



Coastal Zone
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REGIONAL PLANNING COMMISSION

A STUDY OF IMPACTS RESULTING
FROM ENERGY FACILITY SITING
ON SANDUSKY BAY
SANDUSKY COUNTY, OHIO

SANDUSKY COUNTY
FREMONT, OHIO

OHIO, Dept of Energy

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SANDUSKY BAY, SANDUSKY COUNTY, OHIO

December, 1979

Sandusky County Regional Planning Commission
600 W. State Street
Fremont, Ohio 43420
and
Henshaw and Associates, Inc.
Cleveland, Ohio

ABSTRACT

TITLE: A Study of Impacts Resulting From Energy
Facility Siting on Sandusky Bay, Sandusky
County, Ohio

AUTHOR: Sandusky County Regional Planning Commission

SUBJECT: Assessment of impacts resulting from energy
facility siting and recommendations for local
action regarding such development

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ABSTRACT: The study involves the assessment of the major
impacts resulting from energy facility siting
on Sandusky Bay. The need for local input to
the potential project is outlined and a recom-
mended course of action for local government
is proposed. Included in the recommendations
are model regulatory devices designed to assist
local officials in coping with the potential
facility and its resultant land use implica-
tions both on the site and adjacent to it.

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planning grant from the Ohio Department of Energy under the Ohio
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Management Act of 1972.

TABLE OF CONTENTS

	<u>Page</u>
Abstract	i
Table of Contents	ii
List of Figures and Tables	iv
INTRODUCTION	1
DATA ANALYSIS AND SUMMARY OF EXPECTED IMPACTS	3
Background on Sandusky County	3
Background on Site Area	7
POLICY PLAN OBJECTIVES	14
County-wide Growth	15
Transportation and Access	16
Industrial Development Objectives	18
Recreation and Preservation Objectives	19
Land Development Regulation Objectives	21
ALTERNATIVE COUNTY DEVELOPMENT OPTIONS	22
Preservation Option	22
Industrial Development Option	23
Residential Development Option	23
SITING AND DEVELOPMENT POLICY RECOMMENDATIONS	24
Plant Location Guidelines	25
Surrounding Land Use Implications	25
Transmission Line Considerations	31
IMPLEMENTATION	32
Land Development Codes	32
Recreation and Conservation Strategy	35
Industrial Development Incentives Plan	36

TABLE OF CONTENTS

(con'd)

	<u>Page</u>
Transmission Line Routing Placement and Impact Mitigation Plan	37
Monitor Status of O.P.I. Plans	38
APPENDICES.	40
Appendix A: Bibliography of Basic Reference. . . .	41
Appendix B: Land Use and Visual Routing Considerations and Special Resource and Visual Impact Routing Considerations	42
Appendix C: Application and Certification Process for Power Plant and Transmission Line Approval Ohio Power Siting Commission, Local Power Com- pany, Local Government, and Public	44
Appendix D: Model Industrial Park Zoning District.	46
Appendix E: Outline of Township Zoning Resolution and Adoption Procedure	56
Appendix F: Model Planned Unit Development Regulations	61

LIST OF FIGURES AND TABLES

FIGURES

Follows Page

Figure 1: Regional Context	2
Figure 2: Site Location	8
Figure 3: Site Area Expected Impacts	13
Figure 4: Plant Location Guidelines	25

TABLES

Page

Table I: Existing Land Use, Sandusky County, Ohio. .	5
--	---

INTRODUCTION

The Coastal Energy Impact Program (C.E.I.P.) was created in 1976 by amendment to the Coastal Zone Management Act of 1972. The Program was designed to assist coastal states and units of local government in the mitigation of impacts related to coastal energy activity. One basic aspect of the C.E.I.P. is its Planning Grant element. The primary thrust of the C.E.I.P. Planning Grant is to plan for the various economic, social and environmental consequences of new or expanded energy facilities, and, in particular, to plan for the impacts of those facilities which have been determined will have a significant effect upon the coastal zone.

The Sandusky County C.E.I.P. has been established to evaluate potentially significant impacts resulting from the location of an electric generating facility on the southern shore of Sandusky Bay. This program was developed in response to the assembling of 3,890 acres in Riley and Townsend Townships by Ohio Power, Inc. (OPI) through Franklin Real Estate Company. A meeting was held with Ohio Power representatives to determine their plans for this large tract of land. By holding this meeting it was discovered that their ten year forecast does not indicate the development of this site, nor does it identify what type facility (coal-fired or nuclear) would be proposed for the property. Nevertheless, it was ascertained that

at most only 400 to 500 acres of land would be required to develop the power facility. To allow for a certain design flexibility a maximum reserve of 800 acres would be needed for the development of the power facility and for a sufficient land use buffer around the plant. Ohio Power officials have indicated that while they will continue to keep their site development/nondevelopment options open for the site, they are willing to work with the county to assure that proper consideration is given to the development of the site. Figure 1, "Regional Context" shows the regional location of the Ohio Power site and Sandusky County.

This report summarizes the findings and recommendations that were developed in response to the potential construction of a power plant facility on the Ohio Power, Inc. site.

The major components of this report include:

- I. Analysis of existing site conditions, in order to establish the expected impacts that may occur due to power plant construction.
- II. Identification of the County's policy objectives in regard to their effect on the development of the power plant site.
- III. Identification of alternative County development options, based on the possible plant impacts and valid county objectives.
- IV. Delineation of siting and development policy recommendations, which would include plant location

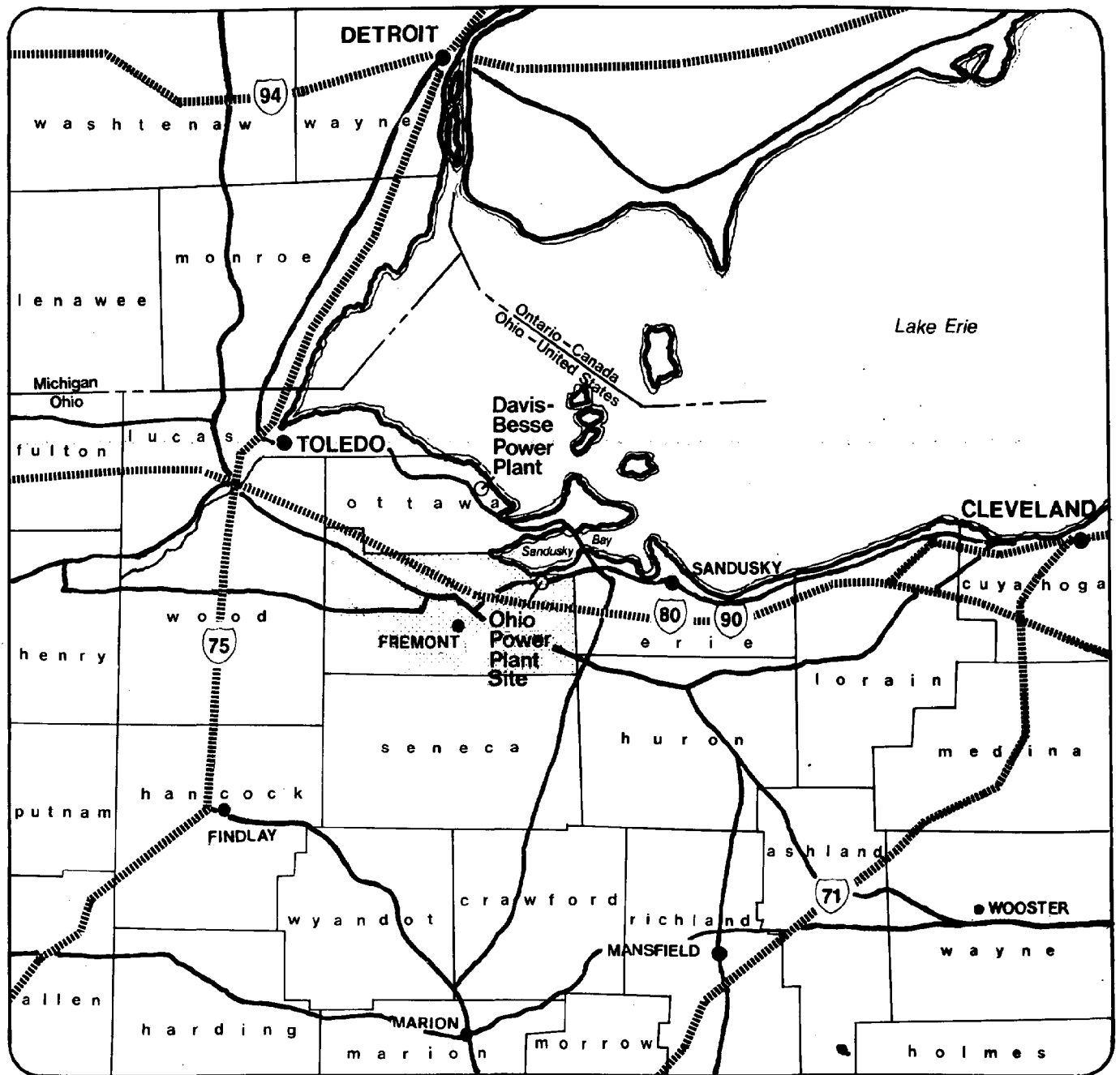
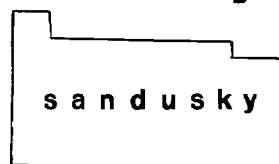


Figure 1. Regional Context

The preparation of this map was funded under the Ohio Coastal Energy Program. June 1979

Evaluation of Energy Facility Impacts Sandusky County, Ohio



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recommendations, a land use policy for the area surrounding the plant, including land not needed by Ohio Power, and general transmission line considerations.

- V. Identification of steps to implement plant and land use policies to mitigate the plant's impact on both the eastern half of Sandusky County and the areas on, and immediately adjacent to, the proposed site. Many of these steps may be taken even though a plant will not be constructed for several years.

DATA ANALYSIS AND SUMMARY OF EXPECTED IMPACTS

The following material summarizes existing county-wide and site area conditions. The intent of this analysis is to establish the possible impacts that would occur if the power plant was to be developed. This section is a synopsis of the background information that was used in developing the policy recommendations. Included, are only a few of the maps that were used to develop the policy. Other maps are available to review in the Regional Planning Commission office.

Background on Sandusky County

Land Use

Geographically, Sandusky County lies in a region that

is largely agricultural. Eighty percent (80%) of county land is used as farmland, with primary income crops of vegetables and cereal grains. The county's overall farm yield rating is 50% above the national average, identifying agriculture as one of the county's primary "industries".

At the turn of the century, the region began to industrialize in the communities of Toledo, Lorain, Elyria, Fostoria, Sandusky, Norwalk and Findlay. Over the last three decades industrial land use in Sandusky County has likewise increased. A large portion of this industrial growth has been in resource extraction, such as the mining of limestone.

A significant portion of the county is in Wetland condition. Much of this land is privately-owned, and serves as hunting and fishing areas for rod and gun clubs. This land area is important as water fowl and wildlife habitats, and is used for purposes of conservation and recreation. Table I enumerates existing land use in Sandusky County as noted in the Sandusky County Regional Development Plan (1973-1974).

It is expected that, on the whole, the county-wide change in land use will not be appreciably altered by the construction of a power facility alone. Sandusky County will not attract new industry that would have located in a nearby county simply due to the develop-

TABLE I
EXISTING LAND USE
SANDUSKY COUNTY, OHIO

<u>Land Use Category</u>	<u>Acres</u>	<u>Percent of County</u>
Developed Areas	23,178	8.7
Residential	10,350	3.9
Commercial	1,620	0.6
Industrial	2,900	1.1
Recreation	1,278	0.5
Public & Semi-Public	7,030	2.6

Undeveloped Areas	243,062	91.3
Agricultural, Woodlands,		
& Vacant	237,722	89.2
Wetlands	5,340	2.0

County Totals	266,240	100.0

Source: Sandusky County Regional Development Plan, 1973-1974.

ment of the plant. Various other conditions would also have to occur (such as improved highway access and sewer services) to promote this additional growth. While there is no special advantage of locating a business adjacent to the plant, some spillover commercial/industrial development may occur due to increased vehicular activity on Route 6. In addition, it is the expectation that some industrial and commercial firms may locate in Riley and Townsend Townships instead of other areas of the county, to take advantage of reduced tax rates.

The real advantage of locating in the power plant vicinity occurs when a locality is able to reduce its taxing rate due to the tremendous tax increase generated by a new power plant facility. For example, preliminary estimates indicated that the Perry Nuclear Power Plant in Lake County, Ohio would generate approximately \$25,000,000 annually to the local school district, County, municipality and township where the site is located. At the County level this translates to roughly \$120 per capita in annual taxes generated, based on the 1975 estimated population. Also, on a local basis, it is estimated that the Davis-Besse Plant currently generates about \$6,000,000 local taxes reflecting an over \$200 per capita annual tax. Due to the relative similarities in general location,

land values, tax rates and adjacent land uses, it is projected that Ohio Power's proposed plant would generate revenues at a scale approximately that of the Davis-Besse Plant.

Population

Currently Sandusky County has a population of about 64,000 which is up nearly 1,000 residents from 1975. Based on the 1976 population projections, and indications that growth rates, in an agriculturally-based region will continue to decline, the 1975--2000 growth projection would be 12% over that period, or a total of about 68,300 residents in Sandusky County by the end of the century.¹ This projection differs greatly from previous population projections that put the growth rate in excess of 48% to the year 2000.² Clearly, Sandusky County is experiencing a moderate population growth rate well below expected levels. It is felt that the effects of the possible power plant construction on the county's population growth would be minimal, and that a moderate growth rate can be expected to continue.

Background on Site Area

The Ohio Power site is located approximately 7 to 9

¹U.S. Bureau of Census, P -25 update.

²Regional Development Plan, Sandusky County, Ohio
Floyd G. Browne & Associates, Ltd., Marion, Ohio (1973-74).

miles from the city of Fremont along U.S. Route 6. Nearly 75% of this potential plant site lies in Townsend Township, with the remaining land area, some 1000 acres, situated in Riley Township. Of these two townships only Riley Township has zoning. Figure 2, "Site Location", illustrates the relationship of the Ohio Power site to the eastern half of Sandusky County. From this map one can compare the relative size of the Ohio Power land holdings to the city of Fremont and see the need for concern regarding the proper use of the OPI site.

1. Land Use and Soil Conditions

Historically, little development has occurred in or near the site area. In recent years some housing has been developed, but with severe soil limitations for much of the area, extensive residential construction is not expected. There are, however, existing residential concentrations at White's Landing, northeast of the site, at Vickery and Erlin, south of the site, and in the area near the intersection of U.S. 6 and T.R. 256, just west of the site.

Although soils in Sandusky County have been proven to be very productive as cropland, the soils that exist throughout the site area are not as productive.³

³Discussion notes, Jack Battles, Sandusky County District Conservationist, April 1979.

Nearly 1400 acres (30%) of the site are currently used for agriculture. The remaining land area is made up of open fields and forested and non-forested wetlands. In contrast to this, the surrounding area, within ten miles of the site, is approximately 70% farmland, and attests to the productivity of the region's soils.⁴

As established earlier, the maximum amount of land required for development of the power facility is about 500 acres. This represents a change of about 12% of the 4,000-acre site. However, as has been emphasized, much of the farmland which would be converted could be classified as moderately productive. Since the yield producing capability of the site is considered to be relatively moderate, the impact of the power plant facility on the site area can be considered slight. In addition, it is expected that through the proper location of the power plant on the OPI site that the land surrounding the site would continue to be productive in agricultural use.

2. Environmentally Sensitive Areas

Shoreline Erosion

Because of intensive wave action, longshore currents,

⁴Site Qualification Studies for Electric Power Generation Sandusky Bay, Ohio, written for the American Electric Power Service Corporation by the Battelle Institute, Columbus, Ohio (1973-74)

ice-scouring during the winter months, and the plasticity of local soil types, the shoreline and nearby areas are highly susceptible to erosion and flooding.⁵ It is expected, that by the year 2000 that the shoreline will be 140 feet further inland due to this erosion. Currently, Ohio Power is making use of piled quarry stone to control erosion. Yet, even with these attempts at erosion control, the shoreline remains one of several environmentally sensitive areas near the site that could be adversely effected by improper location of the power plant facility.

Marshland

Another environmentally sensitive area is the marshland in the northwestern quadrant of the site. This area, surrounding Muddy Creek Bay, is a fresh water estuary and serves as a significant natural wildlife habitat. Since drainage of soils in this area is very poor, the northwest corner of the site experiences seasonal high water, and the potential for flooding. Private clubs have obtained most of this land and are holding it in conservation, which is the only proper use for this land.

Creeks

The Racoon and Little Pickeral Creeks flank the

⁵ibid.

Ohio Power site, and are also considered sensitive as water surface and wildlife habitat areas. These estuaries sustain the fragile balance of the natural environment in the entire Sandusky Bay area. Both areas have been nominated as Geographic Areas of Particular Concern under the Ohio Coastal Zone Management Program administered by the Ohio Department of Natural Resources.

Miller's Blue Hole

Miller's Blue Hole, located less than a half mile east of the plant site is another unique feature within the site vicinity. This hole is actually an underground spring, with similar ecological qualities that exist in the larger more popular "Blue Hole of Castalia". The county has already proposed the development of a recreation area which would provide access for interested visitors to this unique hard water spring.

The impacts that occur to these environmentally sensitive areas could be severe if improper location and development decisions are made. According to the environmental study of this area by the Battelle Institute, construction activities on the Ohio Power site might impact upon siltation and turbidity of Pickeral Creek and Sandusky Bay due to ground cover removal and off-site drainage.

Generally, however, it is not expected that plant development will directly impact or disrupt forested wetlands, open estuaries or flood prone areas in the vicinity; provided that the surrounding ecological systems are protected.

3. Recreation

Much of the land that is considered environmentally sensitive is also important for use as recreation. In the Muddy Creek Bay area for example, various private organizations provide members with great hunting and fishing opportunities. On the other hand, very few recreational opportunities exist in the Sandusky Bay area for public recreational use. There is a general lack of public use of, and access to the bay due to private ownership of lake front property. Public access to the lake has been proposed in previous county reports, and could be achieved somewhere within the excess land of the power plant site. Considering the fact that Ohio Power has much more land than they need to develop a power plant facility, the possibility of using some of their excess land seems good.

4. Transportation

U.S. Route 6 passes through the Ohio Power site

less than a mile from Sandusky Bay. In an effort to provide relief for the considerable traffic that travels this route, a proposal has been made to relocate the route to the south (see Figure 3 "Site Area Expected Impacts"). Due to a variety of uncertainties, however, the Ohio Department of Transportation does not consider the Route 6 relocation to be a high priority.

The Ohio Turnpike, which is located just south of the O.P.I. site, provides the county with good east-west access to numerous major metropolitan areas. Potentially, this accessibility could be greatly enhanced if the Turnpike goes toll free in the 1980's. If the Turnpike becomes a toll free highway, there would be considerable public pressure for the construction of additional local interchanges. One of the probable interchange locations would be S.R. 510 and S.R. 412, which intersect the Turnpike in about the same location. This possible interchange would provide convenient access to the power site vicinity, and would act as the catalyst for commercial or industrial development within the area. If the interchange is developed without the construction of a power facility on the O.P.I. site, it is the expectation that the same development pressure will be apparent within the area.

This is true regardless of the development of the power facility since there would be a large amount of assembled land that would have convenient access to the turnpike.

Figure 3 "Site Area Expected Impacts" summarizes the impacts mentioned above.

II. POLICY PLAN OBJECTIVES

In the past, the county has recognized the potential construction of a major power plant facility without developing a policy to plan for its impact. This is largely due to the fact that the construction of the plant was viewed as being in the distant future. While this may be the case, the County should be prepared now to address any impact that may occur due to the development or non-development of the 4000 acre site. This section of the report summarizes the major existing county objectives, related to the power plant site. These objectives were used to establish the policy for the proper use and development of the O.P.I. site. These objectives represent the County's current position regarding:

A) projected county-wide growth; B) transportation and access; C) industrial development; D) recreation and preservation; and E) zoning and land development regulation.

A. County-wide Growth

As of yet the County has not formally adopted a specific growth objective that it feels to be appropriate for county-wide development. There have been certain indications, however, that more growth has been expected than has actually occurred. The population projections for Sandusky County, contained in the Regional Development Plan completed in 1973, are unrealistically high and are not consistent with existing regional trends. According to U.S. Census estimates the 1975 population for Sandusky County was 63,019 residents, instead of the 69,500 population project indicated in the Regional Development Plan.⁶ Clearly this establishes a more moderate county-wide growth rate than was previously expected. Even with the development of a power plant facility, the annual population growth rate for the county is not expected to appreciably increase since the permanent operational manpower required for such facilities is relatively small. Based on these regional growth trends, the County should adopt a corresponding moderate growth objective that is realistic for the future.

⁶U.S. Census "Population Estimates and Projections" (series P-25).

B. Transportation and Access

There are several access and transportation issues which are related to the potential impact of the power plant site. These issues include: public access to Sandusky Bay, the relocation of U.S. Route 6, the addition of interchanges along the Ohio Turnpike, and the maintenance of the Norfolk and Western Railroad right-of-way.

Public Access Objective

Currently there exists limited public access to the shoreline of Sandusky Bay. Needs associated with this would include improved highway access, public parking areas and boat launching areas, all of which could be accommodated on the O.P.I. site. It is felt that the County's best interest would be served by achieving the objective of providing public access and use of the Sandusky Bay area. Coordination of this objective should be accomplished through the Sandusky County Park District.

Relocation of Route 6

The Ohio Department of Transportation twenty-year plan recommends realignment of U.S. 6 to

include two possible interchanges in the areas, all of which would be undertaken in association with the development of a power-generating facility on the site. However, such a proposal for rerouting U.S. 6 is not considered to be important since an additional right-of-way would need to be assembled which would be disruptive to the area. It is believed that the County's objective should be to improve the condition of the existing Route 6.

Ohio Turnpike

As has been discussed the Ohio Turnpike is under consideration for toll-free status sometime in the 1980's. The County's interests are best achieved through the objective of promoting the construction of selected local interchanges if the Turnpike goes toll-free. This objective is established to provide more convenient access to this major expressway. As previously stated, an additional interchange near the power plant site would provide excellent access opportunities and would probably spur industrial or commercial development in that area.

Norfolk and Western Railroad Right-of-Way

Currently, there is a railroad right-of-way

that passes near the O.P.I. site, which is owned by Norfolk and Western. It is in the County's best interest to encourage the preservation of this right-of-way for possible future use by the power plant facility. It is felt that the reuse of an existing rail right-of-way is preferable to the assembling of a new right-of-way through the area. While the line is not currently operational, maintenance of the right-of-way is essential.

C. Industrial Development Objectives

Currently, no specific county plans have been formulated or adopted which are directly related to industrial development. There are, however, certain relevant objectives that pertain to future industrial development in the County. The major thrust would be to provide land in sufficient size and of suitable type and location to meet new industrial needs. This objective could be largely achieved by the use of portions of the O.P.I. site that are not required for construction of the plant. This objective would have to be weighed, however, against the desire to keep industrial development closer to population centers.

Other relevant industrial objectives include:

1. Locate industry based upon adequacy of utilities and transportation.
2. Assure environmental protection by the appropriate location of nuisance producing activities so as to minimize their effect on the County.
3. Plan for utilities adequate to meet the needs of industry in Sandusky County as it develops.
4. Develop new industry in planned industrial parks. (See Appendix D).

D. Recreation and Preservation Objectives

The primary County objectives to be addressed here include: the promotion of an adequate system of parks and conservation areas, measures to control the eroding shoreline along Sandusky Bay, the preservation of streams, swamplands, and wetland areas, and the preservation of farmland south of the development site. It is recognized that not all of the Ohio Power, Inc. owned property will be necessary for the facility's development. The use of some of this excess land for purposes of recreation and preservation can be incorporated into an objective that the County should pursue. The recreation and preservation objectives include:

1. To preserve stream areas and watersheds for areas of natural beauty, open space and recreation.
2. Use open space as a means of protecting major agricultural areas, stream courses and flood plain encroachment.
3. Encourage the development of private institutional lands in coordination with the open space plan.
4. Encourage the potential for continued and additional recreation activities in the Sandusky Bay Wetlands area which is a unique water, fowl and wildlife habitat.
5. Land should be acquired in the Raccoon and Pickeral Creek areas, marsh areas and Ohio Power, Inc. holdings in order to conserve these areas for public use. Nearby creek conservation areas were identified as:
Little Pickeral Creek, Green Creek, Sandusky River, Muddy Creek, Muskelunge Creek, Sugar Creek, Portage River, Bark Creek and Toussaint Creek.
6. Should the power plant not be built, the Sandusky County Park District has established a policy of working toward the acquisition and development of the site as preserved lands for recreation.

7. Finally, protection of watershed areas, protection of air and water resources, prevention of premature subdividing, preservation of areas of natural policies have been developed by the County.

F. Land Development Regulation Objective

The Regional Development Plan recommends that the local communities adopt and enforce community development controls (primarily zoning ordinances and subdivision regulations) so that growth in the County will proceed in an orderly and appropriate manner. Although Riley Township has zoning, it is felt that both Riley and Townsend Townships have not fully utilized all the legal means available to limit growth in areas considered less desirable for development from either an economic or soil suitability standpoint. Because of this, these townships do not have the sufficient tools to respond and regulate future development on or around the power plant site. In the best interest of the County, and these two Townships the following land development regulation should be adopted:

- To write and enforce community development controls for those communities that do not have them, to regulate the use, height, bulk, and setbacks of

structures especially in areas of scenic importance, and environmental concern.

This objective would be valid regardless of the timing of the development of the power plant facility. Appendix D presents a model industrial park zoning district for consideration.

III. ALTERNATIVE COUNTY DEVELOPMENT OPTIONS

There is a certain amount of flexibility within this set of objectives that enables the county to adopt various development postures. These include:

A) a preservation option, B) an industrial development option, and C) a residential development option

A. Preservation Option

The County could pursue an aggressive preservation approach which would discourage land development around the plant facility. This approach would fervently pursue the preservation objectives previously stated and would discourage any development of land in this area by directing this growth in other areas of the County. By adopting this preservation posture the County would assure the promotion of: continued agricultural use of land in this area, the strict conservation of environmentally sensitive habitats in this vicinity, and the creation of regional

recreational facilities for the use of county residents. This option encourages the maintenance of existing conditions without providing for any growth in the area.

B. Industrial Development Option

A second County development option would encourage the construction of industries in or near the power plant site. These industries would take advantage of the potential access improvement created by the potential interchange on the Turnpike and S.R. 510, and of the assembled land left over from plant development. The County would encourage the location of industrial development in this area to provide additional tax base and needed employment opportunities. This option encourages the growth and development of the area without being particularly sensitive to environmental concerns.

C. Residential Development Option

A final development posture would be to encourage residential development on land adjacent to the O.P.I. site. This posture is not a viable option for the County to pursue since it would promote primarily residential development in an area that

cannot support extensive residential growth. Soil conditions in this area, are not being favorable to any building construction, and are particularly prohibitive to the construction of new housing.⁷ In addition, it would not be advisable to promote residential growth in an area that is so far removed from necessary public services. Many of these constraints do not apply to industrial development.

It is evident, that the County needs to select a development posture that provides the maximum advantages that are apparent in these development options. The following policy recommendations reflect the County's best position to make use of these advantages. It should be emphasized that many of these policy recommendations will still apply regardless if the plant is not built.

IV. SITING AND DEVELOPMENT POLICY RECOMMENDATIONS

Based on the policy directions that the County should pursue, the following siting and development recommendations are made. These recommendations concern the proper location of the power plant facility on the 4000 acre site, surrounding land use implications, and potential transmission line considerations.

⁷This is largely due to economic considerations

A. Plant Location Guidelines

The most suitable location for the development of the power plant is on either side of U.S. Route 6 near the middle of the site (see Figure 4 Plant Location Guidelines). The reasons for this location include:

1. The plant should be developed in a location that has convenient vehicular access and that has sufficient space for a permanent buffer zone.
2. The plant should be located as far as possible from vital water areas, where water is either withdrawn or discharged. This implies sufficient setback from the land and wetland areas.
3. The plant should not be built in the wetland, grassy marsh, or swampy areas which are critical to the ecological function of wildlife, nor should these areas be altered in any way during plant construction.
4. The plant should not be built at elevations below flood plain level nor should it be built in lands adjacent to wetlands which ought to serve as conservation buffer zones.
5. The plant should not be located near existing residential areas.

B. Surrounding Land Use Implications

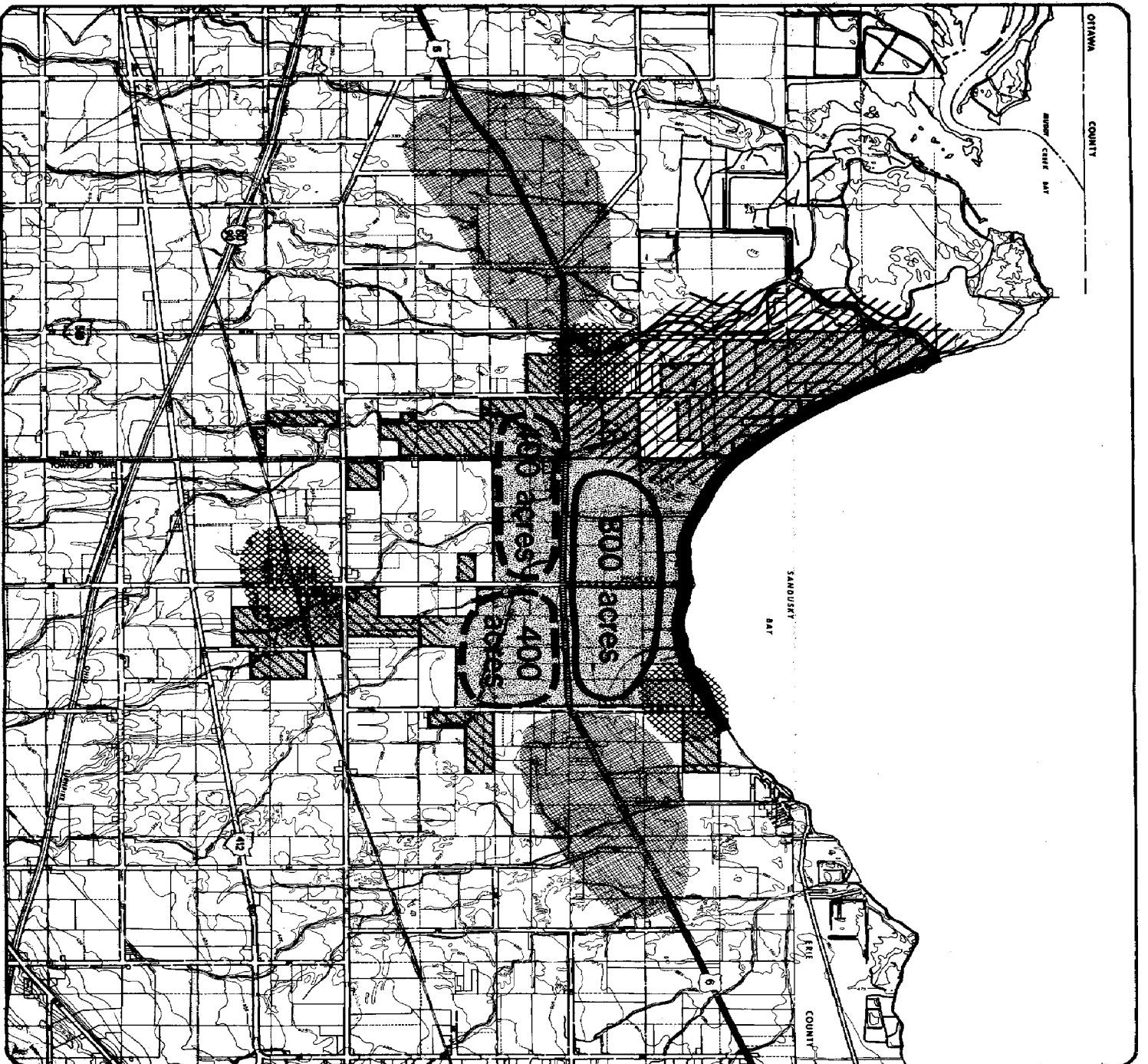


Figure 4.
Plant Location Guidelines

- Preferred Plant Location
- Alternative Plant Locations
- Conservation Area / Poor Soils
- Developed Areas
- Shoreline Erosion Area
- Inappropriate Plant Location Due to Inadequate Access and Lot Size
- Coastal Zone Management Boundary / Route 6
- Potential Spillover Development
- Ohio Power Inc. Site

The preparation of this map was funded under the Ohio Coastal Energy Program. The base map was compiled from Sandusky County Township maps provided by the Sandusky County Engineer, and U.S. Geological Survey maps. June 1979

Evaluation of Energy Facility Impacts Sandusky County, Ohio



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1. Industrial Policies

Based on alternative development options (section III) the land not used for the power plant facility may be used for industrial or scattered commercial development.

It is felt that not only the plant itself but the aggregate effect of the site, improved access roads, and highways, existing adjacent land uses, etc., will attract some new development to an "industrial zone". Unless precautions are taken as a matter of local policy, industrial development could negatively impact established policy plan objectives. Even if this area is not the best industrial location in the region, the County should have an adopted policy in case this development does occur. (See Appendix D). The following recommendations have been established in order to allow for proper facilitation of industry near the plant:

- a. Industrial locations should be selected and planned in areas along U.S. 6 and also south of U.S. 6 on the present site area so that environmentally sensitive areas can be avoided as well as enabling the use of site development amenities to both stimulate and allow for proper

industrial park development.

- b. Industrial locations should also be placed away from the Sandusky Bay shoreline and estuaries to prevent discharge of toxic or hazardous materials into these areas during both construction and operation of industries.
- c. Industrial parks should be required to provide a central sewage treatment facility for the protection of the sensitive local environment.
- d. Finally, various industrial development issues need to be explored to determine the County's position on dispersed vs. concentrated industrial uses, multiple use vs. single site development, and specific on and off-site limitations to expansion or reconstruction. However, these issues cannot be fully explored until further plans for the site are developed and presented by Ohio Power.

2. Preservation Policies

As has been stated in previous studies of this region, the environment of the County is somewhat fragile. This is particularly

true in land near Sandusky Bay, and for parts of the 4000 acres that Ohio Power owns. Therefore, it is exceedingly important for the County to develop a set preservation policy in anticipation of action taken by Ohio Power. These policies are necessary whether a power plant is built or not.⁸ Ohio Power may be willing, based on this plan, to establish their own development policies that are acceptable to the County. This would give O.P.I. sufficient future flexibility to develop their site, while it would enable the County to go ahead and implement their plans now.

a. Environmentally Sensitive Areas

For those excess lands not sold by Ohio Power, Inc. but which are not important to the functioning of a power plant, it is recommended that O.P.I. be encouraged to dedicate or donate part of the undisturbed site area for the purpose of a game and wildlife preserve. In the case of the Davis-Besse Plant, wetland areas (the Navarre Marsh) were donated as wildlife preservation to enlarge onsite marsh habitat under the

⁸ If development does not occur then the disposition of the 4000 acres of land could have a major impact on Sandusky County.

U.S. Department of Interior's, Fish and Wildlife Service property purchase and donation program.

In addition, it is recommended that adequate erosion control measures be taken along Sandusky Bay by Ohio Power. The County should begin discussing this matter soon with Ohio Power officials.

Conservation of the Little Pickeral and Raccoon Creeks will enable a natural buffering between the site and adjacent areas. It is recommended that continued effort in this direction be encouraged by the County in order to provide buffers and also near-site access to the Bay for recreational purposes.

b. Agriculture

With the development of the power plant facility, there will be some development pressure on the surrounding farmland.

The County should continue to encourage the use of much of the surrounding area for agriculture, by:

- Limiting the scattered development of residential areas. The conditions of much of the soil in this area aids in

this regulation, yet scattered housing construction caused by the local variability of the soils can be more detrimental to the preservation of farmland than controlled large lot subdivisions.

- Encouraging the continuation of agricultural practices where appropriate by providing for some in local zoning ordinances. Particular emphasis should be placed on minimizing nuisance provisions of agricultural practices on adjacent land uses.

- Encouraging the utilization by county farmers of current Agricultural Use Value Assessment (AUVA). The County should provide educational information concerning this constitutional incentive for agricultural production.

c. Recreation

As has been mentioned earlier, only a portion of the 4000 acre site would be needed to develop the power plant. It is recommended that Ohio Power be encouraged to enter into an understanding with the County, whereby O.P.I. offers the "right

of first refusal" to the County for purchases of unused property for recreational use. The County's decision to acquire land in this manner, would have to reflect its needs and ability to purchase recreational land both now and in the future.

If the County is able to secure land along Sandusky Bay, picnic and beach facilities should be made available for controlled public use in that area. This could be accommodated as a result of improved access to the shoreline area. Other site area recreation potentials should also be investigated, such as a fishing pier, or public boat-ramp facility.

C. Transmission Line Considerations

In the event that the power plant is developed, there will be a certain amount of transmission lines that will radiate from the site. While there is insufficient detail at present to determine the exact numbers and location of these routings, it is possible to identify certain land use and visual impact guidelines which, when used judiciously, will enable the proper siting

of the transmission line towers. These Land Use and Routing Considerations are located in Appendix B.

V. IMPLEMENTATION

There exist several major considerations for the implementation of the afore-mentioned policy recommendations. The primary steps toward implementation of the Policy Plan would include the development and improvement of local Land Development Codes, a specific Recreation and Conservation strategy, an Industrial Development Incentives Plan, a Transmission Line Routing Placement and Impact Mitigation Plan, and the ongoing monitoring of the status of O.P.I. plans. These necessary steps will help the County achieve its fundamental goal of protecting and enhancing the economic, social, cultural and aesthetic values that established the desirable quality and unique character of the Sandusky County. These steps can proceed and be of benefit to the county, now, even though the plant may not be developed for some time to come.

A. Land Development Codes

1. Townsend Township Zoning Resolution

Most of the land owned by Ohio Power Company lies in Townsend Township. In addition, most of the off-site impact (increased commercial and industrial development) of an energy-generating facility will be in this Township. Unfortunately, Townsend Township presently is unzoned and the likelihood of zoning being enacted soon, without the initiation of a multi-step enactment program, is slight. Local citizen review of this updated plan should be conducted to provide an acceptable foundation for a new zoning resolution. The second phase would entail an educational/public awareness program aimed at the residences of the Township to "sell" them on the advantages of enacting zoning in the township. Promotional materials (brochures, graphics, maps and information) would need to be developed to promote the need for zoning. The promotion would be based on an outline of appropriate standards which could be included in the code. The Sandusky County Regional Planning Commission and the Township Trustees would then host meetings, utilizing the above materials, to explain the advantages of zoning. Appendix E outlines

the basic elements of a zoning resolution for Townsend Township and adoption procedures.

The final work would begin to complete a zoning document (resolution and map) that promotes the conservation and development goals articulated by township officials and citizens. During this phase close cooperation between the County and Township officials would be necessary. This work would culminate in the placement of the zoning issue on the ballot for voter approval.

2. Riley Townships Zoning Resolution

The remainder of the site lies and impacts upon Riley Township. It is recommended that, in order to ensure the enforcement of recommended programs designed to protect wetland areas, including federal and state programs, that local zoning both conform to and provide for such programs. The process used to expedite acceptance of the revised resolution would be quite similar to the process which is recommended to be employed for Townsend Township with the exception that, voting will not be required to adopt the changes.

3. County Planned Unit Development Ordinance

Planned unit Development (PUD) is a technique being increasingly utilized to promote innovative development. Basically it involves utilizing the overall density of zoning but allowing clustering of development to appropriate areas of the site. To be effective PUD's must be negotiated within a reasonable framework that protects the communities' interest while allowing the developer flexibility to innovate. Appendix F herein illustrates a model set of PUD regulations.

B. Recreation and Conservation Strategy

Even though possible construction of an energy facility is several years off, the County should proceed now to take steps to preserve open space in areas along the Sandusky Bay. The work effort could include:

- a) Identifying specific areas for conservation and recreation.
- b) Developing plans for public access and recreational development, if appropriate.
- c) Exploring potential funding to implement the established objectives.
- d) Working with Ohio Power to either secure their land now or have Ohio Power agree to

give the County "right of first refusal" if the land is to be ultimately sold for conservation/outdoor recreation uses.

Ohio Power after reviewing the development concepts, has recognized that some of the lands may not be needed to meet even with their most ambitious power plant needs. Means of securing open space could be identified, explored, and implemented now to complement the County's existing open space system even though the plant may be years away.

C. Industrial Development Incentives Plan

One of the development options considered in this study includes industrial uses on the portion of the Ohio Power site which was not needed for the plant. This land could be attractive to industry since a large tract of land has already been assembled. Furthermore, if property taxes are reduced in Riley and Townsend Townships by the building of a power plant, the site's attraction for industry would be increased. This is especially true with the construction of the potential Turnpike interchange at S.R. 510.

Conversely, however, Riley and Townsend Townships might not be the most desirable areas of the county for industrial development. This element would explore the potential for industrial activity in

Sandusky County and identify priority sites. These findings would be compared with local and county objectives. If there is potential for industrial activity, specific steps needed to achieve economic development could be explored. This implementation strategy could include the use of tax revenue generated from the power plant to make necessary capital improvements. Even if the plant were not constructed this element could provide the County a completed industrial development package that could be utilized to explore other means of funding and implementation.

D. Transmission Line Routing Placement and Impact Mitigation Plan

Presented in Part IV of this report were a number of general transmission line routing guideline policies. It is recommended that a more detailed study be conducted to delineate broad corridors (or routes) in the County which would conform to Ohio Power's needs while minimizing the negative impacts on county residents. This analysis would be expressed in terms of amount of displacement of existing activities and potential for multiple use of transmission line rights-of-way. Various means and methods would be identified as "typical situations" for the impact mitigation of transmission lines and

and towers on different land uses, overall aesthetics of the areas, and upon special resources or features such as historic and archaeological sites. The final aspect of such a Plan would be to investigate and make recommendations for the possibilities of exploiting potentially advantageous impacts of the line in local areas such as the multi-use of rights-of-way for recreational purposes.

E. Monitor Status of O.P.I. Plans

A final, but perhaps most important step in implementing this Policy Plan, is the ongoing monitoring of the status of Ohio Power plans. This element would alert County officials to any action Ohio Power might take regarding the use and/or development of the site. Awareness of Ohio Power's plans is essential for the County to remain abreast of any development or nondevelopment decision that might effect the stated objectives of this plan. To accomplish this, it is recommended that:

1. Periodic contact with officials of Ohio Power be maintained. Meetings should be held soon with Ohio Power to discuss this report. Subsequent discussions could focus on ways to implement the various county objectives contained in this document.

2. County officials should become familiar with the Application and Certification Process for power plant location approval. Any application for development of a power facility must be advertised in local newspapers in the areas effected by proposed plant development. It is important that county government be informed of any applications before they are made public so that it might take a "proactive" position rather than a "reactive" one.

APPENDICES

APPENDIX A

BIBLIOGRAPHY OF BASIC REFERENCE

1. American Electric Power Company, Inc., 1977 Annual Report.
2. Battelle Columbus Laboratories, Phase I and Phase II Reports on Site Qualification Studies for Electric Power Generation, Sandusky Bay, Ohio to American Electric Power Service Corporation, 1973-74.
3. Goodland, Robert, ed., University of Massachusetts, Biotic Management, Along Power Transmission Rights-of-Way. (The Cary Arboretum of the New York Botanical Gardens, 1973).
4. Great Lakes Basin Commission, Energy Facility Siting in the Great Lakes Coastal Zone: Analysis and Policy Options, 1977.
5. Mitre Corporation, Resource and Land Investigations (RALI) Program Considerations in Evaluation Utility Line Proposals (for the U.S. Department of the Interior, Bureau of Land Management; National Technical Information Service, 1975).
6. Ohio Department of Natural Resources, Ohio Coastal Zone Management Program: Public Review Draft, Division of Water, Coastal Zone Management Section; Spring 1979.
7. Ohio Power Siting Commission Citizen Participation, 1978.
8. Ohio Power Siting Commission, Rules and Regulations, 1974 with updates.
9. Ohio Rail Transportation Authority, Preliminary Draft "Rail Ohio": The Rail Plan for Ohio, 1978-79.
10. Ramsey, William and Philip R. Reed, Land Use and Nuclear Power Plants: Case Studies of Siting Problems, U.S. Atomic Energy Commission, Directorate of Regulatory Standards, 1974.
11. Sandusky County Regional Planning Commission, Regional Development Plan, Sandusky County, Ohio, 1973-74.
12. Stanley Consultants, Site Report, Volume II Perry-Macedonia-Inland 345 KV Transmission Line, (The Cleveland Electric Illuminating Company, 1975).
13. U.S. Atomic Energy Commission, Environmental Statement by the United States Atomic Energy Commission Directorate of Licensing for the Davis-Besse Nuclear Power Station Operated by Toledo Edison Company and Cleveland Electric Illuminating Company, 1973.
14. U.S. Department of the Interior, U.S. Department of Agriculture, Environmental Criteria for Electric Transmission Lines: (U.S. Superintendent of Documents; 1970).
15. U.S. Department of Commerce, Population Estimates and Projections: 1973 (Revised) and 1975 Population Estimates and 1972 (Revised) and 1974 Per Capita Income Estimates for Counties, Incorporated Places, and Selected Minor Civil Divisions in Ohio, 1977.
16. The Urban Land Institute, Industrial Development Handbook, 1975.

APPENDIX B

LAND USE AND VISUAL IMPACT ROUTING CONSIDERATION:

<u>Criterion</u>	<u>Basic Policy Guidelines</u>	<u>Environmental Objectives</u>
1) Existing Land Use	Where possible: avoid development areas avoid parks and recreation areas route through rural land	Least disturbance of current patterns; least relocation of residences and businesses as possible
2) Restrictive Features	Where possible: make use of existing utility routes avoid airports avoid cemeteries avoid churches and schools avoid standing towers avoid active mineral extraction areas	Least disturbance of special land use activities
3) Potential Land Use	Where possible: avoid potential industrial, commercial and residential areas avoid highway intersections avoid highway parallel routes	So that future options are not significantly curtailed by the line or right-of-way
4) Multiple utility right-of-way usage	Make use of opportunities to share existing utility routes. Relative advantages and disadvantages of locating a new line either adjacent to or widely separated from existing transmission lines should be considered.	To reduce change-in-land use occurrences and to accommodate the routing so that right-of-way to avoid unusable spaces in between parallel routes

SPECIAL RESOURCE AND VISUAL IMPACT ROUTING CONSIDERATIONS

<u>Criterion</u>	<u>Basic Policy Guidelines</u>	<u>Environmental Objectives</u>
1) Historic sites	None disturbed or destroyed, if possible	No interference with any important cultural or recreational element
2) Archaeological sites	None disturbed or destroyed, if possible	No interference with any important cultural, educational or scientifically valuable element
3) Natural land areas	Where such exist: avoid governmental designated unique or prime areas avoid steep, north facing slopes avoid previously undisturbed natural landmarks avoid special tree species or grove areas	Maintain terrestrial diversity; retain vegetation on slopes to minimize soil erosion
4) Natural water areas	Avoid all natural lakes, streams, rivers, ponds and waterfalls	No interference with aquatic system diversity of recreational potential
5) Biological study area	Avoid, if options, exist, biological study areas	No interference with such scarce resources
6) Slope of 10% or more	Avoid steep-sloped areas for both structure sites and access roads. Steep slopes are possible for alignment if tower site itself on level ground only	Prevent soil erosion and erosion damage effects. Cut down on construction costs and right-of-way preparation
7) Wetlands and lowlands protection	Where possible, avoid wetlands and poorly drained lowlands. When not possible, minimum disturbance necessary	Prevent damage to aquatic and wetland habitat
8) Wildlife protection	Avoid cutting across wildlife migration paths or disturbing breeding areas	Enable hunting, bird-watching and other outdoor wildlife recreation to continue

APPENDIX C

APPLICATION AND CERTIFICATION PROCESS FOR POWER PLANT AND TRANSMISSION LINE APPROVAL: OHIO POWER SITING COMMISSION (OPSC), LOCAL POWER COMPANY, LOCAL GOVERNMENT AND PUBLIC

Basic Steps

1. Letter of intent submitted by local power company to notify OPSC.
2. Pre-application conference between OPSC and Power Company.
3. Submission of application to OPSC.
4. Certification of application by OPSC. Three steps.
5. Public notice placed in local newspapers; interested state agencies notified and begin to provide response.
6. Notice of intervention filed by local government officials to OPSC for adjudicatory hearings.
7. OPSC Secretary's Report docketed (made public).
8. Public hearing at which time the application is placed in official record and the Administrative Law Judge is assigned.
9. Power company and OPSC may file findings, conclusions and briefs in follow-up to the hearing.

Notes

Must be submitted at least one year before application submitted.

Completeness reviewed by OPSC staff to take maximum of 60 days for approval or disapproval.

1) Power company files with OPSC.

2) Application "served" on local government agencies.

3) Power company provides proof of service to OPSC.

Must be placed within 7 days of filing.

Must be filed within 30 days after the service of the application.

Must be submitted to Commission at least 15 days before the hearings.

Hearing must be held 60 to 90 days after certification of application by OPSC.

Basic Steps

10. Administrative Law Judge submits report and recommendations to OPSC.
11. OPSC approves certification based on 6 statutory criteria.*
12. Power company will commence to construct plant and/or transmission line.

Notes

Or OPSC denies certification.

*Certification approved or not approved depending on whether power company documented:

- 1) Need for facility.
- 2) Nature of environmental impact.
- 3) Facility will have minimum adverse environmental impact.
- 4) Transmission line will be consistent with the regional power grid.
- 5) Facility will comply with air and water pollution control standards.
- 6) Facility will serve the public interest convenience, necessity.

Or, power company will file appeals hearing in the Ohio Supreme Court.

APPENDIX D

MODEL INDUSTRIAL PARK ZONING DISTRICT

Section _____: "I-3" Industrial Park District

The purpose of this District is to provide for the park-like development of industry that is based on the performance of an industry as well as the type of industry. In order to secure this type of development, the various regulations herein described must be met. These regulations have been established so as to provide a healthy operating environment for industry, for the protection of industry from encroachment of commercial and residential uses adverse to the operation and expansion of such industry, and to protect industries within the District from the adverse effect of other incompatible industries, and at the same time to reduce to a minimum the impact of industries on surrounding non-industrial land uses; to lessen traffic congestion; to protect the health and safety of the residents or workers in the area; to prevent detrimental effects to the use or development of adjacent properties or the general neighborhood; and to promote the health, safety, morals, comfort, and welfare of the present and future inhabitants of the District.

The following regulations shall apply in the "I-3" District:

A. Use Regulations

1. Permitted Uses

No building, structure, or land shall be used and no building or structure shall hereafter be erected, structurally altered, enlarged, or maintained except for one or more of the following uses:

- a) Dwellings in connection with agricultural operations or as living quarters for caretakers and/or watchmen and their families;
- b) Farming or other agricultural uses;
- c) Governmentally owned or operated buildings and uses;
- d) Heliport;
- e) Office buildings for general office purposes;
- f) Off-street parking for vehicles in connection with uses in the District as regulated herein;
- g) Research, experimental, and testing laboratories;

- h) Signs, as regulated herein;
- i) Underground pipelines, underground electric power and energy transmission and distribution lines, underground or overhead telephone or telegraph lines, overhead electric power and energy transmission and distribution lines not suspended from multi-legged structures, towers, and accessory structures;
- j) Warehouses and storage buildings, not including storage of materials and goods specifically prohibited in subsection A-3 below;
- k) Uses of a light industrial nature not specifically prohibited in subsection A-3 below;
- l) Accessory buildings and uses, swimming pools, recreational facilities, and dining facilities for use in connection with the operation of an establishment and primarily for employees;

2. Special Exceptions

- a) The following uses may be permitted as special exceptions in accordance with the procedures applicable to the granting of a conditional (special) use permit:
 - 1) Airport;
 - 2) Art or cultural center, non-commercial;
 - 3) Public utility buildings and utility structures not otherwise permitted, including overhead electric power and energy transmission and distribution lines suspended from multi-legged structures; above ground pipelines; radio and television broadcasting stations and towers, and accessory structures;
 - 4) Retail sales and consumer service establishments provided that such commercial uses shall not occupy more than 5 per cent of the total floor area of all buildings on any lot or group of contiguous lots in common ownership or control.

3. Prohibited Uses

- a) The following uses are expressly prohibited in the "I-3" District:
 - 1) Recreational or entertainment establishments of a commercial nature;
 - 2) Fuel storage yard;
 - 3) Contractors' storage yard;

- 4) Grist mills;
- 5) Lumber yard;
- 6) Saw mill;
- 7) Stonework;
- 8) Abattoir;
- 9) Stockyard;
- 10) Uses of a heavy industrial nature as defined herein.

B. Performance Standards

It is the intent of these regulations to prevent land or buildings, including those permitted by right or special exception, from being used or occupied in a manner so as to create any dangerous, injurious, noxious, or otherwise objectionable fire explosive, radioactive or other hazardous condition; noise or vibration; smoke, dust, odor, or other form of air pollution; liquid or solid refuse or wastes; electrical or other disturbances; glare or heat; condition conducive to the breeding of rodents or insects; or other substance, condition, or elements in a manner or amount as to adversely affect the surrounding area. Specifically, all uses shall operate in conformance with the limitations set forth below:

1. Vibration

No vibration shall be produced which is transmitted through the ground and is discernable without the aid of instruments at or at any point beyond the lot line; nor shall any vibration produced exceed 0.002g peak measured at or beyond the lot line using either seismic or electronic vibration measuring equipment.

2. Noise

All noise shall be muffled so as not to be objectionable due to intermittance, beat frequency, or shrillness. In no event shall the sound-pressure level of noise radiated continuously from a facility at night-time exceed the specifications published by the American Standards Association. The sound-pressure level shall be measured with a Sound Level Meter and an Octave Band Analyzer than conform to the specifications of the American Standards Association.

3. Air Pollution

- a) Visible emissions. There shall not be discharged into the atmosphere from any source any air pollutant in excess of the darkness limitations listed below. This shall include emissions of air pollutant of such opacity as to obscure an observer's view to a degree equal to or greater than do the visible emissions described below. Visible emissions of any kind at ground level past the lot line of the property on which the source of the emissions is located are prohibited:

No. 1 on the Ringelmann Chart at all times except upon demonstration that the emission contains less than one tenth pound of particulate matter per thousand pounds of dry gases, adjusted to twelve per cent carbon dioxide or fifty per cent excess air.

- b) Materials handling. No person shall cause or permit any materials to be handled, transported or stored in a manner which allows or may allow particulate matter to become airborne.
- c) Particulate matter. There shall not be discharged into the atmosphere any particulate matter in excess of the quantities shown below:
- 1) From refuse-burning equipment, per one thousand pounds of dry gases, adjusted to twelve per cent carbon dioxide or fifty per cent excess air, sixty-five hundredths pound for capacities of over two hundred pounds per hour or less and thirty hundredths pound for capacities of over two hundred pounds per hour. In any one hour period this shall not exceed two hundred fifty pounds. Refuse shall not be burned in fuel-burning equipment.
 - 2) From fuel-burning equipment, six tenths pound per million BTU input for installation using less than ten million BTU per hour total input. For installations using more than ten million BTU per hour total input, the allowable particulate emission, in pounds per million BTU, is determined by multiplying 8.58 times the input, in BTU per hour, raised to the minus 0.165 power.
- d) Threshold values. There shall not be discharged into the atmosphere any contaminant for which threshold limit values are listed for working atmosphere by the American Conference of Governmental Industrial Hygienists in such quantity that the concentration of the contaminant at ground level at any point beyond the boundary of the property shall at any time exceed the threshold limit.

- e) Gaseous emissions. Gaseous emissions shall be controlled by all applicable laws and regulations promulgated by local, area, state, and federal regulations concerning such emissions.

4. Odors

Any condition or operation which results in the creation of odors of such intensity and character as to be detrimental to the health and welfare of the public or which interferes unreasonably with the comfort of the public shall be removed, stopped, or so modified as to remove the odor.

5. Electromagnetic Radiation

It shall be unlawful to operate or cause to be operated any planned or intentional source of electromagnetic radiation for such purposes as communication, experimentation, entertainment, broadcasting, heating, navigation, therapy, vehicle velocity measurement, weather survey, aircraft detection, topographical survey, personal pleasure, or any other use directly or indirectly associated with these purposes which does not comply with the then current regulations of the Federal Communications Commission regarding such sources of electromagnetic radiation.

6. Fire and Explosion

All activities and all storage of flammable and explosive materials at any point shall be provided with adequate safety and fire fighting devices in accordance with such regulations of the State of Ohio.

7. Radioactive Materials

The handling of radioactive materials, the discharge of such materials into air and water, and the disposal of radioactive wastes, shall be in conformance with the regulations of the Atomic Energy Commission as set forth in the Title 10, Chapter one, Part 20--Standards for Protection Against Radiation, as amended; and all applicable regulations of the State of Ohio.

8. Glare and Heat

No direct or sky-reflected glare, whether from floodlights or from high-temperature processes such as combustion or welding or otherwise, so as to be visible at the lot line shall be permitted. These regulations shall not apply to signs or floodlighting of parking areas otherwise permitted herein. There shall be no emission or transmission of heat or heated air so as to be discernible at the lot line.

9. Non-radioactive Liquid or Solid Wastes

There shall be no discharge at any point into any public or private sewage disposal system or stream, or into the ground, of any liquid or solid waste materials except in accordance with all local, state, and federal regulations concerning such disposal.

C. Area Requirements--Net Lot Area--Minimum Floor Area

1. Any tract of land zoned "I-3" shall have a minimum area of fifty acres; except, that a tract with an area of not less than two acres may be permitted where such tract adjoins and has a common boundary with another area zoned for industrial or manufacturing uses. The fifty acre tract shall include any such tract which is or may be separated into two or more parts by existing or proposed streets or utility line properties or easements.

2. Within any "I-3" zoned area, each main building hereafter erected, with its accessory buildings, shall be located on a lot having at least two acres, with the exception of public utility buildings and structures necessary for public convenience and service, which may be located on a lot having an area of one acre.

3. The principal building on any lot used for offices, laboratories, warehouses, and light industrial uses, except public utility buildings and structures necessary for public convenience and service, shall cover a minimum ground area of ten thousand square feet.

D. Required Yards and Landscaped Areas

1. No parking area, loading or maneuvering area shall be located less than 200 feet from the boundary of any residential district or less than 10 feet from any lot line which adjoins another industrial or commercial district.

2. No principal or accessory building above grade shall be located less than 200 feet from the boundary of any residential district.

3. No principal or accessory building above grade, parking area, loading or maneuvering area shall be located less than the following minimum distances from the street right-of-way line or proposed street right-of-way of the following types of streets and highways as designated on the Sandusky County Thoroughfare Plan: all controlled access routes : 100 feet; arterial streets separating an industrial district from a residential district: 100 feet; an arterial street separating an industrial district from a commercial district: 25 feet; all other streets including those within an industrial park: 25 feet.

4. Whenever propoerty that is zoned residential or commercial is owned and/or used by a public utility as a transmission line right-of-way, or is owned and/or used as a railroad right-of way, the setbacks noted above shall be determined as if said proerty were zoned industrial.

5. The required yards set forth above shall be landscaped in accordance with plans approved by the Township. In addition to the yards required on the perimeter of the site, not less than five per cent of the net lot area shall be landscaped. Landscaping shall mean decorative plazas, pools, or the planting of grass, shrubs, or trees, or other comparable surface cover. To the maximum extent possible, driveways within such landscaped areas shall cross said areas by the most direct line and all planting screens or walls required in areas of off-street parking shall be approved by the Township. Such landscaped areas shall be maintained at all times.

E. Street Access and Frontage

1. Each lot shall have a minimum frontage of 150 feet on a street or private drive; provided, however, the Township may approve a lesser frontage to a minimum of 50 feet for lots located on cul-de-sacs or on street curves or having other extraordinary characteristics. Vehicular access shall be permitted only to one of the following types of streets:

a) Controlled access routes: Major highways

b) Local access routes:

1) Major highways

2) Connecting or secondary (arterial) highways

3) A local street or private way connecting only with the above highways and not connected with any residential street.

F. Building Height Limit

1. Within the lot lines, the building heights may be equal to the horizontal distance from the nearest lot line. In no event shall the height of any building exceed one hundred feet unless otherwise permitted by this resolution.

G. Lot Coverage

1. Not more than twenty-five per cent of the area of the lot may be covered by buildings including accessory buildings.

H. Spacing Between Buildings

1. On the same parcel, no two buildings shall be located closer to one another than a distance equal to the height of the lower building measured perpendicular from the face of each building, provided that when the adjacent walls of such buildings are not fenestrated, the equal distance separation shall not apply.

I. Signs

1. Signs displayed on any lot shall be limited to:
 - a) Those necessary for directional or informational purposes, but not exceeding four square feet in size per sign;
 - b) Those necessary to identify the industrial park; and
 - c) Those necessary to identify the use or establishment and designed as a part of the architectural design of the building or as a part of the site plan for any lot.
2. Signs falling within category "b" above shall not exceed one square foot in size for every five linear feet of frontage on the street which the sign faces. Signs falling in category "c" above shall not exceed one square foot for each horizontal linear foot of building wall facing on the street on which the sign faces.
3. The design, size of lettering, lighting, etc. of all the signs in categories "b" and "c" above shall be approved by the Township during the application review stage. Exterior spot lighting of signs is permissible but only if shielded so as to direct light to the sign only.

J. Off-street Parking Requirements

1. Off-street parking shall be provided in accordance with the requirements of this resolution. At a minimum, an industrial or manufacturing establishment or a warehouse or similar use shall have one parking space for each one and one-half employees in addition to one visitor parking space for each ten employees, unless approved otherwise. In addition, one parking space shall be provided for each company-owned or leased vehicle located or principally based on the premises. No parking spaces may be located within required yards except that an area equivalent to not more than five per cent of the total area of all parking spaces required may be located in a required yard for use as parking space for visitors, selected personnel, or minor deliveries. Off-street parking spaces may be grouped in facilities serving more than one lot or establishment.

2. When the lot on which the parking spaces are located abuts the rear or side lot line of, or is across the street from, any land in a residential district other than publicly owned land, a wall, fence, or evergreen planting shall be maintained so as to screen substantially the parking lot from view from the nearest property in the residential district. The screening shall be maintained in good condition at all times. In parking lots of one acre or more, at least five per cent of the area of the parking lot shall be devoted to landscaping within the interior of the parking lot. No luminaries on parking lots shall be more than ten feet above ground level.

K. Loading Berth Requirements

1. Off-street loading berths shall be provided for all buildings in accordance with the following schedule: for buildings with floor area of ten thousand to twenty-five thousand square feet: one berth; For each additional twenty-five thousand square feet or fraction thereof up to one hundred thousand square feet: one berth; For each additional fifty thousand square feet or fraction thereof above one hundred thousand square feet: one berth.

2. Such loading berths shall be at least fourteen feet wide, forty-eight feet long, and fourteen feet in height, unless approved otherwise, and may be located either within a building or in the open, but not in required yards. If such berths are not enclosed, they shall be located not less than three hundred feet from any residential district and effectively screened therefrom as in the case of parking areas above. All access roads to loading berths shall be at least fourteen feet wide, except that if tractor trailers would be accommodated, the roads shall be 14 feet wide for one-way traffic and 22 feet wide for two-way traffic.

L. Enclosed Buildings and Outdoor Storage

1. All permitted uses and accessory activities shall be confined within completely enclosed buildings with the exception of off-street parking spaces, off-street loading berths, accessory fuel storage, and employee recreational facilities. In addition, the temporary outdoor storage of materials, equipment, or vehicles in an orderly manner is permitted in any areas other than in required yards, provided such outdoor storage does not exceed 15 feet in height or occupy more than ten per cent of the area of the lot, and is effectively screened from any adjacent residential district, as in the case of parking areas above.

2. Fuel storage tanks utilized as part of the heating equipment of an establishment shall be located underground or in a building. Bulk storage of gasoline or petroleum products shall not be permitted except as incidental to a laboratory, a production operation, or the servicing of company-owned or leased vehicles.

M. Approval Procedure

1. The approval procedure for an industrial park development shall be the same for any zoning amendment as specified herein. In addition, a plan of development shall be submitted with the regular application for a zoning amendment. Such plan of development shall show the location of all lots, streets, parking and loading areas, landscaping, screening, storage areas, signs, and other information as necessary. The Township shall consider the standards and objectives of these regulations in an effort to achieve the maximum coordination between the proposed park and the surrounding uses.

2. No zoning permit or certificate of occupancy shall be issued for any use except in conformance with the plan of development and these regulations. In the case of a change of use, a new certificate of occupancy shall be required if there are any major structural alterations or substantial variations from the operations referred to in the initial permit or certificate of occupancy permitting such use.

3. After occupancy, if there occurs continuous or frequent, even though intermittent, violations of the performance standards and provisions of these regulations for a period of 5 days without corrective work, the Zoning Inspector shall suspend or revoke the occupancy certificate for the use until such time as the operation is brought into conformance with these regulations.

N. Saving Clause

1. Should any subsection, sentence, clause, or phrase of this Section be declared invalid by a court of competent jurisdiction, such decision shall not affect the validity of this Section in its entirety or of any part thereof, other than that so declared to be invalid.

APPENDIX E

OUTLINE OF TOWNSHIP ZONING RESOLUTION

AND

ADOPTION PROCEDURE

This section provides the basic outline of a township zoning resolution which could be adopted to control and properly orient development in any of the townships of Sandusky County, Ohio. While this simple outline makes no effort to be final and complete since each township is different and should have regulations specifically designed for it, it is intended to provide the basis from which a specific resolution could be generated. The staff of the Sandusky County Regional Planning Commission, in its community assistance capacity, provides technical assistance to member jurisdictions in the development and amendment of such zoning resolutions. Also included herein is the procedure for the adoption and enactment of a township zoning resolution according to the Ohio Revised Code.

Basic Outline of Model Zoning Resolution (Township)

- I. Title, Interpretation, and Enactment
 - A. Title and Purpose (name of resolution and reasons for proposal: e.g., protect property values, promote orderly growth, etc.)
 - B. Provisions of Resolution are Minimum Requirements (the regulations in the resolution are the least allowable in the township--they may be exceeded at the discretion of the applicant)
 - C. Separability Clause (statement that if a part of the resolution is declared invalid the entire resolution is not invalid)
 - D. Repeal of Conflicting Resolutions, Effective Date (a statement indicating all previous regulations are superseded by this resolution)
 - E. Regulations Not Applicable (statement that agricultural activities and public utilities cannot be prohibited by zoning)
- II. Definitions (all terms used in the zoning resolution should be defined in this section unless the "normal" dictionary definition clearly applies)

III. Enforcement

- A. Zoning Permits (description of application, review, and approval procedures; expiration period)
- B. Violations (procedures for the handling of complaints and the investigation and citing of violations)
- C. Penalties for Violations (description of the possible penalties for violations as provided in the Ohio Revised Code)

IV. Administration

- A. Zoning Inspector (requirements and duties of the position of Zoning Inspector)
- B. Zoning Commission (composition, duties, and procedures of this group)
- C. Board of Zoning Appeals (composition, duties, and procedures of this board)
- D. Procedures for Approval of Appeals, Variances, and Conditional (Special) Use Permits (description of the requirements of the Board of Zoning Appeals, hearings, decisions, review criteria for applications, etc.)

V. Non-conformities

- A. Intent (statement that existing uses may continue to operate regardless of zoning district and cannot be terminated by zoning)
- B. Non-conforming Structures (regulations involving the use of buildings not in accordance with zoning)
- C. Non-conforming Use of the Land (regulations involving the use of land not in accordance with zoning)
- D. Expansion of Non-conformities (rules governing the expansion of activities not in accordance with zoning; often, such activities are allowed to expand their activities within certain limits)
- E. Existing Lots of Record (allowance for the reasonable use of properties which do not meet minimum lot area, width, setback, etc. requirements)

VI. Amendments

- A. Initiation of Amendments (who may apply for an amendment to the zoning resolution)

- B. Amendment Procedures (activities and hearings of the Zoning Commission and the Township Trustees, decisions, appeals, etc.)

VII. Provision for the Official Zoning Map

- A. Official Zoning Map (identification by title)
- B. Interpretation of Boundaries (guidelines for the interpretation of districts and their boundaries; e.g., districts intersected by highways)

VIII. Establishment, Purpose, and Requirements of Zoning Districts (including a listing of permitted uses, density, height, bulk, setback, etc. requirements for each)

- A. Agricultural Districts (low density residential may be allowed)
- B. Residential Districts (single, two-family, and multi-family uses should be outlined here)
- C. Commercial (Business) Districts (local, general, highway, etc. businesses)
- D. Industrial (Manufacturing) Districts (light, heavy, extractive activities and industrial park district)
- E. Conservation (Open Space) Districts (open areas, floodplains, recreation areas, etc)
- F. Planned Unit Development (PUD) District (see Article X herein)

IX. Supplementary Regulations

- A. Accessory Uses (detached garages, non-agricultural sheds and other structures; fences, hedges, and walls, etc.)
- B. Swimming Pools
- C. Temporary Buildings
- D. Off-street Parking and Loading Requirements (number of spaces required, location of parking, etc.)
- E. Signs (number and location of permitted signs, billboards, etc.)
- F. Mobile Homes and Mobile Home Parks (rules governing the use and location of mobile homes and parks)
- G. Travel Trailer Parks and Camps

- X. Planned Unit Development (PUD)
(see Appendix F herein for specific PUD regulations)
-

Procedure for Township Zoning Enactment

1. Adoption of Resolution to Proceed with Zoning

The Township Trustees pass a resolution which declares their intention to proceed with rural zoning. This can be accomplished in two ways:

- a.) They may adopt the resolution upon their own initiative, or
- b.) They must adopt the resolution to proceed if they receive a petition signed by 8 per cent of the total votes cast for all gubernatorial candidates from the unincorporated area of the township in the last election for Governor (Ohio Revised Code, Sec. 519.03)

2. Appointment of Zoning Commission

The Township Trustees appoint a five-member Zoning Commission to draft a resolution. The Zoning Commission may employ consultants to assist them or may request the assistance of the local planning commission. Zoning Commission members must reside in the area (township) being considered in the zoning resolution.

3. Public Hearing by Zoning Commission

After the Zoning Commission has prepared a recommended zoning text and map, and before it is submitted to the Township Trustees, a public hearing is required. (ORC Sec. 519.05)

4. Notice of Public Hearing in Newspaper

The Zoning Commission must publish a notice of the public hearing in a newspaper of general circulation in the Township at least 30 days before the hearing. (ORC Sec. 519.07)

5. Submission to County or Regional Planning Commission

After the public hearing, but prior to the sending of the final recommendation to the Township Trustees, the Zoning Commission must submit the text and map to the applicable local planning commission for a recommendation. The plan-

ning commission must respond within 20 days. If it does not respond within this time period, the Zoning Commission presumes approval. If the planning commission suggests material changes or disapproves the proposal of the Zoning Commission, a second public hearing is required. Notice of the second hearing must be published in a newspaper at least 30 days before the hearing. (ORC Sec. 519.07)

6. Recommendation by Zoning Commission

When completed with its work, the Zoning Commission sends the zoning text and map along with the recommendation of the applicable planning commission to the Township Trustees.

7. Public Hearing by Township Trustees

The Township Trustees must hold a public hearing on the proposal submitted by the Zoning Commission. No time limit is specified in the Ohio Revised Code; however, this should take place within 60 days. (ORC Sec. 519.08)

8. Notice of Public Hearing in Newspaper

The Township Trustees must publish a notice of the public hearing in a newspaper of general circulation in the Township at least 30 days before the hearing.

9. Adoption by Township Trustees

After the public hearing, the Township Trustees vote on the adoption of the zoning resolution (ORC Sec. 519.10). If they wish to modify the proposal as submitted by the Zoning Commission, the changes must first be resubmitted to the Zoning Commission for review and suggestions. If modifications are made which are not approved by the Zoning Commission, a second public hearing must be held by the Township Trustees. Notice of this second hearing must be published in the newspaper at least 10 days before the hearing. (ORC Sec. 519.09) If the Trustees make changes not approved by the Zoning Commission, the unanimous vote of the Trustees is required.

10. Resolution Filed with the Board of Elections

The zoning text and map must be filed with the Board of Elections at least 90 days prior to the next primary or general election. A special election may also be called by the Township Trustees. (ORC Sec. 519.11) The zoning resolution becomes effective if a majority of the rural residents in the Township approve the zoning resolution.

Therefore, all Ohio rural zoning is at the option of township residents. The original enactment always remains with the residents of the unincorporated areas of each township.

APPENDIX F

MODEL PLANNED UNIT DEVELOPMENT REGULATIONS

ARTICLE X. Planned Unit Development (PUD) Permitted

PUD shall be permitted in the PUD District only after the approval of a zoning amendment to the PUD District in accordance with the zoning amendment procedure described herein and the satisfaction of the requirements and provisions of this Article.

Section 11. Intent and Objectives of this Article

A. Intent

It is the intent of this Article to provide flexible land use and design regulations through the use of performance criteria so that small-to-large-scale developments may be realized containing both individual building sites and common property which are planned and developed as a unit. This Article specifically encourages innovations so that the growing demands of housing and other uses may be met by greater variety in type, design, and siting of units and by the conservation and more efficient use of land. This Article further recognizes that a rigid set of space requirements along with bulk and use specifications would frustrate the application of this concept. Therefore, where PUD techniques are appropriate, the land may be rezoned to the PUD District. In doing so, the set of use and dimensional specifications elsewhere in this Resolution are herein replaced by an approval process in which an approval plan becomes the basis for continuing land use controls.

B. Objectives

To carry out this intent of this Article, a PUD endeavors to provide:

1. A choice in the types of environment, occupancy tenure, types of housing, types of ownership, and community facilities available to existing and potential residents;
2. Usable open space and recreation areas;
3. Convenience in location of accessory commercial and service areas;

4. Preservation of natural topographical and geological features with emphasis on the prevention of soil erosion, the conservation of existing surface and sub-surface water, and the preservation of other environmental enhancing site features;
5. An efficient network of streets and utilities; and
6. The development of a pattern in harmony with the objectives of an overall site plan which will foster a more desirable living environment.

Section III. General Requirements

A. Uses Permitted

Compatible residential, commercial, industrial, open space, public, and semi-public uses may be combined in the PUD District provided all proposed uses will not adversely affect adjacent property or property values and/or the public health, safety, and general welfare. The amount of land devoted to each specific use shall be approved within the zoning amendment procedure.

B. Minimum Project Area

Under normal circumstances, the minimum area required to qualify for a PUD District shall be ten (10) contiguous acres of land. Projects with less acreage may be considered where the applicant can demonstrate that a smaller parcel will meet the objectives of this Article.

C. Common Open Space

A minimum of twenty (20) per cent of the area in any PUD shall be reserved for common open space and recreational facilities. When common property exists, the ownership of such may be either public or private and satisfactory arrangements shall be made for the improvement, operation, and maintenance of such common property and facilities as approved by the Township.

D. Density Requirements

The overall density in any PUD shall not exceed the maximum permitted by the zoning district previous to the PUD zoning amendment request unless specifically approved. A diversification of lot sizes and setbacks are encouraged.

E. Perimeter Yard and Parking Requirements

All lots or developed areas abutting the perimeter of any

PUD shall maintain all yard requirements specified for the previous zoning district unless otherwise approved. Off-street parking and loading areas shall be provided as approved by the Township.

F. Arrangement of Commercial and Industrial Uses

When any PUD proposes commercial and/or industrial uses, such uses shall be screened from the residential portions of the development to the satisfaction of the Township utilizing landscaping, existing woodlands, plantings, and the like. Traffic circulation in commercial/industrial areas shall be designed to minimize unnecessary through traffic to other portions of the PUD. All areas designed for future expansion shall be landscaped or otherwise maintained in a neat and orderly manner to the satisfaction of the Township.

G. Supplementary Conditions and Safeguards

In approving any PUD, the Township may prescribe appropriate conditions and safeguards which, when made part of the approval, shall not be violated without voiding all actions and being subject to the enforcement provisions of the Resolution.

Section IV. Approval Procedure

A. Preliminary Approval Procedure

The procedure for preliminary approval of a PUD shall involve the receipt of a preliminary plan submitted by the developer and the holding of a public hearing on the matter with public notice provided in a newspaper of general circulation in the Township at least ten (10) days prior to the hearing. The Board of Township Trustees shall conduct the hearing and determine, upon examination of the facts, the approval or disapproval of the preliminary plan. Upon approval of the preliminary plan, the developer may proceed with the application for final approval as outlines herein. The preliminary approval shall be valid for a period of one (1) year and may be extended only by the Township Trustees.

B. Contents of Preliminary Plan Application

The preliminary plan application to be reviewed at the public hearing described in Section IV - A herein shall include, at a minimum, the following data:

1. Name, address, and phone number of applicant;
2. A sketch of the property with the locations and types of all proposed structures and uses displayed and the layout of all streets, open spaces, lots, yards, easements, parking areas, etc. shown;
3. A site development schedule indicating approximate dates for the start and completion of the PUD; and
4. Any other relevant information deemed necessary

C. Final Approval Procedure

The procedure for final approval of a PUD District shall be the same as that for any amendment to this Resolution as provided herein and in accordance with the Ohio Revised Code including all hearings and notices. No final plan shall be approved which deviates significantly from the approved preliminary plan.

D. Submission of PUD as Subdivision Plat

At the time of submission of the final application to the Township, the developer shall submit the proposal as a subdivision plat to the Sandusky County Regional Planning Commission (RPC) for concurrent review in accordance with the Sandusky County Subdivision Regulations. A copy of the final application shall be submitted with the plat to the RPC which will review the proposal as a zoning amendment and as a subdivision plat concurrently in accordance with all applicable provisions of the Ohio Revised Code.

E. Contents of Final Plan Application

At a minimum, the final plan application shall contain the following data:

1. Name, address, and phone number of applicant;
2. Name, address, and phone number of the registered surveyor and engineer preparing the plan;
3. Legal description of the property;
4. Description of existing and proposed land use;
5. Zoning district (current and proposed);
6. A vicinity map at an appropriate scale showing the site location in relation to surrounding uses;
7. A development plan showing topography at least two (2) foot intervals; drainage proposals; the locations and types of all structures and uses;

the layout of all streets, rights-of-way, easements, open spaces, and facilities; the layout and dimensions of all lots and yards; and other items as required;

8. A survey of the proposed development site showing the dimensions and bearings of the property lines, the area in acres, and all existing features of the site including woodlands, structures, streets, utilities, flood hazard areas, etc.;
9. A schedule for the development of the entire site; landscaping plans, a copy of deed restrictions, protective covenants, and other legal statements to be used to control the use, development, and maintenance of the land and the improvements thereon, including those areas which are to be commonly owned and maintained; and appropriate guarantees (e.g., improvement bonds) to be executed to assure the completion of the improvements therein; and
10. Any other requirements as deemed necessary by the Township.

F. Expiration and Extension of Approval Period.

The approval of a PUD District shall be for a period of three (3) years to allow for the approval and recording of the required subdivision plat and the development of the project. If twenty-five (25) per cent of the area has not been completely developed within three (3) years after approval is granted, the PUD approval and zoning shall revert back to its former zoning district. An extension of this time limit may be approved by the Township Trustees.

G. Financial Responsibility

No zoning permits shall be issued for construction within a PUD, or an approved phase of a PUD, until required improvements are installed or performance bonds posted as approved by the appropriate Township or County agencies.

Section V. Definitions.

For the purposes of these regulations, the following terms are defined:

- A. "Common Open Space" is a parcel or parcels of land or an area of water, or the combination of land and water within the site designed and intended for the use or enjoyment of occupants of the Planned Unit

Development. Such areas may contain such complimentary structures and improvements as are necessary and appropriate for the benefit and enjoyment of occupants.

- B. "Landowner" shall mean the legal or beneficial owner or owners of all of the land proposed to be included in the PUD District. The holder of an option or contract to purchase, a lessee or other person having an enforceable proprietary interest in such land shall be deemed to be a landowner for the purposes of these regulations.
- C. "Plan" shall mean the written and graphic submission for a PUD including all subdivision plats; all covenants relating to use, location, and bulk of buildings and other structures; density of development; public and private facilities including streets, ways, and parking facilities; and common open space.
- D. "Planned Unit Development" is an area of land in which a variety of housing types and subordinate commercial and industrial facilities are accommodated in a pre-planned environment under more flexible standards than those normally applicable to a conventional zoning district, the Plan for which does not correspond in lot size, bulk, or type of dwelling, lot coverage, and required open space to any one zoning district.

Note: This model contains the basic elements necessary to foster, yet adequately control, a PUD. Individual jurisdictions should carefully examine all facets of such potential legislation to determine its validity and applicability to their own situation.

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