METROPOLITAN SERVICE DISTRICT
1220 S.W. MORRISON, ROOM 300, PORTLAND, OREGON 97205
(503) 222-3671

MSD BOARD OF DIRECTORS

CRAG OFFICE
527 SW HALL
CONFERENCE ROOM C

NOVEMBER 10, 1977
2:00 P.M.

SPECIAL MEETING

AGENDA

77-948 MINUTES

77-949 PUBLIC COMMUNICATIONS

ADMINISTRATIVE DIVISION

77-950 CASH DISBURSEMENTS

SOLID WASTE DIVISION

77-951 ORDINANCE NO. 54 - SECOND HEARING
AN ORDINANCE AMENDING THE SCRAP TIRE PROGRAM TO ESTABLISH TIRE TRANSFER STATIONS AND ABOLISH SCRAP TIRE CARRIER SERVICE AREAS

ZOO DIVISION

77-952 ZOO DEVELOPMENT PROGRAM PHASE I

METROPOLITAN SERVICE DISTRICT
1220 S.W. MORRISON, ROOM 300, PORTLAND, OREGON 97205
(503) 222-3671

MSD BOARD OF DIRECTORS

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NOVEMBER 10, 1977
2:00 P.M.

SPECIAL MEETING

ACTION AGENDA

PAGE	ACTION RECORD NUMBER	
1	77-948	MINUTES Action - Approve the minutes of October 28, 1977
13	77-949	PUBLIC COMMUNICATIONS Action - Receive comments from the public on matters not listed on the meeting agenda
14	77-950	CASH DISBURSEMENTS Action - Approve staff recommendation
15	77-951	ORDINANCE NO. 54 - SECOND HEARING AN ORDINANCE AMENDING THE SCRAP TIRE PROGRAM TO ESTABLISH TIRE TRANSFER STATIONS AND ABOLISH SCRAP TIRE CARRIER SERVICE AREAS Action - Conduct second public hearing and adopt Ordinance No. 54

PAGE	ACTION RECORD NUMBER	
18	77-952	ZOO DEVELOPMENT PROGRAM PHASE I Action - Approve Phase I report and authorize Warner Walker & Macy to proceed with Phase II
		OTHER BUSINESS
19	77-953	LOAN OF ATOMIC ABSORPTION SPECTROMETER Action - Approve loan to Oregon Graduate Center under specified conditions
20	77-954	CETA VI CONTRACTS - SOLID WASTE DIVISION . CONTRACT 77-120 - WASTE COMPOSITION . CONTRACT 77-121 - CITIZEN PARTICIPATION Action - Approve Contracts 77-120 and 77-121

77-948 MINUTES

THE FOLLOWING PAGES CONTAIN THE MINUTES OF THE OCTOBER 28, 1977, BOARD MEETING.

THE STAFF RECOMMENDS APPROVAL OF THE BOARD MINUTES.

77-949 PUBLIC COMMUNICATIONS

THIS AGENDA ITEM ALLOWS THE BOARD TO RECEIVE COMMENTS FROM THE PUBLIC ON MATTERS NOT LISTED ON THE MEETING AGENDA.

77-950 CASH DISBURSEMENTS

THE FOLLOWING CHECKS HAVE BEEN ISSUED THROUGH NOVEMBER 10, 1977.

CHECKS NO. 4655 THROUGH 4801: $57,355.85

ITEMS OF INTEREST INCLUDE:

BUREAU OF WATER WORKS	$5,388.85
COOPERS & LYBRAND	1,989.00
NORTHWEST NATURAL GAS	2,113.82
PORTLAND GENERAL ELECTRIC	3,897.42
STANLEY SMITH SECURITY	2,043.25
HARDY McEWEN WEISS NEWMAN	7,326.10
WARNER WALKER & MACY	4,756.96
PACIFIC NORTHWEST BELL	1,599.33

THE STAFF RECOMMENDS APPROVAL FOR PAYMENT OF CHECKS NO. 4655 THROUGH 4801 IN THE TOTAL AMOUNT OF $57,355.85.

DUE TO THE FACT THAT THERE IS NO BOARD MEETING SCHEDULED FOR NOVEMBER 25, 1977, STAFF FURTHER REQUESTS PERMISSION TO ISSUE CHECKS AS NEEDED THROUGH THE BALANCE OF THE MONTH. THE STAFF WILL BRING A REPORT OF THESE CHECKS ON THE DECEMBER 9, 1977, BOARD MEETING.

METROPOLITAN SERVICE DISTRICT
BOARD ACTION
NO. 77-950 DATE 11-10-77

	YES	NO	ABST
BARTELS	/		
GORDON	/		
McCREADY			
ROBNETT			
SALQUIST			
SCHUMACHER	/		
MILLER, CHAIRMAN			

Clerk of the Board

77-951 ORDINANCE NO. 54 - SECOND PUBLIC HEARING

AN ORDINANCE AMENDING THE SCRAP TIRE PROGRAM TO ESTABLISH TIRE TRANSFER STATIONS AND ABOLISH SCRAP TIRE CARRIER SERVICE AREAS.

THE FOLLOWING PAGES CONTAIN A STAFF REPORT DISCUSSING THE AMENDMENTS CONTAINED IN ORDINANCE NO. 54. THE ORDINANCE RECEIVED ITS FIRST HEARING ON OCTOBER 28, 1977, AND THERE HAVE BEEN NO PUBLIC COMMENTS RECEIVED BY STAFF.

THE STAFF RECOMMENDS CONDUCTING THE SECOND PUBLIC HEARING, AND ADOPTING ORDINANCE NO. 54.

METROPOLITAN SERVICE DISTRICT
BOARD ACTION

NO. 77-951 DATE 11-10-77

	YES	NO	ABST.
BARTELS			
GORDON			
McCREADY			
ROBNETT			
SALQUIST			
SCHUMACHER			
MILLER, CHAIRMAN			

Clerk of the Board

MEMO

TO: MSD Board of Directors

FROM: MSD Staff Members: Paul Norr and Merle Irvine

DATE: October 20, 1977

SUBJECT: Proposed Ordinance No. 54 allowing the establishment of tire transfer stations and abolishing tire carrier service areas

---

1. Allowing the Establishment of Tire Transfer Stations

At this time there are two authorized scrap tire processing centers, both of which are owned and operated by the Metropolitan Disposal Corporation (MDC). One of these centers is located in Oregon City; the other is located in North Portland. The processing machine at the Oregon City location is broken and is undergoing repairs and modifications. As a temporary measure, and with MSD staff approval, MDC is receiving tires at Oregon City and transferring them to North Portland for processing. This system of transferring the tires has worked to our satisfaction for about two months.

MDC, having evaluated their own labor and machinery costs, has indicated to the staff that MDC would like to continue the current arrangement on a permanent basis. The present structure of the scrap tire program, however, does not provide for such an arrangement.

The staff is of the opinion that funneling scrap tires into a controlled waste stream is the primary objective of the tire program. Thus, maintaining or increasing the number of controlled locations where the general public and tire carriers can deposit their tires is to our advantage. To facilitate the establishment of transfer stations of the type suggested by MDC, the staff proposed Ordinance No. 54.

The proposed ordinance does not restrict transfer stations to the domain of MDC. Any processor, salvager, carrier, or other enterprising individual or company could obtain a permit to operate a transfer station by meeting the appropriate requirements. The requirements proposed are similar to the existing requirements for salvage and processing centers. It should be noted, however, that at this time it appears to the staff that it is unlikely that anyone other than a salvage or processing center would open such a transfer station.

The staff also points out that the proposed ordinance does not increase the maximum charges which can be levied by processing and salvage centers. Further, the proposal should not adversely affect the amount of user fees provided to MSD.

The tire transfer station proposed was discussed with the Solid Waste Advisory Committee on October 10, 1977, and the committee supported the idea.

2. Abolishing the Tire Carrier Service Areas

The staff has concluded that the service area designations are causing an inordinate amount of confusion and unnecessary enforcement problems. Currently, MSD is sub-divided into four service areas:

Area #1 - Washington County
Area #2 - Multnomah County west of S.E. 42nd Avenue
Area #3 - Multnomah County east of S.E. 42nd Avenue
Area #4 - Clackamas County

When we issue a permit restricting a carrier to one or two service areas, we assume, in addition to the already existing responsibility of enforcing the overall tire program, the added responsibility of policing the artificial intra-district boundaries of the service areas.

Further, carriers are only refused entry to a particular service area at the request of one of the cities or counties (whose jurisdiction is smaller than a whole service area) who wish to keep a non-franchised or sub-contract carrier out of their jurisdiction. Unfortunately, by refusing to issue a permit for that entire service area, we exclude the carrier from locals which are not concerned with keeping the carrier out. This has the effect of restricting a carrier's business opportunities in locations where the carrier might otherwise be welcome.

The proposal to abolish the service areas was discussed with the Solid Waste Advisory Committee on October 10,1977. Two members of the committee expressed serious concern that non-franchised carriers might misunderstand and begin entering the franchised jurisdictions. Subsequently, the staff conferred with both committee members and, by modifying the language on the permit, has gained the approval of the objecting committee members.

3. Summary

The staff concludes that: 1) allowing the establishment of tire transfer stations and 2) abolishing tire carrier service areas will improve the scrap tire program and recommends the adoption of proposed Ordinance No. 54.

METROPOLITAN SERVICE DISTRICT

O R D I N A N C E N O. 5 4

An ordinance modifying the MSD Code, amending or adding Sections 12.16.010(16), 12.16.050(1), 12.16.060(1), 12.16.120, 12.16.130, 12.16.140, 12.16.165, 12.16.190, 12.18.010(1) and (3), 12.18.020(2) and (3), 12.18.070, 12.18.100(2), 20.10.030, 20.10.040, 20.10.050, 20.10.120, 20.10.130, 20.10.700, 20.10.710, 20.10.720, 20.10.740, 20.10.750, and 20.10.760.

SHORT TITLE: An ordinance Amending the Scrap Tire Program to Establish Tire Transfer Stations and Abolish Scrap Tire Carrier Service Areas.

NOTE: The language in brackets will be deleted and the language underlined will be added.

ORDINANCE NO. 54

THE METROPOLITAN SERVICE DISTRICT ORDAINS THE FOLLOWING:

SECTION I:

Section 12.16.010(16) of the Code of MSD (Code) is added to read as follows:

(16) "Tire Transfer Station" means a place open to the public where scrap tires are received and stored for shipment directly to a general tire processing center, tire salvage center, or a tire retreading facility.

SECTION II:

Section 12.16.050(1) of the Code is amended to read:

Section 12.16.050 DUTIES OF TIRE CARRIER

(1) Tire Carriers subject to the permit requirements of this ordinance must deliver all those scrap tires picked up or transported by them for the purposes of disposal only to:

(a) A disposal site authorized by the Metropolitan Service District to accept tires in the form they are delivered;

(b) A processing center authorized by the Metropolitan Service District; (or)

(c) A tire salvage center authorized by the Metropolitan Service District; or

(d) A tire transfer station authorized by the Metropolitan Service District.

SECTION III:

Section 12.16.060(1) of the Code is amended to read:

Section 12.16.060 DUTIES OF A TIRE RETAILED AND SCRAP TIRE GENERATOR

(1) A tire retailer or scrap tire generator shall dispose of scrap tires only in the following manner:

(a) By giving up said tire to a tire carrier operating under a permit granted pursuant to this code;

(b) By himself transporting said tire to a disposal site, a tire processing center, (or) a tire salvage center, or a tire transfer station authorized under this Code; or

(c) By returning the scrap tire to the owner.

SECTION IV:

Section 12.16.120 of the Code is amended to read:

Section 12.16.120 ACCEPTANCE OF TIRES BY DISPOSAL SITE.

All disposal sites which accept or hold themselves out as accepting refuse from the general public shall accept all tires brought to them by any person other than a tire carrier operating under a permit granted pursuant to this Code, so long as such person does not deliver more than 30 tires to the disposal site in any one day. The operator of a disposal site may levy a unit charge per tire sufficient to cover the cost of storage and transportation to a disposal site or processing center authorized under this Code to accept such tires in their then present form for on-site disposal or processing, plus any subsequent processing and disposal costs. At regular intervale, tires shall be moved to an approved processing center, (or) salvage center, or transfer station.

SECTION V:

Section 12.16.130 of the Code is amended to read:

Section 12.16.130 EXCLUSIVE CONTRACTS

The Board may by resolution limit the number of permits granted pursuant to this Code and award exclusive contracts for tire carriers, tire salvage centers, (or) tire processing centers, or tire transfer stations in defined areas and set fees for such contracts.

SECTION VI:

Section 12.16.140 of the Code is amended to read:

Section 12.16.140 RECORDS REQUIRED

Every tire carrier, tire retailer, scrap tire generator, (or) owner of a disposal site, (or) processing center, (or) tire salvage center, or tire transfer station shall keep such records or other pertinent papers in such form as the Board may require and shall deliver such records or papers to the Board when requested. The Board or their designated agent may at any reasonable time enter onto the business premises of any carrier, retailer, disposal site, salvage center, (or) processing center, or tire transfer station, for the purpose of inspecting such records or papers.

SECTION VII:

Section 12.16.165 of the Code is added to read:

Section 12.16.165 TRANSFER STATIONS

Only those tire transfer stations authorized and permitted by the MSD to accept tires for direct transfer to a general tire processing center, salvage center, or retreader may operate as a transfer station. The MSD shall issue forms on which applications for such authorization can be made. Permits shall be issued for a period of up to one (1) year.

SECTION VIII:

Section 12.16.190 of the Code is amended to read:

Section 12.16.190 MAXIMUM FEES FOR GENERAL TIRE PROCESSING CENTERS, SALVAGE CENTERS, AND TIRE TRANSFER STATIONS

(1) The Board of the Metropolitan Service District authorizes and approves a maximum fee that may be charged by an operator of a general tire processing center, (or) tire salvage center, or tire transfer station.

(2) The maximum fee that may be charged for processing, (or) salvaging, or accepting at a transfer station motor vehicle tires with a minimum bead diameter of 20 inches and up to and

including 10 ply shall be 25 cents for each tire, which shall include the administrative fee that may be charged for processing, (or) salvaging, or accepting at a transfer station.

(3) The maximum fee that may be charged for processing, (or) salvaging, or accepting at a transfer station motor vehicle tires with a minimum bead diameter of 20 inches and up to and including a tire having an outside diameter of 48 inches or a ply rating of 12 ply or greater, shall be 85 cents for each tire, which shall include the administrative fee approved in Section 12.16.180.

SECTION IX:

Section 12.18.010(1) and (3) of the Code are amended to read:

Section 12.18.010 APPLICATIONS FOR PERMITS

(1) Applications for a permit to act as a tire processing center, tire salvage center, tire transfer station or a tire carrier shall be made on forms supplied by the MSD. Applications must be complete. Incomplete applications will be returned to the applicant.

(3) A separate application shall be filed for each processing center, (or) tire salvage center, or tire transfer station although one application may be filed where two or more processing machines for salvage operations are in the same location.

SECTION X:

Section 12.18.020 (2) and (3) of the Code are amended to read:

Section 12.18.010 NOTICE OF APPLICATION

(2) For tire carrier applications, the notice shall also contain the number of trucks applied for (and the service areas applied for).

(3) For processing or salvage center applications and for transfer station applications, the manager shall notify all other persons holding current and existing processing, (or) salvage, or transfer permits. The notice for such applications shall also contain the number of machines or salvage operations involved (and the service area applied for).

SECTION XI:

Section 12.18.070 of the Code is amended to read:

Section 12.18.070 ABATEMENT

The carrying, storing, transferring, processing, disposing of or salvaging of scrap tires by any person in the district in violation of any provision of Chapters 12.16 or 20.10, is deemed a nuisance and the Board may, in addition to other remedies provided by law, institute injunction, mandamus, abatement or other appropriate legal proceedings to temporarily or permanently enjoin or abate such disposal. The provisions of this section are in addition to and not in lieu of any criminal prosecution or penalties as provided by the Code of MSD or State Law.

SECTION XII:

Section 12.18.100(2) of the Code is amended to read:

Section 12.18.100 BONDS

(2) Every applicant for a permit or a renewal of a permit under Chapter 12.16.110 or 12.16.165 shall deliver to MSD a permit or license bond in the sum of $10,000 in favor of MSD and in a satisfactory form.

SECTION XIII:

Section 20.10.030 of the Code is deleted in its entirety.

Section 20.10.030 SERVICE AREAS

(The MSD has been divided into service areas according to the map set forth on page 20.10-5 of this Code. These areas will be reviewed and modified if conditions warrant. Each service area will be served by at least two scrap tire carriers. It will be the responsibility of the general scrap tire carriers to serve all scrap tire generators, tire retailers, and authorized public tire storage centers within the specific service area. In the event that a customer cannot obtain service from the general scrap tire carriers assigned to his area, MSD will designate one of the general scrap tire carriers to provide service at the minimum service charge as specified by the carrier permits.

This designation will be based on a rotating basis between all general scrap tire carriers assigned to the area.)

SECTION XIV:

Section 20.10.040 of the Code is amended to read:

Section 20.10.040 (FREQUENCY OF) SERVICE

(General scrap tire carriers can make arrangements to service customers on a regular basis or provide service at the customer's request. If tires are to be collected on a request basis, the general scrap tire carrier shall make arrangements to service the customer within two weeks of the request. If, at the request of MSD, a general scrap tire carrier is designated to service a customer as outlined in Section 20.10.030, the response time for pickup shall be two weeks.)

In the event that a customer cannot obtain service from a general scrap tire carrier, MSD may designate one of the permitted tire carriers to provide service at the minimum rate charged by the carrier for that type of service. This designation will be on a rotating basis among all permitted tire carriers. If a tire carrier is designated to service a customer, the carrier shall arrange for service within two weeks of the designation.

SECTION XV:

Section 20.10.050 of the Code is amended to read:

Section 20.10.050 RECORDS

The general scrap tire carrier will be issued a receipt book which will contain tickets bound in triplicate and sequentially numbered. When the general scrap tire carrier collects tires from a scrap tire generator, tire retailer or authorized public tire storage centers, a receipt ticket will be completed (reproduced in triplicate). One copy will be retained by the customer, one copy retained by the general scrap tire carrier for two years and one copy submitted to MSD by the tenth of the month following the collection. All receipts must be accounted for. At the processing center or transfer station, the general scrap tire carrier will be given a receipt (by the pro-

cessor) for the tires disposed. This receipt must be retained by the general scrap tire carrier for two years. All records pertaining to carrying scrap tires shall be made available for inspection by MSD at reasonable hours in accordance with Section 12.16.140, Records Required, of the Code of MSD.

SECTION XVI:

Section 20.10.120 of the Code is amended to read:

Section 20.10.120 (SERVICE AREA) ACCEPTANCE OF TIRES

Permitted individual scrap tire carriers shall not accept scrap tires from any other person for the purpose of transporting the tires (to processing centers). Only scrap tires generated as a normal part of his business can be transported by the individual scrap tire carrier.

SECTION XVII:

Section 20.10.130 of the Code is amended to read:

Section 20.10.130 RECORDS

An accounting of all scrap tires transported to the processing center or tire transfer station shall be submitted to MSD at the end of each month. At the processing center or tire transfer station, the individual scrap tire carrier will be given a receipt for the tires disposed. All records must be retained for two years and be made available for inspection by MSD at reasonable hours in accordance with Section 12.16.140, Records Required, of the Code of MSD.

SECTION XVIII:

Section 20.10.700 of the Code is added to read:

Section 20.10.700 APPLICATIONS

Persons wishing to be permitted as a tire transfer station shall complete an application furnished by MSD.

SECTION XIX:

Section 20.10.710 of the Code is added to read:

Section 20.10.710 TRANSFER FEE

The transfer station may not charge or collect any fees in excess of those authorized by Section 12.16.190.

SECTION XX:

Section 20.10.720 of the Code is added to read:

Section 20.10.720 ACCEPTANCE OF TIRES

MSD shall provide to all authorized transfer stations receipt books of tickets bound in triplicate and sequentially numbered. The transfer station shall complete a receipt in triplicate for each delivery and provide one copy to the customer, retain one copy and submit one copy to MSD by the tenth of the month following the receipt of tires for disposal. All receipts must be accounted for and retained by the transfer station for two years. The transfer station shall provide, on a monthly basis, an accounting of the number of tires collected and the number of tires transferred to a processing center, salvage center, or retreader.

SECTION XXI:

Section 20.10.740 of the Code is added to read:

Section 20.10.740 SITE OPERATION

All transfer stations shall be open to the public. The transfer stations' minimum hours open shall be 8:00 a.m. to 5:00 p.m. Monday through Friday and 8:00 a.m. to 12:00 noon Saturday. A sign shall be posted at the entrance of the site stating operating hours, cost of disposal and site rules. The site shall be fenced by a sight-obscuring fence approved by MSD and all gates shall be locked when the transfer station is closed to the public. All off-site and on-site access roads shall have an all-weather surface so that traffic will not be interrupted during periods of bad weather.

The transfer station shall not unnecessarily stockpile

tires. Stockpiles shall not exceed 2,000 tires unless special permission is granted. The site shall also be free of all litter and debris.

An attendant shall be on duty all hours the transfer station is in operation.

SECTION XXII:

Section 20.10.750 of the Code is added to read:

Section 20.10.750 TRANSFER OF SCRAP TIRES

The transfer station shall transfer all tires received at the transfer station directly to a general processing center, salvage center or a retreading facility.

SECTION XXIII:

Section 20.10.760 of the Code is added to read:

Section 20.10.760 VARIANCES

The Metropolitan Service District may grant a variance of these administrative rules on a temporary basis if unplanned events occur and upon written request from the transfer station.

DATE: _____

_____

Raymond L. Miller, Chairman

ADDENDUM TO ORDINANCE NO. 54

The following Section was omitted from the Ordinance and will be incorporated prior to the second hearing:

SECTION XXIV:

Section 12.18.050(1) of the Code is amended to read:

Section 12.18.050 SUSPENSION, MODIFICATION, REVOCATION, OR REFUSAL TO RENEW A PERMIT

(1) The Manager may suspend, modify, revoke or refuse a permit if (it has reasonable grounds to believe that) a permit holder has (done any of the following):

(a) (Wilfully) Violated any of the provisions of Chapters 12.16, 12.18, or 20.10 or ORS 459, or rules promulgated thereunder, or his permit and any conditions attached thereto; or

(b) (Wilfully misrepresented the statement) Made a material misrepresentation or misstatement in the application for his permit or in any testimony of documentary evidence given to the Manager (or), to the Board, or to the MSD staff; or

(c) (Wilfully) Refused to provide adequate service to the public after written notification and a reasonable opportunity to do so.

NOTE: The language in brackets will be deleted and the language underlined will be added

77-952 ZOO DEVELOPMENT PROGRAM PHASE I

JOHN WARNER, DOUG MACY AND WAYNE STEWART WILL MAKE THE PHASE I PRESENTATION OF THE FOUR-PHASE ZOO DEVELOPMENT PLAN. THIS WILL CONSIST OF A BRIEF OVERVIEW OF THE FOUR PHASES, AN EXPLANATION OF THE PHASE I WORK TASKS, A SLIDE PRESENTATION INCLUDING MAPS AND EXAMPLES OF VARIOUS ZOO FEATURES, A DISTRIBUTION AND DISCUSSION OF THE PHASE I SUMMARY REPORT, AND A QUESTION AND ANSWER PERIOD.

STAFF RECOMMENDS THAT THE BOARD ACCEPT THE PHASE I REPORT AND AUTHORIZE WARNER, WALKER & MACY TO PROCEED WITH PHASE II OF THE PLAN.

METROPOLITAN SERVICE DISTRICT
BOARD ACTION

NO. 77-952 DATE 11-10-77

	YES	NO	ABST.
BARTELS	/		
GORDON	/		
McCREADY			
ROBNETT			
SALQUIST			
SCHUMACHER			
MILLER, CHAIRMAN	/		

Clerk of the Board

WARNER, WALKER AND MACY, P.C., LANDSCAPE ARCHITECTS AND PLANNERS
123 NORTHWEST SECOND AVENUE, PORTLAND, OREGON 97209 PHONE (503) 228-3121

MEMORANDUM

PROJECT: Washington Park Zoo JOB NO. 7612.01

SUBJECT: Proposed MSD Board Presentation -- Phase I Work DATE: Nov. 2, 1977

telephone ☐ conference ☐ inspection ☐ BY: Wayne Stewart

distribution: Warren Iliff, Kay Rich; cc: Chuck Kemper, Gordon Hilker, Bruce Lord, John Warner, Doug Macy, Craig Johndohl

We propose the following format for the consultants portion of the MSD Board meeting on 10 November. (Note: John Warner, Doug Macy and Wayne Stewart will represent the consultant team.)

I. Introduction of consultant team. (Iliff)

II. Overview of the ~~form~~ four phase development program. (Macy) 5 min.

III. A. Explanation of the phase one work tasks.
B. Indicate that the MSD Board will be asked to authorize WWM to proceed into phase two. (Macy) 3 min.

IV. Slide show including maps and examples of various zoo features. (Stewart/Macy) 15 min.

V. A. Distribute copies of the phase one summary report to Board Members.
B. Discuss the key points of the summary report. (Stewart) 10 min.

VI. Question and answer session. (Macy/Stewart) 10-15 min.

VII. Ask the MSD Board to accept phase one and authorize Warner Walker and Macy to proceed into phase two of the work. (Iliff)

WASHINGTON PARK ZOO

To: MSD Board

Date: 11/14/77

From: Warren Iliff

Subject: Development Program - Phase I Report

As I said at Thursday's presentation by our consultants, I think that their Phase I, Data Collection and Analysis has been well done and will be enormously helpful in making development decisions in the months ahead.

As you read the Phase I report there are some items that may cause you concern, and I want to give you additional information on them.

1. Food Service (page 13 of the report) - in which our per capita merchandising is compared to a "theme park" figure of $3.20. To put this into perspective that "average" theme park costs $7.50 to enter and the average length of stay is six and one-half hours as compared to less than two hours for our zoo. Naturally the longer time of visitation extends over meal time periods including a "dinner" time with higher food costs. Our per capita spending is increasing as follows:

1975/76	1976/77	1977-78 (1st 4 months)
26.1¢	36.7¢	57.6¢

   Needless to say, we should and will try to increase it further and faster.

2. Food Service (page 13) - at the bottom of the page concerning the machine food area it is important to realize that the "makeshift collection and makeshift roof" were seen just before we changed concessionaires and both the machines and area will be totally revamped under the new contract.

3. Gift Shop (page 14) - our per capita figures are as follows:

1975/76	1976/77	1977/78 (1st 3 months)
7.9¢	9.7¢	19.2¢

4. Utility Services (page 29) - regarding the electrical problem, PGE has now installed some "overide rings" (at no cost to the zoo) and for eight weeks no power interruptions have occurred. The water service lines and valves in the hooved stock areas do not present impossible problems as in most cases the flow is designed to be continuous and the area can be shut off when necessary.

5. Grounds Servicing and Building Maintenance (Page 32) - the small garage used by the Park Department for the Pitch and Putt course will eventually be returned for the zoo's use.

As I said at the Board meeting, I think that the consultants have gotten off to an excellent start and I only make these additions so that you won't be overly alarmed by the material presented.

jah

cc: John Wight
John Hankee
Chuck Kemper
Kay Rich
Doug Macy
Wayne Stewart

WASHINGTON PARK ZOO
Development Program
Phase One:
Inventory & Analysis

WARNER, WALKER AND MACY, P.C.
LANDSCAPE ARCHITECTS & PLANNERS

November 10, 1977

Commissioner Ray Miller,
Chairman
Metropolitan Service District
Board of Directors
1220 S.W. Morrison Street
Portland, Oregon 97205

Dear Commissioner Miller:

We have completed Phase One of the Washington Park Zoo Development Program Study -- which includes data collection and analysis. This memorandum report summarizes the written portion of the study. In addition, we have prepared maps and photographs which depict pertinent information relating to Zoo resources. This information will be used during the remaining phases of the study.

Upon the Board's approval of this portion of the study, we will proceed with our work, in conjunction with the Zoo staff, to arrive at Development Options and a long range program for Zoo improvements.

Very truly yours,
WARNER, WALKER & MACY, P.C.

J. Douglas Macy
Principal-in-Charge

JDM:vg

WARNER, WALKER AND MACY, P.C.
LANDSCAPE ARCHITECTS AND PLANNERS
123 NORTHWEST SECOND AVENUE
PORTLAND, OREGON 97209
PHONE: (503) 228-3121

TABLE OF CONTENTS

I. INTRODUCTION

On September 23, 1977, Warner, Walker & Macy commenced work on a study leading to the development of an implementation program for the Washington Park Zoo. This implementation program will deal with the question of how to maximize benefits from the expenditure of the approximately $3,000,000 available for capital improvements over the next three to four years.

The study has been divided into four phases, the first of which -- data collection and analysis -- is now complete. This memorandum report summarizes the information collected and analyzed during Phase One. In addition to this summary report, the consultant team has also prepared a series of maps which graphically display the information evaluated to date.

Phase Two of the work will consist of the development of a "framework" plan which will establish the parameters within which specific improvement projects will fit. Phase Three includes the delineation, evaluation and prioritization of possible improvement projects. Finally, Phase Four includes the preparation of schematic (conceptual) designs for a selected group of high priority improvement projects.

THE WASHINGTON PARK ZOO[1]

II. ZOO HISTORY

In its present form, this is a young zoo, less than 20 years old, although it has its roots in the mid-1880s when Portland was a busy frontier city. "Portland's First Zoo" was started at 3rd & Morrison downtown by a seaman-turned-druggist who loved animals and collected them from his seafaring friends. In 1887 the collection had outgrown its quarters on a vacant lot next to his store, and so Richard Knight donated it to the City and it was moved to City Park (the present water reservoir site in Washington Park).

The first Park Keeper (who also had carge of the zoo) was Charles Meyers, and for 16 years he gave the animals his special attention. He constructed what is believed to be the first sunken, barless cage anywhere in the world -- a bear grotto which housed the grizzly and Alaskan bears which were part of the new zoo. The present bear grottos are adaptations of those original ones, which were praised at the time as "a model for all zoos for the humane confinement of wild animals." There was a rapid growth of animal exhibits, and by 1894 there were 300 specimens, mostly North American species plus a few monkeys, foreign birds and a kangaroo. Alligators, the zoo's first reptiles, were acquired in 1895. In 1905, the City paid $1,100 for a leopard, an African lion and a polar bear which had been exhibited at the Lewis & Clark World's Fair in Portland.

The zoo began a period of decline in 1905, which was intensified by a move to a higher and more remote part of the park in 1925. There was a new mayor who was opposed to zoos, a new park keeper who was a gardener by trade, and World War I was in progress. But nature took its course, and the Washington Park Zoo refused to die. Full-time zoo directors were hired beginning in 1938, and although they made some improvements and additions to the collection, lack of interest continued and by the end of World War II the zoo had deteriorated badly.

When Jack Marks took over as Zoo Director in 1947, expansion was impossible at the inadequate site, cages and enclosures were in poor repair and there were numerous escapes. There were also many animal deaths until three veterinarians began spending more time with the animals and gained experience in recognizing symptoms before a disease took hold. They spent a great deal of their own money on care of zoo specimens, signaling the beginning of renewed interest in the zoo. One of these vets, Dr. Theodore Reed, subsequently became the Director of the National Zoo in Washington, D.C., strengthening the good relationship between the two institutions. The sire of the present breeding colony of chimpanzees was obtained from the National Zoo.

A major turning point came in 1951 when the Portland City Club adopted a study committee report recommending that a new zoo be constructed on a new site, that an advisory group be established to further the zoo's interests, and that a commission be formed to aid the City Council on zoo matters. The Zoo Commission was promptly appointed by the City Council, and in 1952 the Council accepted the Commission's recommendation to place a $3,850,000 bond issue on the November ballot to finance a new zoo on the 40-acre site of the West Hills Golf Course in Washington Park.

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[1]History provided by the Zoo Staff.

The Portland Zoological Society was chartered in 1952, and its first task was to run the promotional campaign for the ballot measure. Although many people worked very hard, the measure lost by less than 12,000 votes, but the Commission and the society immediately decided to try again. The next election, in May 1954, was successful. Some of the best publicity was generated by the arrival in September 1953 of Rosy, Portland's first Asian elephant. She was donated by Portlanders stationed in Thailand, and she caught the fancy of the city.

The new zoo, renamed the Portland Zoological Gardens, opened July 3, 1959 in conjunction with Portland's centennial year festivities. Unfortunately, increased construction costs, compounded by delays due to bad weather, forced postponement of many of the proposed facilities. Only 60% of that first "master plan" was completed, forming the nucleus of the present zoo. Construction of the Children's Zoo was made possible by funds from the Society and a private donor in 1961. Donations to the Society also made possible the construction of the hospital/ research facility in 1966.

Partial funding for a railway was included in the original tax levy. Jack Jones, an ex-railroad man, and Ed Miller, former managing editor of The Oregonian, were instrumental in obtaining donations of time, money and materials in order to make the Zooliner the finest amusement train ride of any zoo in the country. The original perimeter route was later extended into other areas of the park complex, making a 4-mile round trip excursion. Halloween "Spook Rides" have been a tradition since 1960. The railroad is an official mail carrier and has its own cachet stamp.

Acquisition of animals continued. Marks led penquin expeditions to Antarctica in 1957, 1958 and 1962; the first birds were kept in the Peninsula Park swimming pool until their new quarters were completed. Asian elephants belonging to Morgan Berry had been spending winters at the zoo for several years, and on April 14, 1962 the zoo was the scene of the first elephant birth in this country in 44 years. A fund-raising drive made possible purchase of the baby "Packy" and his mother "Belle" from Mr. Berry, whereupon he donated his remaining two elephants including the sire, Thonglaw. Rosy gave birth in October, and by 1967 there had been six elephant births at the Portland Zoo. Thonglaw died in 1974, and Packy is now the sire of new calves.

In 1971, the Portland Zoological Society assumed full management of the zoo, although the City continued to provide the funds. Eventually, the burden of subsidizing the zoo became too great for either agency, and they turned to the State for help. Laws were passed to allow the zoo to come under the jurisdiction of the Metropolitan Service District, a special district "government" whose Board of Directors is composed of locally elected City and County officials in the tri-county area. In May 1976, the residents of the District approved a 5-year, ten million dollar levy for the operation of the zoo. MSD has budgetary and general supervisory control, while day-to-day zoo operations are the responsibility of the Zoo Director. Warren Iliff, formerly with the National Zoo in Washington, D.C., has been the Director since the fall of 1975. The Society serves in an advisory capacity to the MSD Board, and continues to promote private donations and volunteer support.

Following the election, a new name was sought for the zoo. After reviewing almost 500 entries, MSD chose an old "new" name submitted by 6th grader Susan Sachitano. On October 1, 1976 the Washington Park Zoo was reborn. In return, the zoo's baby giraffe was named "Sach" in honor of the contest winner.

As the zoo looks forward to its 20th anniversary, a new master plan is being developed to remodel and enlarge old exhibits and provide space to increase the scope of the zoo's collection. With the continued support of the Portland community and visitors, the Washington Park Zoo hopes to take its place among the fine "old" zoos of the country.

III. DEVELOPMENT AND PROGRAM OBJECTIVES

The overall goal set forth by the Metropolitan Service District to direct this study is "to develop recommendations for physical improvements to the Zoo over the next 3.5 years, which will increase attendance, length of visit, revenue, and patron enjoyment of the Zoo facilities, consistent with accommodating future growth and developing the long range potential of the Zoo." The following Development and Program Objectives are recommended as a general framework for accomplishing the overall goal:

1. General

   a. As soon as possible, implement projects which will provide significant improvements and will increase public interest in the Zoo.

   b. Maximize the use of existing facilities that have lasting qualities. Make every effort to preserve facilities and programs that have demonstrated their value to the operation of the Zoo and to enjoyment by the public.

   c. Identify funding sources which might be able to supplement existing funds in the development of exhibits and site amenities and improve visitor services, educational programs, and research activities.

2. Zoo Setting:

   a. Establish an overall feeling generally associated with a park or natural setting rather than a feeling of a "built environment."

   b. Develop a "Botanical Theme" that will enhance the visual setting and improve animal and visitor enjoyment throughout. In general, the theme will:

      (a) preserve and enhance existing natural areas,
      (b) to the greatest extent possible, use plant materials and forms in exhibits that represent the natural habitat of the animal,
      (c) introduce species that provide the highest possible botanical interest with emphasis on plants not normally found in public parks and gardens, and
      (d) use flowering and bedding plants (bulbs) to provide color and visual interest in selected areas not directly associated with animal enclosures.

   c. Provide site amenities that enhance the visual quality and degree of comfort for the visitor, (ie., water features, benches, signs, rain protection, shade, picnic facilities).

3. Buildings and Structures:

   a. Develop an overall unity of character for all structures in the Zoo. Variations in color, texture, form and materials should relate to the site location and function.

   b. Subordinate buildings and structures to the surrounding landscape, especially in animal enclosure areas.

   c. Modify or obscure existing structures that dominate the Zoo to make them more compatible with the landscape setting.

   d. To the greatest extent possible, eliminate visually dominant barriers.

   e. Carefully design all site amenities such as benches, shelters, signs, trash receptacles, fences, screens, lighting, etc. to insure that they do not distract from the overall setting.

   f. Preclude the use of reflective surfaces.

4. Exhibit Content and Context:

   a. Give strong consideration to the overall educational, research, conservation and interest value of each animal when making additions to the collection.

   b. Develop exhibits that will provide a comprehensive view of indigenous animals of the Oregon Coast and the Cascade Mountains. These exhibits should feature zoological, aquatic, botanical and museum displays with a major emphasis on interpretive and educational programs.

   c. Modify existing enclosures and design future enclosures to allow the animal to be viewed in a "natural" setting, free from visually dominant barriers.

   d. Provide an appropriate environment for each animal species that relates to its physical and behavioral characteristics.

   e. Include interpretive displays and, in some cases, interpretive programs in all exhibits that help the visitor to understand the physical and behavioral characteristics of the animals.

   f. Develop interpretive data in a consistent format throughout the Zoo.

   g. Provide for ease of maintenance, animal handling and health care in all improvements to existing exhibits and new facilities.

5. Visitor Services:

a. Continue efforts to improve the quality and variety of food available. Give consideration to developing a substantial restaurant at the Zoo that will be a unique attraction in itself.

b. Increase both the quantity and quality of seating in order to better serve the visitor. Benches and tables should be designed in a unified system and carefully located to enhance animal viewing areas, eating and comfort facilities.

c. Provide for ease of access for pedestrians to all areas of the Zoo. Paths should be scaled to the volume of traffic desired in various areas and should allow for pedestrian movement that does not conflict with animal viewing and other specific use areas.

d. Consider relocation of the main entrance to better accommodate pedestrian traffic flow between the parking lot and the Zoo. This change will also allow for the improvement of the internal circulation system.

e. Whenever possible, eliminate all existing stairs and ramps in excess of 8% slope in order to assure ease of movement by all visitors including physically handicapped persons and senior citizens.

f. Evaluate the need for rain protection throughout the Zoo with special attention to areas where visitors gather -- such as the entrance gate, train terminal, food service areas, outdoor program spaces, and animal viewing areas.

g. Carefully plan outdoor uses -- such as picnic areas, program assembly, dining, sculpture garden, resting and viewing -- to relate to the overall circulation flow and exhibit content of the Zoo. These areas should help assure that the total Zoo experience is a comfortable and enjoyable one.

h. Expand and improve the gift shop to more adequately provide merchandise to the public. Merchandise should directly relate to the Zoo and be of the highest quality.

6. Education and Special Events:

a. Provide broad based education and special events programs both in the schools and community. Wherever possible, integrate these two efforts to maximize positive benefits.

b. Explore new ways of presenting the Zoo's exhibits and in-Zoo programs to visitors, such as through demonstration talks, participatory exhibits, etc.

c. Integrate the activities of such groups as the Playbox Players into the fabric of the Zoo experience.

d. Develop the most meaningful educational approach possible for the 2-8 year old and do so with a recognition that their visit is usually a family affair in which interactions between parent and child take place and continue after the visit.

e. Accommodate special events such as kid's free days and the Spook Rides in a manner which will have a maximum positive impact on the public.

7. Research and Conservation:

a. Establish the Zoo as a resource to the local colleges, universities, research centers and medical shcools and one at which their students can participate in behavioral studies and comparative medicine research to the mutual benefit of the Zoo and its animals and the other institution.

b. Specialize our research efforts in those areas where our animal collection is most unique, such as a broad based research program for our elephants, pqnquins, chimps and musk ox.

c. Develop a cooeerative program with local, state and federal wildlife agencies with a view to implementing cooperative research and captive breeding programs for local endangered wildlife.

d. Establish an intensive breeding program for those species that are endangered or seldom propagated in captivity and have these enclosures exhibit graphics about these efforts and why they are important.

e. Develop periodic statewide programs to highlight a selected endangered animal (or groups of animals) in which exhibits at the Zoo, public libraries, schools, and other institutions are coordinated to build public awareness and understanding.

f. Establish cooperative conservation education programs with other organizations such as the World Wildlife Fund, the Wildlife Preservation Trust and the Nature Conservancy by allowing them the use of the Zoo as a possible forum for their organization and programs.

IV. VISITOR CONSIDERATIONS

A. Programs and Activities

Programs and activities that supplement exhibits have become important elements in involving and maintaining a high level of interest on the part of repeat visitors to the Zoo. Major areas of visitor involvement are: Education, Research, and Special Events. The overall objective of these programs and activities is to encourage meaningful involvement by thepublic in order to increase appreciation of the animals and to generally promote the Zoo as a viable recreation/education facility.

1. Special Events:

Each year the Zoo hosts five "Free Days" and the Spook Ride at appropriate times during the school season when general Zoo attendance is relatively low. Current programs include:

- Animal Poetry Contest (Valentine's Day)

  Participating school children come to the Zoo with poems about animals.

- Spring Vacation Free Day

  A program for children up to and including 11 years old. This program attracted approximately fifteen thousand people last year.

- Senior Citizens Free Day

  This early summer program is held in cooperation with churches and senior citizen organizations. Special bus service is provided to and from the Zoo.

- Handicapped Persons Free Day

  This program is held every fall for handicapped persons, companions, and educators. Useful information concerning ease of movement and "barrier free" design is collected as part of this program. These comments will be considered when remodeling existing facilities or constructing new facilities.

- Christmas Vacation Free Day

  This program is scheduled annually for school age children. Appropriate seasonal programs and shows are provided.

- Spook Ride

  This annual event runs for about ten days preceeding Halloween. The event consists of entertainment and a train ride based on the Halloween theme.

These special events are designed to call attention to the Zoo as a public facility and to increase general interest during the slower months of the year. Many positive comments are received from participants in these programs which suggest that the programs are successful. Good public relations value seems to be derived from each of the events.

2. Education:

Several on-going programs are carried out as a part of the Zoo's basic educational function:

- Zoo-To-You

  Once or twice each day throughout the summer the Zoo Mobile goes to a park or public place within the Metropolitan Service District to share animal contact and interpretive experiences with children and adults. This high quality program generates considerable interest in the Zoo.

- Zoo Days in the Schools

  This program involves a day of educational activities designed around animals. The Zoo education staff provides data packets to the schools to aid teachers in curriculum ideas such as comparisons of Reptiles, Birds and Mammals and foods used at the Zoo. This program was recognized at the annual conference of Zoos and Aquariums as the best educational program for 1976.

- Guided Tours

  Guided tours are available upon request by Zoo volunteers who are prepared to discuss significant characteristics of the animal collection. This program is popular but does not reach a large percentage of Zoo visitors.

- Self Guided Tours

  Information is made available to visitors at the entrance relating to individual subjects. The visitor uses the information and Zoo map to experience the Zoo with a fairly specific objective in mind. Current existing information includes "Think Metric" and "Endangered Species."

- Wandering Guides

  Volunteer weekend guides circulate throughout the Zoo and provide "at the exhibit" information. Those guides are available for impromptu tours, question answering, etc.

2. Education: (Continued)

- Zoo-OMSI-Forestry Center "Enrichment Classes"

  Throughout the year each institution offers classes on a variety of subjects relating to exhibits and activities. Classes are held in the Education Building and includes puppet shows, animal contact, tours of the Zoo, slide and films.

- Animal Demonstration

  These talks are given once or twice daily during the summer. The program has included chimps, reptiles and elephants; with emphasis on physical characteristics, natural behavior and animal care in the Zoo.

- Insect Zoo

  The insect zoo is both an exhibit and a program in the sense that it has junior keepers present when it is open to discuss the insects and to answer questions.

- Zoo Lectures

  The Zoo sponsors one lecture each year that is of interest to a large portion of the public. Speakers are selected that are naturally or internationally known. Jane Goodall is the scheduled speaker in the spring of 1978.

B. Visitor Services

Visitor services is a term that includes a range of support facilities which are geared to satisfying the needs -- and desires -- of Zoo visitors. Visitor services include the following:

Parking
Entrance/Exiting
Food Service
Restrooms
Picnic Areas
Stroller Rentals
Gift Shop
Directional Aids
Seating Areas
Handicapped Facilities
First Aid
Rain Protection

B. Visitor Services (Continued)

1. Parking:

Except on the busiest days, the amount of parking available for the Zoo, OMSI, Forestry Center and Terra One appears to be adequate. The upper portion of the parking lot is not paved and as a consequence, is not particularly appealing to visitors. The parking lot slopes at about 5% toward the south (about the maximum recommended by national authorities for parking lots).

The parking lot is not within the boundaries of the Zoo itself, but rather is a part of the City of Portland's park system. This means that any improvements proposed either to the access road (Knights Blvd.) or the parking area will have to be coordinated through the Portland Bureau of Parks.

The problem with the existing parking lot is not so much its physical size and layout as its location relative to the Zoo entrance. From observing where people parked during the Spook Rides, it became obvious that most visitors assume that parking on the east side of Knights Boulevard is for Zoo use and parking on the west side is for OMSI/Forestry Center use. The center of this "perceived Zoo parking area" is located about 850 feet away (and 50 feet above) the main entrance. Even during light use periods, visitors (including the handicapped) must park at least 350-400 feet away from the entrance. Studies have shown that most people are willing to walk 350 feet or so in suburban areas (eg., shopping) but are reluctant to park and walk much farther. Only in downtown areas are people accustomed to parking 800 to 1,000 feet from their destination. Visitors to the Zoo include the young, the elderly, the infirm, and handicapped patrons. To ask these people to walk 850 feet or more on a busy day is a real disincentive to repeat visits.

2. Entrance/Exiting:

The entrance is large, well marked, and obvious to arriving visitors. Further, there is ample gathering space between the street and the gate to allow for pick-up and drop-off, bus loading, and for group assembly. The main office is also conveniently located at the entrance. On the negative side, the entrance is rather stark, no seating is provided, and only minimum weather protection is available. The excessive distance between the available parking and the entrance has already been mentioned.

The exiting arrangement is less clear. Exiting at the point of entrance is discouraged because of the conflict with arriving visitors. The nearest exit is in a somewhat obscure location between the stroller rental area and the gift shop. Further, exiting is through a turnstile which causes problems for the elderly, parents with young children, and handicapped persons.

The exit turnstile to the southwest of the office is in an even more obscure location and access is gained by the use of steps. We doubt that very many people even know that this exit exists.

2. Entrance/Exiting: (Continued)

The exit near the Children's Zoo is relatively convenient to the parking area (although an exit on the south side of the boat ride or the south side of the Education Building might be even more convenient). Again, exiting is through a turnstile. The ramp from the main part of the Zoo to this exit has a grade in excess of eight percent -- which means this exit is not really usable for the the inform and the elderly. We have personally noticed several irate parents with children in strollers who, upon leaving the Children's Zoo, discover that strollers will not fit through the turnstile.

3. Food Service:

Food service is available near the entrance (fast food counter), at the primate building (seasonal fast food counter, machines), and sometimes in the Children's Zoo (fast food counter). According to current income figures, it appears that the average visitor spends only about $0.56 on food. By way of comparison, theme parks anticipate average food revenues of about $3.20 per visitor. Granted that the Washington Park Zoo and a commercial theme park are different, but the difference between food expenditures should not be of this magnitude.

The existing food service arrangement is totally inadequate. There are no covered (and comfortable) table areas for leisurely eating, the menu includes only the usual uninspired offerings (hamburgers, hot dogs, etc.), the main food service area is dark and uninviting, and the queuing arrangement is very inefficient.

Plans are being prepared now to totally remodel the main food service area. The facility will be closed this winter for the work -- which is estimated to cost $50,000. Upon completion, many of the existing problems will have been eliminated. This proposed work, however, will do nothing to improve the eating areas.

Finally, the main food service area may not be well located from the standpoint of encouraging people to spend more time in the Zoo. Since the facility is located at the entrance, a visitor is asked to make an eating decision upon entering. (Most visitors probably don't arrive in a hungry state). Should a visitor decide later that he or she is hungry, he (or she) must trudge back to the entrance. At that point, a second decision can be made -- to stop at the food counter or to leave the Zoo and go elsewhere to eat. We submit that the latter decision is probably frequently made.

The machine food area at the Primate Building is visually unappealing. The appearance is that of a makeshift collection of machines under a makeshift roof. Again, no consideration is given to where the customer is to eat the food once it is acquired from the machine. (Note: It is our understanding that a new concessionaire has been awarded the contract for this concession. We understand that this concessionaire has agreed to upgrade the physical appearance of this area.)

3. Food Service: (Continued)

The food service counter in the Children's Zoo was not used during 1977 due to a number of factors -- including limited demand. During years when both facilities did operate, revenues generated at the Children's Zoo only amounted to about one-fourth those at the main food area.

4. Restrooms:

Public restrooms are located near the main entrance, in the Children's Zoo, in the primate house and at the elephant house. In our opinion, there are sufficient restrooms and they are adequately spaced throughout the grounds. Handicapped facilities are being installed as funds are available. The adequacy and appearance of these restrooms should be improved.

5. Picnic Areas:

Picnic tables are available in a number of areas including near the main food service area, in the Children's Zoo, between the bear grottos and the elephant house, and a few in other scattered locations. The tables often seem to be arbitrarily placed and are of several designs. The net result is a feeling of a token nod toward providing tables for visitors. More consideration needs to be given to the design of picnic areas and the placement of tables.

6. Strollers:

The stroller rental area is located between the gift shop and the main entrance. During the summer the facility is staffed; and during the winter rentals are handled through the gift shop. Wheelchairs are also available for use at no charge. Visitors seem to appreciate this service and have expressed few complaints. Many people ask, however, if umbrellas are available for rent.

7. Gift Shop:

The gift shop is conveniently and appropriately located near the main exit. The shop handles a variety of animal related items (cards, posters, calendars, stuffed animals, books, etc.) and other items (film, made-in-Oregon products, etc.). According to current revenues, it appears that the average visitor spends about $0.18 on items from the gift shop. By way of comparison, theme parks anticipate average gift shop revenues at about $1.35 per visitor. In our opinion, revenues can be increased substantially by changing the merchandising approach to one which uses the Zoo as the central theme and specializes in quality (and unique) products. (Note: A successful merchandising approach may require more floor area for sales and storage and better visibility.)

8. Directional Aids:

A variety of directional aids are available to assist visitors in locating specific exhibits and facilities. These aids range from simple signs, to pictorial maps (which can be purchased), to display cases containing small animal replicas and directional arrows. The Zoo staff is obviously experimenting with a number of techniques to determine which approaches work best.

8. Directional Aids: (Continued)

We have two major objections to the directional aids as presented. First, there is a lack of consistency in the directional aids. A visitor must be constantly on the lookout for clues as to the location and form of directional aids.

Second, the directional aid system does little to encourage visitors to explore the less popular portions of the Zoo. The existing circulation system and the location of the major exhibits lead visitors from the entrance, to the feline house, to the bear grottos and finally to the elephant house. Other portions of the Zoo -- including the Children's Zoo, waterfowl ponds, and hooved stock areas are away from the mainstream of activity. Directional aids should be employed to encourage greater use of these areas.

9. Seating Areas:

Lack of suitable seating is one of the more noticeable problems. Granted that there are many benches of varying design located in scattered areas; however, there seems to be little rationale for the placement of most of these benches. In addition, most of the seating is located in the open -- with the obvious consequence that they are wet about half of the year. Very few of the benches are located in areas where a visitor can sit down and observe the animals in an exhibit. After trudging around on hot asphalt walks for an hour or two, most people would like to sit down and relax for a few minutes. This simple pleasure is effectively being denied to visitors.

10. Handicapped Facilities:

Some facilities have been provided for the handicapped. These facilities include curb ramps, wide doorways, accessible toilets, and pathways with grades less than 8 percent. The Zoo staff is upgrading facilities as time and money is available. However, there are some inherent problems with the site. These problems include:

a. Parking lot grades which are steep enough to cause some inconvenience with entry and exiting of vehicles.

b. Parking which is located 350 feet (or more) away from the main entrance.

c. Exiting which must be through the main entrance area because of physical constraints at the other exits (eg., the steep ramp to the Children's Zoo exit, the steps southwest of the office exit).

d. Some ramp grades which are excessive for easy wheelchair use (eg., access to the Children's Zoo, approach to the tiger exhibit, access to the Barbary Sheep area).

e. Stairs are located in some areas which effectively preclude use by elderly, infirm, or handicapped visitors.

f. Access to the train cars is difficult due to the curved platform and the need to step up to enter the cars.

10. Handicapped Facilities: (Continued)

The major exhibits were not originally constructed with the thought in mind of satisfying the needs of the handicapped. In many cases, existing railing/boxwood hedge height obscures views of animals for visitors in wheelchairs. In our opinion, simple modifications to viewing areas will be sufficient to serve the needs of the handicapped. As a side benefit, these modifications will also make it easier for children to view the exhibits.

11. First Aid:

The first aid station is located in the administration building. The station is not staffed; however, several of the Zoo staff members are trained in first aid. The existing facilities appear to be adequate to meet current needs.

12. Rain Protection:

Rain protection is available (in some form) in a number of areas of the Zoo. These locations include:

Children's Zoo (contact area, small viewing areas)
Train loading platform
Entrance area (gift shop, food service area, restrooms)
Penguinarium
Primate house
Waterfowl ponds
Feline house (nocturnal exhibit area)
Elephant house
Giraffe house

Most Oregonians are used to the rain and are willing to walk some relatively short distance from their car to a covered area. However, as shopping center developers know, customers are not interested in standing in the rain after they have reached their destination.

The existing rain protection is helpful, but is inadequate to encourage visitors to spend more time at the Zoo during inclement weather. At best, it encourages them to dash from one covered area to another. We suggest that serious thought be given to providing more covered exhibit viewing areas.

C. Attendance and Length of Visitation

The following table illustrates Zoo attendance from January 1970 through October 1977 by month. As can be seen, attendance dropped every year from 1970 to 1975, reaching a low attendance of 448,198 in 1975. Attendance has been up substantially since January 1976.

ZOO ATTENDANCE 1970 - 1977*

MONTH	1970	1971	1972	1973	1974	1975	1976	1977
JANUARY	6,265	7,932	9,968	10,214	4,007	5,915	15,939	18,818
FEBRUARY	27,562	31,259	16,125	24,516	9,954	8,212	26,715	23,323
MARCH	55,578	39,314	35,266	39,444	39,334	25,623	48,227	52,155
APRIL	36,957	61,439	52,582	56,746	35,681	32,783	54,055	61,364
MAY	104,661	84,787	82,003	75,104	65,766	66,035	80,013	64,616
JUNE	123,094	112,742	85,204	65,068	69,627	63,112	85,209	89,495
JULY	116,499	113,246	115,682	93,964	85,023	78,343	105,053	101,171
AUGUST	125,925	102,903	100,945	84,863	77,154	83,169	99,287	74,587
SEPTEMBER	76,666	48,549	36,441	43,030	42,766	51,571	55,258	38,249
OCTOBER	34,167	33,770	36,441	17,525	26,478	17,898	32,832	33,118
NOVEMBER	18,514	10,507	14,667	6,771	13,194	9,319	26,344	
DECEMBER	12,614	4,057	4,974	5,381	5,140	6,218	12,722	
TOTALS	738,502	650,505	590,298	522,626	474,124	448,198	588,790	556,896(10 mos.)

*Provided by the Washington Park Zoo staff.

In addition to these figures, the annual Spook Ride attracts a substantial number of visitors. We do not have information from earlier years, but in 1977 the Spook Ride attracted 11,432 people.

In 1974 J. d. Lorenz & Associates prepared a report entitled "The Portland Zoo: Public Attitudes and Behavior". The following information on length of visit was extracted from page nine:

> "Nearly half of the respondents (47.3%) stayed at the zoo only one or two hours, and another 35.0% stayed for three or four hours. Less than 10% spent "all day". For most zoo visitors, the visit was about as long as planned (60.0%), or else they had not planned to stay any special length of time. For a few (8.4%), the visit was cut short (usually not because of weather), and only 4.3% stayed longer than they intended.
>
> "The average zoo visit, then, is of fairly short duration, and a number of respondents (particularly those who left early) explained this by saying that there wasn't much to do, or that the zoo was too small to sustain a longer visit."

D. Pedestrian Flow

The existing flow can be best described as linear. Visitors are concentrated along one major route with the entrance being the beginning and the elephant area being the terminus. This "obvious route" for visitors encourages most people to follow this linear path without any understanding of the other parts of the Zoo.

The waterfowl area, hippopotamus exhibit, Barbary Sheep exhibit, and the north side of the feline house are underutilized areas. In the interim, better directional aids may assist in informing visitors of these other interesting areas. In the long run, more substantial changes will need to be made in the circulation system (and directional aids) to encourage visitors to explore the Zoo.

There are a number of circulation "inhibitors" or "restrictors" in the pedestrian flow system. Most of these inhibitors have been discussed elsewhere in this report. The following list includes a restatement of the more serious problems:

1. Excessive distance from the exit to the parking area.
2. Lack of clear signage near the entrance to orient visitors.
3. Lack of a free handout map to assist visitors.
4. Ramps with grades in excess of eight percent.
5. Stairs in the pedestrian flow system.
6. Congestion in the main food service - railroad ticket office area area.
7. "Dead end" routes which discourage visitation.
8. Inadequate directional aids.

V. ANIMAL CONSIDERATIONS

A. Enclosure Quality and Visitor Perception of Animals

The physical setting provided for each animal plays a major role in how well the visitor understands and appreciates its psychological and behavioral characteristics. Since the "real and living" quality of each animal is what the Zoo offers best, the setting or animal enclosure should strive to enhance these qualities by presenting a "realistic" environment.

To some extent all of the existing enclosures suffer from being artificial and mechanical environments that detract from the importance of the animal. The current enclosures were developed with considerable attention to keeper servicing, animal health, and protection against escapement which has resulted in an overall harsh environment. This harsh environment is frequently criticized by visitors. The following constitutes some major deficiencies in animal enclosures:

1. Visually dominant barriers that create a caged and depressing effect.
2. Visually dominant architectural forms that create an unnatural background for animals.
3. A mixture of fences, walls, buildings and utility structures that create a confusing visual background.
4. Lack of "natural appearing habitats", (land forms, vegetation and water).
5. Lack of variety in viewing positions -- each animal is always seen from the same vantage point.
6. Lack of variation from one animal enclosure to the next. For example, the tiger and lion enclsoures are similar, yet each animal has significant differences in physical appearance and natural habitats.
7. Visual barriers for children in strollers, younger children, and persons in wheelchairs.
8. Placement of animals in enclosures that preclude adequate perception of significant physical and behavioral characteristics.

B. An analysis of the existing exhibit balance and content, adequacy of enclosures for health care and servicing, and analysis of other keeper related matters has been delayed until the General Curator returns. These matters are important to the study and are scheduled in the contract to be provided by the Zoo staff.

VI. SITE ANALYSIS

A. Land Uses and Degree of Commitment

The Washington Park Zoo contains approximately 64 acres of land. Of this total, we estimate that about 19 acres (30% of the total) have been developed for Zoo use. The remaining portions of the site can be divided into three catagories:

1. Developable (about 10 acres)
2. Questionable (about 6 acres)
3. Unbuildable (about 29 acres)

Developable portions of the site are those which are currently unused (or are underutilized) and which do not exhibit major constraints to development. Questionable portions of the site are those that may be usable, but which exhibit development constraints (such as substantial slopes, signs of historic soil movement, or isolated location). Additional study is required in these areas to determine if development is feasible. Unbuildable areas are those portions of the site which are too steep for development, are subject to active soil movement, or are too small or remote for economic development.

With the exception of the Hoyt Park Pitch & Putt portion of the "L" shaped maintenance building and the Kay Lee operations in the Education Office Building, all of the developed portions of the site are used for Zoo related functions. The parking area -- which is shared with OMSI, The Forestry Center, the Pitch and Putt operations, and Terra One -- is located outside the Washington Park Zoo boundary on Portland Bureau of Parks land.

We have prepared a separate map which catagorizes existing facilities by "degree of financial and/or physical commitment." (Note: This map, and others discussed in this section, are available for viewing by arrangement with the Assistant Zoo Director. Financial limitations precluded publishing these maps with this summary report.) Existing facilities were classed into three groups as follows:

1. Major commitment -- large, expensive structures which, for the foreseeable future, will remain. (Note: It may be feasible to modify the function or make minor alterations to the structure in some instances.)
2. Intermediate Commitment -- smaller scale structures, or relatively inexpensive structures which might be considered expendable (if removal would further other Zoo goals and objectives.)
3. Minor Commitment -- small scale structures and inexpensive structures which are expendable.

B. Land Ownership

The Washington Park Zoo property is, apparently, still owned by the City of Portland. It is our understanding, however, that both MSD and the City of Portland are working on the transfer of legal title to MSD. We anticipate that the actual title transfer will take place in the next few months.

The Zoo property is surrounded on the west, north and east sides by City of Portland park land (the parking area is under control of the Portland Bureau of Parks). The southerly boundary of the Zoo abuts Sunset Highway, which is controlled by the Oregon State Highway Division.

The Zoo train maintenance facilities and a relatively minor portion of the trackage are located within the Zoo property. Most of the trackage and the Washington Park station are located within City of Portland park property. The City has agreed to lease "all the land and equipment comprising the railroad and line including a 20-foot right-of-way along the entire route of the railroad line and the entire Washington Park Terminal with present access thereto. The lease agreement will be perpetual and will allow for the physical expansion of the Zoo in the land bordering the Zoo railroad in the area between the present Zoo site and the Washington Park Station."

C. Access

Access to the Zoo is possible by automobile, train, bus, and bicycle. However, as would be expected, most visitors arrive by private automobile.

The road from the Canyon Road exit to the parking area is confusing to motorists -- especially near the Zoo entrance. Motorists are confronted with several choices of routes -- the most obvious of which is to stay to the right. This route -- while it provides immediate access to the drop-off zone -- also funnels traffic into the parking area in the vicinity of extremely high pedestrian movements. This causes major automobile/pedestrian conflicts and creates a potential safety problem. Serious consideration should be given to redesigning the entrance road to reduce the automobile/pedestrian conflict.

Bus access to the Zoo-OMSI-Forestry Center area is possible but, because of the infrequent nature of the service, is not overly convenient. During the April through September period route 62 provides hourly service from both downtown Portland and the Beaverton Park & Ride. However, during the remainder of the year this rate only operates on weekends.

From October 1975 to October 1976 Tri-Met operated this route on a daily basis as an experiment. According to a Tri-Met staff study[1], revenue from this one-year experiment was insufficient to justify continuation of route 62 on a daily basis. Revenues covered 21% of the cost of operations instead of the Tri-Met goal of 300 percent. Seasonality of use was also a major factor in the decision to abandon daily service on this line.

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[1]Memorandum on Line #62 - Zoo/OMSI, dated 7 March 1977.

C. Access (Continued)

Frequent bus service is available along Canyon Road by means of the following routes:

57 - Forest Grove

59 - Cedar Hills

60 - Cedar Mill

61 - Somerset West

These bus stops are located at the edge of Canyon Road, however, and are neither convenient nor safe for children. The stops are located about one-fourth mile from the Zoo entrance in an area of heavy automobile traffic. We expect that few parents will allow their children to make use of these bus routes.

Due to the geometric features of the Zoo-OMSI exit, it does not appear possible to route busses off of Canyon Road to a safer bus stop location. Tri-Met's staff has also looked at the possibility of routing at least some of the Canyon Road busses through the Zoo-OMSI-Forestry center complex. They have, however, recommended against this approach because of a variety of technical problems.

In the short run, there do not appear to be any viable options for providing better Tri-Met bus service to the Zoo. We suggest, however, that the Zoo, OMSI, and Forestry Center staffs continue to work with Tri-Met to attempt to develop means of improving transit service.

Access to the Zoo is also possible by train from the Washington Park station. This station is staffed on a daily basis (generally 11:30 a.m. to 3:30 p.m.) during the summer. Average daily revenues of about $150 are generated. (This implies that about 75 people per day enter the Zoo by train.)

Parking is in very short supply in the vicinity of the Rose Test Gardens. Any attempt to encourage people to enter the Zoo by means of the train will likely increase this parking problem.

Tri-Met's route #76 (Arlington Heights) provides service to the vicinity of the train station. Connecting service to the Zoo via train is a possibility. However, encouragement of this connection will require coordination of the train schedule with the bus schedule. The cost implications of more frequent train service will have to be weighed against the number of visitors who might take advantage of this connecting service.

Bicycle access is possible by means of Canyon Court from the Sylvan area. Access is also possible from both the Hoyt Arboretum area and the Rose Test Gardens area. Because of the hilly terrain, we anticipate that the number of visitors who arrive by bicycle is and will remain small.

D. Soils/Geology/Stabilization

We have examined available soils reports from 1955 onward, compared the 1954 (prior to Zoo construction) and 1974 topographical maps, and conducted a site reconnaissance tour. From this "overview" work we are of the opinion that soils problems, while serious in some areas, will not preclude expansion of the Zoo.

A map entitled "Soils Analysis" has been prepared which locates known soils problem areas, potential problem areas, and man-made stabilization features. This map generally indicates that the most severe problems are located along the southerly boundary of the Zoo between the Canyon Road exit and the east property line. (The main landslide area is located between the Canyon Road exit and the giraffe house.) Other potential problem areas include the steep ravines to the North and East of the main developed areas.

Major structures should not be considered in the main landslide area. Relatively inexpensive (and flexible) structures might be considered in this area if necessary to meet development objectives. However, it must be recognized that any improvements in this area are subject to damage should the main slide commence moving again.

Away from the main landslide area perimeter slopes become increasingly more stable in appearance. The steeper slopes are probably subject to slow creep, but the flatter upper slopes are reasonably stable. To be sure, old fills and high groundwater will be found in individual site investigations, but -- these problems are common to the Portland area and should not cause excessive problems.

The following should be considered for future development:

1. Fill (except for minor regrading) should not be allowed without adequate engineering investigation as added soil pressures may accelerate soil movement in the vicinity of the fill.
2. Surface and subsurface water must be collected and piped off the site to minimize the amount of water which is in the ground.
3. Rigid structures will have to be designed so as to minimize damage should differential settlement take place. These structures should only be placed on the most stable portions of the site.
4. Flexible structures are appropriate in areas of potential soil movement as they are better able to withstand differential settlement.

E. Buildings and Structures

Most of the major structures were constructed as a part of the original Zoo development program in the late 1950's. The research building was constructed in 1966. Since 1960 a number of modifications have been made to the buildings and numerous small structures have been added to satisfy specific needs.

Most major structures appear to be in reasonably good shape. Exceptions include the giraffe house (which exhibits signs of structural damage due to soil movement) and the education offices building (which suffers from inadequate original construction). The minor structures vary in condition from excellent to poor.

A large retaining wall was constructed just North of the waterfowl ponds as a part of the original construction. This wall was intended to be the North wall of a proposed bird and reptile house. However, due to a lack of funds, the facility was never completed. Future developments will have to be worked around this wall as there is no way to remove this wall without eliminating the waterfowl ponds.

As would be expected, some of the animal exhibit structures were designed for a specific species of animal. For example, the elephant and giraffe houses were porportioned and constructed for the specific strength, size, and shape of the animals housed within. Because of the single purpose character of these structures, there is relatively little flexibility in moving these animals from one area of the Zoo to another location. Some of the other single purpose animal exhibit structures include:

Bear grottos
Feline house
Penquinarium
Primate house

From a locational standpoint, these animals cannot be moved without constructing totally new enclosures. However, modifications to the enclosures can certainly be made.

Some of the other animal exhibit structures are multi-purpose. Examples include the hoofed stock enclosures and the enclosures in the Children's Zoo. More flexibility is available here to move animals and modify exhibit enclosures.

F. Topography

Slope is one of the physical site characteristics that must be considered when determining locations for future exhibits and circulation systems. We have classified the site into the following four catagories:

0 - 8%	Barrier free access is possible in these areas. Ramp grades are reasonable, parking can be easily accommodated, and erosion/drainage problems are not severe.
8% - 15%	Slopes in this range are harder to deal with but barrier free access can sometimes be developed by developing paths which cross hills diagonally. Parking and truck access become more severe, but can usually be accommodated. Erosion can become a problem in some soils.
15% - 25%	Pedestrian walkways generally have to be constructed and soil retainage structures frequently become necessary. Barrier free design becomes very costly (if possible at all). The development of roads becomes very costly and visual scaring of hillsides becomes an issue. Serious consideration must be given to erosion control.
25% +	These slopes are generally too steep for most types of intense activity. Except for carefully constructed walkways and other smaller scale structures, development should be prohibited in these areas.

In our analysis of the Zoo site, we have found a considerable amount of developable (but unused) land with slopes in the range of 0 to 15 percent. This suggests that substantial expansion is possible without the necessity of intruding on the steeper portions of the site.

G. Insolation

Insolation relates to the amount of sunlight which can reach the ground surface, taking into account the slope of the ground and the direction of the slope. Portions of the site are north facing and steep and are inherently "cool". Some portions of the site are southerly facing and steep and are inheretnly "warm." The remainder of the site is classified as "moderate."

We have prepared an insolation map which illustrates the various microclimate of the site. This map allows us to evaluate existing and potential exhibit areas to insure that animals are placed in enclosures which respond to their temperature preferences.

H. Visual Quality

The Washington Park Zoo is located in an enviable setting surrounded by the wooded slopes of Washington Park in the foreground and the southwest hills in the distance. Surrounding roads used to access the Zoo are also scenic and interesting, especially S.W. Kingston Drive that connects to the Rose Garden area of Washington Park. Access by train is an exceptional visual experience taking the visitor through the steep sloped forest without interruption by cars, buildings and other visually competitive forms.

Once in the immediate area of the Zoo and adjacent parking lot, the visual quality changes from the natural surroundings to an environment dominated by buildings, fences, paving, signs, mechanical devices and other man made forms. While all of the man made objects are not objectionable in their own right, the total collection becomes confusing and somewhat "carnival like." In general, the setting that has been created for the display of animals has become so visually complex that the inherent beauty of the animal is diminished. This condition exists to some extent throughout the entire Zoo with one exception. The waterfowl ponds, situated in a natural setting with careful attention to appropriate design and vegetation, provides a high quality visual experience for the visitor.

The public areas of the Zoo can be described in four general categories of visual character: 1) natural areas; 2) areas of undefined open space; 3) areas dominated by scattered buildings, structures and barriers, and 4) areas dominated by large structures.

1. Natural Areas:

As mentioned previously, the waterfowl exhibit represents the only example of an area that has an appropriate setting for the content of the exhibit. Admittedly this is less difficult to accomplish when dealing with indigenous species, but it still remains a standard to be looked to for future developments.

2. Undefined Open Space:

Two areas fall within this classification. First, the entire eastern end of the Zoo, extending from the bear grottos and primate house, east to the elephant house, and south into the train loop. This area is dominated by open lawns and paths which provide an uninterrupted foreground for the elephant house. The open space is a pleasant relief from the more congested portions of the Zoo but lacks variety, color and interest.

The second area is the open space extending from the entrance gates east to the penquinarium. This sloping lawn with scattered trees divides the main entrance from the lower hoofed stock area, but has limited visual appeal in that tree type and placement is random and lacks any distinguishing character.

H. Visual Quality (Continued)

3. Scattered Buildings and Structures:

This area includes all of the hoofed stock exhibit and extends South to the eagles, prairie dogs, racoon and river otter exhibits. Most of the buildings are small and partially obscured vegetation, with the exception of the giraffe house. In general the area has interest, variety of land form and vegetation. However, barriers such as walls, fences, pipe railings and wire mesh, along with the unimaginative concrete block animal shelters, detract from the more desirable qualities. The plant material that has been added as a part of the exhibits is the only thing that prevents this portion of the Zoo from being a visual blight.

4. Dominant Buildings and Structures:

Two major areas of the Zoo are dominated by buildings and structures. These include the central portion, extending from the entrance along the main path to the bear grottos and primate house, and the Children's Zoo.

1) The central portion provides the first impression as the visitor enters. Buildings and exhibits in this area are constructed primarily of concrete and open spaces and are mostly paved with concrete or asphalt. The trees and limited shrub material do little to soften this harsh, cold effect. Plant materials growing from the roof of the feline house and bear grotto are a positive improvement but, unfortunately, do not totally solve the problem. Other distracting elements in this area are views into the backside of the primate house, clutter around the train staion and tracks and the presence of visible barriers of wire mesh, pipes, curbs and concrete walls that restrict the visual appreciation of animal exhibits.

2) The Children's Zoo is characterized by a variety of small building types that form a group appropriately scaled for children but lacking in quality. Concrete block is a major building material as is chain link fence and a variety of other barriers that compete with each other and the animals for attention. The existence of ornamental trees and shrubs throughout the area provides a degree of comfort and visual quality essential in diminishing the adverse effects of the structural elements. One major building in this area of importance is the large shelter over the contact area which is constructed of wood with a sloping shake roof. This building and the penguinarium in the central area both deomonstrate positive structural forms that blend in to the surrounding landscape and tend not to distract from the overall setting.

I. Vegetation Analysis

Vegetation communities are the result of geologic and climatological conditions of the environment. The Washington Park Zoo is situated in the northernmost section of the Tualatin Mountains. The site lies in a rainbelt that averages twelve inches more rainfall than those parts of Portland along the valley floor. This climate condition will support a mix of Cascade and Coast range plant materials as well as ornamental species.

The main portion of the Zoo was unfortunately completely cleared of native vegetation years ago. Some areas have been revegetated with ornamental species whereas substantial portions remain in open lawn or grasses. The undeveloped areas of the site surrounding the main exhibit area are mixed conifer/deciduous forests. These areas provide a quality back drop for the Zoo and present interesting opportunities as native exhibit areas.

While it may not be appropriate to restore the entire site to a native botanical setting, some attention should be given to relating the natural vegetation with ornamental species.

J. Utility Services

Schematic design drawings at a scale of 1" = 50' available in the maintenance office, roughly locate the following utility services:

Water
Sanitary Sewer
Storm Drainage
Electrical Power Distribution
Natural Gas

We have prepared a map entitled "Utility Services" which illustrates the approximate location of these utilities. The purpose of preparing this map is to display, on one drawing, the location of these utilities. It appears that there are no "utility corridors" as such, but rather the utilities criss-cross the developed portion of the site in a more or less random pattern.

There are two implications to this pattern. First, it appears that utility services are generally available to most developed areas of the site. With reasonably short utility extensions it should be possible to serve most potentially developable portions of the site. Second, utility relocations will probably be required to allow for placement of exhibits and support facilities.

We have not made any analysis of the adequacy of the existing system. Analysis of this type is not possible within the budgetary limitations of this study. We will, however, "red flag" potential problem areas as the study progresses into Phases Two and Three.

J. Utility Services (Continued)

According to the Maintenance Department Head, the following utility problems are reasonably serious:

1. The main electrical feeder which serves the south portion of the Zoo is subject to frequent interruption due to some unknown cause. Many people have worked on this problem (including PGE) but have been unable to locate the problem.

2. Water service lines to the hooved stock area (and scattered other areas*) have corroded badly and are only marginally reliable. Valves, fittings, etc. are in such poor shape that repair is not possible.

3. Water use is excessive; this is partially due to a lack of concern over consumption when the Zoo was originally constructed.

4. Natural gas use (for space heating) is excessive due to a lack of insulation and poorly fitting doors in animal enclosures areas.

*Including the Children's Zoo, bear grottos, and the train roundhouse.

VII. OPERATIONAL/MAINTENANCE CONSIDERATIONS

A. Office Space:

Office space is located in a number of buildings including the following:

Main Administration Building
Gift Shop/Restaurant Building
Education Offices Building
Research Building
Feline House
Education Building

In addition, makeshift office space (typically a desk or table and chair) is available in a number of locations including the Giraffe House, Elephant House and roundhouse.

The main Administration Building contains a reception area, four private offices, lounging area, first aid room, bathroom, and some file storage on the main level. The lower level contains one private office, several semi-private offices, storage and a copy machine/sink area.

There appears to be little rhyme or reason as to which person is in which location in the building. We suggest additional study to determine the space and locational needs of Zoo employees to determine who should be located in the main Administration Building.

Several small offices are located in the Gift Shop/Restaurant building. These offices relate directly to the activities in the building. It appears that these offices are adequate for their intended function, but may not be the best use of the limited space available.

The Education Building offices (former birthday party rooms) contains two large office areas which serve the needs of the Education Division of the Education/Research Department. In addition, the Volunteer Coordinator (and volunteers) work out of these offices. The offices have been recently remodeled and, we understand, new furniture is on order. The building appears to have been "cobbled" together over a period of time. Floor levels are not consistent, heating is spotty, the electrical system is barely adequate for an office function, and we doubt that this structure meets current building codes. In our opinion, this structure has a limited useful life. The amount of money spent on this building should be minimized until a decision is made on the ultimate use of this site.

The Research Building was constructed in 1966. It contains a number of offices, several labs, surgery suite, and animal holding areas. The amount of office space available appears to be minimally acceptable for the current level of operations.

The Maintenance Department office is located on the second floor of the Feline Building. This office is separated from both the maintenance staff and the Zoo administration. In our opinion, this is a poor location for a maintenance office.

One unused office is located at the rear of the Education Building. Because of its remote location from other Zoo activities, it is not clear whether this office can be better utilized.

B. Grounds Servicing and Building Maintenance:

The Maintenance Department handles a range of repair work on the buildings, exhibits, grounds and railroad. This section of the report deals with building maintenance and grounds servicing. The next section deals with railroad considerations.

The Maintenance Department office is located on the upper level of the Feline Building. Construction documents, utility maps, soils reports and other historic information in regard to the Zoo are stored here. The type of storage available in this office is totally inadequate for the value of the documents. Copies of these documents should certainly be kept in the maintenance office. However, the originals should be microfilmed and/or stored in a separate, climate-controlled vault.

Maintenance personnel report to the roundhouse for assignment. At the end of the day they return here to punch out. The available facility (a plywood enclosed area with a desk and some chairs) is totally inadequate for this function.

The following facilities are lacking:

Toilet
Code-approved sink
Locker/changing room
Shower
Lunch room/lounge area
Adequate small tool storage

The roundhouse was originally design to store two trains at night and to provide adequate space to handle engine and car repair. Over a period of years, the roundhouse function has been changed and it now serves as the de facto maintenance headquarters. It is our opinion that maintenance personnel should be moved out of the roundhouse and into an adequate facility.

The area south of the Commissary Building serves as a maintenance and storage area. The 'L' shaped building has a sloping floor on its long leg and was designed, apparently, as a covered vehicle parking area. Over the years, doors and walls have been added and now this portion of the building serves the following functions:

Fuel storage
Paint storage
Gardening equipment/supplies storage
Calliope truck parking
Welding/equipment storage

The other leg of the building contains a large room with a high ceiling (and a flat floor) which is now used for hay and alfalfa storage. A small garage is also located in this leg which is used by the nearby Pitch and Putt operation.

Outdoor storage of trucks, usable equipment, junk, hay, lumber and other odds and ends occur at the east and south of the 'L' shaped building. Employee parking and organic material disposal occur in the relatively flat area to the west of the building.

It appears that there is adequate land area in the vicinity of the 'L' shaped building to accommodate all maintenance functions including employee parking, personnel assignment, equipment storage, materials storage, repair/construction shops, vehicle repair, and vehicle parking. However, the amount of covered space available is inadequate to handle the varied needs of the Maintenance Department.

C. Railroad Maintenance and Operations:

The railroad operation consists of about two miles of track, five engines, about 25 cars, a work train, and two stations (one near the main entrance and one in Washington Park near the Rose Test Garden). Engine and car repair/maintenance takes place in and in front of the roundhouse (a portion of the railroad tunnel). Train storage takes place on spur tracks located in the vicinity of the roundhouse.

The roundhouse tunnel was designed so that two trains (engine and cars) can be stored and/or worked on in the roundhouse portion and one train can be placed overnight in the tunnel portion. A grease pit is located in an asphalt service yard located in front of the roundhouse. The service yard is accessible by truck, so supplies and repair parts can be brought directly to the roundhouse.

The grease pit is used frequently for inspection and lubrication of engines and cars (as well as for servicing trucks and automobiles). It is not deep enough and, as a consequence, repair personnel are constantly banging their heads. In addition, no rain protection is available (which limits the usability of the pit). Finally, the entire yard detracts from the view of passengers as they ride on the train.

A railroad storage shed is located east of the Elephant House. The train passes through the structure on one leg of its journey and passes to the west of the structure on its return route to the station. The closed portion of the shed formerly was used for storage of a train, but is now used for storage of "spook ride" equipment. Rails, ties, and other assorted materials are stored outdoors in the general vicinity of the shed. The shed and the outdoor storage of materials detract from the view of passengers as they ride on the train.

An abandoned trestle is located southeast of the Research Building. This trestle was apparently constructed with an inadequate foundation. Because of this foundation problem, the trestle is no longer used. If the trestle is valuable in the operation of the train, a structural investigation should be conducted to see if the structure can be rebuilt. If the trestle is not needed for the train operation, it should be removed.

From an operational standpoint, an additional passing track is needed to the east of the Research Building. Lack of this passing track forces a delay in train departures during heavy use periods.

Additional storage is needed for miscellaneous railroad equipment such as rails, ties, spikes, switches and wheels. Materials and equipment come to the Zoo by truck and must be unloaded either at the roundhouse or at a location accessible to the work train. To reduce the appearance of clutter, it may be appropriate to store railroad materials in the vicinity of the 'L' shaped maintenance building. From here, the materials can be moved, as necessary, to a location accessible to the work train.

The railroad has more rolling stock than can be adequately stored given the existing track and span configuration. It may be appropriate to consider developing an additional 200 feet or so of storage track.

VIII. ECONOMIC CONSIDERATIONS

We have commenced work on the economics portion of the study. Contacts have been made with Washington Park Zoo staff members to discuss known problems, development objectives, and proposed improvements. Initial contacts have also been made with all Zoo directors of major West Coast zoos and private sector animal oriented shows or exhibitions. To date, interviews have been completed at the San Diego and Los Angeles Zoos.

Because of the difficulty in arranging interviews with some of these officials, it has not been possible to complete the economic portion of the work in time for this report. We anticipate that the economic work will be complete by 9 December 1977. The remainder of this section should be considered a progress report.

For purposes of analysis we have separated proposed improvements into seven principal categories:

- New animal exhibits;
- Remodeling of existing exhibits and facilities;
- "Other" types of exhibits;
- Support facilities (concessions, rest rooms, viewing areas, parking circulation, strollers and wheel chairs, gift shops);
- Educational exhibits and facilities;
- Entertainment facilities and services (zoo trains, restaurants);
- Cosmetics (new entrances, signs, landscaping, up-grading of appearance of buildings and facilities, etc.).

We have made an effort to obtain the following information from people who are interviewed:

The reasons for changing year to year attendance patterns -- many things can cause changes in zoo attendnace levels, including the business cycle, shifts in tastes or preferences, relative prices of attending the Zoo compared to other types of entertainment events available to people, lack of alternative entertainment events or facilities, growth in population, age structure shifts (more young children and older people), growth in nonresident visitor traffic, age of the facilities, new animal exhibits provided, better facilities and services, other exhibits or services offered, better or worse parking and circulation conditions, "management", etc.

Obviously, it will be impossible to get anything overly empirical. This exercise is largely impressionistic, but all the above items are to greater or lesser extent determinants of Zoo attendance. These questions are being asked to determine whether changes in Zoo attendance are secular in nature (i.e., long-term), or due to year to year fluctuations caused by extraneous events, such as the business cycle. We expect that most zoo management will emphasize extraneous events as the determinant of attendance in the event attendance has been declining at their particular zoo, and indicate that management has been responsible in the event of increases, but this effort is designed to get a feeling for what people want in the way of entertainment and how they view zoos in the relative hierarchy of entertainment opportunities.

VIII. ECONOMIC CONSIDERATIONS (Continued)

The next set of questions deals with the probable impacts of general types of improvements (i.e., educational facilities versus animal exhibits). Here we are asking the zoo directors to give some examples of results of introduction of some new improvements. Here again we find there are problems of trying to be too empirical. Introduction of a panda bear exhibit, for example, can cause attendance to increase by some 20 percent, but this may have coincided with business cycle shifts or shifts in taste on the part of people towards zoos away from rock bands or other such phenomena. These are the questions we are attempting to resolve, in any event.

We are planning on preparing a Working Paper which discusses what the other zoos are doing in the way of facility improvements and as a means of bolstering attendance, and what the consequences have been. This Paper may be used as at least one basis for assessing the relative merits of the various proposals that are to be considered by the study team.

Observations of at least a preliminary nature from our meetings with Zoo staff and the review of existing Zoo facilities are as follows:

1. Despite the good sense connected with a complete redo or overhaul of the entryway area, parking, Zoo entrance, etc., both politically and in terms of increasing Zoo visitation, these improvements would not make good sense at the outset. It appears that something needs to be done right off to stimulate visitor einterest in the Zoo as a Zoo, such as more unusual animal exhibits and/or better means of exhibiting animals.

2. Major additions to the Zoo (Cascades exhibit) are exciting proposals but also must remain down the line only because of huge budgetary requirements.

3. The necessity of showing that something is happening (besides largely cosmetic improvements) seems to us to be paramount during the next two or three years.

4. Visitor services can use a major overhaul (concessions, gift shops, etc.) and can probably be justified on the basis of additional revenues likely to be generated. We will estimate probable revenue generation. These improvements may be temporary in nature, not meeting long-term physical development objectives of the Zoo, and still pay their way, I suspect.

5. Administrative and storage facilities present problems but it's not clear how crucial a problem these are at this point. Better facilities for the staff are needed soon, as efficiency and working conditions criteria are not being met. Improvements to storage areas and other working facilities can probably wait, however, as they will do little to bolster attendance levels. (These improvements might be justified earlier on the grounds of greater efficiency or cost savings, however, which should probably be explored.)

6. It appears that the most of the initial funds should be used in making improvements to the Zoo proper. Such facilities as the primate house and hoofed stock area can be improved and will have a major visable effect on visitors. Additional improvements to popular exhibits such as the elephant area will also have a great deal of impact. The hippo exhibit is so inadequate that relocating it in an appropriate way may be a project of major public interest and certainly an improvement that can generate public appreciation of the Zoo.

OTHER BUSINESS

77-953 LOAN OF ATOMIC ABSORPTION SPECTROMETER

THE OREGON GRADUATE CENTER, A NON-PROFIT EDUCATIONAL INSTITUTION IN ALOHA, WOULD VERY MUCH LIKE TO HAVE THE USE OF A PIECE OF OUR LABORATORY EQUIPMENT CALLED AN ATOMIC ABSORPTION SPECTROMETER. THIS INSTRUMENT, WHICH IS USED FOR SOPHISTICATED CHEMICAL ANALYSIS, WAS ORIGINALLY PURCHASED BY THE ZOO SOME YEARS AGO UNDER A FEDERAL GRANT AND IS CURRENTLY NOT USED OR NEEDED BY OUR ANIMAL HEALTH AND RESEARCH UNITS. I HAVE DISCUSSED THE FUTURE POSSIBILITY OF DEVELOPING A JOINT GRANT PROPOSAL (THE ZOO AND THE GRADUATE CENTER) THAT WOULD PROVIDE FUNDS FOR A RESEARCH PROGRAM IN WHICH WE MIGHT BE ABLE TO DETERMINE IMPROVED DIETS FOR OUR COLLECTION OR SOME SIMILAR USE OF OUR EQUIPMENT AND THEIR PERSONNEL.

PENDING THE DEVELOPMENT OF SUCH A PROPOSAL (AND ITS FUNDING) WE WOULD LIKE TO PLACE THE SPECTROMETER ON LOAN FOR UP TO A YEAR WITH THEM (AND WITH THE CENTER ASSUMING RESPONSIBILITY FOR IT).

THE STAFF RECOMMENDS THAT THE BOARD APPROVE THE LOAN OF THE ATOMIC ABSORPTION SPECTROMETER TO THE OREGON GRADUATE CENTER UNDER THE OUTLINED CONDITIONS.

METROPOLITAN SERVICE DISTRICT
BOARD ACTION
NO. 77-953 DATE 11-10-77

	YES	NO	ABST.
BARTELS			
GORDON	✓		
McCREADY			
ROBNETT			
SALQUIST			
SCHUMACHER	✓		
MILLER, CHAIRMAN			

Clerk of the Board

OTHER BUSINESS

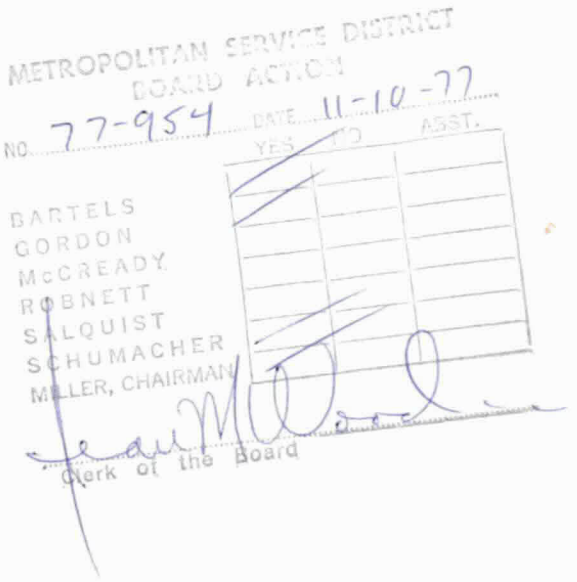
77-954 CETA VI CONTRACTS - SOLID WASTE DIVISION

. Contract 77-120 - Waste Composition
. Contract 77-121 - Citizen Participation

The Solid Waste Division staff prepared a funding application for two CETA projects which should be approved prior to the next Board meeting on December 9, 1977. These programs, if approved, would begin on December 1.

The two projects are termed Citizen Guide and Solid Waste Composition. The composition project is similar to a current MSD project funded through CETA. Attachments 1 and 2 provide a brief description of each project including time schedules and budget.

The staff recommends <u>approval</u> of Contracts 77-120 and 77-121 with the City of Portland for the two CETA projects subject to legal counsel review.



ATTACHMENT 1

WASTE COMPOSITION - PHASE II

Statement of Problem as it Relates to the City of Portland:

Numerous options exist for handling and disposing of solid waste, including waste reduction, separated waste collection systems, recycling and capital intensive recovery systems. One of the major unknowns in designing and implementing any of these options is the composition of the municipal waste stream. Studies of other areas may not apply for Portland.

Specific knowledge of Portland's municipal waste stream assures decision-makers the solid waste collection and disposal needs of the public are being satisfied in the safest, most economical and efficient manner.

Statement of Proposal:

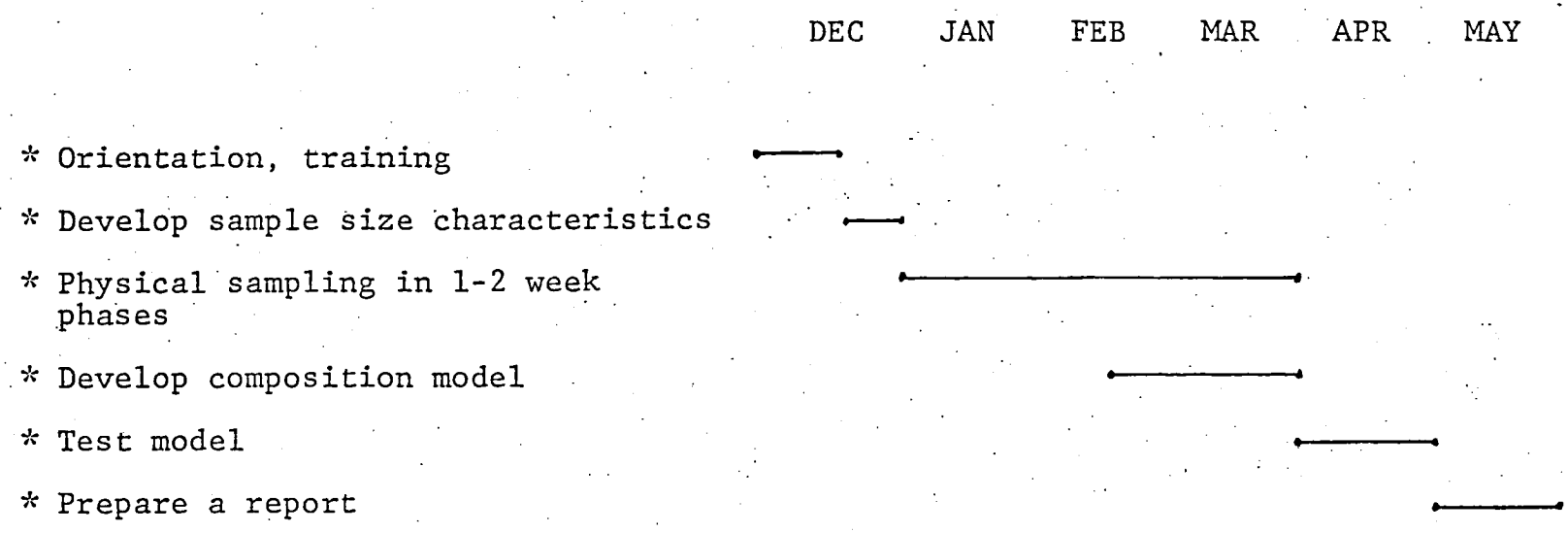
Through sampling residential, commercial and industrial waste generators, improve the reliability of estimates of the composition of the solid waste stream, i.e. present paper, alumunum and so forth.

Statement of Proposal Objectives:

Improve the statistical reliability of waste composition estimates by 50%, utilizing two people for six months to physically separate waste and survey waste generators and utilizing the above data to develop waste composition model for area to project future composition changes.

PROGRAM TASKS AND SCHEDULE

Waste Composition



PROGRAM BUDGET

CETA Eligible Costs Only

Personnel			
2 Solid Waste Technicians ($833/month @ 6 months)		$ 9,996	
Fringe Benefits, including			
Workers Comp Compensation			
Health Insurance Package			
FICA		2,999	
Total Personnel Costs			$12,995
Equipment, Supplies & Operating Costs			
Office & Operating Expenses			
Reproduction, Printing	$ 50		
Postage	200	$ 250	
Sampling, Space, Rental (4 months @ $200/month)		800	
Travel, Local (50 miles/week @ 20¢ per mile @ 25 weeks)		250	
Total Equipment, Supplies & Operating Expenses			$ 1,300
Total Project Costs			$14,295

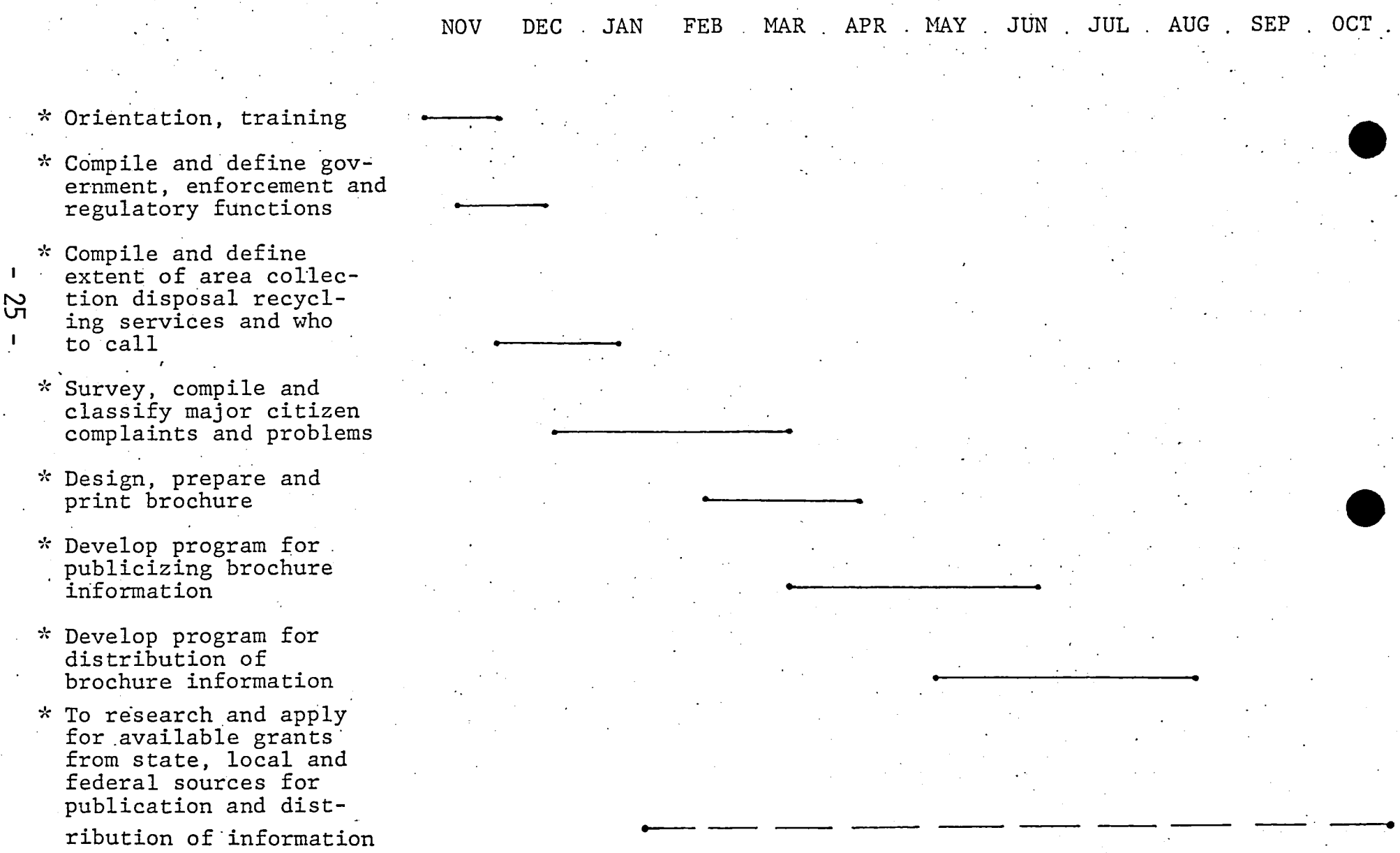
ATTACHMENT # 2

CITIZENS' GUIDE

Statement of Problem as it Relates to the City of Portland:	Citizens of the Portland metropolitan area are confronted with the complex maze of governmental and private agencies which provide agencies which provide garbage collection and nuisance abatement, disposal and recycling services, as well as regulatory control and enforcement. A citizen of he City of Portland might talk to four or five different public agencies and a myriad of private concerns over illicit dumping of garbage and brush on vacant lots in their neighborhoods without resolution of the problem.
Statement of Proposal:	Provide for the citizens an explanation of existing solid waste laws and regulations, responsible agencies and services available.
Statement of Proposal Objectives:	Provide and publicize a citizen directory for handling typical solid waste related complaints, problems and opportunities, utilizing one public information technician for a period of twelve months.

PROGRAM TASKS AND SCHEDULE

Citizens' Guide



PROGRAM BUDGET

CETA Eligible Costs Only

Personnel			
Public Information Technician ($833/month @ 12 months)		$ 9,996	
Fringe Benefits, including			
Workers' Compensation			
Health Insurance Package			
FICA		2,999	
Total Personnel Costs			$12,995
Equipment, Supplies & Operating Costs			
Office & Operating Expenses			
Reproduction, Printing	$ 800		
Postage	400	$ 1,200	
Local Travel		100	
Total Equipment, Supplies & Operating Costs			$ 1,300
Total Project Costs			$14,295

METROPOLITAN SERVICE DISTRICT

BOARD OF DIRECTORS

GUEST ATTENDANCE LIST

DATE: 10-10-77

NAME	REPRESENTATION
BOB BROWN	DEQ
J Douglas Macy	Warner Walker & Macy P.C.
John Lewis	KGW-TV
Michael T. Aleshko	The Oregonian
Jack Pement	Oregon Journal
Linda Gray	Zoo Advisory Committee
Rodger Lawson	Zoo Cefa Project
Craig S. Gottfredson	WARNER, WALKER & MACY, P.C.
JOHN WARNER	"