# CITY OF WELLINGTON, KANSAS

# COMPREHENSIVE COMMUNITY PLAN

## EDITION OF 2000

*Prepared at the Direction*
*of the*
WELLINGTON CITY PLANNING COMMISSION

by

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## SECTION I

## GOALS AND OBJECTIVES

### INTRODUCTION

Although the general process of structuring long-range planning around established goals and objectives has long been practiced at the federal level, setting goals to guide community development has only recently become a working part of community planning practice. Through the process of establishing goals and objectives a series of formal statements are developed which are intended to provide levels of attainment that can be realized through the long-range planning process.

As the practices and procedures of community development have become more diverse and sophisticated, so too have the processes of establishing results expected from the planning effort. Experience has shown that the planning process is most successful where the effort is guided by formally adopted goals and objectives oriented toward definition of quality standards, particularly as those standards help to identify the type of community environment desired for the future. Where the goal statements provide a definition of general quality, the planning standards provide the yardstick by which long-range physical development needs can be gauged and sized.

For the purposes of the Comprehensive Plan, it will be important that adopted goals and objectives identify conditions and qualify parameters for application throughout the community, although the quality parameters identified can also be tailored for specific application in identified regions within the community. When formalized, the goals and objectives statements provide the framework for guiding the long-range planning studies within the context of the long-range development plan.

In the context of the Wellington community, specific regions have been identified by quadrant in the community. With this in mind, the application of the goals and objectives can be implemented in a specific manner within each quadrant, thus ensuring the highest standards of community development throughout City of Wellington during the planning period.

### EFFECT AND PURPOSE OF GOALS AND OBJECTIVES

The community plan is intended as a basis for formulating public policy which will aid in guiding the growth and development of the municipality. Establishing goals is a means of involving people in community affairs, developing a community attitude toward planning, and promoting informed leadership in all areas of civic activity.

Adopted goals and objectives provide community leaders with:

- An expressed policy regarding future community development which answers the question, "what kind of community do we want to build?"
- A basis for future planning of physical, social, and fiscal policies and programs leading to sound community development, and
- A sound basis for decision making and developing the strategy for community development by ordering goals in terms of their priority. For example, housing may be a goal of highest priority, but to achieve this, the development of other systems, such as water and sanitary facilities, must also receive equally high priority.

The broad goal of the comprehensive plan is to foster the creation of a community where people may live in a safe, convenient, and healthful environment. The community must be an enjoyable place in which to live and raise families, to conduct business, and to find educational and employment opportunities. The community planning process provides the framework in which this goal may be approached.

If the overall goal is to be achieved, general guidelines must also be established for developing the community. The guidelines, stated as objectives, should become public policy; thus providing a frame within which diverse activities in the community can achieve public as well as individual goals.

## DEFINITIONS

*Goals* are broad statements dealing with all aspects of community development, which indicate the state or condition that the community wishes to attain over a given time span. Totals are usually established for long periods of time.

*Objectives* help to define more fully the meaning of goals. An objective is a necessary achievement to be accomplished as a step toward fulfilling a goal. Objectives are subparts of the goal, and are accomplished in shorter periods of time.

## GOALS AND OBJECTIVES FOR COMPREHENSIVE PLANNING

Grounded in broad values consistent with fostering a beneficial human environment for all citizens of the community, goals and objectives are intended to provide quality guidelines for preparation of individual planning studies, as well as beneficial influences in the municipal decision-making process generally.

While this process is potentially applicable to almost any aspect of community development, for the purposes of comprehensive planning, goals and objectives are most commonly prepared for the broad aspects of the community which will be reviewed and studied in the planning process. For the Wellington community, these categories consist of the following:

- Community Growth and Development
- Housing
- Transportation
- Commercial and Industrial Development
- Governmental Services
- Open Space and Recreation
- Environmental Quality

Specific goals and objectives suggested for these subjects are outlined below by subject area.

### *COMMUNITY GROWTH AND DEVELOPMENT*

Community growth issues center on the necessity for proper planning and for administrative processes adequate to assure continued protection of the living environment in all aspects of development.

*Goal:* ***Influence efficient and compatible expansion patterns in all categories of land use.***

*Objectives:*

- Adopt and maintain a future land use plan which maximizes the efficiency of existing development with new development areas located in the most advantageous relationship.

- Establish a continuing planning program to monitor and reflect new trends and community needs in both the short- and long-term time frame.

- Maintain administrative processes adequate to assure review and guidance of continuing development on a case-by-case basis in order to minimize conflicts of incompatible land uses.

- Maintain updated zoning ordinance and subdivision regulations, including development standards for design of physical facilities.

*Goal:* ***Maintain a quality living environment in all areas of the community.***

*Objectives:*

- Establish an environmental review procedure for newly developing areas to assure maximum regard for retention of desirable features.
- Review all zoning changes with respect to the affect on immediately surrounding land uses and longer-term development as outlined on the land use plan.
- Assure equitable distribution of police and fire protection and all governmental and human services to all areas of the community.
- Locate schools and institutions in proper relation to present and future populations. Provide sites of adequate size for expansion, play space, and off-street parking.
- Evaluate the impact of each new development on the natural and man-made environment based on established criteria.

*HOUSING*

Housing and the characteristics of the residential neighborhoods in the community are among the primary indicators of the quality of life available in the community. Housing issues will affect every citizen of the community throughout the 20-year planning period and beyond.

*Goal:* ***Promote safe, decent, and sanitary housing and a pleasant and healthful living environment for all citizens.***

*Objectives:*

- Provide housing with adequate living space.
- Encourage maintenance of older residential structures in good condition and encourage replacement of obsolete structures with new units.
- Promote a safe and sanitary environment free from pollution and disease-carrying vermin, including adequate drainage characteristics.
- Enforce applicable ordinances and regulations with regard to housing.

*Goal:* ***Influence continuation of neighborhood expansion in accordance with quality standards developed through the comprehensive planning process.***

*Objectives:*

- Plan for residential development at densities which would encourage economic and efficient spatial relationships between structures, between public and private use of land, vehicular and pedestrian circulation and between services, utilities, and aesthetic enjoyment of dwelling units and their environment.
- Encourage development of a harmonious residential neighborhood oriented toward access to schools, shopping, and recreation.
- Designate and plan extensions of the existing residential neighborhood based on the principles, patterns, and directions established by the land use plan.
- Plan for and promote residential development that provides housing opportunities for all citizens.

*Goal:* ***Encourage residential expansion as an extension of the existing city with provision for continuation of community infrastructure.***

*Objectives:*

- Provide for extension of adequately sized water and sewer services with connections to existing city systems.
- Assure availability of adequate levels of police and fire protection.
- Provide for the extension of streets and pedestrian travelways in future residential development in a manner that encourages access throughout the community.

*Goal:* ***Encourage future residential expansion in areas currently reserved for residential use prior to locating future development in undeveloped areas.***

*Objectives:*

- Maintain an effective zoning pattern and program of administration.
- Utilize infrastructure as a means to guide development in accordance with the Future Land Use Plan

*Goal:* ***Promote the rehabilitation of existing residential areas in order to maintain a healthy and attractive living environment for all citizens.***

*Objectives:*

- Encourage the participation in federal housing rehabilitation programs, where applicable.
- Enforce applicable ordinances and regulations with regards to housing.
- Promote equal housing opportunity by providing access to aid for those in need of assistance in rehabilitating existing housing.
- Develop programs that serve as a vehicle for the rehabilitation of existing housing.

*Goal:* ***Encourage future residential expansion in areas not significantly influenced by floodplains and drainageways.***

*Objectives:*

- Promote the concept that future residential development be located outside of floodplains.
- Educate the private sector and the public about the hazards associated with development in floodplain areas.

*COMMERCIAL AND INDUSTRIAL DEVELOPMENT*

Continuing economic expansion is important for the present and future community; however, the associated physical development must be carefully planned to avoid intrusion of incompatible uses into established residential neighborhoods and areas of future expansion.

*Goal:* ***Encourage continued expansion of diversified commercial and industrial development in accordance with established planning directions.***

*Objectives:*

- Plan for continued growth of commerce and industry based on sound land development practices which are in conformance with the comprehensive plan.

- Encourage clustering of retail and service businesses in areas adjacent to major travelways and limit intrusion of businesses into surrounding residential neighborhoods.

- Limit industrial expansion to areas offering proper zoning, utility service, and transportation systems.

- Maintain procedural safeguards adequate to assure maintenance of acceptable environmental characteristics in industrial expansion areas, and adjacent portions of the existing and future community, including air and water quality.

*Goal:* ***Encourage commercial and industrial development in a manner that will promote economic stability, increase the tax base and improve employment opportunities.***

*Objectives:*

- Maintain an economic development strategy to guide promotional efforts and maximize the benefits of available resources.

- Promote economic opportunity on a community and regional basis.

- Encourage the development of businesses that are unique to the community.

*Goal:* ***Maintain and continue to develop the airport as an important industrial facility.***

*Objectives:*

- Intensify business and industrial use of airport facilities and air transportation opportunities.

- Maximize promotion of the airport as part of the local economic development strategy.

- Encourage and promote the use of the airport as an aspect of travel and tourism.

*Goal:* ***Promote continued development and expansion of the industrial park in a manner that is in accordance with established planning directions.***

*Objectives:*

- Provide a full range of services and infrastructure for future areas of the industrial park.

- Promote the industrial park as part of the local economic development strategy.

- Limit industrial expansion to areas such as the industrial park that offering proper zoning, utility service, and transportation systems.

- Provide for the expansion of the existing industrial park in directions that are in accordance with the future land use plan.

*Goal:* ***Promote the Central Business District as a viable alternative to commercial highway development.***

*Objectives:*

- Create and maintain a short and long range economic development strategy focused on downtown revitalization that is in concert with the community economic development strategy.

- Encourage the cooperation and participation of both the public and private sector in all phases of downtown revitalization.

*TRANSPORTATION*

Transportation systems, both vehicular and pedestrian, are essential to the physical and economic health of the community and the various neighborhoods within. Transportation routes define and shape major land areas and represent an essential element in the design of residential neighborhoods, providing corridors for light, air and landscaping in addition to fire breaks and a means of access to individual property

*Goal:* ***Provide and maintain an efficient and safe network of travelways allowing equitable access to all areas of the community.***

*Objectives:*

- Adopt and maintain a plan for the local street system that includes appropriate traffic controls to enhance the function and safety of the system as well as the continuation of streets and pedestrian travelways.
- Assure through proper land planning continuation of the existing community road and street system in newly developing neighborhood areas of the city.
- Develop and implement plans to accommodate anticipated future traffic volumes, both by maintenance and improvement of existing roadways as well as construction of new streets.
- Develop and maintain a system of designated pedestrian and bicycle travelways as an integral part of the neighborhood transportation planning process.
- Promote proper design of vehicular and pedestrian travelways through review of development proposals as a facet of the subdivision approval process.
- Utilize appropriate design standards and sound policies for various classes of streets and roads that are keyed to vehicular traffic types and anticipated traffic volumes including major highways.
- Develop the major street plan in a manner that discourages through traffic from entering residential neighborhoods.
- Plan for aesthetic enhancement of major traffic corridors consistent with an established image. especially near the fringes of the community along the highways.

*Goal:* ***Maintain and continue to develop the airport as an integral aspect of the community.***

*Objectives:*

- Intensify business and industrial use of airport facilities and air transportation opportunities.
- Create and maintain an airport facilities master plan that takes all aspects of the community into consideration.

*GOVERNMENT SERVICES*

Chief among the reasons why people band together into communities, equitable distribution of essential governmental services is of critical importance to the quality of life available in the existing community as well as the expanding areas of the community.

*Goal:* ***Provide a full range of governmental services adequately sized for service to the existing community as well as areas of future expansion in the community.***

*Objectives:*

- Provide adequate and responsive police protection and reliable fire and disaster protection.

- Assure an adequate supply of potable water and an expandable distribution system, suitable for present and future consumption and for fire protection.

- Provide storm drains and protection works, where needed, to prevent flood damage, unsanitary conditions, or hazards to travel.

- Provide sewage treatment, refuse collection and disposal, street cleaning and similar environmental control processes.

- Assure opportunity for distribution of adequately sized electrical and natural gas services as well as telephone and other electronic communications.

- Maintain a continuing program of monitoring new trends and emerging community needs in both the short- and long-term frame.

- Promote the development of adequate community infrastructure through the subdivision review process and other programs as well.

- Maintain general standards and policies for utility system capabilities and extent of service. Identify needs for detailed engineering studies of present demands and potential future areas of demand in regard to changing land use and population.

*OPEN SPACE AND RECREATION*

Access to parks, open spaces and recreational opportunity is important for all existing and future residential neighborhoods, and represents an important quality of life factor.

*Goal:* ***Provide equitable access to recreational facilities for the entire community.***

*Objectives:*

- Develop and adopt a plan for recreation and open space which is keyed to the overall needs of the community based on accepted standards for recreational opportunity.

- Maintain a program of periodic review of space and facility adequacy in all portions of the community as part of an ongoing recreational facilities planning process.

*Goal:* ***Create recreational facilities that are beneficial for the community as a whole.***

*Objectives:*

- Promote the development of multi-use facilities rather than developing facilities based upon a single use.

- Encourage protection of watercourse and drainageways through designation as open green space.

- Maintain a program of periodic review of space and facility adequacy throughout the community in order to plan for necessary maintenance and improvements.

*Goal:* ***Develop and maintain recreational facilities in a manner that utilizes such facilities serve as neighborhood centers and focal points.***

*Objectives:*

- Encourage location of facilities within distances of residential areas that are appropriate according to planning standards.

- Maintain a continuing policy of assuring that newly developing neighborhood areas will include allowance for playlots, parks, and other public spaces, not only as a separate policy but as part of the subdivision review process.

*ENVIRONMENTAL QUALITY*

Maintenance of quality environmental characteristics with regard to both the man-made and natural environments is among the most important considerations in the continuing process of community development.

*Goal:* ***Maintain a safe, sanitary, and pleasing living environment in the community which is in harmony with the natural setting.***

*Objectives:*

- Develop a system and mechanism for weighing all community development decisions with regard to resultant environmental consequences.

- Develop and maintain land use regulation based upon sound environmental principles.

- Encourage public participation in all aspects of community development planning, particularly in those processes and actions which involve environmental evaluation of development alternatives.

- Encourage the elimination of wasteful practices, increased recycling, and the reduction of solid waste volumes.

- Create and preserve continuity between open spaces and developed uses of land resources.

- Encourage effective resource conservation with regard to environmental issues of community development through maximum use of available aids, such as seminars and distribution of printed material available from state and federal sources.

*Goal:* ***Develop policies and ordinances to limit development in floodplain and drainageway areas.***

*Objectives:*

- Promote the location of future development outside of areas that are flood-prone or are drainageways.

- Create and maintain incentives, where possible, to encourage development from encroaching upon drainage areas and floodplains.

## PLANNING STANDARDS

The goals and objectives statements outline a framework of quality thresholds to guide planning and maintenance of a quality living environment, but in themselves, do not provide standards of measurement. Accordingly, it is important that the goals and objectives be supported with quantifiable standards and guidelines for all aspects of community development in order to gauge current and future need.

Based on values, concepts, and methods developed from planning theory and years of experience with many other similar communities across the high plains, the following guidelines and standards are intended as a means of assessing minimum values for community development.

## RESIDENTIAL NEIGHBORHOODS

Residential neighborhood development standards are based on the walking distance from the farthest point in the neighborhood. The following are recommended standards for major community and neighborhood facilities:

| | |
|---|---|
| Nursery School | 1/4 mile |
| Kindergarten | 1/4 to 1/2 mile |
| Elementary School | 1/4 to 1/2 mile |
| Junior High School | 3/4 to 1 mile |
| High School | 1 to 1-1/2 miles |
| Playgrounds | 1/4 to 1/2 mile |
| Neighborhood Park | 1/4 to 1/2 mile |
| Shopping Center | 1/4 to 1/2 mile |
| Indoor Social, Cultural and Recreation Center | 1/2 mile |
| Health Center | 1/2 mile |
| Fire Station (Residential Areas) | 1-1/2 miles |
| Fire Station (Industrial Areas) | 3/4 mile |

In this context, planning for future community expansion and neighborhood development should include consideration of the following:

- Neighborhoods should be planned for a mix of housing units at costs which will permit access by low and moderate income groups.

- Amenities paralleling residential need should be incorporated into the neighborhood unit, such as neighborhood convenience shopping, school sites, park sites, and locations for churches.

- All residential areas should be served with a complete compliment of utilities including water, sewer, electrical power, natural gas, telephone, and solid waste disposal.

- Utilities should be located to serve each land use while taking account of the specific design criteria of each utility. Whenever possible, utilities should be placed underground.

- Environmental constraints should be carefully weighed in the approval process for any subdivision for residential uses. Among these constraints are soil capability, subsurface geology, slope conditions, water table, vegetative cover, surface drainage, historic and archaeological sites, potential for flooding, and displacement of plant and animal life.

**COMMERCIAL DEVELOPMENT**

Planning for continued development of commercial uses must include consideration of the unique characteristics of the downtown core area while acknowledging the diverse requirements of commercial experience in other locations. General guidelines include the following:

- Expansion of the Central Business District should occur through careful redevelopment of adjacent transition areas, maintaining the same basic concepts and development patterns which have been traditional in the downtown area.

- Strip commercial developments should have lots 200- to 400-feet deep and be provided with frontage roads parallel to the major street with adequate traffic separation, one- or two-way street operation with access to the arterial limited to defined points.

- Control of allowable types of uses in areas outside the central core should be provided through exercise of appropriate zoning regulations.

- Continued commercial expansion should be carefully evaluated with respect to conformance with the adopted Future Land Use Plan.

**INDUSTRIAL EXPANSION**

As industrial uses typically have intensified needs for large site areas, high volume transportation systems, extra capacity utility services, and special environmental protection, it is important that expansion proposal

be carefully evaluated for compatibility with the existing community. General guidelines for industrial expansion include:

- To the extent possible, industrial expansion should occur in planned industrial park areas.
- Industrial development planning should include allowance for:
  - Streets designed for heavy truck traffic.
  - Adequate building setback and height allowances.
  - Appropriate building density ratios
  - Aesthetic controls, including landscape provisions
- Industrial uses should be compatible with each other and surrounding areas of the community.
- Industrial expansion should occur in areas where adequate tract size is available to assure maintenance of quality development standards.

**TRANSPORTATION**

Several types of transportation systems are important to maintenance of the present and future community. However, the primary systems affecting physical development are the airport and the network of vehicular travelways. Concerning vehicular travelways, the following guidelines apply:

Major Streets

Planning standards for major streets are based on functional classifications which reflect intensity of usage. For the purposes of comprehensive community planning, four separate classes of urban streets and highways are usually recognized. These are:

- Expressways and Interstate Highways
- Arterial Streets
- Collector Streets
- Local Streets

*Expressways and Interstate Highways* are the large multi-lane traffic corridors which are intended to efficiently move the bulk of through traffic to, from, and around the community. A primary goal of these trafficways is to avoid directly impacting built-up urban areas. As such, expressways are the largest class of roads and are designed and located in accordance with traffic volumes to be accommodated. Major functions of the expressway are to provide for through traffic and to receive the traffic flowing from the arterial network, although they are themselves arterials by functional classification. At the present time, the Wellington community does not have major streets which would qualify in this category.

*Arterial Streets* are intended to move large volumes of traffic generated within the community. Service access to abutting property is a function of secondary importance to the primary function of efficiently moving traffic. Where possible, the design of arterial streets should incorporate access control, and on-street parking should be minimized or eliminated. Design of arterial streets typically incorporates right-of-way widths of 80 to 150 feet, depending upon pavement and drainage requirements and pavement widths of 498 to 64 feet, depending upon traffic lane and median arrangements. It is over these streets that the greater part of everyday travel will occur. Examples of these types of facilities in the local community include the U.S. 81 and 160 highway corridors.

*Collector Streets* provide the important function of collecting traffic from local streets in the interior of neighborhoods and distributing it to the arterial system. As with the arterial streets, the primary function is to move traffic, and property access points and on-street parking should be minimized. Traffic safety is an important consideration for the collector system. Unnecessary property access points and street crossings

should be minimized or eliminated. Right-of-way widths for collectors typically range from 70 to 90 feet with pavement widths ranging from 45 to 69 feet, depending upon lane, access, and parking arrangements.

The spacing of collector streets is often influenced by land use, density of development, and land use traffic generating characteristics. A spacing of one-half mile intervals is a reasonable standard where conditions are such that it can be achieved.

*Local Streets* are designed and located for the primary purposes of providing access to property, and providing connecting traffic routes to the collector system. Access should be provided for both vehicles and pedestrians. Through traffic should be discouraged on local streets.

The local street is a major element in the design composition of the city, providing space for grass and tree planting and arranging properties in various sizes and shapes of blocks with an irregular or rectangular street pattern. In residential areas, the local street serves as open space, providing light and air to adjoining properties and also acts as a fire stop between blocks of buildings.

Local streets and other streets serve as easements for sewer, water, and gas mains. The street often carries a part of the storm water runoff from abutting properties to storm sewers which may also occupy its right-of-way. In residential areas, power and communication lines should not be located within street right-of-way, except in instances where it is feasible or desirable to locate them underground. Overhead utilities are usually located in easements provided for this purpose at the rear of lots or along side lot lines.

Design of local streets usually incorporates a right-of-way width from 60 to 70 feet with a pavement width from 30 to 34 feet. Spacing of streets is as required to provide property access.

With respect to the airport, maintenance and continued development will be directly affected by the following:

- All development must conform to the standards and guidelines of the Federal Aviation Administration (FAA).
- Planned improvements must be keyed to activity levels expected and types of aircraft to be accommodated.
- The airport must be protected from functional encroachments due to building up of incompatible uses of land by appropriate zoning controls.

## PUBLIC SERVICES

*Schools*

Anticipating and planning new or enlarged schools are largely based on future requirements. Estimates of future requirements are, in turn, substantially based on the population projections which provide a general overview of the numbers of school-age children to be accommodated.

Generally, schools should be adequately sized, providing sufficient classrooms to avoid overcrowding, and should be located on a site large enough to allow development of ancillary functions, such as playgrounds, athletic fields, and off-street parking. School planning standards indicate that an adequate facility should have not more than 25 pupils per classroom and should have available special and multi-purpose spaces, such as lunchrooms, gymnasiums, laboratories, health offices, libraries, and faculty work rooms. While generalized planning standards help to size individual schools, local school officials must carry out detailed determinations of interior space requirements necessary to meet desired specific functions.

In terms of site size, generally accepted standards indicate that elementary schools should have about five acres of land plus one acre for each 100 students of estimated enrollment. Junior high schools should have a site size of 15 acres plus one acre per 100 students, while senior high schools should ideally have a site size of 30 acres plus one acre per 100 students.

School locations within the community should be such that elementary schools are within 0.25- to 0.5-mile walking distance, or not more than 20 minutes travel time by bus for all students, and ideally should complement the neighborhood concept. High schools within small communities should be centrally located with easy access from all residential areas, and should be directly and easily accessible for school buses.

*Libraries*

The following generally accepted standards were developed through experience with the planning of numerous libraries. The standards are guidelines that can be used to measure the space and operational requirements of a given library at a given point in time.

| | |
|---|---|
| Book Stock | |
| Volumes per Capita | 2 |
| Number of Seats | |
| Per 1,000 Population | 3 |
| Circulation | |
| Volumes per Capita | 9 |
| Square Feet per Capita | .55 |
| Desirable First Floor | |
| Ground Area | |
| Square Feet per Capita | .3 |

The standards outlined above are taken from *Volume, Space and Circulation*, National Library Association.

*Fire Protection*

Fire protection standards vary widely, depending upon population and development density, type of land use in the fire district, and topographic characteristics of the service area. Staffing requirements are equally variable; however, minimum requirements indicate that at least six men should be available at any time over any 24-hour period to provide initial fire call response. Providing a minimum or better staffing pattern will require a larger actual manpower complement, up to 24 to 30 persons for a volunteer company. Fire response distance from the fire station should not exceed 10 miles measured in driving distance.

Other general guidelines related to location and overall characteristics of municipal fire stations are noted below.

- Fire stations should be within a 0.75-mile radius of the Central Business District, Commercial Service Districts, and Industrial Areas.
- Fire stations should be within the center (time of travel) of the districts they serve.
- The stations should be within a 1.5-mile service radius of neighborhood shopping areas and residential districts.
- Movement of fire fighting equipment from fire stations should not be impaired by physical or topographic barriers.
- Fire stations should be located with direct access for fire fighting equipment to the thoroughfare networks of the City. Movement of equipment must not be impaired or be a danger to other traffic.
- The design of station houses should be compatible with the surrounding area so that buildings fit into the character of the neighborhood. Space should be provided on station sites for adequate parking, landscaping, and maneuvering area

*Police Protection*

Precise definition of standards for police facilities is not realistic due to extreme variation in social, economic, and physical characteristics, size of service area, and nature of department work load. Even the long used standard of one to two patrolmen per 1,000 population has been inadequate for staffing patterns in recent years due to the growing diversity in case load and the general broadening of police responsibility. Accordingly, police staffing patterns and physical accommodations should be developed to match specific local requirements resulting from a planning process involving municipal officials acting in concert with other county, regional, and state law enforcement agencies.

In general, a police district should comprise, if possible, a homogeneous area, unbroken by impassable barriers, such as expressways, railroads, or rivers that provide natural barriers. In addition, a district should have convenient major street access throughout the area.

The district headquarters should be near the geographic center of the service area; on a major street with good access to all parts of the service area; near concentrations of commercial and industrial uses and the highest crime rate; preferably not in residential areas, but adjacent to a commercial area; and district headquarters should emphasize administration and service to the public rather than the long-term incarceration of prisoners.

*Utilities*

Planning for utility extensions is an important tool in the guiding of community growth toward common environmental and economic goals. In general, a full complement of utility services should be available to all areas of development; however, such extensions should not encourage scattered development outside the corporate limits. It is also important in the planning process to consider the physical capability of service systems in order to guide future growth toward a development pattern which can be efficiently and economically served with utilities. This becomes especially critical for extensions of sanitary sewer service which are most economical when the system can continue to operate on gravity flow without special pumping apparatus. In general, the overall capacities of utility systems will be a consideration throughout the planning period as will the quality of service provided. Water and sewer systems, for instance, must meet a range of quality standards more related to public health than physical design; however, efficient development patterns will complement efforts to maintain a high-quality product throughout.

**PARKS AND RECREATION**

Outdoor recreation planning standards recognize five basic categories of municipal parks, which include playlots, neighborhood playgrounds, neighborhood playfields, neighborhood parks, and community or regional parks.

Playlots are the equivalent of the backyards of homes in sparsely settled residential districts. The size of each lot may range from 1,500 to 2,500 square feet in area and, ideally, is located within a clear view of all the dwellings it serves. The playlot is designed for pre-school children and should have low swings, slides, sand box, jungle gyms, and space for running and circle games. Passive recreation is also provided for the adults while they watch their children.

Neighborhood Playgrounds are designed for children whose ages range from 6 to 14 years. They are intended as the recreation center of the neighborhood and are usually within 0.25-mile walking distance of the dwellings they serve. The preferable location of a playground is adjacent to a community center or elementary school where supervised recreation is possible. The playground should have an area for apparatus and open space for informal play. There should be courts for various games, such as soccer, softball, tennis, handball, and volleyball. Space is also needed for the quiet activities, such as crafts, dramatics, and story telling.

Neighborhood Playfields are intended for both young people and adults, and provide for a variety of recreation activities. Each may serve five to six neighborhoods. The desirable space standard is one acre per 800 people. Recreation facilities normally include softball, basketball, football, handball, hockey, archery, an outdoor theater and a swimming pool. Night lighting is desirable.

Neighborhood Parks provide active and passive recreation for all age groups. The service radius should not exceed 0.75 to one mile. The desirable space standard is one acre per 800 population. The size of the park should not be less than ten acres.

Community or Regional Parks serve as open air spaces in the built-up urban area. Frequency depends a great deal upon the degree of population density. This is the place where active and passive recreation facilities for all ages are provided. There should be areas for picnicking, boating, swimming, winter sports, day camping, and bridle paths. This is a park which serves the whole community.

The general overall space standard for outdoor recreational opportunity within developed areas is ten acres per 1,000 population, or one acre per 100 persons.

Concerning standards for individual recreation facilities, the following guidelines provide an initial gauge for determination of probable present and future needs.

| AREA OR FACILITY | STANDARD |
|---|---|
| Park Land | 1 acre per 100 people |
| Neighborhood Park Land | 1 acre per 800 people |
| District Playfield | 1 acre per 800 people |
| Softball Diamond | 1 per 3,000 people |
| Baseball Diamond | 1 per 6,000 people |
| Tennis Courts | 1 per 2,000 people |
| Archery Range | 1 per 1,500 people |
| Handball Court | 1 per 1,500 people |
| Bicycle Trail | 1 per 2,500 people |
| Group Picnic Center | 1 per 2,500 people |
| Outdoor Theater | 1 per 10,000 people |
| Gymnasium | 1 per 10,000 people |
| Auditorium | 1 per 15,000 people |
| Social Room | 1 per 15,000 people |
| Recreation Building | 1 per 20,000 people |
| Arts and Crafts Workshop | 1 per 10,000 people |
| Municipal Golf Course | 1 per 9,000 people |
| Shuffleboard Court | 1 per 1,500 people |
| Nature Trail | 1 per 10,000 people |
| Wading Pool | 1 per 2,500 people |
| Day Camp | 1 per 10,000 people |
| Indoor Swimming Pool | 1 per 50,000 people |
| Outdoor Swimming Pool | 15 sq. ft. per 3 percent of population |

**PUBLIC BUILDINGS**

There are few general standards for gauging the adequacy of most public buildings. Building and site size requirements differ widely between communities and are related to population growth and the extent of functions and services to be accommodated. Requirements are best determined by local survey with future land requirements estimated accordingly. Projections of future populations to be served are one of the basic considerations of all such determinations.

Generally, public buildings should be adequate to provide the needs of the community and should be centrally located for equitable access from all parts of the community. Sites should feature ample parking capacity with easy pedestrian flow to, from, and within facilities. Site design should minimize the potential for vehicular congestion and should be aesthetically pleasing. All public facilities, inside and out, must be completely accessible, and usable by the physically handicapped.

## SUMMARY

Within the overall purpose of developing a general framework to guide long-range planning directions for the City of Wellington, the goals, objectives, standards, and guidelines are intended to establish quality parameters which can be supplemented by more detailed requirements for each individual project. Where this process is used to guide development decisions, the result will be an attractive, healthful, and pleasant urban environment in both existing and developing areas of the community. Maintenance and extension of this process to all aspects of development are important facets of the community building process.

In order to maximize the benefits from these procedures and evaluations, it is especially important that the community establish a continuing planning process which will incorporate review of each development proposal in light of adopted quality standards. Establishment and maintenance of this process is one of the primary responsibilities of the Planning Commission in its role as technical advisor to the Governing Body.

## SECTION II

## LAND USE

### INTRODUCTION

The term "Land Use" refers to the developed uses conducted within a building or on a particular parcel of land. As technological advances continue to influence new methods and products, the range and complexity of developed uses of land continues to broaden and intensify. In this context, the immediate and long-range survival and prosperity of the community is directly dependent upon optimal use of available land, water, air, economic, and human resources.

In most older communities, existing patterns of land utilization are relatively fixed and are not easily altered. These prevailing patterns reflect the influences of topography and manmade features, such as railroads, highways, airports, pipelines, and other major urban development. Together they have produced the community characteristics evident today, and will continue to influence future development patterns throughout the planning period and beyond.

It is the intent of this element of the Comprehensive Plan to review in detail existing land utilization characteristics in and around the Wellington community, and to estimate and forecast potential community development patterns during a 20-year planning period, or through the year 2020.

### LAND USE DEFINITION AND SURVEY

Developed uses of land encompass all aspects of human development. Associated activities may be residential, a commercial enterprise, the production of goods, or the offering of various services. Uses of available land resources are so numerous and activities so diversified, that for study purposes they are grouped into general classifications by related activity. These groupings are in accordance with the *Standard Industrial Coding Manual*, published by the Federal Office of Management and Budget. These categories include:

Residential
- Single Family
- Two Family
- Multiple Family
- Manufactured Housing

Commercial
- Retail Trade
- Service Business

Industrial
- Light Industry
- Heavy Industry

Public and Quasi-Public
Transportation
Undeveloped Land and Water Areas

In order to establish existing development patterns, a field survey of current land use patterns in and around the Wellington community was prepared in September of 1997. The survey included the incorporated area of the City as well as the surrounding extraterritorial planning area within three-miles of the corporate boundary. The survey was conducted on the basis of a lot-by-lot inventory of each land parcel in the study area, with the resulting data assembled into data tables and depicted on area maps for inclusion in the comprehensive plan.

### EXISTING DEVELOPMENT

The City of Wellington is currently configured in a pattern that closely resembles a square, with an area resembling a 30-60-90 triangle jutting out on the north and a boot-like area protruding to the east. Development has been influenced by the Slate Creek to the southwest and by Hargis Creek which runs through the central part of the community

Development has also been constrained by railroad tracks and facilities in both the central part of the city and on the southeast section of the community. Additionally, topography has limited development to the southwest as well as the northwest corner of the city.

## HISTORICAL POPULATION TRENDS

The population of South-Central Kansas, in addition to the rest of Kansas and the adjoining states in the Midwest region, was subject to massive and dramatic increases in the years immediately following the Civil War due to the opening of the central prairies for settlement. As the early immigrants were largely farmers and others seeking new land at little or no cost through the provisions of the several land bills, the massive and sudden buildup of population occasioned need for centers of supply as well as markets for the products of area farms and ranches, thus the trend toward urbanization was begun. This trend was accelerated over time by many factors, including development of the railroads through the western United States. In this context, the City of Wellington was established and began to grow in population.

Historic population patterns and trends for the City of Wellington are presented in the table below.

**TABLE 1**
**MUNICIPAL POPULATION TRENDS, 1890 – 1990***
**City of Wellington, Kansas**

| YEAR | POPULATION | NUMBER CHANGE | PERCENT CHANGE |
|---|---|---|---|
| 1890 | 4391 | — | — |
| 1900 | 4245 | -146 | -3.3 |
| 1910 | 7034 | + 2789 | + 65.7 |
| 1920 | 7048 | + 14 | + 0.2 |
| 1930 | 7405 | + 357 | + 5.1 |
| 1940 | 7246 | -159 | -2.1 |
| 1950 | 7747 | + 501 | + 6.9 |
| 1960 | 8809 | + 1062 | + 13.7 |
| 1970 | 8072 | -737 | -8.4 |
| 1980 | 8212 | +140 | +1.7 |
| 1990 | 8411 | +199 | +2.4 |

** Source: U.S. Department of Commerce, Bureau of the Census*

Trends shown in the table indicate that, overall, the population of the community has increased since the early part of this century, with only two periods of population decrease. Moderate to strong growth took place from 1900 until 1930; from 1940 to 1960, and from 1980 until 1990. The largest increase was 65 percent, which occurred between 1900 and 1910. The close proximity to the Wichita metropolitan area, coupled with economic growth inside the city, has helped stimulate net in-migration into the community.

Three periods of decline also occurred, with the first just before the turn of the century when severe drought choked the economic life out of much of the Midwest and Great Plains regions. The second and third were during the depression era and again in the 1960's, both due to economic declines in the area.

Whether or not the population continues to experience growth will depend heavily upon the ability of the community to expand the economic base in the future.

## CURRENT POPULATION ESTIMATE

As part of the land use field survey, dwelling unit occupancy characteristics were recorded, which provides the background data for estimating the current population of the community and surrounding area. The current population estimate for each quadrant was obtained by taking the number of occupied dwelling units in each quadrant and multiplying it by both the city and county census data for persons per household as reported in the 1990 U.S. Census, and then computing the average of those two figures. The estimated population of each quadrant as of 1997 is shown in the table below.

**TABLE 2**
**CURRENT POPULATION ESTIMATE**
**BY QUADRANT AND CITY TOTAL**
**City of Wellington, Kansas**

| | QUADRANTS | | | | CITY |
|---|---|---|---|---|---|
| | N/W | N/E | S/W | S/E | TOTAL |
| Population | | | | | |
| W/ City PPH* | 2,000 | 2,329 | 2,113 | 1,281 | 7,723 |
| W/ County PPH | 2,495 | 2,906 | 2,636 | 1,598 | 9,635 |
| Average** | 2,248 | 2,618 | 2,375 | 1,440 | 8,681 |

** PPH = Persons Per Household*
*** Average of City and County PPH Summation*

The number of persons per household was 2.1 for the City of Wellington and 2.62 for Sumner County as recorded by the decennial census of 1990. In addition, the average calculated for the City of Wellington is slightly higher than the actual population of 8,575 reported by the 1998 edition of the Kansas Government Journal as well as the 1990 Census figure of 8,411. Because of this, it is likely that the community population has increased during this decade, although definitive statistical data this will not be available until the release of the 2000 Census.

**FUTURE POPULATION FORECAST**

Trends and patterns in short- and long-range population characteristics over the 20-year planning period will emerge in response to a range of influences, both economic and social. Because these influences are difficult to anticipate accurately, forecasting future population levels is an imprecise process at best, resulting in need to consider several different assumptions in order to bracket the possibilities. However, these estimates are an important part of the planning process. From these estimates, projections of the amount of land needed for a particular use can be reserved in advance, services can be planned, and the financial planning begun for identified projects.

In this context, the following table contains a series of population forecasts, each representing different forecasting methods and/or assumptions about short- and long-range conditions in the community and the surrounding region. In the table, projections are made for each quadrant in addition to the community as a whole.

**TABLE 3**
**FUTURE POPULATION FORECAST**
**City of Wellington, Kansas**

| FORECAST | 2000 | 2005 | 2010 | 2015 | 2020 |
|---|---|---|---|---|---|
| **City Trend Line** | | | | | |
| • Since 1950 | | | | | |
| N/W | 2,251 | 2,273 | 2,294 | 2,316 | 2,337 |
| N/E | 2,619 | 2,644 | 2,669 | 2,694 | 2,719 |
| S/W | 2,380 | 2,402 | 2,425 | 2,448 | 2,470 |
| S/E | 1,310 | 1,322 | 1,335 | 1,347 | 1,360 |
| Total City | 8,560 | 8,642 | 8,723 | 8,805 | 8,886 |
| • Since 1980 | | | | | |
| N/W | 2,264 | 2,291 | 2,317 | 2,341 | 2,367 |
| N/E | 2,635 | 2,665 | 2,696 | 2,723 | 2,754 |
| S/E | 1,317 | 1,333 | 1,348 | 1,362 | 1,377 |
| S/W | 2,394 | 2,421 | 2,499 | 2,474 | 2,502 |
| Total City | 8,610 | 8,710 | 8,810 | 8,900 | 9,000 |

| FORECAST | 2000 | 2005 | 2010 | 2015 | 2020 |
|---|---|---|---|---|---|
| **City Trend Line** | | | | | |
| • Since 1990 | | | | | |
| N/W | 2,263 | 2,288 | 2,313 | 2,338 | 2,364 |
| N/E | 2,633 | 2,662 | 2,691 | 2,721 | 2,750 |
| S/E | 1,316 | 1,331 | 1,346 | 1,360 | 1,375 |
| S/W | 2,392 | 2,418 | 2,445 | 2,472 | 2,498 |
| Total City | 8,603 | 8,699 | 8,795 | 8,891 | 8,987 |
| **Cohort Method I** | | | | | |
| N/W | 2,318 | 2,305 | 2,506 | 3,149 | 3,528 |
| N/E | 2,679 | 2,681 | 2,979 | 3,364 | 4,105 |
| S/E | 2,450 | 2,436 | 2,706 | 3,328 | 3,729 |
| S/W | 1,348 | 1,341 | 1,489 | 2,132 | 2,053 |
| Total City | 8,813 | 8,763 | 9,734 | 11,973 | 13,415* |
| **Cohort Method II** | | | | | |
| N/W | 2,436 | 2,570 | 2,859 | 2,719 | 2,976 |
| N/E | 2,844 | 3,002 | 3,012 | 3,175 | 3,266 |
| S/E | 1,413 | 1,491 | 1,496 | 1,577 | 1,622 |
| S/W | 2,603 | 2,747 | 2,477 | 2,906 | 2,808 |
| Total City | 9,296 | 9,810 | 9,844 | 10,377 | 10,672 |
| **Cohort Method III** | | | | | |
| N/W | 2,300 | 2,301 | 2,245 | 2,260 | 2,512 |
| N/E | 2,686 | 2,688 | 2,622 | 2,640 | 2,394 |
| S/E | 1,334 | 1,335 | 1,302 | 1,311 | 1,458 |
| S/W | 2,457 | 2,460 | 2,398 | 2,416 | 3,225 |
| Total City | 8,777 | 8,784 | 8,567 | 8,627 | 9,589 |
| **Cohort Method IV** | | | | | |
| N/W | 2,387 | 2,384 | 2,202 | 2,089 | 1,926 |
| N/E | 2,788 | 2,785 | 2,572 | 2,440 | 2,249 |
| S/E | 1,385 | 1,383 | 1,278 | 1,212 | 1,117 |
| S/W | 2,551 | 2,549 | 2,354 | 2,232 | 2,058 |
| Total City | 9,111 | 9,101 | 8,406 | 7,973 | 7,350 |

***Selected by the Planning Commission for use in the planning program.**

The series of forecasts illustrate a broad range of possibilities ranging from a steady increase in population to a trend of the population leveling off and then declining. These trends and the range of forecast possibilities are only general indicators of the complicated nature of demographic change and the difficulty of predicting future patterns and trends.

With regard to the trend line forecasts, if any of the three trends were to prevail, the total population of the community would be between 8,800 and 9,000. However, it is important to note that the trend line forecasts do not take economic or other factors into consideration.

The four cohort forecasts are developed from varied assumptions about birth and death rates, as well as migration rates. These rates are varied for statistical purposes based upon estimates of potential future economic conditions. The first cohort forecast assumes birth rates of 13.8 to 17.2, death rates of 11.9 to 14.4, and migration rates of -.002 to .04. Accordingly, the first forecast assumes that current trends and patterns of demographic and economic conditions will prevail throughout the planning period. Thus, this forecast assumes continuation of the present favorable economic climate.

Forecast Number II assumes birth rates of 12.3 to 13.8, death rates of 11.9 to 12.9, and migration rates from -.005 to .02 percent per year. The resulting projection is one of growth, although not at the levels that the first forecast predicts.

Forecast Number III assumes birth rates from 13.1 to 14.1, death rates from 12.7 to 13.5, and a positive net migration ranging from .00 to .02 percent per year. This forecast would result in the total population increasing at a steady rate throughout the planning period, although at a smaller rate than is predicted in forecast number II.

Forecast Number IV assumes death rates of 12.4 to 13.2, birth rates of 12.1 to 12.7, and migration rates that vary from .015 to - .015. This forecast assumes a decline in the local economy and the resulting population decrease caused by an out-migration.

It is also important to note that the population projections do not take into consideration where future community growth is likely to occur. Thus, while the community may reach a target population in a given projection, the distribution of the overall population within the quadrants in the community may be different than what a particular population forecast projects.

## EXISTING INCORPORATED AREA LAND USE PATTERNS

Existing uses of land resources within the corporate boundary of the city as of September 1997 are presented by type, acreage, and quadrant in the following table.

# TABLE 4
# MUNICIPAL LAND USE
## City of Wellington, Kansas

| SIC CODE | LAND USE CATEGORY | NORTHWEST QUADRANT ACRES | NORTHWEST QUADRANT PERCENT DEVELOPED LAND | NORTHWEST QUADRANT ACRES PER 100* | SOUTHWEST QUADRANT ACRES | SOUTHWEST QUADRANT PERCENT DEVELOPED LAND | SOUTHWEST QUADRANT ACRES PER 100* | NORTHEAST QUADRANT ACRES | NORTHEAST QUADRANT PERCENT DEVELOPED LAND | NORTHEAST QUADRANT ACRES PER 100* | SOUTHEAST QUADRANT ACRES | SOUTHEAST QUADRANT PERCENT DEVELOPED LAND | SOUTHEAST QUADRANT ACRES PER 100* | CITY OF WELLINGTON ACRES | CITY OF WELLINGTON PERCENT DEVELOPED LAND | CITY OF WELLINGTON ACRES PER 100 ** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Residential | | | | | | | | | | | | | | | |
| | Single-Family | 288.3 | 49.7 | 12.8 | 158.5 | 26.0 | 6.7 | 216.5 | 25.7 | 8.3 | 62.8 | 13.0 | 4.4 | 726.1 | 28.8 | 8.4 |
| | Two-Family | 0.8 | 0.1 | <0.1 | 0.9 | 0.1 | <0.1 | 1.3 | 0.2 | <0.1 | 0.4 | 0.1 | <0.1 | 3.4 | 0.5 | <0.1 |
| | Multi-Family | 8.8 | 1.5 | 0.4 | 3.1 | 0.5 | 0.1 | 25.7 | 3.1 | 1.0 | 0 | 0.0 | 0.0 | 37.6 | 1.5 | 0.4 |
| | Manufactured Homes | 0.5 | <0.1 | <0.1 | 4.7 | 0.8 | 0.2 | 9.6 | 11.4 | 0.4 | 34.2 | 7.0 | 2.4 | 49.0 | 2.0 | 0.6 |
| | **Subtotal** | 298.4 | 51.3 | 13.3 | 167.2 | 27.4 | 7.0 | 253.1 | 30.0 | 9.8 | 97.4 | 20.1 | 6.9 | 816.1 | 32.4 | 9.4 |
| 2 & 3 | Commercial | | | | | | | | | | | | | | | |
| | Service Commercial | 14.9 | 2.6 | 0.7 | 8.2 | 1.4 | 0.3 | 19.9 | 2.4 | 0.8 | 0.3 | 0.1 | <0.1 | 43.3 | 1.7 | 0.5 |
| | Retail Commercial | 2.9 | 0.5 | 0.1 | 11.8 | 1.9 | 0.5 | 40.9 | 4.8 | 1.6 | 0.6 | 0.1 | <0.1 | 56.1 | 2.2 | 0.6 |
| | **Subtotal** | 17.8 | 3.1 | 0.8 | 20.0 | 3.3 | 0.8 | 60.8 | 7.2 | 2.4 | 0.9 | 0.2 | 0.1 | 99.4 | 3.9 | 1.1 |
| 4 | Industrial | | | | | | | | | | | | | | | |
| | Light Industrial | 0.7 | 0.1 | - | 8.1 | 1.3 | 0.3 | 21.4 | 2.5 | 0.8 | 2.7 | 0.6 | 0.2 | 32.9 | 1.3 | 0.4 |
| | Heavy Industrial | - | - | - | 7.7 | 1.3 | 0.3 | 51.4 | 6.1 | 2.0 | 5.1 | 1.1 | 0.4 | 64.2 | 2.6 | 0.7 |
| | **Subtotal** | 0.7 | 0.1 | - | 15.7 | 2.6 | 0.7 | 72.8 | 8.6 | 2.8 | 7.8 | 1.7 | 0.6 | 97.1 | 3.9 | 1.1 |
| 5 & 6 | Transportation, Communications, and Utilities | | | | | | | | | | | | | | | |
| | Streets | 97.8 | 16.8 | 4.4 | 110.1 | 4.4 | 4.6 | 136.4 | 16.2 | 5.2 | 170.3 | 35.2 | 11.8 | 514.6 | 20.4 | 5.9 |
| | Alleys | 6.4 | 1.1 | 0.3 | 66.2 | 10.8 | 2.8 | 40.3 | 4.8 | 1.5 | 18.4 | 3.8 | 1.3 | 131.3 | 5.2 | 1.5 |
| | Railroads | 3.4 | 0.6 | 0.2 | 47.1 | 7.7 | 2.0 | 23.3 | 2.8 | 0.9 | 117.1 | 24.3 | 8.1 | 191.5 | 7.6 | 2.2 |
| | Utilities | - | - | - | 3.7 | 0.6 | 0.2 | 3.7 | 0.4 | 0.1 | 0.1 | 0.0 | <0.1 | 7.5 | 0.3 | 0.1 |
| | Subtotal | 107.6 | 18.5 | 4.8 | 227.1 | 37.2 | 9.6 | 203.7 | 24.2 | 7.7 | 305.9 | 63.3 | 21.2 | 844.9 | 33.5 | 9.7 |
| 7 | Cultural, Entertainment, and Recreation | | | | | | | | | | | | | | | |
| | Public/Quasi-Public | 18.8 | 3.2 | 0.8 | 43.1 | 7.1 | 1.8 | 55.0 | 6.5 | 2.1 | 51.5 | 10.7 | 3.6 | 168.4 | 6.7 | 1.9 |
| | Parks/Open Space | 138.3 | 23.8 | 6.2 | 137.1 | 22.5 | 5.8 | 197.8 | 23.5 | 7.6 | 19.7 | 4.0 | 1.4 | 492.9 | 19.6 | 5.7 |
| | Subtotal | 157.1 | 27.0 | 7.0 | 180.2 | 29.5 | 7.6 | 252.8 | 30.0 | 9.7 | 71.2 | 14.7 | 4.9 | 661.3 | 26.3 | 7.6 |
| **Total Developed Land** | | 581.6 | 100.0 | 25.9 | 610.2 | 100.0 | 25.8 | 843.2 | 100.0 | 32.4 | 483.2 | 100.0 | 33.6 | 2518.8 | 100.0 | 29.0 |
| **Undeveloped Land** | | 63.8 | --- | 2.8 | 196.9 | --- | 8.3 | 238.5 | --- | 9.1 | 146.3 | --- | 9.1 | 645.5 | --- | 7.4 |
| **TOTAL INCORPORATED AREA** | | 645.4 | | 28.7 | 807.1 | | 34.1 | 1081.7 | | 41.5 | 629.5 | | 42.7 | 3164.3 | | 36.5 |

* BASED UPON THE FOLLOWING 1997 POPULATIONS (PER QUADRANT): N/W – 2,248 (1996 POPULATION), S/W – 2,375, N/E – 2,618, S/E – 1,440
** BASED UPON A 1997 ESTIMATED POPULATION OF 8,681

A summary of land use within the municipal boundary by quadrant follows:

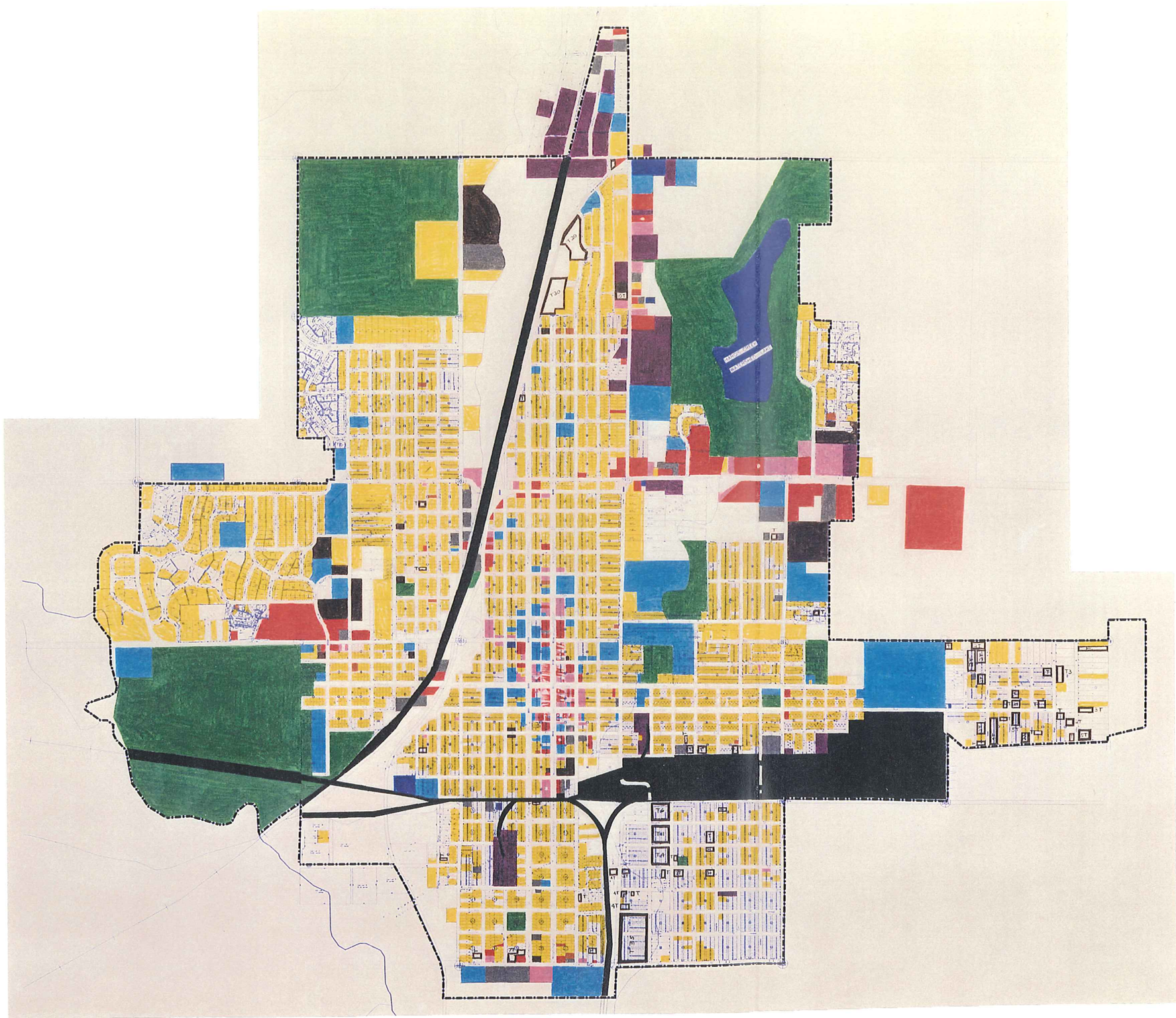
*NORTHWEST*
The table shows that the greatest use of land is for residential purposes, which represents over 51 percent of the total developed acreage. Of that, almost all of the land is classified as single-family. Next in line are cultural, entertainment and recreational uses, which together account for 27 percent of the developed acreage total. This is due to the large number of acres utilized as park space. Transportation, communications and utilities account for an additional 18 percent of the total, with a large majority of the acreage utilized for streets. Only very small acreages are represented in the commercial and industrial categories. Together, these figures suggest the characterization of the quadrant as being primarily oriented toward residential neighborhood development.

*NORTHEAST*
Both residential use and cultural, entertainment, and recreation uses account for the largest uses of land in the quadrant. Approximately 30 percent of the land is used for residential purposes with an additional 30 percent utilized for cultural, entertainment, and recreational uses as well. Because of this, the character of the area is primarily residential. The second largest category of developed land is transportation, communications, and utilities with around 24 percent of the developed acreage, most of which is utilized as streets. Commercial and industrial uses account for between 7 and 9 percent respectively, and indicate that the community's major commercial and industrial land uses are in this region. This is further substantiated when noticing that the quadrant is first in the percent of land utilized for these purposes within the City. In addition, there is the possibility of future industrial growth on the north end of the area not only because of its close proximity to the airport, but because U.S. Highway 81 traverses it as well.

*SOUTHEAST*
The table indicates over 63 percent of the land in this area is classified as transportation, communications, and utilities. This includes 35 percent of the land classified as streets and 24 percent as railroads. This is explained by the large railroad facility owned by the Burlington Northern - Santa Fe Railway in the quadrant as well as the large number of through streets. Cultural, entertainment, and recreation account for slightly under 15 percent of the land developed, most of it being public or quasi - public spaces. There are almost no commercial or industrial acreages to speak of in the section. Additionally, with residential uses accounting for approximately 20 percent of developed land in the quadrant, this section has a great potential to be developed into an excellent mixed residential and commercial area due to the existing transportation systems within the quadrant.

*SOUTHWEST*
Like the southeast quadrant, this area's largest land use is transportation, communications, and utilities as well. However, the distribution among categories is more even in this quadrant than in others, with alleys and railroads being the largest uses within this classification. Another highly developed land use category is the cultural, entertainment, and recreational classification; accounting for approximately 30 percent of the developed land in the section. Furthermore, around 27 percent of the developed land is used for residential purposes; with virtually all of it being single - family. Only 2 to 4 percent of the land is utilized for commercial or industrial development. However, in terms of quadrants, it is the second largest in the community for these purposes, due primarily to the presence of the Central Business District within the section.

Existing land use within the corporate limits of the City of Wellington is graphically shown on the following figure.



E&R

LEGEND

- SINGLE FAMILY RESIDENTIAL
- TWO FAMILY RESIDENTIAL
- MULTI-FAMILY RESIDENTIAL
- MANUFACTURED HOUSING
- SERVICE COMMERCIAL
- RETAIL COMMERCIAL
- LIGHT INDUSTRIAL
- HEAVY INDUSTRIAL
- UTILITIES & COMMUNICATIONS
- PUBLIC/QUASI-PUBLIC
- PARKS & RECREATION
- RAILROAD
- UNDEVELOPED LAND
- MUNICIPAL BOUNDARY

Figure 1

**EXISTING LAND USE**

*City of Wellington, Kansas*

## RURAL AREA DEVELOPMENT PATTERNS

Land use patterns in the rural extraterritorial study area are summarized by type, acreage, quadrant, and percentage in the following table.

# TABLE 5
# EXISTING LAND USE
# EXTRATERRITORIAL DISTRICT
## City of Wellington, Kansas

| SIC CODE | LAND USE CATEGORY | NORTHWEST QUADRANT ACRES | NW PERCENT OF DEVELOPED LAND | NW ACRES PER 100* | SOUTHWEST QUADRANT ACRES | SW PERCENT OF DEVELOPED LAND | SW ACRES PER 100* | NORTHEAST QUADRANT ACRES | NE PERCENT OF DEVELOPED LAND | NE ACRES PER 100* | SOUTHEAST QUADRANT ACRES | SE PERCENT OF DEVELOPED LAND | SE ACRES PER 100* | CITY OF WELLINGTON ACRES | CITY PERCENT OF DEVELOPED LAND | CITY ACRES PER 100* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Residential | | | | | | | | | | | | | | | |
| | Single-Family | 117.5 | 13.6 | 87.7 | 92.5 | 4.4 | 70.6 | 119.6 | 4.1 | 46.2 | 71.2 | 3.4 | 81.8 | 400.8 | 5.1 | 65.6 |
| | Manufactured Homes | 2.5 | 0.3 | 1.9 | 2.8 | 0.1 | 2.1 | 32.7 | 1.1 | 12.6 | 28.4 | 1.4 | 32.7 | 66.4 | 0.8 | 10.9 |
| | Subtotal | 120.0 | 13.9 | 89.6 | 95.3 | 4.5 | 72.7 | 152.3 | 5.2 | 58.8 | 99.6 | 4.8 | 114.5 | 467.2 | 5.9 | 76.5 |
| 2 & 3 | Commercial | | | | | | | | | | | | | | | |
| | Service Commercial | - | - | - | - | - | - | 5.7 | 0.2 | 2.2 | 5.7 | 0.3 | 6.5 | 11.4 | 0.1 | 1.9 |
| | Retail Commercial | - | - | - | 1.4 | 1.1 | 1.1 | 34.2 | 1.2 | 13.2 | - | - | - | 35.6 | 0.5 | 5.8 |
| | Subtotal | - | - | - | 1.4 | 1.1 | 1.1 | 39.9 | 1.4 | 15.4 | 5.7 | 0.3 | 6.5 | 47.0 | 0.6 | 7.7 |
| 4 | Industrial | | | | | | | | | | | | | | | |
| | Light Industrial | - | - | - | 10 | 0.5 | 7.6 | - | - | - | 2.8 | 0.1 | 3.3 | 12.8 | 0.2 | 2.1 |
| | Heavy Industrial | - | 12.2 | - | 8.5 | 0.4 | 6.5 | 37.1 | 1.3 | 14.3 | - | - | - | 45.6 | 0.6 | 7.5 |
| | Subtotal | - | 12.2 | - | 18.5 | 0.9 | 14.1 | 37.1 | 1.3 | 14.3 | 2.8 | 0.1 | 3.3 | 58.4 | 0.7 | 9.6 |
| 5 & 6 | Transportation, Communications, and Utilities | | | | | | | | | | | | | | | |
| | Streets & Roads | 634.5 | 73.2 | 473.5 | 1763.1 | 83.2 | 1345.9 | 2236.9 | 77.4 | 863.7 | 1955.9 | 94.6 | 2248.2 | 6590.4 | 84.1 | 1078.6 |
| | Railroads | - | - | - | 220.6 | 10.4 | 168.4 | 250.5 | 8.7 | 96.7 | - | - | - | 471.1 | 6.0 | 77.1 |
| | Utilities | 0.9 | 0.1 | 0.7 | 2.8 | 0.1 | 2.2 | 10.0 | 0.4 | 3.8 | 2.8 | 0.1 | 3.3 | 16.5 | 0.2 | 2.7 |
| | Subtotal | 635.4 | 73.3 | 474.2 | 1986.5 | 93.7 | 1516.5 | 2497.4 | 86.5 | 964.2 | 1958.7 | 94.7 | 2251.4 | 7078.0 | 90.3 | 1158.4 |
| 7 | Cultural, Entertainment, and Recreation | | | | | | | | | | | | | | | |
| | Public/Quasi-Public | 5.5 | 0.6 | 4.1 | 17.1 | 0.8 | 13.0 | 146.6 | 5.1 | 56.6 | 1.4 | 0.1 | 1.6 | 170.6 | 2.2 | 27.9 |
| | Parks/Open Space | - | - | - | - | - | - | 15.7 | 0.5 | 6.0 | - | - | - | 15.7 | 0.2 | 2.6 |
| | Subtotal | 5.5 | 0.6 | 4.1 | 17.1 | 0.8 | 13.0 | 162.3 | 5.6 | 62.6 | 1.4 | 0.1 | 1.6 | 186.3 | 2.4 | 30.5 |
| | Total Developed Land | 760.9 | 100.0 | 567.9 | 2118.8 | 100.0 | 1617.4 | 2889.0 | 100.0 | 1115.3 | 2068.3 | 100.0 | 2377.4 | 7837.0 | 100.0 | 1282.7 |

* BASED UPON THE FOLLOWING 1997 POPULATIONS (PER QUADRANT): N/W - 134 (1996 POPULATION), S/W - 131 N/E - 259, S/E - 87
** BASED UPON A POPULATION ESTIMATE OF 611

An analysis of development intensities in the rural area is summarized by quadrant below.

*NORTHWEST*
The figures in the above table illustrate of the scattered low-density development presently existing in the extraterritorial portion of the area. While some elements of urban development were evident from the results of the field survey, there are currently few urban uses present except rural residences and wells and equipment associated with the petroleum extraction process in the northwest quadrant.

Throughout the rural study area, streets and roads are the greatest developed use of land resources, accounting for over 73 percent of the developed acreage total. Next in line were residential uses, estimated at nearly 14 percent of the total, followed by heavy industrial uses at around 12 percent. The heavy industrial uses are represented by the petroleum extraction industry. Other urban types of uses are largely absent in the rural portion of the northwest quadrant at the present time.

*NORTHEAST*
This quadrant also evidences a pattern of low-density residential development, with dwelling units occurring in greater densities near the edge of the municipal boundary and only scattered development toward the outer limit of the study area. The surface transportation system accounts for the largest proportion of developed land at just under 87 percent, with the majority of the represented by streets and roads. Additionally, other classifications make up no more than six percent of developed land, even after the airport and local drive-in are taken into consideration.

*SOUTHEAST*
While containing a large system of streets and roads, this area also contains scattered residential development which is clustered in four locations. However, there are no other land uses in proportions significant enough to represent a large percentage of the total developed acreage.

*SOUTHWEST*
Railroads, streets and roads total over 90 percent of the developed land in this quadrant. While this area also supports a limited amount of residential development, there are few other urban types of land uses in the area, and those present are limited in the extent of their development.

Land Use characteristics for the rural study area are shown graphically on the following figure.

## FUTURE PATTERNS OF LAND USE

Based on the earlier studies of natural features and environmental characteristics, future population trends, existing patterns of physical expansion and community development goals, a forecast of potential future land use characteristics can be prepared. The future land use forecast is one of the significant elements of the process of estimating the potential size and character of the future community. Within this overall scope, the land use forecast provides one of the basic indications of possible future need for housing, streets, parks, schools and all of the interrelated elements of community living. In this respect, the study of future land use characteristics helps to establish a general framework for long-range comprehensive planning.

## LAND USE FORECAST

The land use forecast, based on the factors noted above, is grounded in the assumption that future development patterns will result from a range of social and economic factors similar to those responsible for recent expansion patterns. Developed within these guidelines, the following tables contain a forecast of future land use requirements for the community, by quadrant, through the 20-year planning period or until the year 2020.

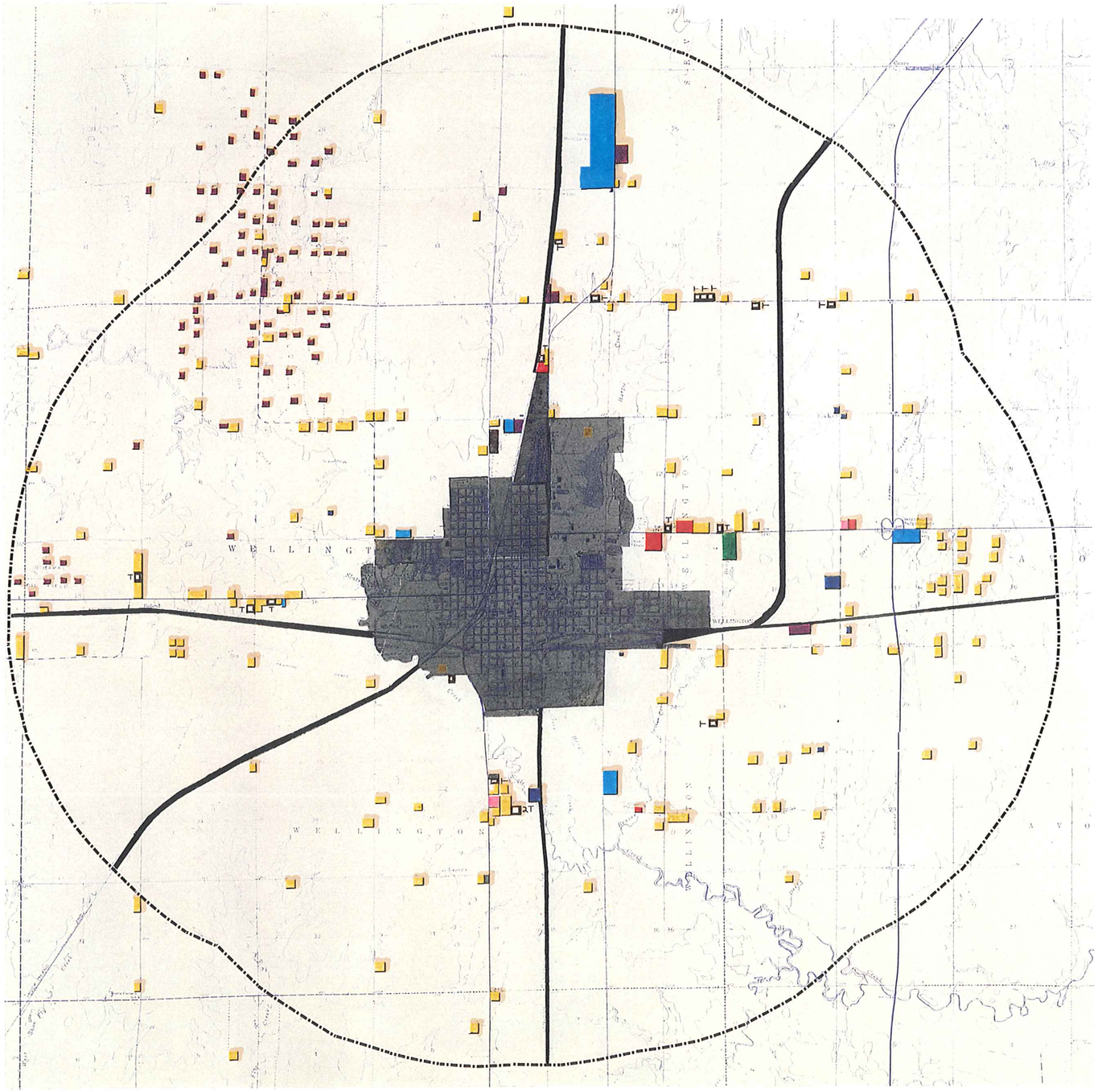



Figure 2

**EXISTING LAND USE**
**EXTRATERRITORIAL DISTRICT**

*City of Wellington, Kansas*

TABLE 6
FUTURE LAND USE FORECAST
NORTHWEST QUADRANT
City of Wellington, Kansas

| LAND USE CATEGORY | EXISTING AREA IN ACRES | PERCENT OF TOTAL | DEVELOPED ACRES PER 100 POPULATION 1997* | DEVELOPED ACRES PER 100 POPULATION 2020** | ACRES ADDED | TOTAL DEVELOPED ACRES 2020 | PERCENT OF TOTAL | PERCENT INCREASE 1996-2020 |
|---|---|---|---|---|---|---|---|---|
| Residential | | | | | | | | |
| Single-Family | 288.3 | 49.7 | 12.8 | 11.6 | 119.2 | 407.5 | 50.1 | 41.3 |
| Two-Family | 0.8 | 0.1 | <0.1 | 0.2 | 5.9 | 6.7 | 0.8 | 777.5 |
| Multiple-Family | 0.8 | 1.5 | 0.4 | 0.4 | 8.0 | 8.8 | 1.9 | 1,000.0 |
| Manufactured Housing | 0.5 | <0.1 | <0.1 | 0.2 | 6.2 | 6.7 | 0.8 | 1,240.0 |
| Subtotal | 298.4 | 51.4 | 13.3 | 12.4 | 139.3 | 429.7 | 52.8 | 44.0 |
| Commercial | | | | | | | | |
| Retail Trade | 14.9 | 2.6 | 0.7 | 0.6 | 5.2 | 20.1 | 2.5 | 34.8 |
| Services | 2.9 | 0.5 | 0.1 | 0.1 | 0.5 | 3.4 | 0.4 | 17.2 |
| Subtotal | 17.8 | 3.1 | 0.8 | 0.7 | 5.7 | 23.5 | 2.9 | 32.0 |
| Industrial | | | | | | | | |
| Light Industry | 0.7 | 0.1 | <0.1 | 0.1 | 2.6 | 3.3 | 0.4 | 371.4 |
| Heavy Industry | — | — | — | — | — | — | — | — |
| Subtotal | 0.7 | 0.1 | <0.1 | 0.1 | 2.6 | 2.9 | 0.4 | 371.4 |
| Transportation, Communications & Utilities | | | | | | | | |
| Streets & Alleys | 104.2 | 17.9 | 4.7 | 4.3 | 47.0 | 151.2 | 18.6 | 45.1 |
| Railroads | 3.4 | 0.6 | 0.1 | 0.1 | 0.5 | 3.9 | 0.5 | 147 |
| Utilities | — | — | — | 0.1 | 3.3 | 3.3 | — | 100.0 |
| Subtotal | 107.6 | 18.5 | 4.8 | 4.5 | 50.8 | 158.4 | 19.1 | 47.2 |
| Cultural, Entertainment, & Recreational | | | | | | | | |
| Public & Quasi-Public | 18.8 | 3.2 | 0.8 | 0.7 | 5.3 | 23.6 | 2.9 | 28.2 |
| Parks & Recreation | 138.3 | 23.7 | 6.2 | 4.8 | 29.7 | 168.0 | 21.1 | 21.5 |
| Subtotal | 157.1 | 27.0 | 7.0 | 5.4 | 34.5 | 191.6 | 24.0 | 21.9 |
| **TOTAL DEVELOPED LAND** | 581.6 | 100.0 | 25.9 | 23.0 | 233.4 | 813.2 | 100.0 | 40.1 |

* Based on an estimated population of 2,248.
** Based on a 2020 target population of 3,528.

TABLE 7
FUTURE LAND USE FORECAST
NORTHEAST QUADRANT
City of Wellington, Kansas

| LAND USE CATEGORY | EXISTING AREA IN ACRES | PERCENT OF TOTAL | DEVELOPED ACRES PER 100 POPULATION 1997* | DEVELOPED ACRES PER 100 POPULATION 2020** | ACRES ADDED | TOTAL DEVELOPED ACRES 2020 | PERCENT OF TOTAL | PERCENT INCREASE 1997-2020 |
|---|---|---|---|---|---|---|---|---|
| Residential | | | | | | | | |
| Single-Family | 216.5 | 25.7 | 8.3 | 8.7 | 141.4 | 357.9 | 30.5 | 65.3 |
| Two-Family | 1.3 | 0.2 | <0.1 | 0.1 | 3.0 | 4.3 | 0.4 | 230.7 |
| Multiple-Family | 25.7 | 3.1 | 1.0 | 0.1 | 8.7 | 34.4 | 3.0 | 33.8 |
| Manufactured Housing | 9.6 | 11.4 | 0.4 | 0.2 | 0.0 | 9.6 | 0.8 | 0.0 |
| Subtotal | 253.1 | 30.0 | 9.8 | 9.8 | 153.1 | 406.2 | 34.7 | 60.5 |
| Commercial | | | | | | | | |
| Retail Trade | 19.9 | 2.4 | 0.8 | 1.0 | 22.6 | 42.5 | 3.6 | 113.5 |
| Services | 40.9 | 4.8 | 1.6 | 1.4 | 16.9 | 57.8 | 4.9 | 41.3 |
| Subtotal | 60.8 | 7.2 | 2.4 | 2.4 | 34.5 | 100.3 | 8.5 | 56.7 |
| Industrial | | | | | | | | |
| Light Industry | 21.4 | 2.5 | 0.8 | 0.8 | 12.5 | 31.9 | 2.7 | 58.4 |
| Heavy Industry | 51.4 | 6.1 | 2.0 | 1.9 | 29.9 | 76.3 | 6.5 | 58.1 |
| Subtotal | 72.8 | 8.6 | 2.8 | 2.7 | 35.4 | 108.2 | 9.2 | 48.6 |
| Transportation, Communications & Utilities | | | | | | | | |
| Streets & Alleys | 176.7 | 21.0 | 6.7 | 6.4 | 87.4 | 264.1 | 22.5 | 49.4 |
| Railroads | 23.3 | 2.8 | 0.9 | 0.6 | 0.0 | 23.3 | 2.0 | 0.0 |
| Utilities | 3.7 | 0.4 | 0.1 | 0.1 | 1.6 | 5.3 | 0.5 | 43.2 |
| Subtotal | 203.7 | 24.2 | 7.7 | 7.1 | 89.0 | 292.7 | 25.0 | 43.8 |
| Cultural, Entertainment, & Recreational | | | | | | | | |
| Public & Quasi-Public | 55.0 | 6.5 | 2.1 | 1.6 | 10.0 | 65.0 | 5.5 | 18.1 |
| Parks & Recreation | 197.8 | 23.5 | 7.6 | 4.9 | 2.2 | 200.0 | 17.1 | 1.1 |
| Subtotal | 252.8 | 30.0 | 9.7 | 6.5 | 12.2 | 265.0 | 22.6 | 4.8 |
| **TOTAL DEVELOPED LAND** | 843.2 | 100.0 | 32.2 | 28.5 | 324.2 | 1172.4 | 100.0 | 38.4 |

* Based on an estimated population of 2,618.
** Based on a 2020 target population of 4,105.

TABLE 8
FUTURE LAND USE FORECAST
SOUTHEAST QUADRANT
City of Wellington, Kansas

| LAND USE CATEGORY | EXISTING AREA IN ACRES | PERCENT OF TOTAL | DEVELOPED ACRES PER 100 POPULATION 1997* | DEVELOPED ACRES PER 100 POPULATION 2020** | ACRES ADDED | TOTAL DEVELOPED ACRES 2020 | PERCENT OF TOTAL | PERCENT INCREASE 1997-2020 |
|---|---|---|---|---|---|---|---|---|
| Residential | | | | | | | | |
| Single-Family | 62.8 | 12.9 | 4.4 | 3.6 | 72.2 | 135.0 | 17.9 | 114.9 |
| Two-Family | 0.4 | 0.1 | <0.1 | 0.1 | 1.5 | 1.9 | 0.3 | 375.0 |
| Multiple-Family | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Manufactured Housing | 34.2 | 7.1 | 2.4 | 1.6 | 25.8 | 60.0 | 8.0 | 75.4 |
| Subtotal | 97.4 | 20.1 | 6.8 | 5.3 | 133.1 | 196.9 | 26.2 | 136.7 |
| Commercial | | | | | | | | |
| Retail Trade | 0.3 | 0.1 | <0.1 | <0.1 | 0.1 | 0.4 | 0.1 | 33.3 |
| Services | 0.6 | 0.1 | <0.1 | <0.1 | 0.2 | 0.8 | 0.1 | 33.3 |
| Subtotal | 0.9 | 0.2 | 0.1 | <0.1 | 0.3 | 1.2 | 0.2 | 33.3 |
| Industrial | | | | | | | | |
| Light Industry | 2.7 | 0.6 | 0.2 | 0.1 | 0.8 | 3.5 | 0.5 | 29.6 |
| Heavy Industry | 5.1 | 1.1 | 0.4 | 0.2 | 1.5 | 6.6 | 0.8 | 29.4 |
| Subtotal | 7.8 | 1.7 | 0.6 | 0.3 | 2.3 | 10.1 | 1.3 | 29.5 |
| Transportation, Communications & Utilities | | | | | | | | |
| Streets & Alleys | 188.7 | 39.0 | 13.1 | 7.9 | 106.3 | 295.0 | 39.2 | 56.3 |
| Railroads | 117.1 | 24.3 | 8.1 | 4.6 | 52.9 | 170.0 | 22.6 | 45.2 |
| Utilities | 0.1 | 0.0 | <0.1 | 0.1 | 1.9 | 2.0 | 0.4 | 1,900.0 |
| Subtotal | 305.9 | 63.3 | 21.2 | 12.6 | 161.1 | 467.0 | 62.2 | 52.6 |
| Cultural, Entertainment, & Recreational | | | | | | | | |
| Public & Quasi-Public | 51.5 | 10.7 | 3.6 | 1.4 | 2.0 | 53.5 | 7.1 | 3.9 |
| Parks & Recreation | 19.7 | 4.1 | 1.4 | 0.6 | 3.0 | 22.7 | 3.0 | 15.2 |
| Subtotal | 71.2 | 14.8 | 5.0 | 2.0 | 5.0 | 76.2 | 10.1 | 7.0 |
| **TOTAL DEVELOPED LAND** | 483.3 | 100.0 | 33.6 | 20.2 | 299.2 | 751.4 | 100.0 | 61.9 |

* Based on an estimated population of 1,440.
** Based on a 2020 target population of 3,729.

**TABLE 9**
**FUTURE LAND USE FORECAST**
**SOUTHWEST QUADRANT**
**City of Wellington, Kansas**

| LAND USE CATEGORY | EXISTING AREA IN ACRES | PERCENT OF TOTAL | DEVELOPED ACRES PER 100 POPULATION 1997* | DEVELOPED ACRES PER 100 POPULATION 2020** | ACRES ADDED | TOTAL DEVELOPED ACRES 2020 | PERCENT OF TOTAL | PERCENT INCREASE 1997-2020 |
|---|---|---|---|---|---|---|---|---|
| Residential | | | | | | | | |
| Single-Family | 158.5 | 26.0 | 6.7 | 8.6 | 20.0 | 178.5 | 27.7 | 12.6 |
| Two-Family | 0.9 | 0.1 | <0.1 | 0.1 | 2.0 | 2.9 | 0.4 | 222.2 |
| Multiple-Family | 3.1 | 0.5 | 0.1 | 0.2 | 2.0 | 5.1 | 0.8 | 64.5 |
| Manufactured Housing | 4.7 | 0.8 | 0.2 | 0.2 | 0.8 | 5.5 | 0.9 | 17.0 |
| Subtotal | 167.2 | 27.4 | 7.0 | 9.0 | 24.8 | 192.0 | 29.8 | 14.8 |
| Commercial | | | | | | | | |
| Retail Trade | 8.2 | 1.4 | 0.3 | 0.5 | 3.6 | 11.8 | 1.8 | 43.9 |
| Services | 11.8 | 1.9 | 0.5 | 0.4 | 0.0 | 8.2 | 1.3 | -43.9 |
| Subtotal | 20.0 | 3.3 | 0.8 | 0.9 | 3.6 | 20.0 | 3.1 | 0.0 |
| Industrial | | | | | | | | |
| Light Industry | 8.1 | 1.3 | 0.3 | 0.4 | 0.0 | 8.1 | 1.3 | 0.0 |
| Heavy Industry | 7.7 | 1.3 | 0.3 | 0.3 | 0.0 | 7.7 | 1.2 | 0.0 |
| Subtotal | 15.8 | 2.6 | 0.6 | 0.7 | 0.0 | 15.8 | 2.5 | 0.0 |
| Transportation, Communications & Utilities | | | | | | | | |
| Streets & Alleys | 176.3 | 28.9 | 7.4 | 8.6 | 1.0 | 177.3 | 27.5 | 0.5 |
| Railroads | 47.1 | 7.7 | 2.0 | 1.9 | 0.0 | 39.8 | 6.2 | 0.0 |
| Utilities | 3.7 | 0.6 | 0.2 | 0.2 | 0.0 | 3.7 | 0.6 | 0.0 |
| Subtotal | 227.1 | 37.2 | 9.6 | 10.7 | 1.0 | 220.8 | 34.3 | 0.4 |
| Cultural, Entertainment, & Recreational | | | | | | | | |
| Public & Quasi-Public | 43.1 | 7.1 | 1.8 | 2.0 | 0.0 | 43.1 | 6.7 | 0.0 |
| Parks & Recreation | 137.1 | 22.5 | 5.8 | 7.5 | 15.9 | 153.0 | 23.7 | 8.8 |
| Subtotal | 180.2 | 29.6 | 7.6 | 9.5 | 15.9 | 196.1 | 30.4 | 8.8 |
| **TOTAL DEVELOPED LAND** | 610.2 | 100.0 | 25.6 | 30.8 | 45.3 | 644.7 | 100.0 | 7.4 |

* Based on an estimated 1997 population of 2,113.
** Based upon a 2020 target population of 2,053.

TABLE 10
FUTURE LAND USE FORECAST
City of Wellington, Kansas

| LAND USE CATEGORY | EXISTING AREA IN ACRES | PERCENT OF TOTAL | DEVELOPED ACRES PER 100 POPULATION 1997* | DEVELOPED ACRES PER 100 POPULATION 2020** | ACRES ADDED | TOTAL DEVELOPED ACRES 2020 | PERCENT OF TOTAL | PERCENT INCREASE 1997-2020 |
|---|---|---|---|---|---|---|---|---|
| Residential | | | | | | | | |
| Single-Family | 726.1 | 28.8 | 8.4 | 8.0 | 352.8 | 1,078.9 | 31.6 | 48.5 |
| Two-Family | 3.4 | 0.5 | <0.1 | 0.1 | 12.4 | 15.8 | 0.5 | 364.7 |
| Multiple-Family | 37.6 | 1.5 | 0.4 | 0.4 | 10.7 | 48.3 | 1.4 | 28.4 |
| Manufactured Housing | 49.0 | 2.0 | 0.6 | 0.6 | 32.8 | 81.8 | 2.3 | 66.9 |
| Subtotal | 816.1 | 32.4 | 9.4 | 9.1 | 408.7 | 1,224.8 | 35.8 | 50.0 |
| Commercial | | | | | | | | |
| Retail Trade | 56.1 | 2.2 | 0.6 | 0.6 | 18.7 | 74.8 | 2.2 | 33.3 |
| Services | 43.3 | 1.7 | 0.5 | 0.5 | 26.9 | 70.2 | 2.1 | 62.1 |
| Subtotal | 99.4 | 3.9 | 1.1 | 1.1 | 45.6 | 145.0 | 4.3 | 45.8 |
| Industrial | | | | | | | | |
| Light Industry | 32.9 | 1.3 | 0.4 | 0.3 | 13.9 | 46.8 | 1.4 | 42.2 |
| Heavy Industry | 64.2 | 2.6 | 0.7 | 0.7 | 26.4 | 90.6 | 2.7 | 41.1 |
| Subtotal | 97.1 | 3.9 | 1.1 | 1.0 | 40.3 | 137.4 | 4.1 | 41.5 |
| Transportation, Communications & Utilities | | | | | | | | |
| Streets & Alleys | 645.9 | 25.6 | 7.4 | 6.9 | 280.8 | 926.7 | 27.2 | 43.4 |
| Railroads | 191.5 | 7.6 | 1.5 | 1.7 | 45.5 | 237.0 | 6.9 | 23.7 |
| Utilities | 7.5 | 0.3 | 0.1 | 0.1 | 6.8 | 14.3 | 0.4 | 90.6 |
| Subtotal | 844.9 | 33.5 | 9.7 | 8.8 | 333.1 | 1,178.0 | 34.5 | 39.4 |
| Cultural, Entertainment, & Recreational | | | | | | | | |
| Public & Quasi-Public | 168.4 | 6.7 | 1.9 | 1.4 | 16.8 | 185.2 | 5.4 | 9.9 |
| Parks & Recreation | 492.9 | 19.6 | 5.7 | 4.1 | 50.8 | 543.7 | 15.9 | 10.3 |
| Subtotal | 661.3 | 26.3 | 7.6 | 5.5 | 67.6 | 728.9 | 21.3 | 10.2 |
| **TOTAL DEVELOPED LAND** | 2,518.8 | 100.0 | 29.9 | 25.5 | 895.3 | 3,414.1 | 100.0 | 35.5 |

* Based on an estimated population of 8,681.
** Based on a 2020 target population of 13,415.

A detailed analysis of each quadrant follows.

*NORTHWEST*

Residential Uses are forecasted to expand the most during the planning period. Although the majority of this increase will be single family residential, larger proportional increases are likely for multi-family units and manufactured housing. Overall, residential acreage has the potential for an enlargement of up to 140 acres or more in the years ahead.

Commercial Development is predicted to expand at a very slow rate due to lack of prime development space. Based on the statistical calculations, commercial acres could expand by up to 6 acres by the year 2020. However, commercial uses generally do not mix well with residential neighborhood development and should be discouraged through appropriate zoning practices.

Industrial Expansion is forecasted to remain at very low levels due to general incompatibility in the neighborhood setting. Some small increase is possible in the light industrial category, but no increase is expected in the heavy industrial category. As a result, the land use forecast reflects an increase of around 2.6 acres classified as industrial acreage over the next 20 years.

Transportation, Communications, and Utilities as a group are among the ancillary types of development induced by expansions in the other categories. As the City expands, there will be continuing need for additional streets, water and sewer services, and similar utilities. Based on the forecasted growth patterns in the northwest quadrant, these uses are expected to show a modest increase of up to 50 acres or more during the planning period, although a slightly smaller requirement per 100 population is likely in the future due to more modern platting practices, and the extent to which these facilities have already been developed in and around the area.

Cultural, Entertainment, and Recreational uses include the parks, public institutions, and major facilities which represent the basic fabric of the community. These uses are also among the induced categories which will grow in response, and in proportion to the overall growth in the community generally. The forecast anticipates some degree of continued growth in the acreage devoted to these types of uses, although the results of the land use field survey indicate such facilities to be well developed at the present time. On this basis, the forecast anticipates an increase of up to 35 acres or more over the course of the planning period.

*NORTHEAST*

Residential Uses will constitute most of the quadrant's expansion during the planning period. Within this increase, the majority will be single family residential, although larger proportional increases are likely for multi-family units and manufactured housing. With this in mind, residential acreage has the potential for an enlargement of up to 153 acres or more in the years ahead.

Commercial Development could expand by up to 34 acres or more by the year 2020, with significant growth transpiring along U.S. Highway 160. However, commercial uses should be discouraged from mixing with residential neighborhood development through appropriate zoning practices, not only in this quadrant but in all sections of the community as well.

Industrial Expansion in this quadrant is likely to be concentrated in and around the industrial park during the planning period, with the majority of industrial growth will be in the heavy industry category. Thus, the land use forecast reflects an increase of around 35 acres of land used for industrial purposes over the next 20 years.

Transportation, Communications, and Utilities are accessory types of development induced by expansions in other land use categories. As the community experiences future growth, there will be an ongoing need for additional streets, water and sewer services, and similar utilities. Due to the forecasted growth patterns in the area, these uses are anticipated to increase around 89 acres or more during by the year 2020.

Cultural, Entertainment, and Recreational uses include the parks, public institutions, and major facilities which represent the basic fabric of the community. In addition, they are induced categories which will grow in response, as well as in proportion to the overall growth in the community generally. The forecast anticipates continued growth in the acreage devoted to these types of uses, with an increase of up to 12 acres or more predicted during the course of the planning period.

SOUTHEAST

Residential Uses are forecasted to expand by approximately 133 acres during the planning period. This increase will primarily be single family residential, with larger proportional increases are likely for multi-family units and manufactured housing as well.

Commercial Development is predicted to experience very slight growth during the planning period, thus remaining fairly stable. Regarding new development, appropriate zoning practices should discourage any commercial uses proposed in the quadrant from mixing with residential neighborhood development.

Industrial Expansion is forecasted to remain at very low levels due to general incompatibility in the neighborhood setting. As a result, the land use forecast reflects only a small increase during the planning period.

Transportation, Communications, and Utilities are subsidiary types of development influenced by the expansions in other categories. Therefore, there will be continuing need for additional infrastructure as the community expands. With this in mind, the forecast predicts an expansion of over 100 acres or more by the year 2020.

Cultural, Entertainment, and Recreational uses include the parks, public institutions, and major facilities which represent the basic fabric of the community. These uses, which are shaped by other categories are predicted to increase by approximately 5 acres during the course of the planning period.

SOUTHWEST

Little development of any kind is expected in the southwest quadrant during the planning period. This is due primarily to the floodplain adjacent to the corporate boundary, which significantly constrains most types of future development. However, residential development of an infill nature could occur along U.S. Highway 81 next to areas already developed. In addition, while parks and recreation uses are projected to also increase, agricultural and recreational uses will remain the dominant uses of land throughout the planning period.

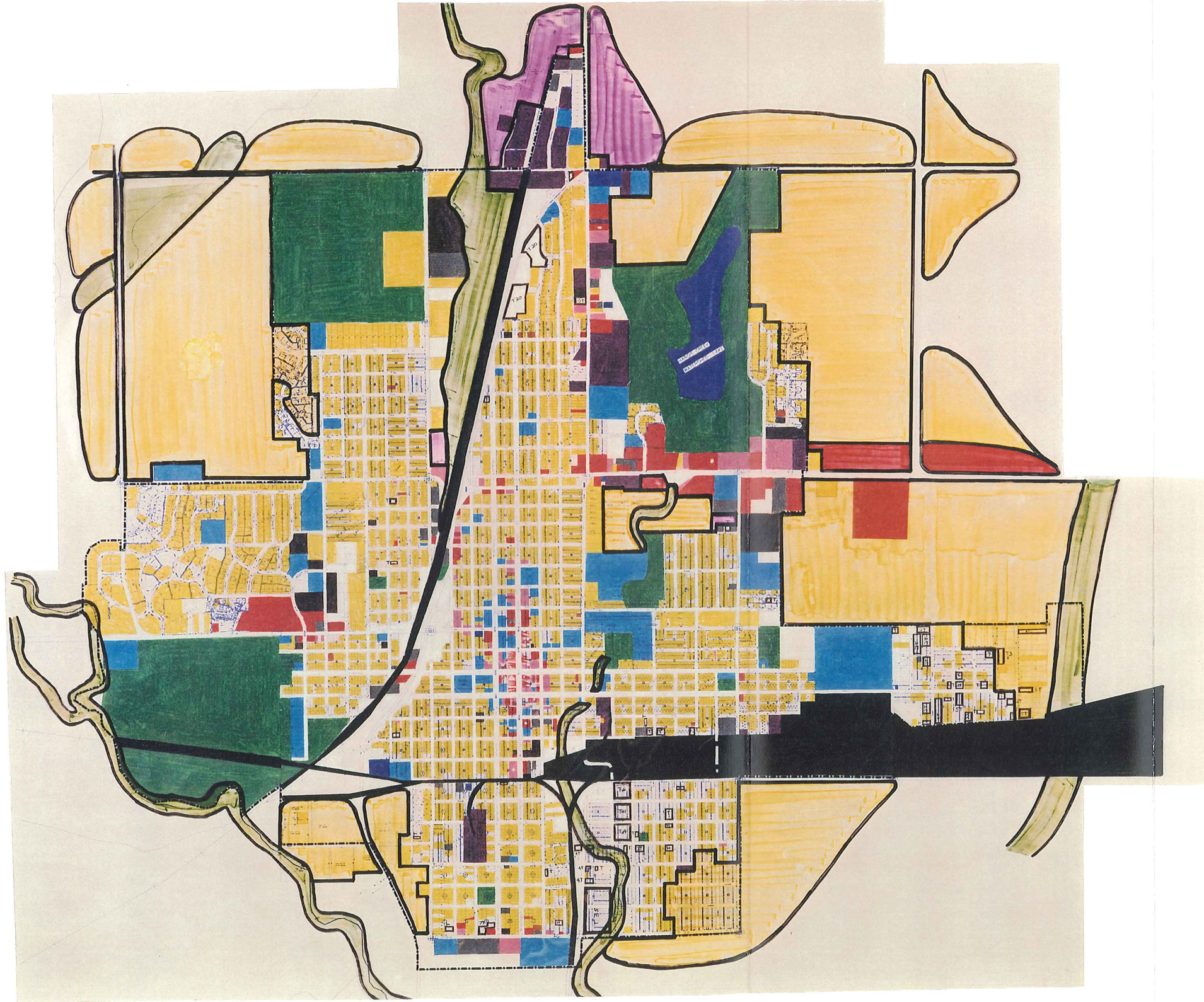
## FUTURE LAND USE PATTERNS

The land use forecast, as influenced by physical conditions and current development trends, provides a foundation upon which a plan for future expansion patterns in and around the city can be formulated. The plan, presented graphically on the following figure, illustrates potential patterns of development in the community, provided the previously summarized influences materialize substantially as envisioned by the planning studies.

The figure reflects the continued industrial expansion north of the community adjacent to the industrial park, with commercial growth projected to occur along U.S. Highway 160 in both the northeast and northwest quadrants. In addition, future residential development is shown to take place primarily in the northwest, northeast, and southeast quadrants with a small section of the southwest quadrant anticipated to incur future residential growth. Furthermore, the figure illustrates the presence of the major floodplains and drainageways as well as the approximate locations for future public facilities such as parks in the community.

## COMMUNITY DEVELOPMENT RATIOS

The land use ratios, that is, the acreage utilization figures per 100 population, developed in the land use forecast, are an expression of the physical space requirements of a given population base. Community planning and development experience has shown that cities across the country demonstrate remarkably similar trends with regard to use of land, due to common values, social views, and platting practices. For



E&R

LEGEND

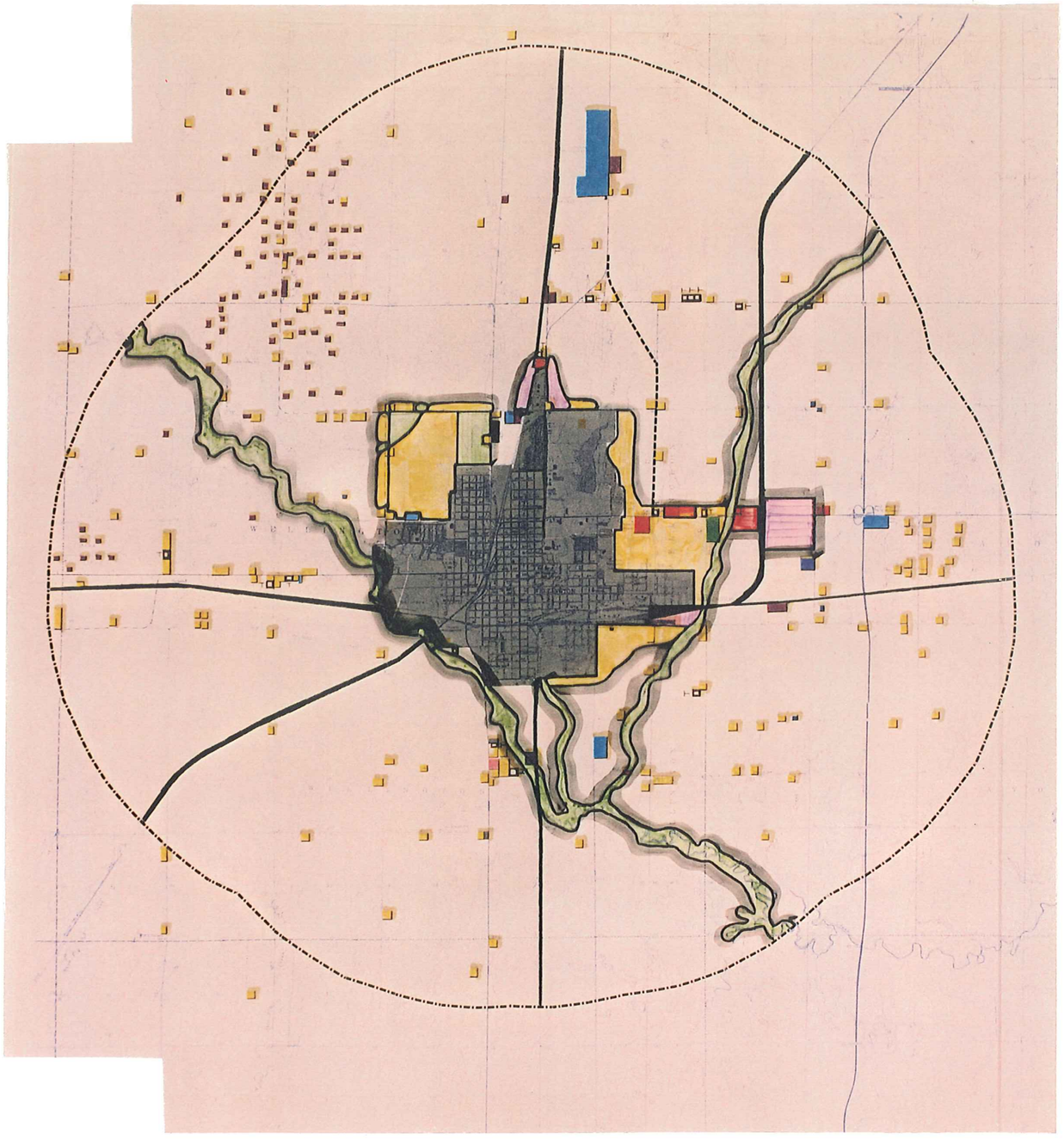
- SINGLE FAMILY RESIDENTIAL
- TWO FAMILY RESIDENTIAL
- MULTI-FAMILY RESIDENTIAL
- MANUFACTURED HOUSING
- SERVICE COMMERCIAL
- RETAIL COMMERCIAL
- LIGHT INDUSTRIAL
- HEAVY INDUSTRIAL
- UTILITIES & COMMUNICATIONS
- PUBLIC/QUASI-PUBLIC
- PARKS & RECREATION
- RAILROAD
- UNDEVELOPED LAND
- MUNICIPAL BOUNDARY

- FUTURE RESIDENTIAL
- FUTURE COMMERCIAL
- FUTURE INDUSTRIAL
- FUTURE PARKS & RECREATION
- FUTURE RAILROAD

Figure 3

**FUTURE LAND USE**

*City of Wellington, Kansas*



E&R

LEGEND

- SINGLE FAMILY RESIDENTIAL
- MULTI-FAMILY RESIDENTIAL
- MANUFACTURED HOUSING
- SERVICE COMMERCIAL
- RETAIL COMMERCIAL
- LIGHT INDUSTRIAL
- HEAVY INDUSTRIAL
- UTILITIES & COMMUNICATIONS
- PUBLIC & QUASI-PUBLIC
- PARKS & OPEN SPACE
- RAILROADS
- STUDY AREA BOUNDARY
- FUTURE RESIDENTIAL
- FUTURE COMMERCIAL
- FUTURE INDUSTRIAL
- FUTURE PARKS & OPEN SPACE

Figure 3a

**LONG RANGE LAND USE PATTERNS**

*City of Wellington, Kansas*

the purposes of comparison, the ratios developed for the Wellington community can be compared to other similar cities in the mid-states region. The figures shown in the following table outline a comparison of Wellington with 25 other cities located across the midwest. The 25-city average has been assembled from actual land use research conducted by the consultant in each of the subject communities, thus assuring comparability of methodologies.

**TABLE 11**
**LAND USE DEVELOPMENT RATIOS***
**City of Wellington, Kansas and 25 Other Cities**

| LAND USE TYPE | WELLINGTON 1997 | WELLINGTON 2020 | 25-CITY AVERAGE |
|---|---|---|---|
| Single-Family Residential | 8.4 | 8.0 | 6.4 |
| Two-Family Residential | <0.1 | 0.1 | 0.1 |
| Multiple-Family Residential | 0.4 | 0.4 | 0.2 |
| Manufactured Housing | 0.6 | 0.6 | 0.3 |
| Retail Trade | 0.6 | 0.6 | 0.6 |
| Service Business | 0.5 | 0.5 | 0.5 |
| Light Industry | 0.4 | 0.3 | 1.0 |
| Heavy Industry | 0.7 | 0.7 | 0.7 |
| Public & Quasi-Public | 1.9 | 1.4 | 2.7 |
| Utilities & Communications | 0.1 | 0.1 | 0.5 |
| Parks & Recreation | 5.7 | 4.1 | 1.2 |
| Streets & Alleys | 5.9 | 6.9 | 5.7 |
| Railroads | 1.5 | 1.7 | 1.1 |
| TOTAL | 26.7 | 25.5 | 21.0 |

* Acres per 100 population.

The comparison illustrates a general similarity between Wellington and the 25-City average in the retail trade and industry categories, while other ratios for Wellington are generally higher than those of the average, with noticeable differences occurring in the single-family residential, manufactured housing, parks and recreation, and streets and alleys classifications.

Due to public preference for low-density development, it is doubtful that the characteristics of the 25-City average will prevail during the planning period. However, it is important to note that such preferences significantly influence the amount of physical space required for future development in the community. For example, because of changes in modern platting practices, the statistical requirement for alleys will decline slightly, as will requirements for items such as railroads due to the extent of present development. In addition, it is also probable that through time the 25-City average will trend upward due to these new lower density development patterns.

## DEVELOPMENT CONSTRAINTS

Earlier investigations and studies of conditions indicated the presence of several physical constraints which will impact the extent and direction of future community development. Among these are the drainage areas of the southwest, west, and northeast sections of the city; the presence of two major highways as well as two railroads; and the limitations represented by soil conditions and floodplains.

Development will also be influenced by the community facilities such as the airport and schools, which will impact the location and density of future development in the City significantly. In addition, existing industrial development in the northern portion of the community and commercial development along the highways will have an influence on future development.

In order to manage and guide continuing expansion toward compatible development patterns, the Future Land Use Plan must be supplemented with sound zoning and subdivision controls as well as formal policies for review of all development proposals as part of the central administrative process. In this respect, primary responsibilities for monitoring emerging development trends and guiding urban expansion toward

directions established by the plan rests with the Planning Commissions action in its role as technical advisor to the Governing Body.

Although some degree of physical constraint for development will always be present in all areas of the community, the background analyses and the land use development plan show that such constraints, with proper practice, need not severely limit future expansion and within the framework from occurring in a rational and planned manner.

**METHODS OF IMPLEMENTATION**

Implementing the long-range land use plan for the community is a continuing process carried forward by the daily decisions of government officials. To a high degree, the ultimate quality and utility of the future community will depend on the policies, controls and actions of the City in guiding future growth and expansion toward development patterns which are consistent and suitable within the present community and which will contribute to an orderly and economical growth pattern. Implementation of a land use plan is facilitated through official development policies, application of appropriate environmental controls, and a sound policy of future annexation. Realization of the full scope and intent of future development guidelines is dependent upon close cooperation of both the public and private sectors to achieve a balance and cohesive community which can continue to offer a healthful and quality living environment.

Some specific actions the City can take with regard to planning implementation include the following:

*Advance Land Acquisition.* The City should acquire land for playgrounds, neighborhood parks, and other open spaces in advance of need. Land reserved in this manner can, if reserved in appropriate areas, become the focal points for new residential neighborhoods.

*Code Enforcement.* The City should continue an active policy of building code enforcement aimed at preservation of property values, providing safe and sanitary living accommodations and providing community amenity.

*City Beautification.* It should be the policy of the City to enhance the environment through tree planting programs and landscaping of all parks and public buildings, and to encourage appropriate landscaping of all private property.

*Annexation* Existing areas of suburban development, as well as those which may emerge in the future, should be considered for annexation to the City when:

1. The fringe area is needed for continued orderly growth and the prosperity of the City.
2. Fringe lands are needed so that public service facilities, such as water and sewer systems, street extensions and recreational facilities, may be planned and provided on a rational and economic basis.
3. Fringe areas need to be brought within and developed under City land use controls; planning, zoning, housing codes, and building regulations.
4. Fringe areas may be subject to City protective regulations and receive City police and fire services.
5. The fringe area may be subjected to City health and sanitation regulations and receive these services.
6. Residents of the fringe areas actually benefit from many of the services and facilities provided by the City and should bear their full share of the costs.

*Public Education.* It should be the policy of the City to keep the general public constantly informed about community growth issues through all available means. Experience has shown that the success of the planning implementation program will be greatly aided or hindered by the degree of understanding of the general public. As citizens become more knowledgeable about the structure and process of local government, there is heightened cooperation with a resultant benefit to the processes and practices of building the new community.

## SUMMARY

The studies of existing land use patterns and development trends indicate that a continued expansion of land use in all categories is likely during the planning period. As this expansion occurs, it will be particularly important that the planning recommendations be implemented and maintained in order to preserve and extend efficient development practices and appropriate growth patterns.

While the primary impetus for plan implementation must come from city government, full-range implementation will ultimately require the understanding and cooperation of all elements of the private sector as well. Coordination of governmental policies with the development actions of the private sector is one of the important responsibilities of the Planning Commission. Acting in its official capacity as technical advisor to the governing body, the Planning Commission can have a significant influence on long-range development patterns through the process of participating in the formulation of day-to-day policy actions and decisions. Ultimately, the course and effect of these actions will significantly impact the direction of the City, and will be an elemental ingredient in the effort to maintain a quality living environment for all citizens of the community, present and future.

## SECTION III

## TRANSPORTATION

### INTRODUCTION

Throughout the New World, and especially on the North American continent, location and design of communities large and small have been significantly influenced by the presence of major transportation systems. At the present time, three primary transportation networks serve the Wellington area; those being air, rail and surface vehicular systems. Although technological means such as pipelines and electrical systems also qualify as forms of transportation, they are usually not significant as physical development considerations.

Because transportation systems have the capability to strongly influence patterns of land utilization, it is important that plans for expansion of existing systems be coordinated closely with the purpose and intent of the other planning studies, particularly the Future Land Use Plan. In this context, transportation systems, especially the street and highway system, help to define community growth patterns and provide corridors of light, air, and green space, as well as opportunity for routing of utility systems. Because of the significance of these corridors to the future growth patterns of the city, it is appropriate that they be considered as an integral aspect of the comprehensive planning process.

Across the City of Wellington, the dominant feature of transportation is the system of streets and roads, which provides internal access throughout the community, but also connects with the streets system in adjacent rural areas to form an overall vehicular transportation network. A secondary major feature of transportation is represented by the railroads, however, these facilities do not impact the local population on a day-to-day basis for the most part, and will not significantly impact future growth patterns beyond the effects of the current configuration. Accordingly, it is the central purpose of the transportation study to review the present system of streets and highways in the planning jurisdiction, and to explore ways and means by which the system may be improved in all quadrants of the City with the intent to provide adequate service to developing areas while promoting safe and efficient interconnection with the existing system in both the incorporated and unincorporated portions of the planning jurisdiction.

### RAIL TRANSPORTATION

The City of Wellington is located along one of the main lines of the Burligton Northern - Santa Fe Railway. This line passes through the city and extends southwest through the states of Texas, New Mexico, Arizona, and California. According to city officials, approximately 60 trains transit the City on these tracks each day. In addition, the railroad company also maintains extensive facilities in the central portion of the city, including switching areas.

Additionally, the Union Pacific Railway also maintains a line running from north to south through the central part of the city. The line extends north toward Wichita and Salina, as well as south to Oklahoma City and the Dallas – Ft. Worth Metroplex.

The railroads affect both the physical and economic aspects of the community, and have been among the important influences in historic development patterns. Due to the present extent of development, it is unlikely that major new rail corridors will be developed during the planning period, and associated employment levels are expected to remain relatively stable over the period as well.

Concerning the long range planning considerations, the rail corridors represent barriers, both effective and perceived, between neighborhood units at the present time, and this influence is expected to continue to some extent in the future. One of the planning challenges during the planning period will be to devise communitywide service and transportation routes which can serve to overcome these divisions and which will tie neighborhood areas and the overall community together as a whole. This will be one of the important functions of the long-range major street plan developed in a later section of the transportation study.

## AIR TRANSPORTATION

The City of Wellington is served by a local airport which is located immediately north of the community in the northeast quadrant. The airport has a fixed-base operator and a number of locally based aircraft. The airport does not have a regularly scheduled commercial air-carrier available, however, commercial air charter service can be arranged. The nearest commercial air carrier service is at Wichita, a distance of approximately 30 miles.

At the present time, the Wellington airport has available an asphalt north-south runway, 3,500 feet in length. Navigation and landing aids include a published VOR-DME approach to runway 17, a non-directional beacon, visual approach slope indicators and several different types of lighting aids. The airport features low intensity runway lighting and a parking/apron area with 32 tie-downs. Currently there are 43 hangar spaces available. Overall facilities include a limited terminal area with a pilot's lounge and a paved vehicle parking area for patrons and visitors. The airport is classified as a basic utility facility.

Due to the age of present amenities and expanding needs an updated master plan for future airport expansion and modernization is currently being prepared. Among the major recommendations of this new plan are the following: runway and taxiway improvements, parking apron and tie-down expansions, additional hangar space, terminal building upgrading, enlargement of automobile parking capacity, and fuel storage improvements.

In addition to the value of the airport for local and regional aviation, the location also has long-range potential for continued development of an airport-related industrial park. Toward this end, land use planning for the facility should include consideration of continuing industrial and commercial expansion, and should guide such development toward patterns which will be compatible with the central functions of the airport as an air traffic facility. All such development should occur within applicable FAA guidelines for airport area industrial development.

The airport is an important community facility, but one which has many unique requirements if the function and utility are to be preserved and expanded. In order to assure a long range use potential, it will be important to protect the facility from encroachment of incompatible uses, and to strictly observe FAA guidelines for height obstruction control and protection of approach slopes. Where these guidelines have been effective, the airport can be expected to continue to serve the community and region throughout the foreseeable future.

## SURFACE COMMERCIAL TRANSPORTATION

Provision of nearly all of the materials and goods of local commerce, including supply of basic essentials, is dependent upon surface commercial transportation. In addition to rail access, the community is served by a number of motor freight truck lines which operate over the area network of state and federal highways. Through these systems, access to almost any location is possible within a very short time over the network of major regional and national travelways.

Surface commercial transportation, other than rail, is directly dependent upon availability of major highway corridors supplemented by a quality system of local streets and roads. In this sense, efficient surface commercial transportation at the local level is best affected through maintenance of a network of major streets adequate to provide direct access to all portions of the community with immediate and efficient connection with the external highway system, identification and planning of the major street network is one of the primary purposes of the transportation study.

Because surface transportation corridors are of such immediate effect to short and long range community development patterns, it will become increasingly important for the City to plan for and maintain a surface transportation network that emphasizes the efficient flow of traffic into and through the community.

## CLASSIFICATION OF STREETS AND ROADS

For the purposes of street system planning, vehicular travelways are classified according to function and traffic-carrying capacity. Four classifications are commonly recognized, which include local streets,

collector streets, arterial streets, and expressways. General characteristics of these street classifications include the following:

Local Streets

The primary purpose of a local street is to provide access to abutting property. Traffic generated from abutting land use is generally light. Through traffic, buses and large trucks are discouraged from using local streets.

The traffic volume on a local street is normally related to the residential dwelling unit. It has been found in many national transportation studies that each dwelling unit will generate from 4 to 10 trips per day. Studies indicate that volumes on local streets usually do not exceed more than 600 vehicles per day.

Right-of-way widths on local streets will vary from 50 to 60 feet with pavement widths of 26 to 48 feet. In low-density residential areas, a pavement width of 28 to 32 feet on a 60-foot right-of-way is often practical.

The local street in a residential area serves as open space and provides light and air to adjoining properties. The local street also acts as a fire stop between blocks. In residential areas, utilities should be located underground and within the street right-of-way except in instances where it is not feasible to locate them underground.

Local streets are the major elements in the design composition of a city, providing space for grass and tree planting and arranging properties in various sizes and shapes of blocks with an irregular or rectangular street pattern.

Collector Streets

The function of the collector street is to collect traffic from the local streets and distribute it to the arterial streets. Land access is a secondary function; parking should be controlled and design should emphasize traffic movement. Curb cuts should be kept to a minimum. Traffic safety is an important design consideration for the collector street as well.

Since collector streets must move more traffic at an increased speed, they require more width than local streets. It is desirable to provide a 70- to 90-foot right-of-way and pavement width of 40 to 48 feet. The traffic volumes on collector streets will vary greatly depending on location, kind of land use and extent of development. Collector streets should not carry more than 2,000 to 3, 000 vehicles per day. Where this volume is exceeded, the collector street is probably carrying through traffic. The spacing of collector streets is influenced by land use, density of development and traffic generating characteristics. A spacing of 1/4 to 1/2 mile is a reasonable standard where conditions are such that it can be achieved.

Arterial Streets

The arterial system is a network of through streets serving the major traffic movements. Arterial streets not only interconnect the various sections of the City, but also interconnect the City with the external highway system. Arterial streets carry the bulk of traffic in the City's major street system. Arterial street traffic volumes may vary from as low as 2,000 to more than 20,000 vehicles per day in an urban setting.

Arterial streets often have right-of-way widths of 80 to 100 feet and pavement widths of 48 to 72 feet. New arterial streets should be designed with rights-of-way from 100 to 150 feet wide. The greater width will provide room to divide opposing traffic lanes and will provide frontage roads on either side to reduce side friction caused by automobiles turning into and from adjacent land uses.

Expressways

Expressways are very large, high-capacity travelways typified by the divided median, controlled access highway common to the federal interstate system. Such roadways feature multiple lane development and are designed to carry high volumes of mixed traffic at high speeds. Accordingly, expressways are designed to accommodate current and anticipated future traffic conditions, and may feature 4 to 12 traffic lanes requiring several hundred feet of right-of-way width. In the Wellington community, the nearest expressway is Interstate 35, located approximately 2 miles east of the city.

## LOCAL AND REGIONAL HIGHWAY SYSTEM

The City of Wellington is located at the juncture of US Highways 81 and 160. The community is bisected on a north-south axis by US 81, while US 160 intersects the midsection of the community on an east-west axis. A third major highway corridor, I-35, also impacts and influences the Wellington community, although the physical location is approximately 2 miles east of the current corporate boundary of the community.

These major travelways provide the primary means of moving the majority of all passengers and freight entering or leaving the community. Through interconnection with the national system of highways and expressways, these travelways provide an important surface transportation network which allows external routing to all major metropolitan and market areas in the region and nation with delivery times of only one to four days at most. With no rail or air passenger service, the network of local and regional highways is an important aspect of economic development, both from the availability of transportation and mobility, and from the induced effects of highway related tourism and travel which annually results in substantial expenditures by the traveling public for purchases of food, fuel, lodging and recreation.

Where these major transportation corridors intersect areas of urban development, however, special problems exist due to mixing of through traffic with locally generated vehicular volumes. Examples of this would be along the US Highway 160 corridor at the southern boundary of the northwest quadrant, as well as the intersection of US Highway 81 and US Highway 160 in the northeast quadrant. In these locations, local traffic generated in the adjacent neighborhoods, as well as large volumes of traffic generated by the strip commercial development located next to the highway right-of-way mix with the through traffic carried by the highways.

Ideally, through traffic should be quickly and efficiently routed through and around the community with minimum points of major conflict, while maintaining an adequate opportunity for interfacing of the interior and exterior systems. Safe and efficient interfacing of interior and exterior vehicular corridors is one of the primary goals of the major street plan.

## COMMUNITY STREET SYSTEM

The community street system within the incorporated area of the community is comprised of a network of arterial, collector and local streets which provide access to all areas of the community and individual locations within. This system of travelways allows connection with the primary highway corridors, and serves as a distributor for the traffic volumes entering and leaving the community via the highways.

The internal street system within the Wellington community utilizes a typical grid pattern developed on a north-south axis, except for areas of recent development where curvilinear designs oriented toward existing topography have been developed. This pattern is more or less typical of most high plain communities and is a reflection of the cultural heritage of the early town builders, who brought European design influence with them to the plains during the settlement period.

Perhaps one of the oldest community design patterns, the standard grid system is, however, not always advantageous in areas of rapid topographic change and often results in areas of platting where streets and alleys are unusable and building sites are of marginal utility due to drainage problems, steep slopes and other topographic characteristics. It is probable, and even desirable, that in the years ahead, development practices will continue to move away from repetition of past platting errors in favor of design better related to existing conditions.

Based on observation of traffic patterns and present street usage, the following figure illustrates the current major street system according to the classifications outlined earlier.

A comparison of the various functional categories of streets in and around Wellington in terms of mileage is outlined in the following table.

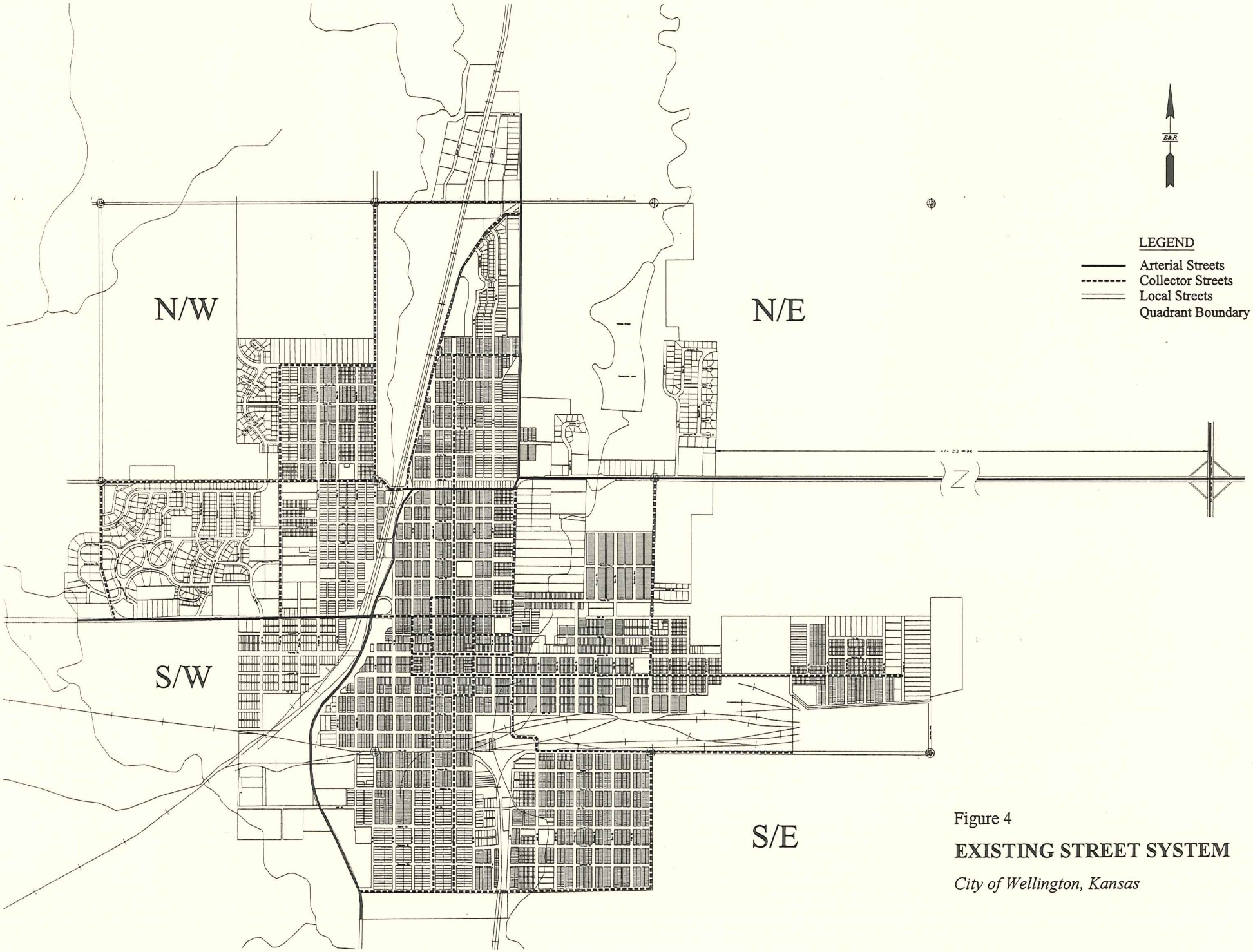



Figure 4

**EXISTING STREET SYSTEM**

*City of Wellington, Kansas*

**TABLE 12**
**EXISTING STREET SYSTEM***
**FUNCTIONAL CLASSIFICATION**
**City of Wellington, Kansas**

| FUNCTIONAL CLASSIFICATION | N/W | S/W | N/E | S/E | CITY OF WELLINGTON |
|---|---|---|---|---|---|
| Arterials | 1.6 | 1.2 | 2.9 | 0.0 | 5.7 |
| Collectors | 2.6 | 2.3 | 2.4 | 2.4 | 9.7 |
| Local Streets | 11.2 | 15.8 | 11.4 | 11.5 | 49.9 |
| Platted Streets not Open | 0.6 | 0.0 | 0.1 | 2.6 | 3.3 |
| Subtotal Streets | 16.0 | 19.3 | 16.8 | 16.5 | 68.6 |
| Platted Alleys | 2.6 | 4.5 | 5.3 | 5.3 | 17.7 |
| **TOTAL** | 18.6 | 23.8 | 22.1 | 21.8 | 86.3 |

*Estimated Mileage

The table shows that there are a total of over 68 miles of platted streets and nearly 18 miles of alleys within the incorporated area of the city, with most of the street system being classified as local streets. The southwest quadrant has the largest amount of street mileage with almost 24 miles of streets, approximately 16 miles of those being local streets. Mileage contained in arterials is distributed in three quadrants with the southeast quadrant containing no arterials. Collector streets are distributed fairly evenly throughout the four quadrants.

When platted alleys are included, there are over 86 miles of vehicular travelways inside the corporate limits of the city. Alleys are distributed through the entire city, with the northwest quadrant having the least incidence, which is due primarily to the curvilinear design of newer subdivisions within the quadrant which do not have platted alleys.

## EXISTING STREET SURFACES

Types of street surfaces vary somewhat between the quadrants, with asphaltic surfacing being the predominate material. Concrete streets occur most often in association with highway corridors, while gravel is present only in fringe areas for the most part. The following table summarizes the street system mileage by surface type.

**TABLE 13**
**EXISTING SURFACE SYSTEM STREET MILEAGE***
**City of Wellington, Kansas**

| SURFACE TYPE | N/W | S/W | N/E | S/E | CITY OF WELLINGTON | PERCENT OF TOTAL |
|---|---|---|---|---|---|---|
| Concrete | 3.9 | 5.6 | 4.2 | 0.7 | 14.4 | 20.5 |
| Asphalt with Curb & Gutter | 7.5 | 9.8 | 9.3 | 5.3 | 31.9 | 46.3 |
| Asphalt without Curb & Gutter | 3.4 | 2.1 | 2.7 | 3.2 | 11.4 | 16.4 |
| Gravel | 0.8 | 1.3 | 0.5 | 5.1 | 7.7 | 11.1 |
| Streets Not Open | 0.6 | 0.6 | 0.5 | 2.4 | 4.1 | 5.7 |
| **SYSTEM TOTAL** | 16.2 | 19.4 | 17.2 | 16.7 | 69.5 | 100.0 |

*Estimated Mileage

The table shows that across the incorporated area of the City, almost 63 percent of all streets have an asphaltic surface, both with and without curb and gutter. Concrete surfacing amounts to slightly over 20 percent overall, while gravel streets account for approximately 11 percent of the total. The remaining 5.7 percent of platted streets were travelways not currently open for public use.

A detailed analysis for each quadrant is contained in the following paragraphs.

NORTHWEST QUADRANT

The table shows that at the present time, the majority, or over 67 percent of the platted streets in the study area have an asphaltic surface pavement. Concrete surface pavement accounts for another 24 percent of the total, while slightly less than 5 percent have a gravel surface. The remaining 4 percent is represented by platted streets which have not been improved for public use. Overall, the quadrant constitutes approximately 23 percent of the total street mileage of the community.

The statistics also show that there are a number of streets, both paved and unpaved, in the study area which do not have curb and gutter. Overall, the results of the field survey indicate that there are a total of 4.2 miles, or 26 percent of streets in the northwest quadrant which are currently without curb and gutter. A total of 3.4 miles of these have an asphaltic surface, while the remaining 0.8 miles are gravel streets. In many cases, paved streets in the study area without curb and gutter also evidence a deteriorated surface condition. Many of these appear to be a seal coat with rock chip type of surface as opposed to a standard hot-mix asphaltic pavement. Many of these streets are currently in need of a range of maintenance repairs. Overall, most concrete streets are in good repair and appear to need only normal maintenance to preserve adequate service characteristics.

In general, most street surfaces are in fair to good condition, particularly on the concrete surface travelways; however, much of the currently existing asphalt surface evidences varying degrees of deterioration. This is especially so where the street surface is without concrete curb and gutter and has a relatively high usage.

NORTHEAST QUADRANT

At the present time, the statistics from the field survey results indicate that the area has over twelve miles of asphaltic street surface, 9.3 miles or 75 percent of which contains curb and gutter as well. There are just over four miles of concrete surface, with curb and gutter, most of which is located west of US Highway 81. Gravel streets are minimal, and found only in isolated locations in the central and southeastern areas of the quadrant. Overall, the quadrant accounts for 24.7 percent of the community's total street mileage.

As in the northwestern quadrant, street conditions in many areas of the northeast quadrant are somewhat deteriorated and in need of regular maintenance as well. With a large number of streets in the area experiencing high volumes of traffic, deeper pavements may need to be considered for some streets in order to ensure dependable service characteristics throughout the planning period.

SOUTHEAST QUADRANT

Currently, 24 percent of the total street mileage of the city lies within the southeast quadrant. Almost a third of the streets within the southeast quadrant are gravel, with particular concentrations south of the railroad and north of the railroad in the far eastern portion of the quadrant. In addition, there are just over two miles of unopened streets south of the railroad. Furthermore, 5.3 miles of the street surfaces are asphaltic and feature curb and gutter. Most of these streets are found north of the railroad, in association with concrete surfaced streets.

As future development occurs in the southeast quadrant, it will become increasingly necessary for the city to upgrade many of the existing streets and, in some instances, extend them in order to meet likely future traffic needs in the area.

SOUTHWEST QUADRANT

The roadways of the southwest quadrant have the potential to offer exceptional service characteristics throughout the planning period. Currently over 50 percent, or 9.8 miles of the streets are asphaltic with curb and gutter. Another five miles are concrete with curb and gutter as well. Additionally, less than three miles of roadway are without curb and gutter, with that amount evenly split between gravel and asphalt. In total the southwest quadrant contains 28 percent of the platted streets in the City of Wellington.

Although there is long range opportunity for street expansion in many parts of the southwest quadrant, many existing streets will continue to require regular maintenance and improvements during the planning period to maintain adequate service capabilities for traffic generated in and traveling through the area.

A graphic illustration of existing street surfaces in the City of Wellington is presented on the following figure.

## TRAFFIC VOLUMES

One of the indicators of street system function and adequacy is the volume of traffic accommodated. The following table summarizes volume data collected by the Kansas Department of Transportation.

**TABLE 14**
**TRAFFIC VOLUMES, 1993 ***
**City of Wellington, Kansas**

| LOCATION | NUMBER | LOCATION | NUMBER |
|---|---|---|---|
| US 160, E. of Slate Creek | 2,605 | Botkin, W. of "G" | 1,270 |
| US 81, N. of 21st Street | 4,935 | Mill Street, W. of "B" | 150 |
| US 81, N. of 16th Street | 8,095 | Blaine, S. of 2nd | 83 |
| US 160, E. of US 81 | 8,340 | US 81, N. of Harvey | 3,015 |
| 15th Street, E. of Washington | 10,625 | "A", N. of 13th Street | 1,465 |
| US 160, E. of Blaine St. | 8,885 | US 81, S. of 12th Street | 7,645 |
| US 160, W. of Park St. | 8,750 | "H", S. of 7th Street | 65 |
| US 160, E. of Cedarview | 3,535 | 8th St., E. of "G" | 6,105 |
| US 160, W. of Woodlawn | 7,850 | 4th St., E. of Blaine | 670 |
| US 160, E of Woodlawn | 6,930 | 4th St., W. of Washington | 750 |
| US 160, W of 1 | 4,935 | Washington, S. of Maple | 1,135 |
| US 160, E. of 2 | 4,340 | 21st, W. of Washington | 645 |
| US 81, N. of Slate Creek | 2,015 | 21st, E. of "B" | 960 |
| US 81, N. of Botkin | 2,805 | "B", S. of 21st St. | 345 |
| Plum St., S. of US 160 | 485 | 14th St., W. of Washington | 4,070 |
| Cedarview, S. of 16th Street | 360 | "B", S. of 12th St. | 1,935 |
| US 160, W. of Cedarview | 775 | Washington, S. of 11th | 4,365 |
| 16th Street, W. of Plum | 2,145 | Washington, S. of 9th | 4,655 |
| Poplar, N. of 20th Street | 245 | 9th, E. of Washington | 1,060 |
| 16th Street, W. of Blaine | 3,825 | 8th, E. of "F" | 6,145 |
| 16th Street, W. of Vandenburg | 4,650 | 7th, W. of Jefferson | 550 |
| 15th Street, W. of Washington | 8,175 | 7th, W. of "C" | 980 |
| Plum, S. of Mission Rd. | 995 | "B", N. of 7th | 1,735 |
| 16th Street, W. of Edgewood | 190 | "A", S. of 8th | 1,265 |
| 19th Street, E. of Plum | 105 | Washington, S. of 7th | 4,640 |
| 19th Street, W. of Olive | 31 | Harvey, W. of "C" | 2,915 |
| Poplar, N. of 14th Street | 585 | Harvey, W. of Olive | 2,155 |
| Poplar, S. of Orchard | 675 | Washington, N. of Lincoln | 3,645 |
| "H", S. of 22nd Street | 705 | Lincoln, W. of "C" | 2,225 |
| "H", S. of Mills | 555 | Washington, N. of 4th | 2,395 |
| Mills, E. of "H" | 605 | Lincoln, E. of "B" | 2,440 |
| Botkin, E. of "B" | 955 | Harvey, W. of Washington | 3,475 |
| Sumner, E. of Jefferson | 175 | 4th, E. of "C" | 155 |
| Sumner, W. of "B" | 65 | Vandenburg, N. of 16th | 1,995 |
| Walnut, E. of "G" | 145 | Mills, W. of US 81 | 1,585 |
| First St., W. of Beaver Creek | 245 | 9th, W. of Hargis Creek | 1,645 |
| Woodlawn, S. of Botkin | 645 | Woodlawn, N. of Waldo | 3,100 |
| Arthur, S. of Lincoln | 42 | Meridian, N. of First | 62 |
| Woodlawn, N. of Walnut | 825 | Cherry, N. of South | 185 |
| Mill, W. of Fair | 150 | Botkin, W. of Cherry | 885 |
| First, W. of Woodlawn | 980 | Fair, N. of First | 1,040 |
| 4th, W. of Cherry | 140 | Cherry, N. of 4th | 105 |
| 9th, E. of Woodlawn | 110 | Harvey, W. of Woodlawn | 1,505 |
| Woodlawn, S. of Harvey | 2,185 | Lincoln, W. of Douglas | 1,955 |
| 4th, E. of Woodlawn | 85 | 4th, W. of Stewart | 55 |
| 4th, W. of Woodlawn | 76 | Cherry, S of 4th | 7 |
| US 160, E. of County Rd. A | 4,340 | US 160, W. of County Rd. A | 4,935 |
| Walnut, W of Washington | 210 | 4th, E. of "A" | 23 |
| County Rd. B, S. of US 160 | 175 | | |

* Source: Kansas Department of Transportation, Bureau of Transportation Planning, 24-hour traffic counts.

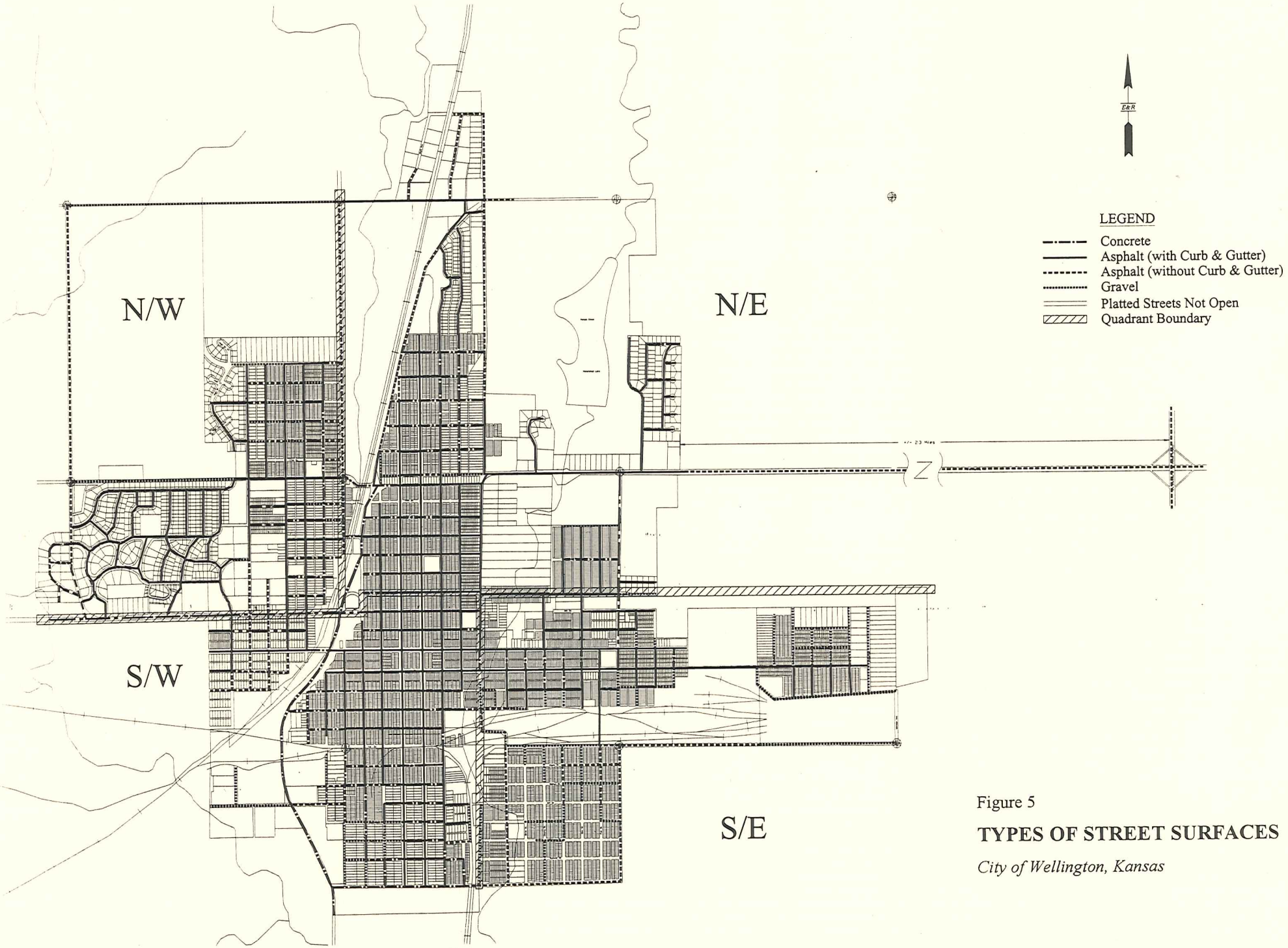



Figure 5

**TYPES OF STREET SURFACES**

*City of Wellington, Kansas*

According to the data in the table, the highest volumes of traffic tended to be concentrated along the US 160 Highway corridor, particularly near its intersection with US Highway 81. Additionally, high volumes of traffic occur in the downtown area as well.

Although many of the streets where traffic volumes were recorded are well within the parameters appropriate for their particular classification, careful monitoring and continued maintenance, as well as roadway improvements when necessary, will be needed in order to continue to provide adequate service characteristics during the planning period and beyond.

The following graphic illustrates traffic volumes for the City of Wellington for the year 1993.

**TRAFFIC ACCIDENTS**

Another of the indicators of the functional condition of the street system is that of accident experience. Generally, most accidents during the 1997 year occurred either in the Central Business District or near the intersection of U.S. Highways 81 and 160. Based on traffic data maintained by the Wellington Police Department, the following figure illustrates over 150 traffic accidents by location for the 1997 calendar year. A summary of accident experiences by planning quadrant is provided below.

NORTHWEST QUADRANT

Although most of the current residential growth of the community has taken place in this area, the number of accidents were not necessarily proportional to the rate of growth. Generally, it is known that the highest levels of accidents have occurred along the US Highway 160 corridor where driveways of large retail stores intersect the highway. Additionally, City Officials note that the intersection of major streets with US Highway 160, such as the signalized intersection at Plum Street, are also locations of higher numbers of traffic accidents. As growth continues during the planning period, the city will need to take steps to insure adequate access and egress for businesses and residential areas. In addition, the number of accidents on 16$^{th}$ Street indicates that City Officials should address the street's growing traffic volumes in order to provide adequate traffic flow both in and out of the area.

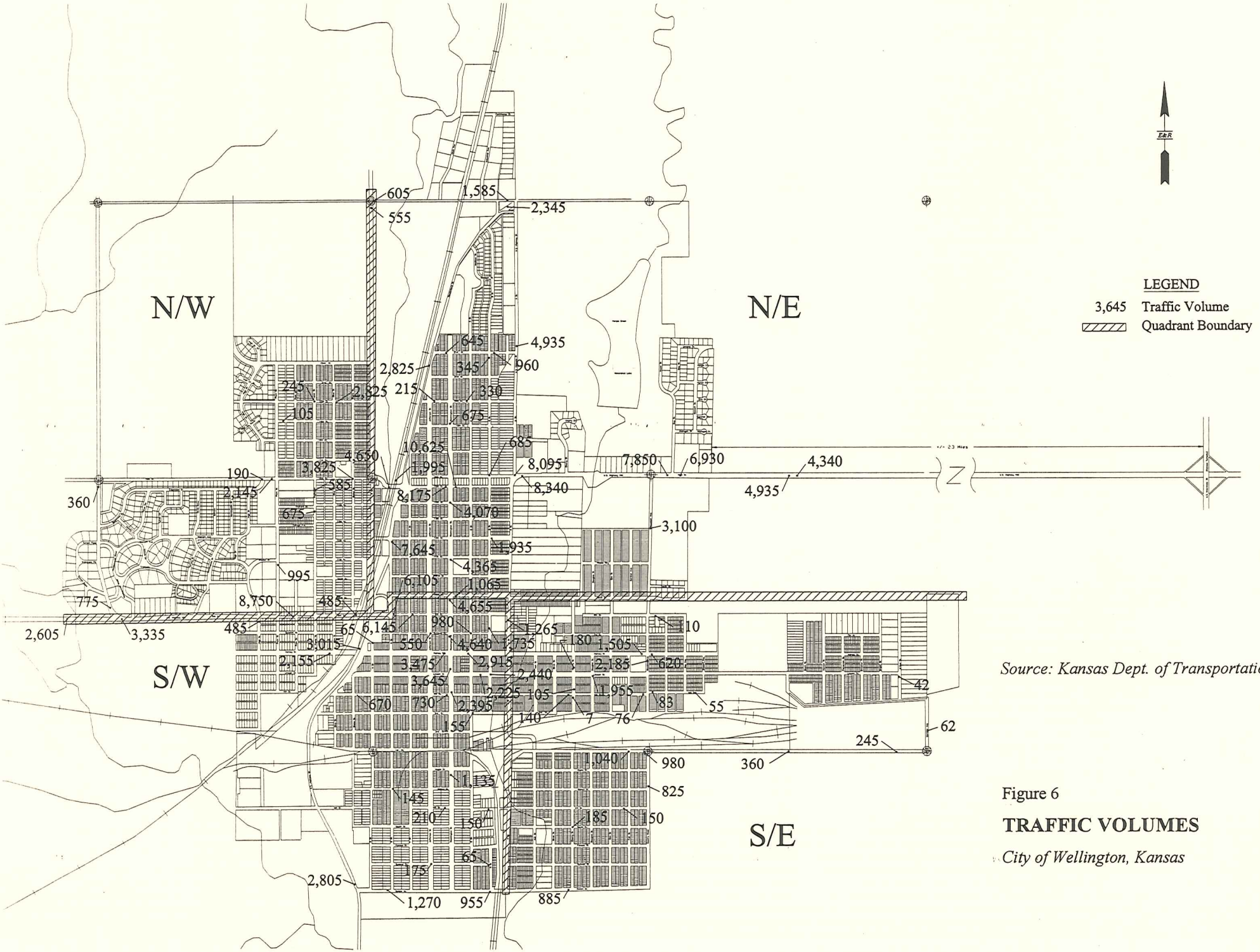
NORTHEAST QUADRANT

The northeast quadrant of the community experienced the highest number of accidents during the 1997 year, with three intersections being the most accident-prone in the city. In this quadrant, most accident locations are in an area that is slightly to the north of the downtown and south of 16$^{th}$ Street. Three intersections in particular each accounted for at least seven accidents during 1997, due mainly to the high traffic volumes at these three intersections. These high traffic volumes are associated with U.S. Highway 160 traversing the central and western areas of the quadrant, as well as U.S. Highway 81, which cuts through the central part of the quadrant on a north-south alignment. Both of these roads are arterials, which, when combined with the adjacent collector streets, constitute a number of traffic hazards which will need to be addressed in the future. In addition, another area that should be reviewed for necessary traffic control improvements is the area south of the high school.

With regard to long range planning solutions, the traffic volumes, including the vehicle mix between private vehicles and heavy commercial trucks have become so intense that it may be beneficial to seek an alternative truck route for the leg of US Highway 81 north of US Highway 160. This could be accomplished by developing an alternate route east of the present city but west of the Interstate 35 corridor. Such a route could be established to coincide with an existing section line road or an entirely new alignment, and would allow traffic connections between US Highway 160 and US Highway 81 north outside the present US Highway 81 corridor, thus reducing traffic volumes both in the corridor and at the intersections. Possible locations for such an alternate route are reviewed in more detail in the Future Major Street Plan section of the transportation study.

SOUTHEAST QUADRANT

This quadrant of the community recorded the lowest number of accidents during the 1997 year. Coincidentally, it also has the lowest population of the city's four quadrants. Almost all of the accidents occurred along sections of Lincoln Avenue and Harvey Street, just southwest of the middle school. While some of this can be attributed to traffic from the middle school, most accidents likely resulted from the fact




*Source: Kansas Dept. of Transportation*

Figure 6

**TRAFFIC VOLUMES**

*City of Wellington, Kansas*

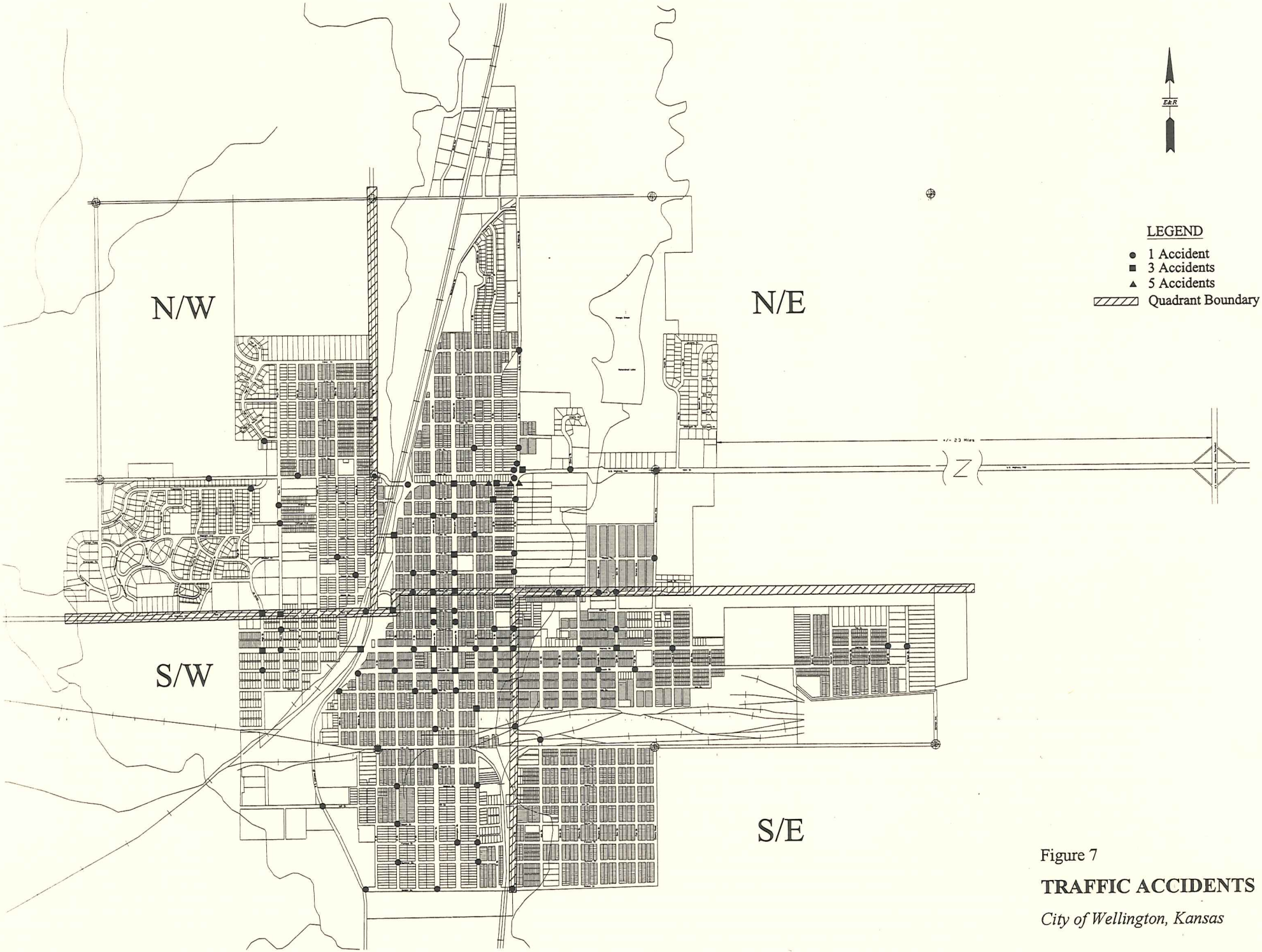



Figure 7

**TRAFFIC ACCIDENTS**

*City of Wellington, Kansas*

that these are the two main collector streets in the northern portion of the quadrant. Adequate traffic and street improvements will be needed in the future to promote efficient traffic flow and minimize congestion in this area, especially during peak periods.

SOUTHWEST QUADRANT

With the Central Business District, numerous public facilities, and many collector streets within its boundaries, it is surprising that more accidents did not take place in this quadrant during 1997. No intersection was the scene of an accident more than four times, and the majority of locations were accident scenes only once. However, the community will need to consider future traffic volumes, especially in the downtown area, in order to keep the number of accidents in this section low throughout the 20-year planning period.

Concerning traffic volumes and accident experiences in the downtown area, the low incidence of conflict suggests that the present reliance on signalization at each intersection may not be warranted. It is possible that alternate controls, such as appropriate signage at key locations, could achieve a safe traffic pattern at a somewhat reduced maintenance cost to the city. Signage as opposed to electronic signals can also have the advantage of spacing traffic along the street rather than the concentrated groupings resulting from signalization.

One of the studies for future application then, should be to restudy the primary downtown street corridors to determine if present and expected future traffic volumes, patterns and conflict experiences continue to warrant full signalization at each intersection as is the current practice.

## CURRENT AND FUTURE OPERATIONAL CHARACTERISTICS

Functional and operational characteristics of the Wellington Street system vary in some detail across the City due to differing traffic and pedestrian volumes and physical characteristics of area street surfaces. These aspects are reviewed in detail for each of the planning quadrants in the following paragraphs.

NORTHWEST QUADRANT

The street system in the northwest quadrant has been heavily influenced by the US Highway 160 corridor on the south and by the presence of a drainageway and a railroad corridor on the east. As a result, the street system in the study area has been internally focusing, and in some cases, has been interrupted where development patterns have failed to allow for future street extensions. Generally, the area is bounded by major streets which provide for circulation around the outside of the area with connection to the street system in adjacent areas of the community.

Throughout the northwest quadrant, most streets are paved and most are well drained. Right-of-Way widths range from 50 to 60 feet on local streets, up to as much as 110 feet in some segments of US Highway 160. Much of the 160 corridor is in the range of 70 feet of right-of-way, however, one segment in the southeastern portion of the northwest quadrant is as narrow as 50 feet. Most local streets in the area have been platted with 60 feet of right-of-way, which is a generally accepted street width throughout the midwest.

Also typical of the northwest quadrant platting pattern and street system are extensive use of alleys in the older portion of the study area which are typically platted with 20 feet of width. Alleys serve the important purpose of providing a secondary means of property access, a route for public utilities and occasionally as a drainage corridor. In this respect, if alleys are not to be provided, future expansion should allow for reservation of permanent drainage and utility easements to assure that adequate property access and drainage will be available. This has been the case in most of the newer subdivisions in the western portion of the quadrant.

NORTHEAST QUADRANT

The US Highway 160 corridor also influences the street system in this quadrant, which is located in the central portion of the area. In addition, Hargis Creek Reservoir and the U.S. Highway 81 corridor also effect the northeast quadrant. Furthermore, Hargis Creek Park dominates the center of the quadrant. Thus, existing streets are located south and east of the Lake. Therefore, future development should allow for the

extension of existing local streets so that future traffic flow can be routed efficiently toward connection with major travelways.

The street system in the northeast quadrant, insofar as the major highway corridors are concerned, is among the most frequently traveled in the community. As noted earlier, the north-south US Highway 81 corridor, particularly near its intersection with US Highway 160, is heavily congested at the present time, and this condition can on intensify as the quadrant continues to develop. Likely new commercial and industrial expansions coupled with continued growth of residential neighborhoods can be expected to result in significant additional traffic in this corridor in the years ahead. A possible solution could be an alternate truck route as described earlier, which could have the effect of substantially reducing traffic volumes on the southern leg of the US Highway 81 corridor.

Except for the major highway corridors, the physical and operational characteristics of the street system in this quadrant are very similar to those described for the northwest quadrant.

SOUTHEAST QUADRANT

This area contains mostly local streets, but with a limited number of collectors as well. Also, the railroad facilities in the central part of the quadrant constitute a major influence to patterns of neighborhood development. One of the important considerations for future planning in the quadrant will be to develop and maintain major street corridors through the railroad yard in order to provide adequate vehicular access between adjoining neighborhoods on the north and south. These transportation corridors would also provide access routes for extension of major utilities.

At the present time there are three points of street connection – Washington Street, "A" Street/Ash Street, and Meridian. Each of these connections represent important points of access, particularly for the area south of the railroad, and should be improved to major street standards.

Overall, physical characteristics of most streets in the southeast quadrant are generally similar to those of the northwest and northeast quadrants, except that in this area of the community there is a somewhat higher incidence of gravel streets. Unpaved streets are especially prevalent in the far eastern and southwestern extremities of the quadrant.

This quadrant also has a somewhat higher incidence of platted streets not open for public use than do the other quadrants. These occur most often south of the railroad and east of Ash Street.

SOUTHWEST QUADRANT

The southwest quadrant is severely limited by topography as well as the floodplain that dominates most of the area. Additionally, the railroad and drainageway in the center of the quadrant will continue to strongly influence future development. Accordingly, any additional development that does occur will likely take place along existing streets and roadways, with the resulting traffic patterns utilizing these local corridors to reach points of access to adjacent collector and arterial streets. In some cases, street upgrading may be necessary to provide an acceptable level of service. Furthermore, as a means to maximize traffic flow in the downtown and surrounding area, a study of existing traffic control devices should be completed to determine if the number of signalized intersections can be reduced. Such a change could allow for increased vehicle circulation in and through the downtown area, which can have positive effects upon overall traffic patterns throughout the central portion of the community.

Within the general operational pattern, as the City of Wellington continues to expand, it will become increasingly important to adopt and implement a policy and long-range plan for extending the municipal street system into newly developing areas. Important to this process will be definition of major street corridors to provide a general area-wide framework for the interior and exterior street and roadway system. Also, important to this process will be recognition of the unique needs of the major street system for wider rights-of-way, deeper pavements capable of supporting the extra traffic load, and adequate drainage characteristics. As a result, these streets are somewhat more costly to build, but have superior service characteristics as opposed to a typical local street.

## MAJOR STREET PLAN

The major street plan for the Wellington community is based on the earlier studies of current and future land use characteristics coupled with expectation of a modest population expansion over the course of the 20-year planning period. The plan, depicted on the following figure, outlines a system of arterial and collector streets while allowing extension into future community growth areas in the years ahead. A summary of the major street plan by quadrant is outlined in the following paragraphs

### NORTHWEST QUADRANT

Based on current and anticipated future land use patterns, current street system characteristics and deficiencies, and long-range need for vehicular circulation, a Future Major Street Plan for the northwest quadrant can be prepared. The plan utilizes the current major street system with extensions of new collector streets toward the north and west to serve the future growth area as defined by the long-range land use studies for the northwest quadrant. Due to the extent of the currently existing arterial network, no new streets of this classification are proposed for the northwest quadrant during the 20-year planning period. The only change for the arterial system will be the inclusion of a portion of Crestview Road, a future arterial extending north at the western boundary of the City, into the corporate area of the community, thereby increasing the mileage of the arterial system within the City.

**TABLE 15**
**FUTURE MAJOR STREET SYSTEM***
**NORTHWEST QUADRANT PLANNING AREA**
**City of Wellington, Kansas**

| CLASSIFICATION | ESTIMATED CURRENT MILEAGE | PERCENT | ESTIMATED FUTURE MILEAGE | PERCENT |
|---|---|---|---|---|
| Collector Streets | 2.6 | 61.9 | 5.9 | 69.4 |
| Arterial Streets | 1.6 | 38.1 | 2.6 | 30.6 |
| **TOTAL** | **4.2** | **100.0** | **8.5** | **100.0** |

*Estimated Mileage

The major street statistics show that if the northwest quadrant continues to evidence urban expansion in a pattern anticipated by the future land use plan, there will be a corresponding enlargement of the major street system, both through annexation of existing travelways and through construction of new streets. In this regard, the table indicates that the collector system has the potential for expansion of over 3 miles, of which approximately 1.8 miles will be entirely new streets on as yet to be dedicated rights-of-way. No new arterial streets are proposed. The statistical expansion will be due to inclusion of existing streets in the future corporate boundary of the City.

### NORTHEAST QUADRANT

This area of the community is expected to experience a brisk expansion for all types of land use during the planning period. The northeast quadrant is unique in that this is the only area of the community which appears likely to have substantial potential for significant expansions of commercial and industrial uses during the period. These expansion patterns coupled with continued growth of residential neighborhoods can be expected to result in substantial increases in traffic volumes as well. Much of this volume will attempt to use the US Highway 81/160 corridors for access to other portions of the community.

Given the degree of vehicular congestion already existing on the north-south leg of the US Highway 81/160 corridor, substantial additional daily volume would result in an increasingly dangerous and highly unmanageable traffic corridor. Accordingly, the Future Major Street Plan indicates a potential location for an alternate truck route on the far northeast. This new trafficway would join the system as a new arterial and should be developed with the view toward relieving much of the commercial and industrial traffic which would normally utilize the existing system. In general, this new arterial should provide a much more direct route between the Interstate 35 interchange and US Highway 160 on the north, as well as the airport industrial area development.

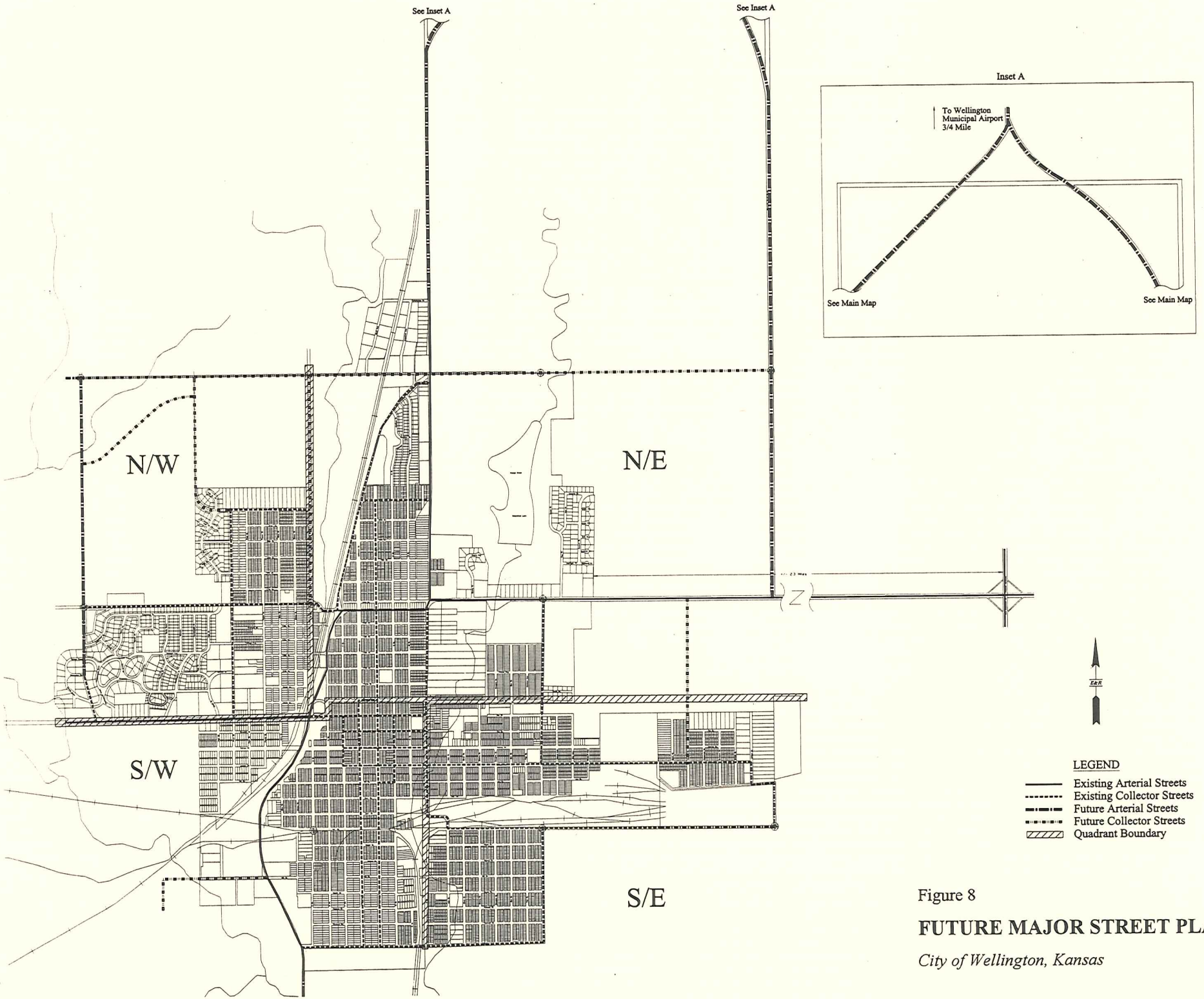



Figure 8

**FUTURE MAJOR STREET PLAN**

*City of Wellington, Kansas*

A statistical summary of the Future Major Street System in the northeast quadrant is outlined in the following table.

**TABLE 16**
**FUTURE MAJOR STREET SYSTEM***
**NORTHEAST QUADRANT PLANNING AREA**
**City of Wellington, Kansas**

| CLASSIFICATION | ESTIMATED CURRENT MILEAGE | PERCENT | ESTIMATED FUTURE MILEAGE | PERCENT |
|---|---|---|---|---|
| Collector Streets | 2.2 | 46.8 | 3.3 | 46.5 |
| Arterial Streets | 2.5 | 53.2 | 3.8 | 53.5 |
| **TOTAL** | **4.7** | **100.0** | **7.1** | **100.0** |

*Estimated Mileage

The table shows that if the future major street plan is implemented as proposed, there will be a considerable increase in the mileage of arterial streets. While collector streets may be expected to increase by 1.1 miles or about 50 percent, the arterial system will increase by over 1.3 miles or over 50 percent.

As shown on the future major street plan graphic the northeast quadrant is likely to encounter the largest extent of new street mileage due to the lack of a well developed existing system as is present in other quadrants.

SOUTHEAST QUADRANT

Although the southeast quadrant has a number of existing platted streets, there are no arterials and relatively few collectors. This, coupled with the lowest population of the four quadrants, shows that the area relies primarily upon local streets. In the future, several new collectors are proposed, however, these are instances where existing vehicular corridors are suggested for upgrading to major street quality. Two of these, Meridian Street and Ash/"A" Street, are significant as the only routes providing access across the railroad yard. As such they should be upgraded early as part of a general neighborhood renovation program for this area of the community.

The following table summarizes the future major street system for the southeast quadrant assuming all of the long-range route improvements materialize as planned.

**TABLE 17**
**FUTURE MAJOR STREET SYSTEM***
**SOUTHEAST QUADRANT PLANNING AREA**
**City of Wellington, Kansas**

| CLASSIFICATION | ESTIMATED CURRENT MILEAGE | PERCENT | ESTIMATED FUTURE MILEAGE | PERCENT |
|---|---|---|---|---|
| Collector Streets | 1.0 | 100.0 | 1.6 | 100.0 |
| Arterial Streets | 0.0 | 0.0 | 0.0 | 0.0 |
| **TOTAL** | **1.0** | **100.0** | **1.6** | **100.0** |

*Estimated Mileage

The future major street system within the quadrant will continue to be comprised primarily of collector streets, with no arterials. An increase in the total mileage of collector streets is expected, bringing the total to around 1.6 miles. However, this is only a statistical increase, as the proposed new collectors are routes utilizing already existing streets.

SOUTHWEST QUADRANT

This region is limited in its ability to sustain significant future development due to the floodplain in the center of the area as well as difficult topography. The following table indicates the future street system mileage for the quadrant.

**TABLE 18**
**FUTURE MAJOR STREET SYSTEM***
**SOUTHWEST QUADRANT PLANNING AREA**
**City of Wellington, Kansas**

| CLASSIFICATION | ESTIMATED CURRENT MILEAGE | PERCENT | ESTIMATED FUTURE MILEAGE | PERCENT |
|---|---|---|---|---|
| Collector Streets | 4.4 | 79.6 | 4.4 | 79.6 |
| Arterial Streets | 1.1 | 20.4 | 1.1 | 20.4 |
| **TOTAL** | **5.5** | **100.0** | **5.5** | **100.0** |

*Estimated Mileage

The southwest quadrant is not expected to register increases in collector or arterials streets during the planning period. However, existing streets will need to be properly maintained in order to assure maximum traffic efficiency during the 20-year planning period. Due to the severe restraints presented by the floodplain and the railroad, it is unlikely that the incorporated area of the city within the southwest quadrant will extend much beyond the present configuration, and with limited potential for new development traffic volumes are unlikely to register major increases as well.

Generally, the existing streets on the future major street system have the theoretical capacity to handle anticipated traffic loading, although continuing repairs and up-grading will be necessary to preserve and extend a appropriate service characteristics throughout the planning period.

Where the future street system has been planned as an aspect of the future land use plan, the major street system, as well as the internal local street network, can continue to adequately serve the vehicular circulation needs of each quadrant and the community as a whole throughout the 20-year planning period and beyond.

**STREET STANDARDS**

Typical street standards for the various types of vehicular travelways, both inside the City and in the rural area, are illustrated on the following figure. The standards outline general dimensional details for a range of travelways including four types of arterials, two types of collectors, and a residential street.

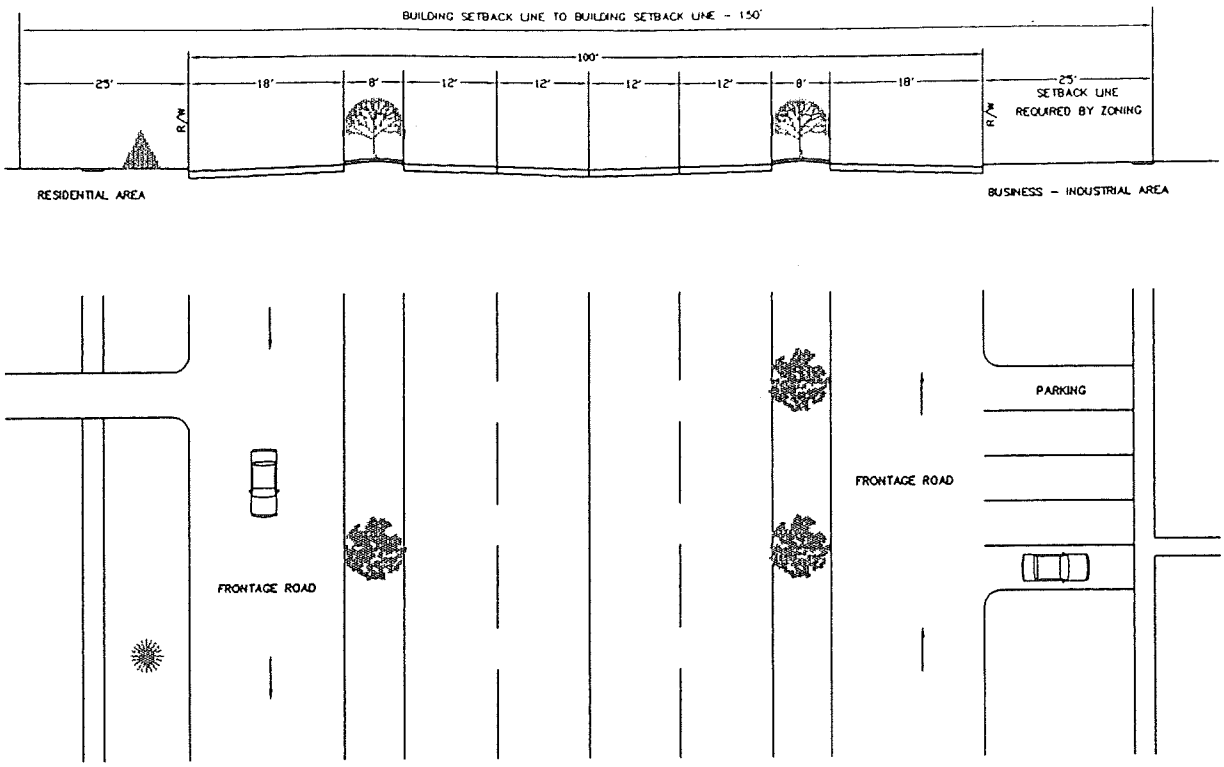
Arterials

The arterial sections include an arterial with frontage roads, an arterial with paved median, an arterial with and without parking, and a rural arterial.

The rural arterial is intended for rural roads which will be upgraded at some future point to the urban arterial standard. This type of section can be used for roads at the periphery of the City in developing areas which later may become part of the interior street system. This type of road should have a minimum right-of-way of 60 to 80 feet. Greater widths may be required to allow for drainage ditches at each side.

Collectors

Two basic types of collector streets are illustrated, one for residential neighborhoods, and one for business-industrial locations. Both types are designed to permit parking.

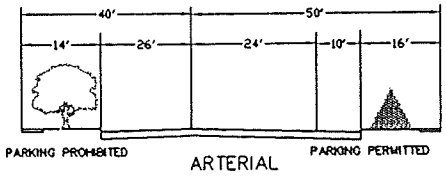



ARTERIAL WITH FRONTAGE ROADS
ADOPTED TO 100' R/W WITH ZONING REQUIREMENTS

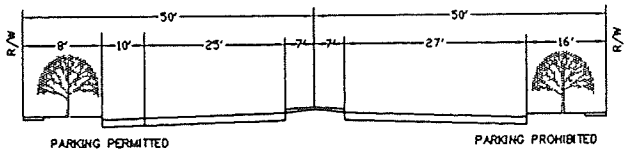
Figure 9

## STREET STANDARDS

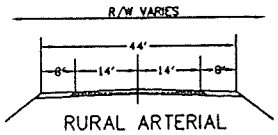
*City of Wellington, Kansas*



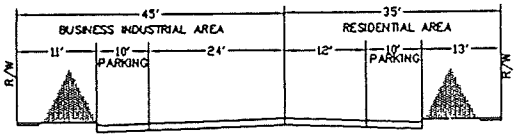

ARTERIAL



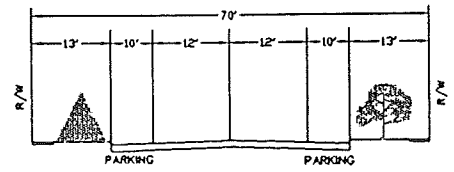

ARTERIAL WITH MEDIAN



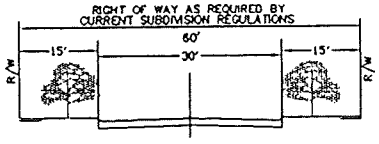

RURAL ARTERIAL




COLLECTOR
BUSINESS INDUSTRIAL LOCAL




LOCAL BUSINESS - INDUSTRIAL




LOCAL RESIDENTIAL

Residential Streets

The residential standard is based on a 60 foot minimum right-of-way with a minimum pavement width of 30 feet. This type of street is designed to permit parking, however, long-term vehicle storage beyond overnight should be discouraged.

Frontage Roads

As shown on the figure, frontage roads should be developed along primary arterial routes which are carrying, or which are expected to carry, heavy traffic volumes. At the present time, such examples include the major Federal highway corridors at the fringes of the community such as the US 160 corridor in the eastern and western sections of the community. While the corridor is currently heavily developed there may be future opportunity for frontage roads where land is to be redeveloped for commercial purposes. In all cases, the possibility of frontage roads should be explored as a means to deal with traffic increases which will be associated with continuing urban expansion. A reasonable minimum standard for a one-way frontage road is not less than 18 feet of width, with a 24-foot minimum width where the frontage road will carry two-way traffic.

## IMPLEMENTING STREET SYSTEM IMPROVEMENTS

Implementing the major street plan is a multifaceted process involving a series of actions over a long period of time. In the short-range time frame, plan implementation, insofar as vehicular traffic patterns are concerned, may be affected through proper signage and traffic controls which will influence area usage toward patterns which are complimentary to the intent of the long-range plan.

Developing through streets, while requiring stops on others, produces immediate alterations in traffic flow, and is an important means of initial implementation of long-range planning.

Implementation of the major street plan in the long-range time frame is significantly affected through exercise of the municipal power for administrative review of new subdivisions. Under this authority, granted through state statute, the City may review land subdivision proposals for compliance, once a major street plan has been prepared and adopted. The authority helps to assure that the integrity of the plan will be preserved as raw land is converted to urban uses through the subdivision process.

Even with the authority for subdivision review, a common problem associated with implementation of the street plan is that of acquiring adequate right-of-way width so that ample building setback will be assured, and new development will not encroach upon the new street and reduce its capacity to move traffic safely and efficiently.

In this context, state law provides municipalities with some discretion regarding reservation of required street rights-of-way. This process is outlined and described in K.S.A. 12-765 which states in part:

> "(a) Whenever any city or county has as a part of a comprehensive plan adopted a plan for its major street or highway system, after consultation with the secretary of transportation and the county engineer and any planning commission of the county or counties within which such system lies, the governing body is hereby authorized and empowered, to establish by the appropriate ordinance or resolution building or setback lines on such existing and proposed major streets or highways and to prohibit any new building being located within such building or setback lines on property within the plat approval jurisdiction of the city. Such ordinance or resolution may incorporate by reference an official map, which may include supplementary documents, setting forth such plan which shall show with reasonable survey accuracy the location and width of existing or proposed major streets or highways and any building or setback lines.---------- ---------- The powers of this section shall not be exercised so as to deprive the owner of any existing property or of its use or maintenance for the purpose to which such property is then lawfully devoted."

Subject to a range of procedural requirements as further outlined in detail in the body of the enabling legislation, this authority provides a means whereby the community can preserve the rights-of-way of

future streets from conflicting development, thus assuring that the major street plan can be implemented on a phased and continuing basis. This authority does not provide a direct taking of land. Actual acquisition of the required right-of-way must proceed according to the usual negotiated purchase procedure.

**SUMMARY**

At the present time, streets in the Wellington community vary with regard to condition, ranging from superior to poor. This however, can be remedied through a long-term process of roadway improvement and maintenance so that streets throughout the city can attain designated service standards. As an aid to this process, annual traffic counts made at strategic locations can provide warning of the need for upgrading of route segments to a higher standard.

Of particular concern in the years ahead will be development practices and traffic patterns in and around the federal highway corridors. In this respect, a high priority should be given to adopting the Comprehensive Plan and associated measures including the major street plan, and updating the zoning ordinance and the subdivision regulations. Where right-of-way route segments will be required for extension of major streets, such area should be reserved at an early date through exercise of the authority noted earlier. Likewise, where special traffic provisions such as frontage roads may be required, community development practices should include reservation of the required width to allow installation of the secondary roadway plus attending to the need for drainage facilities. Additionally, the community should maintain a transportation planning procedure keyed to the process of continuing urban expansion with the aim of assuring system continuity. In all areas of the city, it will be important that the local street system provide immediate connection between neighborhoods and the major street system to assure adequate traffic flow characteristics

Realization of these goals will also be dependent upon maintenance of appropriate administration practices with regard to subdivision and development review, and upon continued close cooperation between the City and the Kansas Department of Transportation. This will be especially important with respect to planning, design and construction of travelway improvements which may affect the major highway corridors. Because the City is continually changing and evolving with respect to land development patterns and associated transportation needs, the Planning Commission should maintain a pivotal position with regard to study and identification of long range needs for transportation improvements as a facet of the continuous planning program. As part of this process the accuracy of the major street plan and associated planning directions should be continually reviewed and updated as necessary to assure close correspondence with community need. In this respect, transportation planning should be one of the essential considerations of the Planning Commission acting in its role as advisors to the Governing Body.

## SECTION IV

## COMMUNITY FACILITIES

### INTRODUCTION

Community facilities are represented by those public amenities which benefit and serve a neighborhood or an entire community. Prominent among such amenities are parks, libraries, water and sewer systems, police and fire protection, hospitals, schools, and churches. These, and a range of other similar facilities and services, provide for the day-to-day well-being of the population and are the result of community agreement to plan, build and pay for common amenities which would not be possible on an individual and uncoordinated basis. Accordingly, the extent and quality of available community facilities in large measure provide indication of the overall quality of life available in the community.

While many of these amenities are properly within the purview of the comprehensive planning process, the purpose of this section of the plan is to review a limited range of vital and essential public facilities within the context of continuing growth and expansion of urban uses in the Wellington community. Of specific interest in this process are the potable water supply, collection and disposal of sanitary sewerage, solid waste disposal, and open space and recreation. It is especially important that these amenities be appropriately sized to serve the projected population and located to fit harmoniously into the long-range development plan for the study area.

Toward this end, the following paragraphs provide overviews of primary public facilities with potential needs for improvements necessary to serve the long-range development patterns identified in earlier sections of the plan.

### MUNICIPAL WATER

Beyond the planning level reviews associated with the comprehensive plan, a detailed study of the community-wide water system should be completed prior to extensive additional development. The detailed study should assess the entire system with emphasis on supply and storage as well as distribution system characteristics. While the planning level reviews suggest locations and extent of improvements based on projected growth patterns, a more specific system study will be needed to verify line sizes, system pressures and determine final locations for major elements of the water system. In this regard, the following paragraphs describe the municipal water supply for the City of Wellington according to the previously defined study quadrants.

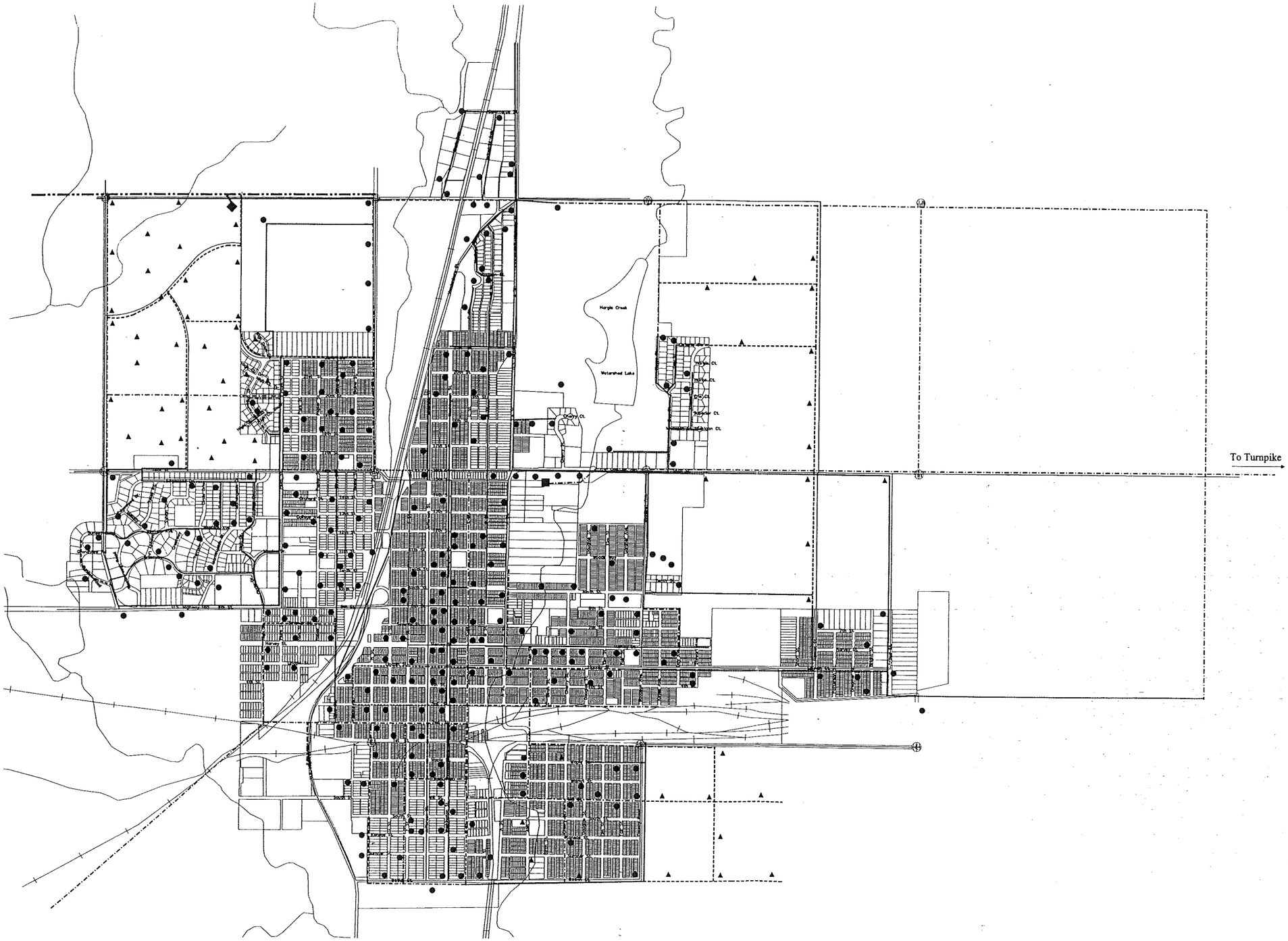
#### NORTHWEST QUADRANT

The pattern of current and proposed future primary water mains in relationship to the street system in the northwest quadrant is shown graphically on the following figure. Based on patterns delineated by City staff, the figure shows that the existing system in this part of the community is comprised primarily of 6-inch lines, with limited runs of 8 and 10-inch lines, and limited runs of 4-inch lines as well. Within this pattern, additional water lines, most of which are also 6-inch in size, distribute water along each street and to all points of use in the system.

The map also shows the overall neighborhood distribution of fire hydrants, which generally follows a 400 to 600 foot spacing pattern as required for service to individual properties and homes.

Based on this general pattern, the map suggests potential locations for future water main extensions and fire hydrant spacing to serve the new growth area on the northwest. Keyed to the development patterns and major street corridors outlined earlier, the map indicates a general looping of the system on the north to help maintain both volume and pressure in both the existing and future portions of the system. As indicated by the proposed future fire hydrant density in the future expansion area, it is anticipated that all water distribution mains in future portions of the system will be 6-inch in size, or larger.

The following table provides a summary of the water distribution system as shown graphically on the drawing.




LEGEND

Major Street System

Existing

- 4" Water Main
- 6" Water Main
- 8" Water Main
- 10" Water Main
- 14" Water Main
- 20" Water Main
- 24" Water Main

Future

- 6" Water Main
- 8" Water Main
- 10" Water Main
- 12" Water Main
- 14" Water Main
- 24" Water Main

Fire Hydrants

- Existing
- Future

Water Towers

- Existing
- Future

Figure 10

**EXISTING AND PROPOSED MUNICIPAL WATER SYSTEM**

*City of Wellington, Kansas*

**TABLE 19**
**MUNICIPAL WATER DISTRIBUTION SYSTEM**
**NORTHWEST QUADRANT PLANNING AREA**
**City of Wellington, Kansas**

| ITEM | EXISTING AREA (Ft.) | FUTURE EXPANSION (Ft.) |
|---|---|---|
| **Water Mains** | | |
| 4" | 900 | 0 |
| 6" | 35,520 | 9,180 |
| 8" | 5,040 | 7,800 |
| 10" | 2,340 | 0 |
| 24" | 0 | 3,900 |
| **Fire Hydrants** | 66 ea. | 35 ea. |
| **Water Towers** | 0 ea. | 1 ea |

The table shows that new water lines should be 6-inch or larger, with portions of the major supply loop utilizing 8 and 10-inch mains. The larger lines will be required for adequate fire flow, both in terms of water quantity and pressure.

Concerning fire hydrants, the City maintains a detailed inventory and condition assessment for all hydrants in the municipal system, with most fire hydrants tested at 700 to 900 gpm flow, with a few at 900 to 1,100 gpm and a few at 500 to 700 gpm. Few hydrants tested below 500 gpm and none were below 400 gpm. Fire hydrants are typically 5 1/4-inch with a few 4, 4 1/4, 4 1/2, and 5-inch sizes. All future hydrants should be the 5 1/4-inch standard size. Additionally, most fire hydrants are Mueller Brand, with several Clow, Dresser, Ludlow, National, Kennedy and other brands.

With respect to long-range water supply, the proposed future system recommends a new 10-inch water main along the section line road at the northern boundary of the expansion area. As part of this improvement, the exiting 8-inch line between "H" Street and US 81 Highway should be upgraded to 10-inch size to connect with the existing 10-inch main along US 81. In this manner, a looping of 10 and 8-inch mains around the northern portion of the northwest expansion area is possible. This improvement would help assure adequate pressures for the new park and the adjacent neighborhood development area. In addition, the graphic recommends that a new 24" supply line be installed from the City Lake to a new water tower in order to assure adequate supply for urban expansion in this area of the community. The graphic also proposes the new water tower to be located at the northern edge of the quadrant. This will aid in providing an adequate water supply for the northwest and northeast quadrants throughout the planning period and beyond.

NORTHEAST QUADRANT

Based upon current studies and future estimates of population and land use, the water system graphic indicates the future system of water distribution for the northeast quadrant of the community. The figure shows that the majority of lines in the region are 6" in size, with runs of 10" and 14" lines as well. The table outlines a summary of the water system improvements identified for the northeast planning quadrant.

**TABLE 20**
**MUNICIPAL WATER DUSTRIBUTION SYSTEM**
**NORTHEAST QUADRANT PLANNING AREA**
**City of Wellington, Kansas**

| ITEM | EXISTING AREA (Ft.) | FUTURE EXPANSION (Ft.) |
|---|---|---|
| **Water Mains** | | |
| 6" | 34,600 | 11,249 |
| 8" | 5,190 | 22,490 |
| 10" | 5,190 | 5,700 |
| 14" | 17,300 | 0 |
| **Fire Hydrants** | 81 ea. | 16 ea. |
| **Water Towers** | 1 ea. | 0 ea |

The data summary indicates that the majority of water lines in the quadrant are 6-inch lines, with substantial runs of 14-inch lines and smaller runs of 8 and 10-inch water lines. The 6-inch lines serve as secondary supply lines for the residential areas in the quadrant, as do the 8-inch lines. Also, the 10 and 14-inch lines function as main supply routes throughout the quadrant.

The table also shows that new water lines should be 6-inch or larger, with portions of the major supply loop utilizing 6 and primarily 8-inch mains. These mains, in particular the 8 inch lines, should be connected to the existing 14 inch line located along U.S. Highway 160 in order to provide the necessary water supply for future growth throughout the quadrant. In addition, the larger lines will be required for adequate fire flow, both in terms of water quantity and pressure. However, this does not take into account possible needs for the replacement or upgrading of current lines, which may be required during the planning period depending upon the extent of expansion in the quadrant.

With regards to fire hydrants, the table indicates at least 16 new units will be required during the 20-year planning period in order to maintain efficient fire protection, although more may be required depending on how future development, particularly residential and commercial expansion, is concentrated in the region. As a guideline, the installation of new fire hydrants should be spaced at approximately 300' to 500' intervals in order to maintain adequate fire protection.

SOUTHEAST QUADRANT

A graphic illustration of the water system for this quadrant is also shown on the water system drawing. The figure indicates that the majority of main lines in the quadrant are 6" in size, along with runs of 4" and 8" lines. The figure also shows that fire hydrants are currently concentrated in or near developed areas of the region. With this in mind, the table below presents a summary of the quadrant's existing water distribution system, as well as potential system expansion during the 20-year planning period.

**TABLE 21**
**MUNICIPAL WATER DISTRIBUTION SYSTEM**
**SOUTHEAST QUADRANT PLANNING AREA**
**City of Wellington, Kansas**

| ITEM | EXISTING AREA (Ft.) | FUTURE EXPANSION (Ft.) |
|---|---|---|
| **Water Mains** | | |
| 4" | 900 | 0 |
| 6" | 23,355 | 6,920 |
| 8" | 6,055 | 5,790 |
| **Fire Hydrants** | 45 ea. | 15 ea. |

Data from the table indicates that new water lines should be 6-inch or larger, with portions of the major supply loop utilizing 8-inch mains, which will ensure adequate fire flow and overall service capabilities for the quadrant. Additionally, the existing 4" lines should be upgraded during the planning period to provide adequate fire flow capabilities for the existing system, especially in areas adjacent to identified future water main extensions. The figure proposes that these 4 inch lines be upgraded to 8 inch lines to meet this projected need.

Additionally, both the table and the drawing indicate that 15 or more new fire hydrants may be required to provide sufficient fire protection for areas of residential expansion in the quadrant. Most of these new hydrants and water mains would be located in the southeast section of the planning area. As in other parts of the community, new fire hydrants should be spaced at approximately 300' to 500' intervals in order to maintain adequate fire protection of new development in the quadrant.

SOUTHWEST QUADRANT

Based upon information provided by the City of Wellington, the following table provides a summary of the existing and future water distribution system for the southwest quadrant.

**TABLE 22**
**MUNICPAL WATER DISTRIBUTION SYSTEM**
**SOUTHWEST QUADRANT PLANNING AREA**
**City of Wellington, Kansas**

| ITEM | EXISTING AREA (Ft.) | FUTURE EXPANSION (Ft.) |
|---|---|---|
| **Water Mains** | | |
| 4" | 6,920 | 0 |
| 8" | 4,325 | 5,260 |
| 10" | 4,758 | 1,898 |
| 12" | 0 | 1,200 |
| 14" | 4,325 | 0 |
| 20" | 865 | 0 |
| 24" | 6,055 | 0 |
| **Fire Hydrants** | 83 ea. | 0 ea. |

The summary shows that most of the lines in the quadrant are 8' in size; with 4", 10", 14" and 24" lines in the area as well. The 24" line represents the main line from the city water plant into the community. However, due to the fact that little future development is expected in the area, the table shows only a marginal amount of new water lines proposed in this area. The proposed new 8 and 10-inch lines are

needed to maintain adequate water pressure in the southeast portion of the quadrant south of the Central Business District.

Generally, new water lines should be 6-inch or larger in order to assure adequate fire flow and service capabilities. Also, the installation of new fire hydrants should be spaced at approximately 300' to 500' intervals in order to guarantee fire protection of new development in the area.

A graphic illustration of the future water distribution system for the quadrant is shown on the water system drawing.

## SANITARY SEWERAGE

A sanitary sewer system is a network of pipelines which collect liquid wastes from individual dwelling units and other water use points. The network of pipes then conveys the wastewater to the sewage treatment area prior to disposal. Collection, treatment and disposal of sewage are essential to the health of the general public, and for a quality environment in the community. The system is designed for gravity flow to the maximum possible extent to assure reliability and economy of operation. A pumping station and force main are used where necessary to lift the sewage to a higher elevation where gravity flow can be resumed. In this context, the following analysis of each quadrant within the community describes both the current capabilities and future needs of the system. Proposed physical expansion of the community sewer system is graphically shown on the following figure.

### NORTHWEST QUADRANT

The following table outlines general characteristics of the existing and proposed sanitary sewer system for the northwest quadrant.

**TABLE 23**
**EXISTING AND PROPOSED SANITARY SEWER SYSTEM**
**NORTHWEST QUADRANT PLANNING AREA**
**City of Wellington, Kansas**

| ITEM | EXISTING AREA (Ft.) | FUTURE EXPANSION (Ft.) |
|---|---|---|
| **Sewer Mains** | | |
| 8" | 13,020 | 15,000 |
| 10" | 0 | 4,200 |
| 12" | 3,240 | 0 |
| 15"* | 750 | 0 |
| **Lift Stations** | 2 ea. | 1 ea. |
| **Force Main** | 3540 | 900 |

* Access at far southwest corner of study area

The proposed sewer expansions would approximately double the primary collection system in terms of linear feet of line, however, due to the low density development associated with the park, actual volume increases would probably be no more than 30 to 40 percent above current levels, overall. However, the future expansions of the sewer system in the area will have the same topographical challenge as the existing system, resulting in the need for an additional lift station and force main on the western edge of the quadrant.

Review of the current and proposed system shows at least one area where a potential lack of long-range capacity could become a problem. This is in the southwest quadrant planning area, where the existing 12-inch sewer main crosses U.S. Highway 160 the pipe size reduces to 8-inch for several blocks before entering the larger 15-inch main. When the 12-inch main begins to receive substantial additional flows due

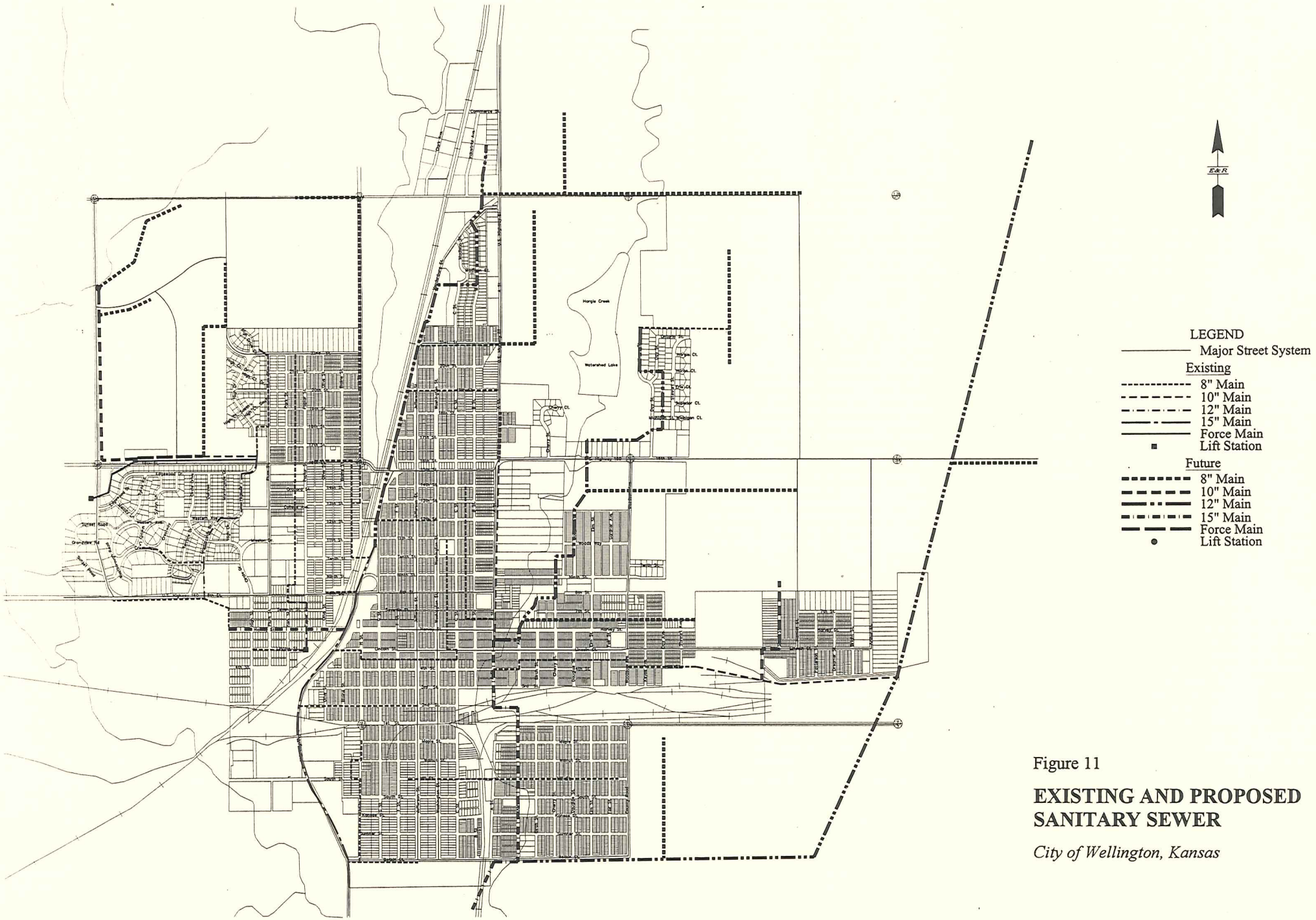



Figure 11

**EXISTING AND PROPOSED SANITARY SEWER**

*City of Wellington, Kansas*

to new development on the northwest, it may become necessary to increase the line between the 12-inch and 15-inch mains to at least a 12-inch size.

NORTHEAST QUADRANT

A summary of the sewer system for the northeast quadrant is presented in the following table.

**TABLE 24**
**EXISTING AND FUTURE SANITARY SEWER SYSTEM**
**NORTHEAST QUADRANT PLANNING AREA**
**City of Wellington, Kansas**

| ITEM | EXISTING AREA (Ft.) | FUTURE EXPANSION (Ft.) |
|---|---|---|
| **Sewer Mains** | | |
| 8" | 12,110 | 8,175 |
| 10" | 7,785 | 0 |
| 12" | 1,800 | 11,400 |
| 15" | 865 | 0 |
| **Lift Stations** | 0 | 0 |
| **Force Main** | 0 | 0 |

The table shows that 8" mains comprise the majority of the quadrant's sewer system, with limited runs of 10" and 12" sewer lines as well. Also, the 15-inch line in the southwest corner of the quadrant is the beginning of the main line that runs to the sewage treatment plant. Additionally, the topographical features of the quadrant should allow for the system to utilize gravity flow rather than requiring lift stations and force mains.

Concerning future expansions, extensions in the study area will likely be of either 8 or 12-inch lines, with the 8 inch lines serving as secondary collection routes for new growth in the quadrant. The 12 inch line would be an upgrade of an existing 8-inch line, and is the primary sewer main in the quadrant as the majority of other lines will discharge into this main. The addition of these new sewer mains would allow for more efficient transport of waste to the wastewater treatment plant.

SOUTHEAST QUADRANT

The following table presents a summary of the existing as well as the future sewer system for the southeast quadrant.

**TABLE 25**
**EXISTING AND FUTURE SANITARY SEWER SYSTEM**
**SOUTHEAST QUADRANT PLANNING AREA**
**City of Wellington, Kansas**

| ITEM | EXISTING AREA (Ft.) | FUTURE EXPANSION (Ft.) |
|---|---|---|
| **Sewer Mains** | | |
| 8" | 8,650 | 6,425 |
| 10" | 4,758 | 0 |
| 12" | 5,190 | 8,100 |
| 15" | 0 | 6,920 |
| **Lift Stations** | 0 | 0 |
| **Force Main** | 0 | 0 |

Information from the table shows that mainly 8" lines serve the quadrant, with larger 10" and 12" primary lines in some locations in the quadrant as well. The 12" line serves as a primary connection to the sewage treatment plant south of the City. Topography in the quadrant currently allows for systemwide gravity flow, thus eliminating the need for force mains or lift stations.

Future improvements call for additional 8-inch lines to be located in the south central portion of the quadrant in order to adequately serve residential expansion in the quadrant. In addition, the table proposes an extension of the existing 10-inch line to the north of the railroad tracks. Also, the table proposes that portions of the existing 12 inch main be upgraded to 15 inch line in order to provide efficient removal of wastes from the quadrant, with additional 15 inch mains to be installed along Botkin Avenue east of C Ave. Avenue. Furthermore, a new 12-inch line is suggested near Beaver Creek in order to serve future residential and commercial expansion in the southeast and northeast quadrants.

SOUTHWEST QUADRANT

A summary of the sewer system for the southwest quadrant is provided in the table below.

**TABLE 26**
**EXISTING AND FUTURE SANITARY SEWER SYSTEM**
**SOUTHWEST QUADRANT PLANNING AREA**
**City of Wellington, Kansas**

| ITEM | EXISTING AREA (Ft.) | FUTURE EXPANSION (Ft.) |
|---|---|---|
| **Sewer Mains** | | |
| 8" | 20,760 | 0 |
| 15" | 6,920 | 5,525 |
| **Lift Stations** | 1 | 0 |
| **Force Main** | 0 | 0 |

The summary indicates that the majority of sewer lines in the quadrant are 8", with a 15' main line located next to U.S. Highway 81 that transfers wastes to the sewage treatment plant south of the community. The rolling topography necessitates the use of a lift station and force main west of the railroad tracks, to the south of Harvey Street.

Concerning future expansion, due to the presence of both the railroad tracks and floodplain in the quadrant, little future development, such as residential or commercial expansion is expected, reducing the need for expansion of the system during the planning period. This, however, does not take into account the volume of sewerage currently delivered by the system in the northwest quadrant. At this time, effluent from this quadrant is carried into the 8-inch main located along Harvey and Poplar Streets, which connects to the 15 inch line that runs to the sewage treatment plant. In order to adequately maintain the system and provide for future development in other parts of the community, the table proposes the upgrading of the 8-inch line along Harvey Street to a 15-inch line. Upgrading this section of the system will provide the capability to serve development throughout the planning period and beyond.

As with other utility systems, continued community growth will be accompanied by attendant increases in overall sewage volume to be collected, transported and treated. Additionally, as the community grows and expands into previously undeveloped areas the need for sanitary sewer modifications must be carefully monitored to assure that service extensions will pace actual development. Also, as the need for expansions develops, the extensions should be carefully planned to avoid the need for lift stations to the fullest extent possible.

Like the potable water system, the planning level reviews of potential long-range sewer needs for the projected new growth area should be supplemented by an in-depth study of projected flows and system capacities. The more detailed studies should be timed to coincide with new neighborhood development.

Within the overall concept established by the comprehensive plan, the detailed system studies should incorporate community-wide needs, with emphasis on both the collection system and the capacity of the disposal plant.

**SOLID WASTE DISPOSAL**

Generation of solid waste is affected by such factors as the kinds of dwellings and density of residential development, extent of commercial development, extent of industrial development, building construction and agricultural activities. The principal wastes generated in most similar communities are household and commercial with lesser volumes of industrial and agricultural refuse. The assumptions used in estimating generation rates for the community are that overall refuse generation will range from four to six pounds of solid waste per capita per day. The higher generation rates are reflective of the need to provide an additional allowance to account for a probable future increase in the proportional volume of commercial waste as the economic base continues to expand.

Based on this assumption, the following waste generation factors are used in the analysis.

| Year | Pounds Per Person Per Day |
|---|---|
| 2000 | 5.5 |
| 2005 | 6.0 |
| 2010 | 6.5 |
| 2015 | 7.0 |
| 2020 | 7.5 |

The assumed existing generation factors are higher than the 3 to 4 pounds per capita per day generation found in many communities due to the extent of existing industrial development. This difference will likely continue for at least the 20-year planning period as the industrial base continues to expand in proportion to other aspects of the surrounding community.

Developed from these values, the following table outlines a forecast of solid waste volumes for the Wellington community through the year 2020.

## TABLE 27
## ESTIMATED SOLID WASTE GENERATION
### City of Wellington, Kansas

| YEAR | POPULATION FORECAST | ESTIMATED SOLID WASTE VOLUME (TONS) | EQUIVALENT ANNUAL LAND REQUIREMENT (ACRES) | ACCUMULATIVE ACRE TOTAL |
|---|---|---|---|---|
| 2000 | 8,813 | 8,846 | 1.4 | 1.4 |
| 2001 | 8,803 | 8,836 | 1.4 | 2.7 |
| 2002 | 8,793 | 8,826 | 1.4 | 4.1 |
| 2003 | 8,783 | 8,816 | 1.4 | 5.5 |
| 2004 | 8,773 | 8,806 | 1.4 | 6.8 |
| 2005 | 8,763 | 9,595 | 1.5 | 8.3 |
| 2006 | 8,948 | 9,798 | 1.5 | 9.8 |
| 2007 | 9,138 | 10,006 | 1.6 | 11.4 |
| 2008 | 9,332 | 10,219 | 1.6 | 13.0 |
| 2009 | 9,531 | 10,436 | 1.6 | 14.6 |
| 2010 | 9,734 | 11,547 | 1.8 | 16.4 |
| 2011 | 10,147 | 12,037 | 1.9 | 18.3 |
| 2012 | 10,577 | 12,547 | 1.9 | 20.2 |
| 2013 | 11,021 | 13,074 | 2.0 | 22.2 |
| 2014 | 11,487 | 13,626 | 2.1 | 24.3 |
| 2015 | 11,973 | 15,296 | 2.4 | 26.7 |
| 2016 | 12,248 | 15,647 | 2.4 | 29.1 |
| 2017 | 12,530 | 16,007 | 2.5 | 31.6 |
| 2018 | 12,819 | 16,376 | 2.5 | 34.2 |
| 2019 | 13,113 | 16,752 | 2.6 | 36.8 |
| 2020 | 13,415 | 18,632 | 2.8 | 39.6 |

The estimated land requirement shown in the table is based on a compacted density of 800 pounds of solid waste per cubic yard, and a fill depth of 10 feet. This represents a fill capacity of approximately 6,450 tons per surface acre.

Based on these assumptions, the figures indicate solid waste generated in the Wellington community could reach over 18,000 tons per year by the year 2020. If the specified compaction rates and burial depth is achievable, this volume would require from 1.4 to 2.8 acres of land per year, with an accumulative total of slightly more than 39 acres over the course of the 20 year planning period. In addition to the direct burial space would be the land needed for access, vehicle maneuvering, screening and similar requirements which will add to the total acreage requirement.

At the present time, solid wastes generated in the community are deposited at a central location operated by the county, where materials are compacted and bundled for transport to an out-of-county location for final disposal. With this arrangement, neither the City or the County is required to operate a landfill, although the City operates a waste stream reduction program, one facet of which is removal of vegetative materials for composting operation. Local sites are also utilized for disposal of tree wastes and construction debris.

Although the City will not be an active landfill operator, the waste generation figures noted above are useful for the purposes of waste disposal program planning. In this context, the projections and forecasts can be easily adjusted mathematically to correspond with actual population numbers at any given point in time.

## OPEN SPACE AND RECREATION

Parks, open space and recreational opportunity represent significant and essential elements of a satisfactory and rewarding living environment. Although it is difficult to attach a monetary value to such amenities, it is well known that they have a definite beneficial impact upon the quality of residential, commercial and industrial development community-wide. Accordingly, it is important that consideration of the need for parks, open space and recreational opportunity be incorporated as an integral part of planning for the future.

As noted in the goals and objectives portion of the plan, the general overall space standard for outdoor recreational opportunity is 10 acres per 1,000 population, or one acre per 100 persons. When applying this standard to the Wellington community, the statistical need for 86 acres of parks and open space is determined. With this in mind, an analysis of existing recreational facilities and future open space requirements is described in the following paragraphs by quadrant.

### NORTHWEST QUADRANT

At the present time, the Northwest Quadrant contains a large community recreation facility, Worden Park, of approximately 140 acres plus a small playground, McKinley Park, in the southeast part of the study area on 10th Street which contains about 1.4 acres of land. Additionally, the school grounds also contain recreation facilities which are available at times for use by neighborhood residents. In light of the quadrant's current population, the study area currently contains recreation space well in excess of that indicated as necessary by basic standards

At the present time, Worden Park is in the process of development. However, a range of recreation amenities are currently available. Available facilities presently include:

Baseball Diamond (lighted) (One of four future)
Restroom/Concession Stand
Go-Cart Track
Model Airplane Flying Field
Football Fields (2)
Soccer Fields (3)

This is a very large park which will function at its completion as a major recreational facility serving both the immediate community and surrounding region. Development has only recently begun and the park contains sufficient space to accommodate a wide range of additional facilities in the future.

The other recreational facility available in the Northwest Quadrant is McKinley Park located in the southwest corner of the quadrant. This small facility which occupies approximately two-thirds of a city block, functions as a neighborhood playlot and contains the following amenities:

Basketball Court
Softball Backstop
Swingset
Fenced Totlot with Play Structures

The park contains a large open grass area suitable for general use and is a good example of a functional facility serving an immediately surrounding residential neighborhood.

While the above figures indicate that present park space is adequate according to minimum standard requirements, they say nothing about location with regard to long-range development patterns. Based on the directions established by the Future Land Use Plan, additional recreation facilities should be established in the western and northern portions of the study area where significant additional residential development is possible in future years, and which will be some distance from existing recreation facilities. In recognition of these needs, a playground type of facility should be developed as part of the large park, while a second small playground type of facility should be developed as part of the new neighborhood area anticipated north of 16th Street and west of Plum. The specific location is not critical, however, the City

should influence provision of adequate playlot facilities as part of the subdivision review and neighborhood development process.

NORTHEAST QUADRANT

Currently, the Northeast Quadrant contains approximately 198 acres of park space. The majority of this acreage is a regional park associated with Hargis Creek Reservoir located north of U.S. Highway 160. This park contains facilities for overnight camping as well as a lake for fishing. In addition, school grounds within the quadrant provide recreational facilities that are at times available for use by the general public.

In addition to the above facilities, the Northeast Quadrant Planning Area also contains four other smaller recreational facilities with contribute to the available recreation opportunity for area residents. These include Hibbs-Hooten field, school ball diamonds and practice fields, a series of practice fields located west of Woodlawn and North of Ninth; and Lions Club Park near the intersection of 10th Street and Highways 160 and 81 in the southwest corner of the quadrant.

Hibbs-Hooten Field and Park is located adjacent to the public school grounds north of Ninth Street and contains a variety of facilities including the following:

Basketball Court
Old Railway Steam Engine
Multi-purpose Building
Large Lighted Baseball Diamond
Walkways, bridges and paths adjacent to a small park.
Large Automobile Parking Lot

The area contains a number of large mature trees and is a good example of a facility serving both the school system and the general public.

The school ball diamonds and practice fields are designed only for field games and do not contain other types of recreation facilities. At this location are 2 baseball diamonds, a football practice field, and spectator seating. One baseball diamond at this location is lighted for evening and night use. The area does not contain automobile parking or developed landscape features.

The practice fields area on Woodlawn Street is largely an open grass field with minimal development as necessary to allow some types of play. At this location are a baseball backstop and several soccer backstop frames. There are no lights, off-street parking or other recreational development. The area does provide a playing field for informal games by residents of the adjacent neighborhood.

Lions Club Park, situated along U.S. Highway 81 at 10th Street currently contains a limited range of facilities which include:

Picnic Shelter
Charcoal Cooker
Refuse Container
Sizable grass parking area
Announcement and institutional signage
Large Shade trees

This small roadside park provides picnic opportunity for area residents plus a rest area for travelers. The location is significant with respect to highway access and has a high potential for future facility development. In addition to general recreation for area residents and the traveling public, the location could also function as a rest area on a hike and bike trail system which could be developed along the highway and railroad corridors. Much of the area is currently in railroad or KDOT right-of-way and is also within the coverage of the flood plain of Rock Island Slough. Recreational uses such as a trail system and park area rest station could be easily compatible with these conditions.

Overall, recreational capability, when combined with the current population of the planning quadrant, indicates that the current acreage is more than the general standard of 1 acre per 100 population. This however, does not take location or type of facilities into consideration, especially with regard to the large established neighborhoods in the quadrant. Also, with the high potential for future development east of Hargis Creek and southeast of the lake area, a playground type of facility should be developed as a part of the new neighborhoods anticipated in these areas. The actual location is not critical, however, the City should plan for adequate playlot facilities as part of the subdivision review and neighborhood development process. Furthermore, the City should continue to develop existing recreational facilities in order to better serve the needs of the overall community, including renovation and expansion of facilities such as Lions Club Park.

SOUTHEAST QUADRANT

The Southeast Quadrant Planning Area contains two public recreation facilities which include a neighborhood playground at Lincoln and Woodlawn, and a baseball diamond located on Mill Street between Ash and Cherry. These park areas, especially when combined with the facilities available at the school, contain statistically adequate acreage for the current population of the quadrant.

The neighborhood playground at Lincoln and Woodlawn contains the following:

Basketball Courts (2)
Swingset
Softball Diamond (Backstop only)
Bench and Refuse Can

The other existing recreation facility in the southeast quadrant, a baseball diamond, is a facility designed specifically for this purpose. At this location are a lighted ball diamond, a restroom structure, and limited automobile parking. The area does not contain other development, but has a limited capacity for installation of other types of amenities such as play toys for small children. In this respect, this is the only public recreation space in an established neighborhood stretching from the railroad south to Botkin and east of South Street.

With future residential development possible in the area south of the railroad during the planning period, the City should begin to take steps to assure future neighborhoods contain playgrounds in order to provide small children and their parents adequate opportunity for outdoor recreation, including multi-purpose facilities that are both active and passive in nature. As in other planning quadrants, the City should influence provision of these facilities as part of the subdivision review and neighborhood development process.

SOUTHWEST QUADRANT

At the present time, the Southwest Quadrant Planning Area contains approximately 137 acres of parks and open space, which includes a swimming pool, the Wellington Golf Course and Melody Bowl Playground and Picnic Area, plus a set of baseball fields east of the country club. A third, small park exists near Sumner and Jefferson Streets as well. When taking the population of the quadrant into consideration, the statistical requirement for approximately 24 acres of park space is met by the extensive acreage already existing in the quadrant.

Concerning recreational facilities in the area of the Golf Course, the community swimming pool at the corner of Harvey and High Streets is currently being rebuilt and substantially improved. In addition to the pool, the location also contains a playlot with equipment for small children. The playlot is also being substantially improved as part of the pool expansion project.

The Golf Course is situated west of the pool and south of US 160 Highway features an 18-hole grass green course which is well landscaped and maintained. The course is owned by the City and is open for public use.

Immediately adjacent to the golf course on the east is Melody Bowl Picnic Area, which features a shelter house with picnic tables, restrooms, two swing sets and a volleyball court. The area is well suited for family or small group use.

South and Southwest of the golf course along Slate Creek is Donut Bay Park. This nature park features large open grass areas with many mature trees and other developed landscape. The main feature of this park is a dam on Slate Creek which ponds water upstream providing fishing opportunity and habitat for waterfowl. Recreational development in the park includes:

Picnic shelters (7)
Restrooms
Duck pond
Drinking water
Swing sets (2)
Charcoal Grills
Benches
Refuse containers
Off-street vehicle parking lots

Recreational development is situated north of Slate Creek and follows the creek under the railroad crossing toward the northwest where the park development adjoins the western portion of the golf course.

The park is a primary recreation facility for the entire community, offering several unique types of activities for area residents.

Another recreation facility located in the southwest quadrant is Woods Park, a specialized facility featuring only baseball. Located at 4$^{th}$ and High streets adjacent to the Santa Fe Railroad this area contains two lighted softball diamonds, with bleachers, a concession stand and a restroom facility, plus a gravel off-street parking area. This is an older facility in an older neighborhood and has several large deciduous shade trees around the perimeter.

Also within the southwest quadrant of the municipal planning area is a neighborhood park located at Kansas and Jefferson in the south-central area of the community. Occupying a city block, the park contains the following equipment:

Basketball Court
Double Tennis Court
Softball Diamond
Swing-sets (2)
Climber/Slide (New)
Picnic Shelter
Spring toys
Refuse containers

Although usable, many of the amenities of the park are deteriorated and in need of renovation. In its current condition there are no restrooms or night lighting. The park does contain several large shade trees and has open grass areas available for field games.

This park is strategically located for service to a rather sizable residential neighborhood, and should be renovated and further improved for use by those living in the immediate vicinity.

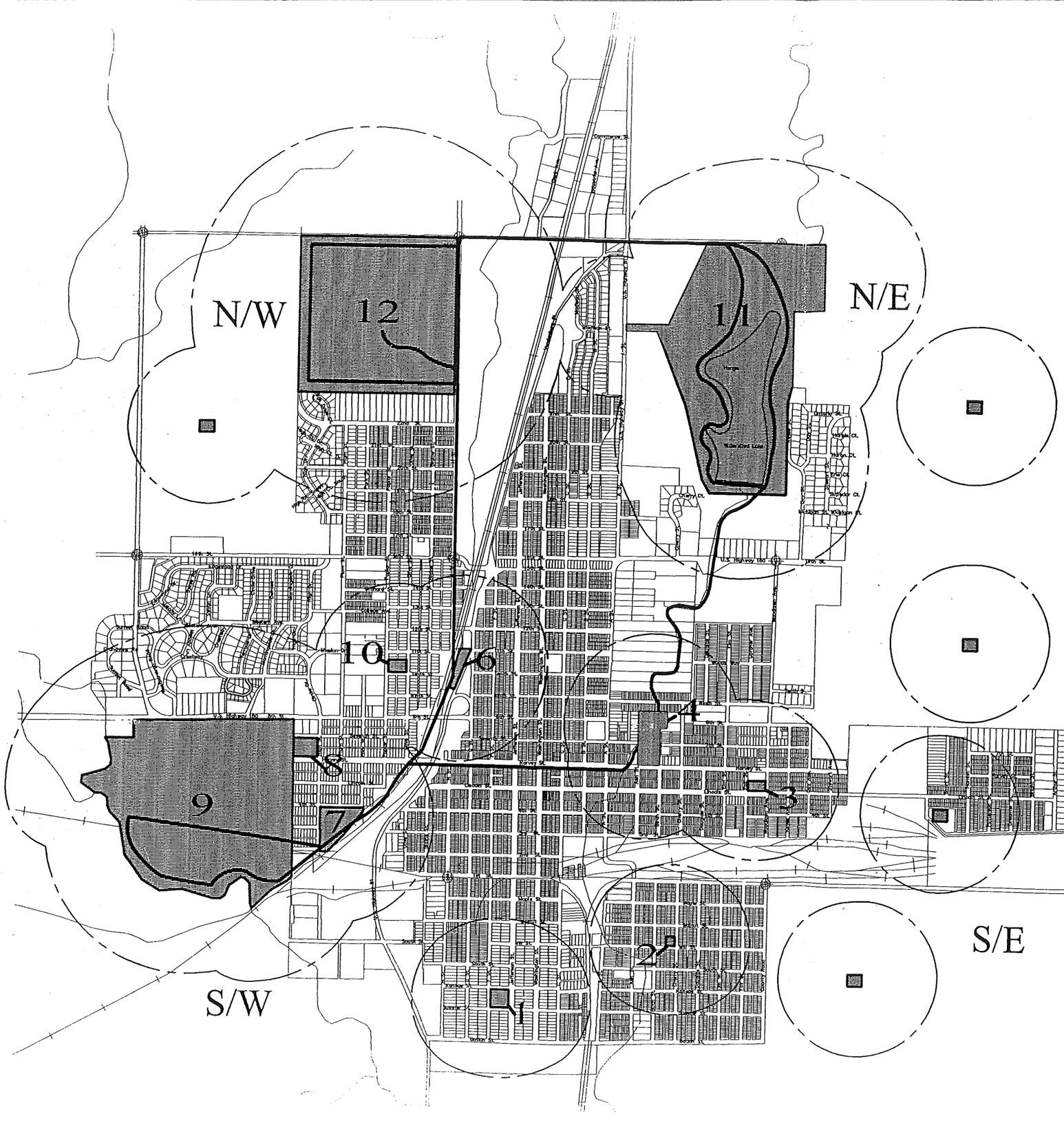
Although the general standard for outdoor recreational opportunity is clearly exceeded statistically, it is important to note that the majority of park space is clustered in the western half of the quadrant, while schools and other public facilities comprise the remainder of recreational facilities in the quadrant. While each of these facilities are an integral aspect of the entire community, the City should work to ensure neighborhoods in the quadrant have playgrounds to meet the recreation needs and interests of all ages,

especially in future neighborhoods. Exact locations for these facilities should be determined through the subdivision review and plat approval process, as well as a continuing program of parks and recreation planning for existing neighborhoods and newly developing areas of the community.

The location of existing park facilities in the City of Wellington, as well as their respective service areas, is illustrated graphically in the following figure. The figure shows the service areas of each park, and indicates that a large portion of the community is within the recommended distance of recreational facilities. Additionally, the figure shows the location of the proposed hike and bike trail for the City. The trail provides not only a connection between most of the parks in the community, but a scenic pedestrian travelway along a number of drainageways in the City, which has the potential to become a major recreational feature in the community during the planning period.

**SUMMARY**

Overall, the City offers a range of recreational facilities for its residents, although a number of neighborhood areas in the community are currently without recreational facilities within easy walking distance. In order to provide quality recreational opportunity throughout the planning period and beyond, it will be important for the City to require consideration of recreational needs as part of the subdivision review and approval process. In addition, it will be important for the community to maintain an ongoing maintenance and improvement program so that existing facilities continue to effectively serve the community. In its role as technical advisor to the Governing Body, the planning commission, should include neighborhood needs for recreational opportunity as one of the aspects of the continuing planning process. This guidance, together with the efforts of other public agencies and private organizations, will help ensure quality recreational opportunity for all citizens of the community throughout the 20-year planning period and beyond.




LEGEND

10 Park

Neighborhood Park Service Boundary

New Neighborhood Park

Proposed Hike and Bike Trail

N/E Quadrant

Figure 12

**MUNICIPAL PARK SYSTEM**

*City of Wellington, Kansas*

## SECTION V

## ZONING PATTERNS

### INTRODUCTION

One of the legal measures adopted by the City in the form of an ordinance, zoning regulations control the use of land, height and bulk of buildings, and density of development. Because zoning requirements so directly impact land development patterns, properly administered zoning regulations are among the most effective means of implementing the long range planning proposals for the community. In this context, the overall potential of zoning is so great that it is commonly referred to as "one of the primary planning tools".

It is the purpose of this element of the plan to review existing zoning in and around the present community and to explore potential future zoning needs in the identified long-range development area. Towards these ends the following paragraphs provide reviews of both the zoning ordinances and zoning district map within the context of continuing community growth and expansion.

### ZONING STRUCTURE

The zoning regulations for the City of Wellington and its surrounding extraterritorial area consists of two parts, a text describing and setting forth the various district regulations and a map delineating the location and boundaries of the individual zones within the zoning jurisdiction. Both are adopted by ordinance and both are legal documents, which together set out the basic tenants of zoning which include type and location of permitted uses, height and bulk of buildings, and the density of development. It is important that the overall patterns and detail of local zoning practice be in close concert with the comprehensive planning directions, particularly the Future Land Use Plan. In this respect, proper zoning practice is one of the primary means of guiding continuing community development toward the goals and ideals identified through the community planning process

### CURRENT AND FUTURE ZONING PATTERNS

Based on the long range Future Land Use Plan for the Wellington community, the following figure illustrates both existing and suggested future zoning patterns for the existing community and the projected future expansion area. The figure indicates substantial potential future residential, commercial and industrial expansions on three sides of the community, with particularly large areas of possible new residential zoning adjacent in the northwestern and northeastern quadrants of the community. The zoning patterns depicted on the map are reviewed in more detail by quadrant in the following paragraphs.

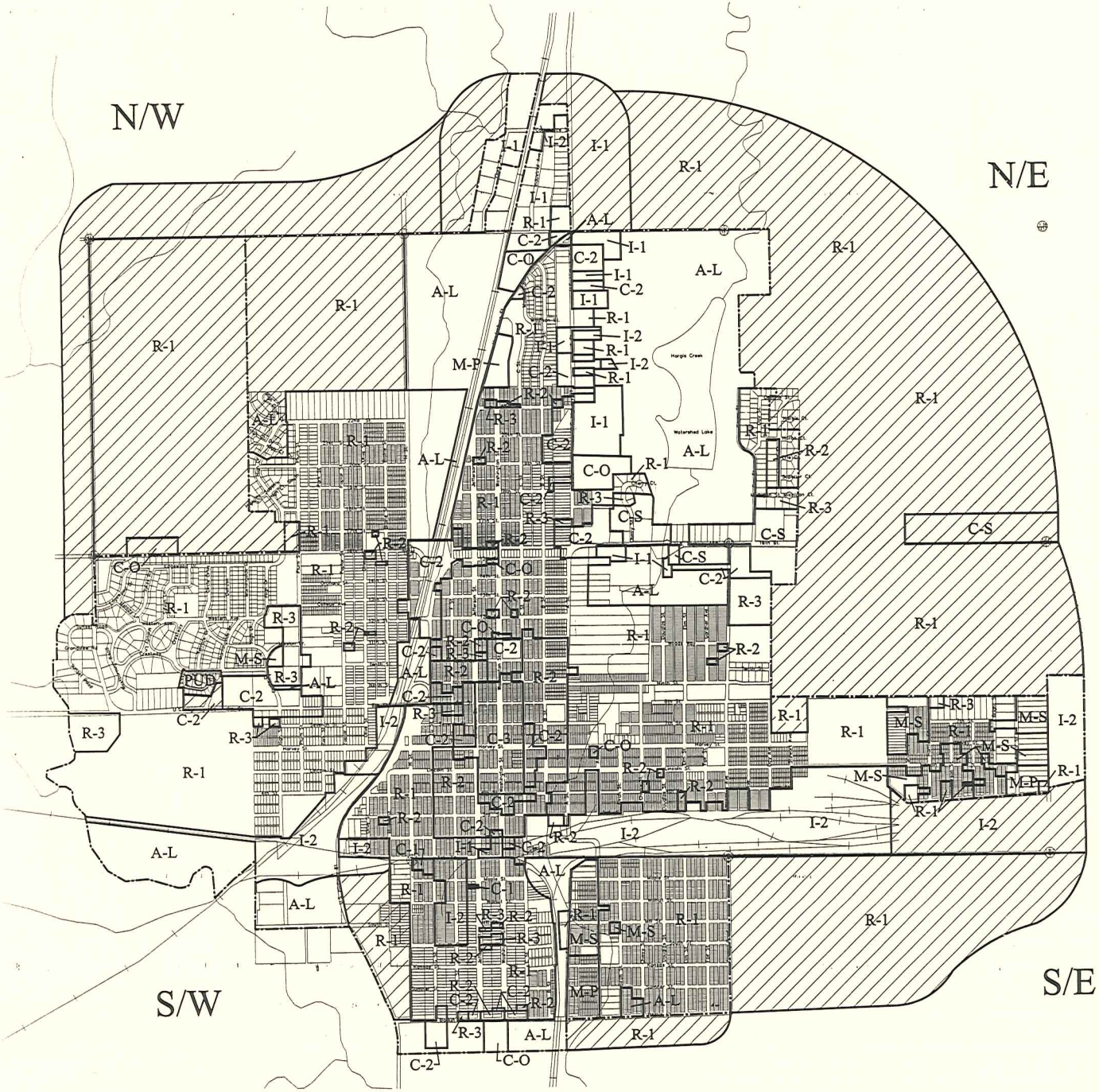
NORTHWEST QUADRANT

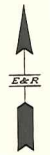
The map illustrates current zoning coverage in the Northwest Quadrant Planning Area, and shows proposed long-range zoning patterns in the identified future growth region on the northwestern flank of the quadrant.

Existing zoning adjacent to the future expansion area is predominantly "R-1" Single Family Residential, with small areas of "R-2" Two Family Residential, "R-3" Multi-Family Residential, "PUD" Planned Unit Development and "C-2" General Commercial. Most of the future expansion area is currently zoned "A-L" Agriculture. Based on the development patterns evident on the Future Land Use Plan, future zoning patterns should recognize projected land use types in order to continue a reasonably cohesive and rational neighborhood expansion pattern.

This suggests that future zoning in the projected new development area should be predominately residential, preferably "R-1" Single-Family Residential. Within the overall development scheme, it is possible that some form of multiple-family development could be compatible with the surrounding neighborhood, however, such proposals should be very carefully evaluated in terms of impact to utility systems, drainage, traffic generation and overall design quality.

Additionally, a "C-2" commercial district is proposed along U.S. Highway 160 adjacent to a "PUD" Planned Unit Development, while a "C-O" commercial office district is anticipated to the north of 16th Street. No new industrial districts are projected on the map, with no existing industrial districts in the quadrant as well.



LEGEND

| | |
|---|---|
| A-L | AGRICULTURAL DISTRICT |
| R-1 | SINGLE FAMILY RESIDENTIAL DISTRICT |
| R-2 | TWO-FAMILY RESIDENTIAL DISTRICT |
| R-3 | MULTI-FAMILY RESIDENTIAL DISTRICT |
| M-P | MOBILE HOME PARK DISTRICT |
| M-S | MOBILE HOME SUBDIVISION DISTRICT |
| C-O | OFFICE AND INSTITUTIONAL DISTRICT |
| C-S | HIGHWAY SERVICE DISTRICT |
| C-1 | NEIGHBORHOOD SHOPPING DISTRICT |
| C-2 | GENERAL COMMERCIAL DISTRICT |
| C-3 | CENTRAL COMMERCIAL DISTRICT |
| I-1 | LIGHT INDUSTRIAL DISTRICT |
| I-2 | HEAVY INDUSTRIAL DISTRICT |
| PUD | PLANNED UNIT DEVELOPMENT DISTRICT |
| | FUTURE ZONING DISTRICT |
| | DISTRICT BOUNDARY |
| | CITY LIMITS |
| N/E | QUADRANT |

Figure 13

**EXISTING AND PROPOSED ZONING PATTERNS**

*City of Wellington, Kansas*

NORTHEAST QUADRANT

The proposed zoning map graphically illustrates the current zoning patterns in the Northeast Quadrant Planning Area. Additionally, the figure shows potential zoning patterns of the projected growth areas in both the eastern and northern sections of the quadrant. Areas projected to experience growth during the planning period are situated next to or near "R-1" Single Family Residential, "C-S" Highway Service, "I-1" Light Industrial, and "I-2" Heavy Industrial districts.

The existing zoning pattern is a variety of districts found throughout the quadrant. Commercial and industrial districts are concentrated along U.S. Highways 81 and 160, with additional industrial districts found on the northern edge of the quadrant in the Wellington Industrial Park. Commercial districts along these major arterials tend to either be zoned as "C-S" Highway Service or "C-2" General Commercial, with a "C-O" Office and Institutional district present along U.S. Highway 81 as well.

In addition, "I-1" Light Industrial is the predominant district in the quadrant, with it being concentrated in the industrial park as well as scattered along U.S. Highway 81. Additionally, there are two "I-1" Light Industrial districts along U.S. Highway 160 as well. With regard to both commercial and industrial districts, the zoning classifications should be in concert with patterns and directions set forth in the land use plan to avoid both conflicting uses as well as the improper zoning of property in the community.

The "A-L" Agricultural District, which is normally a "holding" district, is found primarily in two sections of the quadrant. The first area is in the northwest corner of the quadrant, and includes the railroad as well as conventional housing, manufactured housing, and a storage warehouse, although these properties should generally be zoned according to their respective land use. This would also apply to the other "A-L" district, which is located in the Hargis Creek Park area. Within this district, a number of properties exist that should be zoned in a different classification, particularly the residential and commercial properties.

The graphic suggests that the majority of future zoning in the projected new development area should preferably be single-family residential. However, as with the northwest quadrant, it is possible that some form of multiple-family development could be compatible with the surrounding neighborhood, although such proposals should be carefully evaluated in terms of impact to utility systems, drainage, traffic generation and overall design quality. Also, some industrial and commercial zoning is proposed, particularly on the urban fringe and adjacent to the existing industrial park. Future development proposals in these areas should be evaluated using the same criteria as well so that conflicting land uses or other development hazards do not occur. In addition, all districts should match the land use patterns established in the land use plan for the community so that properties within each district are not allowed to develop in an undesirable manner.

SOUTHEAST QUADRANT

Current zoning patterns shown on the map indicate that most of the quadrant is classified as being Single Family Residential, although there are both "I-2" Heavy Industrial and "C-2" General Commercial Districts, with smaller areas containing other districts throughout the quadrant.

Future zoning patterns for the southeast quadrant are also suggested on the proposed zoning map, and are based on the directions set forth in the Future Land Use Plan. Existing zoning adjacent to future expansion areas is "R-1" Single Family Residential, "R-3" Multiple Family Residential, "M-P" Mobile Home Park, "M-S" Mobile Home Subdivision, and "I-2" Heavy Industrial, with the future expansion area currently zoned "A-L" Agricultural. Based on the development patterns evident on the Future Land Use Plan, future zoning patterns should recognize projected land use types in order to continue a reasonably cohesive and rational neighborhood expansion pattern. By doing this, land in the "A-L" Agricultural district is rezoned as areas projected for expansion in the Future Land Use Plan develop.

In this regard, future zoning in areas projected to experience new development should primarily be some type of residential district, with a variety of such districts potentially able to be utilized as long as they are a part of a reasonably cohesive and rational neighborhood expansion pattern. Concerning the railroad area,

the map suggests a designation of "I-2" Heavy Industrial so that all of the railroad facilities located within the quadrant remain the same zoning classification.

SOUTHWEST QUADRANT

The zoning map shows the current and future zoning patterns for the Southeast Quadrant Planning Area. The figure indicates that a variety of different zoning districts exist within the quadrant. In the northeastern flank of the quadrant lies the Central Business District, which is zoned "C-3" Central Commercial. Surrounding the Central Business District are a "R-2" Two Family Residential district and multiple "C-2" General Commercial districts. In the southern portion of the quadrant, a small "I-1" Light Industrial as well as a "I-2" Heavy Industrial district are surrounded by an "R-1" Single Family Residential district and numerous "R-2" Two Family Residential districts. Additionally, "R-3" Multiple Family Residential districts are scattered throughout the quadrant and a "C-O" Office and Institutional district is located at the southern edge of the quadrant. There are also "C-2" General Commercial districts scattered throughout the quadrant, with a large area of this classification found on the northern edge of the quadrant along U.S. Highway 160.

While the Future Land Use Plan projects little development in the Southwest Quadrant Planning Area during the course of the planning period, the proposed zoning map does anticipate a future residential district being created. Although the preferred designation would be single family residential, some form of two- or multiple- family development could occur, provided they are carefully evaluated with regards to drainage, traffic generation, impact on utility systems, and overall design quality.

In addition, it is important to note that a significant part of the quadrant lies within a floodplain, which will significantly influence future development in the quadrant. With this in mind, the City should utilize appropriate zoning provisions to prohibit future development in the southwest quadrant from infringing upon the floodplain.

**ZONING MAINTENANCE**

In order to keep the zoning provisions current and viable it will be necessary to review and update both the zoning ordinance and the zoning district map on a continuing basis. Toward this end, the map should be updated following each change authorized by ordinance, with an in-depth review of general communitywide zoning patterns on a 5 to 10 year basis. Likewise the zoning ordinance should be regularly reviewed for needed changes. This will be especially important where there have been changes in the state enabling regulation, or administrative rule changes by state or federal regulatory agencies. Where the ordinance and map are regularly reviewed and updated in this manner, the zoning provisions can be kept viable indefinitely with a corresponding benefit to the entire community.

## SECTION VI

## GENERAL DEVELOPMENT PLAN

### INTRODUCTION

Comprehensive planning is a process oriented toward achievement of common goals and aspirations within the context of continued municipal growth and development. In this sense, the completed plan represents the framework around which the future community may be fabricated.

Properly prepared and formally adopted, the Comprehensive Plan represents a statement of policy concerning the type of community and the living environment desired for the future. Within the broad objectives of influencing a healthful, wholesome and attractive environment in which to live and work, it is the purpose of the plan to help achieve a harmonious, well-balanced community based on safe, efficient, and economic development patterns. Through these means, the population of the community can continue to enjoy a wide range of amenities and benefits which would not be available solely through the efforts of individuals.

In this context, each of the earlier individual planning studies outline separate but interrelated aspects of the communities long-range growth pattern. Together, the accumulative effects of these influences comprise the General Development Plan for the community. Presented graphically on the following figure, the plan illustrates the possible physical characteristics of the community if future growth occurs substantially as envisioned by the planning studies. Overall, the plan shows that there will be a strong potential for continued growth in all aspects of the community throughout the planning period.

### POPULATION

Population estimates together with land use studies comprise a basis for projection of future community development on a reasonable scale. From these studies and projections, future need for housing, schools, goods and services, and utilities may be anticipated. Based on historical patterns, current indications and expectation of continued economic expansion in the years to come, the planning studies indicate the potential for the population reaching levels of up to 13,415 or more by the end of the 20-year planning period, with the majority of the population expansion occurring in the northeast and southeast quadrants.

Both internal and external influences will impact population levels in the community during the planning period. Many of these are within the influence of the City, particularly those tied to the local economic base. Realization of the higher range of estimates is tied to job opportunity in area businesses and industries, and upon the ability of the City to create and maintain a municipal environment in which people will want to live and work.

### LAND USE

Patterns of urban uses of land are the primary indicators of the overall physical configuration of the future community toward the end of the planning period. The anticipated spatial arrangement of future land use patterns in the City of Wellington is illustrated on the General Development Plan. The present community contains approximately 3,100 acres of developed land. By the year 2020, it is estimated that developed land acreage will have expanded to around 3,400 acres. It is important that all future development in the community be coordinated with each element of the Comprehensive Plan, particularly the land use and major street plans.

Overall, the growth projections depicted on the plan indicate continued expansion in all directions, with major growth areas in the southeast, northeast, and northwest quadrants of the community. While the greatest acreage expansion is expected in the residential land uses, substantial growth is also predicted for commercial and industrial purposes, particularly in the northeast quadrant. As the community continues to expand, it will become increasingly important to conserve and protect natural drainage features and to promulgate patterns of development that will remain in harmony with the surrounding natural environment.

LEGEND

E&R

- SINGLE FAMILY RESIDENTIAL
- TWO FAMILY RESIDENTIAL
- MULTI-FAMILY RESIDENTIAL
- MANUFACTURED HOUSING
- SERVICE COMMERCIAL
- RETAIL COMMERCIAL
- LIGHT INDUSTRIAL
- HEAVY INDUSTRIAL
- UTILITIES & COMMUNICATION
- PUBLIC/QUASI-PUBLIC
- PARKS & RECREATION
- RAILROAD
- UNDEVELOPED LAND
- MUNICIPAL BOUNDARY
- FUTURE RESIDENTIAL
- FUTURE COMMERCIAL
- FUTURE INDUSTRIAL
- FUTURE PARKS & RECREATION
- FUTURE RAILROAD
- EXISTING ARTERIAL
- EXISTING COLLECTOR
- FUTURE ARTERIAL
- FUTURE COLLECTOR
- NEIGHBORHOOD PARK SERVICE BOUNDARY

Figure 14

**GENERAL DEVELOPMENT PLAN**

*City of Wellington, Kansas*

## TRANSPORTATION

Of the several forms of transportation important in the municipal setting, the system of singular importance to the City of Wellington is surface transportation network of local and regional streets, roads and highways. Also of importance are the railroads and airport, which provides vital transportation links with the region and nation. Both systems, utilized in conjunction with the surface transportation system, are important to the process of long-range economic development and community expansion.

Based on field observations, there are approximately 83 miles of opened streets and alleys in the Wellington community. In addition, arterial and collector streets account for over 15 miles of the street system. Because of this, if the City realizes its potential for growth there will be a need for slightly over 7 miles of additional arterial and collector streets in order to properly serve new expansion areas while promoting a cohesive and functional major street system in and around the current and future community.

Implementing the major street plan is largely an administrative process oriented toward preserving the necessary right-of-way and segmentally developing the system over a long period of time. Where right-of-way route segments will be required for extension of major streets, land reservations should be made at an early date. Maintenance of the major street system through proper planning is another of the important responsibilities of the Planning Commission within the scope of the long-range community planning process.

## WATER SUPPLY

The distribution system for potable water in the Wellington community is comprised mainly of 6 and 8 inch water mains that provide water to individual properties. In addition, there are runs of 4, 10, 12, 14, 20, and 24 inch mains as well, with the larger sizes utilized as the primary service lines between the treatment facility and the community. The system is looped whenever possible in order to provide adequate pressure and fire protection, with fire hydrants spaced at 300 to 500 foot intervals.

If the projections presented in the background planning studies of population and land use develop as anticipated during the 20 year planning period, there will be a need for an additional 15 miles of water mains, most of which should be either 6 or 8 inches in size. The majority of these new water mains are likely to be located in the northwest and northeast quadrants where most of the future growth is expected to occur. Additionally, the plan calls for the installation of a new water tower in the northwest quadrant to continue to provide adequate pressure and fire protection.

The background studies also note that as part of the future utilities planning process, a more complete system study will be needed in order to verify line sizes, system pressures and final locations for major elements of the water system. This study, based on detailed information about system pressures, pipeline conditions, storage capacities, fire protection requirements and similar details will help to identify detailed area needs as well as associated financing requirements and necessary rate structures. In this context, the future expansion patterns, including utility corridors, identified in the Comprehensive Plan should provide the basis for detailed system improvement planning.

## SANITARY SEWER SYSTEM

A sanitary sewer system is a network of pipelines which collect liquid wastes from individual dwelling units and other water use points. The network of pipes then conveys the wastewater to the sewage treatment area prior to disposal. Collection, treatment and disposal of sewage are essential to the health of the general public, and for a quality environment in the community. The system is designed for gravity flow to the maximum possible extent to assure reliability and economy of operation. A pumping station and force main are used where necessary to lift the sewage to a higher elevation where gravity flow can be resumed.

The sanitary sewer system for the Wellington community is comprised primarily of 8-inch mains which connect individual neighborhoods with the larger 10, 12, and 15-inch mains that are situated in various locations in the City. These larger mains serve as transmission lines for wastes to the treatment facility south of the community. The majority of the existing system is capable of gravity flow to the sewage treatment plant, with only 2 lift stations and around 3,500 feet of force main currently in use.

Based on the previous population projections and the spatial delineations of future development in the land use section, the plan estimates the need for approximately 12 miles or more of additional sewer mains by the end of the planning period. While the majority of this will be the typical 8-inch main, there will be a need to upgrade some existing lines to larger 12 or 15 inch mains in order to accommodate projected growth. Concerning location, projected expansions of the sewer system are forecasted mainly in the northwest, northeast, and southeast quadrants either through the installation of new mains or the upgrading of existing mains.

Like the water system, the general indications of possible future expansion needs outlined in the plan should be supplemented by an in-depth engineering study of projected flows and system capacities for the entire community. This should include reviews of the capacities of the system in each quadrant of the community in relation to the other quadrants as well as the capacity of the treatment works to handle the anticipated increases in effluent volumes. This study should also include consideration of potential cost and anticipated means of financing.

## SOLID WASTE DISPOSAL

The long-range planning studies for the Wellington community note that if the population growth and physical expansion identified by the background studies occurs substantially as anticipated, there will be a brisk increase in the volume and tonnage of solid wastes generated in the area, which will require collection, treatment and disposal. In this respect, the background studies indicate the potential for over 18,000 tons of solid wastes being generated annually by the end of the planning period. If disposal is by traditional backfilling methods, this could amount to 1.4 to 2.8 acres per year required for direct burial space. However, the final mix of residential, commercial and industrial uses in the actual development of the area will dictate the extent, type and tonnage of solid wastes to be disposed of during a typical year.

## PROCESS IMPLEMENTATION

The question of how to implement the intent and proposals of the completed and legally adopted quadrant plan is an important consideration of the planning process. Recognizing that plans are of little value if they are not followed and carried out to the greatest extent possible, the processes and means employed to effect a close correspondence between the plan and actual community development are of special concern.

The principal process employed in putting a plan into effect is divided into three areas:

1. Regulation of development and use of property.

2. Provision of public services, utilities and other physical improvements.

3. Public education and participation in the planning program.

Provision of major community facilities, such as streets, bridges, parks, and utility systems should occur through a multi-phase process of administrative review to assure that the resulting facility will be adequately sized and located so as to compliment the intent and directions established by the adopted plan. Appropriate to this process are the following:

1. Adopt a formal Capital Improvements Program and Capital Budget as a means for determining and establishing priorities for desirable projects.

2. Maintain a system of planning commission review and comment prior to final administrative action for each capital project.

These measures in combination with enforcement of appropriate zoning and subdivision regulations, provide the best assurance that the vision developed through the quadrant planning process can be implemented during the planning period.

## ZONING ORDINANCE

Zoning is the division of the City into districts for the purpose of regulating the use of land and buildings, the height or bulk of buildings, the proportion of lot that may be covered by them, and the density of population. Zoning is enacted under the police power for the purpose of promoting the health, safety and general welfare of the people of the community. A zoning ordinance consists of two parts: (1) a map or maps showing the different districts into which the entire area of the community is divided and (2) text setting forth the regulations that apply to each of the different districts, and general information about the regulations.

The zoning ordinance and district map should reflect the spirit and intent of the established long-range land use plan for the community as provided by law. In this context, zoning provides the primary means of influencing an orderly development process as envisioned by the planning concepts.

In order for the zoning ordinance to remain viable as a community development influence, appropriate revision may become necessary from time to time as circumstances and technologies evolve in response to social need. Such changes as may be necessary to keep the ordinance in tune with the intent of the continuing planning process should be incorporated as the need becomes apparent.

## SUBDIVISION REGULATIONS

The second great "tool" of planning implementation is that of control of the design of continuing community development through application of a Subdivision Regulation. By definition, Subdivision Regulations are enacted to control the conversion of raw land into building sites. They are a means of implementing a comprehensive plan and a legal control over community design.

Included in the list of features that are controlled by Subdivision Regulations are streets, lots and blocks. The regulations provide minimum standards for improvements such as utilities, street and sidewalk pavement, and street lighting. As such, the regulations provide a means to control the quality of development which will eventually become part of the city. Applied in concert with the zoning ordinance, these regulations help to establish an acceptable living environment in all areas of the community.

## CAPITAL IMPROVEMENT PROGRAM

While short-term capital improvement programming has always been a necessary function of city government, and is typically carries out as a part of the annual budgeting process, the formal capital improvement program document provides a vehicle whereby a longer term of program of improvements can be established. This term is usually for five or six years. Most such programs are presented in terms of specific calendar or fiscal year listings, although there are some which have been developed around a series of priority categories with a more flexible time schedule.

The basic elements of a formal capital improvements program consist of: (1) an analysis and summary of the general financial condition of the community with regard to ability to fund projects; (2) a listing and the estimated cost of the proposed projects, which forms the basis for a capital budget; (3) an investigation and summary of funding methods and the general effect of the improvement program on the financial structure of the City; and (4) specific project sheets for each of the proposed improvements which detail the need for the project, construction timing, the anticipated method of financing and the source of funding.

Projects included in the program are assembled from the comprehensive plan and from input from all of the operating departments, which must be updated and revised yearly. The completed program is then referred to the governing body for consideration in the annual budgeting cycle. Properly maintained and used, the capital improvement program can be a valuable influence toward implementation of the comprehensive plan on a rational and phased basis.

## OTHER CODES

Over the course of the planning period, the implementation process will also be significantly affected by the accumulative impact of other codes and ordinances as well. These regulations control the details of specific development aspects. Of particular note are housing codes and building codes which together help to reinforce the planning concepts dealing with preservation of a quality living environment community

neighborhoods. Other codes also include the requirements for safe wiring and plumbing and similar regulations which reinforce the concept of safe, sanitary and efficient development practices.

These codes and regulations, in effect, supplement the broad planning concepts and deal with a myriad of community development considerations which will form the basic fabric of physical and social structure during the planning period. In order to keep pace with technological change, it may become necessary, from time to time, to revise the detailed code requirements to allow more innovative practice with regard to specific development practices as new methods and processes emerge over the years. Monitoring emerging technologies and making appropriate code changes will remain important throughout the planning period, and is also one of the means toward implementations of the broad intent of the comprehensive plan.

**MAINTENANCE OF PLANNING DIRECTIONS**

In order to keep the planning process current, the concepts and directions established in the plan must be continuously reviewed and revised as necessary. This process will involve monitoring changing land use and traffic patterns, emerging need for commercial, industrial and residential expansions, and public demand for common amenities. Where special or unusual circumstances are indicated, the comprehensive plan should be supplemented with more detailed specific studies. Examples of such supplemental investigations could include downtown renovation studies, housing rehabilitation programs, industrial park utilization surveys, long-range utility service planning and outdoor recreation facility programming. These and similar studies help to establish the intent of the planning concepts at ground level.

Primary responsibility for maintaining this continuing process lies with the Planning Commission operating in its official role as technical advisor to the governing body. Eventually, this will also involve all of the operating departments of local government, and may occasion the use of outside experts and consultants for certain types of technically detailed investigations. Where these processes and programs have been successfully carried out, the comprehensive plan will continue to provide a meaningful and useful tool for structuring of an appropriate urban environment throughout the established planning period and beyond.

*CERTIFICATE OF APPROVAL*

**SECTION 1.** It is hereby certified that this Comprehensive Community Plan was adopted as the Official Development Guide for the City by the Planning Commission on the 28th day of September, ~~2000~~ 1999

Tracy Baker, Secretary

Alison Redford, Chairman

**SECTION 2.** It is hereby certified that this Comprehensive Community Plan was adopted as the Official Development Guide for the City by Ordinance No. 3806, which was duly approved by the City Commission on the 2nd day of November, ~~2000~~ 1999

Rose Miller, City Clerk

James Chisham, Mayor

**SECTION 3.** This Comprehensive Community Plan shall become effective as the Official Development Guide for the City upon its publication by reference once in the official area newspaper.

PASSED this 12th day of Nov, ~~2000~~ 1999

ATTEST :

Rose Miller, City Clerk

James Chisham, Mayor

CITY OF WELLINGTON, KANSAS

# COMPREHENSIVE COMMUNITY PLAN


EDITION OF 2000