

KENTON COUNTY

Pedestrian PLAN



JUNE 2001

PREPARED BY
NORTHERN KENTUCKY AREA PLANNING COMMISSION

From: **A Walk in the Woods, Rediscovering America on the Appalachian Trail** by **Bill Bryson**, Broadway Books, New York, 1998

So I walked. It was a warm afternoon, and it felt wonderful - you can't believe how wonderful - to be at large without a pack, bouncy and unburdened. With a pack you walk at a tilt, hunched and pressed forward, your eyes on the ground. You trudge; it is all you can do. Without, you are liberated. You walk erect. You look around. You spring. You saunter. You amble.

Or at least you do for four blocks. Then you come to a mad junction at Burger King and discover that the new six-lane road to Kmart is long, straight, very busy, and entirely without facilities for pedestrians - no sidewalks, no pedestrian crossings, no central refuges, no buttons to push for a WALK signal at lively intersections. I walked through gas station and motel forecourts and across restaurant parking lots, clambered over concrete barriers, crossed lawns, and pushed through neglected ranks of privet or honeysuckle at property boundaries. At bridges over creeks and culverts - and goodness me how developers love a culvert - I had no choice but to walk on the road, pressed against the dusty railings and causing less attentive cars to swerve to avoid me. Four times I was honked at for having the temerity to proceed through town without benefit of metal. One bridge was so patently dangerous that I hesitated at it. The creek it crossed was only a reedy trickle, narrow enough to step across, so I decided to go that way. I slid and scampered down the bank, found myself in a hidden zone of sucking grey mud, pitched over twice, hauled myself up the other side, pitched over again, and emerged at length streaked and speckled with mud and extravagantly decorated with burrs. When I finally reached the KMart Plaza I discovered that I was on the wrong side of the road and had to dash through six lanes of hostile traffic. By the time I crossed the parking lot and stepped into the air-conditioned, Muzak-happy world of KMart I was as grubby as if I had been on the trail, and trembling all over.

KENTON COUNTY PEDESTRIAN PLAN

PREPARED FOR
Ohio-Kentucky-Indiana
Regional Council of Governments

JUNE 2001

PREPARED BY:
Northern Kentucky Area Planning Commission

This report is the product of a project financed cooperatively by the U.S. Department of Transportation, Federal Highway Administration; the Commonwealth of Kentucky Transportation Cabinet; and the Northern Kentucky Area Planning Commission. This financial assistance notwithstanding, the contents of this report reflect the views of the Northern Kentucky Area Planning Commission, which is responsible for the facts and the accuracy of the information presented herein. The contents do not necessarily reflect the official views or policies of the funding agencies. This report does not constitute a standard, specification, or regulation.

ACKNOWLEDGEMENTS

The Northern Kentucky Area Planning Commission would like to acknowledge and thank the following individuals who served on the Kenton County Pedestrian Advisory Committee and who gave graciously of their time to assist with the preparation of this study:

Mr. Don Burrell
OKI Staff

Mr. Rob Haney
Kenton County Board of Education

Mr. Bob Hill
KyTC District 6

Mr. Jack Kleier
Citizen Member

Ms. Mary Singler
Northern Kentucky District Health Department

Mr. Timothy Theissen
KC&MP&ZC Representative

Mr. Tom Vergamini
City of Crescent Springs

Ms. Christine Vissman
NKAPC Representative

Mr. Bob Zerhusen
City of Ft. Mitchell

NORTHERN KENTUCKY AREA PLANNING COUNCIL 2001

Kenton County - Judge/Executive Richard Murgatroyd
Bromley - Mayor Jim Miller
Covington - Mr. J. T. Spence
Crescent Springs - Mr. Tom Vergamini
Crestview Hills - Mr. Harold Ries
Edgewood - Mayor John Link
Elsmere - Mayor Bill Bradford
Erlanger - Mr. Paul D. Hahn
Fairview - Mayor Harold L. Parks
Fort Mitchell - Mayor Tom Holocher
Fort Wright - Mayor Gene Weaver
Independence - Mayor Tom Kriege
Kenton Vale - Mr. Ronald Flack
Lakeside Park - Mr. Thomas Jordan
Latonia Lakes - Mayor Bridget Pelzel
Ludlow - Mayor Ed Schroeder
Park Hills - Mayor Michael Hellmann
Ryland Heights - Mayor Bob Miller
Taylor Mill - Mr. Bob Haake
Villa Hills - Mayor Mike Sadouskas

NORTHERN KENTUCKY AREA PLANNING COMMISSION MEMBERS May 2001 - May 2002

Mr. Afton H. Kordenbrock, Chairman

Mr. Paul D. Hahn, Vice Chair
Mr. Thomas Litzler
Mr. Louis Noll

Mr. William Goetz, Treasurer
Mr. Thomas Kriege
Mr. Bill Bradford

Mr. Garry L. Edmondson, Legal Counsel

**NORTHERN KENTUCKY AREA PLANNING COMMISSION STAFF
2001**

Mr. William W. Bowdy, FAICP, Executive Director

Planning Services

Mr. Marshall D. Slagle, FAICP, Technical Coordinator Supervisor
Mr. Michael D. Schwartz, AICP, Planning Services Manager
Mr. Keith D. Logsdon, AICP, Planner
Mr. Paul Drury, Planner
Ms. Larisa Hughes, Planner
Mr. Marvin Benfield, Graphics Coordinator
Mr. Randy Nickum, Planning Co-op (summer of 2001)

Building Inspection/Zoning Assistance Services

Mr. Russell Cloyd, Building/Zoning Services Administration Manager
Mr. John Lauber, Building Inspector/Zoning Administrator
Ms. Diane Collins, Zoning Administrator
Mr. Rick McAllister, Zoning Administrator
Mr. Michael Carpenter, Building Inspector
Mr. Steve Dahlheimer, Building Inspector
Mr. David Mink, Building Inspector
Ms. Susan Conrad, AICP, Planner/Zoning Administrator
Mr. Brian Sims, Building Inspector/Zoning Administrator
Ms. Ann Wuestefeld, Zoning Administrator

Engineering Services

Mr. Barry J. Burke, P.E., L.S., Engineering Services Manager
Mr. D. Scott Hiles, Planning Engineer
Mr. Robert Zwick, Chief Engineering Inspector
Mr. Bernie Schroeder, Engineering Inspector
Mr. Tim Tholemeier, Engineering Inspector

Geographic Information Systems (GIS) Services

Mr. Thomas C. East, Senior GIS Specialist/Acting GIS Services Manager
Mr. Todd Wallace, Systems Administrator / DBA
Ms. Christy P. Davis, GIS Systems Programmer/Analyst
Ms. Emily A. Nordloh, GIS Applications Programmer/Operator
Mr. Robert N. Chandler, GIS Applications Programmer/Operator
Mr. George Neack, GIS Applications Programmer/Operator
Mr. Kevin Linn, GIS Applications Programmer/Operator
Ms. Susan Fruitticher, GIS Applications Programmer/Operator
Mr. Mike Jeggle, GIS Intern

Administrative Services

Ms. Gail H. Deatherage, Executive Secretary/Office Manager
Ms. M. Janice Crabb, Bookkeeper
Ms. Donna M. Bresser, Receptionist/Secretary
Ms. Michelle Allender, Secretary/Asst. Office Manager
Ms. Sandy Grieme, Secretary
Ms. Becky Warnke, Secretary
Ms. Nicole Cullum, Secretary/Office Assistant
Ms. Gretchen Boyce, Office Assistant

CHAPTER I

INTRODUCTION

The 1996 Areawide Comprehensive Plan Update recommended the preparation of bicycle and pedestrian plans for Kenton County. In 1999, the Kenton County Bicycle Plan was completed and adopted by the Northern Kentucky Area Planning Commission and in 2000 by the Kenton County & Municipal Planning and Zoning Commission. This pedestrian plan shares many characteristics with the previously prepared bicycle plan. Both represent modes of transportation, which are basic and simple in that most everyone uses or has used them. They are energy efficient, healthy, and generally only suitable for short trips. Most importantly, however, may be that to “re-establish” these as legitimate modes of transportation involves three of the same functions - enhancement, encouragement and education.

A walking trip begins and ends most every trip we make, regardless of the mode we have chosen for the longest portion of the trip. For example, we walk to the car or bus and we walk from the car or bus to work, school or play. The ability to walk is one of the landmark episodes in our lives - that first step is recorded permanently in our parent’s memory along with the first words we spoke. Walking is still important to us. A pedestrian is any person traveling by foot and any mobility impaired person using a wheelchair. One purpose of this plan is to improve the walking conditions, encourage more walking and to help assure that our community is built to maximize the potential for pedestrians.

This Pedestrian Plan is funded through the Ohio-Kentucky-Indiana Regional Council of Governments (OKIRCOG) and was financed in part by the Federal Highway Administration, Kentucky Transportation Cabinet (KyTC), and the Northern Kentucky Area Planning Commission (NKAPC).

ADVISORY COMMITTEE

Establishment of the Kenton County Pedestrian Advisory Committee was the first step in the development of this plan. The committee includes representatives from OKI, KyTC, the Kenton County and Municipal Planning and Zoning Commission, NKAPC, the Northern Kentucky Independent District Health Department, city government and citizens.

The purpose of the advisory committee has been to assist the NKAPC staff in the study by establishing goals and objectives for the study, reviewing and discussing issues, identifying specific and/or potential problems and generally providing other perspectives on pedestrian issues. The advisory committee has played an active role by attending monthly meetings and providing valuable input and feedback during the preparation of this plan.

PURPOSE

The purpose of this plan, as previously mentioned, is to improve walking conditions. While this constitutes the main or overarching purpose there are other reasons involved with preparing this plan. It is hoped that eventually the NKAPC can assist in creating a more functional multi-modal transportation system in Kenton County and Northern Kentucky - a system that is less reliant on the automobile. Mass transit via bus, light rail or other multiple passenger public carrier are likely alternatives. The primary means of access to these modes requires walking. Access by walking is important to many other activities we undertake as well. Trips to the store, to visit friends and neighbors, church and school are among those that can be accomplished by walking.

In developing the framework for this plan the NKAPC recognized that all too often pedestrian transportation was not being given its due place as the community is developed. Sidewalks in some instances were being omitted from residential developments, block lengths and cul-de-sacs (dead end streets) were long and typically do not provide pedestrian connections, as was done historically, to shorten walking trips.

Several communities in Kenton County have initiated capital improvement programs to construct sidewalks and/or have sought grant funds for this purpose. The question posed was - can we evaluate the issues, develop a plan and determine the priorities for sidewalk development to enhance walking conditions?

PLANNING FOR PEDESTRIAN TRANSPORTATION

From the outset it was discovered many challenges/issues exist in preparing a pedestrian plan. One issue shared in this plan with the previously prepared bicycle plan, is the evolving state of research information. The adoption of the Intermodal Surface Transportation Efficiency Act (ISTEA) in 1991, and its subsequent reauthorization as the Transportation Efficiency Act for the 21st Century (TEA 21), served to increase the importance of considering alternate transportation modes and, therefore, the need for more research data and information on these issues. To some extent the preparation of this plan is ahead of research on pedestrian planning, as indicated by the fact the American Association of State Highway and Transportation Officials (AASHTO) is currently in the process of developing a guide for pedestrian transportation. This guide is due for publication in 2002. It is anticipated that this guide will provide solid advise on the details of pedestrian way design.

Walking for transportation is not exclusive of walking for recreation and/or fitness. Walking for transportation is an important element of this plan, however, increased walking for recreation and fitness is also an important element. Walking has been proven to be one of the most effective activities to improve cardiovascular and muscular health. It is doable by much of the population of all age levels. It is cost efficient, time efficient and if done in conjunction with other daily activities will fit into the busy schedules of many residents of Kenton County.

One intent of this plan is to encourage the substitution of walking trips for those now made by automobile. This plan will address how we can encourage and enhance pedestrian travel for this purpose. To enhance the walking environment and encourage increased walking, improvements to sidewalks and to other facilities in support of pedestrians is important. Sidewalks connecting destinations are as important for pedestrian transportation as roadways connecting destinations are for motorists. The concept of the shortest distance between two points of destination being the most desirable is also important. Therefore, pedestrian access needs to be provided using the shortest routes possible. Another aspect, however, is total distance. Research, conducted as part of the National Bicycling and Walking Study, indicates that twenty-five (25) percent of all trips, regardless of mode are under one (1) mile in length. Pedestrian trips of one (1) mile one-way are considered to be average. This same study concluded that only twenty-one (21) percent of all trips involve travel to and from work. Therefore, many opportunities exist to walk for errands, shopping, visiting etc.

Physical improvements range from retrofitting existing areas for pedestrian transportation to providing destinations for pedestrian trips within range of residential neighborhoods. In other words, planning for a more effective and efficient pedestrian transportation system relates to both the physical pedestrian infrastructure and to land use patterns. The following list of factors that affect pedestrian travel from preliminary research conducted by the Federal Highway Administration (FHWA) indicates the broad range of issues that should be dealt with to enhance and encourage increase pedestrian transportation.

- a. Land use density and mix - higher density and more mixed commercial uses and employment tends to increase pedestrian travel.
- b. Ease of street crossing - easier street crossings tend to increase pedestrian travel.
- c. Sidewalk continuity - sidewalks that do not connect create barriers to pedestrian travel.
- d. Block size - smaller block sizes tend to increase pedestrian travel.
- e. Street connectivity (grid vs. cul de sac) - connected streets allow better pedestrian access, which tends to increase pedestrian travel.
- f. Topography - steep slopes tend to create barriers to pedestrians.
- g. Building orientation - commercial buildings oriented toward sidewalks rather than automobile parking tends to increase pedestrian travel.

If pedestrian transportation is to be increased in Kenton County these factors must be addressed.

CHAPTER 2

GOALS AND OBJECTIVES AND PEDESTRIAN WAY STANDARDS

The following goals and objectives and pedestrian way standards were adopted by the Pedestrian Plan Advisory Committee to guide the development of this plan and the implementation of the plan to provide for an effective pedestrian transportation system.

GOALS AND OBJECTIVES

GOAL 1: Develop a county-wide pedestrian system that is integrated with other transportation systems.

- a. Encourage planners and engineers to include the needs of pedestrians when designing transportation facilities.
- b. Integrate pedestrian planning with other regional and local transportation plans, programs and projects.
- c. Enhance pedestrian access in downtown Covington in conjunction with improved transit access.
- d. Enhance and encourage pedestrian access (and walking) to public and parochial schools.
- e. Promote strategically located transit stops (and shelters) to residential areas and employment centers.
- f. Promote and encourage pedestrian access to public use and community shopping areas.
- g. Whenever possible utilize existing utility rights-of-way for new pedestrian ways.

GOAL 2: Provide a safe, convenient (accessible), and appealing pedestrian environment.

- a. Develop standards for pedestrian access that ensure continuity of travel and provide trip lengths that encourage walking trips.
- b. Develop standards for roadways and pedestrian ways that enhance the environment for walking to encourage increased pedestrian trips.
- c. Develop standards that meet State of Kentucky criteria for safe pedestrian access to schools.

- d. Develop a pedestrian system that is accessible to and usable by persons who have a handicap or disability.
- e. Develop standards for design of crosswalks and curbs (particularly at intersections) that protect pedestrians.
- f. Provide for pedestrian access that includes reasonable walking distances between all destinations.
- g. Develop and maintain, to the extent possible, pedestrian ways that are well lit, free of overhead hazards, and that minimize closed spaces hidden from public view.
- h. Provide amenities, such as benches and shelters to enhance the pedestrian environment.

GOAL 3: Encourage and support walking as an activity for its health and transportation benefits.

- a. Promote and encourage programs that support pedestrian transportation for trips to school, work and recreation.
- b. Provide for and encourage public participation in pedestrian issues and programs.

GOAL 4: Advocate and encourage land development that is compatible with and incorporates conveniently located (essential) services, accessible by pedestrians and other non-motorized transportation.

- a. Develop regulations that encourage mixed uses, which incorporate conveniently located services within the development, and that are accessible by pedestrians and other non-motorized transportation.
- b. Promote and encourage the retention of conveniently located neighborhood convenience stores.

PEDESTRIAN WAY STANDARDS

Pedestrian way standards comprise more specific criteria, guidelines and detailed dimensional information for planning and construction. These standards are intended to provide uniformity county-wide and to be the basis for more specific regulations that may be adopted based on this Plan. The following standards will be reviewed further following the preparation of this Plan and may be amended accordingly.

1. Width and Composition (see diagram)

Pedestrian way widths, except those intended solely for recreation use (e.g. trails) should be a minimum width of five (5) feet and comprised of pavement or other surface approved for use to serve disabled persons.

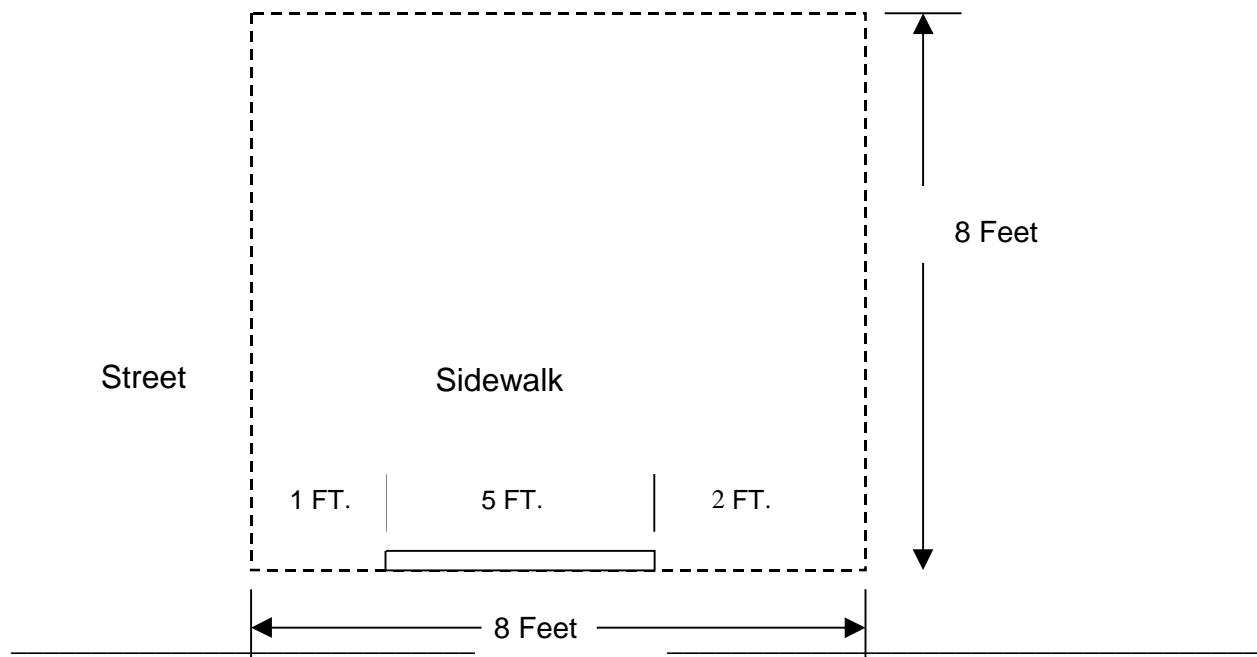
2. Width of Shoulder(s) (see diagram)

Minimum of one (1) foot on “street side” and two (2) feet on back of sidewalk.

(Increasing separation from traffic will enhance the comfort of walking. Distance and/or a combination of landscaping or other facilities (e.g. bicycle lanes) can accomplish separation. Source: National Bicycling and Walking Study)

3. Clearance (see diagram)

Eight (8) feet of height clearance, all of which should be in the right-of-way and should be provided along the height and width of the pedestrian way corridor. (Note other conditions, such as utility easements, may require additional area.)



4. Cross slopes, to allow for adequate drainage and to minimize ice and water build-up, should be one-eighth (1/8) inch per foot.
5. Box curbs should be used in conjunction with handicap ramps at street crossings to protect pedestrians from turning vehicles.
6. Crosswalks

Painted crosswalks should be provided at the following intersections, provided that traffic control devices (e.g. stop signs or lights) are in place:

- a. Local streets with collector streets or arterial streets
- b. Collector streets with collector streets or arterial streets
- c. Crossings (i.e. at mid-block or at intersections) of collector or arterial streets.

Painted crosswalks should also be provided at other locations, such as interstate exit/entrance ramps, where traffic control devices are in place.

7. Continuity/Connections

Pedestrian access between blocks or cul-de-sacs should be provided for at least every 700 linear feet of street length. Where such connections are not along public streets, rights-of-way or easements between lots should have a minimum width of twelve (12) feet. In these situations, pedestrian ways may be comprised of materials other than hard surface, but whenever possible materials used should be ADA (Americans With Disabilities Act) approved.

Commercial buildings should provide direct access to the adjoining public or private street system for pedestrians regardless of whether or not a sidewalk exists along the street. This access should be designed to minimize pedestrian and motor vehicle conflicts within parking lots. Pedestrian ways within parking lots should be raised or protected sidewalks/walkways and be clearly identified as pedestrian ways. One method to clearly identify pedestrian ways in these situations is to use materials, such as brick or other pavement textures to separate these from the parking and aisles. Crossings should be provided (i.e. across parking aisles and driveways) for pedestrians within parking lots and be well marked as a crosswalk.

Pedestrian connections to commercial and other properties oriented toward and/or fronting along arterial and collector streets should be provided, whenever possible, from properties at the rear of these establishments. This is particularly desirable for residential properties that provide a customer base for businesses and as an incentive to encourage walking versus driving to these locations from residential areas within walking distance of one-fourth to one-half miles.

8. Sidewalks Along Both Sides of New Streets

Current subdivision regulations, adopted by the Kenton County and Municipal Planning and Zoning Commission, require sidewalks to be constructed along both sides of all new streets unless a waiver is granted. When sidewalks, including shared use paths, are permitted to be located on only one side of a collector or arterial street, all lots fronting and having access from said street should have direct access to a sidewalk. When other pedestrian alternatives are proposed instead of those along streets, such as those sometimes proposed to be at the rear of properties, these too should provide direct access to every lot.

CHAPTER 3

ANALYSIS OF EXISTING PEDESTRIAN SYSTEM

In the proposal to OKI for the preparation of this plan, NKAPC had determined that one objective should be to map all local, collector and arterial streets where pedestrian access was not available. In most cases this would be where sidewalks do not currently exist. One purpose of this mapping would be to identify where deficiencies exist so that local legislative bodies could use this information in preparing capital improvements programs to construct sidewalks in these locations. Another use would be, in conjunction with the PlanNet GIS System, to identify locations of potential shortcuts/connections that could be created utilizing unused public rights-of-way or other land that might be made available for pedestrian access. Discussions by the Advisory Committee indicated that this approach may not be the most useful. For example, it was determined that most local governments were likely aware of the areas within their jurisdictions where sidewalks did not exist. Furthermore, the mere absence of sidewalks may not indicate that a need exists for them and this information alone would not establish priorities for sidewalk construction. Finally, information from the Massachusetts Pedestrian Transportation Plan indicates that more is involved with the “Decision to Walk” than the availability of sidewalks (see Attachment A). The diagram in Attachment A identifies factors that should be addressed to enhance the pedestrian system to encourage increased pedestrian transportation. Many of these factors have been addressed in the Goals and Objectives and Standards in Chapter 2. The Advisory Committee then determined that a better approach to evaluating the walking environment in Kenton County would be a method entitled “Ped Sheds” (Pedestrian Sheds), which was developed in Australia by the Western Australian Government Sustainable Communities Initiative, and reported in “Progress” the publication of the Surface Transportation Policy Project (Volume IX, Number).

The Ped Shed Approach

A Ped shed can be mapped to indicate the actual area within a given walking range of any designated location that is feasible for a walking trip. This is called a “walkable catchment”. Walkable catchments are expressed as areas within a desired walking range versus a theoretical distance. Using detailed maps, available from the NKAPC, any desired location or destination is designated as the center point of a circle(s). The Australian example used a five-minute or 1/4 to 1/2 mile distance, which are identified by concentric rings on a map (see Attachment B, Pedestrian Shed Example) While the concentric rings represented the theoretical walking distance, actual walking distance by way of pedestrian systems would likely lie within the bounds of the rings. All properties within each ring do not enjoy the same pedestrian access due to actual walking distance along sidewalks or other pedestrian ways. The walkable catchment, therefore is comprised of all parcels within the concentric rings that also are within the desired distance from the destination. This approach is feasible in that it allows for detailed or more focused analysis of pedestrian access to chosen destinations within range of that

destination. This method would allow local jurisdictions and the planning commission to conduct analyses on factors affecting pedestrian transportation to any potential pedestrian destination on a location by location basis. Such analysis could identify methods and locations where improvements could be made to improve walking conditions. Examples of improvements could range from painting crosswalks, re-timing signal lights, providing additional paved sidewalks and installing benches or providing sidewalks where none currently exist.

This approach is more feasible than the initial approach because it is more focused on a desired destination and it will provide much more detailed analysis of the pedestrian barriers to specific locations. It is also more feasible in that it more efficiently uses staff time to prepare a model, with a number of examples, versus the “shotgun” style approach initially envisioned by mapping all streets without sidewalks. It is anticipated that this model will be useful for local schools, businesses and other groups wishing to identify local customers to target for sales or facility use, local legislative bodies that want to prioritize sidewalk improvements, and many others.

Ped Shed and ArcView

The Ped Shed approach is well suited to the use of the Network Analyst, which is an ArcView Extension developed by Environmental Systems Research, Inc. (ESRI) for determining optimal routing, and closest facility and service area analysis. The typical use for this computer program has been to assist with such functions as bus and garbage truck routing, and determining such information as the closest or shortest routes for emergency and service vehicles. The Ped Shed Analysis is similar to these types of analyses in that any given destination location can be evaluated in much the same manner that a service area can be evaluated. The difference being that the outcome of this analysis is focused on potential enhancement of the pedestrian environment by identifying system deficiencies to pedestrian transportation.

As an example, the Pedestrian Advisory Committee determined that the impact of state school system requirements, which stipulate that school districts are not compensated for bus transportation for any student within one (1) mile of a school, is an issue that is well suited to evaluation by the Ped Shed approach. It was indicated by the Kenton County School District that students within this distance of schools were in fact transported by bus, partially due to the lack of safe pedestrian ways connecting residential areas within one (1) mile to the school site. This scenario fit perfectly into the Ped Shed and Network Analyst concept. Map 1, Pedestrian Shed Example, shows the Ped Shed for Beechwood School District for one-fourth (1/4), one-half (1/2), and one (1) distances. This map graphically indicates the properties that lie within walking distance of the schools in both the theoretical distance (concentric rings) and the walkable catchment (shaded parcels). In this example, the object would be to further evaluate the walking routes within the walkable catchment to determine what improvements would be necessary to enhance (e.g., improve safety at crosswalks) and encourage walking to school.

The Ped Shed approach when used in conjunction with parcel information can be used to identify and evaluate potential new connections (e.g. unused rights-of-way, vacant parcels, etc.). Evaluation will help determine the benefit (i.e. increased area within walking distance) that improvement of these areas as pedestrian ways will have on increasing the number of parcels within the identified walkable catchment by shortening distances to a destination. Identifying and using parcel information in this manner was one of the initial objectives of this study. Increasing connections and shortening walking distance to destinations is addressed in Chapter 2, Goals and Objectives and Pedestrian Standards. Evaluation of the extent that a proposed new connection will enlarge a walkable catchment to any identified destination should significantly assist decision makers, in both the public and private sector, in prioritizing pedestrian improvements and is one of the primary basis for selecting the Ped Shed approach.

Ped Shed Evaluations

Four locations within Kenton County were chosen for more detailed evaluation and analysis of the Ped Shed approach. These locations were chosen because they represent a sample of typical developed areas of Kenton County and locations where pedestrian access is desirable.

These locations are:

- 1) Crescent Springs Community Park, located at the intersection of Buttermilk Pike and Collins Road;
- 2) The Dixie Highway Corridor in the vicinity of K-Mart and Kenton Lands Road;
- 3) Summit View School, located on Kentucky 17/Madison Pike; and,
- 4) The site of the new Erlanger Branch of the Kenton County Library at the corner of Hulbert and Kenton Lands Road.

Three of these locations are “public use” areas that should be accessible by pedestrians to maximize their usefulness to the community. The other location, the Dixie Highway Corridor, contains a variety of retail uses located in strip commercial shopping centers. This area is representative of a shopping district that attracts many customers for numerous trips because the area contains a large variety of commercial services. Furthermore schools, offices, and the public library also attract persons to this corridor on a daily basis.

Each of these locations was evaluated using the Ped Shed process previously described, however, during the NKAPC Staff review using ArcView and digital orthophotographs the process was further refined to add an evaluation of parcels within the walkable catchment that have existing sidewalk access. Because of the accuracy and clarity of the photographs no fieldwork was necessary to determine the location of existing sidewalks. Simply by enlarging the scale whenever necessary existing sidewalks are easily identified on the photographs. This finding will be important in the use of this method for planning purposes in that time consuming fieldwork is virtually eliminated.

Maps prepared for the evaluation of these areas include the following information:

- Parcels within the one-fourth and one-half miles radius of the site that comprise the “walkable catchment”. The circles represent the maximum walkable distance for a given point and the “walkable catchment” represents those parcels that lie within these distances from the point, but are measured along roads providing access to the site. (Note: School sites include a one-mile radius. One mile represents the distance from the school that the school district is not compensated by the state for transportation expenses.)
- Parcels were also identified that could be included within the walkable catchment if pedestrian access was available. These parcels were identified by creating “what if” pedestrian links between existing streets. This helped answer questions regarding how many more parcels or how many more people would have access to a selected site if pedestrian ways were provided at more locations.
- Parcels with existing sidewalk access to the selected Ped Shed. This map indicates the existing conditions regarding pedestrian access within the walkable catchment. When compared to the previous map showing the extent of the potential walkable catchment, evaluations can be made to improvements necessary to increase pedestrian access.
- Examples of the aerial photography previously mentioned have also been included to show the usefulness of this technology and its application for this use. Using information gathered from aerial photography, those parcels within the walkable catchment that actually have access to the selected site via sidewalks was identified. This information represents the actual existing “walkable catchment”.
- Existing land use was also mapped to provide information on the types of uses served within a walkable catchment.

Crescent Springs Community Park

The Crescent Springs Community Park (Map 2, a through d) was selected due to its location within a residential area. Recreation facilities providing activities for children, adults and families should be readily accessible for pedestrians. Crescent Springs Community Park is one of the newest parks within Kenton County. How accessible is it for pedestrians?

Map 2a shows that a clear majority of parcels within the Ped Shed are within one – half mile walking distance of the park. Only a few additional parcels would be added with new sidewalk construction as noted on the map. Map 2c shows the actual parcels within this area with existing sidewalk connection to the park. The walkable catchment shown on Map 2c indicates that a large majority of residents within the Ped Shed currently enjoy pedestrian access to this park. Note that these sidewalks can be

identified on the aerial photograph on Map 2b. Land use shown on Map 2d confirms the predominate residential character of the area. Together these maps indicate that the investment in park land at this location and investments in sidewalks have resulted in a very pedestrian oriented recreation facility. This park is a good example of pedestrian access that is advocated in this plan.

Dixie Highway Corridor

The Dixie Highway Corridor (Map 3, a through d) was selected to represent a strip type commercial area. The actual point selected as the center of the Ped Shed is the intersection of Kenton Lands Road and Dixie Highway. A black cross at the center of the concentric circles marks this location. All measurements identifying the limits of pedestrian or potential pedestrian access are measured from this point. Within this Ped Shed are located a number of commercial businesses along with public uses such as: Dixie Heights High School, Cawood Elementary School, the Erlanger Branch of the Kenton County Library, and the Erlanger Branch of the U.S. Post Office.

Map 3a, which shows all parcels comprising the walkable catchment within the Ped Shed for the Dixie Corridor, indicates that a clear majority of the parcels are within one-half walking distance. Significant additional parcels could be added to the walkable catchment if additional pedestrian access is provided. Most noteworthy is a large area adjacent to the corridor off Lynwood Court in Edgewood. This site is currently being developed into a single-family residential subdivision. Map 3b is an example of an enlarged aerial photograph used to identify the location of sidewalks within this corridor. Pedestrian accessibility, via existing sidewalks, is limited primarily to those parcels that have frontage along Dixie Highway (see Map 3c). Evaluations of the walkable catchment for Map 3c indicate an important consideration for site design/planning for shopping centers. Setback of commercial buildings, with large parking lots between the street and the buildings, creates a significant pedestrian barrier. For example on Map 3c the Kmart Shopping Center, which lies near the center of the one-fourth mile circle is not connected by sidewalk to Dixie Highway, and therefore was not selected. Furthermore, Map 3c indicates that most residential parcels (see also Map 3d) within the cities of Edgewood and Crestview Hills are not accessible via sidewalks to the Dixie Highway corridor. More detailed analysis of these maps verifies several important concepts of pedestrian facility design as follows:

- If a goal of pedestrian access is to encourage trips of short distances to be accomplished or able to be accomplished on foot versus via motor vehicle (e.g., 25 percent of all trips are less than one mile, see Chapter 1) sidewalks must be provided.
- In this example, significant numbers of businesses and public facilities are inaccessible to potential customers residing nearby and within the walkable catchment. It appears that these businesses and public facilities may also have a stake in pedestrian access. While this plan did not survey specific potential customers within the walkable catchment for this area, it is logical that some

shopping trips or some trips to public facilities would be made to this area by pedestrians from nearby residential areas if access by sidewalk were available.

- Design of this area with large buildings facing Dixie Highway, may also not be conducive to maximizing pedestrian accessibility. Again using Kmart as an example, the mass of this building and its orientation to Dixie Highway basically creates a wall between residential areas to its rear. Coupled with the fact that these residential areas also do not or have not had pedestrian access provided to or from adjoining commercial areas further limits potential customers via pedestrian transportation. These types of considerations should be evaluated during both the design of commercial areas and adjoining residential subdivisions. Goals and objectives for this plan and pedestrian way standards recommended in Chapter 2 address these issues.

Summit View School

The Summit View School location was selected because this site, which contains a middle and elementary school, is the newest school in the Kenton County system. It was built to relieve overcrowding in existing schools and to serve one of the fastest growing residential areas in the county. Evaluation of this site includes using a one mile Ped Shed, as previously discussed, to conform with school criteria for maximum walking distance/bus service.

Map 4a shows the Ped Shed and walkable catchment for the school. Residential development in the vicinity of the school is along Kentucky 17. A majority of residential lots within the Ped Shed lie within the walkable catchment. Map 4b is an analysis of access via existing sidewalks and shows the actual existing walkable catchment for Summit View School. However, there is no access to the school via sidewalks. Further evaluation, however, indicates that most residential subdivisions within the Ped Shed have been constructed with sidewalks. The missing link, is that no sidewalks exist along Kentucky 17 to provide connection to the school.

New Erlanger Library

The final location evaluated is the new site of the Erlanger Branch of the Kenton County Library. This site was chosen because it is a new facility under construction and it will attract a number of school age patrons on a daily basis. As a result, pedestrian access will be very desirable. Part of the planned construction includes sidewalk extensions.

Map 5a, shows parcels comprising the walkable catchment within the Ped Shed and other parcels with potential access, but which would need connections. The railroad to the east of the site creates a major physical barrier that, if crossed with a pedestrian facility, will provide access to many more lots within the City of Crestview Hills. Access across major barriers (e.g., railroad, interstate highways, etc.) should be considered to enhance pedestrian transportation. Map 5b, which shows parcels with access to sidewalks, indicates that no sidewalks currently provide access to the library site. As

previously mentioned, this condition will be addressed to provide connections to existing sidewalks in the Erlanger area.

Conclusions and Recommendations

The use of Network Analyst has proven to be very simple to use as a tool to evaluate pedestrian access within Ped Sheds. This tool along with other data available in the PlanNet system (e.g., parcel data, land use, topography, aerial photography, etc.) enable most evaluations to be done without the need for field work. Use of this process to graphically detail and locate pedestrian deficiencies should help decision-makers prioritize sidewalk improvements. Facilities, such as the Summit View Schools, should include pedestrian access issues in the planning and design of the facility. For example, if this site had been evaluated using the Ped Shed approach early in the planning process, the school board would have identified that there was virtually no access to this site for pedestrians from nearby residential subdivisions. Planning for pedestrian access to the school could have been initiated to coincide with school construction.

Use of the Ped Shed for evaluating new residential subdivision development proposals is also possible. The ability to modify Network Analyst by adding alternate pedestrian routes, along proposed streets or through existing parcels where future access may be provided, allows for evaluation of pedestrian accessibility at the earliest stages of new development. Connectivity of streets in residential neighborhoods is a priority on this plan. Network Analyst allows for connection routes, which might be implemented either as easements or dedicated rights-of-way, to be evaluated and located where maximum accessibility will be gained.

There are several refinements that can be used to further answer questions that may be needed or desired for decision making. For example, local government may want to add a population component to the process. This evaluation focused exclusively on parcels located within the walkable catchments to determine general deficiencies in the pedestrian system connecting a specific site. Using land use, building permit data, and population estimates/projections within a walkable catchment could also be estimated.

Implementation of the concepts set forth and evaluated in this plan will enhance the pedestrian environment in Kenton County and encourage more people to choose this mode of transportation. The following recommendations are presented to identify the first steps in this implementation process.

Recommendation 1: Amend subdivision regulations and zoning ordinances, as necessary, to incorporate the standards identified in Chapter 2.

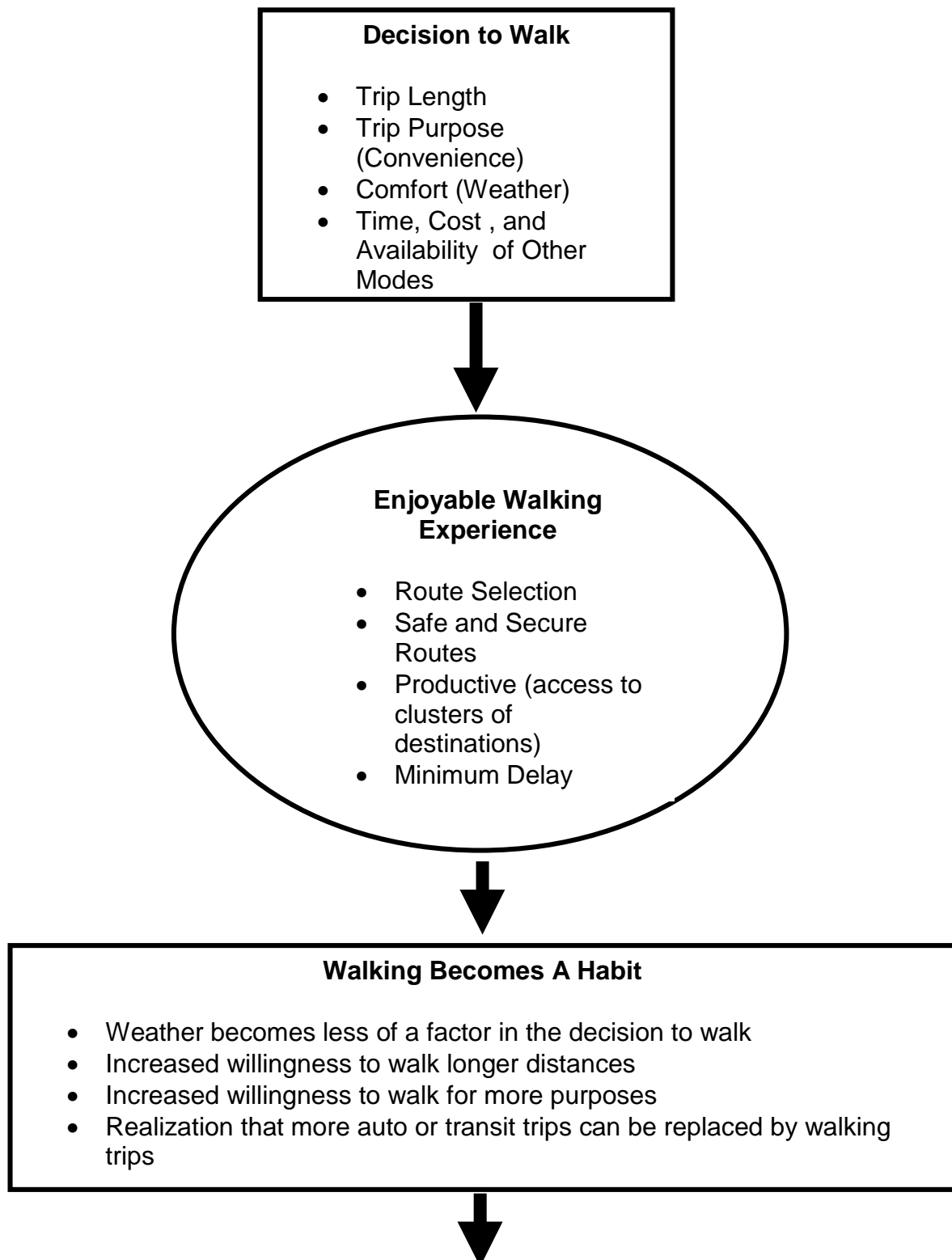
Recommendation 2: Begin using the Ped Shed approach presented in this plan for new developments (commercial, office, industrial and residential) to assure that maximum accessibility is being accommodated. To readily coordinate evaluations with project review timelines, digital submission of development plans will be necessary. It is,

therefore, further recommended that these submissions be required through the application process.

Recommendation 3: Encourage local jurisdictions to evaluate sidewalk improvement projects using the Ped Shed approach to help ensure that maximum accessibility to destinations receives sufficient priority.

ATTACHMENT A DECISION TO WALK

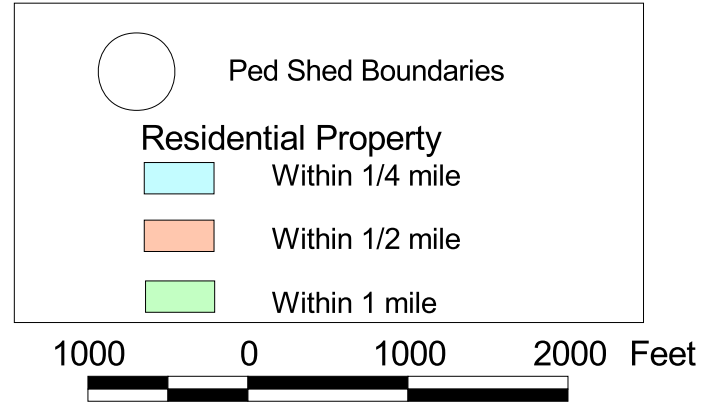
From the Massachusetts Pedestrian Transportation Plan



People may become active in improving walking. Communities become more livable.



PEDESTRIAN SHED EXAMPLE

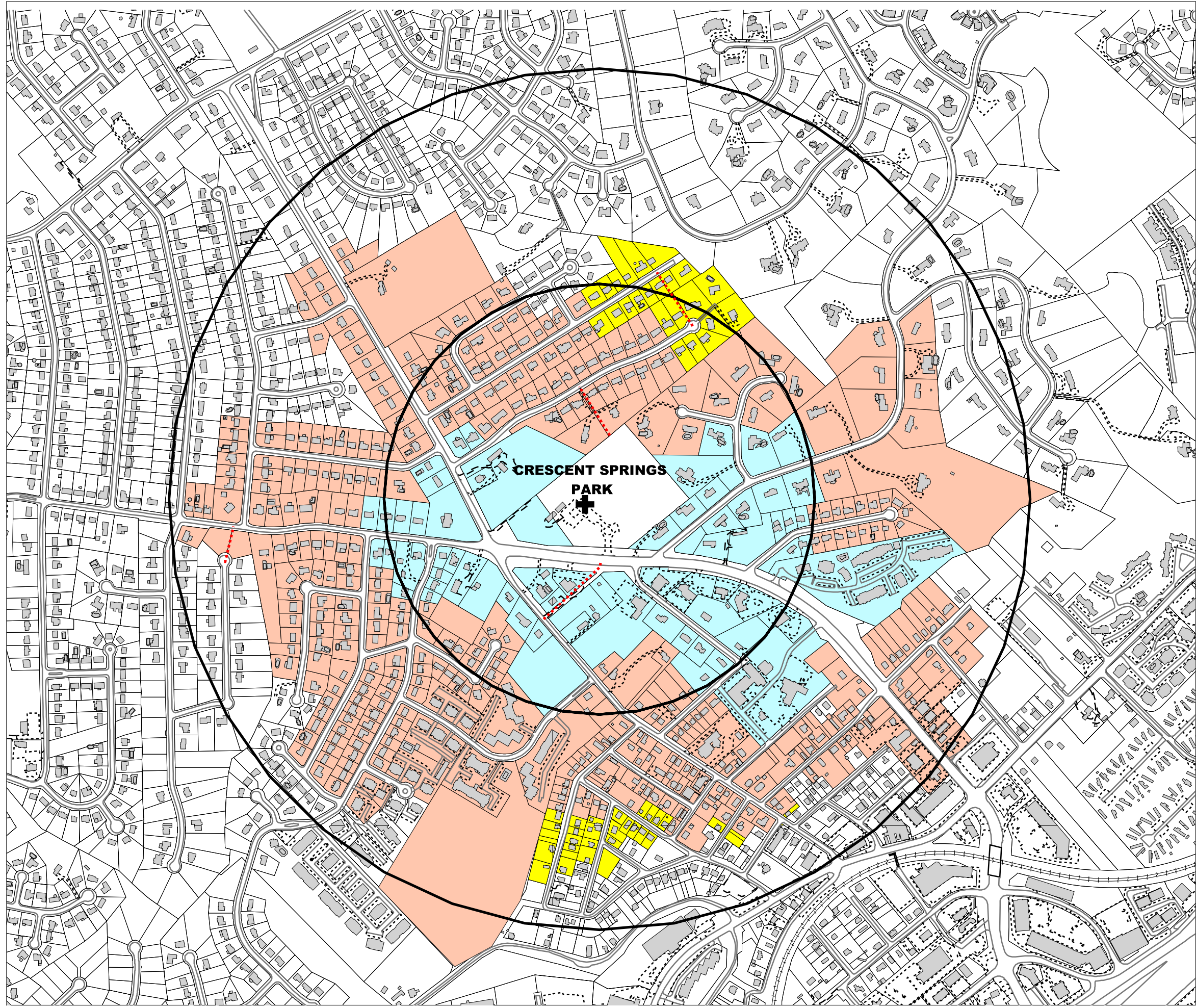


2332 Royal Drive
Fort Mitchell, Kentucky 41017
Phone (859)331-8860/FAX (859)331-8867
Winner of ESRI's "President's Award" 1992
Copyright (C) 1998 by Pictel GIS Partnership
FROM AERIAL PHOTOGRAPHY DATED: MARCH 21 AND 15, 1988
PHOTO REVISED FROM PHOTOGRAPHY DATED: MARCH 21 AND
NOVEMBER 20, 1988, FEBRUARY 7, 1989 AND MARCH 15, 1989
Contours unchanged in areas of photo revisions.
Notice: The Pictel GIS Partnership accepts no liability arising from any
incorrect, incomplete or misleading information contained in this product. The
information presented in this product is accurate for planning purposes only.



MAP 1 BEECHWOOD SCHOOL

KENTON COUNTY PEDESTRIAN PLAN
PHASE 1



CRESCENT SPRINGS PARK WALKABLE CATCHMENT

Parcels Within a Quarter Mile

Parcels Within a Half Mile

Potential Parcels Accessed
By Pedestrian Connection

Pedestrian Connection

0

1000 Feet

N



2332 Royal Drive
Fort Mitchell, Kentucky 41017
Phone (859)331-8980 FAX (859)331-8987
Winner of ESRI's "President's Award" 1992
Copyright (C) 1998 by Frankel GIS Partnership
FROM AERIAL PHOTOGRAPHY DATED: MARCH 21 AND 15, 1985,
PHOTO REVISED FROM PHOTOGRAPHY DATED: MARCH 21 AND
NOVEMBER 20, 1989, FEBRUARY 1990 AND MARCH 15, 1995, MARCH 25 AND 27, 1999
Contours unchanged in areas of photo revisions.
Notice: The Frankel GIS Partnership accepts no liability arising from any
incorrect, incomplete or misleading information contained in this product. The
information presented in this product is accurate for planning purposes only.

MAP 2a CRESCENT SPRINGS PARK

KENTON COUNTY PEDESTRIAN PLAN



CRESCENT SPRINGS PARK AERIAL PHOTOGRAPHY

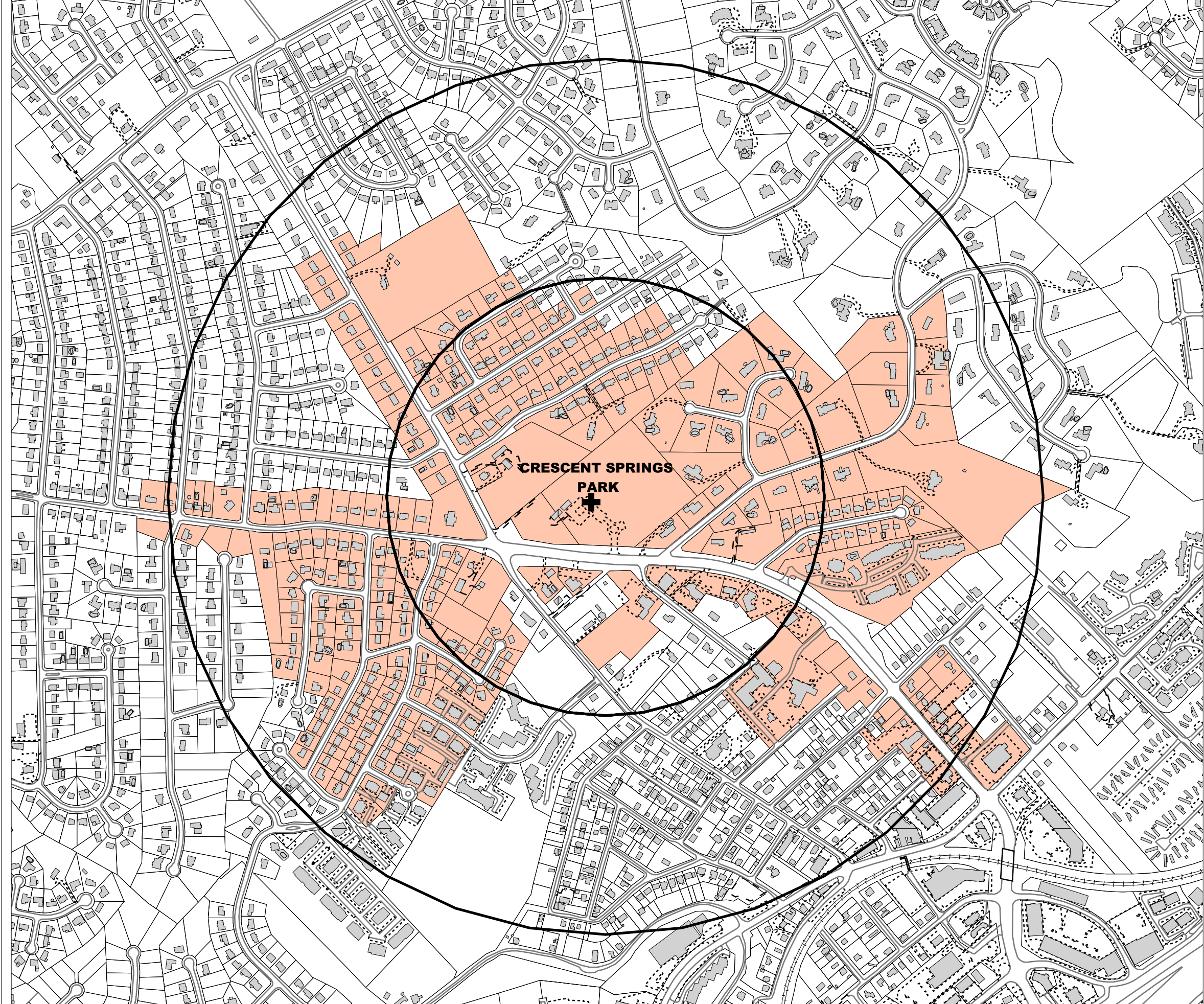
0 1000 Feet



2332 Royal Drive
Fort Mitchell, Kentucky 41017
Phone (609)331-8987 FAX (609)331-8987
Winner of ESRI's President's Award, 1992
Copyright (c) 1995 by Planet GIS Partnership
FROM AERIAL PHOTOGRAPHY DATED: MARCH 21 AND 15, 1985.
PHOTO REVISED FROM PHOTOGRAPHY DATED: MARCH 21 AND
NOVEMBER 20, 1989, FEBRUARY 1, 1990 AND MARCH 15, 1995, MARCH 25 AND 27, 1999
Contours unchanged in areas of photo revisions.
Notice: The Planet GIS Partnership accepts no liability arising from any
incorrect, incomplete or misleading information contained in this product. The
information presented in this product is accurate for planning purposes only.

MAP 2b CRESCENT SPRINGS PARK

KENTON COUNTY PEDESTRIAN PLAN



**CRESCENT SPRINGS PARK
WALKABLE CATCHMENT
WITH SIDEWALK ACCESS**

 Parcels Adjacent to Sidewalks

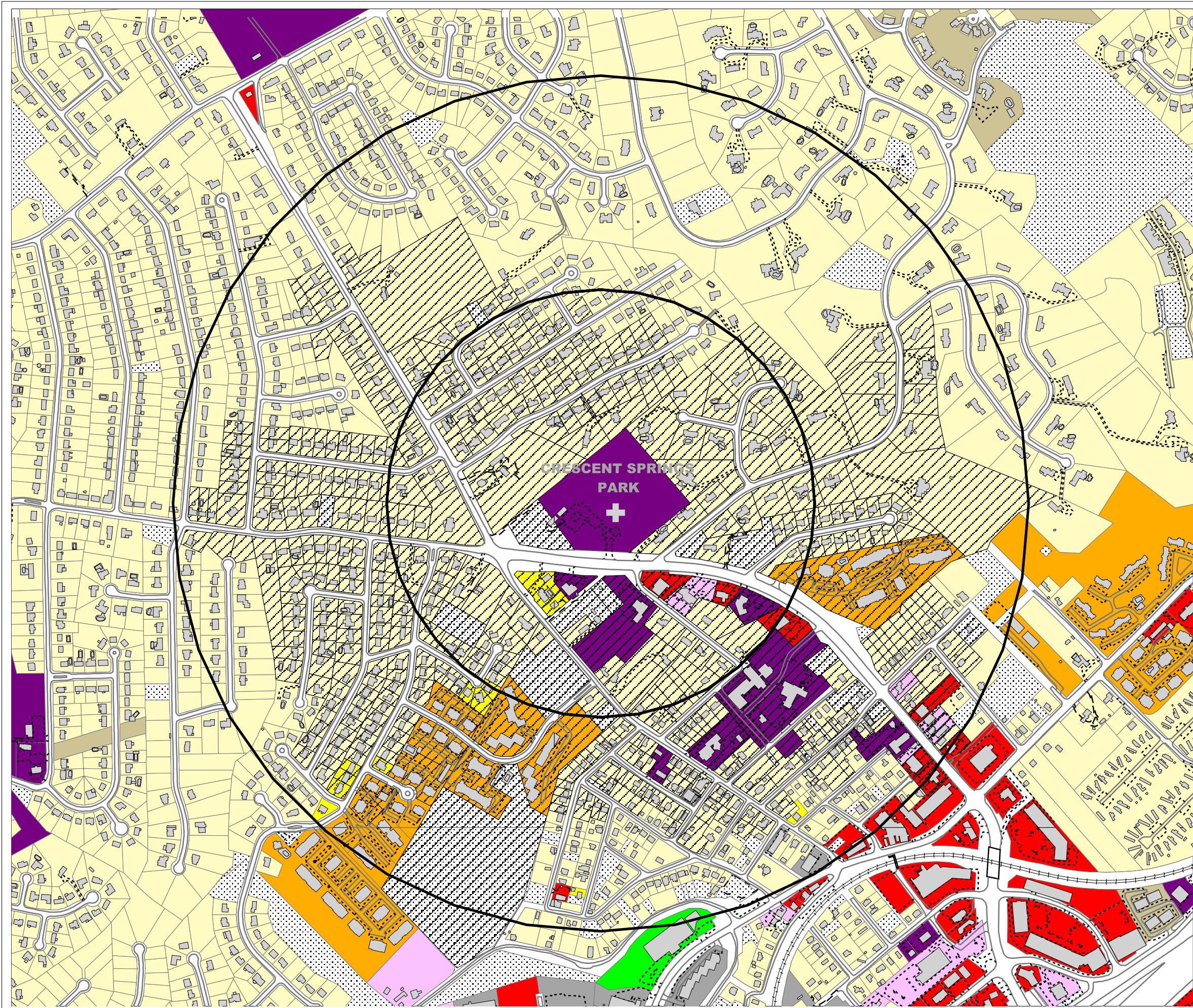
0 1000 Feet



2332 Royal Drive
Fort Mitchell, Kentucky 41017
Phone (502) 331-1950 FAX (502) 331-8987
Winner of ESRI's President's Award, 1995
Copyright (c) 1995 by PlanNet GIS Partnership
FROM AERIAL PHOTOGRAPHY DATED: MARCH 21 AND 15, 1985,
PHOTO REVISSED FROM PHOTOGRAPHY DATED: MARCH 21 AND
NOVEMBER 20, 1989, FEBRUARY 7, 1990 AND MARCH 15, 1995, MARCH 25 AND 27, 1999
Contours unchanged in areas of photo revisions.
Notice: The PlanNet GIS Partnership accepts no liability arising from any
incorrect, incomplete or misleading information contained in this product. The
information presented in this product is accurate for planning purposes only.

**MAP 2c
CRESCENT SPRINGS
PARK**

KENTON COUNTY PEDESTRIAN PLAN



CRESCENT SPRINGS PARK WALKABLE CATCHMENT WITH EXISTING LAND USE

- | | | | |
|--|----------------------------|--|--|
| | Parcels within a Half Mile | | Office |
| | Not Coded | | Retail/Service |
| | Single Family | | ROW |
| | Two Family | | Industrial/Warehousing/Wholesaling/Manufacturing |
| | Multi Family | | Public/Semi Public |
| | HOA | | Recreation and Open Space |
| | | | Agricultural |
| | | | Vacant |

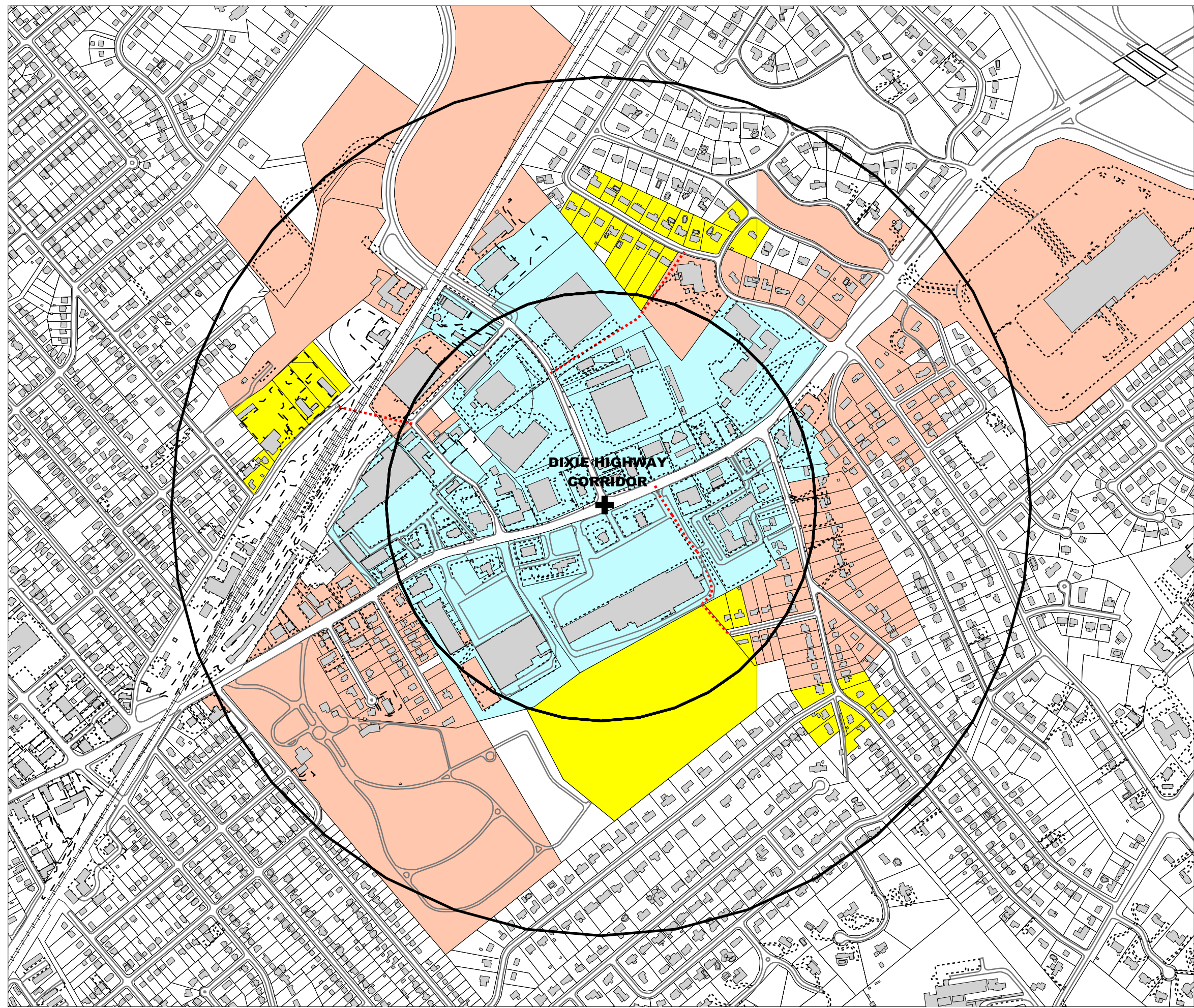
0 1000 Feet



2332 Royal Drive
Fort Mitchell, Kentucky 41017
Phone (859) 331-8880 FAX (859) 331-8987
Copyright (c) 1998 by PlaNNet GIS Partnership
FROM AERIAL PHOTOGRAPHY DATED: MARCH 21 AND 15, 1985.
PHOTO REVISED FROM PHOTOGRAPHY DATED: MARCH 21 AND
NOVEMBER 20, 1989, FEBRUARY 7, 1990 AND MARCH 15, 1995, MARCH 25 AND 27, 1999
Contours unchanged in areas of photo revisions.
Notice: The PlaNNet GIS Partnership accepts no liability arising from any
incorrect, incomplete or misleading information contained in this product. The
information presented in this product is accurate for planning purposes only.

MAP 2d CRESCENT SPRINGS PARK

KENTON COUNTY PEDESTRIAN PLAN



DIXIE HIGHWAY CORRIDOR WALKABLE CATCHMENT



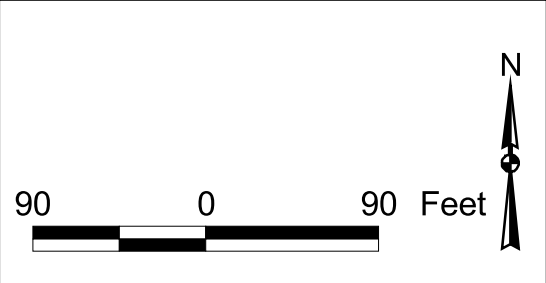
2332 Royal Drive
Fort Mitchell, Kentucky 41017
Phone (859) 331-8800 FAX (859) 331-8887
Winner of ESRI's Presidents Award - 1992
Copyright (C) 1998 by PlanNet GIS Partnership
FROM AERIAL PHOTOGRAPHY DATED: MARCH 21 AND 15, 1985,
PHOTO REVISED FROM PHOTOGRAPHY DATED: MARCH 21 AND
NOVEMBER 20, 1989, FEBRUARY 7, 1990 AND MARCH 15, 1995, MARCH 25 AND 27, 1999
Contours unchanged in areas of photo revisions.
Notice: The PlanNet GIS Partnership accepts no liability arising from any
incorrect, incomplete or misleading information contained in this product. The
information presented in this product is accurate for planning purposes only.

MAP 3a DIXIE HIGHWAY CORRIDOR

KENTON COUNTY PEDESTRIAN PLAN



**DIXIE HIGHWAY CORRIDOR
AERIAL PHOTOGRAPH
ENLARGED**



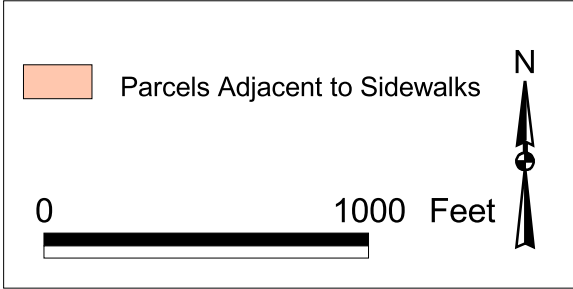
2332 Royal Drive
Ft. Mitchell, Kentucky 41017
Phone (859)331-8980 FAX (859)331-8987
Winner of ESRI's "President's Award" 1992
Copyright (c) 1998 by Pitkin GIS Partnership
FROM AERIAL PHOTOGRAPHY DATED: MARCH 21 AND 15, 1985,
PHOTO REVISED FROM PHOTOGRAPHY DATED: MARCH 21 AND
NOVEMBER 20, 1989, FEBRUARY 7, 1990 AND MARCH 15, 1995, MARCH 25 AND 27, 1999
Contours unchanged in areas of photo revisions.
Notice: The Pitkin GIS Partnership accepts no liability arising from any
incorrect, incomplete or misleading information contained in this product. The
information presented in this product is accurate for planning purposes only.

**MAP 3b
DIXIE HIGHWAY
CORRIDOR**

KENTON COUNTY PEDESTRIAN PLAN



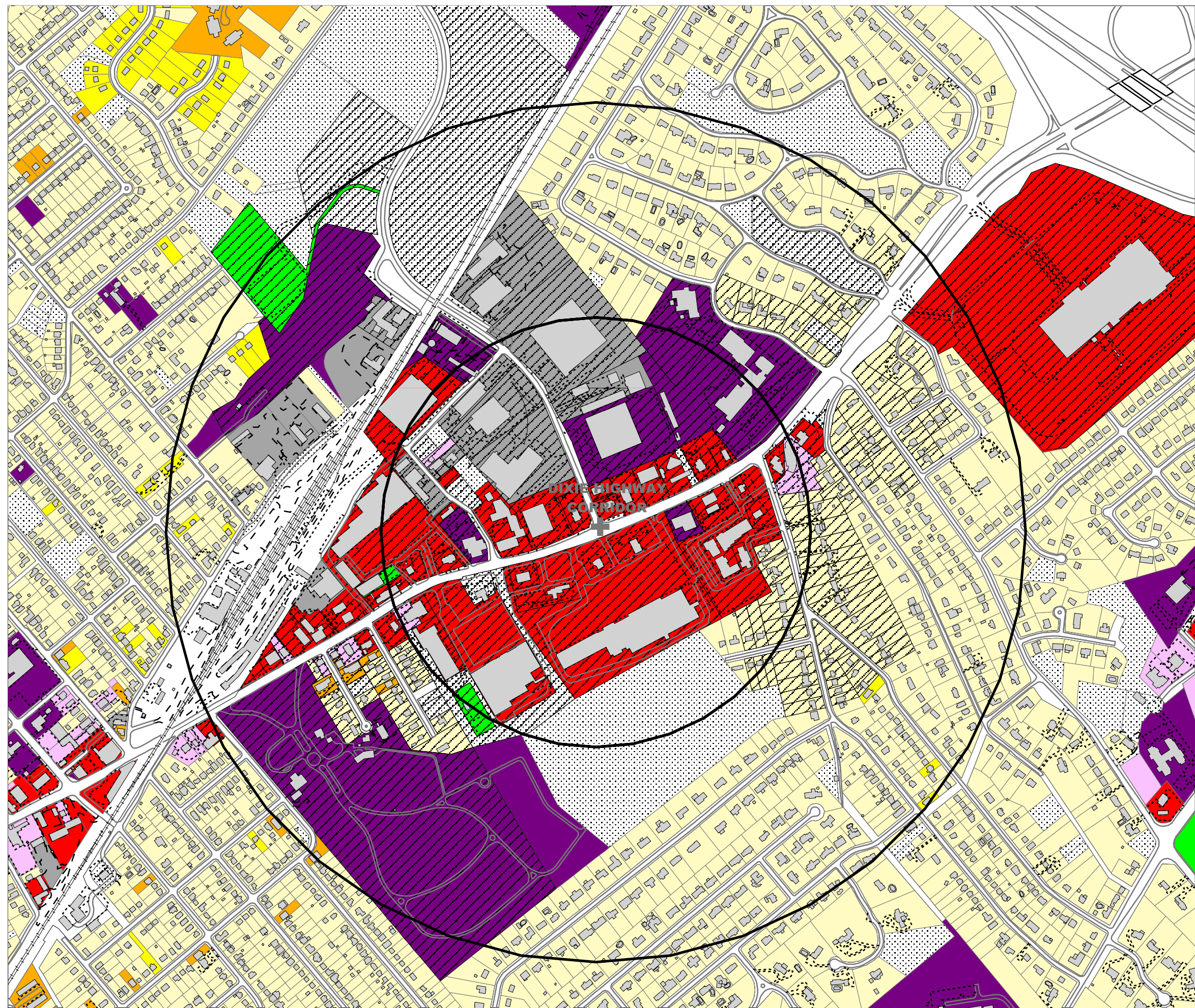
**DIXIE HIGHWAY CORRIDOR
WALKABLE CATCHMENT
WITH SIDEWALK ACCESS**



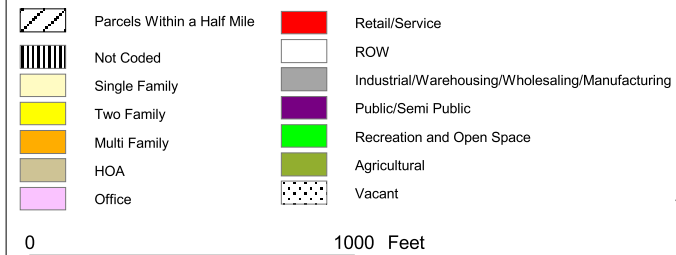
2332 Royal Drive
Evanston, Kentucky 41017
Phone (859) 331-8980 FAX (859) 331-8987
Winner of ESRI's "President's Award", 1992
Copyright (c) 1998 by PlanNet GIS Partnership.
FROM AERIAL PHOTOGRAPHY DATED: MARCH 21 AND 15, 1985,
NOVEMBER 20, 1989, FEBRUARY 7, 1990 AND MARCH 15, 1995, MARCH 25 AND 27, 1999
Contours unchanged in areas of photo revisions.
Notice: The PlanNet GIS Partnership accepts no liability arising from any
incorrect, incomplete or misleading information contained in this product. The
information presented in this product is accurate for planning purposes only.

**MAP 3c
DIXIE HIGHWAY
CORRIDOR**

KENTON COUNTY PEDESTRIAN PLAN



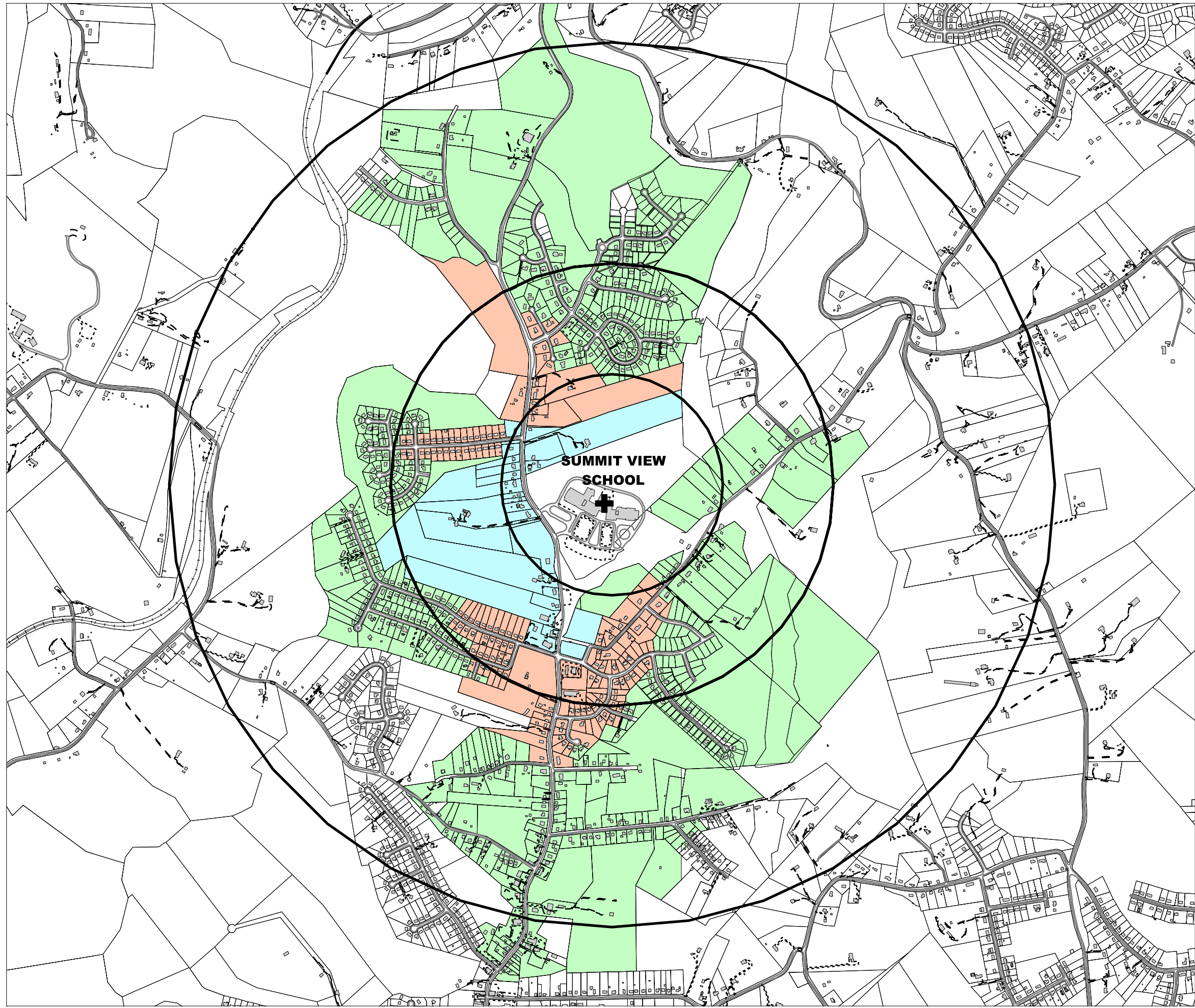
**DIXIE HIGHWAY CORRIDOR
WALKABLE CATCHMENT WITH
EXISTING LAND USE**



2332 Royal Drive
Fort Mitchell, Kentucky 41017
Phone (859) 331-8800 FAX (859) 331-8887
Winner of ESRI's Presidents Award - 1992
Copyright (C) 1998 by PlanNet GIS Partnership
FROM AERIAL PHOTOGRAPHY DATED: MARCH 21 AND 15, 1985,
PHOTO REVISSED FROM PHOTOGRAPHY DATED: MARCH 21 AND
NOVEMBER 20, 1989, FEBRUARY 7, 1990 AND MARCH 15, 1995, MARCH 25 AND 27, 1999
Contours unchanged in areas of photo revisions.
Notice: The PlanNet GIS Partnership accepts no liability arising from any
incorrect, incomplete or misleading information contained in this product. The
information presented in this product is accurate for planning purposes only.

MAP 3d
**DIXIE HIGHWAY
CORRIDOR**

KENTON COUNTY PEDESTRIAN PLAN



SUMMIT VIEW SCHOOL WALKABLE CATCHMENT

- Parcels Within a Quarter Mile
- Parcels Within a Half Mile
- Parcels Within a Mile

0 1000 Feet



2332 Royal Drive
Fort Mitchell, KY 41017
Phone (859) 331-8987 FAX (859) 331-8987
Winner of ESRI's President's Award, 1992
Copyright (c) 1999 by Kenton GIS Partnership
FROM AERIAL PHOTOGRAPHY DATED: MARCH 21 AND 15, 1985
PHOTO REVISED FROM PHOTOGRAPHY DATED: MARCH 21 AND
NOVEMBER 20, 1989, FEBRUARY 7, 1990 AND MARCH 15, 1995, MARCH 25 AND 27, 1999
Contours unchanged in areas of photo revisions.
Notice: The Kenton GIS Partnership accepts no liability arising from any
incorrect, incomplete or misleading information contained in this product. The
information presented in this product is accurate for planning purposes only.


MAP 4a SUMMIT VIEW SCHOOL

KENTON COUNTY PEDESTRIAN PLAN



**SUMMIT VIEW SCHOOL
WALKABLE CATCHMENT WITH
SIDEWALK ACCESS**

 Parcels Adjacent to Sidewalks

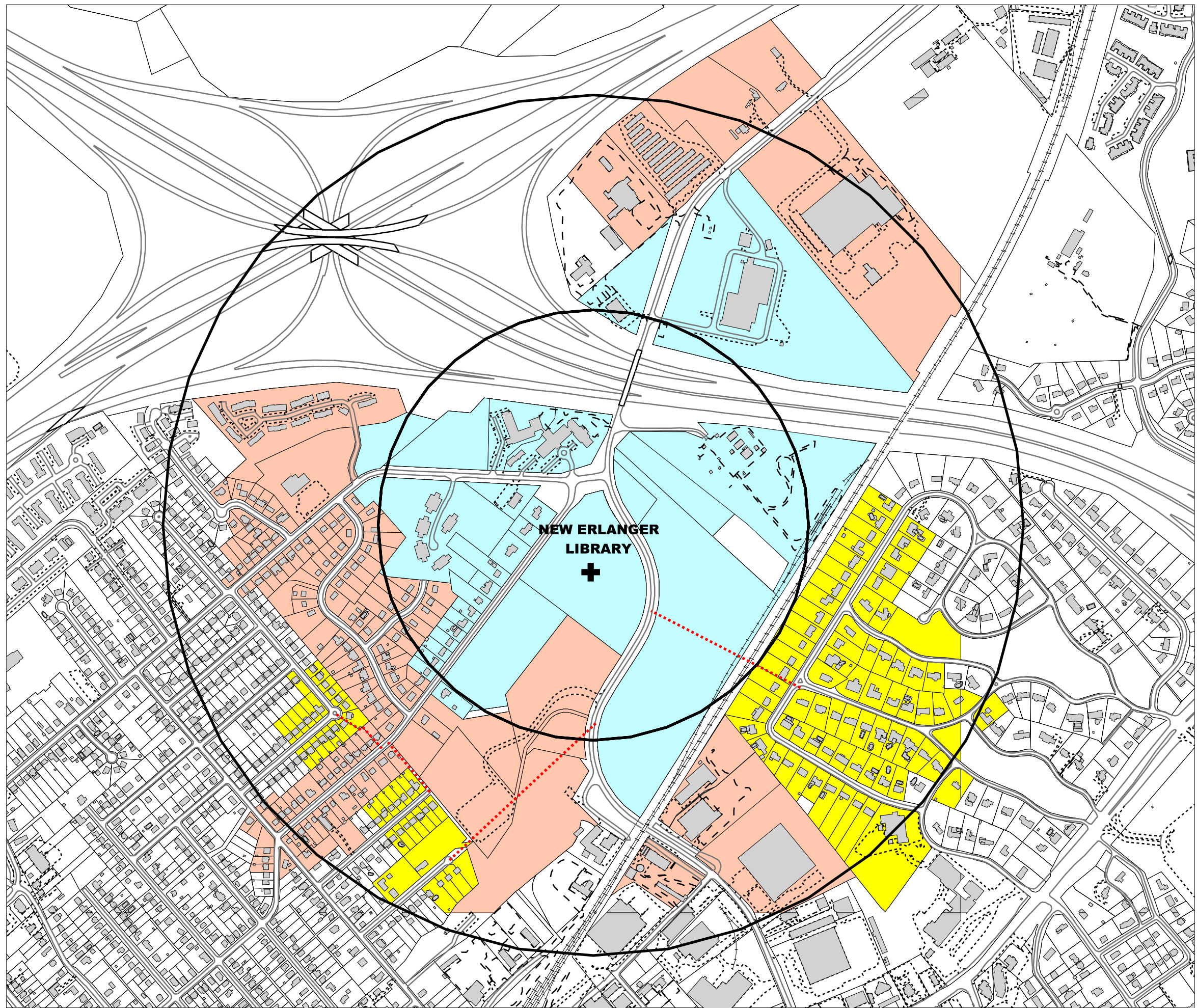
0 1000 Feet




2332 Royal Drive
Fort Mitchell, Kentucky 41017
Phone (609)331-8887 FAX (609)331-8987
Winner of ESRI's President's Award, 1992
Copyright (c) 1995 by Planet GIS Partnership.
FROM AERIAL PHOTOGRAPHY DATED: MARCH 21 AND 15, 1985.
PHOTO REVISED FROM PHOTOGRAPHY DATED: MARCH 21 AND
NOVEMBER 20, 1989, FEBRUARY 1, 1990 AND MARCH 15, 1995, MARCH 25 AND 27, 1999
Contours unchanged in areas of photo revisions.
Notice: The Planet GIS Partnership accepts no liability arising from any
incorrect, incomplete or misleading information contained in this product. The
information presented in this product is accurate for planning purposes only.

MAP 4b
**SUMMIT VIEW
SCHOOL**

KENTON COUNTY PEDESTRIAN PLAN



**NEW ERLANGER LIBRARY
WALKABLE CATCHMENT**

Parcels Within a Quarter Mile

Parcels Within a Half Mile

Potential Parcels Accessed
By Pedestrian Connection

Pedestrian Connection

0

1000 Feet

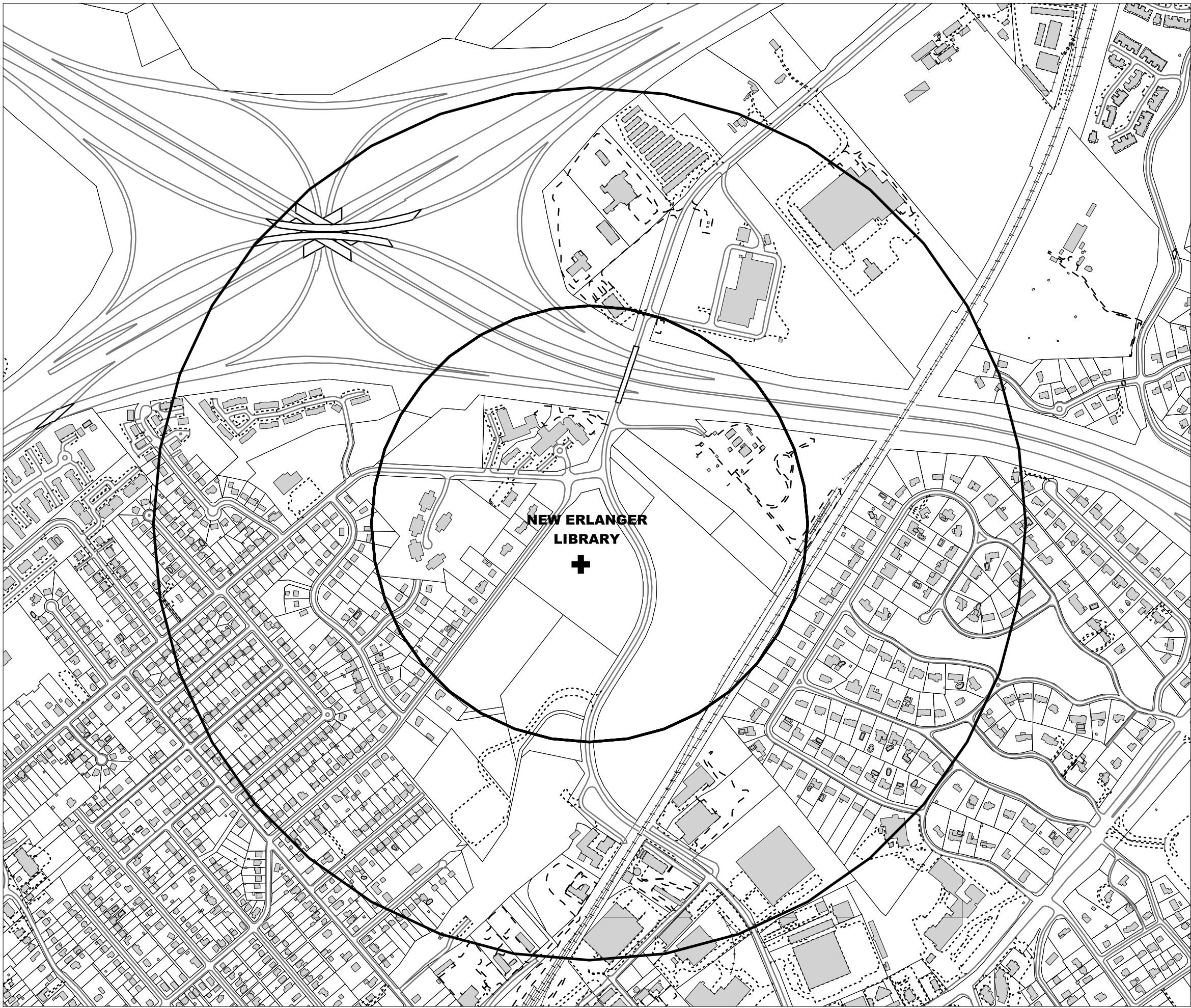
N



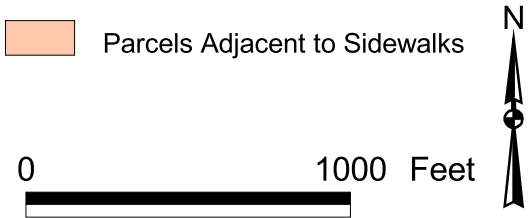
2332 Royal Drive
Fort Mitchell, Kentucky 41017
Phone (859) 331-8800 FAX (859) 331-8887
Winner of ESRI's "President's Award" - 1992
Copyright (C) 1998 by PlanNet GIS Partnership
FROM AERIAL PHOTOGRAPHY DATED: MARCH 21 AND 15, 1985.
PHOTO REVISED FROM PHOTOGRAPHY DATED: MARCH 21 AND
NOVEMBER 20, 1989, FEBRUARY 7, 1990 AND MARCH 15, 1995, MARCH 25 AND 27, 1999
Contours unchanged in areas of photo revisions.
Notice: The PlanNet GIS Partnership accepts no liability arising from any
incorrect, incomplete or misleading information contained in this product. The
information presented in this product is accurate for planning purposes only.

**MAP 5a
NEW ERLANGER
LIBRARY**

KENTON COUNTY PEDESTRIAN PLAN



**NEW ERLANGER LIBRARY
WALKABLE CATCHMENT
WITH SIDEWALK ACCESS**



2332 Royal Drive
Evanston, Kentucky 41017
Phone (859)331-8987
Fax (859)331-8980 FAX (859)331-8987
Winner of ESRI's "President's Award" 1992
Copyright (c) 1998 by PlaNat GIS Partnership
FROM AERIAL PHOTOGRAPHY DATED: MARCH 21 AND 15, 1985
NOVEMBER 20, 1989, FEBRUARY 7, 1990 AND MARCH 15, 1995, MARCH 25 AND 27, 1999
Contours unchanged in areas of photo revisions
Notice: The PlaNat GIS Partnership accepts no liability arising from any
incorrect, incomplete or misleading information contained in this product. The
information presented in this product is accurate for planning purposes only.

**MAP 5b
NEW ERLANGER
LIBRARY**

KENTON COUNTY PEDESTRIAN PLAN