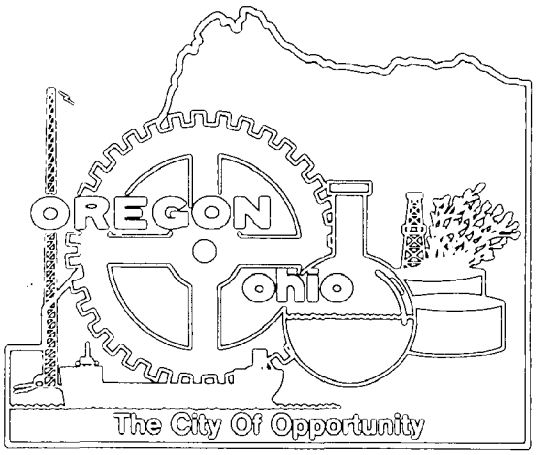
CITY OF OREGON OHIO



LAND USE MANAGEMENT PLAN

1979

FINKBEINER, PETTIS & STROUT, LTD.
CONSULTING ENGINEERS AND PLANNERS
4405 TALMADGE ROAD
TOLEDO, OHIO 43623

A

COMPREHENSIVE LAND USE MANAGEMENT PLAN

FOR

CITY OF OREGON, OHIO

AS ADOPTED UNANIMOUSLY BY CITY COUNCIL

BY ORDINANCE NO. 172

DECEMBER 17, 1979

This document was funded in part through the Coastal Zone Management Act of 1972, as amended (Coastal Energy Impact Program), provided by the U. S. Dept. of Commerce, NOAA, through the Ohio Department of Energy.

DECEMBER, 1979
FINKBEINER, PETTIS & STROUT, LIMITED
CONSULTING ENGINEERS & PLANNERS

CITY OF OREGON, OHIO

1979

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Noel Graham, Chairman

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Roger Kania	Leonard J. Wasserman

Director of Public Safety and Service — Wm. J. Gross

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WATER SUPPLY
WATER TREATMENT
SEWERAGE
WASTEWATER TREATMENT
INDUSTRIAL WASTES
URBAN PLANNING
UTILITY VALUATIONS
FLOOD PLAIN MANAGEMENT

473-1121
AREA CODE 419

December, 1979

Mayor and Members of Council
City of Oregon
5330 Seaman Road
Oregon, Ohio 43616

Gentlemen:

In accordance with your direction in Ordinance No. 62-1979, we present herewith a report entitled "A Comprehensive Land Use Management Plan" for the City of Oregon, Ohio.

This report is submitted with the intent of providing the City with information necessary to properly evaluate present conditions and provides recommendations to reduce environmental pollution in the project area.

We would like to express our appreciation to all members of the City for the cooperation that was extended to us during the preparation of this report.

On behalf of the City of Oregon, we are forwarding eight copies of this report to the Ohio Department of Energy.

Yours truly,

FINKBEINER, PETTIS & STROUT, LIMITED

Richard D. Johnson

Richard D. Johnson

RDJ/mv

Enclosure

cc: file

I. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

SUMMARY

Recently the Department of Energy has initiated efforts to reduce impacts from energy related sources. Study reports of the following nature are one means of focusing attention on the scope and need for such action.

The recommended principal use of land in the project area should be for industry, and whenever possible for that matter, industry should be port oriented.

Immediate 5 year requirements of land space for industry can be readily accommodated within the project. Twenty year requirements of land space for industry can also be accommodated within the project if the following conditions occur:

1. Access to the area is significantly improved.
2. Not more than sixty percent of land requirements by new or expanding industries can be accommodated on parcels ranging in size from 144 to 160 acres.

Sources of air and water pollution affecting the project are located both within and beyond the project limits. Both stationary and non-stationary sources of air pollution contribute to the environmental quality of the area.

Improvement of water and shoreline quality is dependent upon enforcement of EPA regulations and surface-storm water ditch improvements and sanitary sewer extensions.

Continued improvement of air pollution conditions will require a broader application of controls to industries and more effective utilization of vehicles by car pooling and mass transit.

CONCLUSIONS

Within the project area, over half of the property zoned for industry is not yet used for industry, but rather is used agriculturally. Some 850 acres of industrially zoned land is still available for industrial development.

Ninety five percent of the area not yet occupied by industry is comprised of three soil types: Latty clay 75%, Toledo silty clay 11% and Fulton silty clay loam 9%. These inorganic clayey soils have a low to high plasticity rating, low strength when wet, and a high shrink-swell potential which indicates a hazard to maintenance of structures built in, on or with this type of soil.

Vehicular access to the area is hampered by at-grade railroad crossings, therefore economical movement of goods and people in and out of the area is hindered and inconsistent based on route blockages by train movements.

A series of publicly held conservation areas start immediately at the east edge of the project and are downwind of air borne pollution from the project and elsewhere.

At the present time not all industrial operations are controlled by environmental pollution agency controls.

While the major framework of public utilities - water and sanitary sewers has been constructed, local service has yet to be completed in the area.

Fiscal requirements to accomplish the array of necessary actions to mitigate pollution in the project area are beyond the capability of the City of Oregon, Ohio Capital Improvement Program alone.

RECOMMENDATIONS

The City of Oregon, Ohio should seek all available sources of fiscal assistance for the purpose of reducing energy related pollution in the project area.

The "Toledo Regional Community", including the City of Oregon, Ohio, should together with other areas affected, assist in determining the benefits to be derived of more consistent reduction of air borne pollution.

The City of Oregon, Ohio should pursue the development of a new north-south access transportation route which would include an atmospheric purification belt.

The City of Oregon, Ohio should seek to complete the orderly development of industry, in the area west of Wynn Road and north of Seaman Road, prior to zoning additional land for industrial purposes.

By 1983, long range proposed distribution system improvements for water supply, by the City of Oregon, Ohio, should be re-evaluated, in accordance with the recommendation on page 78 of the 1978 Water Master Plan Study, City of Oregon, Ohio.

The City of Oregon, Ohio should improve water distribution service for fire protection and user consumption in the project area.

The City of Oregon, Ohio should initiate the necessary steps to improve surface storm drainage in the project area and that tributary to the area within the city.

The City of Oregon, Ohio should coordinate the north-south roadway improvement with surface storm drainage improvements.

The City of Oregon, Ohio should be a partner in attempts to reduce environmental pollution of areas within the City i.e. South Shore Park residential area, the new Maumee Bay State Park, and areas beyond the easterly city limits including: Crane Creek State Park, Metzger Marsh Wildlife Area, Ottawa National Wildlife Refuge and Cedar Point National Wildlife Refuge.

The City of Oregon, Ohio should establish a stock of plant materials, inside the project area, for long term city-wide use in combatting air pollution.

The City of Oregon, Ohio, together with any other political subdivisions, agencies, authorities, etc. should petition the Governor of Ohio for funds to implement the improvement of State Route 2, from the Port Clinton, Ohio area in Ottawa County, west to a terminal point intersecting the interstate network, in the Toledo area of Lucas or Wood County, i.e. I-280 or I-75.

The City of Oregon, Ohio should pursue the steps necessary to join the Toledo Area Regional Transit Authority.

The City of Oregon should encourage the Toledo - Lucas County Port Authority to lease industrial lands, as soon as they are available, in Facility No. 3, since leased property is taxable and will contribute to the tax base of Oregon.

II. INTRODUCTION

A. Contract Purpose and Scope

To prepare a plan which attempts to mitigate energy related forces on the environment, such plan to be a land use management plan.

This report documents pertinent information available as of March, 1979 per the contractual agreement and some subsequent information.

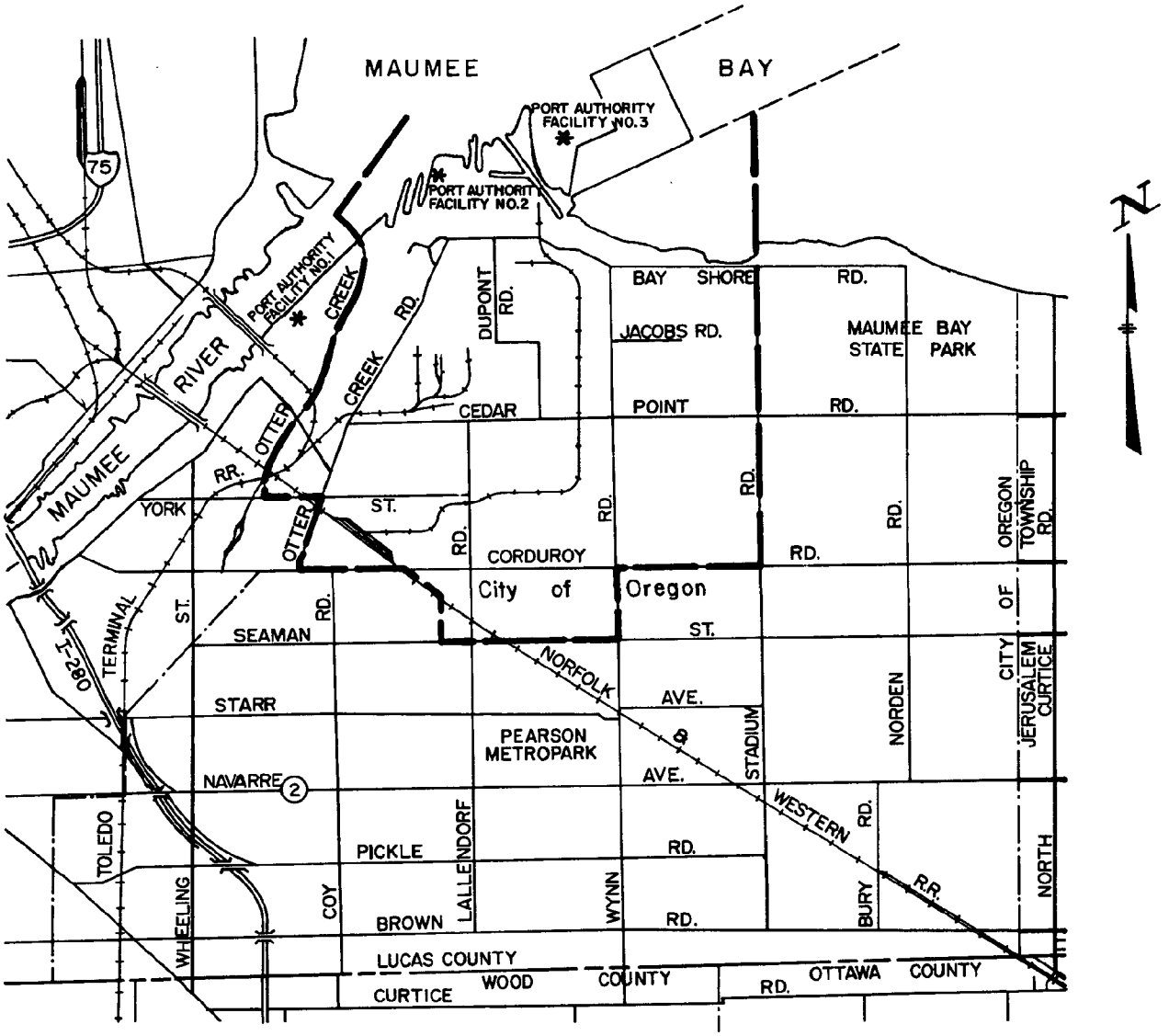
B. Project Area Description (Map)

The project area lies within Oregon, Ohio adjacent to Maumee Bay and River, west of Stadium Road, north of Seaman Road, consisting of approximately 8.24 square miles of land area as shown on Figure 1.

C. Population

The latest U.S. Census Bureau estimate of the City of Oregon, Ohio population was published in 1977; this report estimated the population as of July 1, 1975 to be 18,500. The previous official count for Oregon was 16,563 people recorded by the U.S. Census Bureau in 1970.

Subsequent, to these figures the Toledo Metropolitan Area Council of Governments as a state designated RPDO, thereby being responsible for establishing and maintaining a common regional data base, which includes population information, has prepared a forecast of population for the City of Oregon as follows:



PROJECT AREA

FINKBEINER, PETTIS & STROUT, LTD.
CONSULTING ENGINEERS & PLANNERS
TOLEDO, OHIO
1979

FIGURE I

COASTAL ENERGY IMPACT PROGRAM
OREGON, OHIO

Year	Population
1975	19,790
1980	21,500
1985	23,250
1990	25,000
1995	26,500
2000	27,000

Based on the TMACOG forecast, the population of Oregon will increase by 25.58% or 5,500 people between 1980 and the year 2000.

III. MAJOR ISSUES INFLUENCING DEVELOPMENT

A. External and Internal Influences

The project area all of which lies within the City of Oregon, Ohio is a subpart of a larger land and water network. The following Table 1 provides a framework of the relative size of the constituent parts in the network.

TABLE 1

AREA FRAMEWORK NETWORK SQ. MILES

UNIT	LAND AREA	WATER AREA[2]
Project	8.24	2.60
City of Oregon	28.44[1]	7.22
Lucas County	343.42	268.02

1 - As of 1978, .378 square miles will be added by the filling of dredge disposal diked area.

2 - Portions of Maumee Bay and Lake Erie

The City of Oregon represents 8.28% of the land area of Lucas County and the project area represents 28.97% of the land area of the City of Oregon.

B. Energy

Energy producing and handling facilities located in the Toledo region include coal, electrical and petroleum.

Coal

The bulk movement of coal is accomplished at Facility No. 2 of the Port of Toledo, which is located in the project area. Facility No. 2 consists of two piers with complete coal-loading and ore-loading facilities, approximately 498 acres of backup land, and extensive railroad holding yards with about 100 miles of track and a capacity for 5,000 loaded cars. The coal-handling operation is one of the largest on the Great Lakes, and the No. 4 dumper placed in operation in 1958 has a capacity of 6,000 tons per hour. This facility was purchased from the Chesapeake and Ohio Railway in 1964, and was leased back to the railroad for a term of 40 years. During the 40-year period, this facility will be totally operated and maintained by the Cheasapeake and Ohio Railway Company. Shipments of bituminous coal outbound by waterborne vessels accounts for the majority of coal movement in the port. 14,194,776 short tons of coal were handled in the 1978 season. Coal is railed into the Toledo Port from mines in Ohio, Kentucky, Pennsylvania, Virginia and West Virginia.

Electric Power

The Toledo Edison Company supplies electricity to Northwestern Ohio, including the Toledo Metropolitan Area. Edison's main generating stations are located on the Maumee River and Maumee Bay. The company has five generating stations.

A transmission belt line carrying 69,000 volts and 138,000 volts follows the Toledo Terminal Railroad around the City of Toledo. This belt line ties the two major generating plants (Acme and Bay Shore) together and serves

both Edison and customer substations. The Bay Shore generating plant is located in the project area. The fossil fueled generating plants are supplemented by the Davis-Besse Nuclear Power Plant, which is located on the south shore of Lake Erie just west of Port Clinton.

The total generating capacity of the system owned by Toledo Edison Company is 1665 megawatts; the Bay Shore Station generating plant capacity of this total is 623 megawatts in the summer and 636 megawatts in the winter.

Petroleum

Natural gas is distributed in the Toledo Metropolitan Area by Columbia Gas of Ohio, Inc., a subsidiary of the Columbia Gas System. The main office of Columbia Gas of Ohio is located in Columbus with a district office in Toledo. Natural gas is supplied to the Toledo area from four town border stations. A high pressure line loops the metropolitan area on the east, west, and south. This line serves regulator stations which reduce the pressure to approximately 40 psig. This medium pressure system serves most industrial customers and feeds distribution regulators which further reduce pressure to intermediate (1 to 5 psig) and low pressure (7" water column). The natural gas has a specific gravity of .6 and a heating value of 1,030 BTU's per cubic foot.

Oil refinery business in the Toledo region was established in 1889, by Paragon Refining Company (now Gulf Oil). The initial impetus for the first refinery was the opening of the Lima oil field at Findlay in 1885. Subsequently, the Toledo region was to be come the largest oil refinery center between Chicago and the east coast.

The Sun Oil Company (now Sun Petroleum Products Company) refinery was built in 1890. In 1920, the Standard Oil Company refinery was established,

and the Pure Oil Company plant was constructed in 1931. The refineries receive crude oil via pipeline from Texas, Louisiana, New Mexico, Illinois, Nebraska, Wyoming and elsewhere. Petroleum products are one of the commodities which are transshipped by tankers through the port as well as overland shipment.

In the 1978 shipping season, 823,217 short tons of petroleum and bulk liquid commodities moved through the port of Toledo.

The Standard Oil Company refinery is located entirely within the project area. The Sun Petroleum Products Company (Toledo Refinery) is situated in both Toledo and Oregon, with the refinery process components being in the Oregon part of the site.

C. Environment

Three subjects are discussed here under the environment heading, they are, 1 - land use and plans, 2 - Maumee Bay State Park and 3 - ecologically fragile elements.

Land Use Plans

In the mid-nineteen sixties the Lucas County Planning Commission staff prepared a Comprehensive Plan for the City of Oregon. Subsequently, the Lucas County Planning Commission prepared a Plan Update, for the City of Oregon, which currently is designated rough draft. This update is dated December, 1978.

At the regional level, the TRA Comprehensive Plan for 1985, represents a resource document. This plan, released in May, 1978, documents the work of the Toledo Regional Plan for Action. The plan makes recommendations for the Toledo Region to the year 1985. Toledo Metropolitan Area Council of Governments intends to utilize the 1985 Plan report in the preparation of the year 2000 Plan of the Toledo Metropolitan Area.

In April, 1979, the State of Ohio, Department of Natural Resources, provided the Ctiy of Oregon, with a series of three maps concerning land usage, these maps were prepared in October and November of 1978. The map dated November 3, 1978 is entitled: Oregon Land Use/ covers and depicts land uses current as of 1977-1978 aerial photographs, which are the source of the map information. The other two maps, in the ODNR series, depict limitations of areas in the city for intensive recreation, and for homesites with septic tanks. These maps are part of the long-range coastal zone management program of the Ohio Department of Natural Resources.

TABLE 2

EXISTING ZONING IN PROJECT AREA

DISTRICT CATEGORIES	PERCENTAGE (%) CATEGORY	BY DISTRICT	ACRES
INDUSTRIAL	68.3		
M-1		2.3	121.66
M-2		66.0	3480.90
AGRICULTURE			
A-1	21.1	21.1	1113.20
RESIDENTIAL	7.7		
R-1		6.6	350.34
R-2		1.1	58.03
PUBLIC FACILITY & PARKLAND	2.4		
P.		1.4	72.03
P.L.		1.0	55.17
COMMERCIAL	0.5	0.1	
C-1		0.4	2.19
C-2			19.02
TOTALS	100.0	100.0	5,272.54

Within the project area other independent studies prepared for private industry influence land usage. These studies include a port planning study, the Millard Avenue extension study (in progress now) and capital improvement programs for individual private industry. If pertinent information is made available from these sources it will be utilized in appropriate sections of this report.

Existing Land Use

The land portion of the project area consists of 8.24 square miles (5,274 acres). Usage of the area is predominated by two broad categories of operations: industrial and agricultural uses. These two uses account for 88% (4,641 acres) of the total, while residential and public institutional uses account for the remaining 12%.

Since 1965, two other major public land uses have developed: the Jay L. Shuer School and the City of Oregon Wastewater Treatment Plant on Dupont Road. These two uses involve 25 acres and 30.23 acres respectively for a total of 55.23 acres. The majority of the residential usage is dispersed along the existing mile grid network of roads, except for a modest concentration of houses along Bay Shore Road, between Wynn and Stadium Roads in an area known as "Immergrun".

Industrial uses occupy 1909 acres of land and agriculture is engaged on 2,732 acres. Industrial usage of land in the project area has increased by five percent (4.99%) in the course of the past fourteen years, between 1964 and 1979. This increase of industrial land usage, 91 acres, represents a modest rate of change. The nature of the seven new industries which account for these 91 acres is varied. The uses represented include: an asphalt paving plant, Harrison Lumber, Globe Industries, Fondessy, an oil reclaiming plant, National Wire, and sludge oil pits.

Considering these industrial uses to the petroleum port orientation of the area, it appears that Globe Industries, National Wire, the oil reclaiming plant

and the sludge oil pits, have a more direct correlation than do the lumber yard asphalt paving plant and Fondessy, a waste disposal and reclamation operation.

Numerous factors have an influence in the industrial development of an area. The following list partially cites those that are apparent:

1. Accessibility to the area.
2. Utilities available.
3. Cost to acquire the property.
4. Money available to finance construction.
5. Environmental characteristics of the area.
6. Willingness of owner/s to sell the property.

In the case of this project area, two other factors have been important criteria:

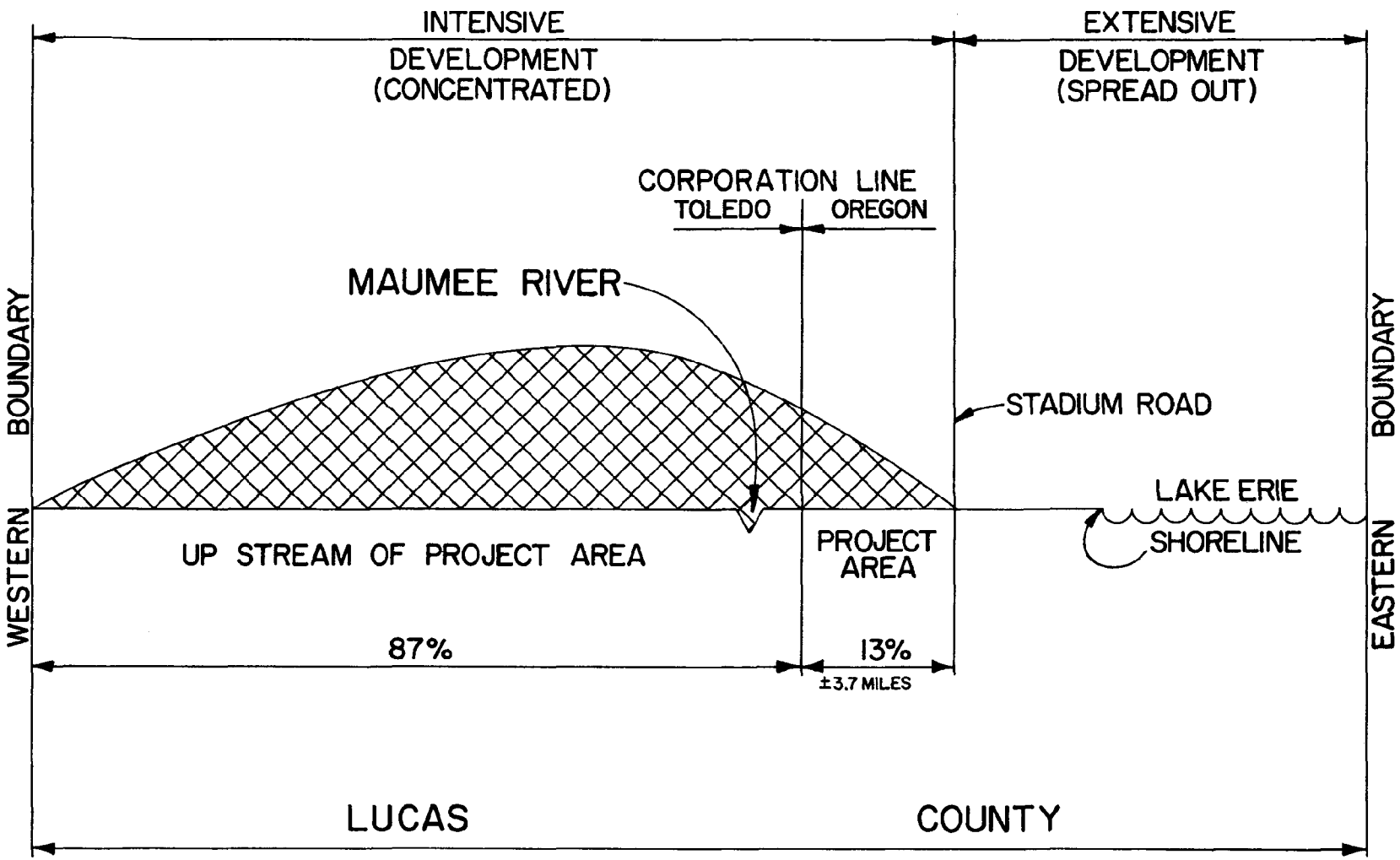
1. Availability of raw water in quantity.
2. Proximity to deep water port facilities.

Maumee Bay State Park

Immediately east of the project study area, a new multi-use regional park facility is currently being developed in phases. Phase one under construction consists of a 256 site campground, with completion scheduled for November, 1980. When entirely completed, the 1,200 acre Maumee Bay State Park will include a golf course, bathing beach, lodge and nature trail area.

Ecologically Fragile Elements

It appears there are two distinguishable elements of the project environment which exhibit deterioration from normally healthy standards, these being air pollution and water pollution. Figure 2 is a representation of the relative proportional size of the project area to the Lucas County portion of the Toledo Regional Area. This figure is drawn as a cross section along the prevailing wind direction



ON AXIS WITH PREVAILING WIND DIRECTION WSW (255° FROM NORTH)
CROSS SECTION OF GENERAL DEVELOPMENT PATTERN

AIR CORRIDOR AREA-
UPSTREAM & PROJECT

FINKBEINER, PETTIS & STROUT, LTD.
CONSULTING ENGINEERS & PLANNERS
TOLEDO, OHIO
1979

FIGURE II

COASTAL ENERGY IMPACT PROGRAM
OREGON, OHIO

of west south west (255 degrees off of north), to indicate the mass of built-up area which lies upstream of the project area. This intensively built-up area is a major source of airborne pollution in the region.

While air pollution in the project area is relatively dispersed; water pollution is concentrated along the several ditches, two creeks, Maumee River, Bay and Lake Erie.

Flooding

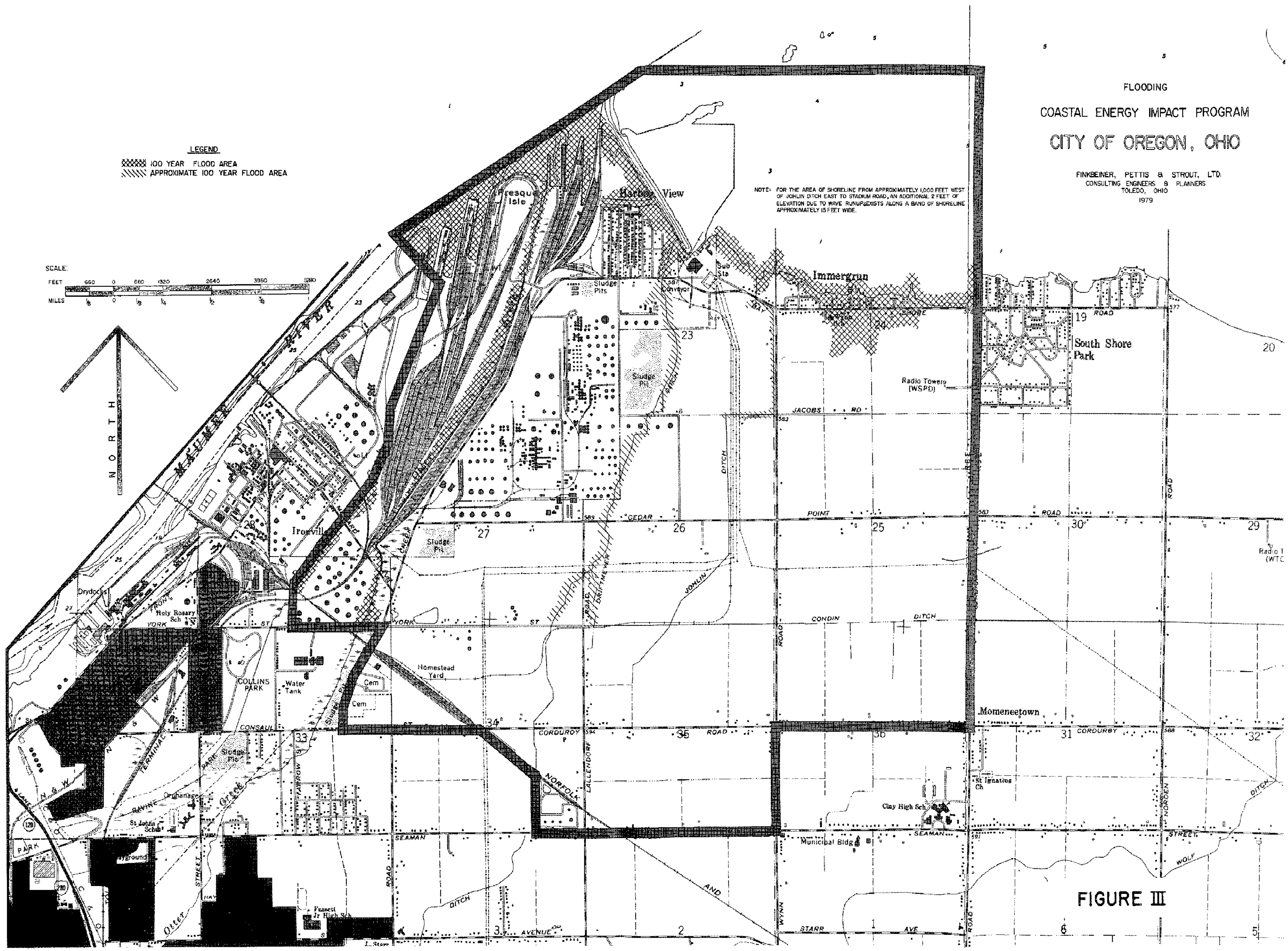
Within the project, three areas are susceptible to 100 year frequency flooding, this information is derived from the Flood Insurance Study, City of Oregon report, dated September, 1977. On figure 3 the cross hatch area represents 100 year flood frequency inundation. The diagonal lined areas on the map, represents the approximate 100 year flood frequency inundation.

D. Utilities

The City of Oregon, since its incorporation in 1958, has dilligently pursued the objective of making provisions to provide its residents and businesses adequate facilities. Among these facilities, water, sanitary and storm sewage are committed obligations of the City of Oregon, with natural gas and telephone services supplied by private industry through franchise privilege. Solid waste collection and disposal is performed by private companies.

Water

In November, 1958 the firm of Finkbeiner, Pettis & Strout, Ltd. submitted a report on the design, construction and operation of a new water supply system for the City of Oregon.


FLOODING
COASTAL ENERGY IMPACT PROGRAM
CITY OF OREGON, OHIO
FINKBEINER, PETTIS & STROUT, LTD.
CONSULTING ENGINEERS & PLANNERS
TOLEDO, OHIO
1979
LEGEND
100 YEAR FLOOD AREA
APPROXIMATE 100 YEAR FLOOD AREA
NOTE: FOR THE AREA OF SHORELINE FROM APPROXIMATELY 1,000 FEET WEST OF JOHLIN DITCH EAST TO STADIUM ROAD, AN ADDITIONAL 2 FEET OF ELEVATION DUE TO WAVE RUNUP EXISTS ALONG A BAND OF SHORELINE APPROXIMATELY 15 FEET WIDE.
SCALE:
FEET 660 0 660 1320 2640 3960 5280
MILES 1/8 0 1/8 1/4 1/2 3/4 1
NORTH
MAUMEE RIVER
Presque Isle
Harbor View
Immergrun
South Shore Park
Radio Towers (WSPD)
Ironville
Drydocks
Holy Rosary Sch.
COLLINS PARK
Water Tank
Homestead Yard
Momeneetown
Clay High Sch.
Municipal Bldg
St. Ignatius Ch.
Fassett Jr. High Sch.
St. Johns Sch.
Orphanage
Otter Creek
JACOBS RD
CEDAR POINT ROAD
YORK ST
CONDIN DITCH
JOHLIN DITCH
CORDUROY ROAD
SEAMAN ROAD
STARR AVENUE
WYNN ROAD
LALLENDORF ROAD
DRIFTMEYER DITCH
NORDEN ROAD
WOLF CREEK
NORFOLK AND
FIGURE III

At the time the original report was submitted, the City had recently incorporated from a township and was supplied with water from the Toledo municipal water system.

Following this report the City constructed a complete water facility to accomodate its needs.

Thus, during a period from 1960 to 1964 the heart of the present system was completed. This system consisted of a new lake intake, low service pumping station, force main, and treatment plant in 1963-64; a new trunk distribution system to connect the then proposed treatment plant and elevated tank in 1960-61 and 1963-64; and a new elevated tank located on Coy Road in 1963.

To administer the facilities constructed, a new Water Department was formed consisting of a Commissioner of Water, an administration division, a distribution and maintenance division, and a filtration plant operation division.

Following completion of the basic facilities outlined in the 1958 report, water service was subsequently extended beyond the Oregon corporate limits into Lucas County, Wood County in 1968, and Ottawa County in 1976.

In early 1979, the City of Oregon adopted a Master Plan for Water Supply Distribution, prepared by Finkbeiner, Pettis and Strout, Ltd. in 1978. The purpose of the master plan report is to provide a workable comprehensive plan for the development of future water improvements to the present water system of the City of Oregon and tributary areas.

Sanitary Sewerage

The City of Oregon is presently served by a sanitary sewer system with an 8 MGD capacity wastewater treatment plant and 1 lift station.

Immediately east of the project study area, South Shore Park has an existing sanitary sewer collection system and lift station which conveys the wastewater to its own treatment plant. Immergrun within the project study area, is completely unsewered and is served by individual septic tank systems. The 8 MGD capacity wastewater treatment plant was designed in 1972, placed under construction in 1975 and became operational in December, 1977.

Storm Sewerage

In early 1979, the City of Oregon adopted by ordinance a workable comprehensive plan for the development of future storm drainage improvements, embodied in a 1974 report entitled: Storm Sewer and Ditch Survey. This report was prepared by Finkbeiner, Pettis and Strout, Ltd.

The present city drainage system is an outgrowth of the drainage ditches constructed in the latter years of the eighteenth century which were intended to serve areas which are primarily agricultural in nature. As these farm lands are converted to residential and commercial areas, an ever increasing amount of runoff is channeled into the existing drainage facilities. If the existing outlet can handle the increase burden there is no problem. Generally, however, the existing system is much too small and severe seasonal flooding results. Developers and public officials have long been plagued with this problem and have recognized the need for a master storm drainage plan to aid in the orderly development of new drainage facilities. The plan provides information and direction for planning nearly all storm water related projects within the City of Oregon, Ohio. General guidelines for sizing drainage facilities are set forth which will materially aid the review of plans for new subdivisions and other related projects.

A plan of this type will ultimately result in considerable savings of total development costs by eliminating costly reconstruction and enlargement projects. It must be recognized that providing adequate facilities for a developing community is a broad complicated and inter-related problem. Solving problem areas cannot be accomplished by constructing isolated individual and non-related projects. A master plan for storm drainage improvements is necessary to establish guidelines for maintaining and improving the existing facilities as well as provide for future development.

The improvements outlined in the report are based on the ultimate development of the various drainage areas. Obviously, at this point in time, it is impossible to accurately determine what the ultimate development will be. However, for purposes of the study, a land use map was developed. The map does not represent an existing zoning map nor a comprehensive suitability - capability land use study. Rather, it is simply a projection that was developed based on existing land use, existing zoning regulations, proposed zoning plan, current land use trends and an evaluation of development potential.

Solid Waste

Residents and all types of business establishments within the City of Oregon utilize private companies for the disposal of solid waste matter. Several companies in the business of waste collection and disposal operate within the city of Oregon offering a complete array of service to meet the diversified needs of residents and business.

Natural Gas

Natural Gas Service within the City of Oregon is provided solely by Columbia Gas of Ohio Incorporated.

Telephone

Telephone service to approximately 99% of subscribers in the City of Oregon is provided by Ohio Bell. The balance of telephone service is provided by United Telephone Company of Ohio, in the eastern edge of the City outside of the project study area.

E. Transportation Facilities

It was pointed out at the beginning of Chapter III that the project area is a subpart of a larger land and water network, which embraces the Toledo Metropolitan region. The Toledo metropolitan region in turn is connected with many other places by a transportation network comprised of several types of facilities. These facilities include: waterborne vessels, railroads, highways, airports and buses.

Water and Port Facilities

The most significant physical feature in Lucas County is the Maumee River, a major navigable river. The river, Maumee Bay, Lake Erie and the balance of the Great Lakes-St. Lawrence Seaway system, together with the Toledo-Lucas County Port Authority allow for the existance of the Port of Toledo. The ports oversea's general cargo center came into existance in 1955. The general cargo site covers 150 acres with 4,100 feet of wharf and 8 ship berths. A private stevedoring terminal and a bulk liquid tank farm operate at the center. Two gantry cranes capable of tandem lifts of more than 110 tons (or as much as 72 tons separately) are available to shippers.

The Port of Toledo is the sixth largest city on the Great Lakes and last year was first in import/export tonnage, with 9.3 million tons. It was number two in United States grain shipping, with 168 million bushels, and third in total port tonnage, with 27.1 million tons. Statistics show the port surpasses such large cities as Chicago, Detroit and even the Port

of Boston. The only foreign trade zone (free port) of the United States located on the Great Lakes is located here.

Railroads

In close association with the port, railroads are an integral facility of the total transportation network. The Toledo area is serviced by nine railroads. These railraods have a capacity of 63,000 cars in their marshalling yards and total trackage of 1,200 miles. Toledo is in the rail trunk line district extending from Chicago to St. Louis on the west to Baltimore, Philadelphia and New York on the east. Some 13 million tons of coal make their way to Toledo each year by rail.

Rapid and cost-saving transfer of freight traffic is made possible in Toledo by the Toledo Terminal Railroad which encircles the city, crossing all incoming roads. This belt line is double-tracked over most of its length. Willis Day Industrial Park in Rossford is also served by this belt line.

Toledo is served by Amtrack with daily service, without change directly to Chicago, South Bend, Sandusky, Cleveland, Buffalo, Rochester and Albany. At Albany, the train splits in two sections with one for Boston and the other for New York City. Also, connections will be available in Chicago to a variety of Midwest and Western points.

Highways and Trucking

Toledo stands at the meeting place of two major components of the National Interstate Highway System. The Ohio Turnpike (Interstate 80 and 90) pass through Maumee just south of Toledo. Toledo has two interchanges on the Turnpike, one in Maumee (Exist 4) and one just south of Oregon (Exit 5). Interstate 75 (North and South) passes through Toledo, Rossford and Perrysburg. Interstate 475 makes a broad loop through and

around Toledo, serving as a main street of access to other area communities, and interconnecting with I-75 and with U.S. 23 a major four lane, limited access artery going north to Ann Arbor and Flint. Other major metropolitan areas in the Midwest accessible via interstate routes are Chicago, Cincinnati, Cleveland, Columbus, and Detroit.

Toledo has 96 common carriers, 24 contract carriers and 30 local carriers. Next day service is provided to cities within 300 miles via Detroit, Chicago, Cleveland, Cincinnati, Pittsburg, Buffalo, Indianapolis, etc. Cities within a 750 mile radius can be served in a two-day period. Several motor freight companies maintain scheduled air cargo service to Detroit and Toledo airports which coincides with the major air cargo flights. The Toledo area is served by the United Parcel Service daily Monday through Friday from a local terminal.

Airports

The Toledo Port Authority assumed operation and maintenance of the airport in 1973. Toledo Express Airport, on Route 2 west of the city and about 25 minutes driving time from downtown on expressways, is a virtually new facility, with its passenger terminal completely rebuilt and enlarged in 1976.

The facility, which also contains private and corporate aircraft service centers, a motel, banking, restaurant, gift shop, bar, real estate office, five rental car agencies, parking facilities for 1,000 cars, and a air freight terminal, is operated by the Toledo-Lucas County Port Authority. Air express truck service is provided by several carriers.

About 700,000 passengers a year move through the terminal. Principal airlines are United, T.W.A., Delta, Eastern, Allegheny, Air Wisconsin, Air Florida, Frontier and Com-Air. The airport can handle any size aircraft built today.

Metcalf Field, located to the southeast of Toledo is also operated by the port authority and provides general aviation facilities and concrete runways. It once served as Toledo's primary commercial airport. It also offers complete service to private and corporate aircraft with hangar space and charter service.

Detroit Metropolitan International Airport can be reached by car in approximately one hour.

Bus Service

Bus service is available throughout the United States from Toledo which is served by Continental Trailways, Short Way Lines and Greyhound. Transit service in the Toledo Metropolitan area is provided by the Toledo Area Regional Transit Authority which has approximately 200 buses and serves the communities of Maumee, Rossford, Perrysburg, Sylvania, Ottawa Hills, Spencer Township, and Sylvania Townships as well as the City of Toledo.

F. Capital

Municipal governments have always faced the problem of providing increasing services with limited financial resources. Today, as the demand for these goods and services increases, sound financial planning becomes imperative. The purpose of this section is to setforth the financial analysis to determine approximately the present and future ability of the City of Oregon to pay for construction and maintenance of public improvements. The analysis is restricted to the presentation of a limited set of facts, in keeping within the scope of this contract. These facts are provided as a set of four tables. Trend projections of assessed values of all taxable property in the City of Oregon is taken up in Chapter V.

The four tables that follow herewith present the following information:

1. Property tax rates,

2. Total tax valuation,

3. Revenue, and

4. Expenditures.

TABLE 3
PROPERTY TAX RATES
CITY OF OREGON, OHIO

	Inside 10 Mill	Outside 10 Mill
General Fund	1.7	
Police Pension	.3	
Fire Levy		.5
Police Levy		.5
Recreation Levy		.5
	2.0	1.5

All present levies are for five years, fire and police levies will be up for renewal in 1980, and the recreation levy will be up for renewal in 1981.

TABLE 4
TRENDS OF TOTAL TAX VALUATION, 1958-1979
CITY OF OREGON, OHIO

Year	Dollars	Change $	Change %
1958	98,586,240	--	--
1960	117,087,510	--	--
1965	128,779,510	--	--
1970	180,205,530	2,176,640	1.20
1971	182,382,170	3,090,840	1.69
1972	179,291,330	8,521,660	4.99
1973	170,769,670	937,770	5.49
1974	171,707,440	27,433,910	15.98
1975	199,141,350	36,301,110	18.23
1976	235,442,460	5,708,670	2.43
1977	241,151,130	13,070,700	5.42
1978	254,221,830	1,864,937	0.73
1979	256,086,767		

Source: County Auditor's Office & City Clerk-Auditor

Total Tax valuation includes: real property, public utility and personal property.

TABLE 5

CITY OF OREGON, OHIO

REVENUES, 1968-1978

REVENUE	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
Real Estate Tax	323,458	364,344	296,873	315,235	312,074	335,937	324,341	454,492	288,504	464,115	438,148
Tangible	105,136	148,765	244,920	228,513	215,870	161,500	225,743	110,451	201,451	295,841	338,104
Intangible	2,579	2,718	3,217							17,589	17,574
Trailers											
Municipal Income Tax	1,137,221	1,461,895	1,260,956	1,436,773	1,438,716	1,465,571	1,688,253	1,675,273	1,864,482	2,162,426	2,230,005
Other Local Tax											
State Levied Shared Taxes	298,074	235,849	271,678	360,429	313,388	436,548	431,565	460,508	669,634	502,883	620,689
Inter Government Aid + Grants	-	-		3,440	663,582	318,433	281,172	478,284	459,195	594,242	763,888
Special Assessments	49,073	127,194	117,437	123,842	173,333	151,380	219,300	516,249	619,548	634,278	829,156
Charges for Public Services	454,598	486,069	568,983	431,870	431,579	451,850	662,837	906,898	807,754	841,986	1,533,243
Sale of Public Debt	429,614	603,660	290,444	2,105,000	1,807,764	2,553,000	3,187,100	3,842,063	961,563	568,000	663,425
Licenses, Permits, Fines, Etc.	59,489	25,821	38,826	111,267	96,627	99,026	100,130	124,514	128,173	161,295	205,531
Other Revenue	269,624	52,555	191,204	307,607	484,549	601,341	134,779	192,386	170,201	257,512	464,001
Other Non-Revenue	-			694,967	1,294,357	1,033,647	1,322,868	4,254,865	2,150,776	3,793,780	5,217,142
TOTAL	3,128,866	3,508,869	3,284,537	6,118,942	7,231,839	7,608,243	8,578,089	13,015,982	8,321,282	10,795,947	13,320,906

TABLE 6

CITY OF OREGON, OHIO

EXPENDITURES, 1968-1978

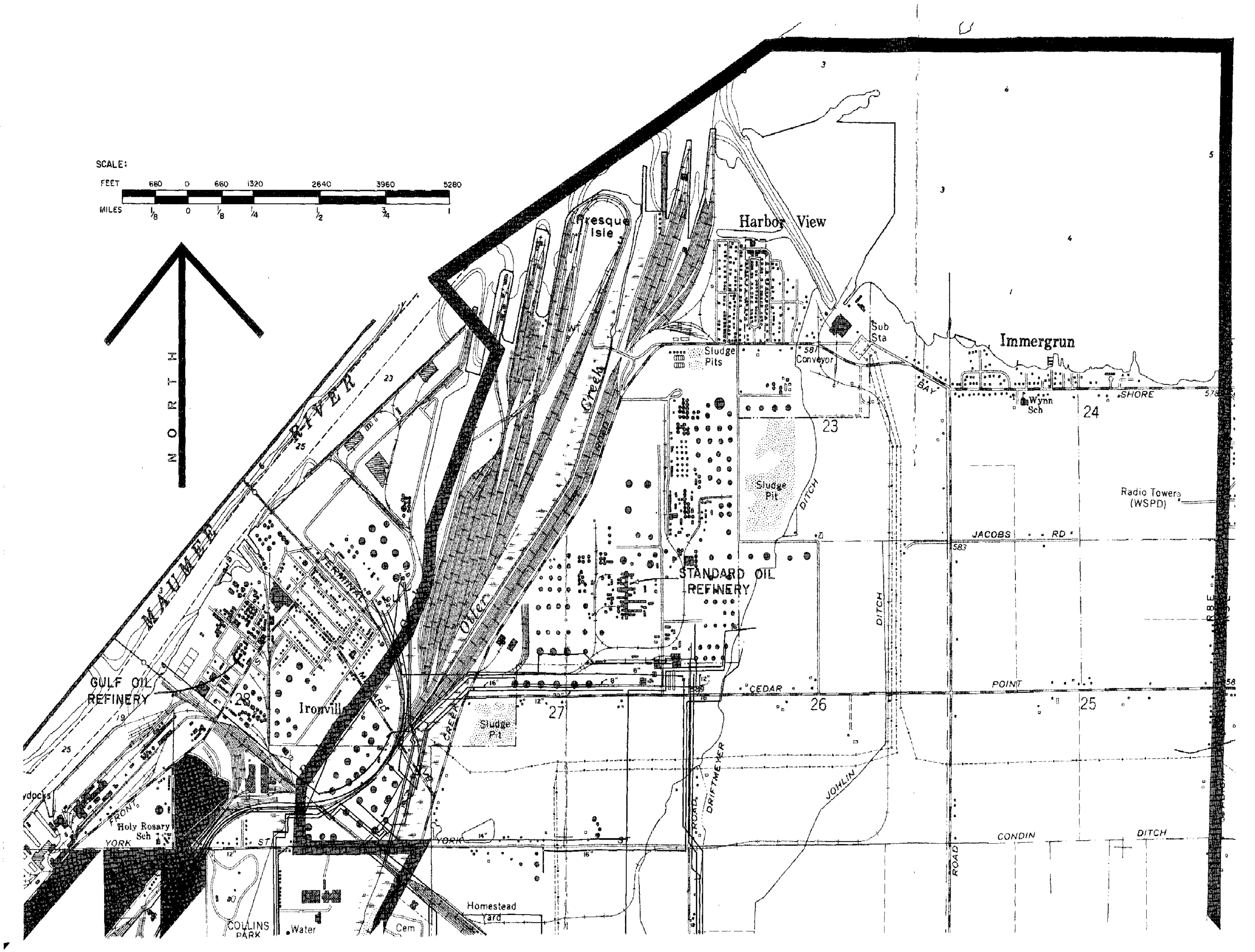
EXPENDITURE	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
Security of Person and Property	408,477	486,333	601,162	715,657	529,539	753,840	829,655	815,416	964,378	1,155,628	1,512,399
Public Health and Welfare	73,114	95,306	110,850	103,338	109,386	123,471	132,137	133,598	132,913	133,207	156,802
Leisure Time Activities	22,096	41,413	51,211	49,088	45,691	78,659	79,213	79,606	66,702	138,718	122,722
Basic Utility and Community Environment	1,362,427	1,313,646	906,401	1,114,591	2,686,300	1,292,535	1,765,092	1,818,306	1,607,444	1,692,235	2,727,008
Transportation	718,448	891,994	883,364	432,395	379,472	1,408,638	712,042	489,066	793,535	779,050	907,688
General Government	152,021	122,239	139,724	215,944	234,746	344,795	454,961	726,634	558,219	656,516	968,376
Debt Service	305,721	339,339	328,263	705,949	2,363,368	2,281,600	3,064,161	3,638,301	1,847,565	1,248,227	1,720,012
Revolving Fund	81,031	10,000	123,363	258,848	268,542	743,927					
Trusts and Agency Funds	21,954	27,391	32,404				407,392	655,802	689,381	1,377,554	971,229
Other Non-Governmental				920,463	1,604,190	904,362	984,237	3,540,905	854,566	2,500,122	3,792,327
TOTAL	3,145,262	3,327,661	3,176,742	4,516,272	7,931,827	7,931,827	8,428,890	11,897,637	7,514,703	9,681,257	12,878,563

IV. SPECIFIC ISSUES WITHIN THE PROJECT

A. Petroleum Refinery

The Standard Oil Company refinery properties in the project area are situated on 770 acres of land, of which approximately 470 acres is used activitly in their operations. The company plans to place new tankage on 24 acres of land, not actively used now, within the next two years. It is anticipated that any other capital expenditure improvements, during the next two years, through 1989, will be placed within the 470 acre portion of the site. Anticipated improvements are forecasted to be made essentially to the "process facilities".

Present forecasts indicate Standard Oil Company will spend $86,000,000 from 1980 to 1984 and $36,000,000 from 1985 to 1989 at the refinery site. A contingent amount of $200,000,000 for an expansion program is also being anticipated within the next five years.


SCALE:
FEET 660 0 660 1320 2640 3960 5280
MILES 1/8 0 1/8 1/4 1/2 3/4 1
NORTH
MAUMEE RIVER
Presque Isle
Harbor View
Immergrun
Sub Sta
Conveyor
Sludge Pits
Sludge Pit
STANDARD OIL REFINERY
GULF OIL REFINERY
Ironville
TERMINAL
Otter Creek
Wynn Sch
Radio Towers (WSPD)
SHORE
BAY
JACOBS RD
CEDAR POINT
CONDIN DITCH
JOHLIN
DRIFTMEYER ROAD
DITCH
ROAD
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FRONT
Holy Rosary Sch
Homestead Yard
COLLINS PARK
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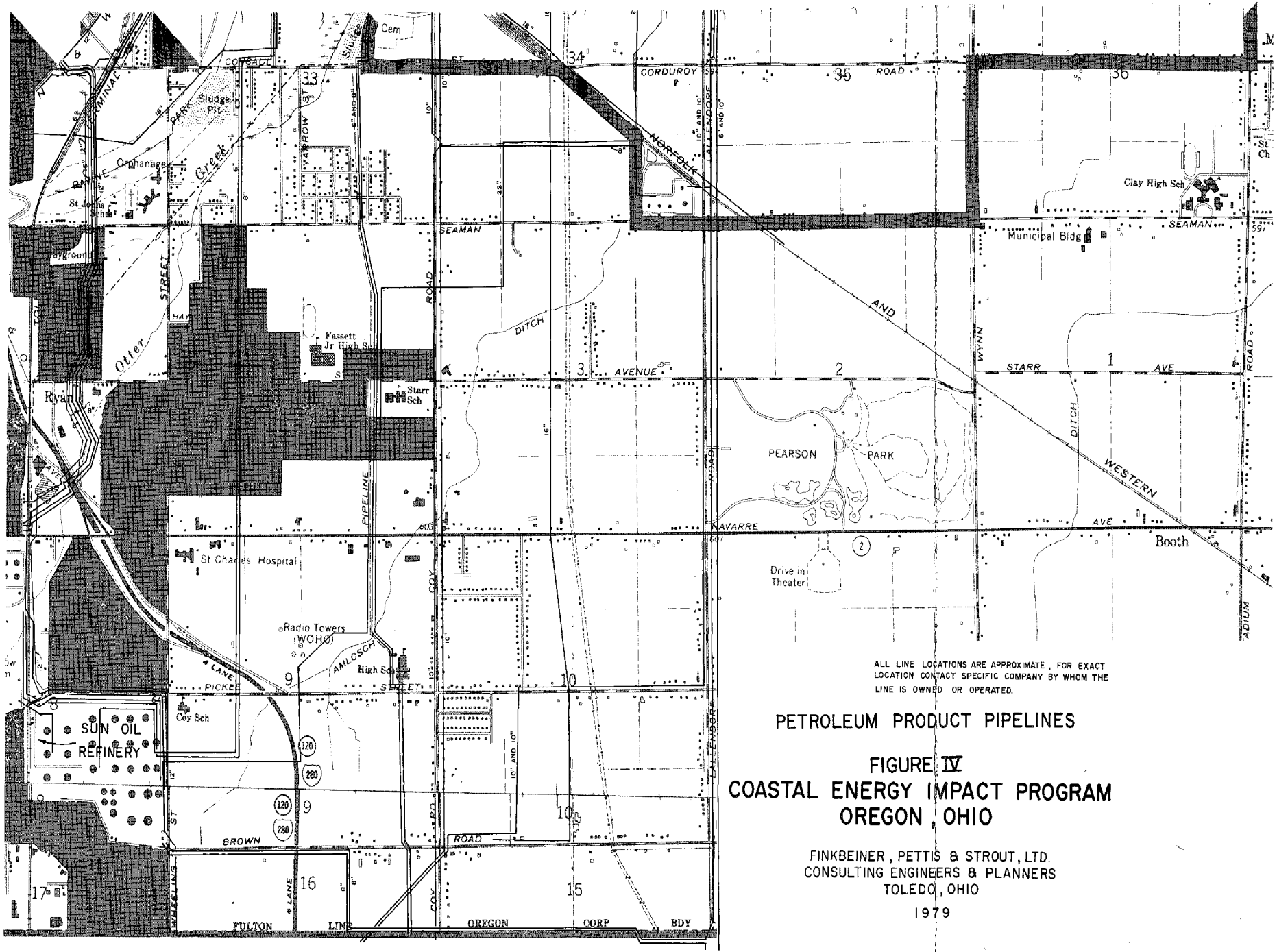

ALL LINE LOCATIONS ARE APPROXIMATE, FOR EXACT LOCATION CONTACT SPECIFIC COMPANY BY WHOM THE LINE IS OWNED OR OPERATED.

PETROLEUM PRODUCT PIPELINES

FIGURE IV
COASTAL ENERGY IMPACT PROGRAM
OREGON, OHIO

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B. Port Activity and Facility No. 3

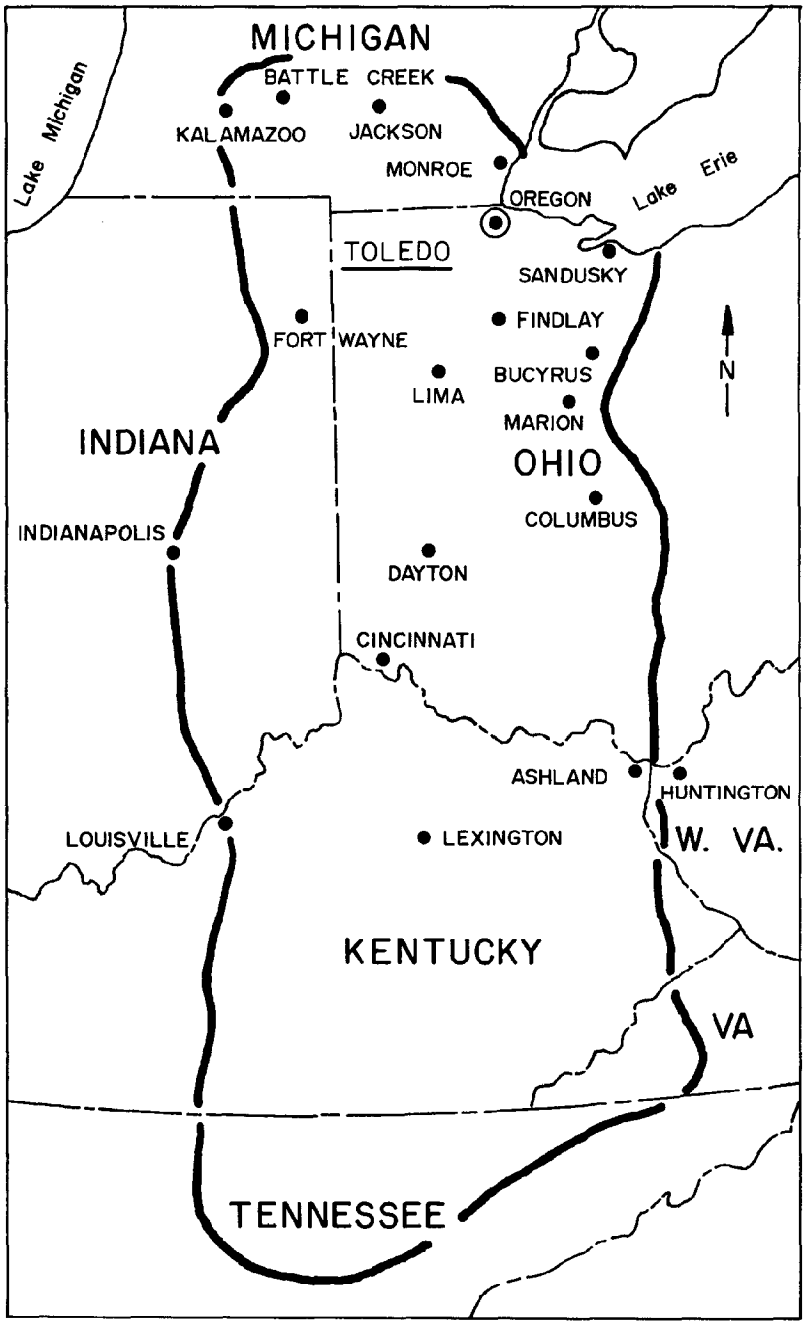
The magnitude of the Toledo-Lucas County Port Authority Trade Area can be partially realized by Figure V , a map which outlines the 'local' area of trade here in the United States through the Toledo Port. The local trade area as shown on the map embraces 216 counties. These counties are located in seven states as follows: Ohio-62, Michigan-14, Indiana-38, Kentucky-73, Tennessee-22, Virginia-4, and West Virginia-3. The true scope of trade passing through the Toledo Port is world wide. Development of the project area should capitalize on this fact whenever possible.

The Toledo-Lucas County Port Authority has plans to utilize the 242 acre diked dredge disposal site as facility number 3. Facility No. 3 is intended to be utilized for both port and industrial uses. Based on the long-range development plan prepared by Parsons, Brinckerhoff, Quade and Douglas in 1970, as much as two-thirds of Facility No. 3 is envisioned as being used for industrial purposes.

Based on recent discussions with the Port Authority Chief Engineer, the proportion of Facility No. 3 used for industrial purposes may be one third of the total. Therefore, additional industrial acreage available in the project area as a result of Facility No. 3 development can be expected to range between 80 and 160 acres. This variation in the amount of acreage devoted proportionately to port and industrial development is dependent upon future economic conditions.

Based on placing 1,110,000 cubic yards of dredged sediments in the contained disposal site annually, which has a capacity to hold 11,100,000 cubic yards, the site will be filled in a ten year period. Placement of dredged materials into Facility No. 3 began in the Fall of 1976. Consequently, if the annual schedule of placing material is adhered to the site will be filled in the year 1987, at which time the Port Authority envisions using the area as a

TOLEDO-LUCAS COUNTY
PORT AUTHORITY TRADE AREA



(BASED ON NEARNESS BY RAILROAD TO THE PORT)

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FIGURE V

COASTAL ENERGY IMPACT PROGRAM
OREGON, OHIO

core facility to include dockage along the ship channel face and port related industry on the remaining areas.

The long range plan mentioned previously recommends that Facility No. 3 be served by an east access route, in addition to access now located in the vicinity of the Toledo Edison Bayshore Electric Generation Plant. Access route design recommended in the report includes provision for a four lane highway, curbs & shoulders, railroad,utility corridor (2) and embankment slope of 2:1 ratio.

C. Electric Generation Station

The Toledo Edison Bay Shore Station which generates 37.8% of the company's total system output, is currently in the process of constructing a new discharge stack for dispersion of emissions. The new stack which will be two and one half times the height of the present building or 465 feet tall. The new stack will provide greater dispersion and dillution of sulphur dioxide and suspended particulates. In addition to the taller stack height the Toledo Edison Company intends to burn a higher grade coal with a lower sulphur content, at the Bay Shore Station.

D. Water Pollution

Within the project area surface water runoff is conveyed by a combination of two creeks and five drainage ditches. Looking at a map of the area from west to east, these conveyances are known as: Duck Creek, Otter Creek, Amolsch/Driftmeyer Ditch, Johlin Ditch, Heckman Ditch, Joehlin Ditch and Big Ditch. These creeks and ditches attempt to convey normal stream flow, storm water and point source discharges of treatment facilities.

As previously mentioned in the storm sewerage section of utilities in Chapter III, these drainage ditches are an outgrowth of a system constructed in the eighteenth century to serve the needs of draining agricultural fields.

Therefore, the loading of these ditches with additional discharge components has a tendency to overload their capacity to convey flows without overrunning embankments. Additionally, due to their limited capacity, in terms of volume, containments which are introduced into the conveyances are not able to be materially dilluted.

The sources of information which we reviewed indicate that these several conveyances are contaminated with domestic and/or industrial wastes at levels exceeding State and Federal guideline standards. The degree of pollution varies in accordance with seasonal weather conditions and the amounts of pollutants which are introduced into the streams and ditches. In general, concentrations of industrial waste pollution are present in the Maumee River, Maumee Bay and Lake Erie in that order, and also present in Duck Creek and Otter Creek, while domestic related wastes are predominate in the ditches.

Industries which contribute waste loads to the bodies of water bordering or traversing through the project area are subject to review and operate with specific permit limitations issued by Ohio EPA. Enforcement of permit restrictions is an obligation of the State of Ohio. Industries are, as a rule, provided a reasonable period of time in which to comply with requirements, this is the case in the project area, where the several energy and petroleum related industries are in the process of upgrading their discharge effluent.

E. Air Pollution

The Maumee River which is 131 miles long, and drains about 6,750 square miles of land area is a major transporter of mans treated and untreated wastes in the region. As indicated in the introduction the project area is situated where the Maumee River industrial corridor meets Lake Erie at Maumee Bay.

Between the Village of Waterville and Maumee Bay the prevailing alignment of the Maumee River is from south west to north east. The alignment of the Maumee River industrial corridor is modified by the main line trackage and associated sidings which run closer to a west south west alignment than south west. This west south west alignment is the direction of prevailing winds on an annual basis in the region.

Review of development patterns in the region (in Lucas County, Ohio) reveals that the corridor in alignment with west south west prevailing winds is intensively developed with urban uses, including major industrial, commercial and residential concentrations. Within, Lucas County, along this alignment the vast majority (88%) of intensive urban development is located west of the Maumee River. The west boundary of the project area is within one mile of the Maumee River. The limits of intensive urban development extends easterly of the Maumee River on said alignment approximately five miles.

The project area consists of less than fifteen percent (13.6%) of this intensively built-up corridor of urban uses. The geographic position of the project area finds it situated downwind with respect to the bulk of this corridor, this is a vulnerable position with regard to air borne pollution.

An examination of 1978 Annual Summary Report of Point Sources, as prepared jointly by the Toledo Pollution Control Agency and Ohio EPA, was conducted by our staff to determine excess pollution in the form of particulates (TSP) and sulphur dioxide (SO_2), within the west south west prevailing wind corridor previously described. Sources of operations which emit TSP and SO_2 are: incinerators, boilers, spray booths, processes and storage tanks.

Summary reports are prepared as a general rule for those point sources which emit twenty five tons or more of pollutants per year. Allowable levels

of pollutant emission are established in the case of particulates by the State of Ohio EPA and sulphur dioxide allowable levels are determined by the federal government.

The 1978 reports reveal, in the prevailing wind corridor that 18 sources exceed allowable levels of particulates, and 57 sources exceed allowable levels of sulphur dioxide. More than one fifth of the stationary point sources in the corridor emit these two pollutants in excess of allowable levels. Allowable levels are measured in terms of the standards reproduced as follows:

Contaminant	Time Period	Standards*	
		Primary	Secondary
TSP	Annual Average	75	60
	24 Hour	260	150
SO_2	Annual Average	80	60
	24 Hour	365	260

*micrograms per cubic meter.

By locating reported point source addresses on a map it was possible to determine the proximity of the sources to the study area. From Table 7 it is apparent that within a relatively short distance there is a concentration of reported sources.

TABLE 7

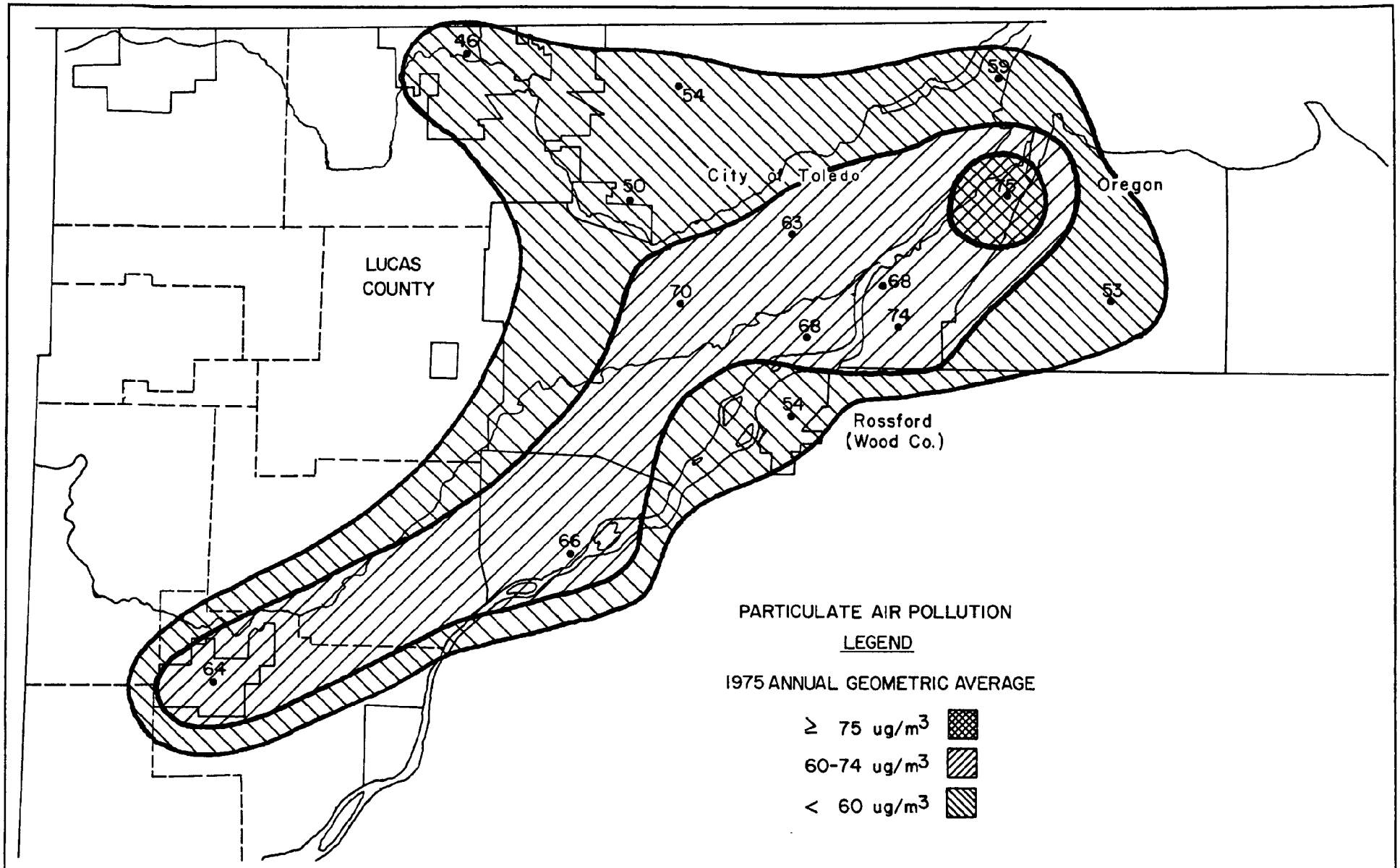
Proximity of Reported Air Pollution Pont Sources, Within Wind Corridor, to the Project Area in excess of Allowable Limits.

	Distance in Miles							
	Less than one mile or within project area	1	2	3	4	5	6	7
Percent of Sources	37.3%	41.3%	70.63%	85.29%	85.29%	89.29%	91.95%	99.95%

We conclude that a significant portion of reported air pollution in the Toledo region, generated at stationary point sources, is tributary to the project area.

In further support of the contention that stationary point sources contribute to air pollution in the project area, four tables located in the appendix provide findings of the Toledo Pollution Control Agency concerning, particulates, sulphur dioxide, ozone and nitrogen dioxide. These tables represent data collected during the years 1976, 1977 and 1978, at sampling sites related to the project area. Sites selected to compile these tables were either within the City of Oregon or up wind of the project area.

The Toledo Pollution Control Agency prepared a series of three maps which graphically show the concentration of particulates in the Toledo region for the years 1975, 1976 and 1977. These maps are reproduced here to point out the concentration of particulate air pollution which is located upstream of the project area. The darker cross hatched portion on the maps represent the areas of highest concentration, the numbers are the annual geometric average count measured at specific sampling stations.



SOURCE: TOLEDO POLLUTION CONTROL AGENCY

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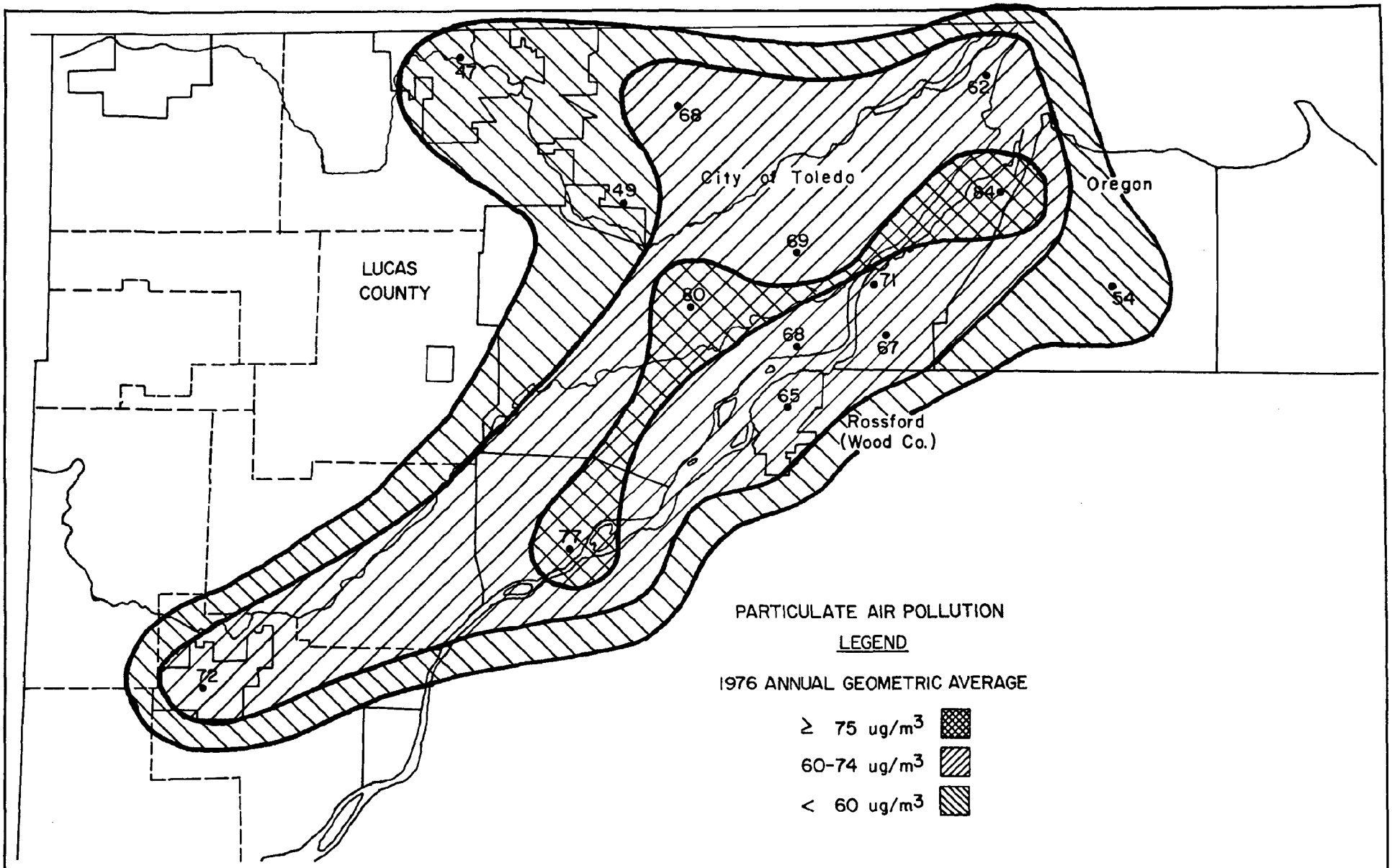
FIGURE VI

COASTAL ENERGY IMPACT PROGRAM
OREGON, OHIO



SOURCE: TOLEDO POLLUTION CONTROL AGENCY

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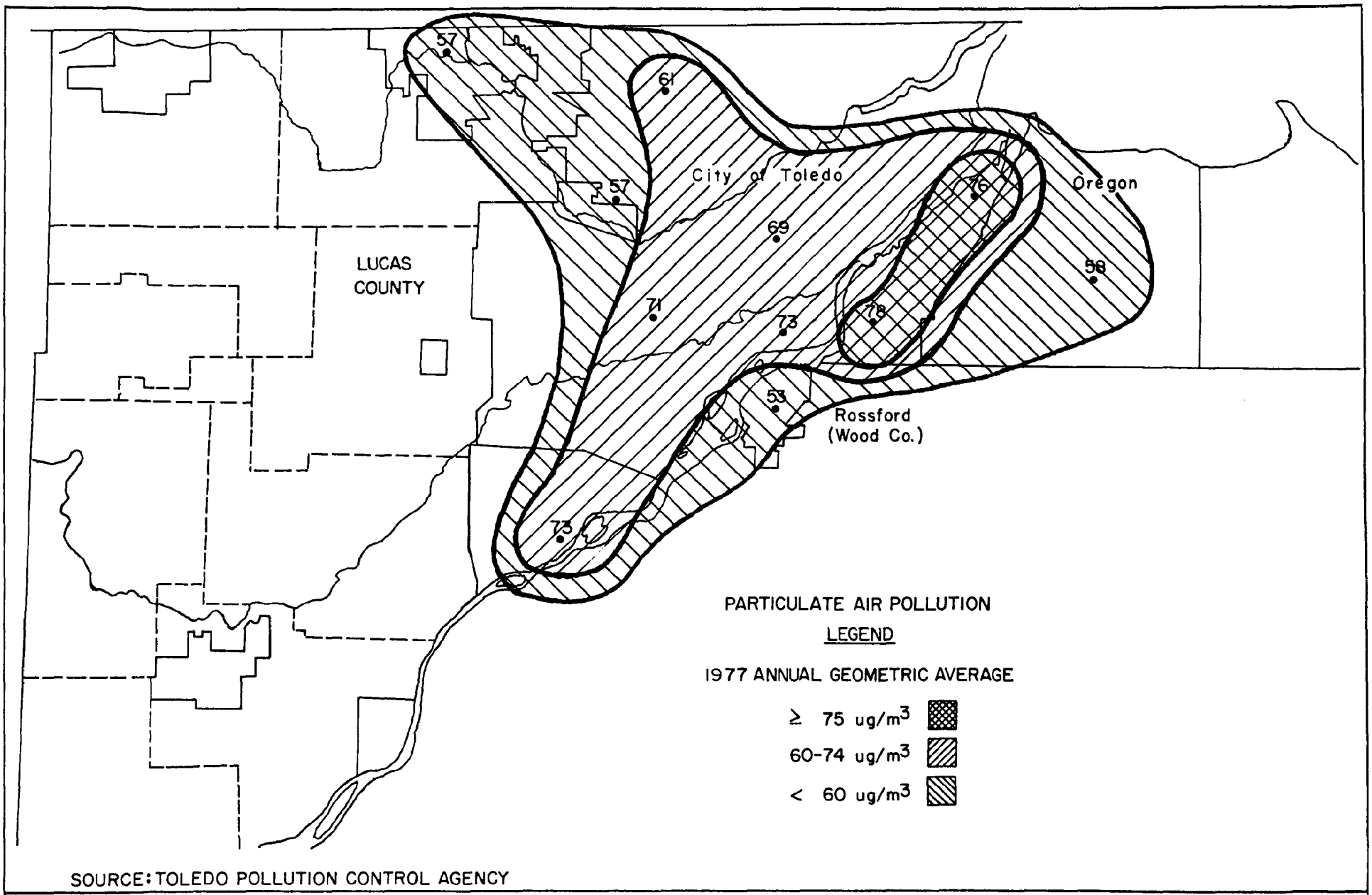
1979

FIGURE VII

COASTAL ENERGY IMPACT PROGRAM
OREGON, OHIO



SOURCE: TOLEDO POLLUTION CONTROL AGENCY

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FIGURE VIII

COASTAL ENERGY IMPACT PROGRAM

OREGON, OHIO

V. MANAGEMENT PLAN ALTERNATIVES

A. Land Use

Industrial Land available, zoned for industry, now exceeds industrial usage by 44.73% in the project area. With the Port Authority Facility No. 3 area in operation, the industrial land available will increase by a factor of between 3 and 6 per cent. These percentage figures apply to the initial phase of Facility No. 3. The long range plan of Facility No. 3 portrays a much larger area ultimately being developed.

Enlargement of Facility No. 3 beyond the initial phase would appear to be virtually a necessity, since dredging to maintain full project dimensions annually is considered essential for deep draft vessel traffic. Based on the present timetable of filling the current diked enclosure, additional enclosure area will be needed by 1987. The 1970 long-range development plan portrays constructing an area 4,000 feet wide by four miles in length which would parallel the shipping entrance channel. Construction of such a facility would create 1,939 new acres of area, by approximately the year 2020. Two-thirds (1,280 acres) of the new area is designated for industrial development; this future industrial acreage represents 67% of what is currently used for industry in the project area now. The net result on a long-range basis would mean that in excess of 4,040 acres would be available for industry in the port area.

Based on the fact that 55.27% of existing industrial zoned land is available for development and the prospect of new land for industry being created via Port Authority Facility No. 3, it is recommended that additional land does not need to be zoned for industry in the project area.

The proper site location and development of industry in the project area should yield long term benefit to the City of Oregon. The principal benefit will reflect in substanial economic stability for the City by solid increases of the property value and tax base. Well thought out development will yield a greater long term return to both industry and the community.

Sites for heavy industry, manufacturing, distribution and research purposes should carefully evaluate property prior to making final selection. Some factors to consider in selecting sites for heavy industrial and manufacturing purposes should be areas well drained and capable of supporting large loads without settling unevenly. Evaluation of land for heavy building sites should indicate appraisal of the following considerations: good foundation stability (10 to 20 foot depth to bedrock) adjacent to highways, adjacent to railroads, adjacent to major utilities, adjacent to existing industry, not in a flood plain, down wind from residential areas, buffered from existing residential areas, and large relatively flat sites.

In addition to the above considerations industrial development criteria as listed in Table 8 should be checked. Within the project area, first priority to business and industry which relate to the port should be given in development of additional land. Such a policy need not be restrictive since a wide range of products and materials flow through the port, such as metals, agricultural goods, plastics, machinery to mention a few. It is intended that Facility No. 3 will be used for new bulk cargo operations and industrial activity. Bulk cargo includes gypsum, phosphate, pig iron, steel scrap,plastics and scrap. General cargo movements can also be expected at the new facility.

TABLE 8
INDUSTRIAL DEVELOPMENT CRITERIA

I
a - Labor intensive
b - Highly automated

II
a - Complex operation
b - Simple operation

III
a - Requires prefinished materials
b - Utilizes raw materials

IV
a - Large volume of material required
b - Modest volume of material required

V
a - Bulky materials requires large vehicle delivery
b - Small parts requires lighter vehicle delivery
c - See Criteria VI

VI
a - Raw products are solid
b - Raw products are liquid

VII
Foundation Requirements
a - Heavy machinery
b - Light machinery

VIII
Energy Sources
a - Total electric
b - Multiple fuels required

IX
a - Large volume raw water user
b - Fully treated water only

X
Environmental Impact of Processes
a - Effects surroundings
b - Does not effect surroundings

XI
Availability of Labor Categories
a - Available locally
b - Skills must be imported

XII
Availability of Water & Sewer
a - Yes
b - No

XIII
Extra Large Size Water and/or Sewer Lines Required
a - Yes
b - No

XIV
Cost of Land
a - Consistent with Market
b - Exceeds Market price

XV
Shipment Mode of Finished Product
a - Truck
b - Rail
c - Pipe
d - Water
e - Air

XVI
Travel Distance of Materials/Products from Originating Source
a - Close proximity to Docks
b - Within Toledo Region (SMSA)
c - Outside of Toledo (SMSA)

XVII
Availability of Land (Cost) for Onsite Waste Disposal
a - High
b - Medium
c - Low

B. Access

In Chapter III under the section heading of Highways and Trucking it was pointed out that the Toledo region is served with both north-south and east-west interstate highways. While these highways provide a good framework for through traffic circulation at the regional level, there exist deficiencies to the network system in reaching key economic areas within the region.

Access to the northern area of the City of Oregon is hampered significantly by railroad crossings. This situation creates delays and interruptions in highway traffic movement. Industry and port facilities located in the project area are economically affected by this situation. Delays caused by train movements across roadways translate into added operating expenses for these businesses. Time is lost by both truck movements and employees who work in the area.

With the development of Port Authority Facility No. 3, the adjacent industrial area in the project area, and the Maumee Bay State Park the need for improved highway and railroad access becomes a more critical need. Facility No. 3 and the industrial area will generate different traffic movements than the Maumee Bay State Park. The park will create peak traffic on summer weekends and particularly on Sundays. Vehicles attracted to the park will include cars, travel trailers, recreational vehicles, campers, and boats on trailers. The port-industrial area operations generate traffic of heavy vehicle types, throughout the week.

Roadway design and construction requirements differ for these two types of vehicular traffic. The port-industrial access routes require heavier loading capacities and geometrics to accommodate large vehicles, while the park access route should provide lanes sufficiently wide enough to accommodate RV's, trailers, pickup trucks, etc.

Presently, consulting firms have been retained to address these respective needs. Access to Maumee Bay State Park, outside of the project area, is being considered in relationship to State Route 2, via North Curtis Road. Improved access to the port-industrial area is being investigated via the extension of Millard Avenue over the railroad tracks in the vicinity of Otter Creek and Otter Creek Road. This extension would provide an uninterrupted roadway link from the port-industrial area to Interstate 280 via Millard Avenue and Front Street. It is envisioned that the easterly terminal point of the Millard Avenue extension would occur in the vicinity of Lallendorf Road. The terminal point of the extension with the existing roadway system has not been determined at this time. Alternate schemes shown in the appendix, drafted as of now indicate connecting as far north as Cedar Point Road or as far south as Corduroy Road.

Improved access to the park is recommended as early as 1980 and all improvements by the mid 1980's when the entire park complex is scheduled to be in operation.

The time table for accomplishing the Millard Avenue extension appears to be a protracted period of time. The consultants for this project have mentioned that ten years may be a realistic period, in light of the complex procedures required for feasibility studies, design reviews and approvals. This would place completion in the year 1989.

While construction of the Millard Avenue extension would improve access of the area to I-280, it should be mentioned that I-280 is currently a very heavily travelled section of the interstate system. Traffic counts on I-280 in the vicinity of the Front Street interchange and the bridge crossing have exceeded design capacities. These traffic counts are contained in the appendix. Therefore, this solution to improving access to the area is viewed as an intermediate solution.

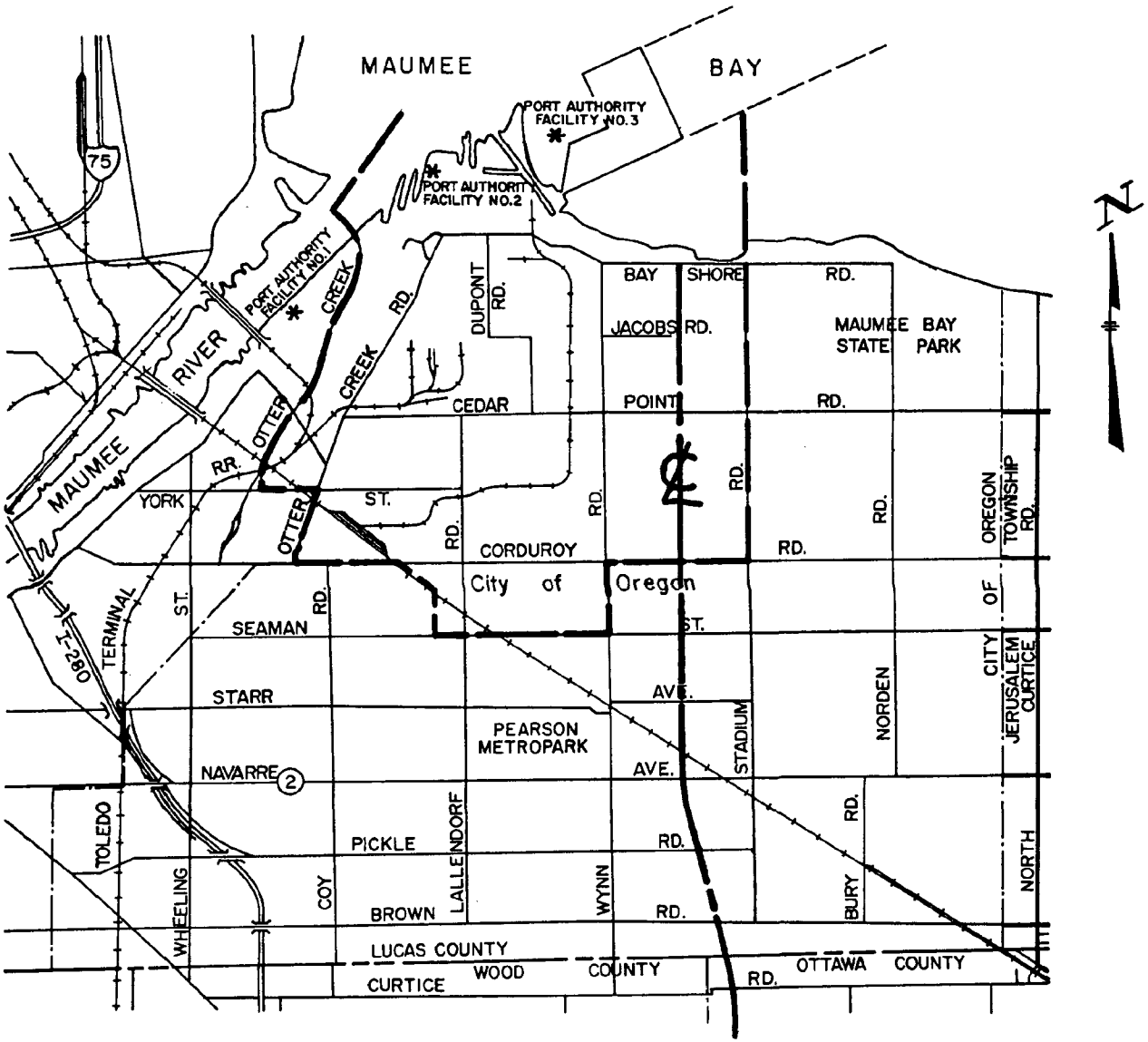
On a long term basis it is felt that a more complete solution to improving both highway and railroad access to the area is a new north-south transportation route. Such a route would incorporate several features which are expressed needs in the project area and elsewhere in the City of Oregon.

A new north-south transportation-utility-drainage corridor would materially improve not only transportation access requirements, it would also provide the means of improving surface drainage, reduce flooding, provide utility easements and create a distinct separation between the heavy industrial area on the west and the non-industrial uses, existing and planned in the eastern portion of the city. Dependent upon localized requirements the corridor would include a tree planted buffer area. This buffer area would be an atmospheric purification belt, entrapping air pollution, reducing noise pollution and screening out of traffic generated light sources.

Figure XIII located in the appendix, relates the location of the proposed north-south access route to other existing and proposed highways in the region, as setforth in the TRA Comprehensive Plan for 1985.

C. Mitigation of Non-Stationary Source Air Pollution

More than half of all air pollution in this country is created by non-stationary sources - automobiles. Of the five common forms of air pollution, automobile emissions contribute three, namely; carbon monoxide, nitrogen oxides and hydrocarbons. One means of reducing automotive source pollution to consider in the project area is the initiation by the City of Oregon into the Toledo Area Regional Transit Authority service of mass transit. The City of Oregon has the option of delineating the area and territory to be served by TARTA. A ten point outline of steps necessary for any political subdivision to join TARTA is made a part of the appendix of this report.



NORTH-SOUTH ACCESS ROUTE
CORRIDOR ALIGNMENT

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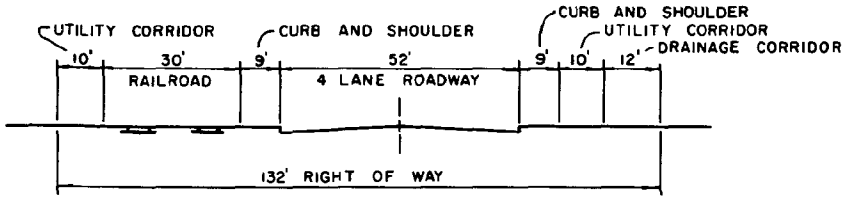
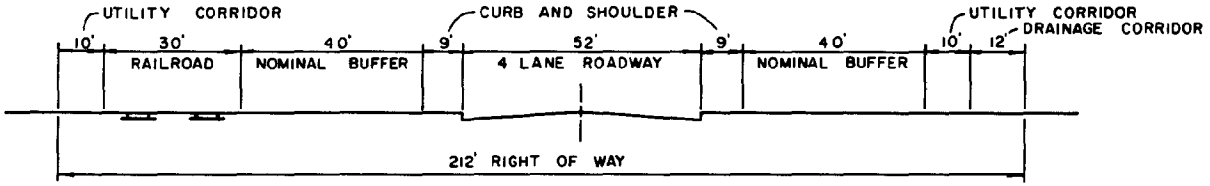
1979

FIGURE IX
COASTAL ENERGY IMPACT PROGRAM
OREGON, OHIO



NO BUFFER PROVISION



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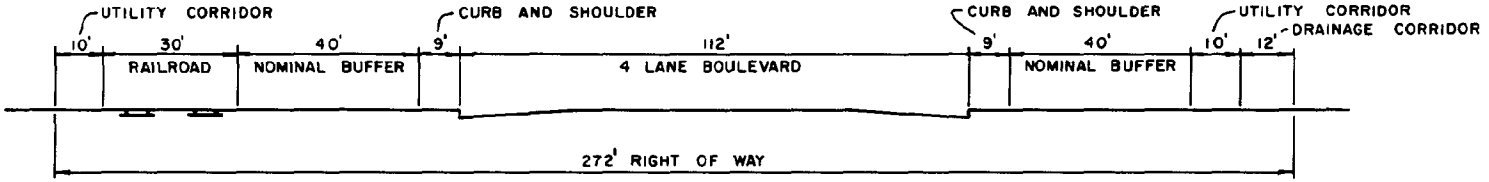
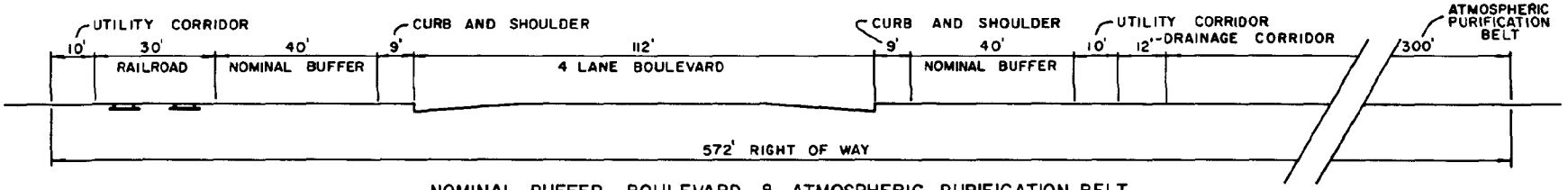


NOMINAL BUFFER & BOULEVARD



NOMINAL BUFFER, BOULEVARD & ATMOSPHERIC PURIFICATION BELT

TYPICAL CROSS SECTIONS FOR NORTH-SOUTH ROUTE TRANSPORTATION - UTILITY - DRAINAGE CORRIDOR

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1979

FIGURE X

COASTAL ENERGY IMPACT PROGRAM
OREGON, OHIO

D. Sanitary Sewer Recommendations

It is apparent from the water quality monitoring program of southern Maumee Bay and of the surface waters in the City of Oregon, that individual treatment systems are not effective and should be intercepted to the City of Oregon Wastewater Treatment Plant.

The Oregon Wastewater Treatment Plant is designed hydraulically to treat 8 MGD, the plant currently is treating an average of 2.28 MGD. This 2.28 MGD figure is based on the latest (1978) annual report figure for the facility. The Oregon Wastewater Treatment Plant is capable of handling more than 2½ times its present useage, based on average monthly flows in 1978.

Therefore, the major industrial and publicly supported agency point discharges can be readily accommodated.

Within the project area, starting at the Dupont Road WWTP a 66-inch trunk sewer follows the alignment of Dupont Road to Cedar Point Road, west on Cedar Point Road to Lallendorf Road; south on Lallendorf Road to Seaman Road; at this point, two sewers of 54" diameter exist, one of which goes west on Seaman Road. Provisions have been made for the extension of sub-trunk sewers from this trunk at the intersections of Cedar Point Road, York Street, Corduroy Road and Seaman Road. Also, along that portion of the trunk following Lallendorf Road between Cedar Point Road and Seaman Road, provisions have been made for future installation of local sanitary sewer service.

E. Water Line Recommendations

The 1978 Water Master Plan Study recommends improvements to the Oregon Water System on a priority basis. Within the project area the following improvements are recommended by the year 1981 for fire protection as noted in Table

TABLE 9

RECOMMENDED IMPROVEMENTS FOR FIRE PROTECTION

Residential-Bay Shore & Bonnie Doone	10" on Wynn and Bay Shore, from Cedar Point to Wynn School	Immediate/3
Wynn Elementary School	10" on Wynn and Bay Shore, N. from Cedar Point to Wynn School; 12" on Dupont to Bay Shore	Immediate/3
Toledo Edison-Bay Shore Power Plant	10" on Wynn and Bay Shore, N. from Cedar Point to Power Plant; 12" on Dupont to Bay Shore	Immediate/3
Residential-Harbor View	12" on Dupont to Bay Shore	Immediate/3

This table is extracted from Table 20 on pages 71 and 72 of the 1978 Water Master Plan Study; the word immediate implies action between 1978 and the year represented by the number following (3).

In addition to improvements for fire protection purposes Table lists recommended distribution improvements.

TABLE 10

RECOMMENDED WATER DISTRIBUTION IMPROVEMENTS

Priority No.	Pipe Size	Location	Cost
Immediate Improvements			
	8"	Corduroy, under RR tracks between Coy and Lallendorf	$ 65,700
	8"	Lallendorf, from Corduroy to Seaman	$ 88,600
1985 Improvements			
	8"	Cedar Point, from Stadium to existing 8"	$ 76,000
	8"	Cedar Point, from Wynn to Lallendorf	$ 152,500
	8"	Lallendorf, from Cedar Point to existing 8"	$ 46,100

TABLE 10

RECOMMENDED WATER DISTRIBUTION IMPROVEMENTS, Continued

Priority No.	Pipe Size	Location	Cost
1995 Improvements			
	36"	Stadium, from Cedar Point to Navarre	$1,582,800

F. Capital Improvement Program

Capital improvements programming is the scheduling of selected physical improvements and facilities for a given period of time. These improvements are based on a series of priorities established according to the need for such improvements and the financial ability to undertake such projects.

Generally, community expenditures may be subdivided into two broad categories. First are those expenditures necessary for the operation of community government. These include municipal salaries and administrative and maintenance costs. Second are those items of long life expectancy and which may be financed by the sale of bonds. New public buildings, major improvements to such buildings, new utility lines, circulation facilities and acquisition of tracts of land for public use are examples of capital imprwvements. Although capital improvements may be financed by the sale of bonds, they may also be paid for in part or in whole, out of normal community revenues. Therefore, the nature of the item and its life expectancy are more useful in defining a capital improvement.

Similar to long-range industrial management planning for new plant equipment, capital improvement programming is a systematic scheduling of the construction or acquisition of municipal captial items over a period of several years. The period of time covered by this schedule varies from

community to community. Five or six years appears to be the most popular span in use, permitting an intelligent appraisal of community needs with relation to the ability to pay for these items. Longer periods of time involve considerable speculation and assumption concerning the financial cost of improvements. An important feature of the capital improvements program is that it is prepared annually. Each year the community's capital improvements requirements are projected for five years (or some other specified period of time into the future) and scheduled in order of priority based upon need and desirability. The items scheduled for the first year of the five year program are incorporated in the proposed community budget for the next fiscal year. The realization of the capital improvements program is dependent, in large part, on the fiscal capacity of the community to finance these improvements. Fiscal analysis is necessary in order to determine the financial resources available to the City or Oregon, both for the present and through the planning period. This analysis is made by considering key fiscal indicators for the city; assessed valuations, property tax rates, local bond debt limitations, revenues from property taxes and expenditures of the city.

The past twenty years of assessed values in the City of Oregon has shown an increase of $155,535,590. Within the years 1958 and 1978 there have been some instances of decrease, notably between 1971 and 1974, since then the assessed valuation total has consistently increased. Total assessed valuation includes real property, public utility and personal property. The total assessed valuation of property in the City of Oregon is the basis for establishing property taxes.

Table 4 total valuation is indicated for the most recent ten years, plus 1965, 1960 and the initial year (1958) when Oregon became a City.

Review of the table indicates that during this twenty year time span the average yearly increase was $7,781,779.50, or expressed in percentage terms this represents 7.9828% increase per year.

The value of Table 4 is that it provides a basis for projecting future valuations.

Assuming that we are projecting for a similar period of time, actually twenty two years, by applying a series of three lines from 1978 to the year 2000 we derive the figures in Table 11, Projection of assessed values of taxable property in the City of Oregon, Ohio.

TABLE 11

PROJECTION OF ASSESSED VALUES OF TAXABLE PROPERTY, CITY OF OREGON, OHIO

Year	$ Assessed Valuation (Millions) Low	Medium	High
1980	263	264	267
1985	302	308	317
1990	330	340	355
1995	368	382	408
2000	396	414	445

If the projections of assessed values materialize as estimated in Table 11, the change from 1978 to 1980 will be a 3.9% increase based on the medium projection. Subsequent medium projections at five year intervals would realize percentage increases ranging from 8.4% to 16.6%. It is possible the net change in assessed valuation of taxable property may increase $160 million by the year 2000. It should be assumed that the figures provided in Table 11 are estimates only, and do not reflect major altering events in the economy.

As a product of the 1970's, this report is aware of the national economic and energy problems that significantly affect all local economies, including that of the City of Oregon. These conditions can be expected to continue to affect the attainment of the designated goals of the city, but it is beyond our capacity to determine the intensity of the long range effects.

Methods of Financing Capital Improvements

The method or combination of methods available to finance capital improvements can only be determined after a thorough analysis of fiscal capacity, anticipated costs, and the methods of financing available. Municipal jurisdictions in Ohio commonly avail themselves of the following alternatives:

- pay-as-you-go;
- municipal bonds;
- authorities and special districts;
- special assessments;
- joint financing; and
- grants under federal, state or county assistance programs.

Pay-as-you-go is the financing of improvement projects from current revenues. Such revenues may come from taxes, fees, charges for services, or transfers from other funds. The principal advantage of this method is, of course, to avoid interest charges. The disadvantage is that it is usually appropriate for small projects only.

Municipal bonds provide the most commonly used source of funds for capital improvements. Improvements which are eligible to be financed from revenue bonds have the advantage over general obligation bonds of not requiring voter approval. The different types of municipal bonds are described in the following explanatory notes.

General obligation bonds - (excluding self-supporting bonds) - are secured by an unconditional pledge of the municipality's credit, including its taxing powers. General obligation bonds are retired by a levy against property over the stated period of the bond issue, including interest costs.

Total indebtedness created may not exceed 10% of the total value of all property as listed and assessed for taxation. Such indebtedness may be created only after authorization of the electors, except that an indebtedness may be incurred without a vote of the electors up to 3½% of the total value of property. Such latter value may be increased to 5% of the total value of property in the case of charter cities where the charter provides for the levying of taxes outside the 10-mill limitation without a vote of the electors. The unvoted indebtedness of 3½% or 5% maximums is included, however, in the total indebtedness of 10% or the total value of property.

Voter approved indebtedness is outside the 10-mill limitation; non-voted indebtedness is included within the 10-mill limitation, unless specifically excepted under certain circumstances in charter cities.

In lieu of a levy against property, general obligation bonds may be retired, in whole or in part, by revenues from a muncipal income tax.

General obligation bonds - (Self-supporting bonds) - also are secured by an unconditional pledge of the municipality's credit. These bonds are retired from revenues of a municipal water, sewer or other utility which are in excess of revenues required for the operating expenses of the utility and for any other bond retirement.

Self-supporting bonds are not included in the 10% debt limitation, but are included within the 10-mill limitation, unless approved by the electorate.

An experience record of six months to one year, at the rate schedule necessary to support the bond issue, is normally required to determine the bonds are self-supporting. However, an experience record is not required for

bonds falling within the 3½% (or 5%) limitation of non-voted bonds, as described in the previous summary on General Obligation Bonds. In such cases, however, the 10% total debt limitation would also apply until an experience record was established.

In the event revenues are not sufficient to retire self-supporting bonds, a levy against property must be made, which levy takes precedence over all other unvoted levies within the 10-mill limitation.

Mortgage revenue bonds pledge the revenue from a specific income producing facility such as a toll road or public utility. Because these bonds are secured by a mortgage on the improvement being financed and not the full faith and credit of the subdivision, the general limit of bond indebtedness of the issuing subdivision is not affected. Revenue bonds may be issued for periods not exceeding 40 years at interest rates not exceeding 8.0 per cent per year (ORC 133.06). Mortgage revenue bonds are secured only by the income received from the utility. They are designed to be self-liquidating obligations.

Revenue bonds are not included within the 10% debt limitation or the 10-mill limitation. From a practical standpoint, however, a mortgage revenue issue is limited by the ability to market the bonds at reasonable rates and by the rate schedule that will be accepted by the consumers of the system.

Because revenue bonds are secured only by revenues, rate schedules established must be sufficient not only to provide for operation and maintenance costs of the utility and for the annual principal and interest payments on the bonds, but, in addition, to produce a "coverage: or additional revenue, until specified reserves are established."

Mortgage revenue bonds are often discounted, or sold for less than par value, and generally carry higher interest rates than other bonds.

Revenue bonds are the same as mortgage revenue bonds except that security is not guaranteed by a mortgage.

Special assessment bonds or notes are retired by assessments levied against owners of benefiting property. These are general obligation bonds or notes guaranteed by the full faith and credit of the issuing subdivision (ORC 133.31) except for special assessment notes issued to pay the costs of lighting, sprinkling, sweeping, cleaning, removing snow from, or treating the surface of streets when such assessments are to be paid in one annual installment (ORC 133.311).

Notes

Notes are often used as a means of initial financing in anticipation of the issuance of bonds. Notes can be used for general obligation and special assessment issues, but not for revenue issues. General obligation notes may be issued for a period of up to eight years. If notes are outstanding for more than five years, the number of years in excess of five years must be deducted from the maximum maturity of the bonds; and during the period in excess of five years, the equivalent of principal payments must be made against the notes as if bonds had been issued for these years. Special assessment notes may be issued for a period of up to five years.

10-Mill Limitation

The 10-mill limitation mentioned previously refers to the maximum amount of principal and interest payments that will prevail during the life of the bond issue, together with all other issues subject to the 10-mill limitation. The total of the principal and interest payments in any year may not exceed the proceeds of a 10-mill levy against all property within the municipality. From a practical standpoint, the 10-mill limit on issues is not permitted to be attained by bond counsel in approving bond issues. A limitation of 9-mills, or less is usually applied.

Authorities and special districts are created, in most cases, to construct and manage facilities which are supported by user charges. Toll roads and water and sewer systems are examples of such facilities. Special districts with taxing power are also created for the purposes of constructing facilities and issuing municipal bonds to finance them. Examples of authorities and special districts are the Ohio Water Development Authority, joint vocational school districts such as Penta County, which serves students of Lucas County; and water and sewer districts serving incorporated areas.

Special assessment finance public works programs which benefit abutting property owners rather than the general public. Local improvements commonly financed in this way are the paving of streets and the installation of sidewalks and water and sewer mains.

Special assessments are levied in three ways: 1) by a percentage of the tax value of the property assessed; 2) in proportion to the benefits which are expected to result from the improvement; and 3) by the front footage of the property benefiting from the improvement. Street, drainage and sidewalk improvements are usually assessed on a front foot basis. Improvements which may be of measurable benefit to property owners in addition to abutters are assessed using one of the other methods. An amendment to State legislation for special assessments requires that no parcel of land may be assessed for any or all purposes for over one-third of the actual value of the parcel within a five year period. Once levied, special assessments may be paid in cash or by a levy against property on an annual basis over the stated period of the bond issue, including interest costs.

Special assessment bonds also are secured by an unconditional pledge of the municipality's credit. They are not included in the 10% debt limitation, but are included within the 10-mill limitation, unless approved by the

electorate. In the event collections are not sufficient to retire special assessment bonds, a levy against all property in the municipality must be made, which levy takes precedence over all other unvoted levies within the 10-mill limitation.

Joint financing of projects of mutual benefit to cooperating governmental agencies, authorities, or special districts is recommended when such projects cannot be economically justified by a single agency. Such cooperation can bring about capital improvements in anticipation of needs and when land acquisition and construction costs are lower. The financing of vocational schools by joint vocational school districts is a good example of joint financing.

Grants under Federal, State or County assistance programs is becoming an increasingly more important method of financing capital improvements; pass-through funds which originate as taxes collected by the Federal government, as allocated to the states who in turn allocate to communities.

The current capital improvement program is for projects scheduled in the years 1979 through 1983. The current C.I.P. contains 62 entries. Of the total, eleven entries are of an annual recurring nature, with the other projects divided between 20 short range entries and 30 long range entries. As of November 1979, of the non-recurring entries, five projects have been completed, plans and specifications are either prepared or in preparation for five more, and three projects are committed for 1980 implementation.

G. Coordination

It is apparent that in order to accomplish orderly development and mitigate energy related pollution in the project area, an array of actions will need to happen.

We have identified twelve major improvement actions which are deemed appropriate for the balance of the project area to be developed to its maximum or near maximum potential and still reduce pollution.

It is anticipated that four levels of government: federal, state, county and city as well as the Toledo - Lucas County Port Authority will be involved with accomplishing the improvements outlined in this report.

While the majority of the improvement actions should commence prior to 1985, completion of several improvements will undoubtedly extend beyond the year 2000.

To enable one to visualize the variety and interrelationship of the actions, we have included Figure XI which in bar chart form shows all the projects at a glance. This figure together with the following explanatory notes is intended to provide the reader with a better understanding of the time involved to accomplish each type of improvement and the possible time relationship of each separate action to the others.

Figure XI Elapsed Time for Coordination of Improvements notes for each of the twelve line items are listed below:

#1 - Ohio Turnpike toll free - by the year 1983. Termination of toll charges on the turnpike, I-80 & I-90, will encourage increased use of this limited access east-west route, and allow new interchanges to be built.

#2 - The design and construction of new interchanges from the turnpike to I-75 and Airport Highway will facilitate improved accessibility to important economic areas in the region, such as the project area.

#3 - Diked enclosure filled - the present 242 acre area, now being filled with dredgings from the navigation channel will be completed by the year 1986. Subsequent enclosures are expected to be constructed to accommodate annual maintenance dredging, as indicated by the dashed line extending into the future on the figure.

ELAPSED TIME FOR COORDINATION OF IMPROVEMENTS

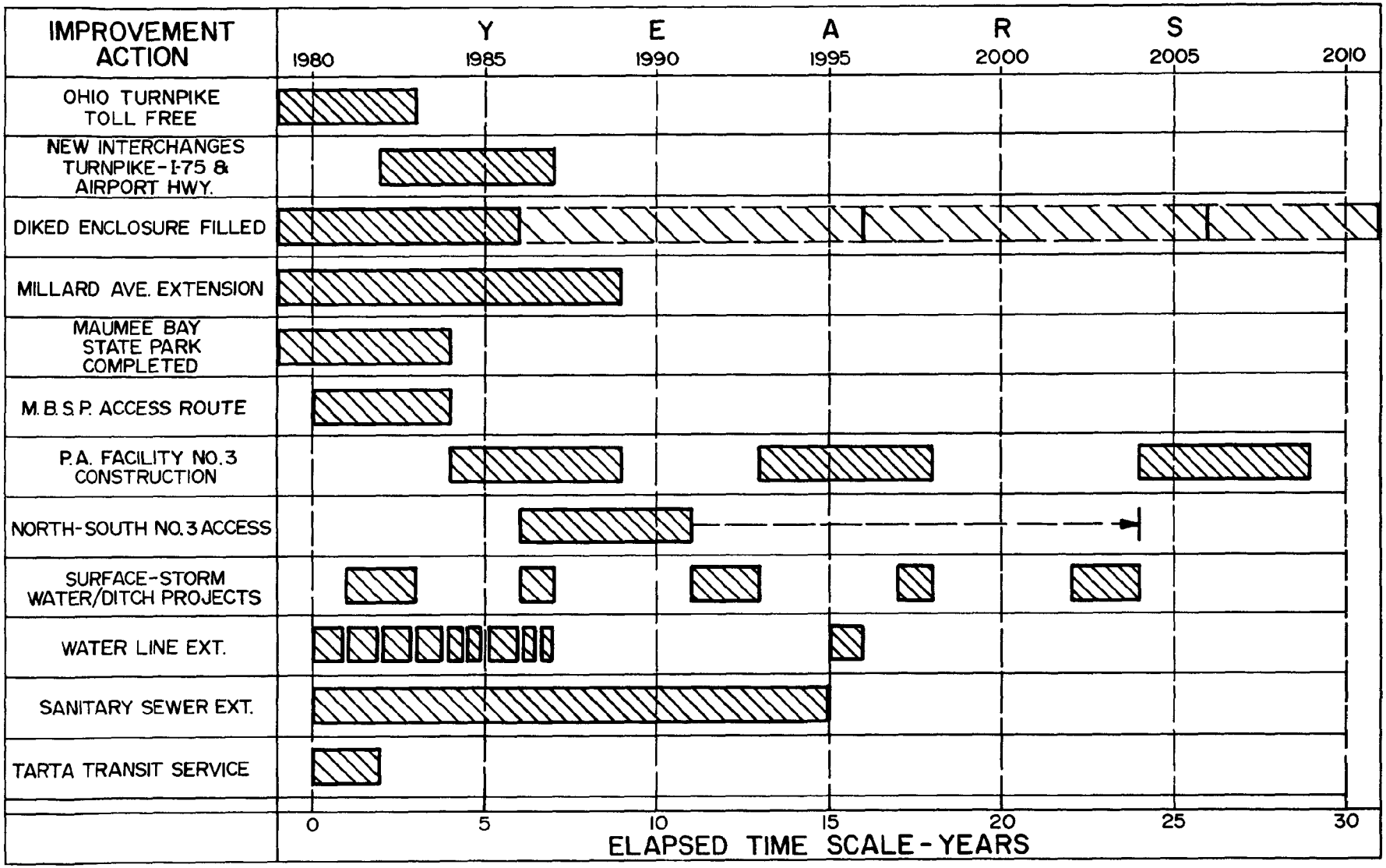

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FIGURE XI

COASTAL ENERGY IMPACT PROGRAM
OREGON, OHIO

#4 - Millard Ave. Extension - Work on this project was initiated February 1, 1979. The project is being conducted in accord with the transportation development process (TDP), as prepared by the Ohio Department of Transportation. The TDP is structured to comply with requirements of the Federal Highway Administration. This multi-governmental project hopefully can be completed in less than ten years (1989) and, will probably require support from the following: Cities of Oregon and Toledo, Lucas County, State of Ohio, Federal government, Port Authority and TMACOG.

#5 - Maumee Bay State Park - Scheduled completion of the entire complex at this time is targetted for the year 1984.

#6 - M.B.S.P. Access Route - Recommendations prepared for the Ohio Department of Natural Resources in the Access Road Study, state a series of roadway and intersection improvements are warranted between the years 1980 and 1984.

#7 - P.A. Facility No. 3 Construction - Dependent upon economic considerations, the design and construction of the initial phase of Port Authority Facility No. 3 is visualized as occuring during the years 1984 through 1989. A two year lead time for design and specification preparation prior to the area being completely filled with dredge material, would allow utilization of the site on an accelerated time table; therefore this figure shows action on this improvement commencing two years prior to 1986. Development of Facility No. 3 is shown on the figure as a series of five year construction projects, phased in sequence to follow the progressive dike enclosure filling process.

#8 - North - South No. 3 Access - The design and construction of a new access route to the industrial, port, and energy related installations existing and proposed in the northern portion of the city is the

primary objective of this project. A related primary objective of the project is to create a buffer between industry to the west and non-industrial uses to the east. Within the project right-of-way a tree planted buffer would be developed to trap air borne pollution and screen light, glare and noise of traffic and industry from properties east of the right-of-way. While the project is anticipated to have an overall design concept, construction is expected to be phased. The figure indicates that definite action would commence by no later than 1986, with total completion slated by 2004, coinciding with the phased development of Port Authority Facility No. 3 construction. Consideration of timing this project at the northern end should relate to advantages of improving access to the mainland industrial area, construction route access for development Facility No. 3 and, the proposed relocation of State Route 2 south of Oregon. That portion of the right-of-way north of the Norfolk & Western R.R. is envisioned as incorporating railroad tracks for improved direct rail access.

#9 - Surface - Storm Water/Ditch Projects - Approximately nine miles of ditch improvement recommendations are located inside of the project area. These nine miles of improvements represent five ditch projects, segments of three extend beyond the project boundary and two lie wholly within the project. The linear length of improvements, within the project, range from 1.25 miles to two miles. Figure indicates that construction of these improvements be phased over a period of some 23 years between 1981 and 2004, this latter year coincides with completion of the new north-south access route, since one of the ditch improvements is anticipated to lie within that right-of-way.

#10 - Water Line Extensions - Within the project area the 1978 Water Master Plan Study recommends improvements for fire protection and distribution. The sum of these improvements is approximately seven miles of new

water lines. Fire protection improvements are recommended for immediate installation, with distribution extensions recommended between 1985 and 1995. Extensions circa 1985 would materially increase distribution of water available to property bounded by Bay Shore Rd., Dupont Rd., Cedar Point Rd. and Otter Creek Rd., as well as property abutting York St. between Otter Creek Rd. and Lallendorf Rd. Extensions of a line in Cedar Point Rd. east to Stadium and south along Stadium by 1995 will increase water service in the eastern portion of the project area.

#11 - Sanitary sewer Extensions - To provide sanitary sewer service to the entire project area, approximately 15 miles of local and sub-trunk sanitary sewers need to be constructed. This construction is shown on the figure as occuring during the fifteen years between 1980 and 1995. Provisions in the existing trunk sewers have been made for tie-ins.

#12 - Tarta Transit Service - Initiation of mass transit transportation service would serve to decrease non-stationary - automotive sources of pollution in the area. If action by the City of Oregon toward this goal is started in 1980, it appears reasonable that within two years time service would be operational.

APPENDIX

TABLE 12

PROJECT AREA SOIL CHARACTERISTICS

SOIL SYMBOL(S) (ALPHABETICAL)	NAME	DEPTH TO SEASONAL HIGH WATER TABLE (FEET)	DEPTH FROM SURFACE (INCHES)	ENGINEERING CLASSIFICATION UNIFIED*	RANGE IN PERMEABILITY (in. per hr.) (1) (2)	SHRINK SWELL POTENTIAL	ACRES IN NON INDUSTRIAL AREAS
CF	Cut and fill land	The properties of this miscellaneous area are too variable to rate.					71
Dd	Del Rey loam	½ to 1½	0-8	ML, CL	0.6 -2.0	low	
			8-34	CL, CH	0.06-0.2	mod to high	10
			34-60	CL, CH	0.06-0.2	moderate	
De	Del Rey loam, sandy substratum	½ to 1½	0-7	ML, CL	0.6 -2.0	low	
			7-23	CL, CH	0.06-0.2	moderate	6
			23-60	GM, GW, SP	6.0 -20.0	low	
Df	Del Rey loam	See data given above to Del Rey loam.					6
Fs	Fulton loam	½ to 1½	0-9	ML, CL	0.6 -2.0	low	
			9-39	CH, CL	0.06-0.2	high	85
			39-60	CH, CL	0.06-0.2	high	
Fu	Fulton silty clay loam	½ to 1½	0-9	CL	0.6 -2.0	moderate	
			9-41	CH, CL	0.06-0.2	high	324
			41-60	CH, CL	0.06-0.2	high	
Lc	Latty clay	0 to ½	0-10	CH, CL	0.6 -2.0	high	
			10-46	CL, CH	0.06-0.2	high	2691
			46-60	CL, CH	0.06-0.2	high	
ML	Made land	The properties of this miscellaneous area are too variable to rate.					14
Tn, To	Toledo silty clay	0-½	0-9	CH	0.6 -2.0	high	
			9-47	CH	0.06-0.2	high	401
			47-60	CH	0.06-0.2	high	

* Soil Groups ML, CL & CH consist of fine grained soils: clays & silts.
Soil Groups GM, GW & SP consist of coarse grained soils: gravels with fines and sands.

TABLE 13

ANNUAL GEOMETRIC AVERAGE
T.S.P. PARTICULATES

AIR POLLUTION

LOCATION OF SAMPLING SITE	1976				1977				1978			
		Total 24 Hr. Observations				Total 24 Hr. Observations				Total 24 Hr. Observations		
	Yearly Standard A.G.A.*	# Of	Primary Standard 260	Secondary Standard 150	Yearly Standard A.G.A.*	# Of	Primary Standard 260	Secondary Standard 150	Yearly Standard A.G.A.*	# Of	Primary Standard 260	Secondary Standard 150
	1	2	3	4	1	2	3	4	1	2	3	4
Oregon Municipal Building	54.5	61	0	1	54.6	59	0	0	54.7	55	0	0
Lee & Front St. (Near Toledo Terminal R.R.) in Toledo	83.5	59	0	4	70.1	58	0	1	78.0	54	0	4
Pollution Control Agency in Toledo	71.4	358	1	21	66.5	321	0	8	76.6	331	3	29
815 Navarre (At Berry Near Woodville) in Toledo	67.3	58	0	1	73.7	61	0	0	76.4	54	0	6

*Annual Geometric Average

SAMPLES ARE TAKEN ON A PROGRAMMED INTERMITTANT FREQUENCY.

TABLE 14

CONTINUOUS HOURLY MEASUREMENT
of
(SO_2) SULFHUR DIOXIDE

AIR POLLUTION

Location of Sampling Site	1976 Number of Observations	**	A B	A C	1977 Number of Observations	**	A B	A C	1978 Number of Observations	**	A B	A C
5760 Bay Shore Road (Near South Shore Park)	4680*	54.3	0	0	6869	60.2	1	1	8292	53.6	2	1
Pollution Control Agency in Toledo	8666	36.5	0	0	8394	40.1	2	1	8383	48.7	1	0
Collins Park Water Plant in Toledo	NO	SAMPLES			7598	63.9	0	1	8575	83.9	3	5

*Partial yearly record

**Annual Arithmetic Average
A - #of Observations in excess of once per year
B - Primary 24 hour standard
C - Secondary 3 hour standard

TABLE 15

(O_3) OZONE

AIR POLLUTION

Location of Sampling Site	1976		1977		1978	
	Total Number Of Hourly Observations	# of Hours Exceeding Primary Standards	Total Number Of Hourly Observations	# of Hours Exceeding Primary Standards	Total Number Of Hourly Observations	# of Hours Exceeding Primary Standards
	1	2	1	2	1	2
Pollution Control Agency in Toledo	5611	276	8670	237	8588	269
131st Street (Friendship Park) in Toledo	6957	153	6902	71	6422	238

MUST EXCEED 160 MICROGRAMS PER CUBIC METER TO BE IN VIOLATION.

TABLE 16

ANNUAL ARITHMETIC AVERAGES
of
(NO_2) NITROGEN DIOXIDE

AIR POLLUTION

LOCATION OF SAMPLING SITE	1976		1977		1978	
	NUMBER OF OBSERVATIONS	AVERAGE 24 HOUR SAMPLES	NUMBER OF OBSERVATIONS	AVERAGE 24 HOUR SAMPLES	NUMBER OF OBSERVATIONS	AVERAGE 24 HOUR SAMPLES
	1	2	1	2	1	2
5760 Bay Shore Road (Near South Shore Park)	10*	29.9	59	32.1	56	33.4
Pollution Control in Toledo	61	50.7	61	53.2	59	56.7
Huron & Orange (Fire Station Number 1) in Toledo	66	55.6	60	56.9	61	63.8
131st Street (Friendship Park) in Toledo	61	40.6	60	44.2	61	48.5

*Partial Yearly Record

MUST EXCEED 100 MICROGRAMS PER CUBIC METER TO BE IN VIOLATION OF ANNUAL AVG. PRIMARY STANDARD

TABLE 17

TRAFFIC COUNTS IN VICINITY
OF I-280, FRONT STREET & S.R.2

YEAR AND COUNT LOCATION	TRAFFIC COUNT (ADT)[1]
1974 on I-280 north of Starr Ave.	
Northbound	19,600
Southbound	20,100
1977 on I-280 at Craig Bridge	
Northbound	32,674
Southbound	27,766
1977 on State Route 2 East of I-280	
Westbound	10,497
Eastbound	10,042
West of I-280	
Westbound	6,592
Eastbound	6,872

[1]ADT = Average Daily Traffic

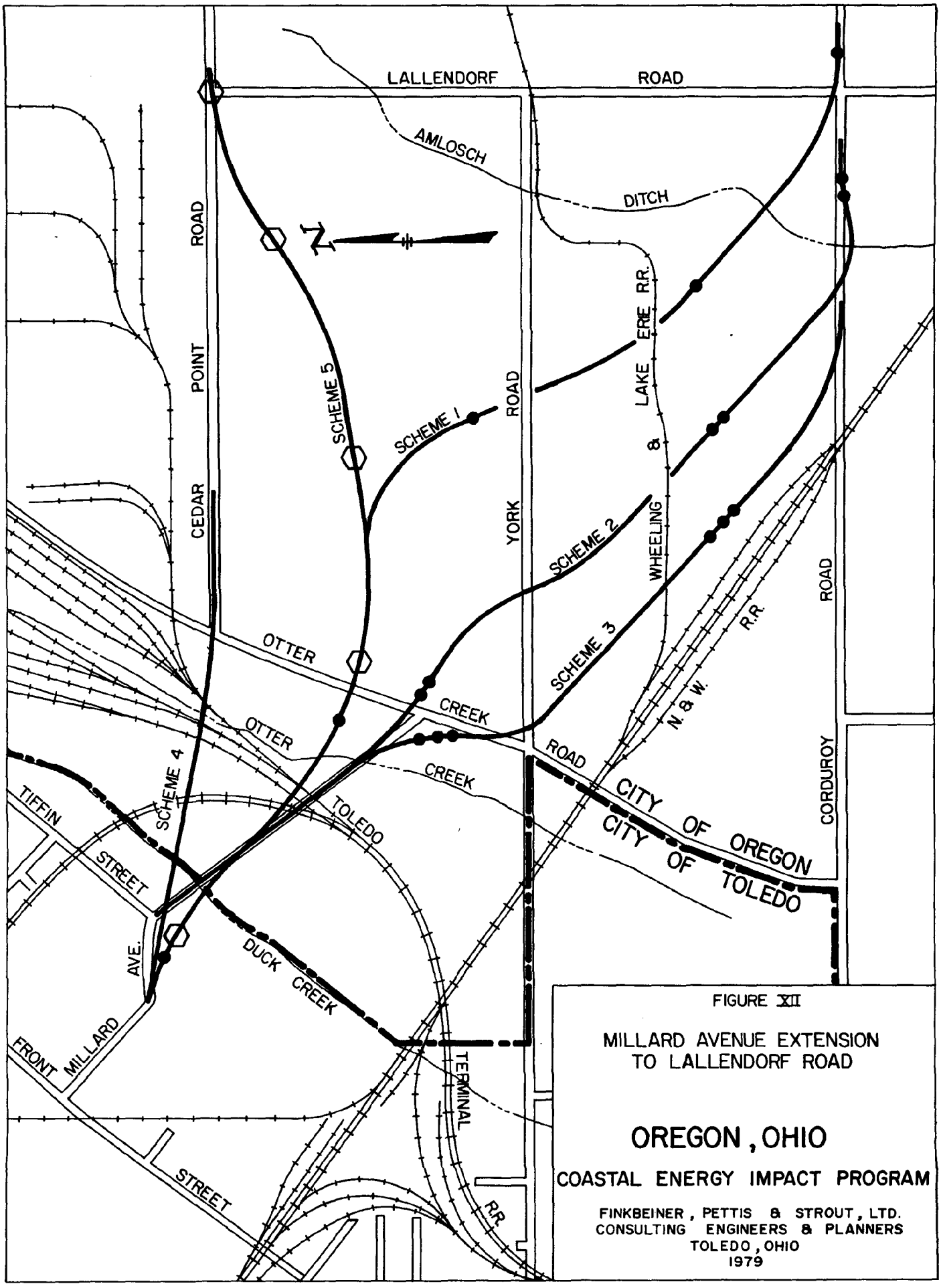

FIGURE XII

MILLARD AVENUE EXTENSION
TO LALLENDORF ROAD

OREGON, OHIO

COASTAL ENERGY IMPACT PROGRAM

FINKBEINER, PETTIS & STROUT, LTD.
CONSULTING ENGINEERS & PLANNERS
TOLEDO, OHIO
1979

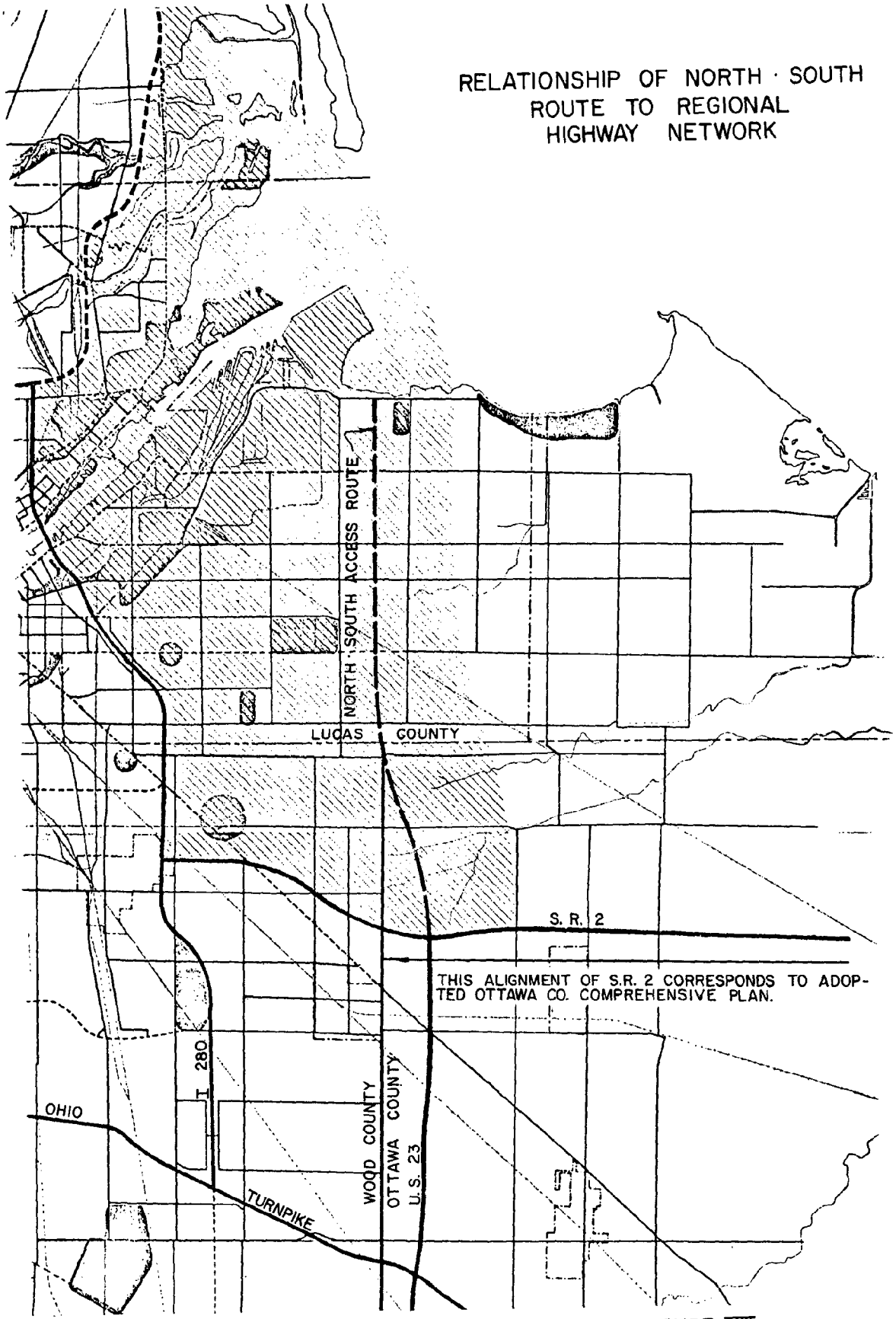

FIGURE XIII

FINKBEINER, PETTIS & STROUT, LTD.
CONSULTING ENGINEERS & PLANNERS
TOLEDO, OHIO
1979

COASTAL ENERGY IMPACT PROGRAM
OREGON, OHIO

EXHIBIT A

The following is an outline of steps necessary for any political subdivision to join the Toledo Area Regional Transit Authority:

1. The political subdivision must pass a resolution of intent to join TARTA and delineate the area and territory to be served.

2. A copy of this resolution must then be certified to each political subdivision presently comprising TARTA.

3. A meeting should be called by representatives of all the subdivisions now in TARTA to discuss: (1) Should the territory be allowed to join; (2) the terms and conditions for joining; (3) representation on the TARTA board.

4. Agreement must be reached by all subdivisions and then a resolution or ordinance passed by each of the subdivisions authorizing the territory to join TARTA and approving the terms.

5. A copy of each ordinance or resolution must then be filed with the County Commissioners of each county in which the territory is located and a copy must also be filed with the Clerk of each subdivision comprising TARTA.

6. A transcript of the proceedings must then be prepared in order to comply with future bonding procedures. This means a transcript of the minutes of each political subdivision's governing body acting on the ordinance or resolution.

7. The joinder is effective when all findings are completed except that the tax is not effective for 60 days after the filing of the last resolution or ordinance approving the joinder and special procedures are provided for doing so.

8. If any territory desires to join TARTA, the proceedings should be started in July in order that the same can be completed in order to certify the tax by the first part of November.

9. With respect to the referendum this can be filed during the 60-day period before the tax becomes effective. A petition containing signatures of 10 percent of those voting at the previous gubernatorial elections is filed with TARTA. TARTA gives a receipt for the petitions to the proponents and then refers the petitions to the board of Elections to check their validity. After validity is determined TARTA is notified and then TARTA must meet within thirty days of the certification by the Board to take action on the referendum petition

and pass a resolution certifying the petitions back to the Board of Elections to put on the ballot at the next general or primary election which occurs not less than 60 days after the date of the meeting of said TARTA Board, or at a special election, the date of which shall be specified in the certification, which date is not less than 60 days after the date of such meeting of the TARTA Board.

10. If the question is approved by at least a majority of the electors voting on such question, such joinder is immediately effective and the regional transit authority may extend the levy of such tax within the territory to be added. If such question is approved at a general election or special election occurring prior thereto or after the fifteenth day of July, the regional transit authority may amend its budget and resolution adopted pursuant to 5705.34 R. C. and such levy shall be placed on the current tax list and collected as other taxes within the territorial boundaries of the regional transit authority.

WJG:cjb
/79

EXHIBIT B
ORDINANCE NO. 172 - 1979

APPROVING A COMPREHENSIVE LAND USE MANAGEMENT PLAN DATED DECEMBER, 1979

WHEREAS, in December, 1979, Finkbeiner, Pettis & Strout, Ltd., Consulting Engineers and Planners submitted a report and recommendations on a Comprehensive Land Use Management Plan dated December, 1979; and

WHEREAS, this report is on file with the Council of the City of Oregon and the Administration; and

WHEREAS, this report was considered and approved by the Oregon Municipal Plan Commission on December 5, 1979. NOW, THEREFORE,

BE IT ORDAINED BY THE COUNCIL OF THE CITY OF OREGON:

SECTION 1. The final report for a Comprehensive Land Use Management Plan dated December, 1979, as submitted by Finkbeiner, Pettis & Strout, Ltd., Consulting Engineers and Planners be and the same is hereby approved and adopted in its entirety.

SECTION 2. That this Ordinance shall take effect and be in force after the earliest period allowed by law and the Charter and the Ordinances of the City of Oregon.

Passed: December 17, 1979 Yeas 7 Nays 0

James A. Hall
President of Council

ATTEST:

Mary A. Taylor
Clerk-Auditor

APPROVED: December 17, 1979

Leonard J. Wasserman
Mayor