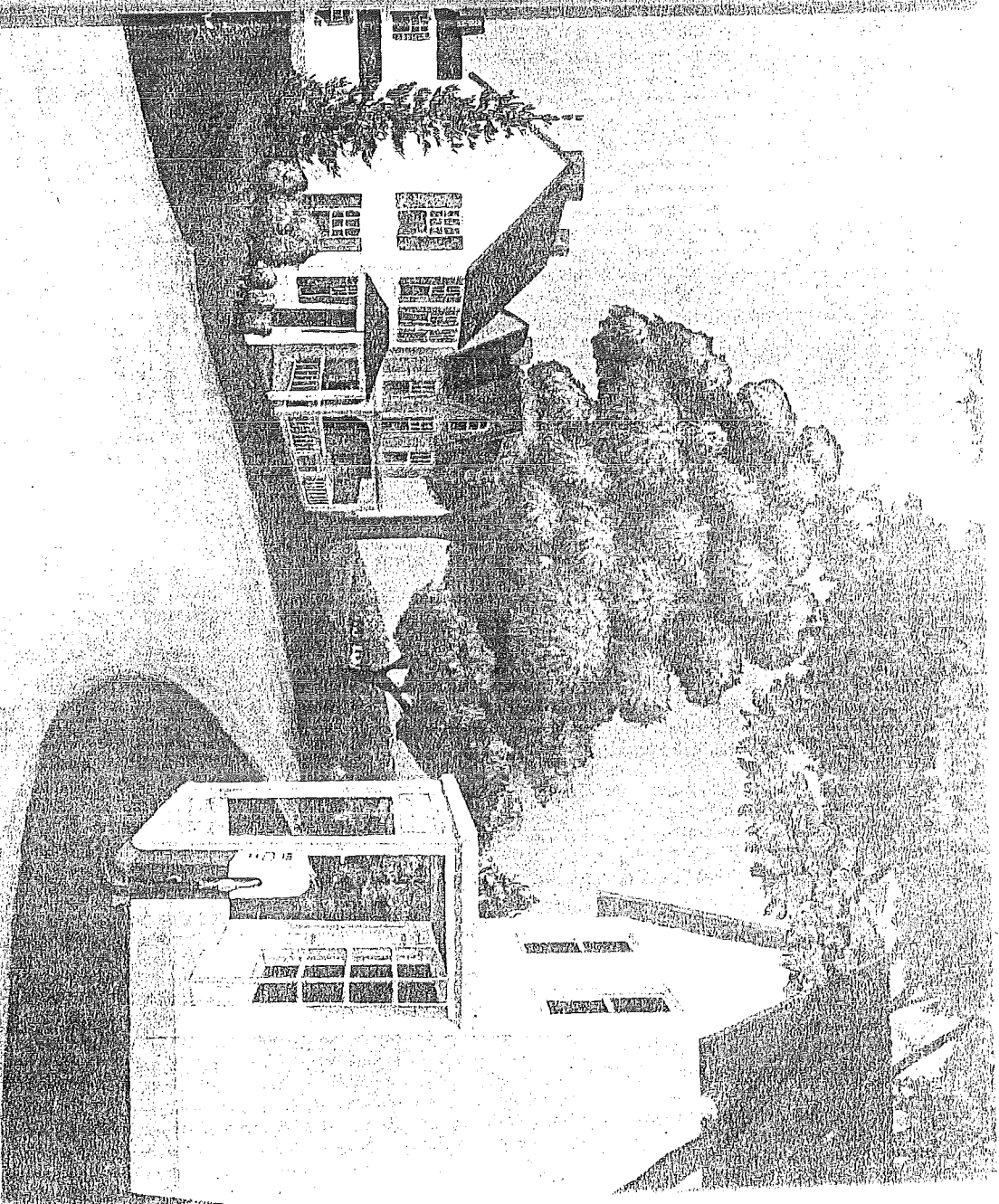
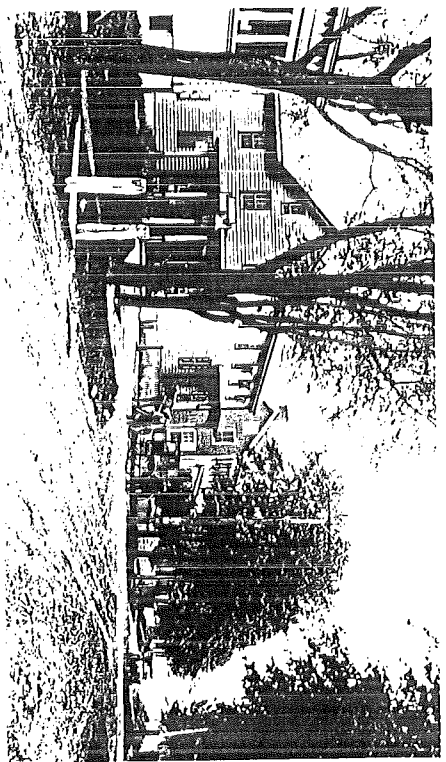
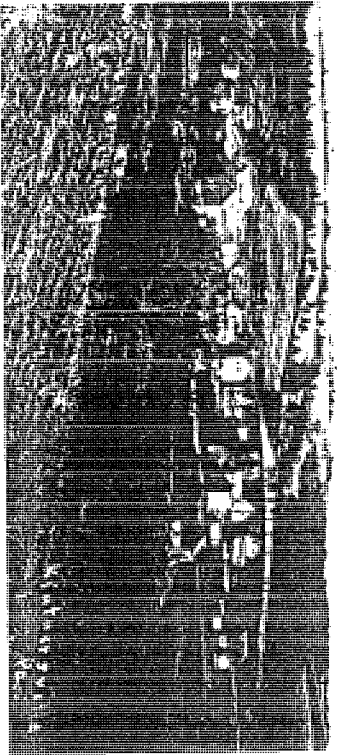


VILLAGE PLANNING HANDBOOK



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An old view of Kinnersville, Nockamixon Township illustrates the way villages commonly developed amidst rolling farmland. (BCIS) (top)

A visit to Forest Grove, Buckingham Township, reveals that the roads are now paved, but the village has retained the character of this 1907 photograph. (BCIS) (bottom)

Introduction

The villages of Bucks County represent an important part of the county's culture and heritage. The history of the county is manifested through these small communities in several ways. Many of the villages contain excellent examples of eighteenth and nineteenth century architecture. Villages located along historic transportation routes, such as Durham Road and the Delaware River and Canal, remain as evidence of early settlement patterns in Bucks County. Village crossroads' inns, many built in the 1700's, continue to serve customers today. Even the name of a village may provide a key to the past. For example, villages were often named after an early postmaster, innkeeper, outstanding citizen, or a unique natural feature. The character and quality of Bucks County would be permanently diminished if these small settlements were to disappear from the county's landscape. Thus, the protection of villages is a worthwhile goal for both village residents and the county as a whole.

While there are still over one hundred identifiable villages remaining in Bucks County, many have been lost in the face of new development and growth.¹ Those that have disappeared were principally located in the lower part of the county where development pressures have historically been the most intense. However, in more recent years, the central and upper regions of the county have undergone dramatic changes in population and housing. The population between 1970 and 1987 increased by approximately 39 percent in upper Bucks and 54 percent in central Bucks County, whereas the population in lower Bucks increased by 15 percent.² Similar growth trends are expected to continue to the year 2000.

While municipalities cannot prevent growth, they can take steps to alleviate the effects that development can have on villages through appropriate land use policies and regulations. In addition, residents can work to maintain or improve the positive aspects of their village. The *Village Planning Handbook* was written to provide guidance for those people who wish to protect the county's heritage as represented by the unique qualities of Bucks County's villages.

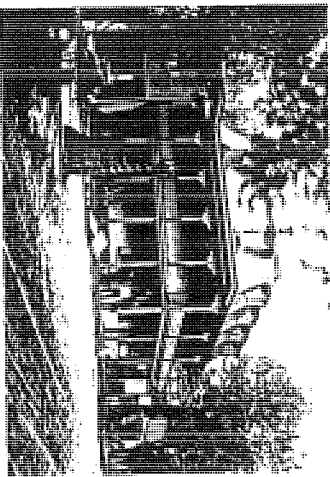
WHAT IS A VILLAGE?

For the purpose of the handbook, a village is generally viewed as a relatively small clustered settlement which is often dominated by older homes and structures. Frequently, the houses are spaced closely together at a crossroads, evoking the image of the village as an identifiable place. The following are characteristics typically associated with a village:

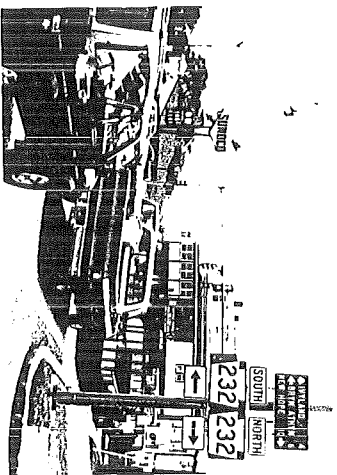
- often at a crossroads;
- small, compact development pattern.

¹ Many of the county's villages are described in *The Villages of Bucks County: A Guidebook* which was published in 1987 as the first part of the Bucks County Planning Commission's village study. This book is available through the Bucks County Planning Commission and includes a short history of each village as well as location maps for finding the villages.

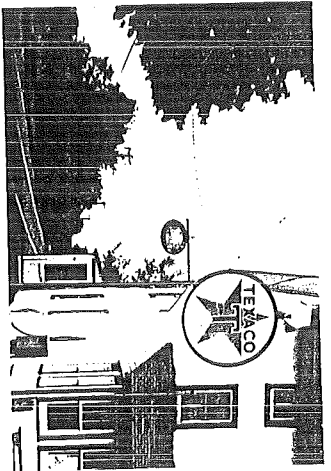
² Bucks County Planning Commission population projections and estimates and 1980 U.S. Census information.



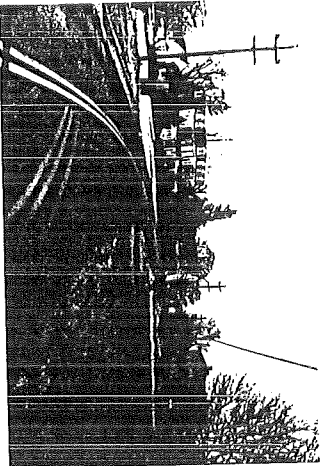
The White Bear Hotel, Richboro, in 1907 (BCGIS)



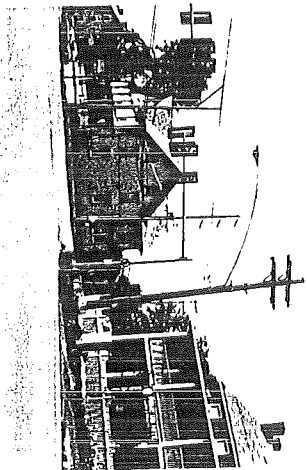
Today it is known as the Spread Eagle Inn and the character of the once-quiet village center has been altered by the intrusion of vehicular traffic and extensive commercial development.



The Village of Elephant, which consists of several houses and the Elephant Hotel, is a hamlet.



Pipersville is a residential, or "classic," form of a village.



Plumsteadville is a commercial village.

- usually small or narrow lots;
- pre-twentieth century in origin; and
- nuclear origin (family, store, tavern, extended family, farmstead).

In addition to the above characteristics, the county's villages originally emerged in a rural setting. While many villages are still surrounded by a rural landscape, those located in more urbanized areas are often adjacent to new development.

TYPES OF VILLAGES

The villages of Bucks County can be grouped into three basic categories: hamlets, residential villages, and commercial villages. Hamlets are the smallest type of village, consisting of a few houses at a crossroads or in proximity to each other. Hamlets generally have no commercial uses or services.

A residential village is the "classic" form of a village: a settlement which is mostly residential but which also contains community related services such as a post office or church.

A commercial village is often the twentieth century or "motorized" form of a previously residential village: a settlement which is largely (and originally) residential in use, but is characterized by commercial uses or services that draw on a broader region for support. Commercial uses found in this type of village might include gas stations, antique and furniture stores, restaurants, inns and taverns, and other shops or offices.

HOW TO USE THE HANDBOOK

The *Village Planning Handbook* is designed for use by both municipal officials and village residents. For example, Chapter 2 of the handbook provides guidelines for the preparation of a comprehensive village plan and recommendations for appropriate land use policies and regulations. The implementation of these policies and regulations requires action by township officials since amendments to the comprehensive plan, zoning ordinance, and subdivision and land development ordinance are necessary. Similarly, sewage and water facilities planning and changes to the local building code must take place at the municipal level.

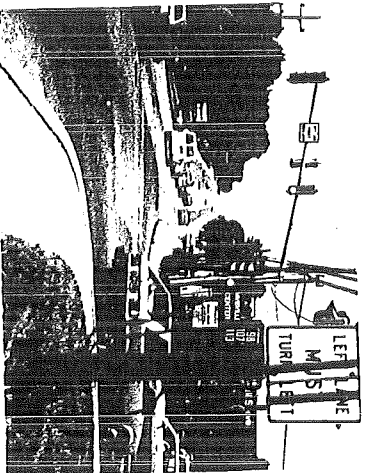
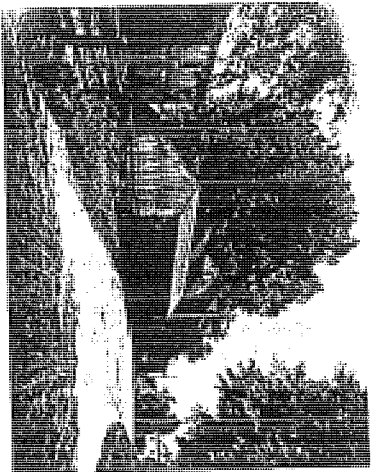
Other chapters of the handbook deal with more specific problems and concerns within villages. Many of the suggestions and recommendations are directed towards village residents who are interested in maintaining the character of their community. For example, the chapter on architecture is helpful for property owners who are considering renovation or new construction within a village and would like to make their building compatible with existing architecture. In many cases, the recommendations in the handbook need to be implemented through the combined efforts of both township officials and residents. While each group can make a difference separately, their joint cooperation will be the most effective approach to maintaining and protecting the villages of Bucks County.

Land Use Policies and Regulations

Lands within a community are often suitable for a wide variety of uses. How the land will be used or developed is dependent, in part, on the actions of local government. The local government controls where land uses will occur by establishing land use policies and land use regulations. Inappropriate land use policies and regulations have produced many problems for communities, including the loss of valuable natural resources and the overburdening of the infrastructure. Inappropriate land use planning and policies have also resulted in the degradation or loss of many of Bucks County's villages. This chapter of the handbook will examine past mistakes and discuss land use policies and regulations which are designed to protect and maintain villages.

The first part of this chapter discusses the development of appropriate land use policies for villages. The preparation of a comprehensive plan is the best vehicle for formulating land use policies. This process could involve a complete overhaul of a municipal comprehensive plan or, more simply, amendments to the existing comprehensive plan.

Land use regulations are developed on the basis of the comprehensive plan and are contained in the municipal zoning ordinance. The municipality's sewage facilities plan also affects land uses, although more indirectly. Appropriate regulations for both villages and the land surrounding villages are discussed in the second part of this chapter.



Davistville, formerly a village, is now a place name at an intersection characterized by highway commercial development. The house (BCHS) (top), which was built in 1827, was moved when the road was widened in 1951.

PART I: COMPREHENSIVE VILLAGE PLANNING

The purpose of the comprehensive plan is to guide the future growth and development of a community. This section of the handbook goes through a step by step process for developing a comprehensive plan and policies specifically designed for villages. The resulting village plan could be incorporated into the existing municipal comprehensive plan or it could be developed as one section of a new municipal comprehensive plan.

The following six step process is the recommended approach to undertaking a comprehensive village planning effort:

1. Organize the planning program
2. Inventory of pertinent information
3. Analyze the information
4. Prepare a plan
5. Prepare ordinances to implement policies
6. Review and revise

STEP 1: ORGANIZE THE PLANNING PROGRAM

A comprehensive village planning program could be started in two ways. If a township board of supervisors or planning commission is concerned about the future of villages within their township, they could initiate and organize the program. A village planning program could also be initiated by concerned residents within the township. However, if the program is started at this level, residents should consider organizing and presenting their concerns to the township planning or commission or board of supervisors early in the process. Because the township officials will eventually be responsible for making changes in township policy and land use regulations which affect the villages, they will play an important role in achieving many village planning goals.

Whether the initiative comes from the village or township level, both groups need to work together to accomplish the goals of a village planning program. Each group has its own role to play in successfully meeting the program's objectives. As previously mentioned, the township officials will be responsible for implementing village policies through amendments to the comprehensive plan, zoning ordinance, and subdivision and land development ordinance. In addition, the township may be able to provide some funding for the project. On the other hand, many suggested village improvements cannot be regulated through ordinances and will only be accomplished through the voluntary efforts of village residents and businessmen. Therefore, organization and cooperation at the village level is equally important in achieving a successful planning program. In addition, the input from both the township and village level is important throughout the planning process to ensure that a comprehensive and realistic plan is developed. Once the desire to undertake a village study has been established, the following organizational guidelines are recommended.

At the outset, the purpose of the program should be clearly defined so that discussion and planning goals can stay on track. The basic concerns should be made as clear as possible so that later, some judgment can be made as to whether the program is accomplishing its purpose.

One of the initial organizational goals is to establish a central group which will be responsible for the major part of the village planning program. This group should be diverse enough so that the interests of the community as a whole are represented and to ensure that important considerations are not overlooked. The township planning commission, along with representatives from the villages, could serve as the core group. A central group, which is responsible for accomplishing the major portion of the work, will help to maintain a stable and coherent planning effort. Public meetings should be held at regular intervals to keep the whole community informed and to allow for their input into the decision making process.

The planning group should consider hiring a planning consultant to assist with the work. The consultant could be hired on a full or part-time basis to provide assistance with more technical matters, review the work as it is completed, or to provide guidance on how to go about the study. An additional advantage to hiring a consultant is having the opinion of someone who can look at things objectively and suggest which solutions are most feasible. If such guidance is desired, the group should investigate ways of funding such assistance. (See Chapter 9 for suggestions on financing village studies and improvements.) The consultant should be familiar with local government operation, public relations, planning, and management.

STEP 2: INVENTORY OF PERTINENT INFORMATION

After the basic organization of the planning program is accomplished, the next step is to acquire a thorough understanding of the character of the village or villages. Therefore, an inventory of pertinent information should be completed for each village in the study. Completing an inventory will allow the community to pinpoint more specifically what it is they want to maintain or improve in each village so that the most important issues are addressed. There are four aspects of a village which should be included in the inventory:

- A. Physical conditions
- B. Visual and aesthetic considerations
- C. Growth related factors
- D. Residents' input

A. Physical Conditions

Existing land use--The extent and variety of land uses are among the strongest determinants of village character and often serve as the basis for comprehensive planning and zoning decisions. Even within a predominantly residential village, the role of commercial and/or limited industrial development can

range from unimportant to vital. The location of vacant or abandoned properties is also noteworthy in terms of potential impact. Surrounding land uses have an important impact on the village and should be included in the inventory.

Historic and architectural resources- The cultural heritage represented by a typical village is worthy of protection. Historic and architectural resources are often the best evidence of that heritage. In addition to providing cultural and educational benefits, these assets can also enhance property values, increase local pride, and bolster economic development.

Natural features- The natural features within and around a village probably influenced or determined the settlement's current form. These features also will play a role in defining potential growth constraints, patterns, and limits. The natural features of a site are often as important to the character of the village as the buildings. Therefore, significant natural features such as restrictive soils, geologic formations, steep slopes, wetlands, and watercourses should be included in the inventory.

Special features- Special features such as landmarks, bridges, railroad stations, and churches are often major contributors to a village's charm, uniqueness, and character. These assets should be noted in the inventory.

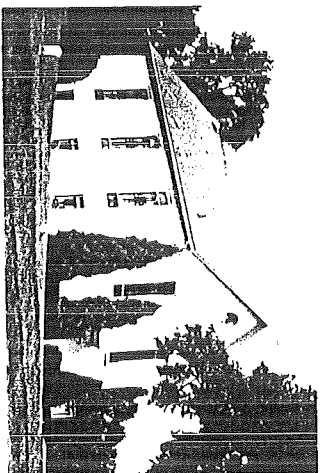
Traffic characteristics- The advent of the automobile probably had a more profound effect on villages than any other change in modern society. The impacts of motorized traffic on villages are largely negative: greater noise and dust levels in residential areas, the deterioration of roads and structures from heavy traffic, and roads that are unsafe for pedestrians. The extent, type, and flow of traffic through the village needs to be examined in order to address the present traffic related problems within the village. Growth within and outside of the village needs to be assessed so that potential traffic problems can also be addressed.

Structural conditions- The inherent charm of a village can be hidden by the effects of poor maintenance and neglect. Dilapidated buildings, sidewalks, streets, and other physical elements can significantly detract from a village's overall image. These types of deterioration problems should be identified.

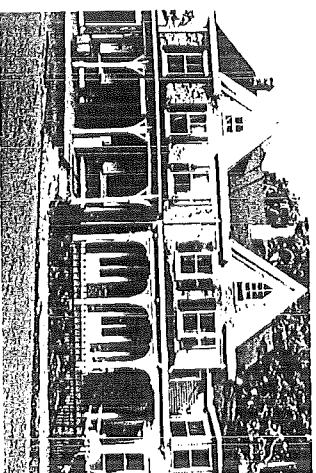
A summary of the villages physical features should result in the following:

Base map- The base map should include as much of the village viewshed as possible. The scale should be large enough for an appropriate level of detail and tax parcels should be delineated so that lot sizes can be determined. Structures should be sited on the lots so that the predominant building setbacks are apparent.

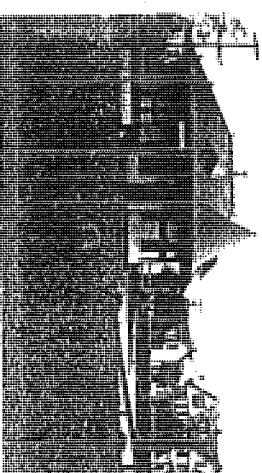
Land use map- Existing land use can be shown on a color-coded base map. All non-residential structures should be clearly distinguished from



Springtown Church

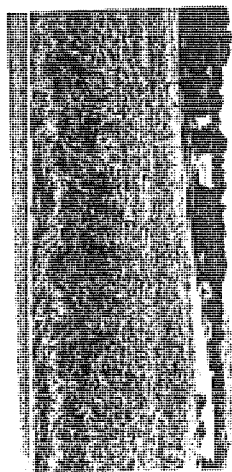


Solebury Post Office



Wycombe Railroad Station (BC&O)

A village inventory should include historic and architectural resources, as well as special features.



Viewshed from a village

B.

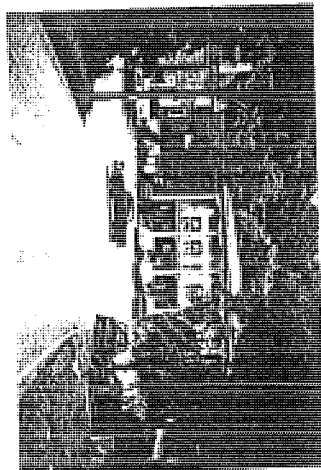
Visual and Aesthetic Considerations

Viewshed- The visual assessment of the village and the area surrounding the village should be completed. The viewshed of the village should be mapped and delineated so that the best approach to visually preserving or improving the area may be determined. The delineation of the viewshed will also be helpful in establishing village planning districts. (See Chapter 3 for a more detailed description of the viewshed.)

Entry images- An evaluation should be made of the entrances to the village. First impressions are often the strongest and most memorable. Therefore, the images one sees upon entering a village are very important to the overall image of the village. Such entry images should be emphasized or improved when necessary.

Special landscape features- This refers to those natural features which have an important visual impact on the village. Street trees, village greens, scenic streams, or interesting geologic formations are some examples of assets that add aesthetic charm to any village and are worthy of protection.

The visual characteristics of the village can be summarized in the following manner:



Carversville Square



Street trees in Spinnertown

C.

Growth Related Factors

Current policies and regulations- An examination of municipal comprehensive plan policies, zoning provisions, and other regulations should be undertaken to evaluate the village's possible future. A direct comparison between current village conditions and how the village might look if developed under the current ordinance standards can show the hazards of a "do nothing" approach to village planning. The exist-

ing zoning around villages should be closely examined to determine the potential magnitude of future development. Many times zoning may permit more intense development than the current infrastructure can adequately handle. This is particularly true of commercial developments which can generate large volumes of traffic.

Inconsistencies in the municipal policies that affect villages should also be noted at this time. For example, if a goal of the comprehensive plan is to maintain the rural character of villages, but the villages are zoned for highway commercial uses, there is an inconsistency in municipal policies. Other inconsistencies might be found between the municipal sewage facilities plan and the zoning ordinance.

Sewer and water availability- Two of the most important factors in determining an area's growth potential are the availability of sewage disposal and water supply facilities. In rural villages, where public water and sewage facilities usually do not exist, related policy-making can be difficult and, at times, controversial.

Modern engineering has provided a number of acceptable alternatives for waste disposal; however, the high cost of the alternatives often makes them impractical. Therefore, the soil suitability for conventional on-site systems (including sand mounds) is still a strong determinant of the type and extent of future development. The municipal sewage facilities plan should be examined for potential conflicts with village goals and interests. Where further extension of public sewer into a rural area is possible, there is a strong potential for more intense development.

Water availability and quality also have important implications for growth. A limited supply of water can slow new growth and cause difficulties for current residents. Similarly, too much growth in one area could cause water shortages where they may not currently exist. (See Chapter 8 for a more detailed discussion of sewage and water facilities within a village.)

Apparent or potential growth pressures- The realistic assessment of external growth pressures can be quite difficult. Despite a municipality's best efforts to have a village remain unchanged, local trends in population growth, employment, and development activity can make this impossible. Even a village which appears to be far removed from growth related changes might be linked to outside pressure by virtue of its proximity to major connecting roads. In that case, the primary concern is how to minimize the impact of expected growth. On the other hand, a village that does not face an immediate threat of growth is in a better position to determine its future size and appearance.

D.

Residents' Input

Summary of growth-related factors- This information may be presented in graphic or written form or a combination of both. The presentation of growth-related factors will depend on the type and complexity of such factors as they relate to a particular village. The formation of village policies will rely heavily on the assessment of growth-related factors and, therefore, this information must be clearly and carefully documented.

Public meetings- An important element of the inventory stage is the involvement of the people in the community. The opportunity for public participation should be provided early in the planning process. Information provided by residents and property owners is valuable in providing insights into the character of the village and a better understanding of the residents' opinions and priorities. Public participation should be undertaken at the village level rather than the township level. In this way, relevant issues can be addressed which otherwise might be lost at the municipal level.

The "nominal group technique" is a useful tool for pinpointing the views of village residents and determining the degree of importance placed on each. (See appendix for a detailed explanation of this technique.) Developing a program which is in tune with local opinion stands a much better chance of being implemented than one which does not take the village residents' views and opinions into account.

Individual interviews- While public meetings are good for determining a consensus, they are somewhat limiting when very specific information is desired. Informal conversations with residents can provide additional insight into village attitudes and opinions. Facts relating to village history, recent changes or trends, and minor but significant local issues are frequently uncovered through personal interviews.

Summary of residents' views and priorities- Public opinion is fairly easy to document if the nominal group technique is employed because a tally of opinions and preferences is generated from each group of participants. If the group responses are somewhat consistent, the results are generally self-explanatory; if not, conclusions may be less evident. In either case, it is important that any information gathered from public meetings and personal interviews be summarized in writing.

E.

Summary of Inventory Results

All of the pertinent information which is gathered during this stage needs to be well documented and organized. Putting the information in a readily usable form will be a great help during

the analysis. In addition, any policies and proposals that are developed during the implementation stage are more likely to generate support if they are backed by thorough and accurate research. Thus, the information gathered during the inventory should result in the following documentation:

- Base map,
- Land use map,
- Site analysis map,
- Natural features map,
- Visual analysis map,
- Summary of growth related factors,
- Summary of residents' views and priorities.

STEP 3: ANALYZE THE INFORMATION

The purpose of the analysis is to provide an understanding of the existing community conditions and how they will relate to village planning. The analysis has probably already begun to a certain extent as questions arise during the inventory stage. However, to create a clear and comprehensive study, it is best to proceed with the analysis in a systematic manner. Although the analysis will vary from village to village due to the inherent differences in each community, there are some basic steps which will be common to any village study.

For example, certain fundamental decisions about a village's future should be addressed at the outset. The decisions should result in an overall set of goals and objectives for the village (or villages). These goals and objectives are what the whole planning process should ultimately strive to achieve. The goals and objectives established at this stage are a statement of intentions for the village's future and will guide the policy decisions in the future land use plan.

The following guidelines will be useful for the development of village goals and objectives. Basically, they are an outline of essential issues to consider when formulating village policies. There are three major considerations around which village goals and objectives are centered: growth, land use, and essential features.

Amount of Growth- The issue of growth, whether in physical size or population, will be an important element of any village policy. Although residents may prefer a "no-growth" policy, this desire should be tempered by the realities of a particular situation. In other words, local preference is a key factor but it must be realistic. If growth pressures are evident and the village has or could have facilities to accommodate additional growth there may be a legal obligation to do so. However, if there are legitimate constraints to growth in or around a village, a limited growth policy may be realistic.

Factors which may influence the growth pressures on a village have been examined at the inventory stage. These factors must now be considered in order to realistically set growth related goals and objectives for a particular village.

VILLAGE GOALS, OBJECTIVES, AND POLICIES

The following list provides hypothetical goals, objectives, and policies which could be used in a village comprehensive plan. Although these are very general, they may be more specific when applied to an actual situation.

Goal:

- To protect and enhance villages through the implementation of appropriate land use and other municipal policies.

Objectives:

- Accommodate future growth within the municipality while maintaining the character of existing villages.
- Minimize the impact of new development by maintaining an appropriate scale and intensity of additional growth within and adjacent to villages.
- Maintain the rural and scenic areas of the countryside surrounding villages.
- Protect the integrity of existing villages where more increase areas are located adjacent to villages.
- Ensure that new land uses within villages are compatible and in character with existing uses.
- Ensure that land uses adjacent to villages will not have a negative effect on the character of the villages.
- Encourage the preservation of unique or historical features of villages.
- Protect natural features within villages and throughout the municipality.
- Encourage the on-going maintenance of properties, buildings, and public facilities in and around villages.
- Encourage the reuse of older buildings within villages as an alternative to new construction.

Policies:

- Review the growth policies of the municipal comprehensive plan to ensure that they are consistent with village growth policies and make amendments if necessary.
- Amend the zoning ordinance and map to create village zoning districts and to ensure the appropriate density and direction of growth in and around villages.
- Amend the zoning ordinance to:
 - Permit compatible land uses within and adjacent to villages.
 - Permit similar lot sizes and setbacks for new uses within villages.
 - Permit and encourage the preservation of open space around villages where a rural, open atmosphere is important to the character of the village.
 - Require adequate buffering where more intense uses are permitted adjacent to a village.
 - Require the protection of natural resources.
 - Create historic districts where numerous structures within villages are of significant historical importance.
 - Amend the municipal sewage facilities plan, if necessary, to be consistent with growth policies for the villages (see Chapter 5).
 - Adopt or amend municipal building codes to encourage the maintenance of village properties and the reuse and adaptation of existing buildings (see Chapters 6 and 7).

A decision on growth should also take into account the type and size of the village and how it may relate to the growth policies for the entire township. For example, a more urbanized commercial village might, under some circumstances, logically serve as the center for a development district within a township. On the other hand, a residential village or hamlet in a rural area should not be a candidate for accommodating more intense growth. If a commercial village is chosen as the center for a development district, the township should recognize the potential effects of the additional development on the village. Steps can be taken to alleviate the impact of growth on the older areas of the village so that its "sense of place" is not destroyed.

Direction and Form of Growth. If growth is likely to occur within or near the village, decisions also need to be made concerning the direction and form future growth might take. For example, the following questions should be considered regarding the direction of growth:

- If the decision was made that the village should grow, which areas are most suitable for village expansion, taking into consideration such factors as visual impact, natural constraints, and accessibility?
- Should the growth be contained within the village or should it be extended into the surrounding areas?
- Which areas could best accommodate new development and which areas are best suited for infill development?
- If a limited growth policy was chosen for the village, are there other areas in the township which are designated for and can accommodate future growth?

In addition, the following issues should be considered regarding the form of potential growth:

- If growth occurs in and around the village at a similar scale and density to the existing development, the character of the village has a greater chance of being maintained.
- If growth occurs adjacent to existing development, but at a different scale and density, the result would be a transition zone. This may not be compatible with the village's character and care must be taken to minimize the impact of this type of growth on the village.

Land Use. The types of land uses permitted in and around the village is another important issue to consider when formulating goals and objectives. There are two initial questions regarding future land use which must first be addressed:

- What uses should be permitted within the village?
- What uses should be permitted immediately surrounding the village?

Although the answer to these questions is somewhat dependent on existing conditions, maintaining the status quo may not be in a village's best interest. Factors to consider when formulating land use goals and objectives include:

- potential for land use changes--amount and availability of undeveloped land and/or vacant structures;
- the demand for changes--interest on the part of the village residents and/or developers;
- the need for change--signs that the village may be deteriorating; and
- the impact of changes--positive or negative effects on a village's existing assets.

The character of the land uses also needs to be considered. For example, if a mix of residential and non-residential uses will be permitted within a village:

- Where should non-residential uses be permitted?
- Which specific uses would be compatible with the village's character?

Essential features- The background research for the study may reveal several features which help to define, identify, and enhance a particular village; however, the relative importance of these features can vary considerably. For policy development, those features which are essential to the village's character must be identified. One should keep in mind that features outside of the village, such as a scenic view, may be just as important as a significant structure within the village. The inventory may also reveal a lack of essential features (weak entry image or lack of a focal point); in that case, distinctive features may have to be created rather than preserved. These features should be identified at this point.

Specific questions which should be considered in regard to essential features include:

- Are there certain building characteristics, in terms of style or scale, which would be more consistent with those features?
- How can distinctive architectural and/or historical features be preserved and further enhanced?
- What natural features need to be protected?

After careful evaluation of the issues, a set of goals and objectives relative to the specific villages should be formulated.

STEP 4: PREPARE A PLAN

After determining the goals and objectives, the next step is to establish policies and prepare a village plan. All alternatives should be considered objectively and the most viable options should be chosen and used to formulate village policies. The final choices should be the alternatives which, to the greatest degree possible, protect the village's essential features, respond to actual growth demands, and reflect the preferences of local residents. These policies will be the basis of the village plan.

Once a draft of the plan has been completed, public meetings should be held to gain further input and opinions. The plan should be revised as necessary to reflect issues and concerns raised during these meetings. Village land use policies should be incorporated into the township comprehensive plan to serve as a basis for new ordinance amendments. Any potential conflicts between the existing comprehensive plan's growth policies and proposed village growth policies need to be resolved at this time.

STEP 5: PREPARE ORDINANCES TO IMPLEMENT POLICIES

Once the village policies have been clearly stated in the plan, specific ordinance standards should be prepared to implement these policies. The standards will vary from one village to another depending on the characteristics of each area. For example, lot sizes and uses may vary between villages and the zoning ordinance should be revised accordingly. Special zoning districts can be developed for villages which are unique to the surrounding community. (Part 2 of this chapter discusses specific ordinance amendments.) In the subdivision and land development ordinance, consideration should be given to design requirements for streets, parking, and sidewalks (see Chapter 3). Other relevant plans, such as the municipal Act 537 Sewage Facilities Plan, should also be considered as a method for implementing policies. Where appropriate, historic districts can be created to help preserve and protect the historic features of the village.

STEP 6: REVIEW AND REVISE

In order to ensure the effectiveness of the planning program, it is important to review, reevaluate and, if necessary, revise the plan and implementation methods. In general, reviews should be undertaken every five years to adapt the plan to changing circumstances. However, if problems become apparent, or if there are significant changes in growth, the review process should be started as soon as possible.

PART 2: LAND USE REGULATIONS

The previous section discussed the preparation of village land use policies and a comprehensive plan. This section will deal with the zoning ordinance, which is a means of implementing the comprehensive plan. First, several problems with current land use regulations will be discussed.

The character of a village is influenced by the land uses within its borders as well as the land uses adjacent to its borders. There are several characteristics of land usage which are common to most villages. Land use regulations which have disregarded these features have altered the character of many villages. For example, villages in Bucks County originated in a rural setting. The rural setting of a village, where it still exists, is important because it outlines the village and helps establish its edges or boundaries. When the farmland, pastureland, and woodland adjacent to a village are developed inappropriately it becomes difficult to distinguish the village from the surrounding suburbia. The village is no longer perceived as a separate entity.

Villages usually have small or narrow lots with buildings set close to the road. These characteristics of a village contrast with suburban development which is more spread out due to larger lot size and greater setback requirements. Unfortunately, land use regulations dealing with area and dimensional requirements are often applied uniformly without regard to the presence of villages. The large lot sizes, lot widths, and yards required in the rural areas surrounding a village are also required within a village. This results in new development which is inconsistent with existing village development and detracts from its character.

Villages often grew around some activity or business such as a general store, tavern, or church. Nonresidential uses still exist in many villages today. Residential and nonresidential uses are often seen as incompatible; however, in villages, this mixture of land uses adds to their appeal. The primary reason for this positive effect is that the buildings were constructed at a human scale (not exceeding two and one-half stories in height and usually not wider than a single-family detached dwelling). Modern nonresidential development is frequently at a much larger scale. Shopping centers, office complexes, and industrial parks exemplify this trend. These types of nonresidential uses are obtrusive when located in or adjacent to a village because they overshadow it. This is evidenced by the former villages which have disappeared into the surrounding commercial, office, and industrial development.

The above discussion illustrates the importance of developing land use regulations which are consistent with the character of the villages and designed specifically for them.

Zoning

The zoning ordinance is a legal tool which enables local government to exercise land use controls. The comprehensive plan provides the foundation for the zoning ordinance. Specifically, the land use policies established in the comprehensive plan should be converted into land use regulations which will protect the villages.

The zoning ordinance is composed of two parts: the text and the zoning map. The zoning map divides all land within a municipality into districts with different types of land uses permitted within each district. The text of the zoning ordinance contains numerous regulations. Some of these regulations apply equally to every district whereas others vary from zone to zone. These regulations address such land use issues as permitted uses, area and dimensions of lots, buffers, natural resource protection, parking, and signs.

Because each village is unique, it would be impractical to develop a model ordinance which would work for all villages. Therefore, this section will provide general guidelines concerning appropriate zoning ordinance regulations for villages. In addition, two hypothetical situations will be used to illustrate how a village could be zoned and how the different regulations are adjusted to be compatible with the village.

Establishment of Zoning Districts

Villages are settlements which are different from the surrounding landscape. Therefore, separate zoning districts should be established for the villages so that standards can be tailored to their individual characteristics. In some cases, villages have historical significance which might involve the creation of an historic district. (See Chapter 5 for more information on historic districts.) An entire village may be covered by one zoning district or it could be divided into several zoning districts. This will depend upon the size of the village and the diversity of uses existing within it. For example, one zoning district may be sufficient for a village which is classified as a hamlet or a residential village. A commercial village, on the other hand, may require two or more districts to separate more intense uses from less intense uses. These zoning districts would encompass the built portion of the village.

Distinct zoning districts can also be created for the land around the village. A viewshed district should be established where the surrounding landscape is important to the character of the village. The viewshed is the primary area which can be viewed from most vantage points within the village. The viewshed would start at the point where the built portion of the village becomes the surrounding landscape and would end at the point where the landscape is no longer readily visible. (For a more detailed description of how to determine the boundaries of the village and its viewshed see Chapter 3.) In some instances, the village may be the center for growth. Thus, some vacant land adjacent to the village would be zoned for a development district. It should be stressed that directing growth towards a village may result in the degradation or loss of the village character.

Use Regulations

In general, village residential districts would consist predominantly of single-family detached dwellings. Some villages also contain two-family homes or other residential dwelling types in addition to single-family homes. The conversion of older industrial and commercial buildings to apartments is seen within several of the county's villages. Thus, the permitted housing types should reflect the existing residential character of the village. A limited amount of commercial uses may also be acceptable to serve local residents. Village residential districts would contain a greater mixture of uses than village commercial districts. However, their size and scale should be controlled to blend with existing conditions. A variety of uses could be permitted including institutional, commercial, and office.

Agricultural uses, detached dwellings on large lots, cluster subdivisions and performance standard developments are recommended in the viewshed districts to protect views and to preserve open space around the village. (See page 15 for more discussion on open space preservation.) More intensive uses would be permitted adjacent to a village where a development district has been established. These uses could be residential and/or nonresidential, depending on the intent of the district and what type of village zoning district abuts it. In any event, the uses should be compatible in scale with the village and buffering should be required to differentiate the village from the new development.

There are some uses which, because of their intensive nature, are incompatible with the character of villages and should be excluded from village commercial districts or development districts adjacent to villages. Mobile home parks and mid-rise or high-rise apartments are inappropriate residential uses. Nonresidential uses which should be prohibited include shopping centers, automobile sales, junk yards, and heavy industrial uses.

There are three ways in which a municipality can allow for uses within a district. These are uses permitted by right, by special exception or by conditional use. Uses permitted by right are those uses which are compatible with the purpose of the district. Special exceptions and conditional uses are usually reserved for land uses that, although appropriate within the district, may have a significant impact on the district or community. These uses require closer examination so that additional safeguards can be stipulated, if necessary. The major difference between a special exception and a conditional use is the party granting the authorization. Special exceptions are granted by the zoning hearing board which can impose additional conditions, and conditional uses are granted by the governing body.

Area and Dimensional Requirements

Area and dimensional requirements are established for each zone or for various types of land uses. These regulations, including lot area, lot width and yard requirements, building coverage and height, and impervious surface ratio, are discussed below under each type of zoning district.

Village Zoning Districts

Lot area-There are several factors to consider in determining minimum lot area requirements. First, the existing lot sizes within the village should be examined. As discussed earlier, the lots within most villages are small. This is a distinctive feature and, therefore, a similar lot size should be incorporated into the ordinance where feasible. Secondly, the type of land use should be considered. Generally, nonresidential uses require a larger lot size in order to accommodate parking and buffer yards. Thirdly, the issue of sewage facilities should be addressed. If on-lot sewage systems are utilized, larger lot sizes may be necessary. If community wastewater disposal systems or public sewers are available, smaller lot sizes are more practical. (Chapter 8 discusses this issue in greater detail.) Taking these factors into consideration, the minimum lot sizes required for specific uses should reflect existing conditions as closely as possible.

Lot width and yard requirements-Lot width and yard requirements are incorporated into a zoning ordinance to ensure requirements are met for the public health, safety, and welfare by privacy and to protect the public health, safety, and welfare by maintaining space between buildings and streets. Narrow lots are characteristic of many villages. The minimum lot width requirement should allow for a continuation of this trend. Lot width requirements should also be in balance with the minimum lot size requirement. However, if large lot sizes are necessary within a village district, the lot width requirement should be as close to existing conditions as is reasonable.

Another distinguishing feature of villages is that buildings are often set close to the road. Thus, the front yard requirement for uses in the village districts should be similar to the prevailing setbacks of existing buildings. In addition, most ordinances contain a section which allows buildings to be constructed nearer to the street than the required minimum front yard depth under certain conditions (see example). Side and rear yard requirements should be in proportion to the required lot size and lot width.

EXCEPTIONS FOR EXISTING BUILDING ALIGNMENT

A proposed building may be constructed closer to the street than the required minimum front yard depth under the following conditions:

- a. *There shall be existing buildings on the lots on either side of the lot which would contain the proposed building.*
- b. *The proposed building would front on the same side of the same street in the same block as the existing buildings on lots on either side.*
- c. *The existing buildings on the lots on either side would be no greater than fifty (50) feet from the proposed building.*
- d. *The proposed building may be constructed at a front yard depth that is not less than the average of the front yard setbacks of the existing buildings on the lots on either side.*
- e. *In no case shall the front yard of the proposed building be less than twenty (20) feet.*

Building coverage and building height- Maximum building coverage and height requirements can be useful in maintaining the size and scale of buildings within the villages. A maximum building coverage requirement controls the percentage of the lot which is covered by buildings. Recommending an appropriate percentage is difficult because building coverage is relative to the minimum lot size requirement and to the existing conditions within each village. The percentage which is chosen should prevent very wide buildings which are generally out of scale with the existing buildings within villages. A maximum building height of 35 feet or 3 stories is common for most ordinances and would be acceptable within villages.

Impervious surface ratio- The impervious surface ratio is a measure of land use intensity. Sidewalks, streets, driveways, patios, buildings - all man-made constructions that water does not readily penetrate - are impervious surfaces. The impervious surface ratio requirement should be designed to be compatible with existing conditions. This could mean a higher impervious surface coverage within village districts because of the smaller size of the lots.

Viewshed Districts

In the viewshed districts, a large minimum lot size should be required for single-family detached dwellings, possibly one or two acres. Minimum lot width and yard requirements should be proportionate. The maximum building coverage and impervious surface ratios should preclude intensive development. The maximum building height should be 35 feet. The above recommendations are applicable to conventional subdivisions, where no common open space is provided. Alternative types of residential development, such as detached dwelling cluster subdivisions and performance standard developments, are discussed under open space preservation techniques. The intent of these types of developments within the viewshed is to preserve the open areas around the village.

Development Districts

The area and dimensional requirements for uses in a development district (if one is designated) should be designed to allow development at an intensity similar to that permitted in the adjacent village. Lot size, lot width, and yard requirements should be adequate to accommodate the particular uses. Maximum building coverage and impervious surface ratios should be relatively equal to those required within the village. Also, new development adjacent to a village should be encouraged to continue the existing road pattern and curway widths. In this way, new development can more closely resemble a continuation of the existing village's scale, density, and form.

Buffer Yard Requirements

A buffer yard consists of a strip of land with plantings which is reserved from development. The purpose of a buffer yard is to minimize the negative impact of any use on a neighboring use. Buffering serves to soften the outline of buildings, to screen glare and noise, and to create a visual and/or physical barrier between conflicting land uses and land use intensities. Buffering provides an ad-

ditional advantage for villages in that it can strengthen the edges or boundaries of a village.

Buffer yards are useful in protecting the character of villages by distinguishing the older part of the village from surrounding development. Therefore, all uses proposed adjacent to a village zoning district should be required to provide buffering. The extent of buffering required should be determined by the type of use proposed and its compatibility with the village. As similarities in adjoining land uses decrease, the width of the buffer yard and the amount of plant material should increase.

Within the villages, buffering should be required to screen parking and service areas. Buffering should also be required along existing and proposed streets in the form of street trees. Buffer yard requirements can only be implemented at the time a use is proposed. Therefore, their benefits are limited in villages which are surrounded by existing development. However, buffer yards can be required where an expansion of an existing use is proposed or where a change of use occurs. One alternative to alleviate the negative impacts of existing, incompatible uses would be to establish a planted buffer along the perimeter of the village. The buffer plantings would probably have to be located on land within the village rather than on the adjacent property. This could be implemented as part of a community or township-wide project.

Natural Resource Protection Standards

The presence of natural features within and around villages adds much to their quality and charm. Farmland, forests, steep slopes, and stream valleys are some of the resources that contribute to the aesthetic quality of villages and have important functions in the ecology of the area. If these features are to continue as assets of the village and the municipality, natural resource protection policies are essential.

The *Bucks County Natural Resources Plan* of 1986 provides a comprehensive set of environmental protection policies which municipalities can incorporate into their zoning ordinances. These should be translated into natural resource protection standards requiring the entire area of the resource or a portion of it to remain undeveloped. These restrictions would be applicable in all zoning districts in the municipality. The *Natural Resources Plan* should be referred to for recommended protection standards.

Parking Requirements

Several aspects of parking typically are addressed in the zoning ordinance. Requirements dealing with the amount of parking required for specific land uses or landscaping of parking areas do not need to be adjusted for villages. However, special requirements may be needed for the location of parking areas within villages. Accommodating off-street parking is often a problem for commercial uses within villages due to the small lot sizes. Although the size of the business should be limited based on the amount of parking which can be provided, the ordinance could be flexible in terms of how it is provided. Provisions could be added to the zoning ordinance to permit common parking lots or to allow the required parking for a commercial use to be located on a separate lot. The following requirements could be included in the zoning ordinance:

The following is a summary of the recommended open space ratios for the various natural resources.

Resource	Open Space Ratio
Floodplains	100%
Floodplain soils	100%
Steep Slopes	70%
• 15 - 25%	
• 25% or more	80%
Woodlands	
• located in environmentally sensitive areas	80%
• and other designated preservation areas ¹	50%
• other woodland areas	100%
Lakes or Ponds	100%
Watercourses and Streams	100%
Wetlands	100%
Lake or Pond Shorelines ²	70%
Wetland Margin ³	80%

¹ Environmentally Sensitive Areas: A natural area including steep slopes, 100-year floodplains and floodplain soils of first and second order streams, lake, pond and wetland margins; or other sensitive areas such as carbonate valleys and sites with significant natural features.

² Lake and Pond Shore Margins: The land side edge of lakes and ponds from established shoreline to an upland boundary. For local regulatory purposes, it is recommended in this plan that 100 feet be the standard minimum width of a lake or pond shore margin.

³ Wetland Margin: The transitional area between the wetland boundary and the upland boundary. For local regulatory purposes, 100 feet or the limit of hydric soils (whichever is shorter) is recommended as the standard minimum of a wetland margin.

- Two or more uses may provide for required parking in a common parking lot if the total space provided is not less than the sum of the spaces required for each use individually. However, the number of spaces required in a common parking facility may be reduced below this total by special exception if it can be demonstrated to the Zoning Hearing Board that the hours or days of peak parking needed for the uses are so different that a lower total will provide adequately for all uses served by the facility.
- Required off-street parking spaces shall be on the same lot or premises with the principal use served, or, where this requirement cannot be met, within three hundred (300) feet of the same lot.

Additionally, parking areas which are located in the front of buildings may detract from the character of the village. Therefore, the zoning ordinance could contain a statement that, within the village districts, parking areas should be located to the rear of buildings, wherever possible. Chapter 3 provides additional recommendations for solving parking problems within villages.

Sign Regulations

Most zoning ordinances contain regulations which govern signs. These regulations address such elements as the size, number, type, and location of signs and can be based on zoning districts and/or land uses. Recommendations for the design and regulation of signs in villages are contained in Chapter 4.

Open Space Preservation Techniques

As discussed previously, the rural setting of many villages adds to the perception of the village as an identifiable place. The preservation of this rural setting would ensure the maintenance of definable village boundaries. The following techniques can be used to retain this visual amenity.

Cluster design- There are two cluster options which can be employed to preserve open space - detached dwelling cluster subdivisions and performance standard developments. A detached dwelling cluster subdivision permits only single-family detached dwellings on smaller lots which are clustered on a portion of the site with the remainder kept as open space. A performance standard development is similar; however, a variety of dwelling types is permitted, including detached, twin, duplex, multiplex, townhouse, and garden apartment. These developments are alternatives to the conventional subdivision which is based on a minimum lot area requirement.

Cluster subdivisions and performance standard developments are subject to a series of three performance standards: maximum density, minimum open space ratio, and maximum impervious surface ratio. There is an interrelationship between the three

performance standards. Therefore, one variable is determined and the remaining two variables are adjusted accordingly. In the viewshed district, the main purpose of permitting cluster subdivisions and performance standard developments is to preserve open space. Therefore, the open space ratio should be high. This will mean a lower maximum density and maximum impervious surface ratio. In the development district, factors other than just open space would be important. For a development district, the density should be established first. The density which is chosen should be similar to that of the adjacent village. The higher the density, the higher the maximum impervious surface ratio and the lower the open space ratio.

These cluster options should be permitted in the zoning districts abutting village zoning districts to provide open space next to the villages. The zoning ordinance could stipulate that the open space be located adjacent to the village where possible. However, it must be recognized that some sites may have constraints which would make this unfeasible. Another alternative would be to permit a density bonus where the open space adjoins the village boundaries, although the potential density should not be out of character with the intent of the district. The Bucks County Planning Commission publication, *Performance Zoning*, provides both a detailed explanation of how this concept works and suggested ordinance language for regulating performance standard developments. The staff of the Bucks County Planning Commission can also be contacted for additional information.

Buffer Zones- A buffer zone, in which development is prohibited, could be established around the villages. It would be an overlay zone to the existing zoning districts surrounding the village. The buffer zone would extend for a specified distance from the village boundaries. The width of the buffer zone should be determined on a case by case basis. Factors to consider when determining the width of the buffer zone include the size of the viewshed and unique features adjacent to the village. However, when establishing a width, the municipality should ensure that it does not render any property unusable.

The Transfer of Development Rights- The Transfer of Development Rights (TDR) is a tool which can be used for the preservation of open space adjacent to villages. It can also be combined with a township-wide agricultural preservation program or open space plan. TDR works on a simple principle. Areas which should be preserved are identified. These areas are called protection areas or transfer areas. Other areas suitable for higher density development (because of road access or sewer availability) are also identified. These areas are called development districts or receiving areas. To facilitate the preservation of the protection areas, the development which previously could have occurred in the protection areas is transferred to the

development district.

Villages themselves would not be protection areas. The protection areas would be the open and wooded land adjacent to the villages. By preventing development in these areas, the integrity and identity of villages can be protected.

In general, a transfer is accomplished by the use of development right certificates which are issued to property owners in the protection areas. Development right certificates represent the loss in value to land owners in the protection areas which result from development restrictions placed on their land. The restrictions on development run with the land. Property owners can sell the development right certificates to landowners in the development district. Alternatively, landowners in the development district can develop their land to the new higher density when they buy development right certificates. The main advantage of TDR is that it can provide compensation to landowners who have relinquished the right to develop their property without requiring the expenditure of large amounts of money by local governments.

The above process can work either as a voluntary or mandatory system. The same general procedures are used for both systems. Landowners in the protection areas receive development right certificates. The municipality defines zoning in the development district in terms of the maximum density permitted by right, and the maximum density permitted with the purchase of development rights. Under a voluntary system, landowners in the protection areas have the option of selling their certificates to a landowner in the development district and accepting a development restriction on their land or developing their land at the density allowed in the zoning ordinance. Under a mandatory system, development in the protection areas is prohibited or severely restricted. To profit from their land, property owners have no choice but to sell their development right certificates.

There are issues, problems, and risks associated with TDR which municipalities should examine before instituting a program. Some issues which should be considered are: the taking issue, exclusionary zoning, limitations on municipal powers of eminent domain, taxes, housing and land prices, and pricing policy for development rights. Some of these issues are of less concern with a voluntary TDR system than with a mandatory TDR system.

Conclusion

The zoning ordinance is a powerful tool which can have a significant impact on the future of a village. What this impact will be visualized best by comparing the current village conditions to how the village and its surroundings might look if developed under the cur-

rent ordinance standards. If the outlook for the village is not good, changes should be considered. The recommended land use regulations discussed in this chapter should help municipal officials in revising the zoning ordinance so that it protects the character of the villages.

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SAMPLE ZONING ORDINANCE REGULATIONS

These sample zoning ordinance regulations are provided to illustrate the planning concepts discussed in the second part of this chapter. These regulations are not intended to be used as standards applicable to all villages nor are they comprehensive in nature. Permitted uses and area and dimensional requirements must be determined on a case by case basis because each village is unique.

Village A is predominantly residential in character. It is located in a rural setting which is important to its identity. Therefore, the viewshed of the village has been delineated and is zoned differently than the village and the areas surrounding it.

VR Village Residential District

- Appropriate Uses
 - Single-Family Detached Dwelling
 - Residential Conversion
 - Home Occupations
 - Place of Worship
 - Bed & Breakfast
 - Village Oriented Shop
 - Accessory Buildings

Area and Dimensional Requirements

- Minimum Lot Area: 10,000 square feet
- Minimum Lot Width: 70 feet
- Maximum Building Coverage: 30 percent
- Maximum Impervious Surface Ratio: 50 percent
- Minimum Yards
 - Front: 20 feet
 - Side: 10 feet
 - Rear: 30 feet

V Viewshed District

- Appropriate Uses
 - General Farming
 - Nursery
 - Single-Family Detached Dwelling
 - Detached Dwelling Cluster Subdivision
 - Performance Standard Development
 - Home Occupations
 - Accessory Buildings

Area and Dimensional Requirements

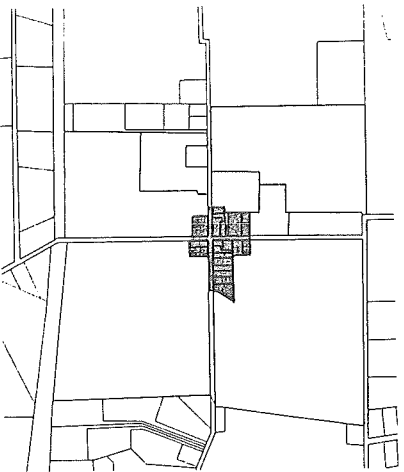
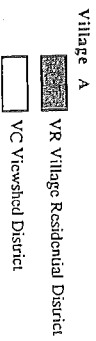
- Minimum Lot Area: 2 acres
- Minimum Lot Width: 150 feet
- Maximum Building Coverage: 5 percent
- Maximum Impervious Surface Ratio: 10 percent
- Minimum Yards
 - Front: 50 feet
 - Side: 30 feet
 - Rear: 50 feet

Cluster Subdivision

- Minimum Site Area: 10 acres
- Maximum Density (Gross): .85 du/acre
- Minimum Lot Area: 10,000 square feet
- Minimum Open Space Ratio: 70 percent
- Maximum Impervious Surface Ratio: 15 percent

Performance Standard Development

- Minimum Site Area: 10 acres
- Maximum Density (Gross): 1 du/acre
- Minimum Open Space Ratio: 80 percent
- Maximum Impervious Surface Ratio: 15 percent



Village B is a sizable community with areas of residential and commercial development. The zoning for this village is indicative of its diversity with separate zoning districts for the residential and commercial areas. In addition, this village has been designated as an appropriate area for future growth. Thus, vacant land adjacent to the existing village has been similarly zoned to allow for an expansion of the village. It is intended that the new development will closely match the scale, density and form of the existing village, including an integrated vehicular and pedestrian circulation system.

VR Village Residential District

- Appropriate Uses
- General Farming
- Nursery
- Single-Family Detached Dwelling
- Performance Standard Development
- Residential Conversion
- Home Occupations
- Place of Worship
- Bed & Breakfast
- Village-Oriented Shop
- Accessory Buildings

Area and Dimensional Requirements

- Minimum Lot Area: 10,000 square feet
- Minimum Lot Width: 70 feet
- Maximum Building Coverage: 30 percent
- Maximum Impervious Surface Ratio: 50 percent
- Minimum Yards
- Front: 20 feet
- Side: 10 feet
- Rear: 30 feet

Performance Standard Development

- Minimum Site Area: 5 acres
- Maximum Density (Gross): 5 du/ac
- Minimum Open Space Ratio: 30 percent
- Maximum Impervious Surface Ratio: 35 percent

VC Village Commercial District

Appropriate Uses

- Single-Family Detached Dwelling
- Performance Standard Development
- Residential Conversion
- Home Occupation
- Place of Worship
- Office
- Retail Store (not to exceed 10,000 square feet)
- Service Business
- Financial Establishment
- Funeral Home
- Bed & Breakfast
- Eating Place
- Tavern

- Service Station
- Accessory Buildings

Area and Dimensional Requirements

- Minimum Lot Area: 20,000 square feet
- Minimum Lot Width: 85 feet
- Maximum Building Coverage: 40 percent
- Maximum Impervious Surface Ratio: 80 percent
- Minimum Yards
- Front: 20 feet
- Side: 10 feet
- Rear: 40 feet

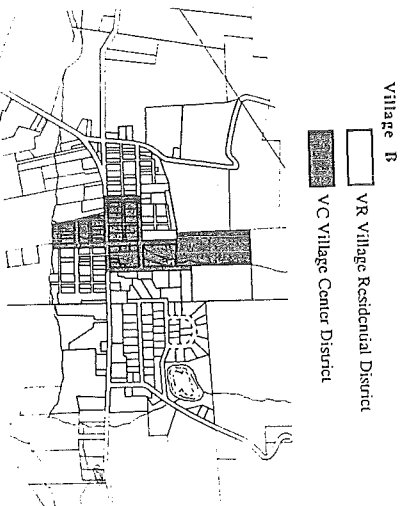
Performance Standard Development

- Minimum Site Area: 5 acres
- Maximum Density (Gross): 6 du/ac
- Minimum Open Space Ratio: 30 percent
- Maximum Impervious Surface Ratio: 35 percent

Definitions:

Performance Standard Development: A development or subdivision that permits a variety of housing types subject to a series of performance standards. The performance standard development requires the provision of open space and limits density and impervious surfaces.

Village Oriented Shop: A shop or store including corner grocery (as distinct from a supermarket), drug store, stationary store, soda fountain, luncheonette, barbershop, and beauty parlor. This use shall not include a store in excess of two thousand (2,000) square feet of floor area.



Village Enhancement

Villages can be characterized as relatively small, clustered settlements often dominated by buildings of a single period. They sprang up in the rural landscape, usually along the major transportation routes of the time and often developed around a tavern, inn, or mill. Today, villages of varying characteristics can be found, from a few residential dwellings at a crossroads to small communities with active commercial and/or industrial enterprises.

The rural settings in which villages historically developed are part of what makes these settlements unique. Villages are not incorporated, as are boroughs, and so do not have fixed edges, which makes it difficult to determine village boundaries. Since the setting of a village contributes to its character, the perceived boundaries of a village typically encompass more than the built environment. Boundaries can be based on the viewshed, which is the primary area that can be viewed from the major vantage points within the village. Establishing the viewshed is important in maintaining the identity of a village. (See adjacent column and Chapter 2.)

Some villages still appear much as they did in the past, while others bear the effects of changing times. Many villages that originally were located amidst open farmland or wooded hillsides are now being surrounded by modern housing developments and shopping centers that are out of scale and otherwise inconsistent with the character of the village. Often the new development is so overwhelming or incongruous that the original settlement can no longer be distinguished.

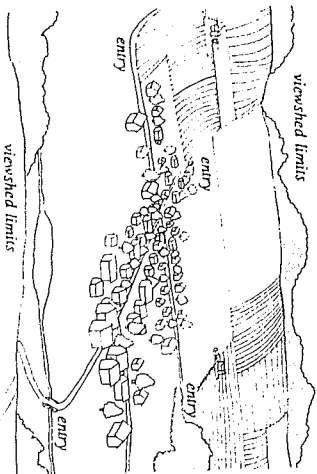
Villages are threatened by vehicular intrusion as well as by encroaching development. The predominance of the automobile has had a profound effect on the evolution of villages. Besides bringing about physical changes, such as road widening and the related problems of noise, pollution, and unsafe conditions for pedestrians, it has caused a change in the way villages are perceived: from a vehicle proceeding at highway speeds. Therefore, it is not surprising that many motorists commonly pass through villages without noticing their existence, or that commuters often become oblivious to the unique settlements through which they routinely travel. Thus, it is increasingly important that villages make a strong visual impression in order to retain their identity in a changing landscape.

The entrance to a village is a key element in strengthening the visual impression. The entrance is the perceived edge of the village, a transition point that indicates the presence of a place that is different from its surroundings. This change in the character of the area can cause drivers to slow down. Similarly, the exit from a village, while not as significant as the entrance, should signal that the driver is leaving the small community and may resume a higher speed.¹ In addition, since the entrance is the first image one sees when approaching a village, it will leave a lasting impression.²

DETERMINING THE VIEWSHED

The viewshed starts at the transition point where the built environment of the village meets the surrounding landscape. In general, to determine the extent of the viewshed, important vantage points and significant features in a village should be identified. The area that can be viewed from those points should be designated as the viewshed.

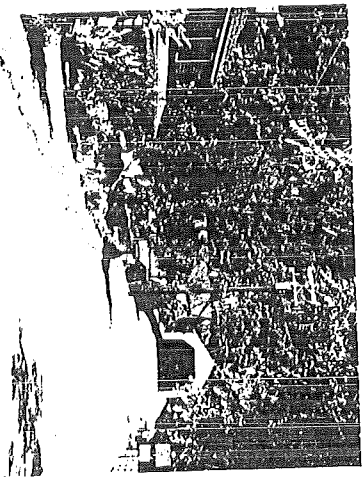
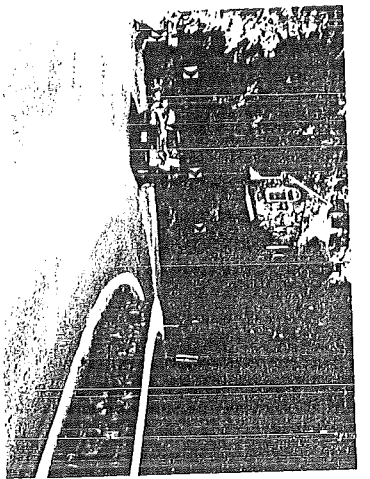
A village located on open agricultural land would have a larger viewshed than would a village nestled between forested hills since the open land would not be able to absorb the visual effects of development as easily. For example, the viewshed of the village of Waterford, Virginia, which is surrounded by rolling farmland, was determined to be forty feet beyond the area that can be viewed from the vantage points in the village. A different method was used for viewshed determination in the proposed Historic District designation for Gettysburg National Military Park. Computer mapping techniques projected the area of viewsheds from key viewpoints in the park. A computer also plotted all areas on which, if cleared, a twenty foot high structure could be seen from a park viewpoint five feet above ground.³ Therefore, the size of the viewshed varies with the topography, vegetation, and other structures or features of the village's surroundings.



¹ Tim Hansen, "Entrances to Small Towns: Front Door or 'Twilight Zone'?", *Small Town*, September-October 1983, p. 25.

² *Ibid.*, p. 24.

³ Cec Jay Frederick Associates, *Straban and Cumberland Townships Historic District Project (Draft)*, 1983, p. 5.



A bridge or a sharp curve in the road can create a strong sense of entry to a village.

Many villages have at least one of the following characteristics which can heighten the sense of entry to a village:

- abrupt change of land use, such as the change from open agricultural land to a tight cluster of buildings in a village;
- change of elevation, such as the crest of a hill or a dip in the road;
- change of direction, such as a sharp curve in the road which would create a rapid transition;
- stream or other significant natural features;
- bridge;
- lot size and configuration, usually small, narrow lots often in a linear arrangement;
- architecture—buildings of a similar architectural period, located close to road; and
- entrance and exit signs.

Any of these factors would be an indicator of a change in land use or in the character of the land. However, various design and planning techniques can be used to enhance or create an effective entrance. A greater level of detail can change the psychological awareness of a motorist by signalling to the motorist that he is entering a small community.⁴ This can be achieved through amenities such as landscaping, lighting, and pavement.

Landscaping

Landscaping can establish a strong overall visual impression of the village. A village-wide landscape plan could be prepared by the township, a shade tree commission, or a village residents' association which would encourage property owners to plant trees and shrubs that would give the village a sense of unity. Or, a more detailed plan could be prepared which would designate areas to be planted, relating one property to another, and provide a list of recommended trees, shrubs, ground covers, and flowers. In the case of villages that have shallow front yards, making extensive shrub plantings unfeasible, a plan for planting street trees could be the unifying landscape element.

In the landscape plan, unity can be achieved through the use of plants of similar shape, color, and texture. A simple massing would be most effective for passing motorists, with a mixture of deciduous and evergreen species to provide color year round. A single species of street trees should be planned for visual continuity. For villages with shallow front yards and/or overhead wires, small to medium sized species of street trees should be chosen. Where space limitations make front yard plantings unfeasible, window boxes and other containers could be used to provide greenery and color.

Lighting

Lighting can help to create a sense of place in a village. If no street lighting exists, street lights could be installed along the main roads of the village. If street lights do exist, additional street lights could be provided that are consistent with the scale and style of the village but which have a different light intensity than the existing lights. This would help to call attention to the village and set it apart from its surroundings. Another option would be to use low-level lighting throughout the village; this would provide illumination on the ground without producing glare.

⁴ *Ibid.*, p. 25.

Road Pavement and Details

The pavement could be changed throughout the village to contrast with that of the open road leading to the village. A coarser aggregate in the pavement or an altogether different paving material, such as brick, could be used in the village, or a colored aggregate could be used in the typical asphalt mixture.

Road details are often oversized for the use they serve in a village. Large culverts and drainage ditches and steel guardrails, often designed to highway standards, could be scaled down to be consistent with the scale of the village and the materials used could be more compatible with the character of the village. A change in pavement and road details would reinforce the sense of a village being a place distinct from its surroundings.

Vehicular Circulation

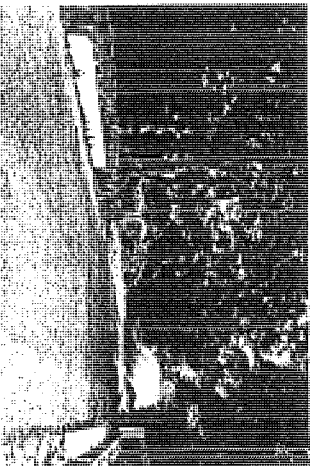
Vehicular traffic is a major factor in defining village character. Over the years, many of the rural roads along which villages developed have become major transportation routes. The crossroads, which were once the focus of and reason for the initial village development, often have become automobile-dominated rather than pedestrian-oriented, destroying the very elements that comprise the villages' unique quality. Due to the current rapid increase in traffic volume, villages are becoming increasingly vulnerable to vehicular intrusion. This points out a dilemma facing many villages: historically they developed along the major transportation routes, but today that location is one of the primary threats to their existence.

The degree to which a village has maintained its character depends to a great extent on how severely pressured the village has been by increased traffic and how that pressure was or is being handled. All too often the priority has been to maintain fast, efficient traffic flow at the expense of the existing village. Typically, roads are widened to accommodate traffic volume, and in the process, space for pedestrian circulation is reduced or eliminated and street trees may be removed. All of the above actions serve to erode village character.

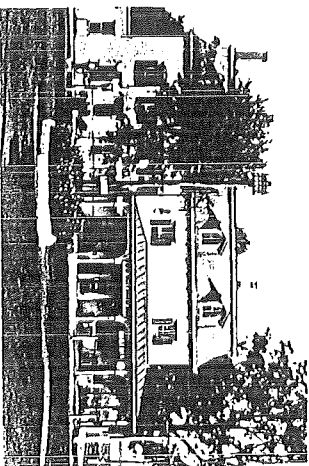
The village of Buckingham, in Buckingham Township, is an example. In the center of this charming village, the Pennsylvania Department of Transportation expanded Routes 413 and 263 to four lanes and added traffic lights and turning lanes at the intersections of Route 413 and Routes 202 and 263. The quaint village center became an automobile-oriented center that is essentially off-limits to pedestrians. Although many of the fine older structures remain, the essence of the village has been altered by the dominance of the automobile. This type of insensitivity toward villages for the sake of traffic flow has led to the loss or degradation of many of these unique settlements and curiously threatens many others.

An alternative to this would have been to direct the heavy through-traffic around the village center as was done in Hartsville, on the Warwick-Warminster Township boundary. George Washington and his officers generally ditched their letters from Hartsville when they were camped in Warwick Township in 1777.⁵ Fortunately, the village was bypassed by the expansion of Old York Road (Route 263). Had it not been bypassed, the village would have been effectively divided by the highway and the village would have disappeared.

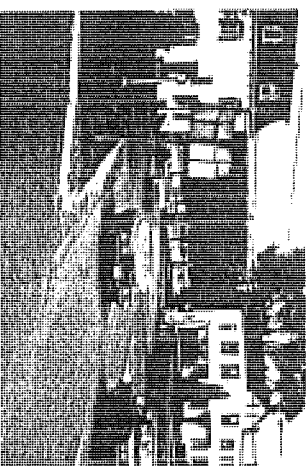
⁵ George Mack Reynolds, *Place Names in Bucks County* (Doylestown, Pa.: Bucks County Historical Society, 1955), p. 183.



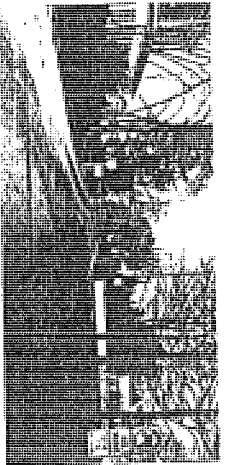
This bridge with wooden guard rails is consistent in scale and character with its surroundings.



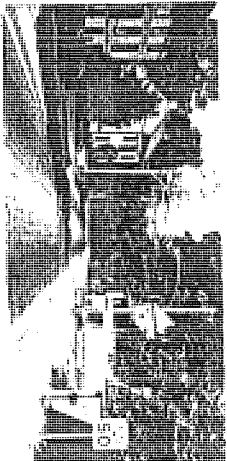
Buckingham in 1920. (BCIIS)



In 1989 the automobile dominates.



Truck traffic is rerouted around the center of Pipersville.



Road widening and high speed limits detract from village character.



Inadequate space for pedestrians often is a problem.



Sidewalk in Blooming Glen.

A simpler, less costly approach is to reroute truck traffic to bypass the village center. This has been done successfully in Pipersville, in Bedminster Township, to divert the volume of heavy truck traffic which the quiet, narrow streets in the village were not designed to accommodate.

Speed Limits

High speed traffic also detracts from the atmosphere of a village. It is not unusual to find a posted speed limit of 30 to 55 miles per hour through a village, such as the 50 miles per hour limit along Route 202 through Spring Valley, in Buckingham Township. The effects of highway-speed traffic on these small communities are felt particularly when buildings are located very close to the road, as is common in villages. The Pennsylvania Department of Transportation or the township (depending on which has jurisdiction) should be contacted to request reducing the speed limit through a village. Any unsafe conditions should be cited, particularly if no sidewalks exist or if poor site distances exist at an intersection. Often, as in Pineville, in Buckingham and Wrightstown townships, reduced speed limits are posted but ignored by motorists. In this case, more stringent enforcement of existing speed limits should be requested of the municipal police force.

However, reduced speed limits obviously are not completely effective in slowing traffic through a village. This is partially because the design of roads through a village often encourages high speed travel. Road details in the village are usually the same as those used on an open highway, although they are incongruous with the intimate scale of a village. Therefore, when approaching a village, a driver may not be aware that he is leaving the open road and entering an environment with a higher degree of activity, where a reduced rate of speed would be more appropriate.

Pedestrian Circulation

Pedestrian circulation, or the lack of it, is a problem common to villages. Road widening has reduced or eliminated the space needed for comfortable pedestrian circulation through many villages, and the increased amount and high speed of traffic has made walking there unpleasant at best and dangerous at worst. Properly designed pedestrian circulation systems are important for the safety and convenience of village residents, for the vitality of a village's commercial area if it has commercial uses, and as a unifying element within the village. Therefore, sidewalks, pedestrian paths, or improved road shoulders should be provided throughout the village wherever possible.

Several years ago the village of Blooming Glen, in Hilltown Township, addressed the problem of inadequate pedestrian access. Financial assistance was obtained through the Community Development Block Grant program. The money was used to fund the preparation of engineering drawings and the installation of new sidewalks and curbs along the main street through the village. This made pedestrian circulation possible in the village along a fairly busy street. Financial assistance may be available for similar projects if they are determined to be eligible. (See Chapter 9.)

Parking

In many cases, small lot sizes and the proximity of buildings to roads leave insufficient parking space for residential and commercial uses. Consequently, parking may occur on the road shoulders or on the road itself, creating congestion and a potentially hazardous situation.

The location of existing off-street parking also can be a problem: large parking lots in front of commercial buildings can detract from the overall appearance of the village. Therefore, parking should be located behind buildings, whenever possible, to remove congestion and screen the view of parked cars from the street and to allow the space in front of buildings to be used for pedestrian paths and landscaping. Parking could occur on individual lots behind buildings or a contiguous area behind several shops could be combined to create a common parking area. If possible, an alley behind the buildings could provide vehicular access to shops and parking, while reducing the number of curb cuts or driveways onto the main road. Or, if space is available elsewhere in the village, the creation of a small community lot may be appropriate. If parking commonly occurs on the road shoulder and no feasible alternative exists, the shoulder should be upgraded to better accommodate parallel parking. If a parking area is being created, the use of a porous paving material is suggested to minimize stormwater runoff. In addition, plant material should be used to screen parking areas from view in the village.

In order to determine the most appropriate parking arrangement, the needs of the village should be assessed, noting where parking commonly occurs, the actual amount of parking space needed, and when the peak demand occurs. Any negative aspects of the existing parking patterns such as unsafe or unattractive conditions should be noted. Also to be considered is whether a particular parking arrangement complies with all applicable zoning or subdivision ordinance requirements or for example, whether parallel parking would be acceptable to the municipality.

SOURCES:

Bucks County Planning Commission, *The Villages of Bucks County: A Guidebook*, Doylestown, PA: BCPCC, 1987.

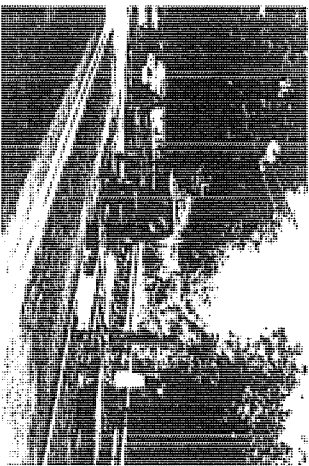
Cee Jay Frederick Associates, Spahan and Cumberland Townships Historic District Project (Draft), West Chester, PA, 1983.

Hansen, Tim, "Entrances to Small Towns: Front Door or Twilight Zone?", *Small Town*, September-October 1983, pp. 24-27.

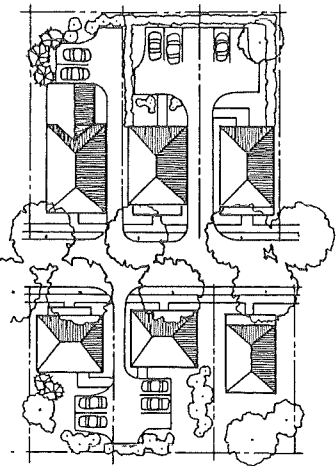
Loudoun County Department of Planning, Zoning and Community Development, Waterford Area Management Plan (Draft), Leesburg, VA: Loudoun County Department of Planning, Zoning, and Community Development, June 3, 1987.

Page, Jake, "Will Success Spoil Brigadoon?", *American Land Forum Magazine*, Summer 1985, pp. 44-49.

Upper Southampton Township Planning Commission with technical assistance provided by the Bucks County Planning Commission, *Southampton Village Designbook: Guidelines for Architectural & Streetscape Improvements for the Old Town*, Doylestown, PA: BCPCC, 1985.



Roadside parking can be made safer and more attractive.



Parking areas can be created behind or to the side of buildings.

Village Signs

Signs are a common problem in many areas, and villages are no exception. In many cases the signs are unattractive, too large, too numerous, improperly placed, or out of character with the village. Signs are more commonly found and, therefore, typically a more serious problem in commercial villages. However, even one or two unattractive signs can have an adverse effect on a smaller, non-commercial village.

The following list outlines the most common problems encountered with signs:

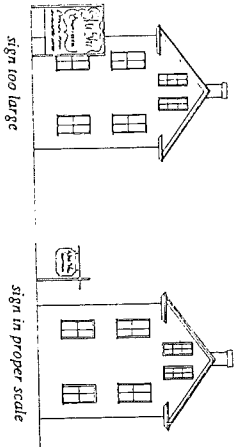
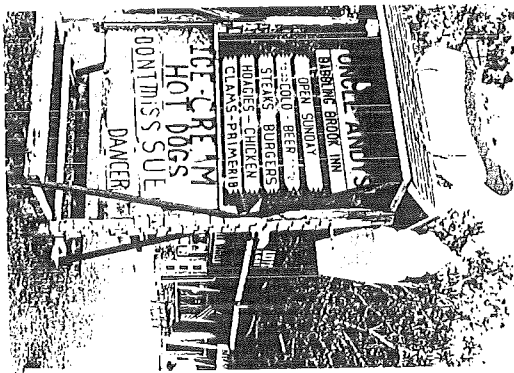
- too large or out of proportion with the building;
- too much information on one sign;
- too many signs on one property;
- signs that are too tall;
- signs that are improperly located on the property (too close to the road or adjacent properties);
- signs that are out of character with the historic atmosphere of the village (plastic, internally-lit signs);
- deteriorating signs, lack of maintenance;
- poor choice of colors;
- "amateurish" handpainted signs;
- flashing or glaring signs on signs; and
- too many signs "competing" with each other for attention.

Because villages have their own unique characteristics, sign regulations and guidelines should be designed to complement those characteristics. This chapter contains recommendations for using signs within a village. The implementation of these recommendations can come about in two ways. Certain sign standards, such as sign type, size, and height, can be regulated through a sign ordinance. Aesthetic standards, such as color and design, can be achieved through a voluntary effort on the part of village residents and businesses. Historic, village, and business associations can work together to design sign guidelines for their communities. A combination of a good sign ordinance and the cooperation of village residents, businesses, and municipal officials should result in the successful implementation of appropriate sign standards.

DESIGN GUIDELINES

The following guidelines address the major design issues for all types of signs. Design guidelines for specific types of signs are included under the section entitled "Sign Types".

Size - Typical characteristics of Bucks County villages include the residential and historic nature of buildings and shallow front yards. These characteristics suggest the need for smaller signs than those found on a major commercial strip. Larger signs are often erected on the theory that "bigger means more business". However, this marketing approach is generally inappropriate for the county's villages. The general appearance of the village is much more important than sign size in relationship to the marketability of the areas businesses. Keeping the size of the signs in scale with the surrounding buildings and street is a very important



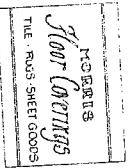
RELATIONSHIP OF SIGN SIZE TO TRAFFIC SPEED

Number of Lanes (A/P/T)	Speed (Mph)	Reaction Distance (Seconds)	Distance Traveled (Feet)	Height from Road (Feet)	Total Area of Sign (Square Feet)
2	15	8	176	12	6
	30		352	16	23
	45		528	20	36
	60		704	24	100
4	15	10	220	14	8
	30		440	18	40
	45		660	22	90
	60		880	26	150

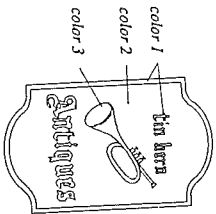
Source: Fred L. Wilshire, Jr. and Mardell R. Daniel B., Street Graphics, The American Society of Landscape Architects Foundation, 1971



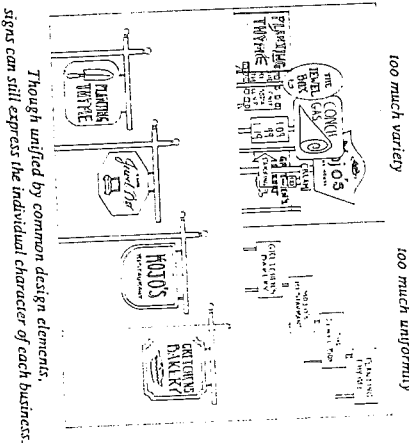
sign too busy
with too much information



simple effective sign



color 1	color 2	color 3
Letters	Background	Accent
Gold leaf, white, red, navy blue, green, yellow	Black	White, red, green, gold leaf, blue, dark yellow
White, red	Navy blue	Black, white, green, yellow, gold leaf
Navy blue, black	Gray	White, red
Gold leaf, white, red	Emerald Green	White, gold leaf, black
Gold leaf, light blue	Brown	Red, white
Navy blue, red	Cream	Black
Gold leaf, white, mustard yellow	Red	Black
Navy blue, red	Mustard yellow	Red, black



Though unified by common design elements, signs can still express the individual character of each business.

factor in maintaining a pleasant and attractive village. In addition, because of the proximity of the buildings to roads in villages, a motorist is able to read smaller signs without difficulty. Thus, larger signs are not only detrimental to a village's appearance, but also unnecessary.

Information- The information shown on signs should identify a business in a simple and straightforward manner. The message should be easy to read and direct. Too much information on a sign or group of signs is difficult, if not impossible, for a viewer to absorb. Signs which identify a business should limit text to the name of the business and perhaps a secondary item such as a principal product or idea. A simple illustration is often the best way to convey a product or service.

Color- No more than two or three colors should be used. Colors used for the sign should match either the background or the trim color of the structure which it serves. This will link the sign to the business. In addition, when more than one sign is used, the colors on the signs should be coordinated with each other to present a unified image.

Materials- Wooden signs, either painted or carved, are usually most appropriate given the architectural character of villages. Other materials may be used only if their design is compatible with the architecture of the building and character of the village. Plastic, internally lit or flashing signs are generally not appropriate in villages.

Uniformity versus Individuality- Signs of many different sizes, shapes, and heights create a confusing scene as they compete for the attention of the viewer. Developing a sign system can create a unifying element for a village. By using similar materials, lighting, and standardized posts for freestanding signs, the perception of the village as a distinct and unique place may be reinforced. A village, historic, or businessman's association may wish to develop sign guidelines so that appropriate standards will be geared towards the character of their village. Some standards, such as size and height limitations, can be included in a sign ordinance. Because many design standards cannot be specifically regulated, a voluntary effort on the part of village businesses will probably be the most successful approach to implementing the standards.

However, too much uniformity is as detrimental as a disjointed arrangement of signs. The above guidelines allow individual expression while respecting the overall integrity of the village.

SIGN TYPES

There are four types of signs which are recommended for village commercial uses: freestanding signs, projecting signs, wall signs, and window signs. Other signs which may also be used within or near villages include directional and off-premises signs. In general, the more commercially oriented the village, the less restrictive the sign regulations need to be. If a village is principally residential with only a few commercial uses, the sign standards should be more conservative. The following section defines each sign type and makes recommendations on the content, location, size, lighting, and design of the signs.

FREESTANDING SIGN

A freestanding sign is supported by an upright (or uprights) permanently anchored in the ground. A freestanding sign is probably the most effective type of sign for use in a village because the signface is oriented perpendicular to the street and is easily viewed by passing motorists.

Content- The freestanding sign is generally used as the primary identifier of a business. Information on this sign type should be limited to the name and function of the business.

Size- The size of the signface should be limited to a maximum of 8 to 10 square feet. The height of the signface should not exceed 7 feet, although the upright supporting the sign may be as high as 9 feet.

Lighting- The light source for freestanding signs should be concealed from view. Glare from light sources can be reduced through the use of shielded light fixtures or landscape plantings.

Sign Supports- While a variety of supports could be used, a simple wooden support is recommended. Standardized sign supports could provide a visually unifying element which would help identify the village. A design for a sign support is illustrated in the adjacent column. This simple post and arm support is constructed of 4 X 4 lumber. The dimensions illustrated are maximums. In cases where a freestanding sign would be within the clear sight triangle, a projecting sign should be used instead (see below). Posts should be painted or stained a neutral background color to match the building. Accent colors may be used in coordination with building trim colors or sign lettering. The sign support dimension with building trim colors or sign lettering. The sign support design (post and arm) and detailing, such as routed areas and chamfers, should be used throughout.

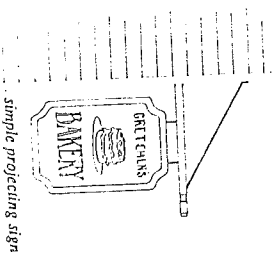
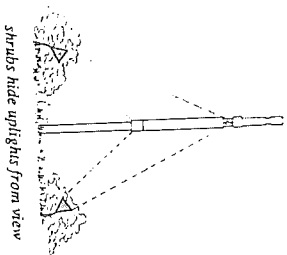
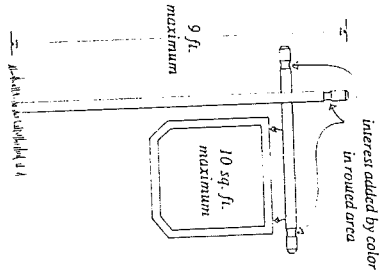
PROJECTING SIGN

A projecting sign is attached to and projects more than 18 inches from a wall of a building. Because projecting signs tend to interfere with the appearance of the facade, the use of this type of sign is recommended where it is not possible to use a freestanding sign. For example, a property which has little or no front yard is an appropriate situation for using a projecting sign.

Content- As with the freestanding sign, the information on a projecting sign should be limited to the name and function of the business.

Location- The sign should be located so it does not block or obscure important architectural elements of the facade. Either of the front corners of a structure would be the best location. Smaller signs projecting from porches are also appropriate.

Size- The area of the signface should be limited to 8 to 10 square feet and should project no more than 5 feet from the side of the building. The bottom of the sign should be at least 10 above the ground.

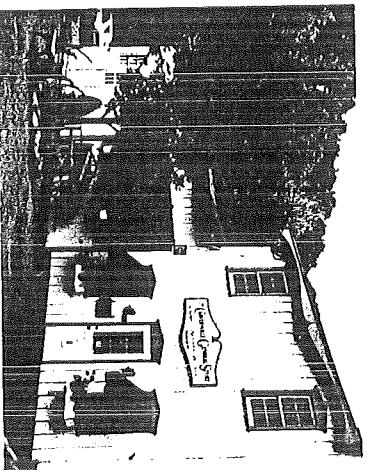
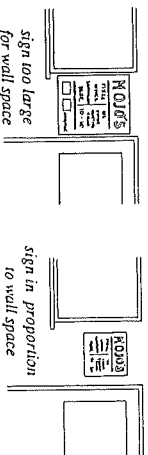


Lighting- Lighting should be shielded so that no direct light shines onto sidewalks, streets, or adjacent properties. If possible, the light source should be concealed from view.

Sign Support- The supports should be as simple and unobtrusive as possible. If the sign supports are wooden, they should be painted to match the building.

WALL SIGN

A wall sign is parallel to any exterior wall of a building. Because many of the commercial buildings in villages were originally constructed as residences, there are a limited number of places on the facades where wall signs can be located without obscuring important architectural details. However, older commercial buildings were often designed to make sign space an integral part of the facade. The lintel, which extends horizontally across the top of the store front, was generally used as the sign area for the business. Where a building has been designed in this manner, the wall sign should be used as the primary identifier of the business. In the case of residentially designed commercial buildings, wall signs should be considered as a secondary or informational type sign.



Wall sign as the primary identifier of the business.

Content- If the wall sign is the primary identifier of the business, the information should be limited to the name and function of the business. If the wall sign is a smaller secondary sign, more detailed information such as store hours, products, and services may be included. This information should be placed so that it can be read by people entering the establishment.

Location- On most of the residential structures converted to commercial use, the only appropriate location for a wall sign is at the entrance of the building between the windows and door. As noted above, when the building is designed as a commercial structure with a sign area built into the facade, the wall sign should be located in that space. In the case of new buildings, the sign should be placed according to the design of the building. If the building incorporates sign space into the facade, the sign should be placed in that area. If no such space is designated, the general guidelines for residentially designed buildings should be followed.

Size- Because the size of spaces between doors and windows is generally limited on residential type structures, the size of the wall signs should be proportionately small, not to exceed 8 square feet. Care should be taken to ensure that the sign size is proportional to the wall space on which it is mounted, i.e. not visually pinched between the doors. Where the wall sign is part of the architectural design of the building, the sign size should be restricted to an area of not more than 15 percent of the wall area, including windows and doors, on which the sign is attached. A wall sign on any type of building should not obscure the architectural features of the building.

Lighting- The source of lighting for the wall sign should be shielded or concealed from direct view.

WINDOW SIGN

A window sign is painted on or attached to the inside surface of a window. Windows provide an excellent area for signs which do not affect the overall appearance of the structure. Window signs are particularly appropriate for buildings with large display windows. The use of window signs is more limited on residentially designed commercial buildings which generally have smaller windows.

Content- The window sign should simply state the name and function of the business. Windows should not be covered with long lists of products, prices, and other information, as this creates a cluttered and unattractive appearance. The information and design used for window signs should not be confused with temporary advertising signs, which should be avoided.

Size- Permanent window signs should be limited to 30 percent of the total glass area of the building front. Temporary advertising signs should be limited as much as possible. As a maximum, temporary signs should cover no more than 30 percent of the window area and the signs should remain in place no longer than 30 days.

Lighting- Illumination can be provided simply and inexpensively through the use of interior backlighting.

DIRECTIONAL SIGNS

A directional sign is designed specifically to direct pedestrian or vehicular traffic flow. Directional signs should be used only when absolutely necessary in order to avoid a clutter of signs. When used, they should be visually subordinate to major identification signs.

Content- The text should contain direction messages only.

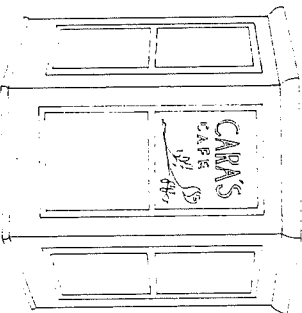
Location- Directional signs should be located where necessary to mark driveway entrances or to direct cars to parking at the rear of buildings.

Size- These signs should not exceed 3 square feet.

Lighting- Lighting, when necessary, should be concealed and unobtrusive.

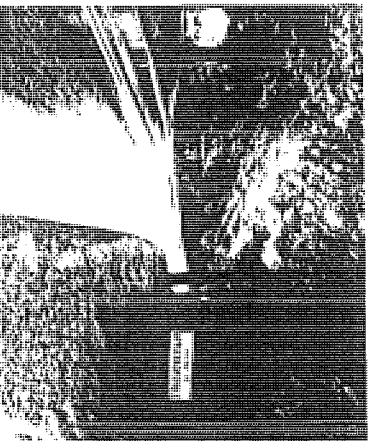
OFF-PREMISES SIGNS

An off-premises sign directs attention to a person, business, profession, or activity which is not conducted on the premises where the sign is located. This definition includes large advertising billboards which are not an appropriate use within or on the perimeter of villages. However, smaller off-premises signs which identify the village may be appropriate if properly regulated. These signs should be limited to one sign per entrance point to the village. The design and material used for the sign should be appropriate to the character of the village.



a simple window sign

Credit: Lowell Sign Book



Off-premises sign identifying a village.

SIGN ORDINANCE REGULATIONS

The following sign regulations are included to provide guidance in formulating a village-oriented sign ordinance. The standards shown for sign types and sizes within a commercial village incorporate the recommendations of the first section of this chapter. The sign regulations for a residential village district should be similar to those of other low intensity residential districts. It is important to note that the following sign regulations represent only a portion of a sign ordinance and would have to be incorporated into a complete ordinance designed for a specific municipality.

Signs in the Village Commercial District

In the Village Commercial District the following types of signs and no others, shall be permitted:

- a. Any sign erected and maintained in accordance with the provisions of Section _____ (signs permitted in the residential district), provided the use to which it refers is permitted in the Village Commercial District.
- b. Signs advertising a business, office or other permitted use. Such signs shall be on-premises signs and shall be erected on the site where such use is located.
1. The computation of the area of a sign shall include incidental decorative trim and the framework in addition to the portion devoted to the message and lettering.
2. For projecting or freestanding double faced signs, only one (1) display face shall be measured in computing the total sign area where the sign faces are parallel or where the interior angle formed by the faces is forty-five (45) degrees or less. Signs with sides forming an interior angle of more than forty-five (45) degrees shall not exceed the maximum area permitted for such signs for all sides combined.
3. The area measure of each freestanding sign shall include all separate components which shall not exceed three (3) in number. Freestanding signs shall not exceed a height of seven (7) feet from the ground level to the top of the sign and shall not exceed a height of nine (9) feet to the top of the sign support.
4. Wall signs which are part of the architectural design of a building shall be restricted to an area not more than fifteen (15) percent of the wall area, including windows and doors, of the wall upon which such sign is affixed or attached, and such signs shall not protrude above the structural wall of which it is a part. Where

USING SIGNS

No more than two sign types should be used per property. A combination of a freestanding or projecting sign plus a wall or window sign is recommended. This combination provides one sign perpendicular to the road which can easily be read by passing motorists and a second sign which can be read when facing the building. A projecting sign should be used if there is no front yard, or if a freestanding sign would obstruct visibility from a driveway. The use of temporary window signs should be avoided to prevent a cluttered appearance. Directional signs could be used in addition to the above, only if they are absolutely necessary.

SIGN ORDINANCES

While many of the design elements are most effectively achieved through a voluntary effort, several sign standards can be regulated through a sign ordinance. For example, issues such as size, number of signs, height, setbacks from roads and adjacent properties, deteriorating signs, and inappropriate lighting can all be controlled to some extent through a sign ordinance.

Generally, a sign ordinance is incorporated into the municipal zoning ordinance. When writing a sign ordinance for a township with villages, special consideration should be given to regulating signs within the villages. For the ordinance to be effective, specific districts should be created for the villages as described in Chapter 2 (i.e., Village Commercial or Village Residential). The type and size of signs permitted within these districts should be based on the unique qualities of the village. For example, the size and height of signs within a commercial village should be smaller than those permitted within a highway commercial district. Signs permitted within a residential village should be similar to those permitted in other low intensity residential districts.

The following are the basic components of a sign ordinance:

Statement of Purpose: This section explains the philosophy and goals of the sign ordinance. The stricter the ordinance regulations, the more complex and explanatory this section should be since its purpose is to ensure that the health, safety, and welfare of the community is being served in a legitimate and legal manner.

Definitions: The purpose of this section is to define all terms in the sign ordinance which might be unclear or misinterpreted.

Classification: This section classifies or identifies types of signs which are either permitted or prohibited in all zones.

Signs by Zones: The purpose of this section is to regulate signs according to the zoning district in which they are located, thus ensuring the signs' compatibility with their surroundings. In general, signs in residential areas are subject to the strictest regulations, while signs in the commercial and industrial district are the least restricted. As previously mentioned, signs within a village commercial district should be more restrictive than those within higher intensity commercial districts.

Design and Construction Standards: This section is included to ensure that signs are of safe construction and will not be hazardous to the public. The ordinance may simply refer to standards set forth in the building code or include such construction standards as wind loads, vibration resistance, acceptable supports, allowable stresses, materials, and electrical wiring.

Enforcement of the Sign Regulations: A sign ordinance can only be successful if it is effectively and uniformly enforced. In fact, if there is no commitment to enforce all aspects of the ordinance it may be unfair. New businesses are the most likely to suffer in this case since they will probably be the ones forced to abide by the new regulations, putting them at a disadvantage to existing businesses with nonconforming signs.

Dealing with nonconforming signs is an important element of the sign ordinance. If there are no provisions in the ordinance that specifically regulate nonconforming signs, a sign owner may be reluctant to repair a sign for fear that size or height reductions will be required if the sign is altered. Thus, existing nonconforming signs may be allowed to slowly deteriorate.

A variety of methods can be used to accomplish the eventual removal of nonconforming signs. For example, if the sign is abandoned for a specified number of days (usually 90 to 180 days) the sign may be removed without payment or compensation to the owner. However, there must be proof that the use of the sign has been abandoned voluntarily. While the cessation of a use for a long period of time may infer an abandonment, the burden of proving the abandonment will rest with the municipality (*Pa. Zoning Law and Practice*, Robert S. Ryan, Vol. 1, 1981). If sixty percent or more of a nonconforming sign is destroyed, the ordinance may require that it be replaced with a conforming sign on the theory that the original sign has no value left to protect.

Public removal of abandoned signs at no cost to the owner is one way to get a new sign ordinance off to a good start. If accomplished within a short period of time, there is an immediate effect seen in the appearance of the community, and the public is more likely to lend its support to the new ordinance.

such sign consists of individual lettering or symbols attached to a building, wall or window, the area of the sign shall be considered to be that of the smallest rectangle or other regular geometric shape which encloses all of the letters and symbols.

c. For all permitted office, commercial, and consumer service uses in the Village Commercial District, a sign or signs may be erected in accordance with one (1) of the following:

1. One (1) freestanding sign up to ten (10) square feet, plus one (1) of the following:

(a) One (1) wall sign mounted flush on wall up to eight (8) square feet; or

(b) One (1) wall sign (when part of the architectural design of the building) consisting of individual letters or symbols not to exceed fifteen (15) percent of wall area; or

(c) One (1) window sign consisting of individual letters or symbols not to exceed thirty (30) percent of the total glass area of the building front.

or

2. One (1) projecting sign projecting not more than five (5) feet from the wall up to ten (10) square feet in size, plus one (1) of the following:

(a) One (1) wall sign mounted flush on wall up to eight (8) square feet; or

(b) One (1) wall sign (when part of the architectural design of the building) consisting of individual letters or symbols not to exceed fifteen (15) percent of wall area; or

(c) One (1) window sign consisting of individual letters or symbols not to exceed thirty (30) percent of the total glass area of the building front.

If a building fronts upon more than one (1) street, one (1) additional sign in conformity with either subsection (a), (b) or (c) above may be permitted on each street frontage.

d. Directional Signs. Directional signs of three (3) square feet or less are permitted for traffic control purposes, provided such signs do not contain advertising copy.

e. Temporary Signs. Exterior temporary signs, including all movable signs such as those advertising a commercial sale, when

located on the site where such use is conducted, may be permitted for a period not to exceed thirty (30) days in any one calendar year for any one premises or commercial use.

1. The size of such sign may not exceed twelve (12) square feet per side.
 2. Application for a temporary sign permit shall be made to the Township Zoning Officer accompanied by the required permit fee and an escrow deposit to be set from time to time by resolution of the Board of Supervisors, as a guarantee that the temporary signs shall be promptly and completely removed at the end of the authorized period. If such signs are not promptly removed at the end of the authorized period, the Township will then have them removed and forfeit the sum deposit to reimburse the expense incurred in removal.
- Prohibited Signs**
- When developing a sign ordinance, a municipality should also consider prohibiting the following signs within or adjacent to village districts:
1. Off-premises signs (billboards).
 2. Flashing, rotating or revolving signs, with the exception of barberpoles.
 3. Roof signs.
 4. Any sign suspended between poles and illuminated by a series of lights.
 5. Any sign erected on a tree or utility pole, or painted or drawn on a rock or other natural feature.
 6. Any banner sign or sign of any other type across a public street or on any private property, except for such signs which are approved by the Board of Supervisors to be of general benefit to the municipality or for public convenience, necessity, or welfare.
 7. Any sign suspended between poles which is either a pennant which blows in the wind or a spinner which spins in the wind.
 8. Signs which contain, include, or are illuminated by any flashing, intermittent, or moving light or light, except those giving public service information such as time, date, temperature, weather, or similar information.

SOURCES:

Browne, Carolyn. *The Mechanics of Sign Control*. Planning Advisory Service, American Planning Association, Report No. 354.

Buckingham Township Zoning Ordinance, August 1984.

East Rockhill Township Zoning Ordinance, May 1987.

Ewald, William R. and Mandelker, Daniel R. *Street Graphics*. McLean, Va: Landscape Architecture Foundation, 1977.

Lowell Division of Planning and Development and Lowell Historic Preservation Commission. *Lowell: The Sign Book*. Lowell, MA: Lowell Division of Planning and Development and Lowell Historic Preservation Commission, 1980.

Upper Southampton Township Planning Commission and Bucks County Planning Commission. *Southampton Village Designbook: Guidelines for Architectural & Streetscape Improvements for the Old Town*. Doylestown, PA: BPC, 1985.

Architectural Considerations

Buildings are an integral part of a village's character. In order to maintain and enhance this character, older buildings must maintain their original character and new buildings must respect the existing structures.

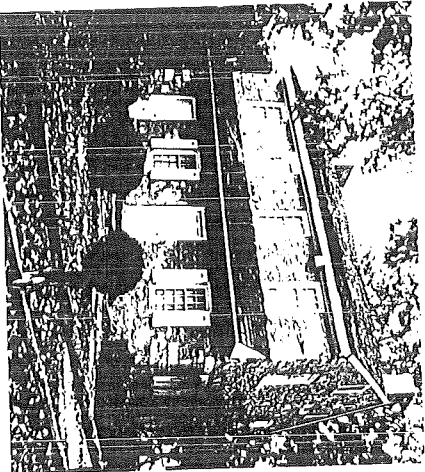
Although some villages within Bucks County clearly represent a uniform architectural period, many are an eclectic combination of architectural and historical periods from the eighteenth century to the present day. Even a single house may have changed throughout its existence, containing the elements of several periods. In many cases, there may not be any one building that is a prime example of distinguished architecture. However, when viewed together, the buildings within a village present a unified image of a distinct and attractive community. The goal of this chapter is to suggest ways of maintaining this unified image when the construction of new buildings or additions to existing structures are proposed within a village.

GUIDELINES FOR NEW CONSTRUCTION, RENOVATIONS, AND ADDITIONS

New buildings and additions to existing buildings can blend into a village without imitation or by trying to replicate, in detail, an historic architectural period. By incorporating the important architectural characteristics of a particular village into a contemporary design and properly siting the building, a new structure or addition can blend with its surroundings and be compatible with the village. In addition, by following certain guidelines, renovations to an existing structure can be accomplished without being detrimental to the established character of the structure or to the village as a whole.

There are a number of elements which work together to create a building's character. These elements include the building's scale and proportion, massing, directional expression, roof shape, placement on the lot, platform, rhythm of openings, sense of entry, windows and doors, and materials and details. These basic elements are found in every architectural style, but they are varied to create different styles. For example, the roof shape of a Colonial structure is a simple, steeply sloped gable, while a Victorian structure generally has a more complicated roof shape with numerous gables.

Understanding these elements and their relationship to each other is essential for designing compatible renovations, additions, and new buildings. The following is a list of important design elements and guidelines to consider when building within a village. The renovation guidelines suggested in this chapter do not require historically accurate reproductions of period architecture.¹ The guidelines are based on simplicity and quality of design, and are intended to help residents and businessmen make the most appropriate improvements to their properties.

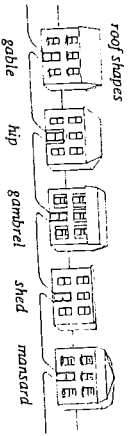


New buildings or additions must respect the existing structures in a village.

¹ Guidelines for historically accurate restorations and requirements for being listed on the National Register of Historic Places are discussed later in the handbook.

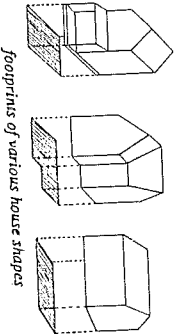
Roof Shape

There are several different roof types such as saddleback or ridge (often called gable), gambrel, hip, mansard, shed, and flat. The type and pitch (slope) determine the overall roof shape. If one roof shape is predominant, any new buildings should have a similar roof shape. If there are a variety of roof types in the area but all are pitched, then a flat roof should not be used on new construction. Additions and renovations should not add to or eliminate original stories or alter roof shapes, particularly in areas exposed to public view.



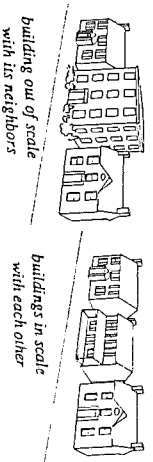
Directional Expression

The directional expression of a building is shown by the footprint of the building and the roofline. A building may have a narrow front and deep sides, a wide front and shallow sides, or it could be roughly square. A wide building can be placed within an area of narrow buildings by breaking the facade into smaller masses which match the existing buildings. Similarly, an addition should reflect the directional expression of the original structure.



Proportion and Scale

Proportion deals with the relationship of the height to the width of the building and with the relationship of each part to the whole. Scale deals with the relationship of each building to the other buildings in the area. For example, the relationship of each building to the other buildings in the area. For example, a five story structure would be out of scale in an area of two story buildings. Similarly a long, low building would not fit in with a group of narrow buildings. Therefore, when proposing a new building within a village the proportion and scale of existing structures should be considered. If there are a combination of building types in the village, scale and proportion of the buildings closest to the proposed construction should be maintained. Additions should maintain the original scale and proportion and be built at the same level as the existing building.

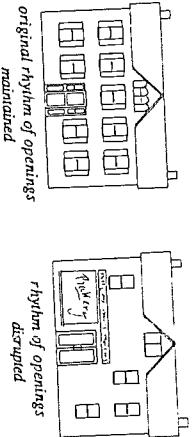


building out of scale with its neighbors

buildings in scale with each other

Rhythm of Openings

Rhythm of openings refers to the number and spacing of windows and doors in a facade. Most Colonial, Georgian, Federal, and Greek Revival buildings have a symmetrical facade with an odd number of equally spaced openings per floor. Other styles exhibit different rhythms. Any new construction should show the predominant rhythm of other buildings in the area. Additions to an existing building should maintain the original rhythm of openings. If renovations are planned, this rhythm should not be changed by the removal or addition of openings.



Platforms

Some building styles place the structure on a high foundation or "platform". Sometimes retaining walls or a short, steep slope exists between the street and building where stairs are usually provided. This also creates a platform for the structure. Where these platforms exist in the village, they should be incorporated into the design of new buildings and additions.

Massing

Massing deals with the volume created by sections of a building. For example, a simple Colonial home may be one mass but a Victorian home with a porch, turret, wings, etc., has a varied massing. Placing a boxlike structure in a neighborhood of Victorian buildings would be intrusive. Renovations or additions should respect the massing of existing buildings.

Sense of Entry

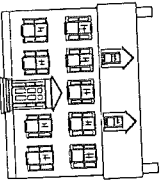
Every building has an entry but each may be articulated differently. The entry may be a simple door or it could be steps and a door or it might be more strongly articulated by a portico, porch, or other prominent architectural feature. If the existing buildings have a strong sense of entry, new construction should express a strong sense of entry as well. When working with an existing building, porches should not be removed or enclosed unless absolutely necessary. If enclosure is needed for additional space or other reasons, the enclosure should be done so that the space retains the appearance of a porch. This can be done by using large areas of glass. Never enclose the porch with opaque materials.

Placement on the Lot

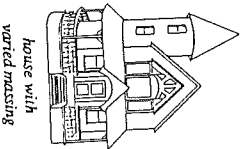
A building may be close to the street or further back, parallel to the street or at an angle, and to one side or in the middle of the lot. Predominant siting patterns should be maintained. In many villages, structures are placed close to the street; any new construction should use the predominant setback. However, there may be cases where the predominant front yard setback is smaller than what is permitted by the local zoning ordinance. In this situation, there is little the builder can do unless a variance is granted or the zoning ordinance is amended to permit a closer placement to the street. (Chapter 2 contains suggestions for appropriate building setback requirements within villages.)



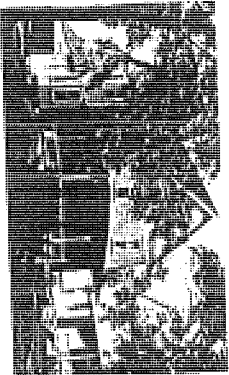
Houses on a high foundation.



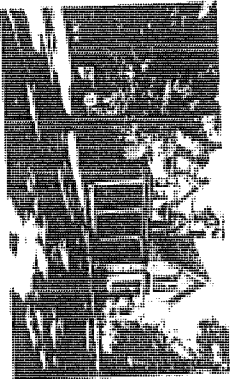
House with one mass



House with varied massing



Porches create a strong sense of entry.



New construction should maintain the predominant building setback.

Materials and Details

The materials and architectural details used on a building form an important part of a building's style and character. Materials used on the walls and roof of any new building should have a similar appearance and texture to those on existing buildings. The use of similar materials and textures will help the new building fit into the existing neighborhood and help an addition to blend into the original building.

If a house is being restored, original materials should not be replaced unless they are deteriorated beyond repair. If they must be replaced, the same material should be used. If this is not possible, a material of similar appearance and texture should be used. Details such as trim, moldings, and shutters should be maintained in their original form. Any significant details which have been removed or altered should be replaced. Existing details such as cornices, trim, shutters, and ginghamhead should not be removed, altered, or obscured. Replacement details should be of the same architectural period as the originals. Shutters should be sized so that the pair will completely cover the window. Shutters should not be used on bay or large windows unless specifically designed to cover those windows.

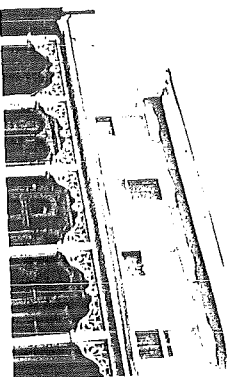
Original windows and doors should be retained whenever possible. If new windows or doors must be used, care should be taken in choosing compatible replacements. Any new windows should duplicate existing windows in location, size, shape, and number of panes. Although use of original materials would be ideal, it is not essential. New types of windows and doors such as double glazed windows with fake mullions or insulated steel doors can provide creditable imitations of the original while being more practical and less costly. It is especially important to match existing windows if only a few of the windows in a facade are being replaced. The use of matching windows and doors applies to additions as well as restorations.

Special Considerations for Additions

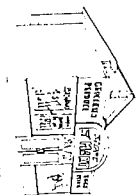
When building an addition to an existing building, there are guidelines which should be followed in addition to those mentioned above. If possible, additions should be located to the side or rear of the building to preserve the front facade. Additions do not necessarily have to be replicas of the existing building. A contemporary addition which is compatible in scale, materials, and roof shape could be appropriate. To ensure a compatible design for an addition, the owner may want to seek the advice of an architect or historic review board.

Creating Specific Guidelines for a Village

Although the above guidelines are very general, specific guidelines can be tailored for each village. This is advisable because what is important in the makeup of one community's character may not be important for another community. For example, if an area is homogeneous with most of the buildings of the same period, stricter guidelines may be necessary. If, however, an area has a mix of different styles, then the guidelines can be more general. Determining what elements are important to the makeup of the community's character and form-



Existing building detailing, such as trim or ginghamhead, should not be removed, altered or obscured.



addition not compatible with the original structure

lating guidelines to enhance those elements is a good method to encourage the use of compatible architecture. In addition to architectural characteristics, the natural setting, settlement patterns, vegetation, and made elements should be considered. Professional advice should be sought to help develop guidelines which are appropriate for a specific village.

IMPLEMENTATION

Guidelines can help to maintain a village's character, but only if they are implemented. Other methods can help ensure that existing buildings will keep their original character and that new buildings will be compatible. These methods include creating an historic district, enacting conversion standards, acquiring easements, seeking National Register Landmark status for important buildings, and enacting landmark ordinances.

Historic Districts in Pennsylvania

Local governments in Pennsylvania have two methods for creating historic districts. One way is through the Historic District Act (1961 P.L. 282, No. 167) and the other is through Article 6 of the Pennsylvania Municipalities Planning Code (Act 247 of 1968, as amended by Act 170 of 1988).

In 1961, the Pennsylvania General Assembly passed the Historic District Act enabling municipalities to designate and regulate historic districts. Although each historic district ordinance would be tailored to a specific area or village, it must also adhere to the guidelines set forth in Act 167.

- The ordinance creates and defines one or more districts by map reference or legal description. The historical significance of the district must then be certified by the Pennsylvania Historical and Museum Commission.
- An Historical Architectural Review Board (HARB) consisting of at least five members is appointed by the governing body. Three of the five members must be a building inspector, a licensed real estate broker, and a registered architect.
- The HARB must review the "erection, reconstruction, alteration, restoration, demolition, or razing" of any building in the district (Act 167, Section 3). Only changes affecting a facade which can be seen from a public street or way can be evaluated. The HARB holds a meeting to review the changes and sends its recommendations to the governing body.
- The governing body then decides to issue or deny a "certificate of appropriateness". If denied, an indication must be given as to what changes in the plans or specifications would be acceptable.

Act 167 gives local governments three options for designating and regulating an historic district. A municipality can adopt a "special purpose" historic district ordinance without any zoning controls. A municipality with zoning can include historic district provisions in the zoning ordinance. Finally, a municipality can adopt a separate historic district ordinance with a specific reference to the district in the zoning ordinance. The primary purpose of an Act 167 historic district ordinance is to impose architectural and aesthetic controls on buildings. This type of district is limited in that it does not address questions about the appropriateness of the underlying zoning code.

Another option available to municipalities is to create an historic zone under Article VI (section 605(2)(v)) of the Pennsylvania Municipalities Planning Code. This section authorizes the regulation of "places having unique historical or patriotic interest or value." This allows the use, area, and bulk regulations to ensure compatibility between present-day activities and the historic nature of the area.

National Register Program

To further ensure protection of an historic district, registration on the National Register of Historic Places (NRHP) can be sought. The NRHP recognizes five categories: districts, sites, buildings, structures, and objects. Significance may be at the local, state, or national level but standards for significance and integrity must be met. The NRHP provides a number of benefits and protections.

One benefit is that the owners of properties in districts listed on the register are also eligible to apply for grants-in-aid under the National Historic Preservation Act of 1966. Another benefit is that resources listed are prime candidates for acquisition by historical groups, government agencies, and individuals interested in preservation. This contributes to the ability to attract funding and other forms of support. Listing on the NRHP also provides protection from federally assisted projects such as highways. Section 106 of the National Historic Preservation Act requires review of undertakings that may have an adverse impact on listed properties. This applies not only to properties already listed but also to any which are determined to be eligible. This process does not guarantee that adverse impacts will be avoided but it can create a climate for the resolution of conflict and focus attention on the property. Similar protections are also offered under the National Environmental Policy Act of 1969 and the Department of Transportation Act of 1966.

Another benefit is federal income tax incentives. This benefit is discussed in more detail in Chapter 9, which also includes a discussion on how to place a property on the National Register.

Some disadvantages to the National Register Program are the long and somewhat difficult process that must be followed to

get a property listed on the NRHP and the lack of control over private actions. However, inclusion in an historic district can stabilize or increase property values, foster an increase in civic pride, and contribute to the quality of life in a community. Restrictions placed on buildings within an historic district help to ensure the integrity of the neighborhood, providing a benefit to the residents.

Single buildings, as well as districts, can be nominated for registration on the NRHP. In addition, they can be placed on the National Historic Landmark (NHL) list. The National Historic Landmark Program (NHLP) has more rigid nominating procedures. Buildings must possess exceptional national significance and they are selected according to prescribed historic themes. Anything listed as a National Historic Landmark is automatically listed on the NRHP since there are no built-in protections or benefits to the NHLP. Buildings listed individually on the NRHP can reap the same benefits as mentioned in the discussion on historic districts.

Easements

Single properties can also be protected through the use of preservation easements. An easement is a legal agreement in which certain rights or interests in property are conveyed from the property owner (the donor) to another party (the recipient). Negative easements remove certain rights from property and grant the recipient the right to enforce restrictions. This type of easement has long been used for land conservation. They are also used to preserve the architectural integrity of historic buildings. An easement on the exterior of a structure normally restricts the owner's right to alter the external appearance of the building and precludes demolition. An easement can cover just the facade or the entire structure.

The benefits of an easement accrue to both the donor and recipient. The recipient can ensure the continuation of the architectural integrity of the structure without the expense of acquiring the building. The donor can benefit from reduced real estate taxes and, under certain conditions, easements can be treated as tax-deductible charitable contributions. In addition, the easement is a flexible tool which can be written to meet the donor's needs. For a more detailed discussion of easements, see Chapter 9.

CONVERSION STANDARDS

Another technique to maintain a village's visual characteristics is the enactment of conversion standards. Many areas which have older buildings may find that the buildings are being converted to other uses or, in the case of large older homes, they may be divided into several apartment units. This is often a necessary change but, if done improperly, can cause problems. Conversion standards should ensure that the building maintains its exterior appearance. New doors should be added to the side or rear rather than the front; fire escapes should also be located to the side or rear. Conversion standards should include design guidelines similar to those discussed previously to ensure continuation

of the building's character. The following chapter provides a more detailed discussion of conversion and adaptive reuse projects.

SOURCES:

- Brandywine Conservancy. *Protecting Historic Properties: A Guide to Research and Preservation*. Chadds Ford, PA: Brandywine Conservancy, 1984.
- Bucks County Planning Commission. *Planning for Residential Conversion*. Doylestown, PA: BCP, 1985.
- Colorado Historical Society. *Good Neighbors: Building Next to Historic*. Denver, CO: Colorado Historical Society, 1980.
- Metropolitan Historic Zoning Commission. *Historic Zoning Handbook: A Guide to Historic Preservation and Neighborhood Conservation Zoning in Nashville*. Nashville, TN: Metropolitan Historic Zoning Commission, March 1985.
- Roddewig, Richard J. *Preparing a Historic Preservation Ordinance*. American Planning Association, PAS Report No. 374, 1983.

Conversions and Adaptive Reuse

With few exceptions, the county's villages have a higher proportion of old to new structures. Some of these older structures may appear to be obsolete or ill-suited for modern needs. However, they can often be adapted for or converted to new uses. Where it is possible, the rehabilitation and reuse of a unique older building is a better alternative than tearing it down and replacing it with something new. This is particularly true in villages where the buildings and architecture are an important element of the village's character. The aim of both adaptive reuse and conversions is to preserve the exterior of the structure while providing flexibility in allowing for the change of the interior features. Therefore, a good adaptive reuse or conversion project should not noticeably alter the outside of the original building. This results in, not only the enhancement of the reused or converted building's value and appearance, but also increased values for the surrounding area.

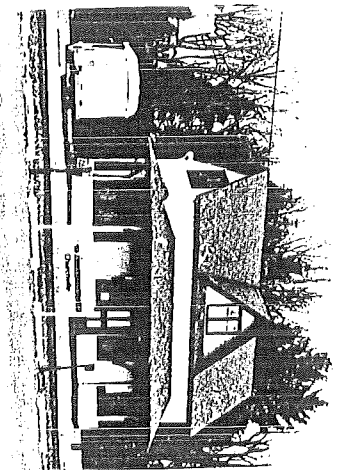
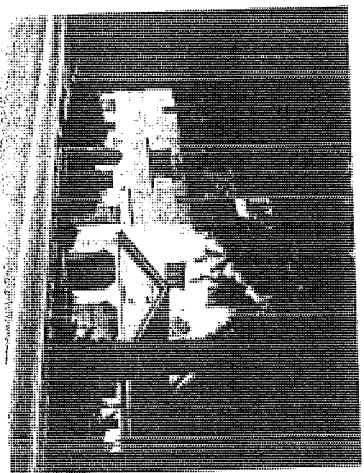
Adaptive reuse and conversion projects can offer several benefits to the county's villages. First, they provide a way to preserve historic and older structures and give them new life. Secondly, if unused or underutilized buildings are rehabilitated, they can improve and add new life to the village. Rather than allowing an obsolete building to deteriorate, the adaptive reuse of the structure can provide a viable future for the building. Many times, adaptive reuse and conversions are an attractive alternative to new construction. For example, the conversion of large, older homes into two or more living units can be achieved without noticeably altering the exterior of the building. This provides an economical way to increase and diversify the housing stock without changing the character of the community. A well executed conversion of an existing structure to apartments or other uses will always be more compatible with a village's character than new construction.

There are additional benefits to those who successfully complete adaptive reuse projects. Federal tax credits of 10 to 20 percent are available for the rehabilitation of qualified structures. In many cases, the materials and construction quality of an older building would be economically impossible to duplicate today. Rehabilitated buildings also have historic and aesthetic appeal which helps to attract tenants or future buyers.

However, adaptive reuse and conversion projects require careful planning and monitoring since it is not automatically guaranteed that such projects will prove successful. In addition, municipal building codes and ordinances may inadvertently discourage or even prohibit the adaptation of older buildings for new uses. This chapter discusses possible steps a municipality can take to permit and regulate adaptive reuse and conversions. General guidelines and recommendations for those attempting a reuse project are also included.

How Can Municipalities Promote and Regulate the Reuse or Conversion of Existing Buildings?

While local government officials may want to encourage the reuse of underutilized buildings within their municipalities, many current ordinances and building codes inadvertently prevent or discourage such projects. This is principally because many of these ordinances and codes were designed to regulate the



Throughout the county there are numerous examples of reuse and conversion projects which have already been completed. Old feed and grain mills have a variety of new uses while maintaining their historic exteriors. Several rail stations in the county have been adapted for use as offices, shops, and even homes. Stone barns are often converted to other uses. In addition, there are a number of proposals to renovate vacant factories in the county. The conversion of large, single-family homes to multi-family uses is a relatively common practice in many municipalities.

construction of new buildings. As a result, municipal regulations sometimes require the upgrading of existing buildings to meet the standards of new construction. However, this is not always practical or necessary for public safety. Thus, a reuse project may be prevented because of the physical or financial constraints of trying to meet building code requirements.

The inability to meet parking requirements is one problem often encountered. These difficulties are especially prevalent in villages where buildings are already located on smaller, narrower lots than may be permitted by current ordinances. These smaller lots may make parking setbacks, the number of required spaces, and impervious surface limitations difficult to meet. In addition, ordinances may not permit the conversion of single-family homes or other structures to two or more dwelling units even in situations where it may be beneficial to the village or municipality. Building codes may pose another set of problems to reuse or conversion projects. Literal compliance with minimum distances to exits, location of stairs, fire protection, and sound transmission is not always possible when using codes meant for new structures.

Fortunately, there are ways in which municipalities can regulate the reuse of existing buildings without compromising the welfare of their communities. For example, rather than applying building codes which are written for the construction, repair, or alteration of new buildings, a building code which addresses the special problems of rehabilitation or conversion of existing structures can be adopted. The Building Officials and Code Administrators (BOCA) building code was expanded in 1984 to address just such an issue. The *BOCA National Existing Structures Code* provides model regulations for the conversion, rehabilitation, and reuse of existing buildings while maintaining basic standards for human health and safety. This code allows the builder to correct or compensate for the deficiencies of an older building without compromising the intent of the BOCA code. For example, where maximum travel distance to an exit is exceeded, alternative solutions such as alarms, sprinklers, or additional exits may be permitted. Municipalities which have not already adopted the BOCA Existing Structures Code should consider doing so to provide more flexibility for reuse projects while, at the same time, meeting important building code requirements.

Municipal zoning and subdivision ordinances should also be reviewed to determine how they affect the conversion of existing buildings to new uses. The Bucks County Planning Commission completed an in-depth study of the conversion of single-family homes into multi-family uses. *Planning for Residential Conversions* (1985) looks at the many issues which need to be considered when regulating conversions and also contains suggested ordinance provisions which address parking requirements, density, buffering, and impervious surface ratios. In addition, the publication discusses the potential impacts of permitting residential conversions and what to consider when determining the location and extent to which conversions should be allowed. These are all issues which a municipality should evaluate when determining the appropriateness of conversions within their villages.

Municipalities should also consider how their current ordinances might affect the conversion of non-residential buildings to new uses. For example, some zoning ordinances only permit a single-family residence to be converted to a multi-family use. However, the conversion of non-residential buildings to apartments might be appropriate, as well as beneficial, to a village or municipality. This is particularly true of older commercial or industrial buildings which may be obsolete, and thus no longer suited for their original purpose. Permitting the reuse of such buildings for residences could provide an alternative to the deterioration and eventual demolition of these structures.

Of course, the use to which a building may be converted is also dependent on what type of land uses are permitted within the zoning district where it is located. The types of uses which should be permitted need to be determined on a village by village basis since each village has its own unique characteristics. Chapter 2 discusses what uses are generally most appropriate for different types of villages.

In addition, chapters 2 and 3 look at land use and design issues which are applicable to both reuse projects and new construction projects located in or near a village. Municipalities should consider being flexible in their ordinance requirements because of the nature of most villages. For example, parking for commercial uses within villages is often a problem because of the small lot sizes. Chapter 2 recommends some alternative ordinance standards that can help solve these parking constraints. While it is not recommended that the ordinances be so lenient as to adversely affect the quality of the village, the benefits of successful reuse or conversion projects are often worth the extra effort made by a community to accommodate them.

What Should a Developer Consider Prior to Attempting a Reuse or Conversion Project?

The developer plays a significant role in initiating reuse and conversion projects. While no two such projects are exactly alike, the following basic steps should be considered when determining the feasibility of a reuse project:

1. Determine the appropriateness of the site and choose a compatible land use

The potential of a site on a local and regional level should be evaluated at the start of the project. An important consideration at this stage is the compatibility of the proposed use with the local zoning ordinance. Thorough researching of local ordinances and codes will expedite the review process and increase the developer's chances of success.

A feasibility and market analysis should also take place at this stage. A developer considering a site for rehabilitation as a commercial structure, for example, must evaluate whether the surrounding area can support a commercial enterprise and if there is a real need for the type of commercial use proposed.

Similarly, an area that is experiencing a great deal of residential growth or that has a shortage of housing will be a strong candidate for residential conversions. Therefore, a feasibility analysis of the site should be a major factor in determining the site's economic potential. If the future site has a limited market potential for a particular use, the developer should consider another use for the site.

2. Evaluate the potential of a structure

Financial considerations are an important factor to bear in mind when considering the potential of a structure for reuse or conversion. The cost of acquiring an existing building and renovating it is sometimes less than new construction costs which involve site acquisition and clearing, road construction, and the installation of sewer, water, and electrical systems. However, reuse and conversion projects often present difficulties which are not encountered when building a new structure. For example, older structures may contain inadequate electrical and ventilation systems. The existing plumbing and septic system may not be able to handle the needs of a proposed new use. Many older buildings present access problems to the handicapped. As previously discussed, meeting current building codes, unless specifically designed for existing structures, is often difficult and expensive. Also, unlike an existing structure, a new building can be designed to specifically accommodate the proposed use. In the case of an adaptive reuse or conversion project, the use must be made to fit the building.

Therefore, the developer should assess the existing infrastructure to ensure that it can sufficiently accommodate (or be modified to accommodate) the proposed future use of the chosen structure. Thorough inspection of the building's physical characteristics, taking note of its uniqueness as well as its structural deficiencies, will enable the developer to make a clearer determination as to what type of future use might be appropriate.

Because of the unique problems involved, it is suggested that the advice of an architect experienced in working with older buildings be solicited. Even with the advice of an experienced architect, there is no guarantee that unexpected problems will be avoided. In fact, unpleasant and unforeseen surprises are such a frequent occurrence that it has become a common practice for developers of historic properties to add a 10 to 15 percent contingency cushion to their rehabilitation budget. This better prepares the developer to cope with unknown factors which invariably increase a project's cost. However, by carefully planning and researching a project from the start, serious difficulties can be minimized.

3. Develop an implementation strategy

Once the site and the type of use for the structure is decided, a strategy should be developed to ensure that the process continues smoothly. At this stage, financial considerations are further examined. One notable financial incentive for reuse projects is the rehabilitation tax credit. The Tax Reform Act of 1986 allows a 20 percent federal tax credit for rehabilitating a certified historic structure and a 10 percent credit for nonresidential buildings finished at least fifty years ago. This tax credit has provided an incentive for many developers to restore and reuse older buildings. However, there are numerous criteria that must be met and qualifying for the credits can be a complex process. (See Chapter 9 for a more detailed explanation of this procedure.)

Depending on the scale of the rehabilitation project, the developer may wish to assemble a management team that is experienced in the reuse of older buildings. The management team should consist of a general contractor, marketing consultants, architects, and financial advisors. Such a management team is often the key to a successful rehabilitation project. An experienced management team will not only help the project run more smoothly, but will also encourage the support of elected officials and the local community.

Successful reuse and conversion projects are dependent on both the municipality and the developer. The municipality needs to examine its ordinances and codes to permit these projects, where appropriate, and to ensure that they are properly regulated. The persons attempting to complete such a project must be willing to do the necessary groundwork to increase their chances of success. The preservation and continued use of older buildings within villages, and throughout the county, is certainly worth the efforts and cooperation of everyone involved.

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Maintenance of Village Properties

This chapter focuses on two issues that are vital to the appearance and integrity of villages throughout the county. The first issue, on-going maintenance and simple repair of the exterior of older structures, is examined primarily for the benefit of the owners and prospective owners of older structures within villages. Because villages primarily consist of older structures, it is particularly important for village property owners to be aware of proper maintenance procedures. Although historic restoration and preservation techniques should be employed whenever possible, this section of the handbook does not attempt to go beyond providing general information and guidelines on the repair and maintenance of older structures (A discussion of historic preservation guidelines is found in Chapter 9)

The second issue addressed in this chapter, maintenance of the grounds in and around villages, is intended to give guidance to municipal actions aimed at maintaining the overall appearance of villages and the municipality in general.

MAINTENANCE OF INDIVIDUAL PROPERTIES

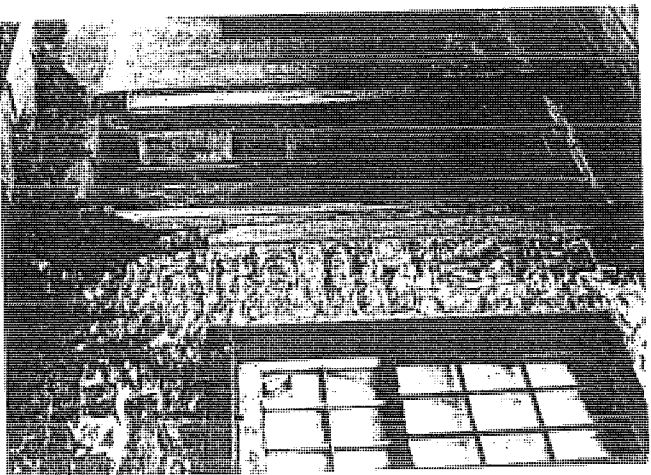
Attention to preventative maintenance will, in almost all cases, eliminate the need for major repairs to structures. The following overview of basic maintenance steps serves to identify typical problems in the care and preservation of older structures.

Physical inspection

The owner of an older house should conduct a thorough physical investigation to determine the condition of the structure. If it is suspected that major repairs are required on the house, a professional building inspector should be hired to perform an inspection. Prospective buyers of an older home should also consider hiring a professional inspector so that they are well aware of repairs that may be necessary prior to purchasing the house. The inspection should identify all repair and maintenance problems that are found and set priorities for the repairs. Start with an examination of the exterior: the roof and the exterior walls; then proceed from the basement to attic on the interior. Throughout the inspection special attention should be given to signs of moisture on surfaces that are subject to decay and to insect infestation (termites, carpenter ants, and powder-post beetles). An important factor in determining whether the structure is basally sound is the condition of the foundation and basement. If there is extensive damage to the foundation from excessive settlement, causing the house to be askew, or if there is extensive damage to the sills and joists in the basement from insects, the cost of repair may be extremely expensive¹.

Emergency repairs

If the physical inspection reveals weather penetration, the first priority is to stop the penetration immediately. If permanent repairs cannot be done immediately, temporary emergency repairs must be undertaken to abate further dete-



Many neglected buildings can complement a village's architectural character if properly repaired and then maintained.

¹ Sills are the wooden base attached to the foundation on which the whole frame of the house rests.

rioration of the structure. However, care must be taken during the temporary repair work to avoid irreversible changes to the structure.

Roofs

As the most exposed element of a building, the roof is critical to the protection of the building from the ravages of the weather. The roof covering, flashings, gutters, and downspouts must be properly maintained to ensure against weather penetration. The roof should be carefully inspected twice a year for signs of deterioration or damage, such as missing shingles. Where accessible, the underside of the roof should be inspected after heavy rain storms for signs of leaks.

Slate, metal, and wood shingles were the common roof coverings on older structures. These durable and attractive roof coverings should be retained whenever possible. However, because the cost of replacing these materials is extremely expensive in today's economy, they are frequently replaced by asphalt or fiberglass shingles. If substitute roofing material is to be used, an attempt should be made to match the existing roofing in texture, design, and color so as to retain as much of the structure's former appearance as possible. Asphalt or fiberglass shingles generally last about twenty years. Signs of age and need of replacement are apparent when the gravel coating is worn thin or off the shingles, or when the edges begin to curl. A second layer of shingles may be applied over the existing layer of shingles, provided there is adequate ventilation under the roof. However, if there are two existing layers of shingles on the roof, both layers should be stripped off before installing the new shingles.

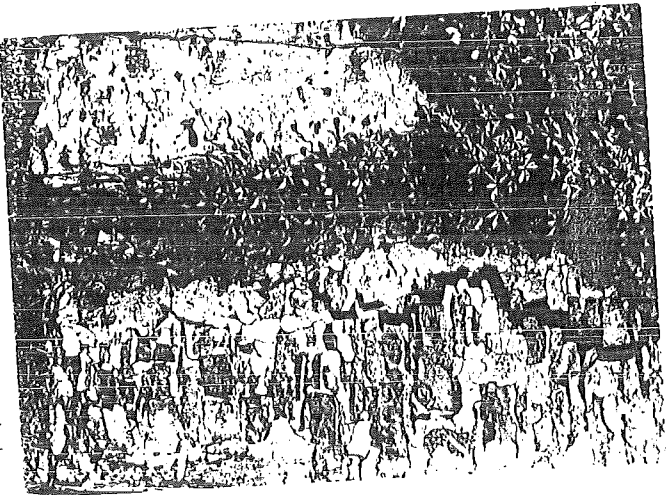
Improperly maintained roof gutters and down spouts can cause extensive water damage to buildings. Accumulated leaves and other debris in roof gutters are the most frequent cause of malfunctioning roof gutters and downspouts. Overflowing water from the gutters may saturate surrounding support members and, with built-in gutters, the overflow can enter a building's interior. Gutters and downspouts should be kept free of leaves, twigs, branches, and other debris.

Foundations and basements

Correctable structural weaknesses of the foundation and basement should be stabilized and repaired as soon as possible. A contractor who is skilled in foundation and basement stabilization should be engaged to undertake this work. Excavation needed for the repair of the existing foundation of an older structure should not be undertaken unless it can be certain that the excavation will not undetermine the structural stability of the building. Cracks in the foundation should be repaired to eliminate water infiltration and to help prevent the entrance of termites. The entire perimeter of the foundation should be tight and free of dampness. If dampness is present, steps should be taken to eliminate the source of the dampness.

Exterior walls

Weather penetration of both wood and masonry walls is the primary cause of their deterioration. However, the maintenance and repair requirements of wooden and masonry structures differ considerably.



Neglected buildings are not only an eyesore, but can also be unsafe.

Wooden walls: If properly maintained, wooden exterior walls will last for centuries. Wood that is protected by properly applied paint and caulk will remain dry and free from rot. A good paint job depends on the following factors: (1) proper preparation of the exterior surface, (2) elimination of all sources of penetrating moisture; and (3) selection and application of good quality paint.

The proper preparation of exterior wooden walls involves: scraping and sanding off loose paint; washing off algae and mildew²; and, if the walls are soiled, washing the walls with a detergent solution and a bristle brush, followed by a thorough rinsing with a garden hose. To thwart exterior moisture, seal all cracks with paintable caulk and fill holes with putty.

Dealing with interior moisture to prevent damage to exterior walls is more complex, but adequate ventilation is usually the key. Clothes dryers should be properly vented to the outside, and exhaust fans may be needed to give water vapor a direct path to the outside. Another cause of interior moisture buildup in the exterior walls of older structures is the use of blown insulation. Because there is usually not a proper vapor barrier in the outside wood frame walls of an old house, moisture will condense on the blown insulation during the winter³. This moisture condensation can cause excessive paint peeling and rotting of the wood (dry rot). Therefore, unless the necessary vapor barriers are in place, blown insulation should not be used.

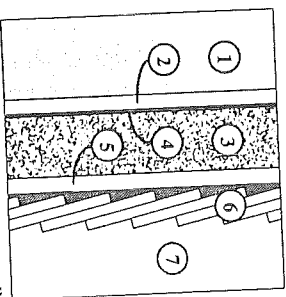
In paint selection, the rule of thumb is to use the same type of paint (either oil-based or latex) as was used the last time the structure was painted. If a primer is used, it should be one formulated by the manufacturer to be compatible with the finish coat.

The original colors of the house or the customary colors of the period in which the house was built are recommended. For example, during the Victorian era, the preference was for subdued colors of nature, shades such as olive, ochre, rust, and dark gray. Intense combinations of these colors were used to highlight the architectural detail. Houses built during the early Federal and Greek Revival periods were usually painted white or in lighter shades such as pale yellow, soft beige, buff, and pale gray; trim was painted in even lighter shades.

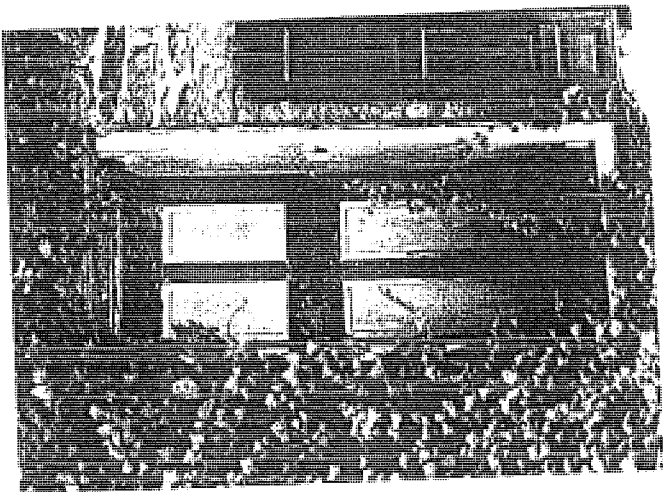
The installation of aluminum or vinyl siding over clapboard walls is not recommended because it may result in the loss of architectural character. Moreover, overlaying these synthetic siding materials on top of clapboard walls may, if not properly ventilated, form a shell that does not breathe. Consequently, condensation may form between it and the old siding, thereby producing the conditions conducive to dry rot.

2 A bleach and water solution is generally effective in removing both algae and mildew. The appropriate mixture should be determined through consultation with a paint store representative.

3 A vapor barrier is a waterproof skin (aluminum foil, polyethylene plastic, Kraft paper, vinyl wall paper, or vapor barrier paint) which is used to prevent water vapor (general humidity inside a house, and steam produced by cooking, bathing, and laundering) from entering into the cavity of exterior walls reduces the effectiveness of the insulation and can cause dry rot in the moist wood. The vapor barrier must always be installed on the warm inner surface of the wall cavity of exterior walls, not the cold outer surface. (see illustration).



- VAPOR BARRIER**
1. interior of house
 2. interior wall
 3. insulation
 4. vapor barrier
 5. exterior wall
 6. clapboard
 7. exterior of house



Plant material can deteriorate wood and masonry work.

Masonry walls: Masonry walls are also prone to damage from water infiltration. Once saturated, stone and brick decay, either through frost damage or salt crystallization. Water infiltration of masonry walls can usually be eliminated by repointing—the process of raking out loose and deteriorated mortar by hand and re-pointing it with fresh mortar. It is particularly important that the new mortar match the original in strength and hardness. A frequent mistake in repointing old buildings is the use of hard mortars containing Portland cement⁴. Soft mortars, which were generally used prior to the 1880s, provided a relatively classic cushion between the stone or brick; this flexibility is lost when joints are repointed with a high proportion of Portland cement.

The new mortar joints should also match the original in profile and color. There are numerous pointing styles; therefore, the mortar joint should be studied before it is raked out and an effort made to match the original mortar joint profile as closely as possible. Similarly, the color of the original mortar should be studied and an effort made to match the original color. Early nineteenth-century mortars were generally light in color, whereas darker mortars became popular later in the century.

When brick is severely deteriorated, it should be replaced, preferably with old matching bricks. If they are not available, contemporary handmade bricks may be available in the same color and dimensions. Similarly, stone which has deteriorated should be replaced using the same type and color stone. If masonry walls need cleaning, only those cleaning methods which do not damage the masonry material should be considered. All too often simple methods, such as a low pressure water wash, are not even considered, yet they frequently are effective, and least expensive. The least dangerous and damaging methods should always be tested prior to considering harsher methods.

Older masonry buildings should never be sandblasted. Sandblasting erodes and pockmarks soft stones and dulls and scars polished stones. Brick is even more susceptible to damage from sandblasting. The fired outer surface of the brick is pulverized in the sandblasting process, which exposes the softer porous interior. Once they are sandblasted, bricks are more vulnerable to weathering, water penetration, and discoloration. Unfortunately, sealant coats are only a temporary remedy to damage caused by sandblasting.

Plant growth: Plant material, such as vines, moss, and lichens, growing on a building can deteriorate both wooden and masonry walls. The presence of moss and lichens indicates an inherently damp condition, and vines, particularly ivy, can extend tendrils below, into, and behind wall surfaces, causing pressures which can loosen and deteriorate building materials. Plant material, therefore, should not be permitted to grow on exterior walls of older structures.

⁴ Portland cement, which is commonly used today, did not become popular until the 1880s. Portland cement can create a bond that is stronger than the building material, which can cause deterioration as a result of the differing coefficient of expansion and the differing porosity of the stone or brick and the mortar.

Existing landscape

Mature hardwood trees, informally situated in the yards of older houses, are typical of many village landscapes throughout the county. These existing trees should be retained whenever possible because they are usually native species which have proven over the years to be tolerant of conditions on the site. Trees that are diseased or damaged should be removed and replaced by tolerant species that will be in proper scale with the existing house when the trees reach maturity. The species selected for planting should also be in harmony, when mature, with the size and form of existing trees throughout the village.

Maintenance of Properties In and Around Villages

Municipalities can play a significant role in maintaining and even improving the villages within their jurisdiction. This can be done through the establishment and enforcement of appropriate codes as well as proper maintenance of public facilities within and near the villages.

Litter and Junk Control

Any area will become unattractive if junk and litter are permitted to accumulate in and around the yards of existing houses and accessory structures. To correct this problem, or to avoid its occurrence, a municipality can establish minimum permitted conditions for the maintenance of all premises throughout the municipality through the enactment of appropriate code standards. For example, the *BOCA National Existing Structures Code (1987)* contains updated provisions for property maintenance as well as technical guidelines for the rehabilitation and reuse of existing structures. Many communities in Bucks County have already adopted some form of the BOCA code.

The following standards are examples of the BOCA Existing Structures Code requirements which can be used to ensure that property owners maintain their properties in accordance with minimum standards:

Sanitation: All exterior property areas and premises shall be maintained in a clean, safe, and sanitary condition free from any accumulation of rubbish or garbage (section ES-301.1);

Storage areas: All open salvage yards and open storage areas shall be completely obscured from surrounding property by a solid screen not less than six feet in height. Storage of debris, junk, or construction materials, which are not associated with an approved use or permitted construction at that site, shall be prohibited (section ES-301.7);

Motor vehicles: Not more than one currently unregistered and/or uninspected motor vehicle shall be parked on any property in a residential district, and said vehicle shall not at any time be in a state of major disassembly, disrepair or shall it be in the process of being stripped or dismantled. A vehicle of any type shall not at any time undergo major overhaul, including body work in a residential district unless such work

is performed inside a structure or similarly enclosed area designed and approved for such purposes (section ES-301.10.1); and

Weeds: All lots shall be maintained free from weeds or plant growth in excess of 10 inches. All noxious weeds shall be prohibited. Weeds shall be defined as all grasses, annual plants and vegetation other than trees or shrubs provided, however, this term shall not include cultivated flowers and gardens (section ES-301.5);

In some municipalities, uses such as junk yards and storage areas are also controlled through the zoning ordinance. For example, a property which contains two or more cars without valid inspection stickers is defined as a junk yard. Such a property would then be subject to the zoning regulations for a junk yard.

Active enforcement of codes such as those listed above can prevent blighting problems from occurring. Moreover, knowing that all adjacent or nearby properties would have to at least meet minimum maintenance standards would encourage property owners to maintain the appearance of their properties.

Public Areas and Facilities Maintenance

Appropriate care and maintenance of public areas and facilities within and near villages not only assures their continued use but also enhances their appearance and increases individual property values. In many Bucks County municipalities, it is the responsibility of the property owner to maintain the sidewalks, curbs, driveways, parking spaces, and similar paved areas that are within the street right-of-way adjacent to the property owner's land. Therefore, municipalities should include language in their codes that stipulates the property owners' responsibilities for the proper maintenance of these facilities. Model language for the maintenance of public areas is contained in the *BOCA National Existing Structures Code*.

The responsibility of maintaining stormwater facilities in villages lies with the municipality. The municipality should properly maintain stormwater facilities to ensure that stormwater flow does not damage sidewalks, curbs, or streets within their villages. (Refer to Chapter 9 for methods of financing suggested improvements.)

Community Maintenance Programs and Projects

Community pride in a village's appearance could be fostered through maintenance programs and projects. Concerned residents should encourage their neighbors to join in a common effort to maintain and improve the village properties. A well coordinated maintenance and improvement program should give the village a sense of unity, yet encourage individual structural identity. Litter control programs such as the Pennsylvania Department of Transportation's "Keep Pennsylvania Beautiful," can not only help to reduce litter along our roads and highways,

but can also encourage people to be more mindful of appropriate ways to dispose of trash. For participation in this program contact:

Keep Pennsylvania Beautiful
229 N. Broad Street
Doylestown, PA 18901

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Sewage and Water Facilities

PART I - WASTEWATER DISPOSAL

Approximately 20 percent of the villages in Bucks County are served by public sewers. These villages are principally located within or around existing developed areas. Homes and businesses in the remaining villages continue to utilize on-lot disposal systems. An increasing number of these villages are faced with the problem of malfunctioning on-lot systems. The failure of these systems is often due to their age. Most systems were installed with design and installation techniques that are inadequate when compared to current state standards. Other problems originate from improper operation and/or maintenance. Adverse site conditions or a combination of these. Failure of on-lot systems can result in public health dangers and surface and ground-water pollution. Some indicators of on-lot disposal problems are:

- surface breakout (standing effluent, malodorous air, lush vegetation over absorption area);
- wastewater backup into house; and
- groundwater contamination.

Groundwater contamination is of particular concern since many of the villages contain concentrations of closely spaced residential and commercial uses on small and/or narrow lots (less than one acre in size). In these areas of high density on-lot disposal systems, the distance between absorption areas may not permit adequate treatment or dilution of pollutants, such as nitrates, before reaching on-site wells. When on-lot problems occurred in the past, little or no effort was given to rehabilitation of the existing system. Rather, attempts to alleviate malfunctioning systems often resulted in the unnecessary installation of expensive public sewers.

CORRECTING ON-LOT DISPOSAL PROBLEMS

In some cases, only a minority of the lots in a village may be plagued with failing on-lot disposal systems. A detailed investigation of all possible causes of failing systems is the key to correcting the malfunctions. There may be a number of corrective alternatives available to remedy such malfunctions, although each is dependent upon site-specific conditions. Correction of the malfunctions can be as simple as practicing water conservation and proper maintenance or as complex as installing an entirely new system at a different location. Any corrections should be done in coordination with the Bucks County Department of Health. The following items represent some of the measures that can be taken to correct individual malfunctioning disposal systems.

1. Proper Operation and Maintenance

On-lot sewage disposal systems require minimal routine maintenance to ensure proper operation. However, many times these systems

are inadequately maintained. Some reasons for inadequate on-lot maintenance are:

Unknowledgeable homeowner - This occurs most often when new residents, accustomed to public sewers, relocate to an area with homes serviced by on-lot systems.

Poor record keeping by property owners - Often the property owner realizes that his septic tank should be pumped out every two to five years, but forgets when it was last done. Also, when a homeowner buys a used home he often does not know when the last septic tank pumpage was performed.

Negligence - Some property owners simply neglect their systems and fail to live up to their responsibilities of proper maintenance.

Many on-lot systems consist of a septic tank and some form of soil absorption area. If a septic tank is not pumped out on a regular basis, solids and scum accumulation will fill the tank and eventually be transported with the effluent to the soil absorption area. This can result in a clogged system. The scum and sludge levels in a conventional septic tank should be checked at least once each year and pumped if necessary. For a typical home, a septic tank will need cleaning every two to five years depending upon load and material put into the system. The system, especially the soil absorption area, should be protected from surface drainage. All downspouts and surface water should be diverted away from the system. For on-site systems involving mechanical devices, such as aerobic systems, proper operation should be checked weekly to ensure that all components are functioning properly.

2. Water Conservation

Reducing the amount of wastewater generated can usually prolong the life of an on-site disposal system or reduce the severity of a failing system. When water conservation is practiced throughout the home, water usage can be cut nearly in half. Unnecessary water use may be eliminated through wise water habits such as:

- washing dishes once a day;
- taking a shower instead of a bath;
- turning off water while brushing teeth and plugging the basin to rinse the razor; and
- eliminating unnecessary flushes.

In addition, a large volume of water can be saved by repairing leaking toilets and dripping faucets. Water consumption can be further reduced by installing water conservation devices such as:

- water saving (low flush) toilets or pressurized toilets;

- reduced flow shower heads and faucet inserts; and
- front loading washers.

3. Structural Rehabilitation

Structural rehabilitation could include providing waste segregation by constructing a separate system to handle greywater (kitchen and bath drain water). This will reduce the hydraulic load on the existing system. Similarly, a second absorption area could be constructed and connected to the existing system so that effluent could be alternately discharged to the two absorption areas. This will allow resting periods for each absorption area. Other structural alternatives could include replacing the septic tank with an aerobic tank; expanding the existing absorption area; installing curtain drains around the absorption area (diverting groundwater); or constructing a new system (including an elevated sand mound) in a new location on the lot. All of the above systems will require a permit from the Bucks County Department of Health.

VILLAGE-WIDE SOLUTIONS TO SEWAGE DISPOSAL PROBLEMS

Where there are concentrations of failing on-lot systems within villages, the municipality should undertake a feasibility study to determine the severity of the malfunction. This study could be included as part of a municipal sewage facilities plan update in accordance with Act 537 of 1966. Possible wastewater alternatives to solve concentrations of problems within villages should be evaluated and the most appropriate solution should be implemented. One alternative would be to determine whether the malfunctions can be corrected on an individual basis as discussed above. However, villages containing concentrations of failing on-lot systems may require wastewater technologies that are capable of handling flows from more than one home. Several possible systems are discussed below.

1. Community Wastewater Systems

By definition, a community sewage system serves two or more lots and is usually limited to small subdivisions or isolated rural areas. The system can be owned and operated by a homeowners association or by a municipality or municipal authority. A community sewage system comprises three components: a collection and conveyance system, a treatment system, and a disposal system.

Collection and Conveyance system - The first step in community sewage processing involves the accumulation and transport of sewage from each home to the treatment site. The most common method to convey sewage flows from each home to the treatment facility is by gravity sewers. However, expensive pump stations and force mains may be needed where the collection system lies in hilly terrain.

Treatment systems - There are several wastewater treatment facility alternatives which should be evaluated to determine the most feasible method to meet the needs of a village.

- **Community septic tank or aerobic tank**- This treatment facility consists of large septic tanks or aerobic tanks. Generally, these types of facilities are used for treating up to 10,000 gallons-per-day (approximately 28 to 38 dwelling units). However the treatment system can be designed to fit the needs of the individual village. These systems require the same operation and maintenance as individual on-lot septic or aerobic tanks.

- **Aerated lagoon system**- An aerated lagoon system consists of a series of wide shallow pools. Sewage flows into the first pool where the solids settle from the liquid; the liquid flows into a second pool into which air is pumped to aid the microbiological purification process. When the liquid flows into the third pool, additional settling of solids takes place.

- **Package treatment plant**- Package treatment plants are prefabricated units that are available commercially to provide treatment for sewage flows between two-thousand and one-million gallons-per-day. When designed, operated, and maintained properly, they can provide a high level of wastewater treatment. While this type of system can serve a relatively large number of dwelling units (up to 2,800), the treatment plant should be sized to meet the sewage needs of the individual village.

Disposal system - Regardless of the method of treatment, the effluent can be disposed of by discharging it into a local stream or by applying it to land.

- **Stream discharge**- This disposal method requires the disinfection of treated effluent wastewater prior to discharge into a stream or river. When the receiving stream exhibits low flows, the Pennsylvania Department of Environmental Resources requires extensive treatment.

- **Land application**- This method of disposal can be accomplished through either subsurface disposal or spray irrigation. The subsurface method is similar to individual on-lot septic systems in that it utilizes a large network of subsurface pipes and includes a pumping station that ensures equal distribution of the effluent throughout the pipe network. Disinfection with chlorine is not required for subsurface disposal. Because this technique is more sophisticated than the standard septic system, proper design and construction are essential for proper performance.

With the spray irrigation method, treated, disinfected sewage is conveyed from the treatment facility to a suitable site and is sprayed over the surface of the land. As with the large subsurface disposal network, this is a sophisticated scheme requiring careful design, construction, and operation to ensure proper wastewater disposal. The recharge of groundwater is an advantage that both land application methods have over the stream disposal method.

The most appropriate wastewater treatment method described above can be coupled with the most appropriate disposal method discussed. The ability to "mix and match" adds flexibility for providing sewage facilities to villages. The adjacent diagram presents a number of feasible treatment and disposal combinations.

2. Potential Connection to New Development

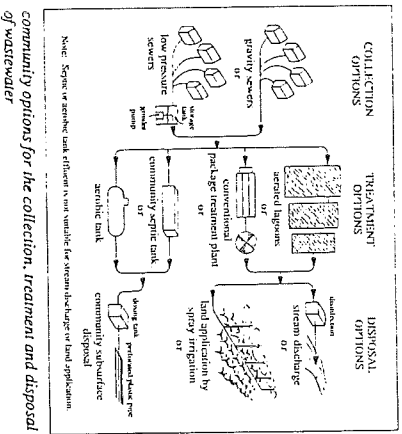
The major drawback for utilizing small community systems is the lack of available space to accommodate the sewage facility within the village. When development proposals are located adjacent to a village, the feasibility of connecting the malfunctioning systems to the new development should be examined.

As discussed in Chapter 2 (Land Use Policies), cluster development is one option for preserving open space in areas around villages. This may create the potential for villages to connect to a proposed development's community sewage system. At the planning stage, the municipality and the developer should work together to create a system that will meet the needs of the village in addition to the new development. It is recommended that the community system be dedicated to the municipality to ensure that it is properly operated and maintained.

3. Public Sewer Extension

Connecting properties with malfunctioning on-lot systems to public sewers is another possible alternative for solving village sewage problems. However, this is not always a feasible or desirable alternative. For example, some villages are relatively isolated and, therefore, cannot be easily or economically connected to a large centralized wastewater treatment plant. On the other hand, villages located closer to public sewage facilities may be adversely affected by the connection. Extending sewer lines to villages often encourages development along the extension and in and around the village. The unique characteristics of the village, which the municipality wishes to preserve, may become overshadowed or lost by the new development. Therefore, the potential impact of extending sewer lines to villages should be thoroughly evaluated by the municipality.

In cases where a public sewer extension must cross an undeveloped area to reach a village, the sewage facilities could be sized to service only the development which initiated the need. This will help prevent more intense development along the sewer extension. However, in some instances, villages may be part of a development district and, therefore, may be designated as areas to be served by public sewage facilities. In these cases, special attention should be given to maintaining the character of the village while allowing more intense development to occur next to it (see Chapter 7).



LOT SIZES WITHIN VILLAGES

Many villages contain small concentrations of closely spaced residential and commercial uses on small and/or narrow lots. Chapter 2 (Land Use Policies) recommends that zoning requirements for village lot dimensions be consistent with the existing lot characteristics. However, prior to determining the optimum lot size for the village, consideration should be given to how much area is needed to adequately accommodate an on-lot sewage disposal system (where public sewers are unavailable). For example, the lot size should be large enough for on-lot systems to meet all applicable requirements of the Bucks County Department of Health and the Pennsylvania Department of Environmental Resources. In cases where community disposal systems are proposed, smaller lots will be more feasible and permitted lot sizes should be adjusted accordingly.

CONCLUSION

Since development is directly influenced by the availability of wastewater facilities, careful sewage facilities planning is needed to protect the unique attributes of villages. Municipal wastewater policies should be consistent with the land use goals and objectives of the municipal comprehensive plan. In addition, appropriate land use regulations, such as lot area and density, should be related to the condition and type of sewage facilities available. Homeowners must be continually educated on proper operation and maintenance techniques, as well as water conservation techniques, in order to reduce potential problems with on-lot systems. All feasible solutions for correcting malfunctions should be evaluated to determine the most appropriate alternative for each village. The potential impact that possible wastewater solutions (particularly public sewage systems) will have on villages must be carefully considered.

For more information, contact the Bucks County Planning Commission and the Bucks County Department of Health.

PART 2 - WATER SUPPLY

Most village residents in the county depend on private, on-lot wells for their water supply. Some of these wells were constructed prior to modern well drilling techniques and also before the training and licensing of water well drillers. A number of older wells in villages are hand dug wells which typically have large diameters, some or brick linings, and shallow depths. Because hand dug wells are poorly protected, they are commonly polluted by surface runoff. Older wells are also very susceptible to any pollutant that may be introduced to the ground-water due to their inadequate some or brick lining. A wide variety of pollution and health problems can arise because of poor well construction.

In addition, the shallow depth of hand dug wells can result in them going dry more readily than deeply drilled wells. Growth in and around a village may cause a drawdown of the water table within the village due to the construction and pumping of deep, high capacity wells. This can also cause nearby shallow wells to go dry. Therefore, water quality and water quantity are the two principal water supply problems which villages face.

WATER QUALITY

Groundwater contamination can originate from a variety of sources including fertilizers and pesticides, animal feedlots, spreading salt on roads, dumps, and land disposal of solid or liquid waste materials. If a well is found to be contaminated, the property owner is faced with a difficult task. First, the property owner, with the assistance of the appropriate agencies, should attempt to identify the source of contamination. This can be difficult because of the complexities of groundwater movement. However, even if the source of the contamination can be identified and clean up of the site is initiated, the contamination already released into the local groundwater needs to be addressed. The following corrective methods should be evaluated when attempting to provide a feasible solution to the contaminated water supply.

- **Well upgrade** - Upgrading the well with proper casings and seals will prevent water contamination resulting from run-off of surface water pollutants leaking into the well.
- **Treatment of water** - In some instances, the property owner may allow a very low level of contaminant to remain and treat the water before it is used. A combination of upgrading and disinfecting the well can correct many of the biological and chemical problems resulting from surface water runoff. However, high levels of chemical contaminants are difficult to remove with individual (point of use) systems, and more effective systems can be difficult and expensive to maintain.

- Containment of pollutant - Impermeable barrier walls placed into the ground around a contaminated area will physically contain the source from spreading and affecting other water sources. This method may not always permanently solve the problem due to the possibility of future leaks in the barrier material.

- Removal of contaminant - Another method for cleaning up contaminated groundwater involves pumping the water from the aquifer and treating it to remove the harmful pollutants.

The cost of any of these methods can vary considerably. However, for most individual property owners, the expense of clean up operations would be economically unfeasible. Therefore, in these cases and in instances where the contaminated source cannot be identified, the property owner should consider switching to an alternative water system that can provide uncontaminated water. Shifting to an alternative source of water may be less costly than attempting to clean up a contaminated supply, but it is still not an inexpensive solution. Using bottled water or connecting into a neighbor's well which is not polluted may solve isolated problems. However, for concentrations of contaminated wells within a village, other more comprehensive methods should be evaluated.

One alternative would be to develop a community water system to which each individual homeowner in the village could connect. This system would have to withdraw water from an uncontaminated source or else be treated before consumption. The community water system should be sized to meet the water needs of the village.

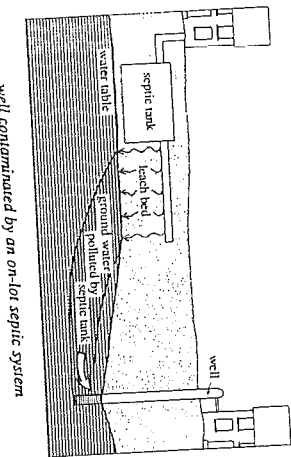
The feasibility of extending a municipal water line into the village is another alternative to evaluate. This may not always be possible, however, because some villages are relatively isolated and cannot be easily or economically connected to public, centralized water supplies.

WATER QUANTITY

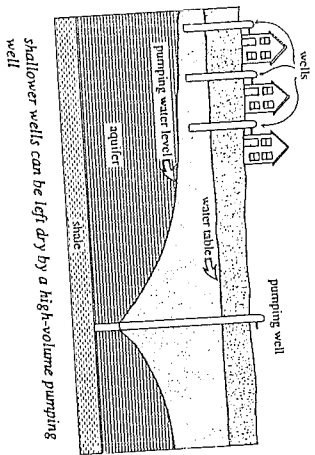
Water shortages are typically caused in three ways. An obvious cause is drought conditions. Problems occur when, after an extended period of dry weather, the water table drops below the bottom of the well. Water shortages can also be created when an area exports water without replenishing the groundwater supply. This situation may occur where public sewers are installed but on-lot wells continue to be used. Finally, a concentration of high density development in an area can cause water shortage problems. If large volumes of water are withdrawn from the aquifer, the water level of nearby wells may be adversely affected. The older, hand dug wells in villages are even more susceptible to the above problems because of their shallow depth.

The following alternatives should be evaluated when attempting to solve water quantity problems.

- Upgrade existing well - Since some older wells in villages are quite shallow, wells may simply need to be drilled deeper to tap the aquifer.



well contaminated by an on-lot septic system



shallower wells can be left dry by a high-volume pumping well

- Community well system - Village homeowners could elect to construct a single, deep well capable of providing for their water needs and manage it as an association.
- Connect to new development's water system - As discussed previously, water shortages may be created by new development occurring in the vicinity of the village. In this case, the feasibility of connecting to the adjacent development's water supply should be determined.
- Connect to municipal water supply - The feasibility of extending a public centralized water line into a village experiencing water shortages should also be examined. However, the potential impact of extending the water line across undeveloped land into a village should be carefully evaluated. Providing water in this situation may open an area to unanticipated growth.

For more information contact the Bucks County Planning Commission or the Bucks County Department of Health.

SOURCES:

- Bucks County Planning Commission. *Water Supply Update 1981*. Doylestown, PA: BCPC, January 1982.
- The Conservation Foundation. "A Guide to Groundwater Pollution: Problems, Causes, and Government Responses." *Groundwater Protection*. Washington, DC: The Conservation Foundation, 1987.
- U.S. Environmental Protection Agency. *A Manual of Laws, Regulations, and Institutions for Control of Groundwater Pollution*. Washington, DC, 1987.

Financing Village Improvements

This handbook contains many suggestions for village improvement and maintenance projects. However, there often remains the problem of paying for the various improvements. If a village organization or township hopes to undertake projects such as buying entrance signs, landscaping, repairing or installing sidewalks, or amending ordinances and comprehensive plans, it will need a source of funding. While the municipality may be willing to absorb some of the costs, there are other sources of funding which can be explored. In addition, if a property owner is considering the restoration of an historic structure, financial incentives may encourage him to undertake the project. This section contains several alternatives for financing improvements or, at least, making such improvements more affordable.

TOURISM

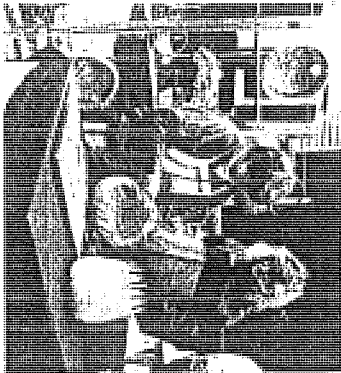
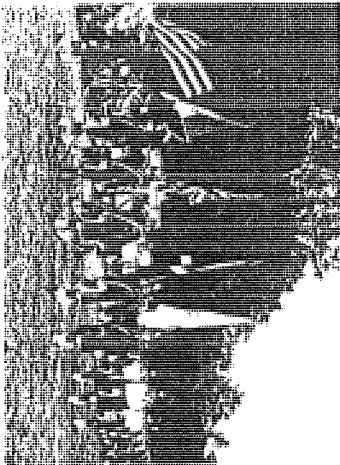
Small towns with unhealthy economies often look towards tourism as an answer to their financial problems. Unlike an economically depressed town, tourism in a village will not be for the purpose of saving the local economy. Rather, the money raised would be used for village improvement projects. Therefore, tourism would be on a much smaller scale than that which would promote the economic growth of a town. In addition to being an extra source of income, tourism often promotes local awareness of heritage, culture, and architecture. Considering the historic nature of many villages, promoting these features should be beneficial to residents as well as visitors.

Of course, there can be a negative side to increased tourism in an area. For example, tourism brings strangers into a community and their activities may conflict with those of the residents. This may develop into a "tourism industry" versus "the rest of the community" feeling. Increased pressure on local resources may cause deterioration of the environment. If the area becomes very attractive to tourists, an increase in prices may result. For these reasons, any tourist related activities in a village should be kept as small scale and short term as possible.

Fairs and Festivals

Rather than turning a quiet residential village into a year around "tourist trap", the least disruptive option for most villages is to hold a fair or festival once or twice a year. With this approach, the village is left undisturbed for all but a few weeks out of the year. Another benefit of holding a festival is that overhead costs are low (if volunteers are used) and minimal capital improvements are required. Several such festivals are already held throughout the county. These festivals and special events, which benefit a variety of organizations and groups, include:

- Historic Fallington Day, Fallington, Falls Township;
- Wrightstown Craft Fair and Middletown Garage Fair, Wrightstown Township;
- Trilcum Art Festival, Erwinna, Trilcum Township;
- Scottish Country Fair, Pipersville, Bedminster Township;
- Carversville Day, Carversville, Solebury Township; and
- Deep Run Arts Festival, Bedminster Township.



The most successful fairs or festivals are usually organized around a common theme such as a cultural, historical, or ethnic theme. Because civic pride and support are essential to the success of these events, it is advisable to promote something that is meaningful to and can be enjoyed by both the residents and visitors.

The following list contains some basic suggestions for organizing a festival, fair, antique and craft show, etc.:

- determine the main purpose of the project and organize around that purpose;
- organize, assign responsibilities, and resolve any obstacles to community cooperation early in the process;
- start small in the development and promotion of the event and grow with it as necessary;
- start with and maintain the highest quality affordable;
- develop the necessary hospitality services, involve and educate the host community;
- minimize adverse impacts through proper management;
- make the most use of volunteers, this is one reason why the enthusiasm of residents is important;
- determine who the target market is to make the most of promotional money;
- get the highest quality promotion possible, this is your first contact with potential visitors;
- use public service announcements on radio or television, travel writers are also a good source of free promotion, and provide necessary services such as directional signs, ample parking (a field is usually sufficient for a one or two day event), if the event is large, additional police may be needed for security and traffic control.

In addition, there are several "pitfalls" to avoid when promoting your event or attraction:

- do not overrate community attractions;
- do not go with second-rate promotion, make it as accurate and attractive as possible;
- do not plan events in secret, solve potential conflicts and problems early; and
- do not try to compete with other area attractions, try to complement them.

Volunteers

In reviewing what other communities have accomplished with little or no money, one common denominator often stands out. The most successful programs have dedicated, ambitious volunteers who offer their time, energy, and expertise to a project. Without volunteers, most community projects would never get off the ground. This type of contribution plays a big role when a community is organizing a fair or other special event to raise money. Volunteers are needed for every-

thing from organization and promotion to running the stands and directing parking. Without the help of volunteers, fund raisers would not be possible or profitable.

Waterford, Virginia

Waterford is a village located in Loudoun County, Virginia which provides an excellent example of what a small community can do to help itself. Waterford looks very similar to many Bucks County villages. In fact, the first inhabitants, who arrived in 1733, were natives of Bucks County.

The village residents raise money for their community through a very successful annual craft fair. The fair was started by the Waterford Foundation, a non-profit corporation which is dedicated to buying, restoring, and selling old houses and buildings in the village. The Foundation was also interested in reviving and preserving the early crafts which had once thrived in the village. In order to encourage these crafts, the Foundation began the annual Waterford Handicrafts Exhibit to provide a market for the craftsmen. The fair proved to be so popular that the Foundation expanded the affair by buying and restoring some old buildings and is using them to house the craft fair.

The fair is now the single largest tourist attraction in Loudoun County. Funds from the fair have been used for the acquisition of open space around the village. By preserving the land around Waterford, the Foundation hopes to protect the village from increasing development pressures. Unfortunately, funds derived from the craft fair have been unable to keep up with huge land price increases as more people discover what an attractive area Waterford is.

Waterford could probably raise even more money through increased tourism if they were so inclined. However, the village is a living community and if more tourist facilities were added, the nature of Waterford would change, destroying what makes the village so attractive. Also, it is doubtful that many village residents would be willing to serve as volunteers at the craft fair if the village were drastically changed through tourism.

Waterford demonstrates the extent to which residents can help their own community. While buying open space around the village may not be a viable option for most Bucks County villages, raising enough money to finance community improvement projects is a realistic goal.

The following are sources of additional help and information:

Bucks County Tourist Commission
152 Swamp Road
Doylesstown, PA 18901
(215) 345-4552

Bureau of Travel Development
Pennsylvania Dept. of Commerce
Room 416, Forum Building
Harrisburg, PA 17120

U.S. Travel and Tourism Administration

Dept. of Commerce
Washington, D.C. 20230

U.S. Travel Data Center
1899 L Street, NW
Washington, D.C. 20036

GRANTS AND LOANS

Grants and loans from federal, state, local, and private agencies are another potential source of funding for village projects. While there are numerous grant programs available, successfully applying for funds can be a long and complicated task. Knowing how to apply for a grant is as important as knowing which grants are available. The following advice on applying for grants and loans should be helpful for anyone interested in obtaining funding through grant programs.¹

Patience and common sense are necessary traits when applying for funds. Expect numerous and sometimes complex regulations and forms. Time delays are also common. "Clear goals, careful planning, and a knowledgeable approach" will contribute to a successful grant application. A few basic steps should be taken before applying for a grant.

1. Organization

The first step is to decide what needs to be done and when it must be done. Many grant programs have strict deadlines. While it is important to set a schedule, try to allow for some flexibility in the event that the objectives and schedule need to be adjusted.

2. Analysis

The purpose of this step is to determine the most likely sources of funding. This will ensure that time is not wasted applying to the wrong organizations for grants. The following factors need to be considered:

Type of Sponsor- Eligibility requirements will determine which sponsors are worth pursuing. For example, individuals,

profit making corporations, non-profit corporations, and units of local government will qualify for a different combination of programs.

Use of Structure - Although some programs are general, others are aimed specifically at residential, commercial, or cultural uses. Depending on the use, it may be possible to obtain funding from these programs for the reuse of an older building, even though the program is not specifically geared towards historic preservation or adaptive reuse. For example, a program that sponsors senior citizen projects might contribute funds to rehabilitate a building used for senior citizen activities. Similarly, a small business loan could be used towards the repair of an older commercial building.

Location - Several programs are geared towards certain locations such as rural communities, small towns, or urban areas. Some are even more specific in orientation, with funds intended only for specific neighborhoods, commercial areas, riverfronts, or urban renewal areas.

Type of Funding Needed - The type of assistance sought will partially depend on the physical size of the project and the amount and type of work proposed. Assistance may come in the form of cash grants, non-cash grants of properties and services, low interest loans, guaranteed loans, and tax incentives. The most appropriate type of funding should be determined based on the needs of the project.

Amount Needed and Time Limitations - Programs vary widely on the amount of assistance available. Grants may range from hundreds to thousands of dollars. Potential sources of funding can be pinpointed by matching the size of the project with a sponsor's matching capabilities. Time limitations also need to be considered. Some loans may be available in a matter of weeks while it may take months or years for other types of applications to be approved. This should be taken into account when planning a project and applying for funds.

3. Investigation of Sources

Programs are constantly changing to address changing priorities. Keeping up-to-date on these changes is essential in locating funding sources. Keep in mind that funding can come from sources other than programs aimed specifically at your area of interest. For example, if your goal is historic preservation, housing and community development programs, while not specifically geared towards that goal, may be potential sources of funding.

Since government programs and private lending policies change often and vary among communities, it is essential to consult local agencies and organizations for current information. Many federal programs are administered through local government agencies which can

¹ Information on pursuing and applying for grants was condensed from a publication entitled "Sources of Funding for Preservation Projects," written by Ruth Lawlor Pierpont and published by the Preservation League of New York State in 1982.

often aid in the application process. Other federal agencies have regional offices or representatives in major cities that handle programs at the local level. Information on government programs can sometimes be obtained from congressional and state representatives. When looking into one source, also make inquiries about other potential sources. This is a good way to learn about additional funding programs which might otherwise be overlooked.

SOURCES OF GRANTS AND LOANS

The following is a list of federal, state and private sources of grants and loans. A brief explanation of each program is included along with addresses where more detailed information may be obtained. This list is not all-inclusive but can be used as a base from which to build when searching for additional financial support. Each agency should be contacted prior to applying for funding since programs and requirements are continually changing.

Federal Programs

A. Department of Housing and Urban Development (HUD)

1. Community Development Block Grants (CDBG)

This program provides funds to municipalities throughout the county. The funds may be used at the municipalities' discretion within certain guidelines. Bucks County is entitled to receive an annual grant from the CDBG program which is administered and distributed among the various municipalities by the county Office of Community Development. The amount of the grant is determined by a formula which includes population, the number of overcrowded households, and the number of households below the poverty level. All of the municipalities in Bucks County participate in the county program with the exception of Bensalem and Bristol townships which receive separate grants. Each municipality determines its own highest priority community development needs and may receive funding for projects which meet the program's eligibility standards.

The following are examples of previously funded activities which have benefited Bucks County communities. Projects which qualified for aid under the category of "elimination of blight through historic preservation" include the restoration of an historic covered bridge, the Stover House in Tinicum Park, the Stover-Myers Mill, the Thomas Musselman Log Barn in Hilltown Township, the Langhorne Library, the Red Hill Schoolhouse in Tinicum Township, and the relocation of the old Dolington Library to prevent its demolition.

Funds were allocated to Buckingham Township to repair malfunctioning on-site sewage disposal systems, a problem experienced in several Bucks County villages. Blooming Glen, a

village in Hilltown Township, was allocated money for the installation of new sidewalks. Langhorne Borough used funds to review their present historic district and to conduct research which could lead to the expansion of the district. Line Leasing, a village in New Britain Township, was experiencing serious contamination problems in many of the existing private wells. Money was allocated to the village to assist qualified low-income residents in correcting this problem. Several municipalities have also used funds for planning related activities such as updating zoning maps and amending or revising zoning and subdivision ordinances.

Because criteria for eligibility may change from year to year, the Office of Community Development should be contacted for the most recent eligibility requirements and application procedures.

Address: Office of Community Development

The Almshouse
Neshaminy Manor Center
Doylesstown, PA 18901
telephone: (215) 345-3841

2. Federal Housing Authority (FHA) Insurance Programs

The FHA provides insured loan programs for the acquisition and/or rehabilitation of single and multi-family homes. The program is generally directed towards higher risk groups and reduces the risk to private lending institutions which issue the loans. The money can be used for home repairs, housing mortgages, and insurance for elderly housing. In addition, communities can combine FHA insurance programs with other programs, such as the CDBG, to develop low interest loan programs. Applications for loans are usually made through local lending institutions. Additional information can be obtained from the HUD area office.

Address: Dept. of Housing and Urban Development
Regional Office
107 South 7th Street
Philadelphia, PA 19106
General Information: (215) 597-2350

3. Section 202 Housing for the Elderly and Handicapped

This program provides direct, low interest loans for rental housing and related facilities for the elderly and handicapped. The conservation of neighborhoods and preservation of architecturally and historically significant buildings through the substantial rehabilitation of structures are permitted uses of funding. The loans are available to private, nonprofit sponsors.

Address: HUD Regional Office (see above)

4. Rental Rehabilitation

The purpose of this program is to provide adequate and affordable rental housing for low and moderate income tenants. The emphasis is on private sector investment and projects that require strong management and long-term maintenance. As an incentive for providing rental housing, the program offers grants and low-interest or deferred payment loans to owners or investors for the rehabilitation of market-rate rental properties. Rental subsidies or "housing assistance vouchers" are also provided to low and moderate income tenants. To qualify for the grants and loans, at least 80 percent of the rehabilitated units must be affordable to holders of the rental vouchers. This is another program which, while not directed to historic preservation, can be used for the rehabilitation of older buildings.

Address: HUD Regional Office (see above)

B. National Trust for Historic Preservation

This organization was established by Congress in 1949 to help preserve historically and culturally significant buildings, sites, and objects. The Trust assists private preservation organizations, individuals, and all levels of governmental agencies in a variety of ways. Help may be in the form of information, technical assistance, or advice. Under certain circumstances the Trust may also provide grants or loans. Small matching grants are available to units of local government and nonprofit member organizations of the National Trust for such purposes as hiring expert consultants to develop reuse plans for old buildings, fighting legal battles, developing energy conservation plans for historic structures, upgrading historic districts, developing historic district ordinances, and advising on a variety of related problems. Low interest loans are also available to help buy, rehabilitate, and sell residential and commercial property in historic neighborhoods.

The Trust also collects information on successful preservation projects, helps solve specific problems, provides guidance to those starting preservation programs, and initiates special projects that result in both help to specific areas and in techniques that can be used elsewhere.

Address: National Trust for Historic Preservation
1785 Massachusetts Avenue, N.W.
Washington, D.C. 20036
telephone: (202) 673-4000

C. National Endowment for The Arts

The National Endowment for the Arts (NEA) was created by Congress in 1965 to promote American arts and artists. There are several types of programs which are funded, but the one most applicable to village type projects is the Design Arts Program. Projects that demonstrate and promote excellence in the design fields, including architecture, urban design, and planning, are eligible for funding under this category.

Grant awards favor those projects which uncover new concepts or solutions to problems and the NEA attempts to support the earliest phases of project planning. Activities that are eligible include feasibility and adaptive use studies, professional design fees, and planning for district revitalization. Eligible applicants include states, units of local government, nonprofit organizations, and individuals.

Address: National Endowment for the Arts
Nancy Hanks Center
1100 Pennsylvania Avenue, N.W.
Washington, D.C. 20506
telephone: (202) 682-5400
(Contact the Design Arts Program)

D. National Endowment for the Humanities

The National Endowment for the Humanities (NEH) was founded by Congress in 1965 to promote progress and scholarship in the humanities and arts. The NEH provides challenge grants to eligible institutions performing work in the humanities. Nonprofit educational or cultural institutions such as schools, historical societies, and libraries are eligible for the grants. However, an applicant which currently receives a grant from NEA is not eligible for an NEH grant. Grants may be used for renovation and adaptive reuse.

Address: National Endowment for the Humanities
1100 Pennsylvania Avenue, N.W.
Washington, D.C. 20506
telephone: (202) 786-0438

E. Small Business Administration

The Small Business Administration (SBA) was established to assist and protect the interests of small businesses. SBA programs are aimed towards business development and expansion. Assistance is provided through direct loans or loan guarantees. If a building is to be used for small business purposes, and is in need of rehabilitation, a loan from the SBA may be used for that purpose. Local commercial banks or SBA offices should be contacted directly for more specific information.

Address: (Regional Office)
Middle Atlantic Region
Small Business Administration
1 Bala Cynwyd Plaza
Bala Cynwyd, PA 19004
telephone: (215) 596-5888

(National Office)
Small Business Administration
8th Floor
1441 L Street, N.W.
Washington, D.C. 20416
telephone: (202) 653-6416

State Programs

A. Pennsylvania Historical and Museum Commission Grants

The PHMC is responsible for the "collection, documentation, preservation, and interpretation of Pennsylvania's history, heritage, art, and culture." The agency conducts a number of statewide programs and provides many public services to help community residents understand their collective past. The historic preservation program has helped protect and reuse old and/or historic buildings throughout Pennsylvania.

Grants are provided under a number of programs such as "General Operating Support and Technical Assistance"; however, these grants are geared more towards museum assistance. The Local History Grant may be the most likely source of funding for village purposes. These grants have no matching requirement and are available to institutions for the support of local history projects in the categories of Public Educational Programs, Research and Writing, and Records Management.

Local History Grants are awarded on a competitive basis and must be directly related to some aspect of Pennsylvania history and demonstrate a benefit to the general public. Historical societies and other historical organizations are eligible to apply for these grants. Funding may be requested for original research on some aspect of Pennsylvania life, history, and culture. Historical societies or organizations doing research on the history of a village may qualify for this type of grant.

Address: Pennsylvania Historical and Museum Commission
Box 1026
Harrisburg, PA 17108-1026
telephone: (717) 783-7296.
(Museum Assistance and Local History)

B. Historic Preservation Grants

These grants are funded by the U.S. Department of Interior and administered by the PHMC. Matching funds must be supplied by the applicant in order to qualify for the grants. The purpose of the program is to provide assistance in the "identification, registration, and protection of significant historic properties in Pennsylvania." Eligible activities include surveys to locate and describe previously unrecognized activities and the preparation of nominations to the National Register of Historic Places. Grants are most often awarded to local governments, planning commissions, historical societies, preservation organizations, and institutions. More detailed information on eligible uses, terms and conditions of the grant, priorities for funding, and criteria of evaluation is provided with the application.

Address: Bureau for Museum Preservation
Pennsylvania Historical and Museum Commission
Box 1026

Harrisburg, PA 17108-1026
telephone: (717) 783-8946

Private Agencies and Foundations

In addition to federal and state funding sources, there are a number of private agencies and foundations which may provide assistance for village projects.

A. American Association for State and Local History

This group was founded in 1940 and is dedicated to advancing the appreciation of local history in the United States and Canada. Members of the Association include historical societies, museums, libraries and archives, preservation groups, and individuals interested in the history of their state, region, or country.

There are two types of funding programs available. The Consultant Service provides practical and technical assistance to museums and historical agencies. The Grants-in-Aid Program provides funding for research projects which advance the understanding of the history and culture of states, regions, and localities.

Address: Consultant Service Coordinator
AASLH
172 Second Avenue North
Suite 102
Nashville, TN 37201
telephone: (615) 255-2771

B. William Penn Foundation

The William Penn Foundation was established over forty years ago by Otto Haas, founder of the Rohm and Haas Company. The available grants cover a wide variety of activities including environmental conservation, historic restoration, cultural activities, and human services. The grants are concentrated in the Delaware Valley, which includes Bucks, Montgomery, Chester, Delaware, and Philadelphia counties in Pennsylvania, and Camden County in New Jersey.

The grant category most applicable to village related projects is "Conservation and Restoration." The goal of this category is to assist in the preservation and enhancement of the Delaware Valley's natural and historic environments. Types of restoration projects which have been supported in the past include: restoration of an historic log house in Downingtown; restoration and adaptive reuse of the historic Waterworks Complex in Philadelphia; repairs to the roof of the Church of the Advocate, an historic landmark in Philadelphia; street beautification projects; and a variety of other historic preservation oriented projects.

The Foundation accepts and reviews written requests for grants throughout the year and there are no formal deadlines. The Foundation prefers to make grants to organizations which have additional sources of funding so that it is not the sole support of a project.

Address: William Penn Foundation
1630 Locust Street
Philadelphia, PA 19103-6305
Telephone: (215) 732-5114

C. The Foundation Center

This organization keeps records of approximately 22,000 private foundations which are a potentially valuable source of funding for nonprofit organizations. The Foundation Center assists groups and individuals in finding appropriate funding sources that are referenced in its collection. They also publish *The Foundation Directory* which can be purchased by writing to:

The Foundation Center
888 Seventh Avenue
New York, N.Y. 10019

A list of host libraries containing cooperating collections can be obtained by telephoning: 1-800-424-9836.

PRESERVATION EASEMENTS AND TAX CREDITS

The first two sections of this chapter discuss methods of raising money and potential sources of grants and loans for village-wide improvements. However, there are also financial incentives available that can be used by individual property owners. These incentives principally consist of federal income tax deductions for the rehabilitation of historic properties and for the donation of conservation easements. While these are a less direct source of aid, they can provide a financial incentive for homeowners to make improvements to their properties or to preserve an historic or scenic view.

PRESERVATION EASEMENTS

What is an Easement?

An easement is a legal agreement in which certain rights in property are transferred from a property owner (the donor) to another party (the recipient). The recipient then has the power to enforce restrictions on the conveyed rights. Easements are commonly granted for access across a property or for utility lines. However, preservation easements offer a means to protect open space, scenic vistas, and historic structures. For historic preservation purposes, easements are most often used to control physical changes to a building's facade or to the entire building. While easements can be used to promote historic and open

space preservation, financial benefits are also available to the easement donor. These benefits and the mechanics of donating easements are explained below.

Benefits of Easements

Easements offer several benefits to both the property owner and the general public. For example, the donation of an easement can be financially beneficial to the property owner in two ways. First, the value of the easement and the cost of preparing the donation can be claimed as a charitable contribution and used as a deduction on federal income taxes. Secondly, the easement can potentially reduce federal gift and estate taxes because these taxes are paid on the property's "after-easement" value. Easements are also the only federal income tax incentive available to privately owned and occupied certified structures. (Other historic preservation tax incentives only apply to income producing properties.) In order to ensure that all federal tax requirements are satisfied it is recommended that a tax attorney be involved throughout the donation process.

An appraisal of the property is necessary to determine the worth of the donated easement. The appraiser must take into account such complex issues as land values, comparable sales, foregone opportunity to alter a building for greater income or value, and possible height limitations. Generally, easements in strong growth areas, where development pressures are greatest, will receive the highest appraisals. An accurate and well documented appraisal is needed to withstand the scrutiny of the Internal Revenue Service. For this reason, an appraiser who has experience in valuing easements should be sought by the donor. A recipient organization can often recommend such an appraiser.

Additional benefits to donors result from the flexibility of easements as a preservation tool. For example, there is opportunity for negotiations in the use of easements. Options permitting the owner to build an addition or accessory structure can be included in the agreement if the recipient organization agrees and the proposal does not conflict with the purpose of the easement. How these options will be exercised should be quite specific to reduce the chance of future disagreements.

Another flexible feature of easements is the ability to "stage" them and spread their benefits over a longer period of time. For example, the facade of a building can be put under an easement and, later, the grounds and outbuildings can be restricted under an additional easement. In this way, potential tax deductions for charitable contributions can last over a period of several years.

The local community and general public also benefit from the use of easements as a preservation tool. The property may be visually enjoyed by the public without the cost of publicly acquiring and maintaining the land. Some easements also require that the property be open for public visits; however, these visits are usually restricted to a few times a year. An additional benefit is the guarantee that historically significant properties will not be permitted to deteriorate. The continued

upkeep of the property is enforced by the recipient of the easement through the easement's maintenance provisions. Finally, because these properties continue to be privately owned they remain on the tax rolls, further reducing the cost to the public.

What Types of Properties Qualify for Easements?

According to federal tax laws, a property cannot qualify for an easement unless it serves a "conservation purpose." One such conservation purpose is the preservation of an historically important land area or a certified historic structure. A property is generally considered "certified" if it is listed individually on the National Register of Historic Places or if it is located in a registered historic district and is certified to be significant to the district. (See following section for an explanation of the certification procedure.) In addition to historic significance, properties which meet the following conservation purposes, as defined by the federal government, may also qualify for easements:

- Preservation of land areas for outdoor recreation by the general public or for the education of the general public;
- Protection of natural habitat of fish, wildlife, or plants or similar ecosystems;
- Preservation of open space, including farmland and forestland, where such preservation is for the enjoyment of the general public or pursuant to a clearly delineated federal, state, or local conservation policy.

Donating an Easement

Anyone who is interested in donating an easement must find a willing recipient. Accepting and enforcing an easement involves substantial responsibility and, for this reason, receiving organizations tend to be very selective about what easements they will accept. One concern is whether or not the restrictions imposed will be difficult to enforce. Another consideration is whether or not the acceptance of the easement will further the goals of the organization. Thus, the donor and recipient should have similar interests in mind for the agreement to work for both parties. The recipient organization could be a governmental unit or a tax exempt group which is authorized to accept easements.

Examples of organizations which accept easements include:

Bucks County Conservancy
11 North Main Street
Doylestown, PA 18901
(215) 345-8966

Brandywine Conservancy
Box 141
Chadds Ford, PA 19317
(215) 459-1900

National Trust for Historic Preservation
Mid-Atlantic Regional Office
6-01 Germantown Avenue
Philadelphia, PA 19145
(215) 438-2886

Preservation Fund of Pennsylvania, Inc.
2470 Kiesel Hill Road
Lancaster, PA 17601
(717) 569-2243

The names and addresses above are from a survey conducted by the Bureau of Historic Preservation in August of 1984. For more information, contact them at:

Bureau of Historic Preservation
Box 1026
Harrisburg, PA 17120
(717) 787-4363/2891

Potential Cost to the Donor

A prospective donor should be aware of the potential costs and restrictions which accompany easement donations. The restrictions on property are written into the easement agreement and apply permanently to the property. Because the restrictions run with the land, they will affect the value of the land if and when it is sold. The principal aim of the restrictions is to protect the historic importance and character of the property. Typically a landowner is not permitted to alter or remodel a structure without the permission of the recipient. Also, the use of the building cannot be changed to an inappropriate use (such as residential to commercial). Other restrictions might be on the subdivision of the property, building additions, new structures, certain types of signs, and quarrying or excavation. In addition, the landowner is usually required to maintain his property and make any repairs necessary due to damage or deterioration. Individual organizations may have additional requirements besides those mentioned above.

There are a number of expenses which a donor must be prepared to pay in the process of contributing an easement. The services of a lawyer, surveyor, and appraiser will probably be required. Endowment contributions are also required by the receiving organization to help support on-going activities such as monitoring and enforcement of the easement. Depending on which organization is accepting the easement, the value or determined by a formula which calculates the costs of monitoring and enforcement. Although the donor may be reluctant to pay for the endowment, the contribution is necessary for the recipient to fulfill their future obligation in the property. In addition, the financial benefit to the donor should be substantial enough to compensate for the cost of the endowment. The donor should also keep in mind that all costs related to the donation are tax deductible.

Much of the above information on easements was condensed from the Brandwynne Conservancy's publication *Protecting Historic Properties: A Guide to Research and Preservation* (1984). This book is an excellent resource for anyone interested in historic preservation. Many examples of local preservation projects are used throughout the book. For information on ordering copies, contact The Museum Shop, Brandwynne Conservancy, P.O. Box 141, Chadwick Ford, PA 19317, phone: (215) 459-1900.

TAX CREDITS FOR HISTORIC PRESERVATION

Tax Reform Act of 1986

The first tax incentives for historic preservation were created by the Tax Reform Act of 1976. Since that time, provisions for tax credits have been continually evolving. Changes and revisions came about through the Revenue Act of 1978, the 1980 Tax Treatment Extension Act, and the Economic Recovery Act of 1981. The most recent changes to historic rehabilitation credits occurred through the Tax Reform Act of 1986. Although the Tax Reform Act brought about major changes to the tax system, incentives for restoring historic buildings were retained in a modified form. Preliminary data indicate that large projects (those costing \$750,000 to \$5 million and geared towards high income investors) will have more difficulty qualifying for tax credits. However, the incentives for smaller projects and investors are for the most part, still intact. Thus, much of the historic rehabilitation work done at a village scale should not be adversely affected by the new tax law.

The following is a brief summary of the provisions of the Tax Reform Act of 1986 as they relate to historic preservation. Qualifying for historic tax credits is generally a complex procedure; therefore, anyone attempting to use these incentives should obtain the services of a tax lawyer and/or accountant before starting the rehabilitation of their property. Work done improperly or failure to meet requirements could result in disqualification for the tax credits.

Currently, a 20 percent rehabilitation credit is available for certified historic structures and a 10 percent credit is available to non-residential buildings placed in service for at least fifty years. Either credit can only be applied to income producing properties. If the building is a certified historic structure, it may be residential but must still be income producing (for example, a rental property or one also used for business). Buildings other than certified historic structures must retain at least 75 percent of the existing external walls (with 50 percent continuing to be used as external walls) and at least 75 percent of the building's internal framework must be retained. Also, certified historic buildings must meet the "Secretary of Interior's Standards for Rehabilitation" (see adjacent column).

Certification and Rehabilitation of an Historic Structure

In order to receive the highest tax credit, a building must be a certified historic structure. To qualify as a certified historic structure, a building may either be listed individually on the National Register of Historic Places or it may be located in a registered historic district and certified as being of "historic significance" to that district (see page 37 for "National Register Criteria for Significance and Integrity"). However, if it is determined that a building is not significant to a district, the building may still qualify for the 10 percent credit if it was

SECRETARY OF THE INTERIOR'S STANDARDS FOR REHABILITATION

The Standards shall be applied taking into consideration the economic and technical feasibility of each project; in the final analysis, however, to be certified, the rehabilitation project must be consistent with the historic character of the structure(s) and, where applicable, the district in which it is located.

1. Every reasonable effort shall be made to provide a compatible use for a property which requires minimal alteration of the building, structure, or site and its environment, or to use a property for its originally intended purpose.
2. The distinguishing original qualities or character of a building, structure, or site and its environment shall not be destroyed. The removal or alteration of any historic material or distinctive architectural features should be avoided when possible.
3. All buildings, structures, and sites shall be recognized as products of their own time. Alterations that have no historical basis and which seek to create an earlier appearance shall be discouraged.
4. Changes which may have taken place in the course of time are evidence of the history and development of a building, structure, or site and its environment. These changes may have acquired significance in their own right, and this significance shall be recognized and respected.
5. Distinctive stylistic features or examples of skilled craftsmanship which characterize a building, structure, or site shall be treated with sensitivity.
6. Deteriorated architectural features shall be repaired rather than replaced, wherever possible. In the event replacement is necessary, the new material should match the material being replaced in composition, design, color, texture, and other visual qualities. Repair or replacement of missing architectural features should be based on accurate duplications of features, substantiated by historic, physical, or pictorial evidence rather than on conjectural designs or the availability of different architectural elements from other buildings or structures.
7. The surface cleaning of structures shall be undertaken with the gentlest means possible. Sandblasting and other cleaning methods that will damage the historic building materials shall not be undertaken.
8. Every reasonable effort shall be made to protect and preserve archaeological resources affected by, or adjacent to any project.
9. Contemporary design for alterations and additions to existing properties shall not be discouraged when such alterations and additions do not destroy significant historical, architectural, or cultural material, and such design is compatible with the size, scale, color, material, and character of the property, neighborhood or environment.
10. Wherever possible, new additions or alterations to structures shall be done in such a manner that if such additions or altera-

tions were to be removed in the future, the essential form and integrity of the structure would be unimpaired.

Source: U.S. Department of the Interior, *Heritage Conservation and Rehabilitation Service*, "The Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitation of Historic Buildings," January 1981.

National Register Criteria for Significance and Integrity

Significance The following criteria are used to determine whether a building or site is significant to American history, architecture, archaeology, and culture.

The quality of significance is present in districts and structures that possess integrity of location, design, setting, materials, workmanship, feeling, and association and:

- A. are associated with events that have made a significant contribution to the broad patterns of our history; or
- B. are associated with the lives of persons significant in our past; or
- C. embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. have yielded, or may be likely to yield, information important in prehistory or history.

Integrity In addition to historical significance, a property must possess integrity. Integrity refers to the physical characteristics of the building which were present during its historic or prehistoric period. Whether or not a building has retained its integrity depends on how much the property has been altered over time. If the property has retained the essential features which convey the significance of the building's past identity or character, then it has retained its integrity. This does not mean that the building must have all of its original features. However, it must have enough of these features to preserve and convey the historical significance of the property.

built at least fifty years ago and is not residential.

In the case of a certified historic building, the rehabilitation work must also be certified as consistent with the historic character of the building or district to qualify for the tax credit. Specific criteria are listed in the "Secretary of the Interior's Standards for Rehabilitation." Applications for rehabilitation are evaluated against these standards. If these and other standards of rehabilitation are not met, a certified structure will not qualify for the tax credit.

Buildings and rehabilitation work must be certified by the Secretary of the Interior through the National Park Service. In Pennsylvania, nominations and requests for determination of eligibility for listing in the National Register are made by the State Historic Preservation Officer at the Pennsylvania Historical and Museum Commission (PHMC). Before the Officer makes a nomination to the National Park Service, the Bureau's staff and the Pennsylvania Historic Preservation Board review the registration documentation.

All nominations are made on the National Register registration form. The information required on this form is used to evaluate the significance and integrity of a property. Types of information on the form include an architectural description, historic functions, and other details of the property's historic significance. Detailed instructions for completing the registration nomination are available in the Pennsylvania Historical and Museum Commission publication entitled *The National Register Process in Pennsylvania: Guidelines for Completing the National Register of Historic Places Registration Form* (Draft, June 1987). The guidelines may be obtained by contacting the PHMC at the following address:

Bureau For Historic Preservation
Pennsylvania Historical and Museum Commission
Box 1026
Harrisburg, PA 17108-1026
telephone: (717) 783-8946

Certification of Rehabilitation Work

After a building has been certified as historic and placed on the National Register, the next step is to have the proposed rehabilitation work certified. (This requirement only applies to certified historic structures and not to uncertified buildings placed in service prior to 1936.) This is accomplished by submitting Part 2 of the Historic Preservation Certification Application entitled "Description of Rehabilitation." The PHMC determines if the rehabilitation proposed is consistent with the Secretary of the Interior's Standards for Rehabilitation and sends its recommendation to the National Park Service (NPS). The PHMC will try to ensure that the application is complete before sending it to the NPS. If the PHMC feels that additional information is necessary, it will contact the applicant.

If, upon recommendation by the PHMC, the NPS approves the application, the applicant will receive preliminary certification of the rehabilitation. The final certification is obtained after the NPS examines and approves the completed work. In general, it is advisable not to begin any rehabilitation of the building until the project has preliminary certification. The loss of tax credits

will result from improperly completed construction. The applicant can expect to wait six months to a year before the building is certified. In the event that the NPS determines that the completed rehabilitation does not meet the Secretary's standards, the decision may be appealed to the NPS's Chief Appeals Officer for Cultural Resources in Washington.

SOURCES: TOURISM

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Oldham, Sally G.; Boyle, Jane F.; and Giosberg, Stuart M. *A Guide to Tax-Advantaged Rehabilitation*. Washington, DC: National Trust for Historic Preservation and Dewey, Ballantine, Bushby, Palmer and Wood, October 1986. (Publication is available for \$5.50 by writing to the National Trust for Historic Preservation, 1785 Massachusetts Avenue, N.W., Washington, DC 20036.)

Opasna, Margaret. "The Rehub Game." *Historic Preservation*, May-June 1987.

U.S. Department of the Interior, National Park Service. *Guidelines for Completing National Register of Historic Places Forms*. National Register Bulletin No. 16 and Supplement, September 1986.

Appendix: Citizen Participation

To be effective, planning should have the understanding and support of the local citizens. Without public support, few local plans are ever implemented. Efforts should be taken to involve the local citizens to the greatest extent possible in the process of plan development. The earlier the public is drawn into the planning process, the greater the chances of developing an implementable plan or program. In Chapter 2, "Land Use Policies and Regulations," we suggested involving the public during the inventory of pertinent information in order to determine the residents' views and the degree of importance which they place on their concerns. One method, called the nominal group technique (NGT), has proven to be particularly successful in generating citizen support and guidance at the beginning of the planning program. The following is a description of this method and how to go about using it at a public meeting.

What is the NGT?

NGT is a technique for a structured group meeting which provides a method for the residents of the community to list their responses to questions and then rank the responses according to their relative importance. This technique, developed by André L. Delbecq and Andrea H. Van De Ven in 1968, provides a valuable method for assessing the needs and concerns of a community's residents.

The Mechanics

An advantage of the nominal group process is that a large number of people can participate. Participants are grouped in workshops of five to ten people with a trained leader for each group. Due to time constraints, the participants are asked to consider only two questions that relate to an issue. One question should be designed for subjective views on the issue; the other should seek objective solutions to the problem. For example, a question such as "What don't you like about your village?" attempts to get from the participants problems from their personal experiences. The combined responses should be a statement of the overall problem. A second question such as "What should be done to prevent, improve, or change your village?" should develop a list of projects and programs which will be the solutions to the problems from the participants' point of view.

Each group leader will need the following material to run a session:

1. A set of instructions for the group leader which outlines the steps of the process
2. A large newsprint pad
3. Masking tape
4. A marking pen
5. Pencils for participants
6. Response sheets (one sheet for each question per participant)
7. 3" X 5" cards for ballots (five cards per question per participant)
8. Two tally sheets (one sheet per question for the group leader)

To make the running of the session easier, half of the tally sheets, response sheets, and ballots should be printed on different colored paper to relate to the separate questions.

There are seven basic steps in the nominal group process:

1. **Introduction** - The participants are welcomed and the steps of the process are explained. The participants are then divided into groups of 5 to 10 people.
2. **Idea Generation** - Each participant is asked to list all responses to the first question. The responses should be written silently and independently. The responses should also be brief and include a single thought. Fifteen minutes should be sufficient time for the participants to develop most of their ideas.
3. **Round Robin Listing of Ideas** - In round robin fashion, each participant is asked to present one idea from his list for the first question. The group leader numbers and writes the idea on a flip chart in full view of other members. However, identical responses should not be listed. No discussion is to take place until all participants indicate that they have no further ideas to share.
4. **Clarification of Ideas** - During a short discussion period, the participants are given the opportunity to ask for a clarification of any of the listed ideas. It is the group leader's responsibility to prevent any disputes or challenges to the listed ideas. No participants should find it necessary to defend any of his or her ideas. While the group may decide to combine ideas that are very similar, no idea should be eliminated. New ideas can still be added to the list.
5. **Ranking the Ideas** - Each participant is asked to write the five most important responses (from the flip chart) to each question on separate ballots (3X5 cards). The participant should arrange his or her five ballots in order of their priority by writing the number "5" on the top right corner of the ballot for the most important response, "4" on the second most important response and so on with the least important response numbered "1".
6. **Tallying the Priorities** - The group leader collects all the ballots and combines the weighted votes to determine the top five priorities for the group.
7. **Reporting the Results** - The group leader presents the top five priorities to the group participants. If time permits, all the groups should combine into one large group. The top five priorities for each group should be listed on the large newsprint pad again. Identical priorities should be eliminated. The entire group should once again rank their top five priorities from the entire group list as stated in section number 5.

Responses to the second question are gathered in the same manner as listed in steps 1 through 7. At the end of the meeting all the materials should be collected by the group leader. The newsprint sheets and the tally sheets will be important for any further analysis of the session.

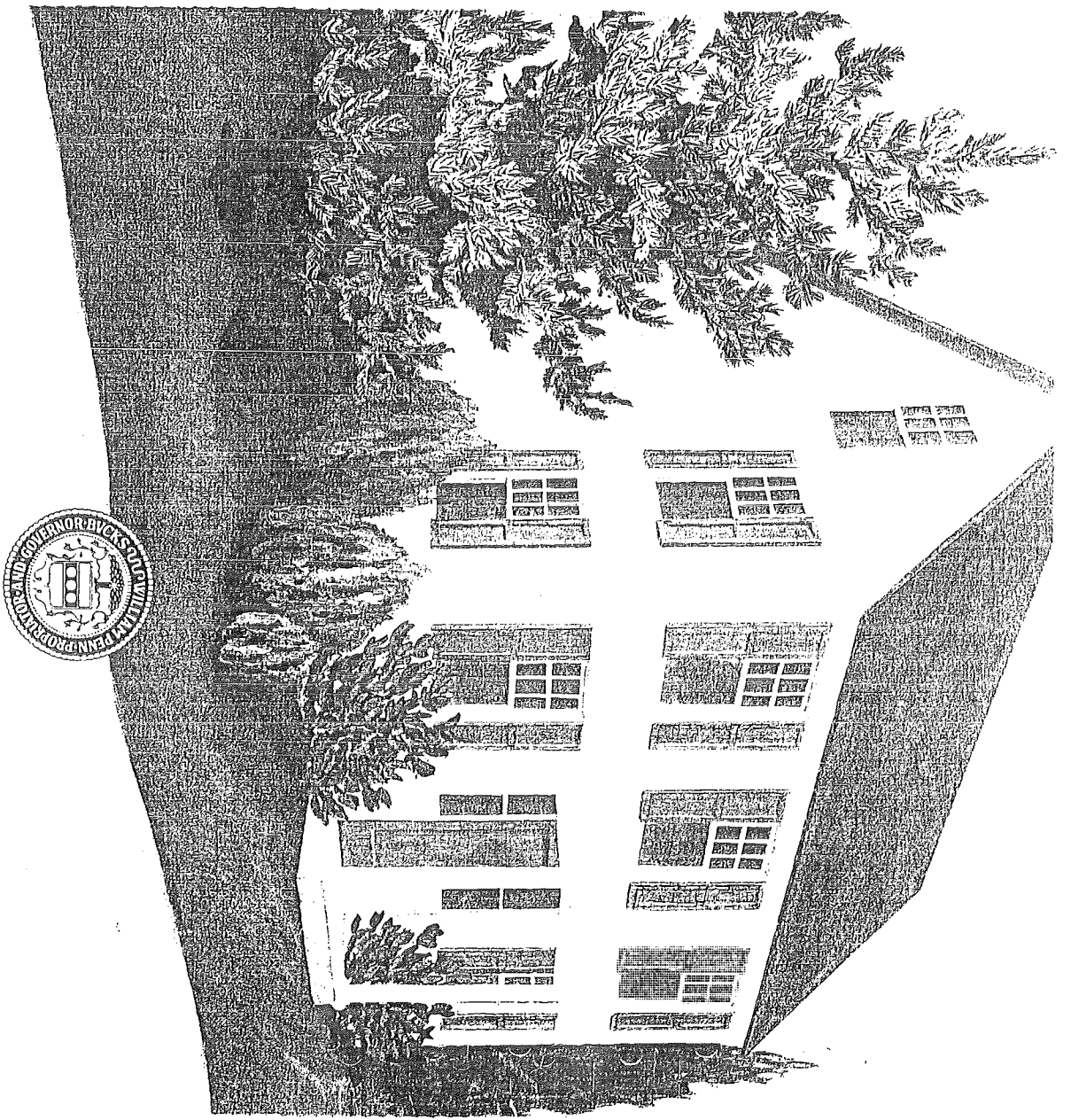
Results

The process provides a method to develop a large number of ideas related to the subject in question. Conflicting ideas can be generated without argument and without the dominance of forceful participants. Again, the relative importance of the ideas is determined by participating members of the community.

Responses from the meeting should be considered as the planning program is developed. The group may have viewed community improvements, such as sidewalk installation, housing renovation or street repairs, as one of the top priorities for retaining the village character. The overall planning program should suggest alternative ways for achieving this goal. Other solutions may result in creating new zoning districts (such as an historic district or village district) to help preserve the existing features of the village. Ordinance changes may also be recommended and implemented regarding standards ranging from housing type to nuisance regulations.

With the nominal group technique, a large number of people can participate. However, the process is fairly time consuming. When the Bucks County Planning Commission staff has used the technique, one and a half to two hours have been required for the group in addition to introductory sessions. The group leader must be able to move the process along and keep the participants to the task.

The planning commission staff has tried an adaptation of the nominal group technique in a planning program for several villages in Bucks County. Rather than forming the groups randomly, the groups were separated by residency. The residents of each village participated in one group, non-residents participated in another. The difference between each group's perceptions of what their village is, what it should be, and what improvements were necessary provided the staff with sound guidance in developing a plan for each village. A plan developed in this way will meet the residents' needs and the needs of those who visit the village.



Bucks County Planning Commission