

THIS DOCUMENT CONTAINS ONLY THE
NEIGHBORHOOD I PAD DISTRICT REGULATIONS
AS SECTION "F" OF THE CIVANO MASTER PAD

(REFER TO THE COMPLETE CIVANO MASTER PAD DOCUMENT FOR ALL OTHER SECTIONS)

CIVANO

MASTER PLANNED AREA DEVELOPMENT

District PAD's Include:

SIERRA MORADO PAD

PAVILIONS PAD

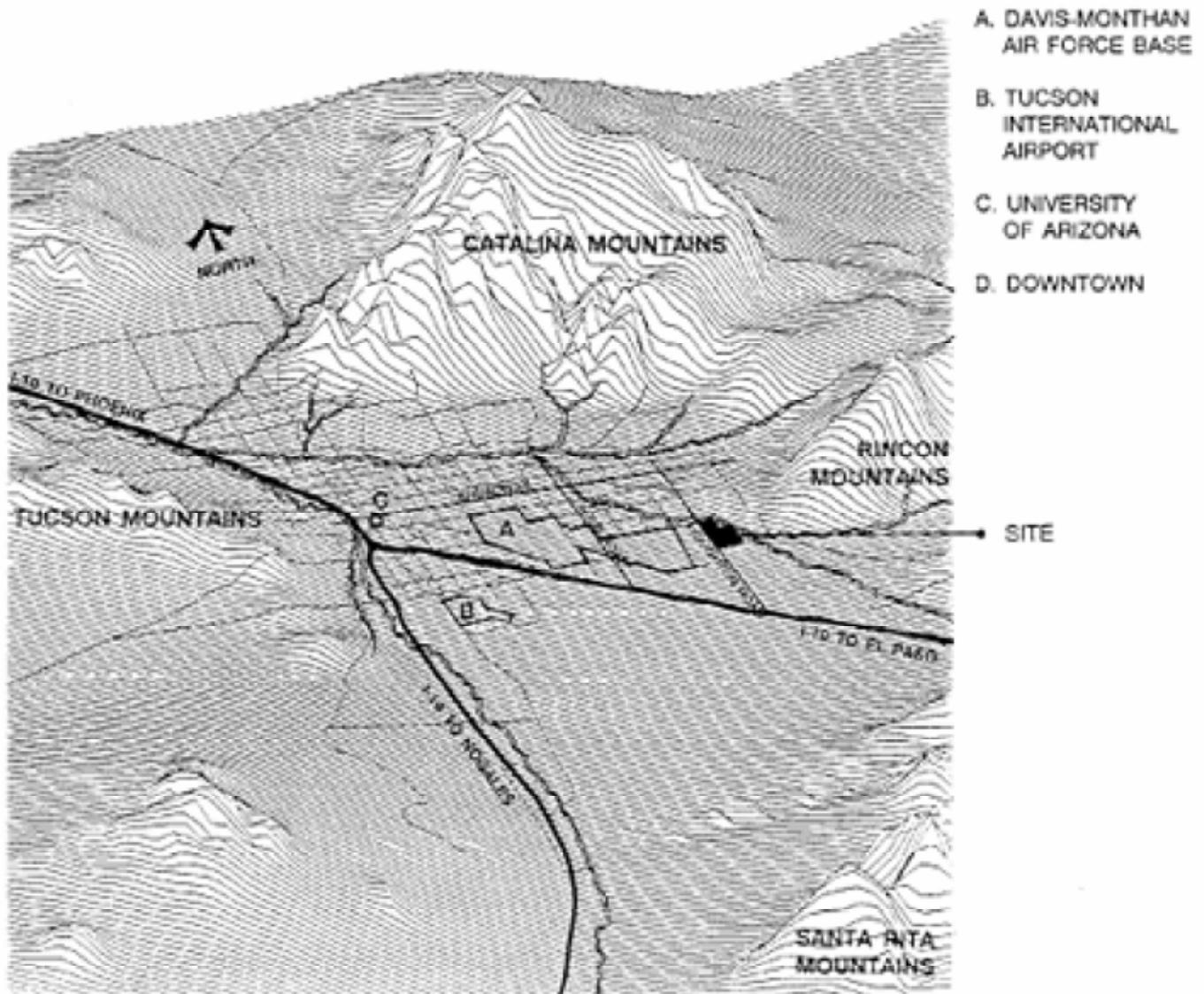
NEIGHBORHOOD 1 PAD

Revised Submittal
City of Tucson
Revised April 7, 2005

CIVANO
MASTER PAD/DISTRICT PAD'S
SIMPLIFIED TABLE OF CONTENTS
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F. NEIGHBORHOOD 1 PAD DISTRICT



Regional Setting

Exhibit 30

F-1.0 INTRODUCTION

1.1 Purpose, Scope, Main Concepts and Goals

The purpose of this Planned Area Development is to direct the development of Civano's first neighborhood and portions of the Town Center and to assure its consistency with the currently-adopted Civano Master Development Plan and other related city plans and policies.

The original Planned Area Development boundary is amended to include the southern portion of Block, 2, and lot 527 of Civano 1 Bk. 52, Pg. 34 of Maps and Plats as shown in Exhibit 1a. The southern portion of Block 2 and Lot 527 which was zoned SR shall now fall within the Neighborhood Center District as defined in Exhibit 11 and 12. The amended Planned Area Development covers approximately 237.54 acres of land within the 815.42 acre. This Civano project and includes a mixed-use neighborhood center, a variety of residential living environments, recreation and cultural facilities, and substantial open space preservation.

Main Concepts

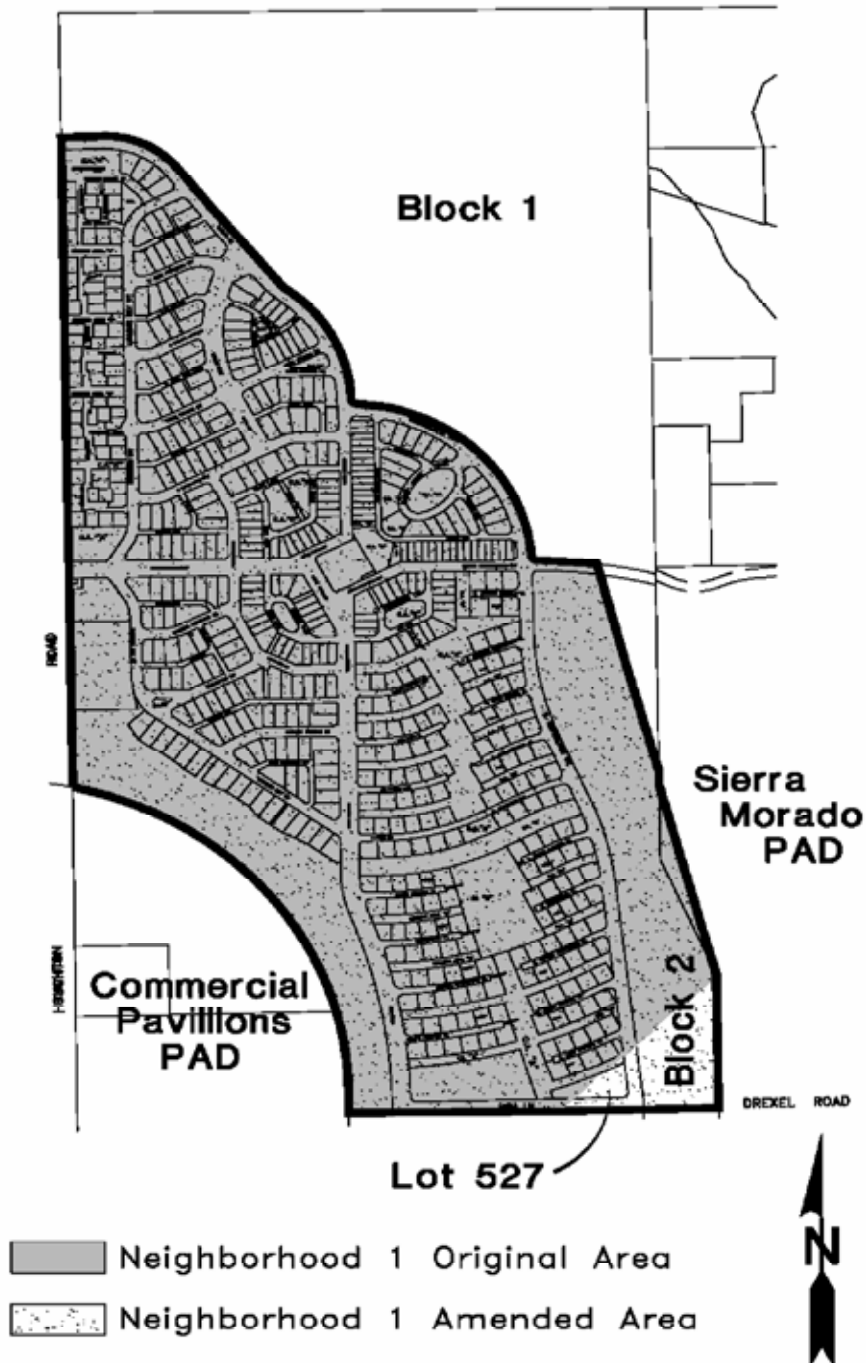
There are four main conceptual elements which are integrated into the proposed Phase 1 Planned Area Development: Building Community, Connection with the Land, Respect for Climate, and Regeneration. These factors are viewed as guiding principles in both conceptualizing and detailing the plan and should be used as first principles in any specific programming for spatial layout, design details, or zoning interpretations or decisions. These are briefly discussed below:

Building Community

That settlement is good which enhances the continuity of a culture and the survival of its people, increases the sense of connection in time and space, and permits or spurs individual growth: development, within continuity, via openness and connection.
--Kevin Lynch

Civano is about building community; about connecting with each other. The Civano plan is designed to encourage face-to-face meeting and interaction--gathering places, meeting areas, cafes, safe and livable streets where automobile traffic is encouraged to slow down, a fine-grain mix of uses, and the ability to reduce the time spent in an auto.

The plan is based upon principles of "New Urbanism" of which "Neo-Traditional Planning" is a part (see Development Agreement, Exhibit numbers 6 and 8). The plan is laid out to encourage connection with important gathering places: the neighborhood center, the Town Center, the Community School and similar spaces. A variety of social and cultural spaces for recreational activities are provided as public, semi-public, semi-private and private spaces. Streets are laid out in short segments which end in important views or deflect in direction so that the street environment is easily defined visually, avoiding the anonymity so prevalent in most suburban areas. The streets are designed almost as if the auto is an intruder, certainly to be tamed and to be slowed down to the speed of pedestrians and cyclists. As drivers enter into the territory of the Civano streets, they become aware of the human scale and the need for care and caution. The streets are to be lived in as well as the homes.



Civano Neighborhood 1

Amended Boundary

Exhibit 30a

The Planned Area Development is designed to encourage a human connection between the house, the street and the pedestrian spaces.

Pedestrian spaces are designed to be comfortable and to make the trip as pleasurable as possible, with shade and places to rest and meet with neighbors.

Connection with the Land

How do we return to the sacred? How do we acknowledge it? For me, it's being out in the land. You are simply in that presence--in the calmness of that moment of walking on redrock, of hand on stone, of hearing the sound of the raven, of feeling the wind across your face. It's not something that one has to search for. One is simply standing in the center of it.

--Terry Tempest Williams

The form of the land and the way it has weathered over time speaks to its potential for development. The drainage and erosion patterns, its visual setting, the way vegetation has grown upon it to support the animal kingdom--all form a pattern to either support or reject the built forms to be placed upon it.

The Civano plan seeks to respect these forms and patterns and further develop their connections with the built fabric. The richest parts of the land, in terms of drainage patterns, water resources and resulting vegetation patterns are preserved. As the built environment is superimposed upon these patterns, it is designed to enhance the pattern of the land--by directing the flow of water runoff into areas which support vegetation and wildlife, by making connections both visual and physical between the built environment and the prime natural areas, and by expanding the extent of heavily vegetated areas into the built environment.

Respect for Climate

...there is an inherent logic in the structure and nature of organisms that have grown on this planet. Any architecture, any urban design, and any social order that violates that structure and nature is destructive of itself and of us. Any architecture, urban design or social order that is based upon organic principles is valid and will prove its own validity.

--Peter Blake

The Civano plan seeks to acknowledge the natural patterns of the sun and the wind and the seasons: through attention to orientation of buildings relative to these factors; through the creation of public spaces which support human comfort through natural means--shade trees nurtured by natural runoff; and by minimizing the amount of heat absorbed--in buildings and in streets, resulting in minimizing the energy needed to reduce the impact of that heat, both for energy consumption and human comfort.

Regeneration

"A regenerative system provides for continuous replacement, through its own functional processes, of the energy and materials used in its operation. Regeneration has to do with rebirth of life itself, thus with hope for the future."

--John T. Lyle

Principles of sustainability include strategies for conservation, regeneration, and stewardship of resources. Because of a general lack of responsible stewardship of our resources over the past several decades, conservation alone does not appear to be sufficient to restore the ecosystem to a natural balance. Therefore, strategies of regeneration need to be applied also.

Regeneration implies that each action and resource be viewed as an opportunity to actively create energy and balance, rather than “status quo,” and each “improvement” can serve more than one purpose.

Examples of regenerative principles embodied in this plan include restoration of natural riparian habitats, planting of food-producing crops which serve not only for shade but also for community income and community ritual in planting, tending and harvesting crops.

1.2 Conformance with Existing Land Use Plans

In December of 1984, The City of Tucson adopted the *South Pantano Area Plan*, establishing planning and development policies for a several square mile area including and surrounding the Civano site. These policies were developed after substantial analysis of the general area (*South Pantano Inventory*, October, 1983), but prior to more recently adopted regional policy initiatives (transportation, parks, trails access). The City of Tucson’s general planning* policies for this area are included within this adopted plan, most recently amended during the Civano planning process on May 6, 1991, by Ordinance No. 15655. This area plan incorporates the “village” concept in accordance with the concepts embodied in the Civano Master Development Plan.

Following is the general policy, as amended, for the specific subarea which includes the Civano site (Subarea Eight):

“SUBAREA EIGHT PROFILE

This is approximately a four square mile area between Irvington and Valencia Roads and between the Harrison Road alignment east to Pantano Wash. Approximately 85% of the land is State Trust land, 10% is owned by the City and about 5% is privately owned. Houghton Road is the main arterial through this subarea also and furnishes direct access to Interstate 10 to the south and the total metropolitan area to the north. Melpomene, Drexel, and Valencia Roads are major streets within the interior of this subarea.”

“PROPOSED USE

Suburban to midurban densities integrated with job site Park Industrial development are appropriate in this area. Higher densities should be located along arterial and collector streets, while Park Industrial type development is best suited near Valencia and along Houghton Road. Main access to job site development should be limited to major streets.

It is recommended that development transition to suburban densities toward the interior of this subarea and adjacent to Pantano Wash. Special care must be taken to ensure residential development is sensitive to the existing natural environment. During design stages of non-residential development special consideration must be given which emphasizes minimal impacts on properties either developed residentially or having potential to be developed residentially. Cut and fill, and grading of proposed development should be kept to a minimum.

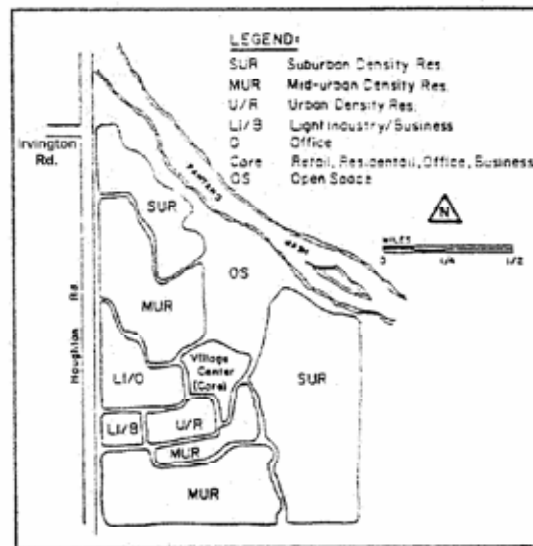
Davis-Monthan Air Force Base may expand its activities in the future. Since the land parcel west of Houghton Road is contiguous to the Air Base, it may be appropriate to use it for expansion of military operations.

If this land parcel is not to be used for base operations, then it *should* be developed with land uses compatible to base activities with special consideration for building setbacks and open space/recreational uses between Davis-Monthan Air Force Base and proposed developments.

* The General Plan was originally adopted as the “Comprehensive Plan” pursuant to the Tucson Zoning Code and, subsequently, the Tucson Land Use Code. The term “Comprehensive Plan (CP)” was changed to the “General Plan” by Ordinance 9517, which was adopted by Mayor and Council on February 12, 2001. This change in title does not affect the content of the Plan.

Drexel and Valencia Roads extend east through this area from Houghton Road and currently serve as access to sand and gravel operations located adjacent to Pantano Wash. Houghton, Melpomene, Drexel and Valencia are major streets in the adopted *Pima County Major Streets and Routes Plan*. Their classification and any additional major streets will be reviewed and necessary rights-of-way determined at the time the area is annexed."

Over 800 acres of State Trust Land has been reserved to develop Civano, an energy efficient community. The "village" concept supports a core containing a mix of supportive uses. Generally, land uses between the core and Houghton Road should include employment uses. Radiating away from the core are decreasing residential densities toward the periphery. The area reaching north of the core and along the east and south sides of Civano should be developed as suburban to mid-urban density residential. The area between suburban residential development and the core is provided as a transition zone. In this zone it is appropriate to gradually increase the intensity of development through a mix of mid-urban and urban densities. Washes and other undevelopable areas will provide open space for the public. The illustrative insert...displays a conceptual range of land uses and their transition from the core to the perimeters.



EXISTING LAND USE PLANNING POLICIES

The area immediately to the south of this planning area is covered by the *Esmond Station Area Plan*, adopted by the City in March, 1986. It is anticipated by the City that this area will receive substantial new development over the next couple of decades. This plan covers the area south of the Poorman Gunnery Range of Davis-Monthan Air Force Base and north of Interstate 10 between Kolb Road and Pantano Wash. It includes Rita Ranch, the Air Force Base Airport Approach Zone, the Southern Pacific Railway line, and several square miles of primarily vacant State Trust lands east of Houghton Road. The Rita Ranch planned development consists of a combination of medium density residential, light industrial, and commercial business. School sites have been designated and substantial infrastructure has been installed. To date, development has been slow, partially due to the general economic conditions in Arizona.

Recently adopted regional open space, trails and circulation plans proposed increased access by all modes of transportation to this area. Pantano Wash is proposed to become part of the regional linear park system with pedestrian, bicycle, and horse trails linking other parts of the region. Two additional trail access points to Saguaro National Monument are proposed from the Pantano Wash at the north edge of the Solar Village site. Houghton Road is adopted as a "Gateway Route", defined as a major urban transportation gateway from Interstate 10 to the urbanizing Tucson basin, designed as two-way divided 200-foot rights-of-way with native-

landscaped medians and side areas and limited automobile access. In addition, Houghton Road is proposed to contain a regional bikeway route adjacent to the site.

1.3 Rationale and Benefits for Using Planned Area Development District

There are several reasons for using the Planned Area Development District for this project, rather than other existing zoning districts. One of the primary reasons is to mix uses in the Neighborhood Center to create a place of social interaction. The Planned Area Development District also creates an equivalent to overlay zones which set forth design characteristics for a variety of urban and rural environments and to allow more specificity and control over the general design of the built environment.

1.4 Suitability of Planned Area Development District

This proposed district is generally consistent with the existing zoning on the property. It is sufficiently large to adequately guide planned area development for the next 2-3 years. It is designed to allow and encourage a relatively-balanced mix of uses to be developed concurrently. These include a variety of residential densities and environments, some commercial services, and both office and manufacturing jobs.

1.5 Compatibility with Adjoining Land Uses

Immediately adjoining land uses are primarily single-family residential, although most of the land is vacant. There are some remaining sand and gravel extraction operations along the Pantano Wash directly east of the property, although these are slowly being phased out in preparation for construction of the regional park and trails system along the major washes. There are two operating horse stables immediately to the north of the property, on both sides of Houghton Road at the Pantano Wash. There should be no interference to these uses as a result of community development on the Civano property, although added residents may wish to use the stabling and riding services available.

1.6 Physical and Economic Suitability and Feasibility with Existing Infrastructure and Services

When the Civano site was originally selected through a community-oriented State Land selection process, it was determined that one of the primary advantages of this site was that infrastructure already existed and could be extended with relatively little added expense and with minimal impact upon the existing infrastructure system.

As noted elsewhere, all significant infrastructure necessary to support this development is in very close proximity and can be effectively extended into the property for the proposed development. In concert with community understanding and Mayor-Council decisions in supporting this project, impacts on infrastructure and public services are being planned and designed to be as minimal as feasible, using best-known and available technologies, and to be a demonstration of these impacts can be minimized for future projects.

F-2.0 PLAN OBJECTIVES

2.1 Conservation and Development of Natural Resources

2.1.1 Solar Energy Resources

All building in Civano is intended to meet the “Civano Standards” relative to energy conservation and the use of solar energy resources as delineated in the Development Agreement between the City of Tucson and Community of Civano, LLC, and specifically delineated in the Mayor and Council Memorandum re Civano Performance Targets dated October 2, 1995.

Celebration of Solar Orientation

Seasonal events such as the summer and winter solstices and the vernal and autumnal equinoxes are opportunities for community and individual celebration which enhance the awareness of our connection with, and reliance upon, the sun as a primary source of energy. In public gathering places, opportunities to acknowledge significant seasonal solar patterns should be observed. This can be done by aligning buildings with solar positioning, by creating public art which interacts with significant solar positions, and by maintaining views of sunrise and sunset at these times of year.

Because of the direction of the natural site topography, the plan layout acknowledges the summer solstice sunrise and winter solstice sunset in many of the street angles (63 degrees west of north; 63 degrees east of south) and in the orientation of the buildings within the neighborhood center plaza. View corridors are maintained between the neighborhood center plaza in both directions so that visual and shadow alignments can be made on those days.

2.1.2 Wind Resources

While normal wind velocities are not sufficient to maintain efficient energy generation from wind power, wind and natural site breezes can be an effective tool for cooling, both for interior and exterior comfort. The wind patterns generally run in a southeast-northwest direction, parallel with the direction of the Pantano Wash. In the mornings, cooling breezes from the Santa Rita Mountains flow in a northwesterly direction and can be used for refreshing the air and pre-cooling interior spaces in preparation for the daily warming pattern. In the evening, the flow is the opposite, but the breezes are also warmer and also carry airborne pollutants from more densely populated areas of the region. These afternoon breezes can be used, with proper building design and management, to create a negative pressure within buildings which can be used to “pull” warm air from the buildings. Those buildings and public spaces along the rises adjacent to the Pantano Wash are particularly suitable for taking advantage of these wind patterns. This can be accomplished by locating public walkways along this area and by designing those homes to be oriented so that wind can be a more effective cooling technique in their design. In addition, wind catchers should be designed into the homes to catch the morning breezes and bring them into the interior and exterior spaces. These devices should be exceptions to building height limitations.

The plan carefully positions single-family homes on the bluffs and palisades adjacent to the Pantano Wash to take advantage of these wind patterns. Community orchards are also located

in this area, with a public pathway winding through it, for the same reason. Because of the additional moisture inherent in the cultivating of trees in this area, it can act as an additional evaporative cooling technique.

2.1.3 Water Resources

Potable Water Usage

The Development Agreement between the City and the developer includes a water use goal to “reduce potable water consumption significantly below metropolitan Tucson baseline levels; and use non-potable water, such as reclaimed water, graywater, or rainwater harvesting for landscape irrigation.”

In accordance with the Civano IMPACT system, individual houses will be designed to provide an interior use of 53 gallons per person per day (a 54% reduction from 1991 residential baseline) and 28 gallons per person per day for exterior uses. Commercial uses are planned for 15 gallons per employee per day, subject to a case-by-case review of businesses, such as restaurants, with above-average water requirements.

Community swimming pools will be built with the first development phase to discourage the need for private swimming pools. If private pools are installed, it will reduce the allowable water allotment for landscape irrigation.

Each building will be designed with a dual water supply system, one for potable water and one for reclaimed water which will be used for all outdoor irrigation. There remains some question relative to the use of reclaimed water for all outdoor uses, including the cultivation of edible crops and the need to control bodily contact. In any case, all landscape irrigation will be accomplished with non-potable water, graywater, and/or rainwater harvesting. The City’s reclaimed water service, rainwater harvesting or graywater equipment will be provided at all Civano properties.

Xeriscape Principles

The basic concept of xeriscape design is establishing hydrozones in the landscape. The three hydrozones are the mini-oasis, transition, and arid zones. The mini-oasis is located in areas of high use and where higher water-use plants are planted. The transition area radiates outward from the oasis area and includes plants that require irrigation but are not water-greedy. The arid zone usually is the perimeter areas in which selected plant materials are drought tolerant or low water use.

Established xeriscape principles shall be used for all outdoor landscape design. There are seven horticultural principles of xeriscape landscaping: (1) good landscape planning and design, (2) appropriate turf areas, (3) efficient irrigation, (4) use of soil amendments, (5) use of mulches, (6) incorporation of low water use plants into the landscape and (7) appropriate maintenance of plants and irrigation systems.

Natural and Surface Drainage Systems

All on-site drainage shall be conducted as surface drainage, except as necessary to pass across and under roads and pathways. The surface drainage system shall be designed to maximize on-site water detention in sufficient volume to irrigate landscaping within it, supplemented as required by reclaimed water. This landscaping shall be designed so as to create substantial shading along streets and public pathways.

The sections dealing with General Landscape Program and Drainage Plan, following, discuss this in more detail.

Use of water for public enjoyment

Water features such as fountains and small ponds can be used effectively for both general enjoyment as well as cooling features when properly designed. These should be used carefully in public spaces.

Cool towers (devices which use evaporative cooling techniques without the use of fans) can also be effective tools for cooling in both public and private spaces. Misting devices which use large amounts of potable water for evaporative cooling should be discouraged.

2.1.4 Soils Resources

The soils on the developable portions of the site are not especially good for plant growth. In order to encourage more lush landscaping, soils resources should be improved. On-site water retention will help over time to improve the soils. On-site composting of yard wastes through the Civano Community Association will provide a source for soil supplements.

Community orchards are planned on a community-wide basis. In addition, areas are planned to be set aside, both on private property and adjacent to natural washes for small individual gardening plots.

Studies will be ongoing throughout the development process which focus on the following objectives:

- Develop a regenerative agricultural model that focuses on the nutritional needs of Civano residents. This model may be manifested as community gardens, organic home gardens using native plant species, access to locally grown organic food, or other such examples.
- Develop a comprehensive waste treatment facility that addresses recycling and organic waste treatment through composting or vermiculture (use of worms in composting).
- Responsible use of reclaimed water for food production systems.
- Establishment of a permaculture-type model for residential development that integrates food systems into the overall land use plan.
- Develop regional food resources (stores/food cooperatives) for the community that serves to support local farmers and to integrate food systems into the overall Civano development model.
- Develop organic (synthetic-free) landscape management.
- Reclaim lands damaged by overgrazing and roadway filling in natural drainage ways.
- Provide local employment opportunities in regenerative agriculture.

2.1.5 Native Vegetation and Wildlife Habitats

Primary natural vegetation and wildlife habitats are to be preserved as delineated in the site analysis (see Exhibit 2, Native Plant Preservation Map and Section 2.7.2, General Landscape Program). Enhancement of these areas through water detention and retention should be a priority. However, City flood control policies which prohibit “in-line detention” currently prevent this strategy. Supplemental native landscape enhancement will be made in those areas which have been disturbed. In addition, a public landscaped open space corridor will be developed to link two significant natural washes on the east and west sides of the area.

2.2 Preservation of Scenic Natural Features

There are few scenic natural features on the site itself. Those considered scenic, however, are the steep bluffs along the Pantano Wash boundary, the natural washes, and the gentle slopes dividing the upper and lower terraces. The bluffs and major washes are preserved in their natural states through the delineation of land uses. At the base of the bluffs along the Pantano Wash, community orchards are planned to meet the base of the bluffs and provide a landscaped foreground to better delineate the landform from the public viewpoint. This orchard is planned to extend into the developed area along the natural slopes which separate the upper and lower terraces. This will further accentuate this landform.

Offsite are significant views of the Catalina and Rincon Mountains. These views are most prominent from the bluff areas and at the top of the slope which separates the upper and lower terraces. Public areas and house siting design is planned to maximize these views. A constraint to these views exists in the form of overhead electrical utility towers and lines. Studies are underway to relocate these to be less obtrusive. However, should these not be feasible to move, siting for specific buildings can be such that these will be a minimal intrusion.

At the first neighborhood center, the “borrow pit” provides an unnatural change in elevation which allows a more open view of the Catalinas, Rincons, and Reddington Pass. The siting and orientation of buildings in the neighborhood center is designed to keep this view open and frame it to be more significant.

2.3 Drainage Plan

As noted in other sections of this Planned Area Development, it is the intent to utilize natural drainage for the benefit of the landscape within the project and to keep as much of the rainwater runoff on the site. Any excess runoff during unusually heavy storm events will be directed into the natural arroyos which drain directly into the Pantano Wash.

Existing and newly-created sheetflow problems will be relieved by directing the flow into newly-created swales and channels, landscaped to become natural-looking arroyos. Civano Boulevard is designed to be used as water harvesting area with a swaled median. Additional runoff is designed to flow through the unpaved sections of alleyways in order to foster plant growth and to end up in existing natural drainageways which lead to the Pantano Wash.

One existing wash (between the residential area and the Town Center) is currently overtaxed. The plan is designed to remove existing drainage from this area and allow it to flow into a newly-created pedestrian path and recreational system traversing the area of the plan to follow

the natural drainage direction. This solution places more water within the area which is designed to foster plant growth and create shaded areas for pathways and outdoor recreation areas.

Exhibit 3, following, generally details the drainage plan.

2.4 Impacts on Existing Structures and Roads

There should be no impacts on existing structures. While traffic generation off site should be less than normal subdivision development due to the mixture of residences, jobs and commercial services, there will be traffic added to the public road system over time. This impact is well within the impacts anticipated for normal urban growth and planned within the normal metropolitan transportation planning processes.

2.5 Impacts on Existing Infrastructure and Public Services

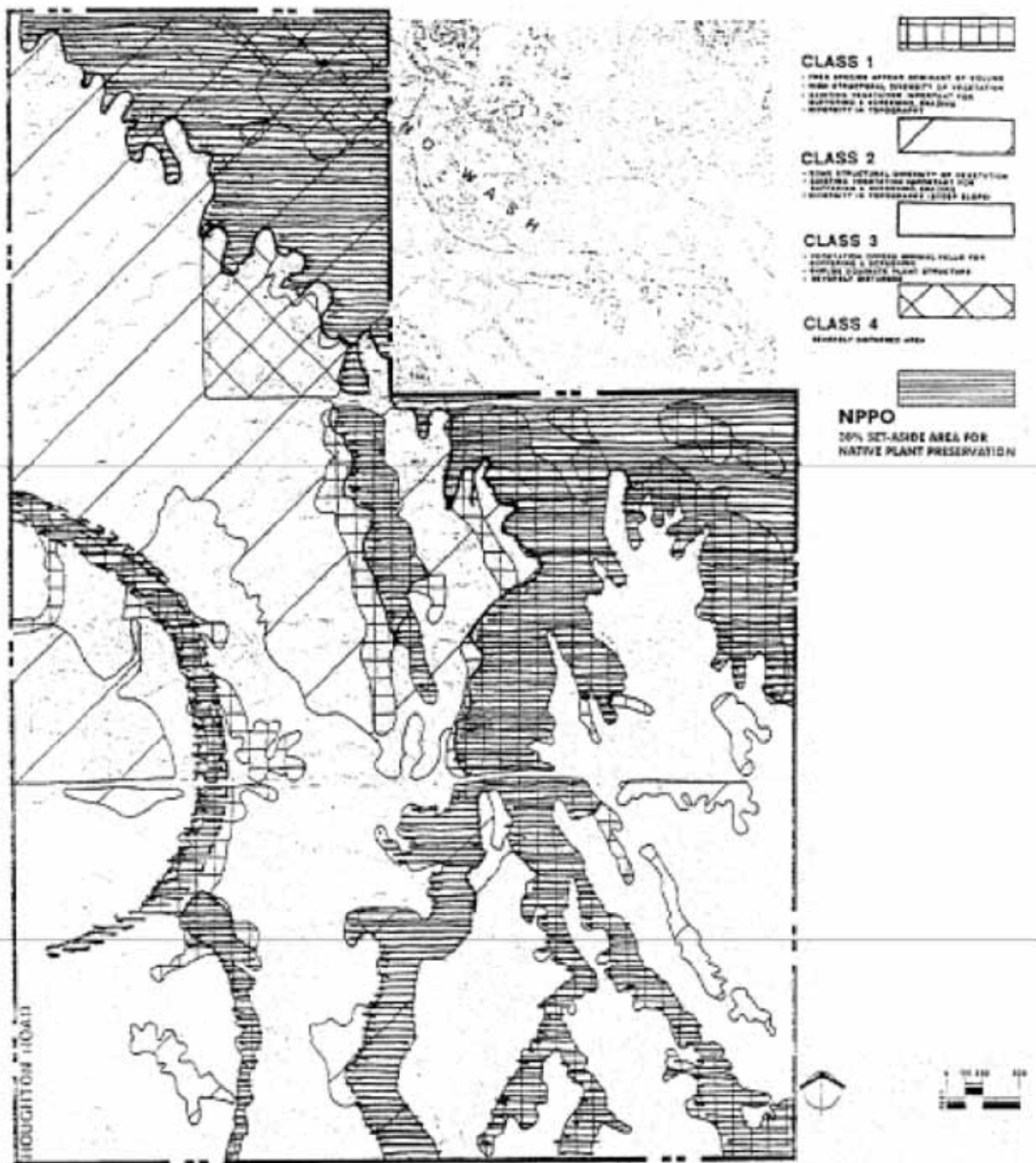
Due to the nature of the development in reducing water usage, energy usage, and automobile usage, it is anticipated that the impacts on existing infrastructure will be substantially less than with normal residential and commercial development of this scale.

2.6 Location and Extent of Provisions for Sewage Disposal, Effluent Use, Stormwater Drainage, and Utilities

Stormwater, drainage and utility plans are being submitted with Tentative and Final Tract Maps and will be more specifically designed as part of a Municipal Improvement District upon approval of the Tentative Map.

The off-site sewage disposal line has been designed to meet Pima County Wastewater plans for future expansion of the basin.

Extension of the treated effluent line for outdoor irrigation is being designed by Tucson Water Department as per the Development Agreement between the developer and the City of Tucson.



Native Plant Preservation

Showing Area of 30% Plant Preservation Set-Aside (Approximate Area)
 Overlaid on Landscape Character



Exhibit 31



Drainage Patterns

Exhibit 32

2.7 Development Design Guidelines

Additional design and development guidelines will be contained within the Conditions, Covenants and Restrictions (CC&Rs) to be administered by the Civano Community Association (Master Association). The Civano Community Association Design Review Committee will review all new development plans for conformance to the Design Guidelines, CC&Rs and Civano IMPACT Guidelines.

2.7.1 Building and Site Design

The first and primary strategy for effectively utilizing solar energy resources is through “passive solar” techniques in the initial design of buildings and outdoor spaces.

The relationship of the building to the site will be designed to be integrated as a single living-working/interior-exterior functional space. As such, site development plans for any site shall include not only building plans but also landscaping plans to delineate all interior and exterior space and to show the relationship between landscaping and energy conservation through shading.

Building and spatial orientation shall be such that summer heat gain shall be minimized to the greatest extent possible through the following “passive solar” techniques:

1. Minimizing door and window openings on the easterly and westerly building facades;
2. Shading roof surfaces and easterly and westerly facades with landscaping and other shading devices;
3. Shading southerly-facing window and door openings with roof overhangs, landscaping, or other shading devices during the mid-Spring to mid-Autumn seasons;
4. Providing thermal mass building surfaces on the westerly, southerly, and easterly faces, sufficient to delay daytime heat gain into interior spaces;
5. Providing sufficient building insulation and air-tight building envelopes to minimize heat gain;
6. Providing well-sealed cooling supply (ductwork) system within insulated space to minimize any mechanically-supplied cooling loss;
7. Providing light-colored, non-absorptive building colors on solar-exposed building surfaces;
8. Providing shady summer outdoor living spaces as extensions of interior spaces;
9. Providing sunny winter outdoor living spaces as extensions of interior spaces; and
10. Allowing Winter sun to reach building surfaces by selecting appropriate landscaping materials (deciduous trees) and through appropriate building setbacks and height restrictions.

For buildings that need to be air-conditioned, other important passive energy-conservation strategies are to:

- prevent unnecessary air leakage by making sure that window and door openings are tightly sealed; and
- contain all ductwork within conditioned and insulated space, making sure that all joints are thoroughly and permanently sealed with mastic rather than tape.

2.7.2 General Landscape Program

The general landscape program for the development is conceived as both a conservation and a regenerative approach. The landscape program will also be designed to satisfy the requirements of the City's Native Plant and Preservation Ordinance. Following are the specific methods by which the developer is complying:

1. The 30% set-aside method is being selected as the basic compliance strategy. This 30% area is intended to generally conform with the Native Plant Preservation Map, Exhibit 2. Combined, it contains approximately 250 acres, exceeding 30% of the 818-acre Master Plan Area. This area contains the floodplains, most of the diverse vegetation habitats and biomass, as it conforms to the washes, natural arroyos, minor canyons and tributaries, and wildlife corridors. It is intended that these areas will gradually increase in biomass by the construction of several small check dams or gabions which will be designed to detain water and nourish existing habitat. Some areas in primary arroyos which have been disturbed over the years through road building and grazing will be restored through removal of impediments and replanting. Within some of this area, it is intended that native vegetation will eventually be supplemented with additional native and drought-tolerant planting for watershed enhancement, runoff control, native crop production, and botanical education. The methods for achieving this goal and the precise crops have not yet been delineated and will require extensive additional study before these decisions are made. Areas to be set aside will be fenced to protect against construction intrusion when construction activities are anticipated to be within fifty feet of the protected area. Each phase of development of the Civano Project will track and submit their acres of set-aside areas during CDRC review to assure the 30% requirement is met overall.
2. In addition to the set-aside method, the developer is committed to preserve as much of the native plant community which falls within the areas to be developed as is humanly and economically possible. The following methods are in place and are underway to achieve this goal. It is estimated that approximately 60% of the native tree and saguaro and other cactus population within the areas to be developed will be salvaged, moved and reused within the development areas as a result of these methods:
 - a. All trees of 4" caliper or greater, saguaros and other cacti will be surveyed by a Certified Arborist for general health and susceptibility for salvage and successful transplantation.
 - b. Those trees deemed healthy will be tagged and pruned to encourage additional growth.
 - c. Trenches will be hand-dug of sufficient distance around trees and saguaros to avoid cutting tap roots and to allow sufficient area for boxing.
 - d. When boxed in place, trees will be watered to encourage the growth of a thick root ball.
 - e. When a sufficient root ball has been stimulated, the trees will be cut from the tap root and moved to a storage location where they will continued to be watered as required until moved to the new permanent location.
 - f. As the first phase of development is completed, the second phase area will have been cleared and made ready for development, such that the plant salvage operation will be able to avoid the interim storage steps and salvaged plants may be immediately transplanted into the new development.

The landscape created at Civano will be designed to be aesthetic as well as reflect the desert environment we live in — and it can also be useful as the built environment in providing a quality of life that meets the needs of the residents and helps meet the community's

performance standards. For example, vegetation can be used to reduce building temperatures. Trees and shrubs can shade pedestrian paths and otherwise make them attractive, encouraging greater use. Plantings can utilize locally-made compost, removing material from the solid waste stream. Some of the landscape could produce an economic harvest of food and medicines for potential income to the community association.

For residential lots, landscaping will be designed to maximize livable outdoor space by providing shade and screening, while ensuring appropriate winter solar access, to establish comfortable outdoor micro-environments.

In order to accomplish the significant plant reclamation, an on-site nursery will be established as part of the first phase of development. This nursery will be responsible for salvaging, holding, hardening and replanting the salvaged materials and will also develop a plant propagation program for compatible plant materials. In addition, the nursery will serve as an information and demonstration center for desert landscaping design and maintenance.

2.8 Phasing Plan

It is anticipated that the first increment of Neighborhood 1 will contain approximately 250 dwelling units surrounding the neighborhood center and will include the neighborhood center and plaza (see following Phasing Plan). In addition, the Civano Nursery will begin during the first increment, first as a native plant reclamation area and then phasing into a series of demonstration gardens, plant propagation area, landscape materials sales, and cafe/gift shop. Subsequent increments will follow outward from the neighborhood center to the north, south and west, until Neighborhood 1 is completed. The Town Center employment and manufacturing area (outside the Phase 1 Planned Area Development area) will begin along Houghton Road and expand toward the residential areas.

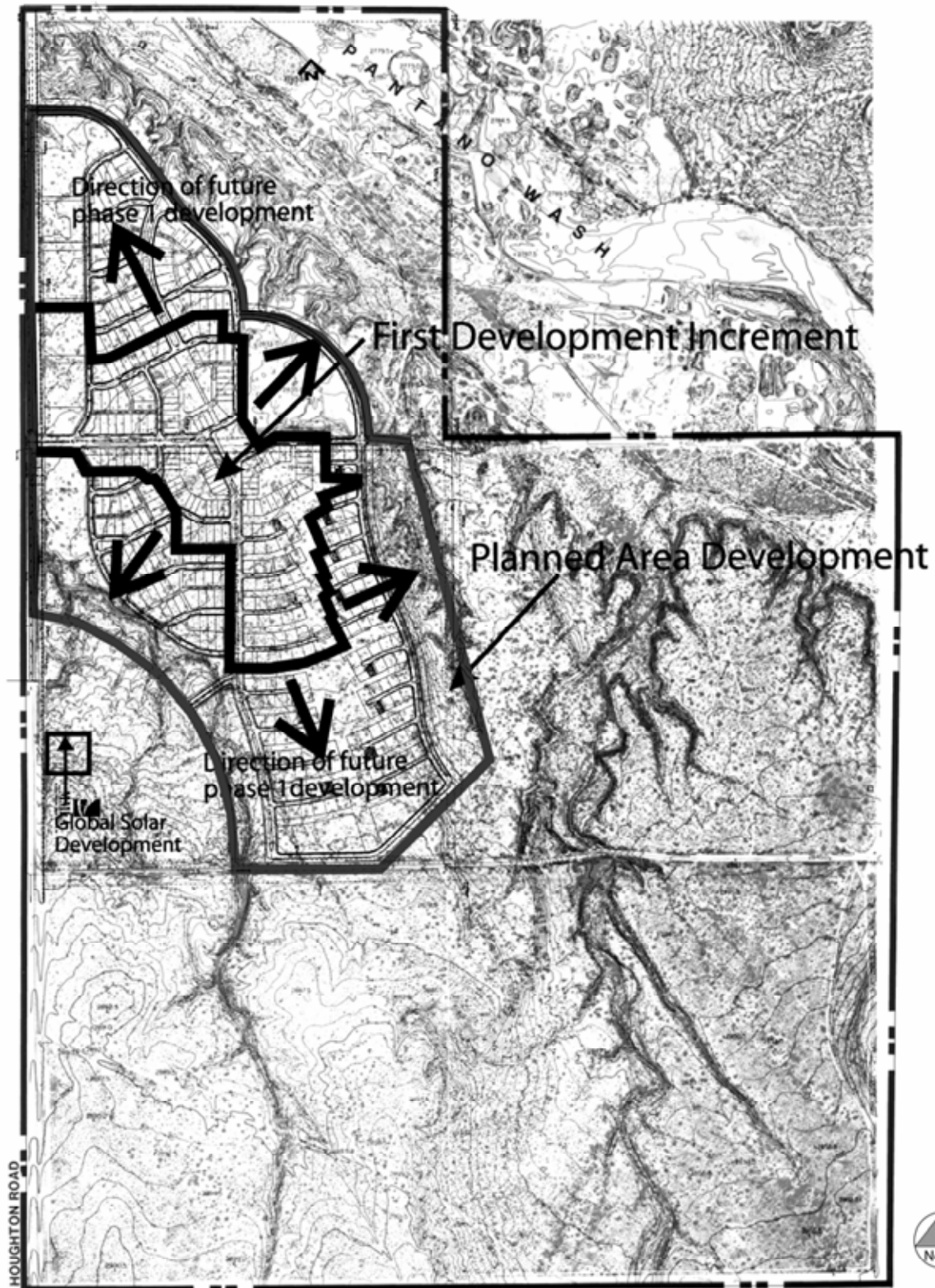
Prior to the completion of Neighborhood 1, Neighborhoods 2, 3 and 4 (City property west of Houghton Road, including the Town Center, will be designed and it is anticipated that additional planned area developments will be prepared for these phases).

2.8.1 Phasing and Construction of Streets

City standards will be met for the design of public streets. Where phased, temporary turn-arounds meeting City standards will be constructed until street continuity according to the overall plan is achieved.

2.8.2 Phasing and Construction of Sewage Disposal

It is anticipated that the sewage disposal system will be designed in accordance with County standards and be publicly-maintained. The Development Agreement between the City of Tucson and the developer and the State Land Department conditions of patent outline the specific phasing requirements.



Phasing Plan

Exhibit 33

2.9 Circulation Plan

The Civano Planned Area Development views automobile traffic as secondary to creating a safe environment for pedestrians and bicyclists. Therefore, several measures have been taken to slow traffic down to the greatest extent feasible and to give cues to the motorist that caution should be used. These methods include narrower streets, changes in pavement textures to denote pedestrian areas and crossings, side parking bays (sometimes perpendicular or at an angle to the travel way), sharp turning radii, limitations on the length of straight segments, and locating landscaping very close to the edges of the streets. While these measures may conflict with the current “norm” for most developments, it is deemed to be essential to the creation of a strong sense of community.

Because Civano will become a mixed use community with a high percentage of jobs located within it, the traffic analysis in the adopted Master Development Plan considered each type of trip and assumed differing mode splits (non-auto) for each. For example, the modal split for home-based work trips is 20% for internal trips and 7% for external trips and it is assumed that 30% of the home-based work trips will be internal (these assumptions are conservative, as there is sufficient land set aside within Civano to accommodate over 60% of the jobs generated). Ultimate transit service, both internal and external, is planned so that this mode split can be reasonably achieved. The following table shows the various assumptions used for percentage of trip types, percentage split between internal and external trips, and mode splits for each. The total percent split between types of trips in the above table is taken from the Master Development Plan adopted by the Mayor and City Council and the Arizona State Land Commissioner.

TABLE 1: TRIP GENERATION ASSUMPTIONS

Type of Trip Generated	Split	Total %	Internal		External	
		Split	%	Mode Split	%	Mode
Home-based Work Trips		23.2%	30.0%	20.0%	70.0%	7.0%
Home-based School Trips		10.4%	67.0%	70.0%	33.0%	40.0%
Home-based Shopping Trips		10.3%	40.0%	35.0%	60.0%	2.0%
Home-based Other Trips		28.4%	10.0%	20.0%	90.0%	4.0%
Non Home-based Trips		27.7%	10.0%	5.0%	90.0%	2.0%

Source: Community Design Associates

For the purposes of this study for Phase 1, it was assumed that internal trips would be an average of 33%. It is assumed that the modal split and the split between internal and external trips are on the conservative side. A “worst case scenario” is therefore portrayed. This has been done in order not to underestimate the magnitude of automobile trips and because, even though we believe that automobile travel will be significantly less (up to 40% less than in conventional developments), this is impossible to prove because of a lack of comparable developments.

The following table calculates auto traffic impacts at the main intersections with Houghton Road due to two phasing scenarios:

- Phase 1 shows the impact of only main neighborhood development for approximately 600 units of the first phase, all of which will use either the Nebraska alignment (new Civano Boulevard) or a secondary alignment between Nebraska and Irvington;

- It is recognized that there will be future development beyond the first residential phase which will travel through the first neighborhood and, likewise, that traffic generated by the first neighborhood will ultimately travel into other phases for access and egress. Therefore, Phase 1A shows the impact of the full first neighborhood and the projected entire Town Center development north of the Drexel Road alignment. It is anticipated that this full development will not be achieved for several years and are based upon assumptions of substantial commercial development. Even if there is substantially more development than currently anticipated, the number of lanes proposed will not be impacted.

1) TABLE 2: TRAFFIC ANALYSIS, PHASE 1 AND FUTURE DEVELOPMENT

Phase 1 Development

Land Use	Units	Rate	Trip Total	Daily Trips External	Percent External	External Trips	Entrance # ¹		
							1	2	3
Residential	600	homes	8.000 ²	4800	67%	3216	482	2734	N/A
Retail-Market	2,000	sq. ft.	0.155 ³	310	10%	31	5	26	N/A
Office	11,000	sq. ft.	0.025 ⁴	271	67%	181	27	154	N/A
Totals				5381		3428	514	2914	N/A

Notes:

- Entrances are: (1) Northerly entrance just south of Irvington; (2) Nebraska alignment (new Civano Boulevard); (3) Drexel Road alignment.
- Residential is combined attached, detached and apartment units, reduced due to pedestrian and bicycle orientation.
- Retail-Market is based on ITE Category 852, Convenience Market, assuming half of the trips are by auto, due to being primarily pedestrian oriented.
- Office is based on ITE Category 710, General Office.

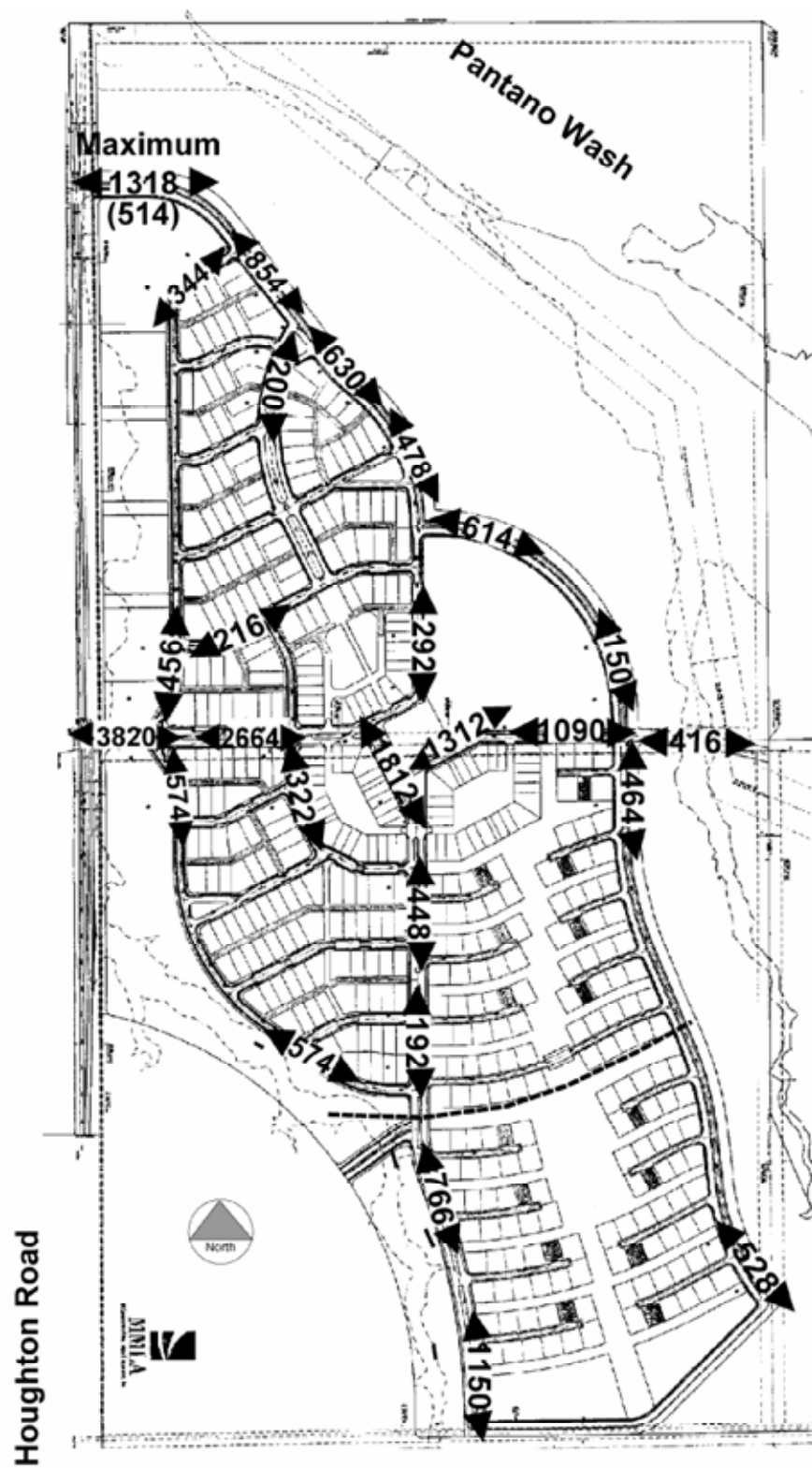
Phase 1 and Partial Town Center Development

Land Use	Units	Rate	Trip Total	Daily Trips External	Percent External	External Trips	Entrance # ¹		
							1	2	3
Residential, Phase 1	600	homes	8.000 ²	4800	67%	3216 ⁵	482	2412	322
Retail-Market	2,000	sq. ft.	0.155 ³	310	10%	31 ⁵	5	23	3
Office, Phase 1	11,000	sq. ft.	0.025 ⁴	271	67%	181 ⁵	27	136	18
Retail-Office	150,000	sq. ft.	0.033 ⁷	4895	67%	3280 ⁶	0	656	2624
Office-Manufacturing	315,000	sq. ft.	0.008 ⁸	2426	67%	1625 ⁶	0	325	1300
Residential, Phase 1A	250	homes	8.000 ²	2000	67%	1340 ⁶	0	268	1072
Totals				14701		9673	514	3820	5339

Notes:

- Trips generated by Phase 1 uses are split 15%, 75%, and 10% between entrances 1, 2, and 3 respectively.
- Trips generated by Phase 1A uses are split 0%, 20%, and 80% between entrances 1, 3, and 3, respectively.
- Retail-Office is based on average rates for ITE Category 760, Specialty Retail Center and ITE Category 710, General Office.
- Office-Manufacturing is based on ITE Category 760, Research and Development Center.

Source: Curtis Lueck & Associates; Community Design Associates



Traffic Analysis

Exhibit 34

The following traffic mitigation design elements are built into the Civano Development Plan:

- 50% of the population and 70% of the jobs within Civano are located within $\frac{1}{4}$ mile of the Town Center. This results in a very close physical proximity between home-job-shopping. Studies have shown that if this distance is within $\frac{1}{4}$ mile, significant reductions in automobile travel will occur.
- Sufficient land is set aside on site, within easy walking distance from homes, to provide jobs for 60% of the demand needed by residents. This is significantly higher than conventional housing developments by a factor of 2 to 4. In addition, specific housing product is allocated to provide for an integrated home and office space, accommodating a well-documented trend for the 90's.
- The pedestrian path system is designed as closely as possible in a straight line relationship between home, work and shopping. Pedestrian paths are located and designed as pleasant, tree-lined and landscaped ways in close proximity to destinations
- Pedestrian and bicycle systems are designed to be separate facilities, in order to minimize the conflicts inherent in these different speeds of travel. Where bicyclists and pedestrians share the same right-of-way, the paths are specifically designed to be separate. This increases safety and mobility. Many bicycle paths use road rights-of-way where traffic is designed to be slow.
- The road circulation system is designed to accommodate linkage at the future Town Center and the first neighborhood center for metropolitan Tucson's public transportation system. Although the street sections have been designed to accommodate existing 40' buses to use the major access streets and have stops at the neighborhood center, community school, and town center as those are developed, alternative, smaller and quieter vans or other form of jitney services should be investigated. The major public bus stops are located within $\frac{1}{4}$ mile of 50% of the population and 90% of the jobs on site. The study and future provision of transit service to Civano will be coordinated through the Department of Transportation Planning Division. Transit service, as recommended through the study, will be planned and programmed in the Metropolitan Area Short Range Transit Plan, prepared annually by the Planning Division.
- The employment, institutional and commercial uses within the future Town Center are linked with a continuous pedestrian and bicycle system.
- The open space system, pedestrian system, and bicycle system are designed as interrelated systems. This encourages the use of and access to the open space system by pedestrian and bicycle modes, rather than automobile modes.

F-3.0 PLANNED AREA DEVELOPMENT DISTRICT PROPOSAL FOR CIVANO PHASE 1

3.1 Proposed Land Uses

This Planned Area Development covers approximately 170 acres of land within the 820-acre Civano project and includes a mixed use neighborhood center, a variety of residential living environments, recreation and cultural facilities, and substantial open space preservation. It is based upon principles of long-term sustainability and “new urbanism” concepts which include a healthy respect for, and integration with, the natural environment and the creation of a pedestrian-friendly community which fosters interaction with each other as well as with the natural environment. It is the first of three planned residential neighborhoods and a Town Center which are part of the original Civano Master Development Plan, and a fourth neighborhood which is planned to be added on the west side of Houghton Road.

The Phase 1 Plan area will be implemented through the development regulations established for the three zoning districts of Neighborhood Edge (NE), Neighborhood General (NG) and Neighborhood Center (NC).

The following Planned Area Development Land Use Districts Exhibit identifies the land uses within the Phase 1 development that will be regulated by these three Districts. The Districts are summarized as follows:

District Designation	Acres	Max. Permitted Density.
Neighborhood Edge (NE) du/ac	72.4	15
Neighborhood General (NG) du/ac	59.0	25
Neighborhood Center (NC) du/ac	39.4*	44

TOTAL ACRES 170.8

* limited to 5 acres of office and commercial uses

The Neighborhood Edge District is a residential district with limited low intensity non-residential uses allowed as accessory land uses (neighborhood recreation, food production, religious uses, etc.). This district is intended to be more “rural” in character relative to the other Districts, with wider lots and integration with gardens, orchards, and landscaped pedestrian frontages.

The Neighborhood General District is primarily a higher density residential District, but allows commercial uses as accessory land uses. An example is a corner cafe or office use on the ground level with a residential dwelling on the second floor above.

The Neighborhood Center District is the most intensive area of the Phase 1 development. At the heart of the District is a one acre “Neighborhood Center” activity area. The Neighborhood Center will consist of office, commercial, and entertainment uses surrounding a pedestrian

plaza for the Phase 1 community. It will later serve in support of, and secondary to, the future Civano Town Center. The Neighborhood Center District will be integrated with a mix of higher density residential uses surrounding this one acre activity node. Non-residential uses within the residential areas, such as retail, commercial, and office uses, will be secondary to these residential uses.

3.2 Proposed Major Streets

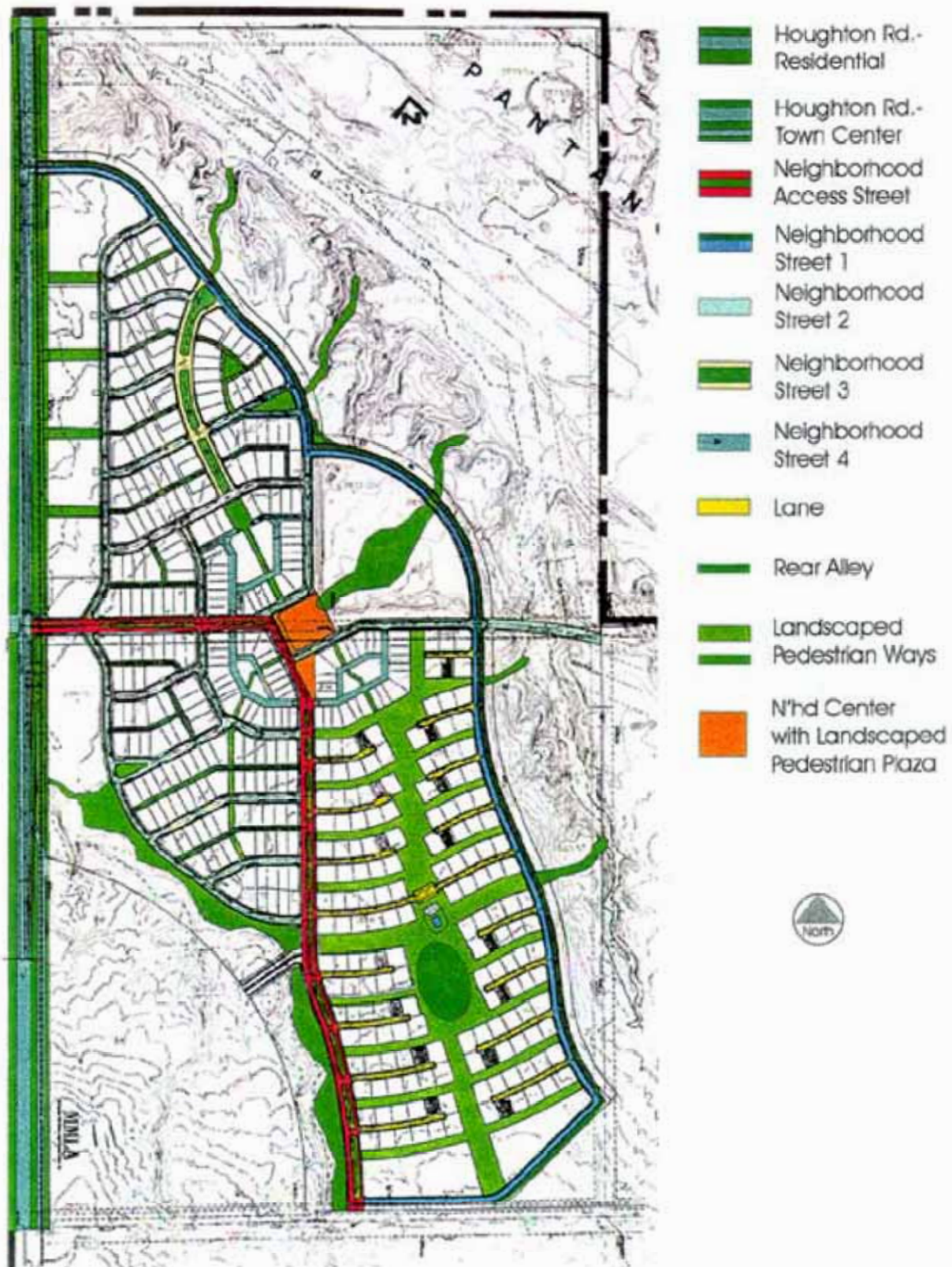
There are several classifications of streets proposed for Phase 1. The major neighborhood access street links Houghton Road with the first Neighborhood Center and the future Town Center. Street classifications are shown on Exhibit 6. Bikeways, pedestrian paths, and bus routes are shown on Exhibit 7. Detailed cross sections of streets are shown on Exhibit 8, Thoroughfare Standards. Improvements shown in conjunction with the streets and paths will be constructed as part of each development phase. Bus service will be implemented as demand warrants, in cooperation with the City's bus service needs.

Bus Service

The major Neighborhood Access Street (east from Houghton into the Neighborhood Center and south from the Neighborhood Center to the future Town Center) has been designed to accommodate future bus service, including the existing 40' buses now being used. Alternative, smaller-vehicle systems will continue to be investigated for short-term solutions as residents begin to occupy the neighborhood.

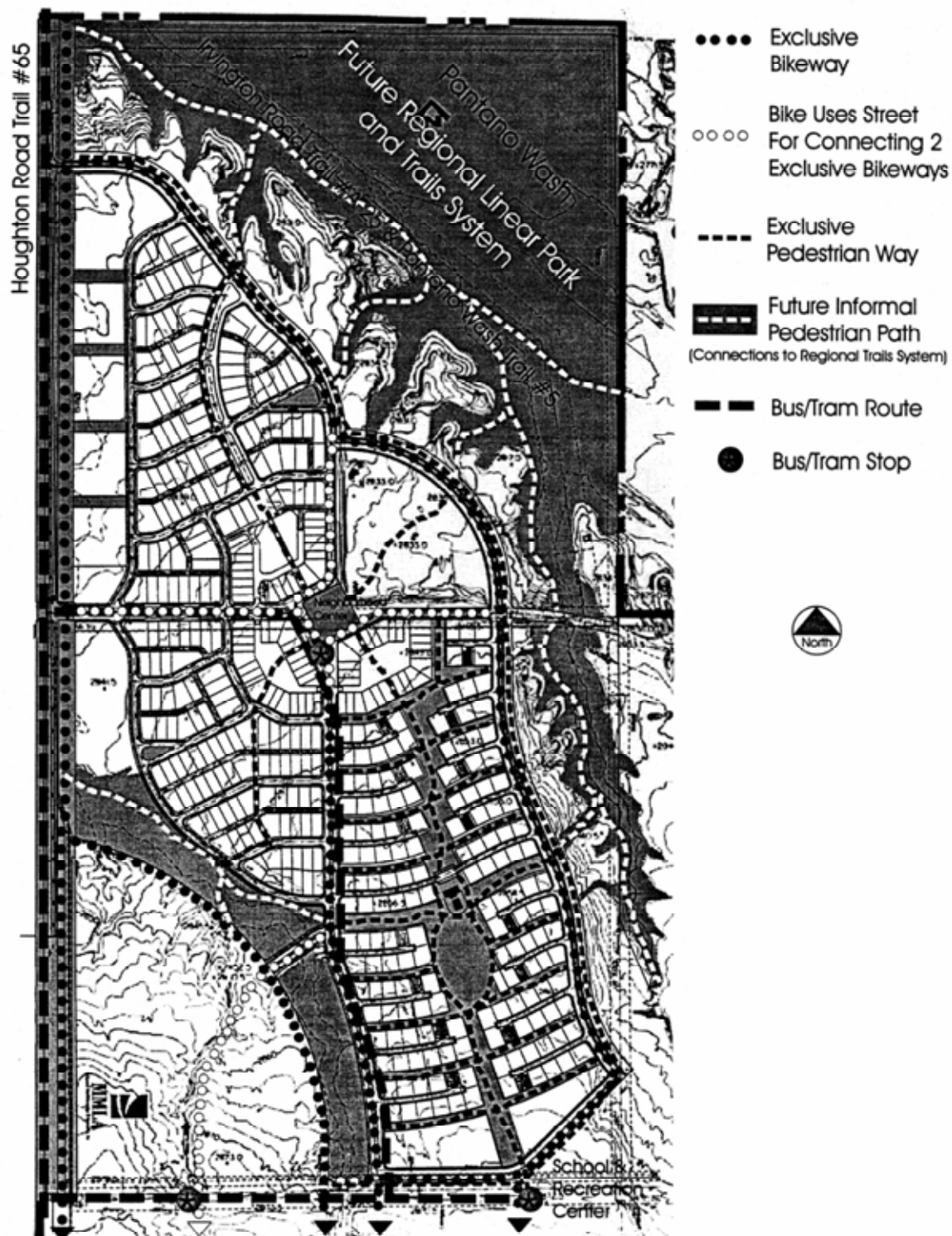
Bicycle Paths

An exclusive 2-way bikeway is shown along the north and east side of the main edge road which links Houghton Road with the future school and recreation area to the southeast of the Planned Area Development area. This will also link with the future Town Center and the future neighborhoods to the south and east. This is envisioned primarily as a recreation amenity. It is envisioned that the "commuter" cyclists will use the same roadway lanes as automobiles, as traffic will be relatively light and the road is designed for slow-moving traffic. Connections to the neighborhood center from this exclusive bikeway and from Houghton Road will also use the same lanes as automobiles because the speed will be very similar, the traffic will be relatively light, there will be parallel parking along the sides, and this will allow for more maneuvering area and safety for cyclists. The neighborhood center and the immediately-surrounding residential/mixed use area is designed as a *destination* for bicyclists and pedestrians as well as automobiles. It is designed as a relatively small-scale, intimate place within which automobile and bicycle traffic is slowed down through the use of narrower lanes, curbside parking, abrupt changes in direction, special paving, mature landscaping from the beginning, tight turning radii, etc. As traffic is slowed, it becomes substantially safer for both pedestrians and bicyclists. As streets are narrowed, it becomes substantially easier for pedestrians to cross them safely. These efforts are designed to improve pedestrian and bicycle safety as well as create a stronger sense of place and personal connection.



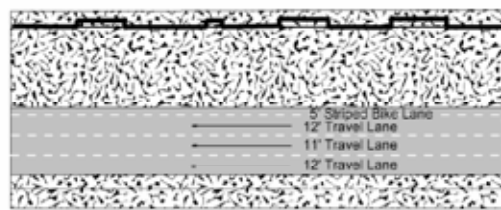
Street Classifications

Exhibit 35

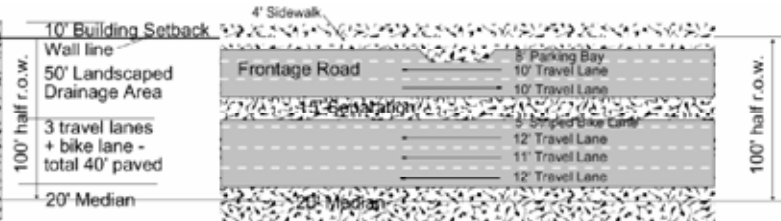


Pedestrian, Bikeways & Bus Routes

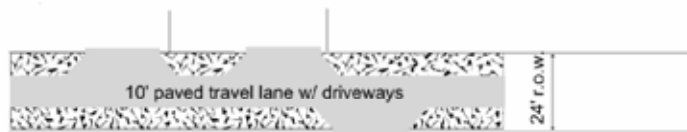
Exhibit 36



**Future Houghton Road
Urban Gateway
at Residential Areas**



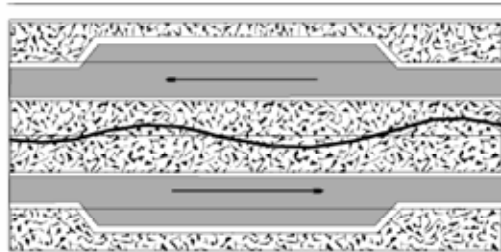
**Future Houghton Road
Urban Gateway
at Town Center**



Rear Alley

Building setbacks: 10 ft. excluding fences, walls, overhangs for roofs and porches and shade structure overhangs and supports; which can extend up to the Houghton Road property line.

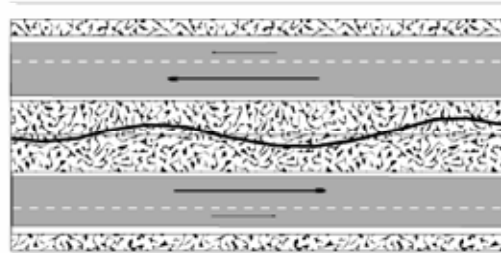
Note that 27 feet of width is provided for landscaping, sidewalks and bikeways between Houghton Road travel lanes and building fronts.



**Neighborhood Access Street
(Houghton to N'hd Center) w/ Parking**

Note: Median narrows w/ 2 lanes each way between Houghton Rd. & first street east.

Note regarding median landscaping: Trees over 4" caliper may be planted within 3 feet of travel lanes.



**Neighborhood Access Street
(North-South Direction) w/ Bikeway**

Note regarding median landscaping: Trees over 4" caliper may be planted within 3 feet of travel lanes.

Thoroughfare Standards

Exhibit 37

3.3 Planned Area Development Districts

The following districts are proposed for the residential area: Neighborhood Center, Neighborhood General, and Neighborhood Edge. Exhibits 9 through 12, following, describe these districts in more detail. Applicability of the land use regulations shall be in accordance with the Development Agreement adopted on July 1, 1996, by Resolution #17345 and as subsequently amended.

3.3.1 Neighborhood Center District

Purpose: To provide an area for attached and detached dwellings at densities up to 44 units per gross acre; to provide places for public assembly, recreational and educational purposes; and to provide basic neighborhood professional and commercial services.

Permitted Uses: The following permitted Land Use Classes are clustered, compact and at a neighborhood scale and are to be in accordance with the Tucson Land Use Code with exceptions noted. Regional activities and uses, such as large hotels or outdoor performances, are to be accommodated at the Town Center.

Civic Use Group

- Civic Assembly
- Cultural Use
- Educational Use (as per 6.3.4.6. A and C)
- Membership Organization (Limited to a total of 1200 s.f. for the entire district)
- Postal Service
- Religious Use

a. Commercial Services Use Group

- Administrative and Professional Office
- Alcoholic Beverage Service subject to 3.5.4.19.A.
- Communications subject to 3.5.4.20.C,D,F,&G
- Day Care
- Entertainment, subject to 3.5.4.4.A. and C.
- Financial Service
- Food Service, subject to 3.5.4.6.D.
- Medical Service - Extended Health Care
 - Outpatient
- Parking
- Personal Service
- Technical Service
- Trade Service and Repair, Minor
- Travelers' Accommodations, Lodging

Industrial Use Group

- Craftwork

Recreation Use Group

- Neighborhood Recreation
- Recreation

Residential Use Group

- Family Dwelling, minimum lot size, 1800 sq. ft.; no maximum number of units on each lot, except as required to meet density caps.
- Group Dwelling
 - Home Occupation: General Application, as a secondary use, according to Sec. 3.5.7.2, and allowing up to two (2) nonresidents to be employed on the premises.
 - Home Occupation: Day Care, as a secondary use, according to Sec. 3.5.7.3
 - Home Occupation: Group Dwelling, as a secondary use, according to Sec. 3.5.7.9, A., C., and D.
 - Home Occupation: Travelers' Accommodations, Lodging, as a secondary use, subject to Sec. 3.5.7.4.A and .F through .L.
- Residential Care Services

Retail Trade Use Group

- Food and Beverage Sales
- General Merchandise Sales subject to 3.5.9.2.A.
- Swap Meets and Auctions

Max. Residential Density: 44 du per acre. As per the Development Agreement, low rise apartments (1 and 2-story) shall not exceed 22 units per acre and mid-rise apartments (3 and 4-story) shall not exceed 44 units per acre. Should there be a conflict between the stated density in this district and Exhibit 12, the density in this district shall apply.

Building Heights: 40 feet, excluding cool towers, wind catchers, chimneys and other vertical extensions with similar purposes under 250 sq. feet in section and limited to 60 feet in height.

Perimeter Yard Requirements:

Front: 0'. Continuous walls and/or building facades are required on frontages facing Neighborhood Square within 4' of front property line (see diagram, Exhibit 9).

Rear: 0'

Side: 0'

Building Coverage: Maximum lot coverage as per L.U.C. Section 3.2.9 shall not exceed 75%.

3.3.2 Neighborhood General District

Purpose: to provide an area for attached and detached dwellings at densities up to 25 units per gross acre and to provide places for limited in-home professional offices, in-home workshops and craft areas, limited neighborhood commercial uses, public assembly, recreational and educational purposes.

Permitted Uses:

The following Land Use Classes are permitted land uses within this district in accordance with the Tucson Land Use Code with exceptions noted:

Civic Use Group

- Membership Organization (limited to a total of 1200 s.f. for the entire district)
- Religious Use
- Educational Use as per 6.3.4.6.A

Commercial Services Use Group, as an accessory land use.

- Administrative and Professional Office
- Day Care
- Food Service
- Personal Service
- Technical Service
- Trade Service and Repair, Minor
- Travelers' Accommodations, Lodging

Industrial Use Group, as an accessory land use.

- Craftwork

Recreation Use Group

- Neighborhood Recreation

Residential Use Group

- Family Dwelling, minimum lot size, 3,000 sq. ft., except as noted on Exhibit 9. Two or more dwellings are permitted on one lot subject to 1740 sq. ft. of lot area per unit. The lot area is measured to the centerline of abutting public rights-of-way.

- Group Dwelling

Home Occupation: General Application, as a secondary use, according to Sec. 3.5.7.2, and allowing up to two (2) nonresidents to be employed on the premises.

- Home Occupation: Day Care, as a secondary use, according to Sec. 3.5.7.3

- Home Occupation: Group Dwelling, as a secondary use, according to Sec. 3.5.7.9, A., C., and D.

- Home Occupation: Travelers' Accommodations, Lodging, as a secondary use, subject to Sec. 3.5.7.4.A and .F through .L.

- Residential Care Services

Max. Residential Density: 25 du per acre. As per the Development Agreement, low rise apartments shall not exceed 22 units per acre. Should there be a conflict between the stated density in this district and Exhibit 12, the density in this district shall apply.

Building Height: 35' max., excluding cool towers, wind catchers, chimneys and other vertical extensions with similar purposes under 250 sq. ft. in section and limited to 50 feet in height.

Perimeter Yard Requirements:

- Front:** 12' min. to porch; 16' to main structure and second floor.

- Rear:** 3' min. at ground floor, 7' min. to garage doors. 12' min. for second floor.

- Side:** Total of side yards, 20% of average lot width with 4' minimum if not on lot line. Minimum 8' between houses if not attached. Side yards fronting on a street must be 6' minimum. Garages are not subject to side yard requirements.

See Exhibit 9 for "Villas" lot yard requirements.

Building Coverage: Maximum lot coverage as per L.U.C. Section 3.2.9. shall not exceed 70%.

Perimeter Walls: Not required but if constructed, max. 42" height when facing pedestrian way. This Planned Area Development supercedes the LUC landscape and screening requirements of the Land Use Code. Walls will not exceed 30" within traffic sight visibility requirements.

Civano Nursery

Purpose: *to provide an area for on-site plant salvage and reclamation, propagation of native and other drought-tolerant plant species, demonstration and exhibition of water-efficient gardens, plant and related landscape material sales, and education oriented toward water- and energy-efficient landscape patterns. This is intended as an overlay zone for a specific area within the NG district.*

Agricultural Use Group

- Crop Production

Civic Use Group, as a secondary use:

- Cultural Use
- Educational Use

Commercial Services Use Group, as a secondary use:

- Alcoholic Beverage Service
- Construction Service
- Food Service

Industrial Use Group, as a secondary use:

- Craftwork

Retail Use Group, as a secondary use:

- Construction Material Sales (landscape materials)
- Food and Beverage Sales
- General Merchandise Sales (landscaping and yard maintenance materials and supplies)

Wholesaling Use Group, as a secondary use:

- Business Supply and Equipment Wholesaling (plants, landscape materials & supply)

3.3.3 Neighborhood Edge District

***Purpose:** to provide an area for attached and detached dwellings at densities up to 15 units per gross acre; to provide places for neighborhood recreation; and to provide areas for community gardening and food production.*

Permitted Uses:

The following Land Use Classes are permitted land uses within this district in accordance with the City of Tucson Land Use Code with exceptions noted:

Section 1.02

Agricultural Use Group

Crop Production

Section 1.03

Civic Use Group

Membership Organization (limited to a total of 1200 s.f.
for the entire district)
Religious Use
Educational Use as per 6.3.4.6.A

Section 1.04

Recreation Use Group

Neighborhood Recreation

Residential Use Group

Family Dwelling, minimum lot size, 3,600 sq. ft., except as noted on Exhibit 9. Two or more dwellings are permitted on one lot subject to 2,900 sq. ft. of lot area per unit. The lot area is measured to the centerline of abutting public rights-of-way.

Group Dwelling

Home Occupation: General Application, as a secondary use, according to Sec. 3.5.7.2, and allowing up to two (2) nonresidents to be employed on the premises.

Home Occupation: Day Care, as a secondary use, according to Sec. 3.5.7.3

Home Occupation: Group Dwelling, as a secondary use, according to Sec. 3.5.7.9.A, .C, and .D

Home Occupation: Travelers' Accommodations, Lodging, as a secondary use, subject to Sec. 3.5.7.4.A and .F through .L

Residential Care Services: Section 3.5.7.8.“G”, subject to
Sec. 3.5.7.8.C.1 and .D

Article II.

Article III.

Retail Use Group

Food and Beverage Sales when accessory to Neighborhood Recreation use

Maximum Residential Density: 15 du per acre. As per the Development Agreement, low-rise apartments shall not

Building Height: 30 foot maximum (20 foot max. if within the "Community Orchard area"), excluding cool towers, wind catchers, chimneys, and other vertical extensions with similar purposes under 250 square feet in section and 40 feet in height

Perimeter Yard Requirements:

Front (Pedestrian Way): At least 50 percent of the building frontage must be set back a minimum of 12 feet. 12 feet minimum setback for second floor.

Rear (Street): Minimum setback to main structure may be "0" feet but at least 50 percent of the building along this rear property line must be set back a minimum of 12 feet. Minimum setback of 18 feet to garage door except "0" feet if garage door is perpendicular to the street or unit is on the last lot at the end of the street. 12 foot minimum to second floor.

Side: If a sideyard(s) is not 0 feet, it requires a minimum 4 feet. Side yards fronting on a street can be "0" feet but at least 50 percent of building wall must be set back a minimum of 6 feet. In any side yard, "0" foot setback for trellis patio covers that are at least seven feet above the ground. Structural support (walls, columns) for trellis patio covers may also have a "0" foot setback. Trellises under seven feet above the ground will be set back at least six feet.

See Exhibit 9 for "Villas" lot yard requirements.

Building Coverage. Maximum lot coverage as per L.U.C. Section 3.2.9 shall not exceed 60 percent, except as noted on Exhibit 9 for "Compound" lots.

Perimeter Walls: Not required but if constructed, maximum 42 inch height for solid walls when facing pedestrian way. Any part of a wall within six feet of the property line facing pedestrian ways, above 42 inches must be 50 percent open for visibility. Total wall height not to exceed six feet in any yard unless wall is required as a firewall. Walls may exceed 30 inches in height within traffic sight visibility requirements on streets that do not exceed 140 ADT.

This *Planned Area Development* supercedes the landscape and screening requirements in the Land Use Code.

exceed 22 units per acre.

Should there be a conflict between the stated density in this district and Exhibit 12, the density in this district shall apply.

3.3.3.1 Villas Lot Layout

Front Yard. Minimum setback varies (same as provisions for Rear Yard Auto Access Street) in Neighborhood Edge District.

Perimeter Walls. Maximum height 42 inches for solid walls within six feet of pedestrian way property line. Any part of a wall above 42 inches must be 50 percent open for visibility. Total wall height not to exceed six feet in any yard unless wall is required as a firewall.

Interior Yard and Access Provision.

“0” foot setbacks on Private Parking/Access Court.

Private Parking/Access Court does not require separate sidewalks but shall be designed as A.D.A. accessible. Pedestrian refuge areas to be provided at each house pedestrian entry.
28 foot minimum cross-section, including landscaping, for Court access per Exhibit 9b.

Walls in Front 12 foot Setback Area.

Maximum height is 42 inches for solid walls within six feet of a Pedestrianway property line.

Any part of a wall above 42 inches must be 50 percent open for visibility. Total wall height may not exceed six feet unless wall is required as a firewall.

Minimum Setback to Garage Door from Public Street Property Line:

18 feet. May be “0” feet if garage door is perpendicular to the street.

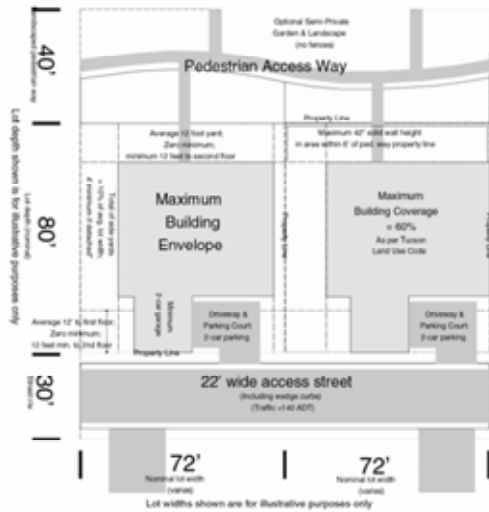
Private Parking/Access Court Provisions:

A continuous access court with a smooth stabilized earth with no separate curbs and sidewalks, as supported by the advocates for persons with disabilities.
20-foot minimum two-way travel lanes required. Maximum number of garage access points is 17. Parking may be contiguous with travel lanes, perpendicular, angular, or parallel.
Private garages may open directly onto court and access way.

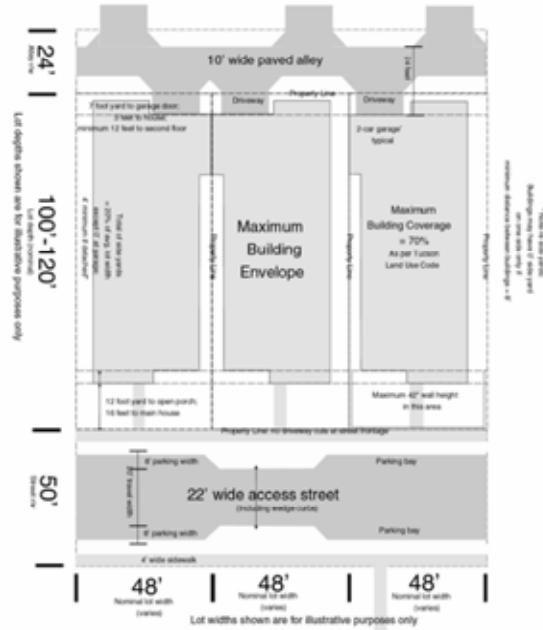
Rear Yards. Perimeter walls and trellis roofs may extend into rear yard.

3.3.4 Guidelines for Apartment Development

Within the Planned Area Development Area, the number of apartment units shall be consistent with the Development Agreement (currently not more than 20 percent of the residential units shall be apartments). Development review guidelines should allow relatively few apartments within the Neighborhood General and Neighborhood Edge Districts, and a much higher percentage should be within the Neighborhood Center District. This is designed to encourage a higher density of people to live within a short walk to and from the neighborhood center.



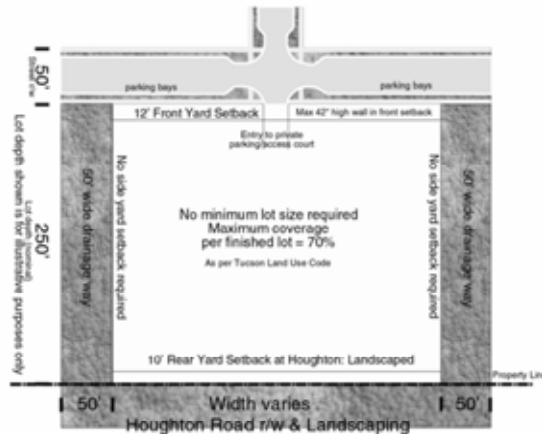
"Desert Home" Lot Layout
(Neighborhood Edge District)



"University" Lot Layout
(Neighborhood General District)



"Courtyard" Lot Layout
(Neighborhood Center Zone)



"Villas" Lot Layout
(Neighborhood General or Edge Zone)

Perimeter Walls: Maximum height 42 inches for solid walls within 6 feet of pedestrian way property line. Any part of a wall above 42 inches must be 50% open for visibility. Total wall height not to exceed 6 feet in any yard unless wall is required as a fire-wall.

Interior Yard and Access Provision:
10' foot setbacks on Private Parking/Access Court.
Private Parking/Access Court does not require separate sidewalks but shall be designed as A.D.A. accessible.
Pedestrian refuge areas to be provided at each house pedestrian entry.
28 foot minimum cross-section, including landscaping, for Court access per Exhibit 9b.

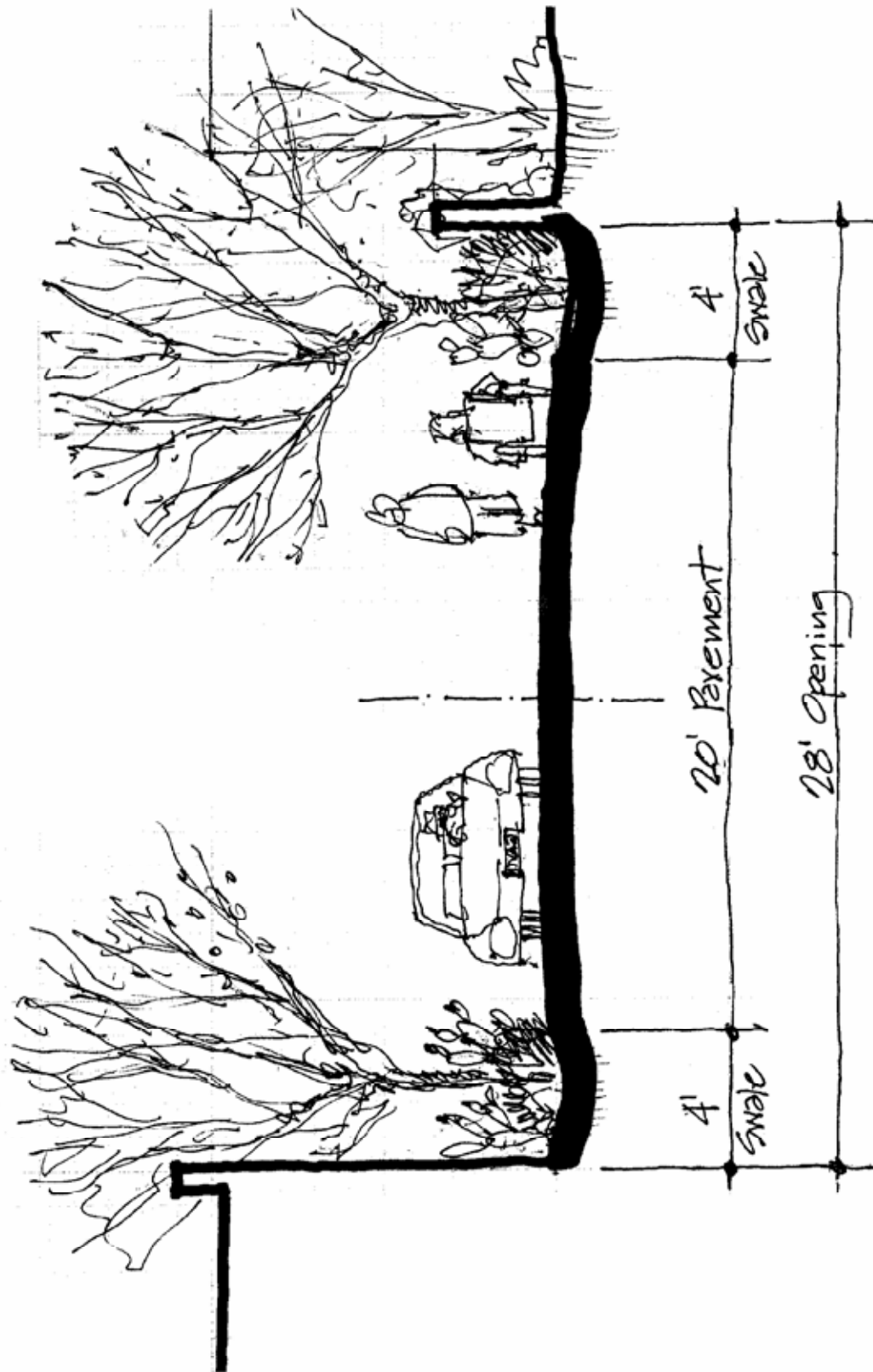
Walls in Front 12 foot Setback Area: Maximum height is 42 inches for solid walls within 6 feet of a pedestrianway property line. Any part of a wall above 42 inches must be 50% open for visibility. Total wall height may not exceed 6 feet unless wall is required as a fire-wall.

Minimum Setback to Garage Door from Public Street Property Line: 18 feet. May be "0" feet if garage door is perpendicular to the street.

Private Parking/Access Court Provisions:
A continuous access court with a smooth stabilized earth with no separate curbs and sidewalks, as supported by the advocates for persons with disabilities.
20 foot minimum two-way travel lanes required.
Maximum number of garage access points is 17.
Parking may be contiguous with travel lanes, perpendicular, angular, or parallel.
Private garages may open directly onto court and access way.

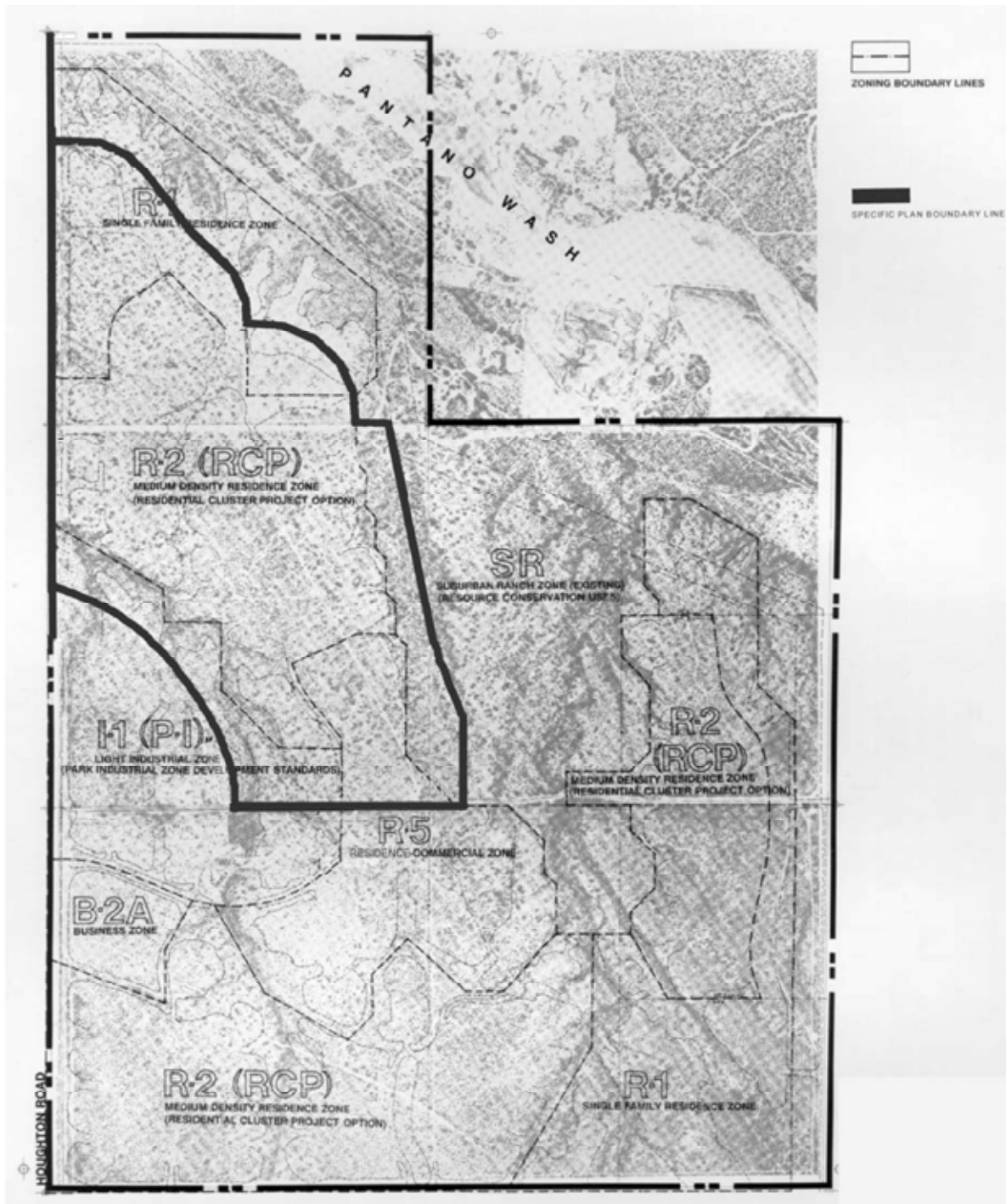
Typical Lot Layouts

Exhibit 38



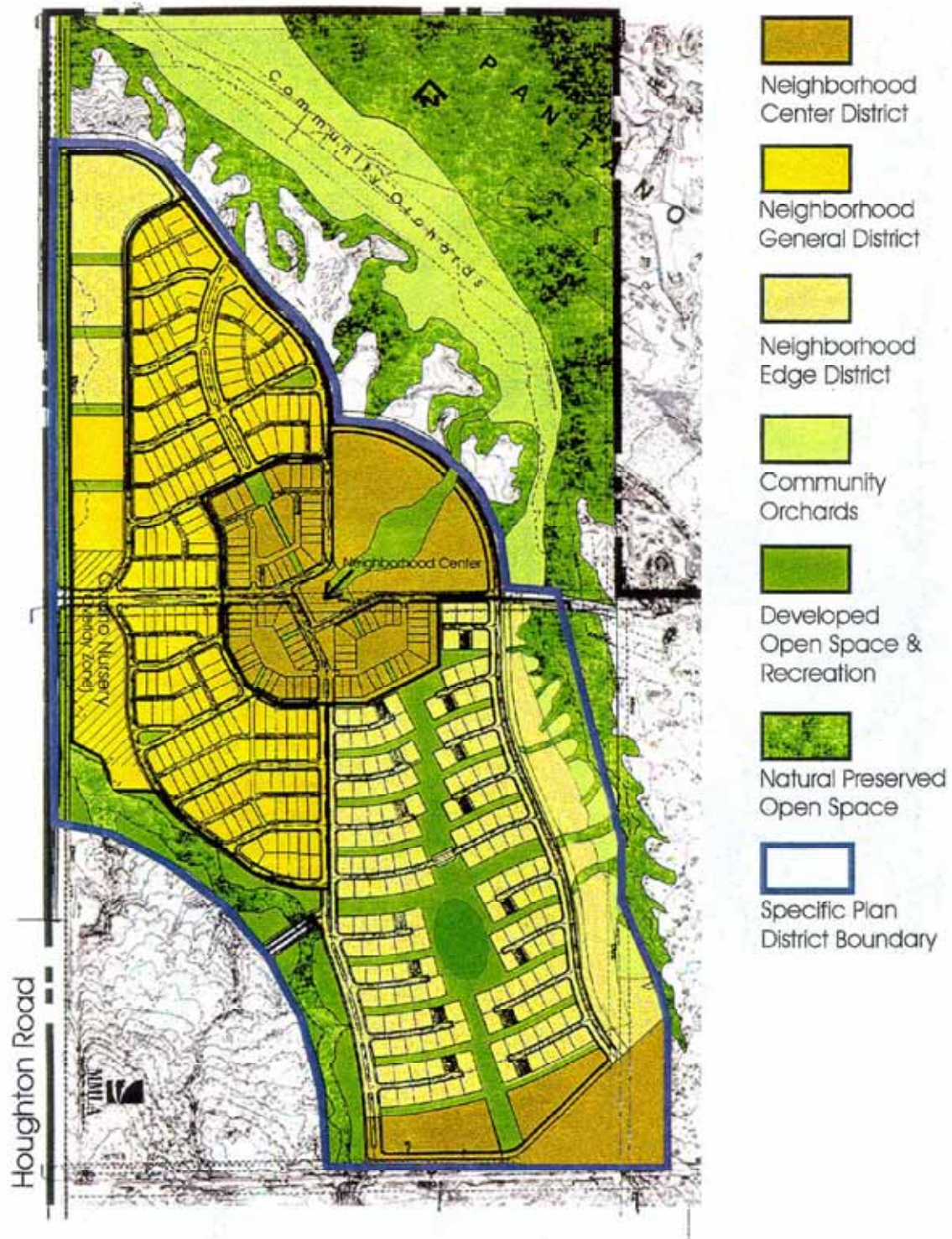
Villas Lot Courtyard Access Cross Section

Exhibit 38a



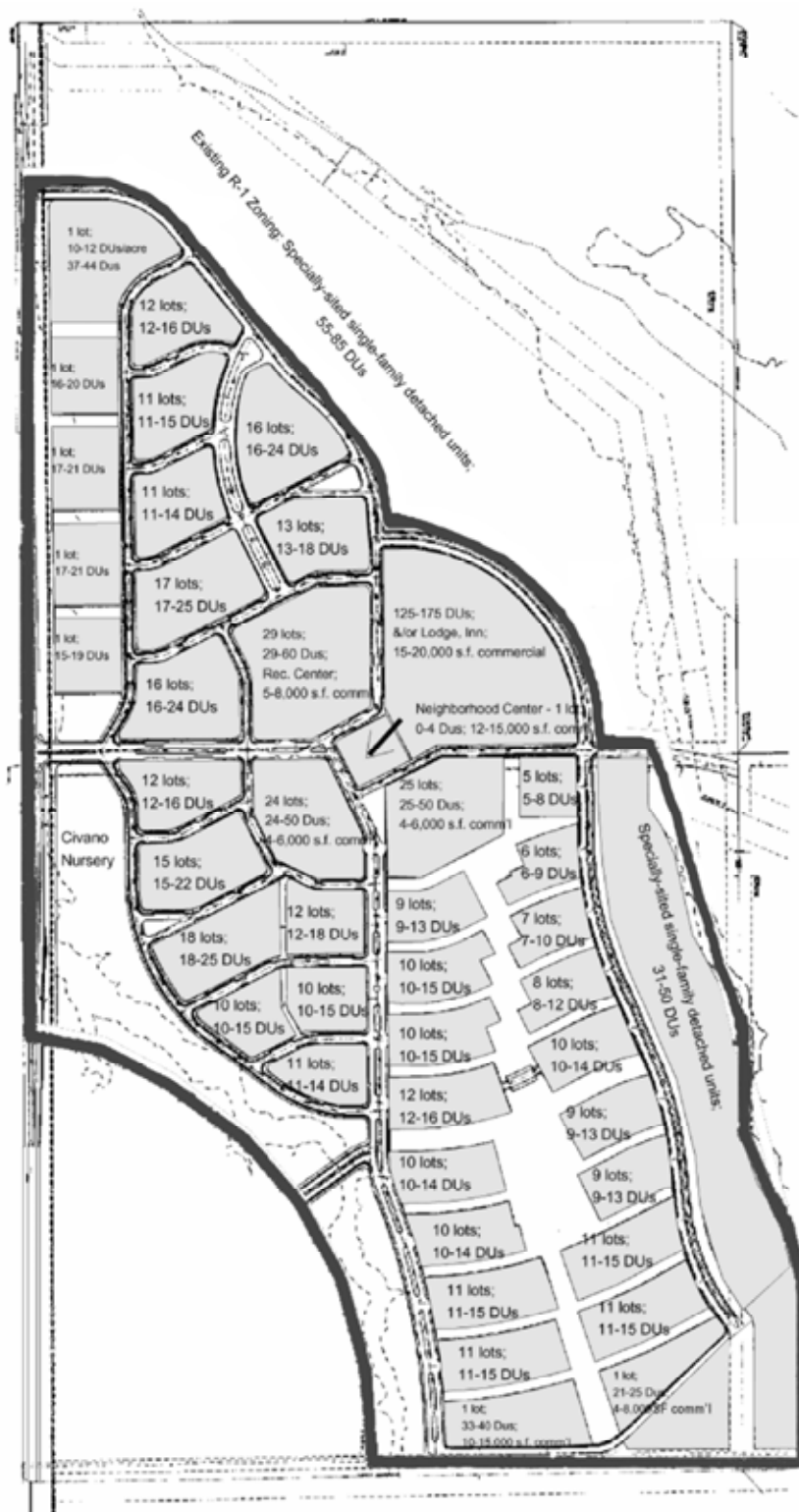
Planned Area Development Area Overlaying Existing Zoning

Exhibit 39



Planned Area Development Land Use Districts

Exhibit 40



Projected Land Use Intensities

Exhibit 41

3.4 Motor Vehicle and Bicycle Parking Requirements

Due to the integrated land use mix and pedestrian orientation of the Civano Community, such that neighborhood retail services, recreation, civic, employment centers and transit services are provided within walking distance of residential uses, motor vehicle parking requirements are deemed to be below the parking space requirements of the Land Use Code. The reduction of these requirements, though, will be offset by an increase in the bicycle parking and landscaping regulations. Spatial dimensions of a parking space and accessibility will be in conformance with the Land Use Code, Development Standards, and ADA requirements.

In order to demonstrate that parking is available each development plan submitted will include a Parking Inventory and Monitoring Program. This Parking Inventory and Monitoring Program will define the parking requirements for the particular use and identify the on-site and off-site parking spaces it is utilizing to meet the requirement. The Inventory will identify and monitor the available existing spaces that have been utilized to meet previous development approvals so that existing spaces that are already credited towards meeting a previous approval are not utilized.

Neighborhood Center District

Motor Vehicle parking requirements for each Land Use Group/Class permitted within this District may be reduced by 50% of the parking spaces as required by the Land Use Code. Each parking space and parking area will still comply with performance criteria related to size, surfacing, striping, etc. The following provisions may also apply in meeting the parking calculation:

- a. Parking spaces required for Non-residential Land Uses may be located off-site and/or on-street provided it is within this District's boundaries.
- b. Parking spaces required for Residential Land Uses can be located up to 100' from the residence it serves.
- c. Residential visitor parking requirements can be satisfied on-street and by utilizing required non-residential parking spaces located within 600' of the residence it serves, provided the minimum number of non-residential parking spaces are still met.
- d. A street or alley may be used for maneuvering directly into or from any parking space located wholly or partially outside the public right-of-way. This is not applicable on MS&R designated streets as provided in the City of Tucson Land Use Code Sec. 3.2.14.3.

Bicycle Parking requirements for each Land Use Group will be increased over the normal requirements of the Land Use Code. The bicycle parking spaces will be determined by calculating the standard number of bicycle spaces (based on normally-required Land Use Code vehicle parking spaces) and adding 40% to determine the number of bicycle spaces required. Bicycle parking will consist only of Class II bicycle parking spaces.

Neighborhood General District

Motor Vehicle parking requirements for each Land Use Group/Class permitted within this District may be reduced by 40% of the parking spaces as calculated by the Land Use Code. Each parking space and parking area will still comply with performance criteria related to size, surfacing, striping, etc.. For single family residential development, the Land Use Code requirement of 2 1/4 parking spaces (including visitor parking) per unit will apply, unless the unit is less than 800 sq. feet, in which case the requirement is 1 1/8 spaces per unit (including visitor parking). The following provisions may also apply in meeting the parking calculation:

- a. Parking spaces required for Non-residential Land Uses may be located off-site and/or on-street provided it is within this District's boundaries.
- b. At least one (1) of the required parking spaces for each residential unit must be located on-site. Others may be located up to 100' from the residence it serves.
- c. All additional Residential-parking requirements (including visitor requirements) can be satisfied on street and up to 600' from the residence it serves.
- d. A street or alley may be used for maneuvering directly into or from any parking space located wholly or partially outside the public right-of-way. This is not applicable on MS&R designated streets as provided in the City of Tucson Land Use Code Sec. 3.2.14.3.

Bicycle Parking requirements for each Land Use Group will be increased over the requirements of the Land Use Code. The bicycle parking spaces will be determined by calculating the standard number of bicycle spaces (based on normally-required Land Use Code vehicle parking spaces) and adding 40% to determine the number of bicycle spaces required. Bicycle parking will consist only of Class II bicycle parking spaces.

Neighborhood Edge District

Motor Vehicle parking requirements for each Non-residential Land Use Group/Class permitted within this District may be reduced by 40% of the parking spaces as calculated by the Land Use Code. Each parking space and parking area will still comply with performance criteria related to size, surfacing, striping, etc. For single family residential development, the Land Use Code requirement of 2 1/4 parking spaces (including visitor parking) per unit will apply, unless the unit is less than 800 sq. feet, in which case the requirement is 1 1/8 spaces per unit (including visitor parking). The following provisions may also apply in meeting the reduced parking calculation.

- a. Parking spaces required for Non-residential Land Uses may be located off-site and/or on-street provided it is within this District's boundaries.
- b. At least one (1) of the required parking spaces for each residential unit must be located on-site. Others may be located up to 100' from the residence it serves.

- c. All additional Residential parking requirements (including visitor requirements) can be satisfied on-street and up to 300' from the residence it serves.

Bicycle Parking requirements for each Land Use Group will be increased over the requirements of the Land Use Code. The bicycle parking spaces will be determined by calculating the standard number of bicycle spaces (based on normally-required vehicle parking spaces provided) and adding 40% to determine the number of bicycle spaces required. Bicycle parking will consist only of Class II bicycle parking spaces.

3.5 Off-Street Loading Requirements

The City's Land Use Code on Off-Street Loading will provide development regulations for Civano's future Planned Area Development Districts. As a result of Civano's integrated mix of land uses and the lesser emphasis and use on the motor vehicle, the following additional provisions apply to the Neighborhood Center within the Neighborhood Center District:

Required Loading Spaces can be provided at designated on-street parking spaces with hours

posted for this use and provided the Loading Space is located within 100 feet of the use it serves.

- a. Individual developments with two to more principle uses within the same site conducted as a single project which integrates elements of the various uses may share designated loading spaces. These projects will reduce by 50% the total number of required loading spaces for each principal use.
- c. Access and maneuvering to Loading spaces can utilize streets or alleys regardless of the abutting zone or land use.

In the Neighborhood Center District, the one-acre neighborhood center is to be designed as one unified development and shall be designed to contain one loading space, which may be located on street. In the Neighborhood General and the Neighborhood Edge Districts, and for other commercial uses in the Neighborhood Center District, the Off-Street Loading requirements apply only when the gross floor area of the use requiring such spaces is greater than 2,500 sq. ft.

3.6 Landscaping and Screening Requirements

The Landscaping and Screening requirements for Civano will follow the requirements of the City's Land Use Code with the following exceptions:

- a. Interior landscape borders are not required between adjacent land uses and zones.
- b. Parking area screening is not required, but the requirement for landscaping of canopy trees within parking areas will be increased above the Code's requirements such that one (1) canopy tree is required for each eight (8) parking spaces.
- c. The Native Plant and Preservation Ordinance requirements will be met or exceeded in the overall Civano project. Civano will utilize the 30% Set Aside

provision of the ordinance through preserving areas of the overall development as natural undisturbed open space. These areas are generally located outside the Phase 1 Planned Area Development boundaries along the washes, steep slopes, and high vegetative density areas as identified in the Civano Site Analysis (Appendix). The Preservation Ordinance requirements will be supplemented through an extensive plant salvage and propagation program. This program will be implemented and managed on-site at the Civano Nursery. See Section 2.7.2, General Landscape Program for additional details.

- d. Street Landscape Borders are not required.

3.7 Development Standards and Policies

The standards and policies related to water conservation, drainages, landscaping and solid waste are contained in the Civano Development Agreement, Resolution #17345, dated July 1, 1996.

3.8 General Provisions and Administration

3.8.1 Draft Financial Assurances

Financial assurances for the development of Civano are contained within the Development Agreement between the City of Tucson and the developer. Further assurances will be included in the final subdivision tract maps to be submitted in concert with this Planned Area Development.

3.8.2 Extent of Planned Area Development Superceding and Supplementing Existing Zoning

The Planned Area Development District supercedes existing zoning on the property for the area covered. Areas of the property not currently covered by this Planned Area Development will remain as zoned unless later rezoned or included within a subsequent Planned Area Development District. Street widths and standards supercede existing development standards for those types of streets listed.

3.8.3 Guidelines for Interpretation of PAD Regulations

The following are guidelines for interpretations of, and variations from, the Planned Area Development regulations. Interpretations and variations should be based primarily upon the degree to which any decision meets the following criteria (refer to Section: Purpose, Scope, Main Concepts, and Goals, pages 2-4 of this document):

- whether it helps to create a strong sense of community, particularly in terms of fostering interpersonal contact (refer to Exhibit 6 of the Development Agreement for guidance in determining Traditional Neighborhood Design Principles and Exhibit 8 of the Development Agreement for interpreting Traffic Engineering principles for Traditional Neighborhood Design);

- whether it serves to make a strong connection with the land, particularly in relation to accentuating natural land forms, respecting natural drainage patterns, providing for dramatic views, or fostering native plant growth;
- whether it respects the climate, particularly in terms of utilizing the energy of the sun, natural breezes and natural rainfall to foster human comfort; and
- whether it serves to regenerate the natural (including human) environment and to integrate natural systems with human productive endeavors.

Secondarily, interpretations of these planned area development district regulations pertaining to land use and performance criteria shall be made in accordance with the Development Agreement in existence between the City of Tucson and the developer.

3.8.4 Procedures for Interpretation of PAD Regulations

This Planned Area Development implements the Development Agreement adopted by Mayor and Council on July 1, 1996, by Resolution #17345 and as subsequently amended. Interpretations of these planned area development district regulations shall be made in accordance with City Planning administrative procedures as contained in the Tucson Land Use Code.