	10.2%	7.3	12.1%	8.8	15.3%
Parking Revenue	5.0	8.8%	4.5	7.0%	4.8	8.3%
Service Fees	3.4	6.0%	5.9	10.0%	2.1	3.7%
Contracts	.9	1.6%	.8	1.0%	1.1	1.9%
Miscellaneous	2.8	4.9%	5.8	9.6%	5.0	8.7%
Grants	11.5	20.2%	9.7	16.0%	6.3	11.0%
Local Improvement Districts	2.3	4.0%	1.8	3.0%	3.0	5.2%
Street Light Levy	7.6	13.4%	7.9	13.0%	7.6	13.2%
Utility Francise Fees	9.3	16.4%	6.8	11.0%	5.7	9.9%
TOTAL	\$56.8		60.5		57.5	

Source: City of Portland, Office of the Transportation Director, 7/88.
 A Revenue Report for Portland's Transportation System, 4/87.

Table 37
PORTLAND STREET RIGHT OF WAY VALUE ANALYSES

The following is an estimate of the total value of public street right of way included within the incorporated City of Portland, excluding state highways.

METHOD "A"					
LOCATION	MILES OF STREET RIGHT-OF-WAY	ASSUMED AVERAGE WIDTH OF STREET RIGHT-OF-WAY	SQ FT OF STREET RIGHT-OF-WAY	ASSESSED VALUE OF LAND/SQ FT	VALUE OF STREET RIGHT-OF-WAY
North	227.80	50'	60,139,200	2.80	168,389,760
West Northwest	89.46	50'	23,617,440	2.75	64,947,960
Inner Northeast	213.96	50'	56,485,440	3.20	180,753,408
Central Northeast	229.13	50'	60,490,320	3.80	229,863,216
Outer Northeast	67.78	50'	17,893,920	2.80	50,102,976
Downtown	38.89	50'	10,266,960	75.00	770,022,000
Inner Southeast	221.44	50'	58,460,160	2.80	163,688,448
Southwest	331.27	50'	87,455,280	6.00	524,731,680
Outer Southeast	399.27	50'	105,407,280	1.50	158,110,920
TOTAL	1,819.00		480,216,000		2,310,610,368
TOTAL VALUE OF PUBLIC STREET AREA IN CITY OF PORTLAND = \$2,310,610,368					

METHOD "B"		
Total land in City of Portland	132.1 Sq Miles 84,544 Acres 3,682,736,640 Sq Feet	
Total Area	3,682,736,640 Sq Feet	
Less		
State Highway (Assumed)	<110,246,400> Sq Feet	
City Streets	<480,216,000> Sq Feet	
Willamette River (Assumed)	< 83,635,200> Sq Feet	
Net Land Area	674,097,600 Sq Feet 3,008,639,040 Sq Feet	
True Cash Value of Land City of Portland	\$13,701,671,000	
Assessed Value per Sq Ft	\$4.5541	
Total Area of Street Right-of-Way	480,216,000 Sq Feet	
Total Value of Public Street Area in City of Portland	\$2,186,951,686	

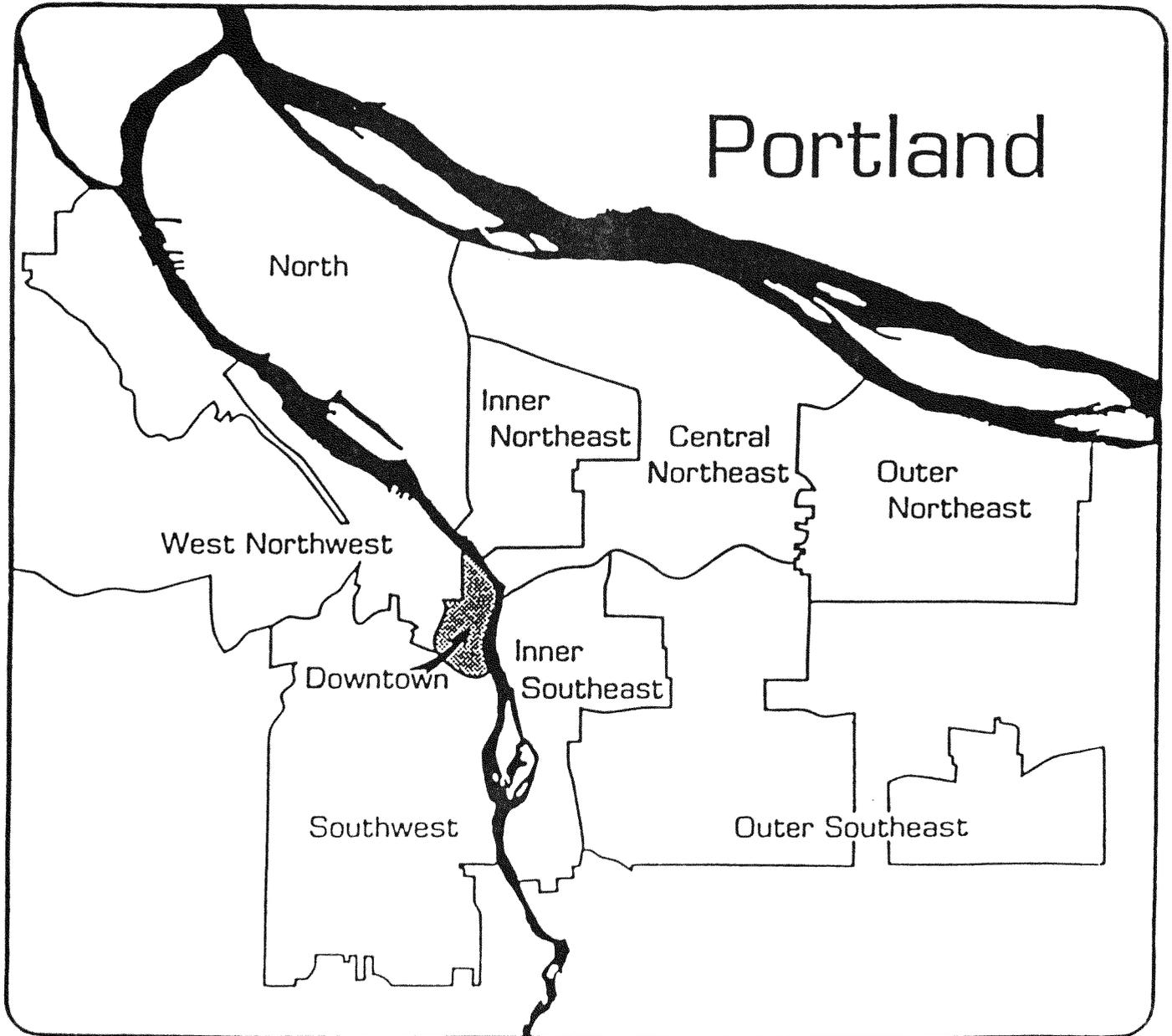
The data used in preparing this report as compiled from the following sources:
 Multnomah County Assessor's Office (values tax year 1986-87)
 "1984 Neighborhood Information Profiles" prepared by Office of Fiscal Administration,
 Urban Services Division
 City of Portland Bureau of Maintenance Street Inventory Report
 REPORT PREPARED 1985 - Method A - Updated August 2, 1988

The data used in preparing this report was compiled from the following sources:
 Bureau of Transportation Engineering - Calculation of total area of City of Portland (in square miles).
 City Auditor's Office (Figure of total assessed value of land located in the City of Portland).

Neither Method "A" or Method "B" is considered to be of greater reliability.

Source: City of Portland, Bureau of Transportation Engineering, 7/88.

ATTACHMENT 5
PORTLAND SUBDISTRICTS



Source: City of Portland, Bureau of Transportation Engineering,
9/86.

Attachment 6

PDOT STREET AND STRUCTURAL MAINTENANCE RESPONSIBILITIES

The Portland Office of Transportation is responsible for the maintenance of all arterial and local streets, bridges and transportation structures (i.e., retaining walls, stairways and guardrails) within the City limits with the following exceptions:

1. Union, Grand, Sandy, and 82nd Avenue overcrossings are maintained by the state; I-84 bridges are maintained by the city.
2. Willamette River Bridges are owned and maintained by the state, county or railroad.
3. Surface streets designated as state highways within the City limits are maintained by the state except for drainage, signals, pavement marking and signing which are maintained by PDOT. State highways within the City include:
 - Macadam Avenue. (State 43)
 - Interstate Avenue/Denver Avenue. (State 99W)
 - 82nd Avenue (State 213)
 - Clay and Market Streets (U.S. 26)
 - Barbur Boulevard/Front Avenue/Hood Avenue/Capital Highway (State 99W)
 - Union and Grand Avenues (State 99E)
 - McLoughlin Boulevard (State 99E)
 - St. Helens Road/Yeon Avenue (U.S. 30)
 - Lombard Street/Killingsworth Street (U.S. 30 Bypass)
 - Sandy Boulevard/(U.S. 30 Business Route)
 - Beaverton-Hillsdale Highway (State 10)
 - Portland Road
 - Marine Drive
 - Powell Boulevard
4. Unimproved streets, as a rule, are not maintained by the City.
5. As a part of the City-County Agreement, the City maintains county roads within the Urban Services Boundary, except for some county roads in the far northwest.

Source: City of Portland, Bureau of Maintenance, 7/88.

Attachment 7
CITIZEN SURVEYS

Citizen perceptions were taken from the following surveys:

Transportation Services Survey

Sample size 792, 95% confidence level, $\pm 3.5\%$, May 1986,

Questions

1. An arterial street is a major traffic and bus street. Overall, would you describe the surfaces of the arterial streets over which you ride as rough or smooth?
 - a. Mildly rough - very rough
 - b. Neither rough nor smooth
 - c. Mildly smooth - very smooth
 - d. No opinion

Neighborhood Information Profiles

Sample size 1,200, 95% confidence level, $\pm 2.8\%$, October 1986.

Questions

1. How would you rate the cleanliness of Portland's streets?
 - 1 - 2 Very clean
 - 3
 - 4 - 5 Very dirty
 - Don't know

2. How would you rate the city on providing street maintenance and repair?
 - 1 - 2 Excellent / Good
 - 3
 - 4 - 5 Fair / Poor
 - Don't know

Attachment 7 - continued

Citizen Surveys

3. How would you rate the amount of street lighting on city arterials?

1 - 2 Very satisfactory

3

4 - 5 Very unsatisfactory

Don't know

4. How would you rate the traffic condition on Portland's major streets, excluding freeways, during morning and evening rush hours?

1 - 2 Very satisfactory

3

4 - 5 Very unsatisfactory

Don't know

5. What do you feel is the worst intersection you encounter traveling to and from work?

Attachment 8

STAFF CONTACTS

PROJECT MANAGERS

Marlene Farnum, Office of the Transportation Director
(796-7239)

Patricia Bugas-Schramm, Office of the Transportation Director
(796-7239)

PAVEMENT

Dick Godfrey, Bureau of Maintenance (248-5514)

Steve Berg, Bureau of Maintenance (248-5531)

Ron Rupert, Bureau of Maintenance (248-5502)

Jerry Markesino, Bureau of Transportation Engineering
(796-7057)

CURBS, CORNERS, SIDEWALKS

Dennis Campbell, Bureau of Maintenance (243-7317)

STRUCTURES

Terry Bray, Bureau of Transportation Engineering (796-7058)

Steve Barrett, Bureau of Transportation Engineering (796-7059)

Rich Gitschlag, Bureau of Maintenance (248-5534)

TRAFFIC SIGNALS / STREET LIGHTS

Bill Kloos, Bureau of Traffic Management (796-5382)

SIGNS

Rob Burchfield, Bureau of Traffic Management (796-5175)

TRAFFIC MEASURES

Dave Hutson, Bureau of Traffic Management (796-5172)

PARKING

Brooks Koenig, Bureau of Traffic Management (796-5189)

Francie Royce, Bureau of Traffic Management (796-5183)

FISCAL ANALYSIS

Mike Blackledge, Office of the Transportation Director
(796-7134)

Phyllis Redman, Bureau of Transportation Engineering (796-7068)

Joanne Foulkrod, Office of the Transportation Director
(796-3142)

Attachment 8 - continued

STAFF CONTACTS

GROWTH AND DEVELOPMENT

John Cullerton, Metropolitan Service District (221-1646)
Steve Iwata, Office of the Transportation Director (796-7734)
Ken Lindmark, Office of the Transportation Director (796-7190)

BICYCLES

Krys Ochia, Bureau of Transportation Engineering (796-7082)

*Emergency
Medical Services*

DATE SUBMITTED _____

(For Clerk's Use)
Meeting Date 7/28/88
Agenda No. Int

REQUEST FOR PLACEMENT ON THE AGENDA

Subject: EMS Appeal Briefing on Process

Informal Only* ~~7-26-88~~ 7-28-88 following Formal Only _____
(Date) formal agenda (Date)

DEPARTMENT of General Services DIVISION County Counsel

CONTACT Sandra Duffy TELEPHONE 3138

*NAME(s) OF PERSON MAKING PRESENTATION TO BOARD Sandra Duffy

BRIEF SUMMARY Should include other alternatives explored, if applicable, and clear statement of rationale for the action requested.

Briefing concerning procedures to be followed at EMS Appeal, August 2, 1988

(IF ADDITIONAL SPACE IS NEEDED, PLEASE USE REVERSE SIDE)

ACTION REQUESTED:

INFORMATION ONLY PRELIMINARY APPROVAL POLICY DIRECTION APPROVAL

INDICATE THE ESTIMATED TIME NEEDED ON AGENDA _____

IMPACT:

PERSONNEL

FISCAL/BUDGETARY

- General Fund

Other _____

SIGNATURES:

DEPARTMENT HEAD, ELECTED OFFICIAL, or COUNTY COMMISSIONER: [Signature]

BUDGET / PERSONNEL /

COUNTY COUNSEL (Ordinances, Resolutions, Agreements, Contracts) _____

OTHER _____
(Purchasing, Facilities Management, etc.)

NOTE: If requesting unanimous consent, state situation requiring emergency action on back.

BOARD OF
COUNTY COMMISSIONERS
1988 JUL 20 PM 3:10
MULTI-COUNTY
OREGON

✓ Ordinances
Corres, Non Dept

GRETCHEN KAFOURY
Multnomah County Commissioner
District 2



605 County Courthouse
Portland, Oregon 97204
(503) 248-5219

MEMORANDUM

July 25, 1988

TO: Board of County Commissioners

FROM: Gretchen Kafoury

RE: Real Estate Transfer Tax

I wanted to let you know that I will not be submitting a resolution to refer this proposed revenue source to the voters at this time. A letter outlining my concerns and proposing a process for further investigation follows--probably by this afternoon (Monday).

1150K

BOARD OF
COUNTY COMMISSIONERS
1988 JUL 25 AM 9:57
MULTNOMAH COUNTY
OREGON