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background & introduction

The Pentagon City site, comprising 116 acres of mostly vacant urban real estate, is one of the last large tracts of developable land in Arlington County, Virginia. Due to its size, its prime location several minutes from downtown Washington, and its superior access to the highway and mass transit systems serving the Metropolitan Area, the site presents an outstanding opportunity for new-town-in-town development. The site is sufficiently large, and its zoning appropriately constituted so that an entire new community can be created. This new community potentially can offer desirable housing in attractive settings with conveniently located employment opportunities and commercial, recreational and cultural activities.

During the decade of the 1960s and continuing to the present, the area surrounding the site has undergone a dramatic change from low density residential and industrial land uses to high intensity development consisting mainly of high-rise apartments and commercial office buildings.

Recognizing this fact, the Cafritz-Tomkins Group, owners of the land, determined to explore with Arlington County the possibility of creating a suitable master development plan for the site, together with a set of new land use and zoning regulations which would foster an improved development climate. In 1972 the owners retained as prime consultant, Dewberry, Nealon & Davis, Engineers, Architects, Planners and Surveyors to prepare a master development plan for the Pentagon City site. The planning process was designed to involve not only Dewberry, Nealon & Davis' specialists, but also representatives of neighborhood and civic groups, and County agencies. The consultant's team was enlarged to include R. H. Pratt & Associates - Transportation Planning and Analysis, and Gladstone Associates - Economic and Market Analysis.

The planning team, officially labeled the Policy Guidance Committee, met together during a period of 3-1/2 years. The outgrowth of their effort was a master plan for Pentagon City, or "Phased Development Site Plan" as it is known. The master plan was approved by Arlington County in February of 1976. Concurrent with this effort, a new zoning regulation was adopted which provides for coordinated development through the approval, in stages, of final site plans for parcels of land within Pentagon City.

This report presents, in summary form, information about the Pentagon City site, and the characteristics of the County-approved Phased Development Site Plan. The report also contains information on County-required site improvements and other stipulations which concern builders and developers who participate in the construction program for Pentagon City.
overview

LOCATION AND ACCESS

Pentagon City is a planned high-density mixed use community consisting of approximately 116 acres. The site is situated in Arlington County, Virginia, across Interstate 95 from the Pentagon, and minutes from downtown D. C., Washington National Airport, and existing concentrations of population and employment. The site is favored by direct access to high-type arterial streets, and more importantly, the Washington Metro rail system. Rail transit, including a subway station, has been completed through the middle of Pentagon City, and is expected to be operational between the site, downtown D. C., and National Airport during early 1977.

SITE OWNERSHIP

The Pentagon City tract is owned by several corporations which operate under the informal title of the Cafritz-Tompkins Group. The sale, ownership, operation and other activity pertaining to the use of the property is coordinated through the Cafritz Company of Washington, D. C.

EXISTING ZONING

In February of 1976, Arlington County approved a zoning request which established the C0-2.5 District and approved a Phased Development Site Plan (Master Plan), thereby permitting a coordinated and comprehensive planned community. This action by the Arlington County Board reaffirmed the County's commitment to concentrated development in proximity to Metro rail stations, while at the same time insuring an adequate system of streets, pedestrian circulation, community facilities and amenities which will allow Pentagon City to function as an integral and harmonious part of the surrounding community.

MASTER LAND USE PLAN

The land use plan approved for Pentagon City will permit an overall development consisting of:
• 1250,000 gross square feet of office
• 800,000 gross square feet of retail commercial
• 2,000 hotel rooms
• 5,900 apartment units (which should include a minimum of 300 marketable dwelling units specifically designed for elderly housing and must include a minimum of 200 "family" units of a low to medium rise character containing multiple bedrooms)
• 300 units of subsidized elderly housing
• 300 bed nursing home
• A public park consisting of approximately 11 acres
The land plan initially designed by DND, generally provides for the allocation of the uses to various portions of the 116 acre site. However, a considerable amount of flexibility remains, thereby permitting individual builder/developers to exercise their creativity and ingenuity in the design of a final and detailed arrangement of uses, buildings, and open spaces. The majority of the Pentagon City site is vacant or unimproved property ready for building development at the present time, except for 16 acres of the total site which has been improved with warehouse facilities. It is expected that this development block or parcel would be the subject of redevelopment in the latter stages of the Pentagon City development process. These warehouses consist of 20 buildings, containing 449,500 square feet of net leaseable space.

DEVELOPER'S RESPONSIBILITIES

In addition to a land use plan, County government has approved and clearly defined the developer's responsibilities with respect to public street and utility improvements. Thus, much of the uncertainty frequently surrounding this aspect of the urban development process has been resolved.

AVAILABILITY OF URBAN SERVICES

The Pentagon City tract presently has available a network of utilities which offer a high level of service, including water, wastewater and solid waste disposal, storm drainage, electric and telephone. The site is also favored by direct access to an outstanding transportation system, including major arterial highways and a Metro rapid rail station. These systems all have the potential to accommodate future service demands to be created by the realization of the project.

MARKET ANALYSIS

Market analysis has been conducted by the highly respected economic firm of Gladstone Associates, and such analysis substantiates demand for the development program as approved by Arlington County, and suggests that approximately 10 to 15 years may be required to absorb all of the land use that is proposed.
A UNIQUE OPPORTUNITY AND CHALLENGE

Pentagon City has the potential and opportunity to provide not only its owners and builder/developers considerable economic reward, but in addition provides the challenge of creating a high-density urban complex that could function much in the manner of a "New-Town-In-Town." Its mixture of uses and activities could ultimately house up to 10,000 residents and provide employment opportunities for over 6,000 employees, with ample retail and recreational facilities, which would be available not only to those residing and working within the community, but to the transient guests and visitors of the hotel and conference facilities as well. This mix and variety of activities and facilities provides opportunities and rewards for those developers willing to accept the challenge of becoming a part of Pentagon City.

The property offers a unique opportunity and challenge to either a single entrepreneur or several builder/developers who could purchase all or portions of the site. Each developer accepting this opportunity must provide and submit a "Final Site Plan" to Arlington County and seek its approval for the detailed arrangement and location of buildings, parking, circulation, and open space.
The Site is Minutes from Downtown Washington.
REGIONAL SETTING AND ACCESSIBILITY

The Pentagon City site is located in Arlington County, Virginia, near the center of the Washington Metropolitan Area. The site adjoins Interstate Route 95 and U. S. Route I, and is less than three miles from the White House in downtown Washington. The Pentagon is one-fourth mile to the north; Washington National Airport is one mile to the east. The location offers excellent accessibility to the regional freeway system, and thus affords easy access to the major population and employment concentrations in the Metropolitan Area.

The Metro rail rapid transit system traverses the site below ground, and includes a station in the center of the property. The rail mass transit system is scheduled for opening during 1977. Initial service from the Pentagon City station will be to Crystal City and National Airport, and to the Pentagon, Rosslyn and downtown D. C. points.

The Metrobus system provides local service primarily between Alexandria and Washington, and express service on the Interstate 95 bus lanes. Anticipated minor changes in the express bus routes will improve accessibility by transit for residents and employees.

COMMUNITY SETTING

Since the early 1960s, the area surrounding the Pentagon City site has been under continuous development, creating an environment of high intensity development.

While not immediately adjacent to the site, the developments known as Jefferson Plaza, Crystal Square, Crystal Mall, Crystal Plaza, National Center, and Crystal Towers are all within walking distance and have established the urban character of the area.

The property surrounding Pentagon City contains a mixture of land uses. To the north of the site is Army-Navy Drive and I-95, a multi-lane highway. Beyond this and further north is the Pentagon. To the east, at the intersection of Army-Navy Drive and South Eads Street is a high-rise office building of 230,000 gross square feet, and the Pentagon City Quality Inn Motel with 383 rooms. Continuing south along South Eads Street to 15th Street, South, Pentagon City is bordered by a mixture of warehouse and industrial uses.

Quality Inn and Office Building at 400 Army Navy Drive
The southeast corner of the site, which is bounded by 15th Street, South and South Fern Streets, adjoins the Crystal Towers Apartment complex with 910 apartments situated on 13 acres in two twelve story buildings. The remainder of the adjacent land to the east is in a state of transition. Older structures are soon to be replaced with new higher-density hotel and commercial development.

Riverhouse Apartment Buildings and View South Along South Joyce Street

The southern boundary of Pentagon City is contiguous to Aurora Highlands - a neighborhood of single-family homes on lots averaging 6,000 square feet in size developed shortly after World War II. At the western border of Pentagon City is South Joyce Street and the three River House apartment towers with 1,800 apartments on 35 acres.

SITE BOUNDARIES, AREA AND USE

The Pentagon City site contains 116.324 acres bounded generally by Army-Navy Drive on the north, South Eads Street and South Fern Street on the east, 16th Street South and 18th Street South on the south, and South Joyce Street on the west. The only developed property within these boundaries that is not part of the Pentagon City tract is the Western Electric plant site, comprising approximately 17 acres. Within the 116 acres, the principal developed property is a group of warehouse structures located on approximately 16 acres. These structures contain U. S. Government agency offices and commercial establishments. A rail spur enters the Pentagon City site along its South Eads Street frontage and extends through the tract to the warehouse structures and the Western Electric plant. The balance of the site is vacant, with the exception of several areas being temporarily used as parking lots for commuters and apartment residents.
Boundary Survey Prepared by DND, September 1973
environmental considerations

CLIMATE

The Washington area lies midway between the sharply defined seasonal climatic conditions of the northeastern seacoast, and the milder climate of the southeastern United States. Hot, humid conditions occur during the summer months. In winter, snow accumulation and temperatures are not severe. Rainfall distribution throughout the year is relatively uniform, although there are peaks of rainfall during the summer and fall. Droughts are rare. Rainfall averages 4 inches per month.

VEGETATION

Much of the site has been cleared of woods and the vegetation consists of scrub growth and ground cover. Tree cover exists on approximately 40 percent of the site. The wooded areas have developed over the past two to three decades, and are comprised mainly of deciduous species.

GEOLGY AND SOILS

The Pentagon City site is situated in the Potomac River valley, and occupies a portion of the lower valley terrace. The soil structure has been influenced by ancient stream-deposited materials which have been formed in layers of variable thickness by the Potomac River. The soil composition includes mixtures and lenses of sand, gravel, and clay.

The existing soil information is based on soil boring logs made in conjunction with the Metro Rapid Transit Line through the middle of the site. The soil test borings conducted at the site indicate the location of several areas of brick and miscellaneous fill. The depth of these fill areas range from 3 to 20 feet below the present ground surface. The site has been extensively excavated and regraded in connection with the former brick manufacturing operation as well as during construction of the River House apartments and more recently, in conjunction with activities related to Metro construction.

A representative cross-section of the soil conditions existing at this site is provided by a series of soil borings which were taken in connection with the design of the Metro rail route. The figure below indicates the approximate locations of eleven borings made along the Metro alignment, between 18th Street, South and Army-Navy Drive. The borings range in depth from 35 feet to...
90 feet below the ground surface. The average depth of the ground water table was found to be 20 to 30 feet below the surface by the Metro soils consultants. Copies of the soil boring logs are included in Appendix A.

TOPOGRAPHY

The elevation of the site ranges between 30 feet and 60 feet above mean sea level. The majority of the land is level or gently sloping in character. Several depressions exist in the vicinity of Army-Navy Drive and South Fern Street. These low spots were created by the excavation of clay for a brick manufacturing operation which was formerly conducted at this site.
existing facilities & services

SANITARY SEWER SERVICE

The Pentagon City tract and the surrounding area is served by two parallel 36" and 54" diameter trunk sewers installed in South Eads Street. These sewers were designed to accommodate sewage flows anticipated from development in Arlington through the year 2010. There is sufficient reserve capacity in the sewers to serve the ultimate projected resident and transient population of Pentagon City, assuming development in accord with the approved Phased Development Site Plan.

Sewage collected from Pentagon City development is treated in Arlington's wastewater treatment plant at Four Mile Run. The plant has a rated capacity of 24 million gallons of sewage per day. At present, the plant is treating about 22 million gallons per day.

The County is now constructing advanced wastewater treatment facilities with a 30 mgd capacity. The upgrading of the plant is scheduled for completion in 1978.

Sewage collection within the site is presently accomplished by a system of 8", 12" and 15" diameter gravity sewers which originate at the western boundary of the tract in the River House Apartment complex. This system extends eastward through the central portion of the site and terminates at the Relee Sewage Pumping Station adjacent to South Eads Street. Sewage collected at the Relee Station is lifted by pumps and a force main into the 36" trunk sewer in South Eads Street, and flows by gravity to the Arlington Sewage Treatment Plant at Four Mile Run.

A second gravity sewer system composed of 12" and 15" diameter mains originates in 6th Street - Virginia Highlands, and extends through the southerly portion of the Pentagon Tract to connect to the 36" trunk sewer in South Eads Street near 18th Street.

Portions of the present onsite 8", 12" and 15" diameter sewers will be inadequate in capacity to accommodate flows from the site when high density development occurs.

These sewers will have to be replaced before the site is fully developed. Arlington County has agreed to construct the majority of the sewer main improvements required to provide adequate sewer service to Pentagon City development.¹

¹For details see "Statement of Commitments", Page 3, Paragraph 6 (Appendix B, Page 46).
Map of On Site Sanitary Sewer System

- 36" & 54" trunk lines
- 8", 12" & 15" lines
WATER SUPPLY AND DISTRIBUTION

Arlington owns and operates the countywide water distribution system which serves the Pentagon City site. The source of water supply is the Potomac River. Water is filtered and treated at the Dalecarlia Reservoir in the District of Columbia. The U. S. Army Corps of Engineers is responsible for operating the treatment facility.

Two major watermains, one 20" and the other 24" in diameter provide the potable water supply to the Pentagon City tract, and surrounding areas. The water distribution system has been designed to serve the projected population of Arlington in the year 2010. Thus, there is a reserve capacity built into the water system which should insure a high quality of service for all existing and proposed development at Pentagon City.

The water distribution system serving Pentagon City consists of a grid of 8" and 12" diameter watermains which are installed in the existing streets. Portions of the 8" watermains will have to be replaced to provide adequate water service to the fully-developed Pentagon City tract. Arlington has agreed to construct the majority of the water main improvements required for proposed development at this site.¹

¹For details see "Statement of Commitments", Page 3, Paragraph 7 (Appendix B, Page 46).
Map of On-Site Water Distribution System

- 24" watermain
- 8" & 12" watermains
STORM DRAINAGE

The Pentagon City site is located in the central portion of a 400 acre watershed. The entire area is drained by a storm sewer system which conveys the stormwater runoff to a point of discharge near the western shoreline of the Roaches Run Waterfowl Sanctuary, and ultimately to the Potomac River, via Roaches Run.

The drainage system serving the Pentagon City tract is comprised of two branch sewer lines which begin in the vicinity of South Joyce Street and the River House Apartments. The storm sewers extend eastward through the tract, gradually increasing in pipe size. At South Eads Street, one of the branches is 84" in diameter and the other 96" in diameter. These two large pipes connect to a junction box adjacent to South Eads Street. From this point, the 84" and 96" storm sewers extend eastward in parallel to a second large junction box. From this box, there is 320' of 72" diameter storm drain which connects to a double 8' x 8' box culvert under U. S. Route 1. The outlet of the existing storm sewer system east of U. S. Route 1 is comprised of a double 12' x 6' box culvert through Jefferson Davis Plaza, and two 12' diameter pipes which carry the storm water flow under the Richmond, Fredericksburg & Potomac Railroad tracks to an open channel approximately 400' from the shoreline of the Waterfowl Sanctuary.

The portion of the storm sewer system consisting of 320' of 72" diameter pipe is known to be inadequate. This section will be replaced by Arlington County with parallel 84" and 96" diameter pipes, or their equivalent.¹

¹For details see "Statement of Commitments", Page 4, Paragraph 8 (Appendix B, Page 47).

Based on drainage system design data obtained from Arlington County, the major onsite drainage system serving the Pentagon City tract should be adequate to accommodate the proposed intensity of development. As detailed planning and site plans are prepared, it will be necessary to analyze the anticipated runoff of storm water from the site will have to be regulated so as not to overburden the existing drainage system.

Arlington will require the application of storm water management techniques in the design of site development plans for this tract. The county requires that onsite storm water detention areas be provided to moderate the flow of storm water discharged from the site. These impoundments can be designed to regulate the amount of storm water draining to offsite areas by retaining the peak storm flows and releasing water at a controlled rate. The water detention areas may be incorporated into parking lots, building rooftop areas, or as ponds or basins in open plazas.
Map of On Site Storm Drainage System

- major collector drains
- minor drains
ELECTRIC POWER

The Virginia Electric and Power Company (VEPCO) supplies electric service to the Pentagon City tract and vicinity. Its prime local generation source is the power station at Possum Point near Quantico on the Potomac River in Prince William County. The system is also linked to other power plants of the VEPCO system and to the interconnected regional reliability system.

An overhead transmission line comprising 2 circuits of 230 KV runs in South Glebe Road to South Eads Street. The line then runs underground in South Eads Street to the underground Crystal Substation located at 18th Street South and South Fern Street. Several distribution lines serving the adjoining neighborhoods lead from this substation. The VEPCO Sales Department has indicated that the company can provide ample supply of power for the residential and commercial needs of the Pentagon City tract assuming adequate advance planning and coordination between the developer and VEPCO.

TELEPHONE SERVICE

The Pentagon City tract is within the service area of the Chesapeake and Potomac Telephone Company of Virginia. The new Crystal City central office located on 12th Street South will serve Pentagon City and the surrounding area.

SCHOOLS

The schools that will serve the site are in the Arlington County Schools system. Nellie Custis Elementary School is six blocks away. Gunston Junior High School is less than one mile away. Wakefield High School is four and one-half miles from the site.

LIBRARY

There is an existing public library on the corner of 23rd Street and South Eads Street, a distance of seven blocks. There is a proposed library located adjacent to the proposed park to the south of 15th Street. This represents a five minute walk from the furthest point in Pentagon City.

PARK

The Virginia Highland park is located at the southwest corner of the site. The park contains picnic areas and a baseball field. The owners of the Pentagon City site have committed approximately 11 acres of the site to increase the size of the existing park.1

FIREHOUSE AND COMMUNITY CENTER

Arlington County is currently constructing a new fire house and community center at 18th Street South and South Hayes Street. This facility will border the existing park. There is also the provision as previously stated, for a new library to be added to this structure in the future.

1For details, see "Statement of Commitments", Page 1, Paragraph 2 (Appendix B, Page 45).
planning & zoning history

ZONING HISTORY

The 3-1/2 years of work by the Policy Guidance Committee (PGC) produced a land use plan that embodied the ideas of many individuals and groups. The ultimate product of the PGC was a development program and land use locations that, in a modified form were to eventually become the approved master plan, or Phased Development Site Plan. In addition, certain design constraints were developed by the committee that influenced major planning decisions.

In the spring of 1975, Arlington County's Planning Department developed a zoning process by which a coordinated development of several individual parcels under a unified site plan could be implemented. The resultant zoning process became Arlington County Administration Regulation 4.1, or as it was broken down into two phases: the Phased Development Site Plan and Final Site Plan.

The Phased Development Site Plan establishes the location and quantity of land uses. In addition, the commitments for amenities, utility, and street improvements are defined as to extent and responsibility. The approval of a Phased Development Site Plan by the County Board constitutes authority for the owner or individual builder/developer to prepare final site plans in accordance with the approved Plan. Final Site Plans can then be prepared and submitted for the entire planned development at one time, or for individual development stages or parcels.

The Phased Development Site Plan for Pentagon City was prepared by Dewberry, Nealon & Davis, and submitted to Arlington County in the latter part of 1975. The County Board approved the Plan on February 25, 1976 and rezoned the property to the CD-2.5 district.
Pentagon City Metro Station
the adopted plan

PLANNING GOALS AND OBJECTIVES

A number of planning objectives and goals were defined by the joint efforts of the Policy Guidance Committee, Consultants, and Arlington County Staff. These objectives guided the planning process that produced the Pentagon City master development plan. The principal objectives for planning of Pentagon City were:

- Development should be compatible with the surrounding existing uses and projected future growth and uses.

- A desirable mix of land uses should be provided; this mix should include office, hotel, residential and commercial uses to create a convenient live-work-shop relationship, and to insure a twenty-four hour vitality in the new community.

- Lowest densities should be in the south portion of the tract, adjacent to existing single-family neighborhoods.

- Highest densities, including office buildings, commercial uses and hotels, should be in the north and east portions of the site for ease of access to major traffic arteries, and the Metro rail station.

- Community and recreation facilities should be located close to existing residences in the south portion of the property.

- A major retail center should be provided with a wide variety of commercial uses.

- Building heights should be varied to break up the skyline.

- Pedestrian circulation should proceed easily through the urban development.

- A balanced circulation system should be provided, based on a variety of transportation modes, and serving the needs of residents, employees and shoppers.

THE DEVELOPMENT PROGRAM

The land use plan which evolved from the Pentagon City planning process incorporated the previously stated goals and objectives. The land use plan adopted by Arlington County for the site will permit an overall development consisting of:

- 1,250,000 gross square feet of office

- 800,000 gross square feet of retail commercial

- 2,000 hotel rooms

- 5,900 apartment units (which should include a minimum of 300 marketable dwelling units specifically designed for elderly housing and must include a minimum of 200 “family” units of a low to medium rise character containing multiple bedrooms)

- 300 units of subsidized elderly housing

- 300 bed nursing home

- a public park consisting of approximately 11 acres
DEVELOPMENT PLAN RATIONALE

The location of the Metro rapid-transit rail station at South Hayes Street in the northern section of the site influenced the placement of the office, commercial, and hotel uses on the land use plan. Also, these structures are not as sensitive to noise from I-95 as the other uses and can serve as a noise buffer to the rest of Pentagon City and the existing community to the south.

Since the major source of vehicular traffic is I-95, the South Hayes Street and Army-Navy Drive intersection will be the arrival and departure point of the majority of auto traffic oriented to Pentagon City. This factor along with the desire to separate as much as possible the existing neighborhood from the traffic-intensive uses of hotel, office, and commercial also militated for the placement of these uses in the northern portion of the site.

South Hayes Street provides the major link between the proposed I-95 and Crystal City to I-95. Locating commercial uses close to Hayes Street and the Metro station will serve two functions. The traffic utilizing South Hayes Street as the links between I-95 and Crystal City will find it convenient for vehicular access to the commercial development. Also, the Metro rider could continue his journey from the Metro station through a commercial mall development on his way to his office destination. To this end, it has been proposed that one or more of the commercial levels be below grade and connect to the mezzanine level of the Metro station, thereby avoiding any street crossings on the surface.

It is significant to note that a projected 32 percent of all individuals arriving at Pentagon City will use mass transit, either Metro rail or Metro bus. 1 The transit service presently provided in the Pentagon City area is all Metro bus service, characterized

by two separate and distinct types of operation. One type is the local service, primarily provided by the Alexandria to Washington routes. The other is the express service on the Shirley Highway bus lanes.

The service will change with development and the corresponding changing needs. Metro rail will be in service in 1977, which will predominate any development. Initial service from this station will be to Crystal City and National Airport, and to the Pentagon, Rosslyn and downtown D. C. points.

The hotel use will require easy vehicular access, with commercial, office and residential uses following in that order for strong vehicular orientation. The hotels uses were placed near the I-95 ramp at South Hayes Street as a result of the strong tie between this use and the automobile.

The residential uses are located throughout the site in order to satisfy the need in an urban environment for a mix of uses. This mix was sought in order to give Pentagon City a 24-hour vitality.

The most significant aspect of the land use plan in conjunction with the Phased Development Site Plan process is the flexibility a designer or developer has in the ultimate placement of the allowed uses. This flexibility was the intent of this particular zoning process. From the guidelines established by the PGC to the framework of the two-phase zoning/site plan procedure, the objective was to accommodate the needs of a changing market place.

**URBAN DESIGN**

A certain character and homogeneity will be established through the urban design elements of street furniture, planting and pedestrian walkways. The developer will be required to provide these elements as described in the "Urban Design Manual" that was approved by the Arlington County Board. The manual provides for tree planting along streets, strategic placement of street furniture and wide pedestrian walks. Also, an attempt to standardize graphics as an ingredient of the urban fabric is outlined in the "Urban Design Manual." These elements will create the identity of Pentagon City and also will contribute to the enhancement of the physical environment.

Architectural Conception of Pentagon City

See Appendix C for "Urban Design Manual."

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PARK

The recreation and leisure time opportunities of Pentagon City will be enhanced by the proposed public park. This 11 acre park, located in the southwest corner of the site, provides a pleasant buffer between the planned high intensity urban development and the existing residential community.

PEDESTRIAN BRIDGES AND TUNNELS

A grade separated crossing to facilitate pedestrian movement across Hayes Street near the more intense office-commercial portion of the site will be constructed by the developer. In addition, the grade separation of South 12th Street on either side of South Hayes Street will provide easy access to the Metro entrances. These crossings can be connected to or combined with underground shopping concourses creating unobstructed and protected pedestrian circulation.

1For details see "Statement of Commitments", Page 1, Paragraph 4 (Appendix B, Page 45).
DEVELOPER AND COUNTY COMMITMENTS

Prior to the rezoning of the Pentagon City tract and adoption of the Phased Development Site Plan the Arlington County Board required assurances that certain public facilities, community services, as well as other amenities would be provided by the developers of the proposed urban community. There was an equal concern on the part of the owners of the site, that the prospective purchaser or builder/developer of portions of Pentagon City have a clear understanding of those responsibilities or commitments to the provision of public facilities and project amenities which had been predetermined with the adoption of the aforementioned plan. Also, there would have to be assurances from the County Board as to the types, amount and extent of land uses (apartments, office space, retail/commercial) permitted within the Pentagon City boundaries.

A document, entitled "Statement for the Provision of Easements, Dedications and/or Construction and Improvement of Public and/or Community Facilities" was made a part of the Phased Development Site Plan for Pentagon City, and was approved, with revisions by the Board on February 25, 1976. This document sets forth the stipulations and agreements pursuant to this rezoning. A copy of the revised Statement appears in Appendix D of this brochure. The following pages illustrate the major developer and County commitments with regard to streets, sewers and water mains.

Map Showing Typical Street Cross Sections Required by Arlington County
15TH STREET SOUTH
(Between S. Eads Street and S. Fern Street)

A half-section of street will be constructed along the Pentagon City block frontage. Ultimately, the street will be improved by others to include a raised median and additional paving to provide for three traffic lanes in each direction.

Reference: "Statement of Commitments" - ATTACHMENT, Page 1, Section A-1 (See Appendix B, Page 49 of this report)

(Between S. Fern Street and S. Hayes Street)

A half-section of street will be constructed along the Pentagon City block frontage. Ultimately, the street will be improved by others to include a raised median and additional paving to provide for three traffic lanes in each direction.

Reference: "Statement of Commitments" - ATTACHMENT, Page 2, Section A-2 (See Appendix B, Page 49 of this report)

(Between S. Hayes Street and S. Joyce Street Relocated)

A half-section of street will be constructed along the Pentagon City block frontage. Ultimately, the street will be widened by others to include a raised median and additional paving to provide for two traffic lanes in each direction.

Reference: "Statement of Commitments" - ATTACHMENT, Page 2, Section A-3 (See Appendix B, Page 49 of this report)
(Between S. Joyce Street Relocated and S. Joyce Street)

A full-section street improvement will be constructed.

Reference: "Statement of Commitments" - ATTACHMENT, Page 2, Section A-3 (See Appendix B, Page 49 of this report)

SOUTH JOYCE STREET
(Between 15th Street S. and Army-Navy Drive)

A street cross-section will be constructed retaining the existing curb and gutter along the frontage of the River House apartments.

Reference: "Statement of Commitments" - ATTACHMENT, Page 2, Section A-4 (See Appendix B, Page 49 of this report)
SOUTH EADS STREET
(Between Army-Navy Drive and 12th Street S.)

One of the alternate street cross-sections shown will be constructed. The existing curb and gutter or edge of pavement will be retained along the west side of the street.

Reference: "Statement of Commitments" - ATTACHMENT, Page 2, Section B-1 (See Appendix B, Page 49 of this report)

A half-section of street will be constructed along the Pentagon City block frontage. The ultimate cross-section will include 6 traffic lanes and will be constructed by others.

Reference: "Statement of Commitments" - ATTACHMENT, Page 3, Section B-2 (See Appendix B, Page 50 of this report)
12TH STREET SOUTH
(Between S. Hayes Street and S. Joyce Street)

The County will require the street to be improved as shown, how­ever, the street may be eliminated or modified in the event that Parcel 2 and the block north of the street alignment within Parcel I are planned, designed and/or developed as an entity under final site plan control.

Reference: "Statement of Commitments" - ATTACHMENT, Page 3, Section C-1 (See Appendix B, Page 50 of this report)

(Between S. Hayes Street and S. Fern Street)

A full-section street improvement will be constructed.

Reference: "Statement of Commitments" - ATTACHMENT, Page 4, Section C-2 (See Appendix B, Page 50 of this report)

(Between S. Fern Street and S. Eads Street)

A full-section street improvement will be constructed.

Reference: "Statement of Commitments" - ATTACHMENT, Page 4, Section C-4 (See Appendix B, Page 50 of this report)
SOUTH FERN STREET
(Between Army-Navy Drive and 12th Street S.)

The County may require the construction of this street according to either Alternate #1 or Alternate #2, or may allow the street to be abandoned. The determination will be made at the time of the first Final Site Plan approval on the block contiguous to the existing street.

Reference: "Statement of Commitments" - ATTACHMENT, Page 4, Section D-1 (See Appendix B, Page 50 of this report)

(Between 12th Street S. and 15th Street S.)

A full-section street improvement will be constructed according to either Alternate #1 or Alternate #2. The determination of the cross-section is to be made at the time of the first Final Site Plan approval on the block contiguous to the existing street.

Reference: "Statement of Commitments" - ATTACHMENT, Page 5, Section D-2 (See Appendix B, Page 51 of this report)
SOUTH HAYES STREET
(Between Army-Navy Drive and 15th Street S.)

Two additional lanes of paving will be constructed.
Reference: "Statement of Commitments" - ATTACHMENT, Page 5,
Section E-1 (See Appendix B, Page 51 of this report)

ARMY-NAVY DRIVE
(Between S. Hayes Street and S. Fern Street)

An additional traffic lane will be constructed.
Reference: "Statement of Commitments" - ATTACHMENT, Page 6,
Section G-1 (See Appendix B, Page 51 of this report)
WATERMAINS

Arlington County has agreed to construct a 12" watermain in the proposed alignment of South 12th Street from South Eads Street to South Joyce Street, and in South 15th Street, from South Hayes Street to South Joyce Street.

Reference: "Statement of Commitments" - Page 3, Paragraph 7
(See Appendix B, Page 46 of this report)
SANITARY SEWERS

The County has agreed to construct adequately-sized sanitary sewers in the alignment of proposed South 12th Street from South Joyce Street to South Eads Street, and in South 15th Street from South Hayes Street to South Eads Street. The timing of construction of these facilities will be coordinated with development of the Pentagon City site.

Reference: "Statement of Commitments" - Page 3, Paragraph 6
(See Appendix B, Page 46 of this report)
the final site plan process

The Arlington County Board's approval of the Phased Development Site Plan application for Pentagon City represented the first step in a two-phase process leading to Final Site Plan approval. It will be necessary for prospective builder/developers to prepare and submit to Arlington County detailed final site development plans. A Final Site Plan can be prepared for the entire planned development at one time or for individual development stages or parcels. The overall requirement of a Final Site Plan is that it conform to the set of guidelines and planning controls established in the adopted Phased Development Site Plan. These guidelines and controls are not restrictive, and offer a high degree of flexibility to the architect-planner in the design of buildings and site areas for residential, commercial, office or hotel uses.

The requirements of the Final Site Plan submission, abstracted from Arlington County Administration Regulation 4.1, are as follows:

1. Plot and location plan at scale 1''=25' showing:
   a. Lot dimensions, area and north arrow orientation
   b. Location (distance to site lot lines and center lines of adjacent streets) and dimensions of building(s) or site
   c. Functional relationship to adjacent lots and buildings; platting of adjacent buildings
   d. Adjacent roadway median strips, existing and proposed openings

2. Vertical cross-sectional view with:
   a. Height of proposed building(s)
   b. Number of stories
   c. Height, location and general design of structures proposed above the building height limit
   d. Location and access to underground parking
   e. Relationship to adjacent lots, buildings and streets
   f. Proposed floor grades of each floor, including basements and boiler rooms

3. Typical floor plan with dimensions showing all exit ways
4. Plan of each non-typical floor with:
   a. Location of square foot area of any permitted accessory or 
      proposed conditional use as permitted by the Ordinance
   b. Access to any accessory personal or convenience service 
      uses
   c. Number and individual area of guest rooms in any hotel or 
      motor hotel use

5. Plan of each parking garage floor (with layout of proposed 
   spaces)

6. Certified map of parcel at scale 1"=25' showing:
   a. Area and dimensions of tract
   b. Topography at a minimum two (2) foot contour intervals
   c. Location of all existing underground utilities such as 
      water, sanitary sewer, gas, storm sewer, electric and tele-
      phone cables, etc., both within the property, and in ad-
      jacent streets
   d. Location of all surface facilities such as sidewalks, curb, 
      gutter, telephone, etc.

7. Utility plan at scale 1"=25' showing:
   a. Location of all proposed underground utilities with con-
      nections, changes and additions to 6 "c" and "d" together 
      with a notation as to any County responsibility

8. The following data will be supplied in tabular form (where 
   applicable):
   a. Area in square feet of parcel
   b. Maximum allowable gross floor area
   c. Proposed gross floor area
   d. Number and type of any dwelling units
   e. Number of required and proposed parking spaces (or square 
      feet of area where applicable; Section 29 - Zoning 
      Ordinance)
   f. Maximum allowable and proposed areas of personal or con-
      venience service accessory uses; restaurant, cafe or soda 
      fountain uses
   g. Percentage and amount of impervious area in square feet for 
      purpose of calculating storm water runoff
   h. Area of common open park area (on townhouse plans only)

9. Advertising:
   a. A site plan accepted by the Zoning Administrator will be 
      heard by the Planning Commission and the County Board 
      following advertising and posting as specified in Section 
      32, Subsection 1 of the Zoning Ordinance (same as a use 
      permit)
   b. A site plan amendment determined by the Zoning Administra-
      tor to require County Board approval will be posted and ad-
      vertised as specified in Section 32, Subsection 1, for a 
      County Board Hearing and, when in the judgment of the 
      County Manager the amendment would result in a substantial 
      impact on the adjacent neighborhoods, for a Planning Com-
      mission Hearing.
appendix

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PENTAGON CITY
STATEMENT FOR THE PROVISION OF
EASEMENTS, DEDICATIONS AND/OR
CONSTRUCTION AND IMPROVEMENT OF PUBLIC
AND/OR COMMUNITY FACILITIES
(A Part of the Phased Development Site Plan)

Approved by Arlington County Board on February 25, 1976

The developer agrees to provide the following easements, dedication of land and/or construction and improvement of public and community facilities to the extent and at the time indicated herein:


2. Parks: The developer shall, at the time of approval of the first of the final site plans, convey to the County the portion of the property indicated as "Parcel 4 Park" on the Phased Development Site Plan. This area contains approximately 13 acres including the area included in the adjacent streets and shall be conveyed in fee simple. An easement for the use of this parcel shall be conveyed to the County on approval of the Phased Development Site Plan.

3. The developer shall convey approximately 1.67 acres including the area in the adjacent street as indicated on the Phased Development Site Plan as "Aurora Hills Center" for library, fire station and community center use. Conveyance will be made immediately following approval of the Phased Development Site Plan.

4. Pedestrian Bridges and/or Tunnels: Developer agrees to provide three pedestrian/automobile separations at the general locations shown on...
the Phased Development Site Plan; the exact location of the barrier-free pedestrian grade separation will be determined at the time of final site plan approval. Such separations may be bridges or tunnels. Developer also reserves the right to provide these pedestrian facilities integrated into buildings, malls or plazas and may be above or below grade or at grade if 12th Street is eliminated between Joyce and Hayes Street. These facilities will be provided at the time that the portions of the property that connect and relate to them are developed. If tunnels are provided, developer may elect to install them at the time 12th Street is constructed. If tunnels or bridges are provided other than as a component of project construction, they will be dedicated to and maintained by the County. The developer shall be required to construct or pay the full cost of construction for the required barrier-free grade separations.

(a) Where a developer chooses not to construct a required barrier-free grade separation, the actual estimated cost of construction is to be determined by the County and established at the time of final site plan approval, and shall be placed with Arlington County in an escrow account for said construction. Such payment will be required prior to the approval of a building permit for the project and include the estimated actual construction cost projected to the estimated construction date.

(b) Where a developer does not control both faces of a street at a crossing, one-half of the cost of construction shall be placed in an escrow account as stated in (a) above.

5. Urban Design Elements - Street trees, grass planting strip, bus shelters, benches, trash containers, signs, major and minor walks: Developer agrees to provide the Urban Design Elements indicated in the plan submitted as part of the Phased Development Site Plan and discussed in the applicants accompanying document: "PENTAGON CITY URBAN DESIGN MANUAL FOR PUBLIC STREETS AND PEDESTRIAN AREAS." The Urban Design Manual is a guide, the final site plan submission shall include a detailed planting, street furniture-sidewalk plan and landscape plan for the project. Developer reserves the right to grant easements or to dedicate the areas of the walks and/or the planting areas, the location and extent of subterranean and/or air rights development within areas of dedication or dedication shall be determined at the time of final site plan approval. The developer shall be required to maintain landscaping along sidewalks and shall submit a landscape maintenance agreement with the final site plan submission.

6. Sanitary Sewer: The County agrees to construct sanitary sewer improvements in South 12th Street from South Joyce Street to South Eads Street for a distance of approximately 2,700 feet with size running 15, 18, 21, and 24 inches and in South 15th Street from South Hayes Street to South Eads Street for a distance of approximately 1,925 feet with a size of 15 inches.

7. Water: The County agrees to the following water main enlargements as indicated in the Phased Development Site Plan.

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In addition to the above, the following improvements may be required to increase the minimum size of water mains to 12" diameter:

**South Fern Street**
- 18th Street South to 15th Street South
- 860 linear feet - 12" water main

**South Hayes Street**
- Property Limit to 15th Street South
- 600 linear feet - 12" water main

The developer shall prepare construction working drawings for all water mains indicated in the Phased Development Plan prior to development of any part of any parcel of land.

9. **Storm Water**: The County agrees to replace 320 feet of off-site storm sewer.

A storm water management plan for the site shall be submitted as a part of each final site plan.

9. **Nursing Home**: The developer agrees to attempt to provide a nursing home located in Parcel 5. If such effort is unsuccessful by the time the first final site plan is approved, then approximately three acres, including related easement areas, shall be conveyed to the County for such purpose of the purposes set out in Condition Number 46 of the attached County Board Minutes. Such acreage will be located in Parcel 5, and indicated on the Phased Development Site Plan.

10. **Subsidized Housing for the Elderly**: The developer will attempt to provide 300 subsidized units for moderate-income elderly residents on site at locations within Parcel 5. Such locations shall be related to the Nursing Home Site in a manner which could allow the development of a campus-type facility providing a wide range of types of housing accommodations, group care and nursing home facilities for the elderly.

If efforts to provide such housing are unsuccessful by the time the first final site plan is approved, then the developer shall convey approximately three acres, including related easement areas, to the County for such purposes. Such acreage will be located in Parcel 5 adjacent to the Nursing Home Site.

The developer shall reserve the right to review and approve the site plans and building plans for the nursing home and housing units. Approval shall not be unreasonably withheld.

If the developer produces any part of the 300 units, the acreage to be conveyed to the County shall be reduced accordingly.

11. **The applicant shall notify the Zoning Administrator immediately following each sale of property as to the**:

   (a) Square feet of property sold,
   (b) Local (Parcel number),
   (c) Use and density committed by the sale.
13. Subject to the approval of the County Attorney, the deed of covenant submitted by the applicant (Attachment "A") shall be recorded prior to the first final site plan approval.

14. Items that shall be considered:

A. At the time of final site plan, the owner shall make his best efforts to provide sites up to one acre in size coordinated with the buildings to offer urban park space for lunching and strolling, some portion of which may be in paved plaza.

B. The developer is encouraged to provide a plan at the time of final site plan for encouraging reduction in office parking by means of providing incentives for carpool and transit usage.

C. The developer is encouraged to develop the property in such a way as to improve the bus-rail transfer possibilities at the Pentagon City Metro Station.

D. Above-ground parking structures shall be discouraged.

E. At the time of final site plan, building heights of up to 22 stories for not more than four apartment and/or hotel buildings shall be considered, for the purpose of improving the overall design without increasing density.

F. The provision of child care facilities shall be encouraged within the development.
ATTACHMENT

Statement for the Provision of Easements, Deductions and/or Construction and Improvement of Streets and Highways

In general the applicant commits to the construction of street improvements and/or widening as detailed hereafter, and the rights-of-way for same shall be achieved or provided in the form of easements and/or the dedication of free simple title with the possible retention or reservation of subterranean and/or air rights use by the applicant/builder/developer. The developer shall construct the total frontage of street and sidewalk required on a block face commensurate with the first building construction on the block face. On corner lots, construction of the total block face frontage shall be required only on the longer side and the building site frontage only on the shorter side. The developer shall landscape all medians to the standards established in the Urban Design Manual for Street trees. The street sections U4, U4R, U5, U6, U6R are detailed in the Urban Design Manual.

A. South Joyce Street/15th Street South

1. From South Eads Street to South Fern Street--Ultimately U6R--The applicant commits to the widening of a half section 147' 4" of pavement from centerline with curb and gutter on the north side, on its frontage only, utilizing the centerline established by the I-595 plans and the existing centerline of 15th Street west of the I-595 construction limits. Also the future raised median will be constructed by others. The location of future median crossovers will be determined at the time of final site plan submission.

2. From South Fern Street to South Hayes Street--U6R--The applicant will construct a half section along its frontage on the southside of said street with the curb face approximately 47 feet from the existing centerline. The remaining improvement or widening along the Western Electric frontage shall be by others. Also the future raised median will be constructed by others. The location of future median crossovers will be determined at the time of final site plan submission.

3. From South Hayes Street to Joyce Street Relocation--U6R--The developer shall construct the north half of street section, sidewalks and median of South Joyce/15th Street -- From South Hayes Street to South Joyce Street relocation (i.e. approximately 35 feet of pavement from centerline with curb and gutter along the northside). The remaining half section along the frontage of the proposed public park shall be constructed by the County. The location of future median crossovers will be determined at the time of final site plan submission.

4. From South Joyce Relocation to Army/Navy Drive--U6R--The applicant commits to the construction of the complete pavement widening with curb and gutter along its frontage of both parcels 1 and 2 on the east side of said street thereby retaining the existing curb and gutter along the frontage of the River House apartments. The raised median will be constructed by the developer, subject to the median breaks being determined at the time of final site plan submission.

B. South Eads Street

1. From Army/Navy Drive to 15th Street South shall be designated U6R, as to be determined at the time of the first final site plan approval on the block.
To South Hayes Street to South Fern Street——The full street section and sidewalks on 12th Street, South, from South Hayes Street to South Fern Street shall be constructed by the developer.

3. From South Hayes Street to the East—The applicant has no commitment to the future widening of existing 12th Street and the same shall be constructed by others.

4. From South Fern Street to South Eads Street——The applicant commits to the construction of the full cross-section of approximately 51 feet from face of curb-to-face of curb and said full width construction will be provided at the time of building construction on the adjoining or abutting development (tract/block or parcel).

5. South Fern Street——The applicant commits to the construction of a public street within the corridor defined by the dashed alignment contained on the transportation component of the Phased Development Site Plan. However, this new street may be eliminated or modified in the event that parcel 2 and the block north of said street alignment within parcel 1 are planned, designed and/or developed as an entity under final site plan control. In the event a street facility is constructed along this general alignment, it may be constructed in segments less than the entire length between South Joyce Street and South Hayes Street; however, as each segment is constructed, the same will be for the full width of the ultimate cross section.

6. To be determined at time of the first final site plan approval on the block—The applicant commits to the widening of the full or complete cross section with the majority of the construction widening occurring along the east side of said street. The US street widening will permit a 5th or center lane for continuous left turn movement in either direction and/or a painted flush median in addition to the existing raised median on Fern Street at the Army/Navy Drive intersection. (The existing raised median with its left turn lane will be retained.) The developer shall construct the full street section and the median for the US section, if determined necessary at the time of final site plan approval. Median openings will be determined and located at that time.
2. From 12th Street South to 15th Street South—shall be designated U4R or US, to be determined at the time of the first final site plan approval on the block. The applicant commits to the construction necessary to widen this street to the full or complete U4R or US section.

3. From 15th Street South to 18th Street South—In general, the existing street conforms to the aforesaid cross section, and therefore the applicant neither foresees nor commits to any construction responsibility for said street.

E. South Hayes Street

1. From Army/Navy Drive to South Joyce Street/15th Street South Intersection—U6R—The applicant commits to the widening of this section of South Hayes Street to provide the two additional 12 foot lanes along the applicant’s frontage and on the west side of South Hayes Street.

2. From South Joyce Street/15th Street South Intersection to South Fern Street—U4R—This street construction shall be provided by others (MVTA and/or Arlington County), and the applicant bears no construction responsibility for said street along its property frontage. The applicant shall convey upon approval of the Phased Development Site Plan the area shown on approved Arlington County plans for South Hayes Street to 15th Street South, between Army-Navy Drive and South Fern Street.

F. South Joyce Street Relocation

(As indicated on the transportation component of the Phased Development Site Plan, South Joyce Street is to be relocated so as to intersect the proposed 15th Street extension at or close to a right angle, thereby discouraging fast moving through traffic from continuing south on Joyce Street into the Aurora Highlands Community.) The County is committed to the construction of this relocation, at the time of the construction of the south Joyce Street/15th Street South extension. This relocation will be constructed as a 40 foot cross section from curb face to curb face with a transition into the existing pavement to the south. The developer shall be responsible for the relocation and reconstruction of the existing 200 parking lot presently located east of South Joyce Street opposite the River House apartments.

G. Army-Navy Drive

1. From South Hayes Street to South Fern Street—U7R—The applicant commits to the construction of an additional 12 foot lane along its property frontage and on the west side of said street.

H. Parking Formulas

The developer shall provide parking by the following formulas unless otherwise approved in the final site plan:

(a) Apartment - One and one-eighth space per unit for the first 200 units; one space for each additional unit.
(b) Hotel - One space per unit.
(c) Office - 708 sq. ft. / each 1,000 sq. ft. of gross floor area ("C-0" Code).
(d) Commercial in major retail centers, apartments and hotels - one space / 200 sq. ft. of floor area (excluding common area not designated as commercial use).
(e) Commercial within office structure 708 sq. ft. / each 1,000 sq. ft. of gross floor area.
The Pentagon City development should have an easily recognizable identity and character. To this end, certain elements of the urban fabric can be standardized and repeated throughout the development to affect this desired feeling of homogeneity and identity.

While the Phased Development Site Plan regulations do not require the formulation of a so-called urban design element nor its submission to Arlington County for consideration, the planning staff has requested that Cafritz-Tompkins develop these certain standards which will be applicable to pedestrian ways and landscape for the adjoining streets.

Therefore, this report containing certain policies and standards which will guide the design of paving, landscaping, lighting, graphics, and street furniture within the public rights-of-way or easements, is presented as a part of the Phased Development Site Plan in an effort to comply with the planning staff request.

The parameters set forth in this study should not unduly restrict the designer's flexibility or imaginative architectural solutions on the various development parcels; however, the primary purpose of an identity, character and homogeneity should be paramount.
DESIGN OBJECTIVES

The development of standards and policies which will guide the design or selection of materials, styles and locations for the various urban design elements within the public spaces must be predicated on an acceptable set of objectives. The following objectives or design considerations provide the foundation for the policy recommendations and standards which are contained in the subsequent sections of this manual:

1. The pedestrian walkway system should contain a certain degree of standardization so as to impart a sense of unity and identity.

2. Pedestrian walkways should be carefully related to existing and proposed buildings.

3. Pedestrian walkways should be natural extensions of building plazas, concourses, and public open space.

4. Home-to-work travel by Metro should be encouraged by providing attractive pedestrian access and short walking distances between the Metro station and major buildings.

5. The most direct pedestrian routes should be sought for minimizing walking time and distances.

6. Pedestrian ways should be safe, attractive, and convenient to use. Routes should be simple, direct, natural, and continuous. Pedestrians should be able to identify locations readily by particular visual features, such as signs and graphics along walkways. Directional signing should be clear and consistent. Safety and security should be maximized by means of light and open construction, ample sight lines, adequate illumination, and avoidance of concealed spaces. Suitable pedestrian environments should be provided through amenities such as benches, plantings, and street furniture.

7. Horizontal and vertical movement continuity should be provided.

8. It is desirable to facilitate travel between the various pedestrian levels through the use of escalators, ramps, elevators, and related devices. Stairs generally should be avoided because they are difficult to use. Uniformity of pedestrian levels should be maximized by avoiding or minimizing abrupt grade changes along major travel paths.

9. Pedestrian ways should provide sufficient operational flexibility. Many key elements could operate independent of office or store hours; others links could operate only during daytime or peak hours.

10. Economical and realistic development of pedestrian ways should be achieved by (a) balancing investments in pedestrian facilities with demands; (b) utilizing, improving, and expanding existing movement corridors whenever possible; (c) coordinating development of walkways with building construction progress; (d) providing a high degree of locational flexibility to meet changing building plans and schedules; and (e) allowing for incremental expansion of the pedestrian movement system.
RECOMMENDED DESIGN POLICIES

The achievement of the previously described design goals or objectives is accomplished through the use of or compliance with policies. The formulation of design policies as a logical step preceding the adoption of design standards or specifications. The recommended policies which shall govern the design of each of the functional elements within or adjoining the public spaces are as follows:

1. Sidewalks

- The pedestrian circulation system shall consist primarily of a network of exterior at grade walkways providing an interconnection between the several blocks or parcels which comprise Pentagon City, and more importantly, provides a direct connection between the interior of several of the blocks and the Metro Rail Station entrances which are adjacent to these development parcels. This latter public pedestrian walkway system which diagonally traverses several of the development blocks is referred to herein as the "Metro pedestrian access corridor". This pedestrian access corridor will be built by the developer of the individual tracts or parcels, and the exact alignment, location, widths, etc., will be established at the time of the final site plan.

- In addition to the "Metro pedestrian access corridors", the public walkway system is classified as to "major" and "minor" walkways depending upon the anticipated pedestrian demand or volume, which is expected to be largely a function of the intensity of use and proximity to the principal pedestrian generator (i.e., the metro rail station). All major sidewalks shall be a minimum 12 feet in width with an adjacent 6-foot planting area. All minor sidewalks shall be a minimum of 10 feet in width with an adjacent 6-foot planting area.

- Pedestrian grade separations either as underpasses such as the tunnel connection(s) to the mezzanine level of the metro rail station or as overpasses will be provided only at those locations where the heaviest pedestrian volumes would otherwise conflict with large volumes of vehicular traffic and further, where the provision of such grade separations is economically realistic. (The location of grade separations is as shown on the transportation component of the Phased Development Site Plan).

- Pedestrian ways should provide a minimum vertical headroom of 8 to 9 feet and a clear walking path of at least 5 feet wide.

2. Landscaping and Screening

- Public streets bordering the several blocks which comprise Pentagon City will be planted with street trees.

- Landscape screens utilizing evergreen plant material will be utilized between the public street or pedestrian right-of-way or easements and above grade parking structures, thereby minimizing the visual impact of what is typically a monolithic structure.

- Screen planting strips, which may include the use of earth berms, will be located adjoining surface parking and loading areas so as to minimize

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the visual impact upon motorists and pedestrians operating within the public street or walkway system.

- Median planting shall be the same as the requirements for street trees (50' on center).
- Landscape screens including the use of architectural fences or walls and evergreen plant material will be utilized adjoining refuse collection areas to minimize their visual impact on the motorist and pedestrian operating within the public street and walkway system.
- The selection of trees, shrubs and other plant materials should be based on a consideration of hardiness both in terms of the region’s climate as well as the microclimate associated with an urban environment. Tree selection should recognize the need for low maintenance and, therefore, the use of deep-rooted and non-fruit bearing material should be encouraged.

3. Paving

- Paving material and treatment should be used to distinguish and/or differentiate between the public pedestrian system and the adjoining private areas.
- It would be inappropriate, at this stage of the design process, to select a detailed paving material or technique that would be compatible with all of the varying design solutions which will be utilized on the development of each of the several parcels. That is, sufficient flexibility should remain for the public pedestrian route which traverses most of the individual development blocks diagonally (Metro Pedestrian Access Corridor), however, the traditional or typical sidewalks adjoining the public streets at the perimeter of each block will contain a standardized paving treatment throughout Pentagon City.

4. Street Furniture

- Street furniture consisting of benches, refuse containers, bus shelters, and public telephones will be provided in the pedestrian convenience and/or rest areas. These convenience areas will be located at selected bus stop locations and public street intersections as well as major intersections between the public pedestrian routes.
- Street furniture may consist of wood, masonry and concrete materials. However, maximum use of natural finished wood should be encouraged.
- In addition to pedestrian convenience and/or rest areas, it may be necessary to locate selected street furniture such as refuse containers at other strategic points along the public street or walkway system. That is, the placement of certain facilities should not necessarily be confined to the groupings of street furniture occurring at the pedestrian convenience areas.
- Benches as well as other street furniture should be fixed in place and constructed of durable and maintenance free materials.
- The refuse or trash container system should have, as a prime consideration, the facility or ease with which trash may be collected.
- Benches without backrests shall be used primarily in very active areas where people will stop only for short time periods. Conversely, benches with backs should be used in conjunction with the public street and pedestrian system where people may wish to relax outdoors. The more passive pedestrian
areas of Pentagon City will undoubtedly be confined largely to the plazas,
 malls and in general, the interiors of the blocks rather than in areas ad-
 jacent the public street. 
 5. Signs and Graphics (Information System)
	* The policy recommendations providing guidance in a design frame-
	work for signs and graphics are limited to the street and public walkway sys-

tems. The illustrations presented are not final design solutions but rather the most viable design directions in the 
	consultants judgment.
	* The information system or sign classifications may be divided into the functions served by each sign, such as:
	(a) Directional—Directing the user from any origin to des-
	ination.
	(b) Confirmatory—Confirming the correctness of his path 

toward his destination.
	(c) Informational.
	(d) Identification.
	(e) Regulatory—primarily for traffic control
	* Directional and Informational Signs will be located at street 
	intersections as well as intersections of the public walkway system.
	* Informational and directional signs should be utilized to clearly 
identify and separate the "metro pedestrian access corridors" from adjoining 
plazas and/or private walkways.

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6. Lighting

Guidelines for lighting, design and location within the public street and walkway system areas will be governed by standards and criteria acceptable to the Arlington County Department of Transportation as well as the Virginia Electric and Power Company.

The selection of luminar designs and light source types (mercury vapor, incandescent, etc.) for the interior of individual development blocks and parcels as well as that for the "metro pedestrian access corridors", will be determined at the time of final site plan preparation and submission.

The formulation of the lighting concept and design for major pedestrian spaces as a part of the final site plan preparation should consider the following guidelines:

- Utilize building mounted fixtures where possible
- Provide a pedestrian scale in height of luminar ranging between 15 and 20 feet with spacing as required
- Utilize warm lighting sources such as color corrected mercury vapor lamps as well as some incandescent light sources (warm light refers to the color tending more toward a red-yellow spectrum of light as contrasted with the cooler light effect associated with a blue or "cool" coloration). The applicant shall provide to the County Board further information regarding:
  (a) Lowering the pedestrian lighting to 13 feet;
  (b) Lowering the street lighting to 35 feet in height.
- Warm lighting sources will be used for a pedestrian scale in height of luminar ranging between 15 and 20 feet with spacing as required.
- The illustrations are only typical solutions which must be interpreted and applied to a specific situation. Inevitably, alterations and adjustments will be necessary as additional information is developed for each project. However, the consistency of the Pentagon City design will depend, to a large extent, upon the continuous use of the principles established in this and the previous sections of the manual.
TYPICAL 4/4 ROADWAY

TYPICAL 4/4 ROADWAY
TYPICAL PUBLIC AREA
PLAN (EXCEPT 12TH ST)

12TH ST, SO. PLAN

PLANTING STRIP - 6' WIDE
(SHALL BE INCLUDED AS
PRIVATE AREA REQUIRED
OR OTHERWISE)
SIDEWALK - 5' TO 12'
CONCRETE

STREET TREES
- 50' SPACING
TYPE 1: 6" DIA. CEDAR
(EXCEPT 10TH ST)
- ROUGHY MAPLE
- RED MAPLE
- RED OAK

STREET LIGHT
85' HT., 100' SPACING
NOTES:
1. The sidewalk shall be a continuous path across private streets and driveways.
2. Ramps at the sidewalk at all curb changes will provide proper access for the handicapped.

SIDEWALK CROSSING DRIVEWAY OF PRIVATE STREET

TYPICAL LANDSCAPE SCREENING FOR PARKING STRUCTURES

SCREENING TYPES:
HIGH - CHEESE HOLLY
TALL HEDGES
WHITE PINE
AUSTRALIAN PINE

LOW - EVERGREEN CHRYSANTHEMUM
PRIZZER'S JUNIPER
POSSIBLE PAVING FOR MAJOR PEDESTRIAN CORRIDORS

NOTE:
1. THE BASE OF BENCHES AND THE ENTIRE REFUGES RECEPTACLE SHALL BE PRE-CAST CONCRETE WITH EXPOSED AGGREGATE OR MORORRY.
2. THESE URBAN ELEMENTS SHALL BE DISTRIBUTED THROUGHOUT THE STREETS CAPS WITH TRAFFIC AT BUS STOP AREAS, PEDESTRIAN CROSSING AREAS AND OTHER MAJOR PEDESTRIAN CONVENIENCE AREAS.

STREET FURNITURE
TYPICAL BUS STOP

TYPICAL STREET INTERSECTION
TYPICAL PICTOGRAPH SIGNS

LEYTERED SIGNAGE

NOTE:
THE TYPE FACE OF LETTERING USED ON INTERDIAL DEVELOPMENT SIGNS SHOULD NOT BE RESTRICTED TO SLIM STYLES, THIS WOULD HELP LESSEN VISUAL NOTOTIVITY.

LETTERING:
TYPE: Helvetica Medium
COLOR: White

BASE:
MATERIAL: Thermoset plastic
COLOR: Brown
FRAME: Black anodized aluminum

to metro
bus stop
MATERIALS:
- White knit on frame
- Aluminum tubing
- Plastic base
- Frame - black anodized
- Surface - paper

WHERE PICTURES TYPE, ROAD & TRAFFIC CONTROL SIGNS ARE USED THEY SHOULD BE SUCH THAT:
- SIGNS & STRUCTURES ARE A STANDARD SIZE & COLOR.
- PROPORTIONS WILL BE SUCH AS TO INTEGRATE THE TRAFFIC SIGN.
TYPE: VESCO ENCLOSURE UNIT
MATERIAL: ALUMINUM

HEIGHT: 36'
SPACING: 120' on 124' ATR.
1. This site plan is approved subject to the submitted Site Plan, the Statement for the provision of fire escapes, dedications and/or Construction of Public and/or Community Facilities and the Pentagon City Urban Design Manual for Public Streets and Pedestrian Areas as each of these documents may be amended by the following conditions:

2. In the following is a summary of the approved uses and densities by Parcel for the Pentagon City Planned Development Site Plan:

<table>
<thead>
<tr>
<th>Parcel</th>
<th>Use</th>
<th>Density</th>
<th>Area</th>
<th>Parcels</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Office</td>
<td>2.00</td>
<td>1,000</td>
<td>132</td>
<td>1,700</td>
</tr>
<tr>
<td>2</td>
<td>Apartment</td>
<td>1.50</td>
<td>1,000</td>
<td>12</td>
<td>2,000</td>
</tr>
<tr>
<td>3</td>
<td>Park</td>
<td>1.00</td>
<td>1,000</td>
<td>12</td>
<td>1,000</td>
</tr>
<tr>
<td>4</td>
<td>Park</td>
<td>1.00</td>
<td>1,000</td>
<td>12</td>
<td>1,000</td>
</tr>
<tr>
<td>5</td>
<td>Park</td>
<td>0.50</td>
<td>1,000</td>
<td>12</td>
<td>500</td>
</tr>
</tbody>
</table>

TOTAL 1,000,000 4,000

This document includes the following:

- A site plan for the Pentagon City Planned Development Site Plan that includes the following:
  - Office buildings
  - Apartment buildings
  - Park areas

- The site plan is subject to conditions set forth in the Statement for the provision of fire escapes, dedications and/or Construction of Public and/or Community Facilities and the Pentagon City Urban Design Manual for Public Streets and Pedestrian Areas.

- The summary of approved uses and densities by Parcel for the Pentagon City Planned Development Site Plan is shown in the table above.

The table provides a summary of the approved uses and densities by Parcel for the Pentagon City Planned Development Site Plan, subject to the following conditions:

- The site plan must be approved subject to the submitted Site Plan, the Statement for the provision of fire escapes, dedications and/or Construction of Public and/or Community Facilities and the Pentagon City Urban Design Manual for Public Streets and Pedestrian Areas.

- The approved uses and densities by Parcel are shown in the table above.

- The total area for the approved uses and densities is 1,000,000 square feet.

- The document includes a compliance with the conditions set forth in the Statement for the provision of fire escapes, dedications and/or Construction of Public and/or Community Facilities and the Pentagon City Urban Design Manual for Public Streets and Pedestrian Areas.

- The summary of approved uses and densities by Parcel is shown in the table above.

- The total area for the approved uses and densities is 4,000 square feet.

- The document includes a compliance with the conditions set forth in the Statement for the provision of fire escapes, dedications and/or Construction of Public and/or Community Facilities and the Pentagon City Urban Design Manual for Public Streets and Pedestrian Areas.

19. South First Street from 12th Street. North, on Army-Navy Drive shall be designated S.F. 306.00 ft. to be abandoned at the time of the final site plan approval on the north.

20. South First Street from 12th Street. South, on Army-Navy Drive shall be designated S.F. 306.00 ft. to be determined at the time of the final site plan approval on the block.

21. If 12th Street, South, is constructed between South Joyce Street and South Army-Navy Drive, the street movement will be permitted at the time of final site plan approval, otherwise prohibited for thoroughfare movements.

22. The full street section, sidewalks and median of South Joyce/12th Street - from South Joyce Street to 12th Street, shall be constructed by the developer.

23. The median of South Joyce Street from South Joyce Street intersection to temporary drive will be constructed by the developer, subject to the median being determined at the time of final site plan approval.

24. South First Street, South, from South Joyce Street to South Army-Navy Drive shall be shown on the final site plan as a landscaped median, and prior to the approval of a building permit for the project, to be determined at the time of the final site plan approval on the block.

25. The full street section and sidewalks on 12th Street, South, from South Joyce Street to South Farm Street shall be constructed by the developer.

26. The site plan must "two additional 10' lanes by 10'" relating to South Joyce Street from temporary drive to 12th Street, South, will be detailed.

27. The developer shall maintain a landscape plan along sidewalks and shall submit a landscape maintenance agreement with the final site plan submission.

28. Street trees shall be spaced at a minimum 50-foot interval.

29. Other street tree species are acceptable and shall be described as approved plants.

30. The Urban Forestry Manual shall include a detailed planting, street furniture, sidewalks and landscape plan for the project.

31. The developer shall maintain at the time of the approval of the first site plan, a thank you to the County for all the required medians, and shall be detailed prior to the approval of the final site plan by the Planning Department.

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37. The developer shall provide notice to the following formalities above otherwise approved, to the final site plan approval, to thoroughfare movements will be permitted at the time of final site plan approval.

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February 25, 1974

At the time of final site plan, the owner shall make his best efforts to provide sites up to one acre in size, all of which are to be considered as land use space for single-family and multifamily dwellings. The following are to be considered:

1. The development of a plan for the development of the property in a manner consistent with the overall plan for the area. The plan should include:
   - A layout of the proposed buildings and streets.
   - A description of the proposed landscaping and open spaces.
   - A schedule of construction.
2. The development of a plan for the development of the property in a manner consistent with the overall plan for the area. The plan should include:
   - A layout of the proposed buildings and streets.
   - A description of the proposed landscaping and open spaces.
   - A schedule of construction.
3. The development of a plan for the development of the property in a manner consistent with the overall plan for the area. The plan should include:
   - A layout of the proposed buildings and streets.
   - A description of the proposed landscaping and open spaces.
   - A schedule of construction.
4. The development of a plan for the development of the property in a manner consistent with the overall plan for the area. The plan should include:
   - A layout of the proposed buildings and streets.
   - A description of the proposed landscaping and open spaces.
   - A schedule of construction.
5. The development of a plan for the development of the property in a manner consistent with the overall plan for the area. The plan should include:
   - A layout of the proposed buildings and streets.
   - A description of the proposed landscaping and open spaces.
   - A schedule of construction.
6. The development of a plan for the development of the property in a manner consistent with the overall plan for the area. The plan should include:
   - A layout of the proposed buildings and streets.
   - A description of the proposed landscaping and open spaces.
   - A schedule of construction.