



*Tucson Post World War II  
Residential Subdivision Development  
1945 - 1973*

*October 2007*



# Acknowledgements

Tucson Post World War II  
Residential Subdivision Development  
1945 – 1973  
prepared for the

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# Introduction

The Tucson Post World War II Residential Subdivision Development Study, 1945-73, has been prepared for the City of Tucson to assist in achieving the following goals:

- To gain a comprehensive understanding of the extent, nature and variations found in the Post World War II residential subdivision population of Tucson
- To determine National Register of Historic Places eligibility of the subdivisions to utilize in National Historic Preservation Act of 1966, Section 106 compliance
- To understand the similarities and differences in the postwar pattern of growth and development of Tucson from other Arizona cities
- To establish a framework for evaluating the relative significance of the subdivision population to aid in developing priorities for designation
- To assist in planning for further survey work
- To develop historic contexts that can be utilized in determining National Register of Historic Places eligibility

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# Methodology

## Research Design

Previous analysis of the development of single family homes during the decades following World War II (WWII) in Arizona helped guide the selection of methods and techniques that were utilized in this study. Further, an understanding of the requirements and documentation needed for multiple property nomination submissions for listing on the National Register of Historic Places also helped define the parameters of the study and the information to be collected. The initial hypothesis was that Tucson's development during this time frame would be historically similar to that which occurred in the Phoenix metropolitan area with the same type of influences shaping the development of the built environment. Through earlier studies of over 88,000 post WW II single family-homes in Arizona a range of architectural stylistic categories had been developed for the residential building of this era. It was anticipated that only minor variations in the style categories would be found in Tucson related to the size, number and sophistication of the local builders.

To verify these assumptions, archival research was initiated collecting information from the Arizona Daily Star newspaper for two periods. The first period was 1955-57, one of the peak periods of subdivision platting activity. Also researched was 1966-68, the lowest period of subdivision development recordings in the postwar era. This work identified a number of aspects of Tucson's development very different from development in the Phoenix metropolitan area during the same time-frame. Research of general histories, as well as primary source materials of the period, identified themes related to attitudes towards growth, water management

and allocation and the physical attributes of the environment which are unique to Tucson and shaped its subdivision development patterns in the postwar era. This research and initial field reviews led to a refinement in the focus of the development of the historic contexts to deal primarily with those influences, practices and circumstances that set Tucson's postwar development apart from other cities in Arizona and the Southwest region. The research and initial observations also were used to determine the period of significance as 1945-73.

Concurrent with this work, data available from the the Pima County Assessor Records was analyzed. It was discovered that in the Assessor's computerized data base the "actual" date of construction of a building is changed to become an "effective" date of construction to reflect the midpoint between the time when a home was built and when it was improved at a later date. So a home built in 1950 that had an addition added in 1980 would be listed with an effective construction date of 1965. However, a sampling of the property records for 96 large subdivisions with 100+ lots and a review of the associated archival Assessor property cards, which are kept in addition to the computerized data, revealed that the frequency that the "actual" construction date varied from the "effective" construction date in the Assessor's computerized data base was not high. Given the size of the population to be studied, it was decided that this data variation would not measurably affect the planned data and Geographic Information System (GIS) analysis of the subdivisions.

### Research

Throughout the study period research was conducted utilizing primary and secondary source

materials. Research of the newspaper archives was expanded to include systematic, but selective study of the entire period of significance. Much of the information collected from newspaper archives and periodicals from the period was organized into an Excel spreadsheet format to allow for analysis and sorting according to the variables found. The information collected included such things as the type of advertising used to market the subdivisions; developers, contractors, architects and/or interior designers associated with the subdivisions; landscaping; use of model homes; terms used to describe the architectural styles or models in the subdivision developments; possible upgrades available for the homes and financing options. Copies of the Covenants, Conditions & Restrictions (C,C & R) for selected subdivisions also were obtained as were historic subdivision plats. U.S. Census data was analyzed to determine the demographics of the population in Tucson during the period of significance. Research became more focused as the project progressed to better understand the distinctive patterns that shaped Tucson's development. Areas of focused research included the high and low cycles of home-building, the relationship of the highway construction on the development of the physical form of a community and the influence on subdivision development of local lenders and financing practices. To supplement the written source materials, oral history interviews were conducted with home builders, City planners and landscape contractors who worked in Tucson during the post World War II era.

#### Data Analysis and Evaluation

An important technique used to study the large subdivision and single family housing population was GIS analysis. A data base was created from the Pima County Assessor records with information about the physical characteristic of the individual homes and their associated subdivision developments. Information was collected and

analyzed for over 41,000 houses built during the period 1945 to 1973. This data was analyzed at several levels: individual houses, individual plats and associated plats were aggregated to form subdivision developments. Subdivisions that were platted but had less than 50% of the houses built during the period of significance were culled from the population as were subdivision developments of less than 16 houses. As a result, the subdivision population that was ultimately studied represented 304 developments and approximately 40,000 single family homes. Data from the Assessor records was mapped and their patterns analyzed over time, geographically and descriptively. The physical patterns were matched with historic trends allowing the identification of important historic development influences to be identified. Charts and graphs were prepared breaking the population into its component elements which, in turn, led to an understanding of the frequency or rarity of forms, materials and stylistic treatments. Gaining an understanding of the overall development pattern and the character-defining features of the larger population enabled efficient field work and facilitated the process of significance evaluations. Building typologies were developed which also assisted in comparative analysis of the population.

#### Field Reviews

Using the GIS maps, field reviews were conducted to collect information not available through the Assessor records and verify proposed subdivision type classifications, architectural style categories and landscape typologies. The geographic location within the community of the predominant architectural styles, landscape patterns and subdivision size and types were also ascertained. Anomalies in the data were checked to understand why they had occurred. Photographic documentation of the representative developments, styles and landscape was completed as part of the field reviews.

# Growth of the Tucson Metropolitan Area, 1947-73

World War II ushered in an era of growth and prosperity for Arizona and its metropolitan areas. The state had one of the highest in-migration rates in the nation drawing new residents by the thousands. In the 1940s Arizona was the country's second fastest growing state, surpassed only by California. At the beginning of World War II, Tucson was home to 40,000 people located within approximately 20 square miles. Attracted by jobs, affordable homes and mild climate, the population grew by 368%, a 57% higher rate than the growth in Phoenix during this same time period. By 1950 the metropolitan area had 122,764 residents. However, two-thirds of this population did not actually live within Tucson but settled instead in subdivisions which sprang up around its corporate limits. This pattern changed during the 1950s as the City began an aggressive campaign of annexation and the city boundaries were extended to include over 70 square miles by 1960. Most of the annexed areas were single family subdivisions developed in the county with limited or no zoning or building requirements.

Although Tucson continued to incrementally grow throughout the postwar period, it did not do so uniformly. The up and the down trends were driven by the major employers in the area. The Defense industry came to Arizona because of its favorable climate, expansive open space and federal dispersion policies. The conversion of Davis-Monthan Field from a municipal airport to an air force training operations at the outset of the World War II expanded the economic base of the community. Serving as headquarters for the First Bombardment Wing of the United States

Army Air Corp, the unit was composed of over 3,000 officers and enlisted men. The 7,000 acre installation trained crews for medium and heavy bombers. Two other air bases were also established in the area during the war years: the Marana Basic Flying School and Ryan Field, a pilot training school.

As in other areas of the southwest, aviation related industries were quick to follow the arrival of the military bases. A division of Consolidated-Vultee Aircraft Corporation of San Diego was established south of Tucson in 1942 as a result of a federal directive to decentralize the production of vital military materials. The plant employed some 6,000 workers over the course of the war years, upgrading the B-24 bombers for service after their fabrication by west coast manufacturing plants.

Hughes Aircraft Company opened in 1951 to produce guided missiles and related equipment. During the 1950s the Hughes factory annually employed over 5,000 workers, becoming the largest technology employer in the state. The company recruited employees nationwide utilizing Wild West imagery to entice potential workers: "Arizona was settled by men who dared to be different... and carved out a new life in their own frontier...If you are interested in not only a new way of personal life but a different concept of professional life, we would like to talk about specific opportunities for you at Hughes-Tucson." (*Hughes Aircraft Company, "Career in the Sun."*)

A Douglas Aircraft official explaining his company's decision to relocate to Tucson noted "We came here for the flying conditions and the

airport facilities but we have been pleasantly surprised by other advantages. The labor supply, for instance. We can recruit engineers, electronics people, machinists – anything we need. Workers like it here and don't want to move away." (Arizona Daily Star, February 2, 1955)

While air bases and war industries brought growth and prosperity to Tucson, the reliance on military and federal spending had its repercussions. The ebb and flow of government contracts, which were issued then completed, resulted in a distinctive pattern of boom and bust cycles. When World War II ended Consolidated Vultee closed its operations in 1949, throwing the local economy into a recession. In an effort to rebound there were stepped up efforts by the Sunshine Club to attract tourists to enjoy the multicultural heritage and Old West traditions of the town. The Tucson Chamber of Commerce touted the healthful way of life, low cost of living and modest taxes to bring new residents to the area. The Chamber, working with the Pima County Board of Supervisors, established the Industrial Development Department to recruit businesses that both diversified the city's industrial base and complimented its established companies. From 1951 to 1958 the number of industrial firms grew by 115% including companies like Dyer Steel Manufacturing and Krieger Air Conditioning Co. The multi-pronged effort was successful in raising the population to 212,892 by 1960. That year the federal government appropriated \$64.8 million for the installation of eighteen Titan Missiles. Their construction in Tucson brought a boost to the economy. Unfortunately, with the completion of the missile construction projects in 1961, workers were let go and the economy endured another slump. Strikes of industrial workers intensified the decline.

Fortunately there were other economic forces that helped to mitigate the vagaries of the government and military orientation of the economy.

Tourism was a mainstay of the Tucson economy. Beginning in the 1920s, Tucson was promoted in national publications as a tourist destination. The marketing efforts emphasized the city's charm and quaintness and easy access to nearby dude ranches, western ghost towns and Indian Villages. The Hispanic cultural traditions of the barrios and the Old Pueblo image were also included as part of the advertising campaigns. The increased mobility of the traveler and the expendable income of the growing middle class led to more tourists vacationing throughout the Southwest. The availability of air conditioning extended the tourist season. In Tucson dollars generated by tourists rose from \$28.5 million in 1954 to \$900 million by 1959.

Real estate developments also helped sustain the growth. The interest of California investors in the "cheap" land in Tucson and the advent of planned retirement communities helped sustain this component of Tucson's economy. The growth of the University of Arizona's enrollment to 13,058 students by 1960 also brought employment and new residents. The mining industry remained strong throughout the postwar era. Factors such as these helped Tucson weather its boom and bust cycles.

While the rate of growth was beneficial for many, there was resistance to it as well. In fact, from the earliest days of Tucson's history there have been tension within the community about change and progress. There has always been a segment of the population who resented the influx of newcomers and wanted the community to remain as it was when they arrived. With the rapid growth and physical expansion of the urbanized area in the postwar period, the tension was exacerbated.

One of the forums through which the debate was waged was through the efforts to plan and provide standards for the physical development of the city. Planning was viewed by some as

a means of providing for an orderly pattern of growth that was integrated with the city's utility and transportation systems. Others viewed planning as a tool for development, encouraging growth and rationalizing the need to continue to expand. While a number of planning efforts were supported by the business community and town boosters, the actual implementation of controls to guide the growth of the community were thwarted by the development practices of the period. To take advantage of lower land prices and avoid the bureaucracy, high building costs and land use regulation, most of the development associated with Tucson's postwar growth took place in the county rather than in the city. This building practice developed in response to the passage of state statute which required that plans for subdivisions platted within three miles of a city's corporate limit must be submitted to that city for their review. By developing subdivisions beyond three miles of Tucson's municipal boundaries, subdivisions could be laid out and houses constructed for the burgeoning population without any regulatory oversight. During the period from 1945 to 1952, over 125 subdivision plats were developed without government approvals. As a result, many of these developments lacked the infrastructure and services necessary to support the families that came to live there. To keep prices low, homes were often quite small and modestly appointed. In other instances issues of drainage, traffic circulation, utility capacity and other matters routinely reviewed as part of the City of Tucson's development process were not addressed.

Following the State's authorization of the County Planning and Zoning Act in 1949, Pima County was the first county to pursue the enactment of a county-wide zoning ordinance. Opposition sprang up immediately. Many developers did not want an expanded bureaucracy and any additional regulation. Others who opposed it

included new residents that had moved to the area to enjoy the Western "Individualist" lifestyle. They distrusted government and believed planning and zoning would bring development that would affect land prices and ultimately raise their taxes.

The approval process for the zoning ordinance was extremely contentious with heated public debates, many petitions and even a referendum election to consider a "local-option" alternative which would have allowed property owners to enact their own building and land use regulations on parcels of 160 acres or larger. But the County Zoning Plan was approved by the Board of Supervisors in 1952. However, with only limited resources, actual planning for land in the county was done on a section by section basis without thought as to how the areas would relate. Consequently it continued the pattern of stand alone developments that had been built before the ordinance went into effect. Further, stretched with minimal staff support, coupled with a high volume of developments to review and approve, it was difficult for the County to ensure compliance with the ordinance.

In the early 1950s the problems of the unplanned and unregulated development was becoming increasingly apparent. Residents of some subdivisions began to petition the City for annexation which would bring the provision of municipal services to their neighborhoods. Expansion of the City would increase its tax base, so the City was supportive of the requests. Politically, it was decided that annexation was vital to Tucson's economic survival, so the City embarked on an aggressive campaign to bring the larger urbanized area within the City limits. The annexation process sparked years of public rancor, law suits, allegations of misconduct by the City and strident opinions voiced at lengthy meetings and in letters to the newspaper. Acrimony became the hallmark of public decision-

making affecting rezoning requests, adoptions of neighborhood and recreation plans, transportation planning and even the location of schools.

Despite the protest that Tucson should not become a sprawling metropolis like Phoenix, by the 1960s its corporate limits included over 275 subdivisions plats that had developed in the County to the north and east of its historic core. The pattern of development, however, continued as the majority of subdivisions platted in the sixties and early seventies were again sited in the County. The practice of building just beyond the City's boundaries created distinct concentric zones of development with shared physical characteristics related to the time frame in which it developed.

Water was another important influence on the growth of Tucson during the post World War II period. Like all desert cities, obtaining a reliable source of water was tantamount to Tucson's development. Two sources of water have traditionally supported the residents of the area: surface water from Santa Cruz River and wells tapping the aquifers beneath the Tucson basin. The geology of the basin floor on which Tucson sits is such that sinking a well was not a difficult task, so wells sprang up on individual properties as the settlement grew. The Tucson Water Company, purchased by the City at the turn of the nineteenth century, provided the first municipal water delivery system. Initially water was diverted from the Santa Cruz River and piped into town. Due to increased demand and periods of drought, additional sources of water needed to be found to augment the modest flow of the Santa Cruz. The City began digging wells to provide a regular supply. For decades this ground water pumping sustained Tucson's growing population. Prior to World War II a delicate balance was maintained between the natural recharging of the aquifer and the draft of ground water by wells and pumping. However, with the postwar growth

and the exponential increase in pumping by the City and private water companies the water table dropped 200 feet, creating land subsidence and causing the virtual disappearance of the flow of the Santa Cruz River.

The physical manifestation of the impact of growth on the environment prompted renewed debates about its desirability. Concern for the dwindling water supply, prompted the Tucson's state legislative delegation to introduce water regulations. However, the focus of these measures was on wells and pumping used for agricultural purposes and had little effect on the water supporting urban development.

As most of the subdivision development during the postwar period occurred in the County, beyond the reach of existing water and sewer services, developers were forced to independently provide a water source. Most of them followed the historic practice of drilling wells, as it was the most efficient and economical means available. During this period of time, however, there were no requirements for how long the water would be available or the sufficiency of the water distribution system. When the area was annexed, the water system was purchased and added to the municipal system. The private systems that were acquired varied widely in size and operational conditions and often needed upgrades. To further supplement supplies, the City began the acquisition of nearby farmlands to convert their water to urban use. This practice, added to the controversy over annexations, ignited further public debate over the wisdom of allowing unchecked growth. But the acquisition of the private water companies and farms and two successful bond elections in 1951 and 1953, enabled the municipal water system to expand its supplies and infrastructure and keep pace with growth. By 1955 the Tucson Water company had doubled in size, serving approximately 20,000 customers compared to 10,000 in 1944.

However, during this time the availability of water was never perceived as assured. Break downs in the cobbled delivery systems, pressure drops, droughts that created water shortfalls and competition for water sources all served to reinforce the notion that the growing population was outstripping the capacity of the water system. Numerous studies were undertaken to document sufficiency and search for additional sources. As Tucson's water problems began receiving national attention, local boosters issued a statement that "The Tucson metropolitan area has a water supply for all normal use and the right of eminent domain to secure all the water it may need in the future in." (*Arizona Daily Star*, April 1, 1953.) Nonetheless the constant issues about scarcity began to shape community-wide attitudes toward water management. A conservation ethos began to grow as the residents and business and political leaders grappled with how to reconcile the prosperity brought by growth with its impact on the shrinking water resources.

While the water debate dominated the city's public agenda, the Tucson Water Company continued to grow. By 1965 the number of connections provided was 61,000. The City was acquiring well sites at increased distances outside the City limits in an attempt to draw less on the rapidly depleting existing wells and create a regional management system. During this time the Tucson Water Company was able to keep rates for water low due to the increased economies of scales associated with increased consumption.

However with the advent of the seventies there began a change in direction on how to address Tucson's water issue. Rather than continue to augment supplies, there was growing consensus that a conservation strategy would better serve the community. Record droughts in the early seventies illustrated the gravity of the situation and led to a takeover of City Hall by proponents of controlled growth and water conservation.

Sweeping reforms were made including the overhaul of water rates and adoption of a range of conservation measures. These changes translated directly into the local building and landscape practices.

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## Post WWII Subdivision Development, 1947-73

The creation of single family residential subdivisions and home building in Tucson in the post-World War II era had numerous participants in the development process. It also evolved over time in response to the local market forces related to supply and demand, national trends in home building and changes in consumer taste and expectations.

The first step of the development process is the subdivision of land into parcels which can be sold. Within the Tucson area during the immediate period after the war a number of subdivisions were recorded by individuals, usually a married couple or several married couples. They personally owned the land instead of it being owned by a business. All were single plat developments. Presumably, the lots in the development were then sold to builders or directly to families who made arrangements for their home construction, as there was no marketing of these subdivisions through newspapers or by realtors. Built in the county, prior to the advent of zoning regulations and with no private or public controls on construction, these subdivisions have irregular building patterns. They also contain some of the smallest and most modest houses constructed in Tucson in the postwar period. Typical of this type of development is the Casa Solariega subdivision which was platted by Howard McCormick and his wife Wilma in 1946. The subdivision took over a decade to build out. The homes ultimately constructed averaged less than 1000 square feet with only four rooms, a single bathroom and a carport.

By 1960s the practice of individuals subdividing land had virtually disappeared. Instead subdivi-

sions were platted by development companies, both locally established and those with regional or national operations. In Arizona the use of subdivision trusts became a widespread practice in the 1960s as well. As a result, title companies became the most common entity filing and recording subdivision plats, obscuring the identity of who was actually undertaking the development.

A range of home builders participated in the building boom of the postwar period. Small scale builders had a significant influence on the physical pattern which developed. These builders produced only a few houses per year. Many became involved in home building with the construction of a house for their own use. As there was such a limited supply of housing, they were often approached to sell the house or construct another home for a friend or family member. As a next step they might build a house "on spec," or speculatively, without an identified buyer from the outset. Realtors might be engaged to sell the spec home or a classified ad would be placed in the newspaper. As noted, what distinguishes this group, referred to as "jerry-builders," is the limited number of houses they produced, annually. In addition, the jerry builders used construction practices and project management techniques which characterized home construction in the prewar period instead of utilizing the efficiencies and fabrication methods that distinguished building after WWII. Some of these builders even continued the historic practice of making burnt adobe bricks on site for use in the home's construction.

While individually, the small-scale builder did not

have a big influence on the physical form of the neighborhoods that developed, collectively they made a significant contribution. The fact that a number of small builders might work in a single subdivision contributed to the diversity of its appearance. As each builder had preferences for the size, type and materials to utilize, this resulted in an array of roof types, a distinctive palette of wall materials and different stylistic treatment within the neighborhoods that developed in the Forties and Fifties.

There were generally two types of developers involved in subdivision development in the postwar period. The first type was the “horizontal” developer. This development entity’s efforts focused on land assembly, subdivision platting, the establishment of Covenants, Conditions & Restrictions and the construction of streets and utilities. In Tucson, because of limited surface water, the acquisition of a groundwater source was an important part of this work. Desert Development Corporation’s 1956 Carlos Terrace subdivision is typical of horizontal development practices of the postwar era. The corporation recorded a single plat with lots typically 85’ x 116’ in size. Streets were paved with asphalt with rolled concrete curbs and an alley in the rear. Sewer, water, gas, electricity to every lot and perfect drainage with good top soil was promised. Its display advertisement included a map and narrative text touting its proximity to schools and parks. Its location with breath taking mountain views and “QUIET – No Aircraft Disturbance” made it an “IDEAL HOMESITE FOR ALL THE FAMILY.”

Horizontal developers marketed their lots to home builders as well as consumers. Many of the lots were bought by the small-scale builders, as discussed. The National City subdivision, which consists of seven plats, provides a good example of how subdivisions developed with multiple small builders involved. It was developed by the Home Realty Company, thought to

be an out-of-state entity because of the generic name and the fact that National City is a city in Southern California. Platted in 1949 and located in the southwest portion of the community, the subdivision provided homes for military contract and aviation company workers. Indicative of the up and down pattern of employment in these industries, the individual blocks contain small houses that were constructed in different years ranging from the late forties to the mid-seventies. No single block contains dwellings that were even built in the same decade.

Other developers worked with larger scale home building companies who bought a number of lots at one time and more systematically built out the subdivision. Over the years working relationships developed between the development entities and home building companies. The Tucson Land Development Company worked with the Chesin Construction Company in the development of Wilshire Heights, Wilshire Terrace and Manana Vista. In developments like these and Western Realty’s Miracle Mile Manor subdivision, blocks were built out in a generally uniform fashion and, consequently, houses in proximity to each other are similar in age and style.

Vertical developers were companies that not only subdivided the land and provided infrastructure but also planned and constructed the houses. The integration of home building with development operation was spurred on by several forces. The creation of the Federal Housing Administration (FHA) in 1934 brought stability and certainty to housing production. If houses were designed to conform to FHA’s standards, financing would be available through FHA insured loans. Also FHA mortgage insurance provided a means for the cost of the house to be repaid to the builder even if the individual owner defaulted. So the risk for the developer was lessened.

The 1944 G.I Bill allowed veterans to purchase

homes without a down payment, further expanding the market for potential buyers. Including home construction as part of the development process helped the cash flow for developers. Substantial up-front costs were incurred by the developer that were borne until lots could be sold. To attract builders, concessions like reduced prices and deferred payments were often required. Constructing and selling homes meant a quicker infusion of cash back into the operations and reduced the subsidy which essentially the developer had provided the builder.

The rise of vertical development also influenced the form of the developments. Builders tended to focus their efforts on the individual dwellings instead of the subdivision as a whole. Developers looked at the component elements of the subdivision both in terms of achieving economies of construction but also in terms of attractiveness, which ultimately translated to salability. Attention was paid to devices that could be employed to give the subdivision an appearance of diversity while at the same time utilizing basic plans that actually varied little from one house to another. Multiple elevations created by combinations of exterior materials or finishes, different roof and porch forms and changes in house siting and orientation served to individualize the homes. As time progressed and the home building industry became more competitive because of the increased supply of available dwellings, developers sought different means to distinguish their subdivisions and attract buyers. The inclusion of sites for schools, parks and churches were provided as part of the subdivision planning. Land was set aside for shopping centers. Meandering streets and cul-de-sacs were incorporated into the lay-out of roads to slow traffic and minimize entries into the subdivision, making it safer for children to play.

Frontier Village is an early example of a local development illustrating these practices. A quarter

page display ad in January of 1946 announced "*HOMES – Now Under Construction*" by Frontier Construction Company. A FHA approved development, the two and three bedroom homes would come complete with lawns and shrubs, electricity, natural gas and Rincon water. Located ten minutes northeast of Tucson, its proximity to schools, stores and transportation was touted. Weekly classified ads charted its progress noting such things as "*Sure Materials Are Hard To Get - Labor is Scarce - But Homes Are Being Built in Frontier Village For You.*" Its curvilinear streets were quickly built out with 150 homes constructed by 1950.

While the participants in the residential subdivision development process can be generally characterized, there was no clear-cut distinction among the developers, home builders and other entities such as real estate companies who worked in Tucson to produce and sell homes in the postwar period. Some businesses evolved over time like J. W. Anderson, a General Contractor who initially platted the Lorena Homesites subdivision in 1948. A model home was built to illustrate the floor plan that the company could construct. Prospective owners had the ability to select the roof type and interior and exterior colors of the house but there could be no changes to the floor plans. In 1949 the company became Home Builders & Suppliers, Contractor and Developers. They purchased another subdivision, Chula Vista, from the El Suelo Realty Company that same year and built a model home. Their ads state "This model home is part of planned development" but in fact there is little evidence that the company did more than construct houses as buyers were found.

Some developers were responsible for all phases of their developments, from platting to construction, as well as the sale of homes. The Lusk Corporation, a national firm, developed a number of subdivisions in Tucson during the 1950s and

1960s. Headed locally by Robert Lusk, founder and the first president of the Tucson Homebuilders Association, the company both planned and developed their own subdivisions and also constructed custom homes outside their own developments. Extensive market research was conducted to guide their development process and target the consumers for their products. Lusk sold homes using large newspaper display ads and promotion through magazines like *Better Homes and Gardens*. They offered conventional as well as FHA financing packages. Unlike many of the developments of the period that promoted "Veterans Preference," Lusk advertisements noted that only a limited number of veterans could move into a Lusk community and a down payment would be required. Lusk custom homes were large with 3 bedrooms and an additional room that could serve as a den or a fourth bedroom. They had a wide array of models from which one could choose. Their 1956 Glen Heather Estate "award winning planned community" included a community pool and park.

Most commonly during this time, however, there were many different entities involved in the development process and the players changed over time. For example, the first plat of the Linden Park Addition to the City of Tucson was platted by two married couples in April of 1948. The two couples, now joined by the Linden Investment Company, were the owners of record when its C,C & R's were filed in June of 1948. But it was the American Homes Associations, advertising *10 YEARS OF BUILDING QUALITY HOMES*, that constructed and initially marketed the two bedroom concrete block dwellings within the Linden Park Addition. In 1950 the National Realty Company was the new owner of record for the subdivision and four additional plats had expanded its size to include 172 properties. It was common practice, even for developments with

a single developer or home builder, that once a subdivision was substantially built out, realtors were engaged to manage the sales of the last homes.

As time progressed in the decades that followed WWII, the building and development industry within Tucson, like many other areas in Arizona and the West, grew in complexity and its participants. The size of many of the companies also increased as well. The boom periods attracted out of town companies but these companies were usually quick to leave during the periods of decline.

M.R.F. Construction Company, builders of the Perfect Arizona Type or PAT homes was one of Tucson's largest builders during the fifties and sixties. The company got widespread attention in the mid 1950s with their participation in the development of Terra Del Sol. Heralded as the most thoroughly planned subdivision in Southern Arizona, it was the site of the 1956 Tucson Homebuilders Association's Parade of Homes. The development consisted of four twenty-five acre shopping centers located at the intersections of the major streets which bounded the area. Baptist and Catholic churches and a school was planned for inclusion. A forty-acre site for a high school was purchased by the Tucson School District within the development. The City-County Planning Department lauded Terra del Sol, planned by Engineer William Armstrong, as an ideal example of subdivision planning. PAT Homes was one of five home builders that constructed homes in their Wilmot Terrace, Wilmot Vista and Donna Vista subdivisions in Terra Del Sol. Other subdivisions constructed by PAT homes over the next decade included Craycroft Village, Vista del Prado, Carriage Hill Estates, Sutton Place East and Eastview Estates. Another large-scale builder of this period was Beauty Built Homes Corporation. They developed Huntington Park, Birchcrest, Random Ridge, Foxcroft

## Estates and Los Reales Heights.

PAT Homes and Beauty Built Homes utilized the techniques and technology that distinguished mass-produced home construction of the post WWII era. Standard rectilinear or L-shape floor plans were employed. Minor variations in the roof and front porch forms and exterior wall materials enabled the builders to create seemingly different elevations for the basic plans. Carports were tucked under the house's main roof. Windows were preassembled aluminum sliders and a sliding glass door opened onto a rear patio. The prices for the three and four bedroom, one or one and half bath homes ranged from \$8,850 to \$11,750 in the 1950s and \$10,990 to \$13,250 in the 1960s. This pricing was geared to the middle-income buyer which made up the largest segment of the home buying market. As consumer tastes and expectations changed with time, the successful developers adapted accordingly. In PAT Home's earlier subdivisions only one or two Simple Ranch style houses were available. Within the Terra Del Sol development, nine models were offered each with a distinctive name: Savoy, Regent, Coronet, Monarch, Imperial, Windsor, Windsor II, Fleetwood and the Arizonian. Pumice stone, a local term for concrete block, or brick could be selected for the home's construction. Appliances were an option that could be included in the mortgage. By the 1960s, the PAT developments offered a greater choice of exterior wall materials including red brick, desert rose brick, mortar washed brick or desert stone. Appliances were now included as part of the purchase price. Double wide carports replaced the single carports of the previous decade and the size of the house had grown to include up to five bedrooms. The models available, which essentially were the same architectural styles of their earlier homes, had been renamed. Their All American home series in their 1962 Carriage Hill Estates

subdivision now featured the Coolidge, Fillmore, Garfield, Jefferson and Madison, a split level home. While PAT Homes were primarily Ranches, the subdivisions developed by Beauty Built Homes included the postwar versions of the locally popular southwestern themed Territorial and Pueblo styles.

The marketing employed by these companies was like those used by successful home builders and developers throughout the West. Most of the advertising was geared toward women. The appointments of the house were to make life easier for the "lady of the house" so she could spend less time working and more time with her family and friends. Beauty Built advertised that their homes were "Femineered," that is, engineered with a woman in mind and included free dishwashers. Interior appointments to the homes, like name brand appliances, became an increasingly important marketing tool. While the home buyer in the immediate post war periods had been happy with a dwelling that met basic needs, by the sixties, consumers demanded more amenities. Cabinetry, carpeting and specialty tile were promoted as selling points for homes. Kitchens were equipped with built in appliances, garbage disposals and modern Formica counters. Bathrooms were expanded in size and included vanities as well as colored fixtures for the bathtubs, toilets and sinks.

To stay competitive methods for attracting prospective buyers to their developments were expanded. Both PAT and Beauty Homes ran large newspaper display ads every week with illustrations and catchy slogans. These ads included information about the range of financing options and the ease by which the prospective buyer could obtain mortgages. Changes in the availability of federal programs, such as the end of the veteran financing program which allowed no money down, were advertised as a reason to "BUY NOW" before it was no longer avail-

able. To appeal to the upwardly mobile population, PAT homes advertised a “Re-Sale” service to sell a buyer’s old home and enable them to move into their new PAT Home months sooner. Events were planned to entice buyers to visit their open houses. PAT regularly offered free food, balloons and entertainment for the kids of the home shoppers. During the holidays a visit with Santa Claus was even possible at their subdivision model homes. Search lights and radio and television spots also were used to lure consumers to their developments.

An interesting aspect of the rise of the large-scale builders and the increased involvement of developers with national operations in Tucson was the evolution of names for the subdivisions. The name given a subdivision is a branding technique and part of its marketing. In the first decade after World War II many of the Tucson subdivisions had Spanish names. For example, the name given the 1947 Bonita Vista Addition not only reflected the Hispanic heritage of the community but also conveyed that the subdivision had pretty views. The 1947 Los Ranchitos subdivision gave some insight as to the architectural style that were to be found on the homes. Casa, Spanish for house, was frequently incorporated into subdivision names, such as in the 1957 Casa Loma Estates and the 1953 Casa Lindas subdivisions. Some subdivisions, like the 1948 Colonia Del Valle and the 1950 Colonia Alegre developments were named after the historic pattern by which Tucson was settled by the Spanish as a colony. San Xavier Vista, platted in 1948, and the 1951 Mission Manor, an eight-plat subdivision constructed for Hughes Aircraft to house its workers, pays homage to the nearby iconic historic landmark. The 1952 Old Pueblo Estates employed a name for which Tucson had been marketed to tourists for decades.

In the sixties the practice of using descriptive names related to the history and character of

the community essentially disappeared. Names were now generated by corporate offices and were generic monikers the same as those used to identify subdivisions across the nation. For example, a large 228 unit subdivision was recorded in 1960 by the Arizona Land Title and Trust Company with the name Warwick Village. Other sixties developments included Westwood Village, Centennial Park, Enchanted Hills, Hidden Hills, Lakeside, and Blue Ridge Estates, the latter two developed by the Lusk Corporation. Even local builders that followed the traditional practices of using Hispanic names began to change as more Anglos moved to the area. John Wesley Miller, one of the more prominent Tucson builders, developed an upscale 80 acre subdivision that targeted engineers from Hughes Aircraft, Air Force pilots and officers and university professors as buyers. The subdivision was initially recorded as Lomas Verdes, but his advertising agent persuaded him that nobody would understand the Spanish name, so it was changed to its English equivalent, Green Hills, for the marketing campaign.

The lending industry was another important force that shaped the physical pattern of development of residential subdivisions after WW II in Tucson. Somewhat surprisingly, very few banks operated in the Tucson area. In 1946 and as late as 1950, only two banks were listed in the local telephone directory as providing general lending services: the Valley National Bank, the state’s preeminent financial institution, and the Southern Arizona Bank and Trust Co. By 1955 the Bank of Douglas had established operations in Tucson. While over the next fifteen years the Arizona Bank, the Bank of Tucson, First National Bank of Tucson and Union Bank became active, this was a relatively small number of institutions to serve the rapidly growing population and expanding development industry. The limited number of banks no doubt influenced the scale of

development that occurred in the postwar era. A lender would be more inclined to provide smaller amounts of financing for multiple construction projects than sink its limited cash reserves into a large-scale development. This factor helps explain why 86% of the residential subdivisions developed in Tucson during the post WWII period were single or two plat developments. This same influence might also account for the fact that much of the housing stock was built by the small-home builder. These small builders obtained financing on a "house-by-house" basis, paying off the loan when it was completed and sold and getting a new loan when the next construction project began. Once again, these practices helped the cash flow to the banks and spread their risk of loan default over a larger population.

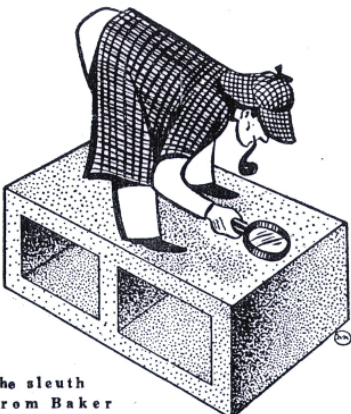
To meet the demand for financing for both the builders and developers to construct homes, as well as mortgages for the home buyer, a variety of other entities were involved in lending in Tucson in the decades following WWII. As in other parts of the country many home buyers used Savings and Loan (S&L) companies. Historically, these thrift institutions limited their activity to the accumulation of savings from their members. The pooled money was then loaned back to their members to be used for the purchase of homes. Typically S&L companies were small with fewer assets than banks, but there were many of them, so they ended up serving a large share of the people buying houses. After World War II as S&Ls became wealthier, and because of the high demand for housing, many S&L companies extended their operations to provide financing to the home builders. This practice not only generated profits from the interest and fees charge for the construction loans, but also expanded the supply of dwellings for which mortgages could be provided. A number of local Tucson builders moved on to become developers after being ap-

proached by aggressive S&L companies offering financing to produce larger scale subdivisions.


Title companies also became involved in construction lending, offering to finance developments in exchange for the title work. Some of the most active title companies during this period were Transamerica Title, Arizona Land Title and Trust, Tucson Title Insurance Company and Phoenix Title and Trust. Insurance companies also offered mortgage financing in the postwar period, with Prudential and John Hancock locally active. This wide array of lenders coupled with the FHA and VA loan programs ensured that a steady supply of houses was produced and sold. The range of underwriting requirements and standards for production of the different lenders no doubt contributed to the diversity in the forms and appearances of the subdivisions that resulted.

the ant

Elementary, Watson!



The sleuth from Baker Street would have recognized that San Xavier Rock and Sand Company's concrete cinder block are the best produced in Tucson! San Xavier uses top grade materials to produce block of guaranteed quality, guaranteed strength, uniform size. Dial 3-7566 for Tucson's best building block — it's the elementary thing to do!



601 W. 22nd St. Dial 3-7566



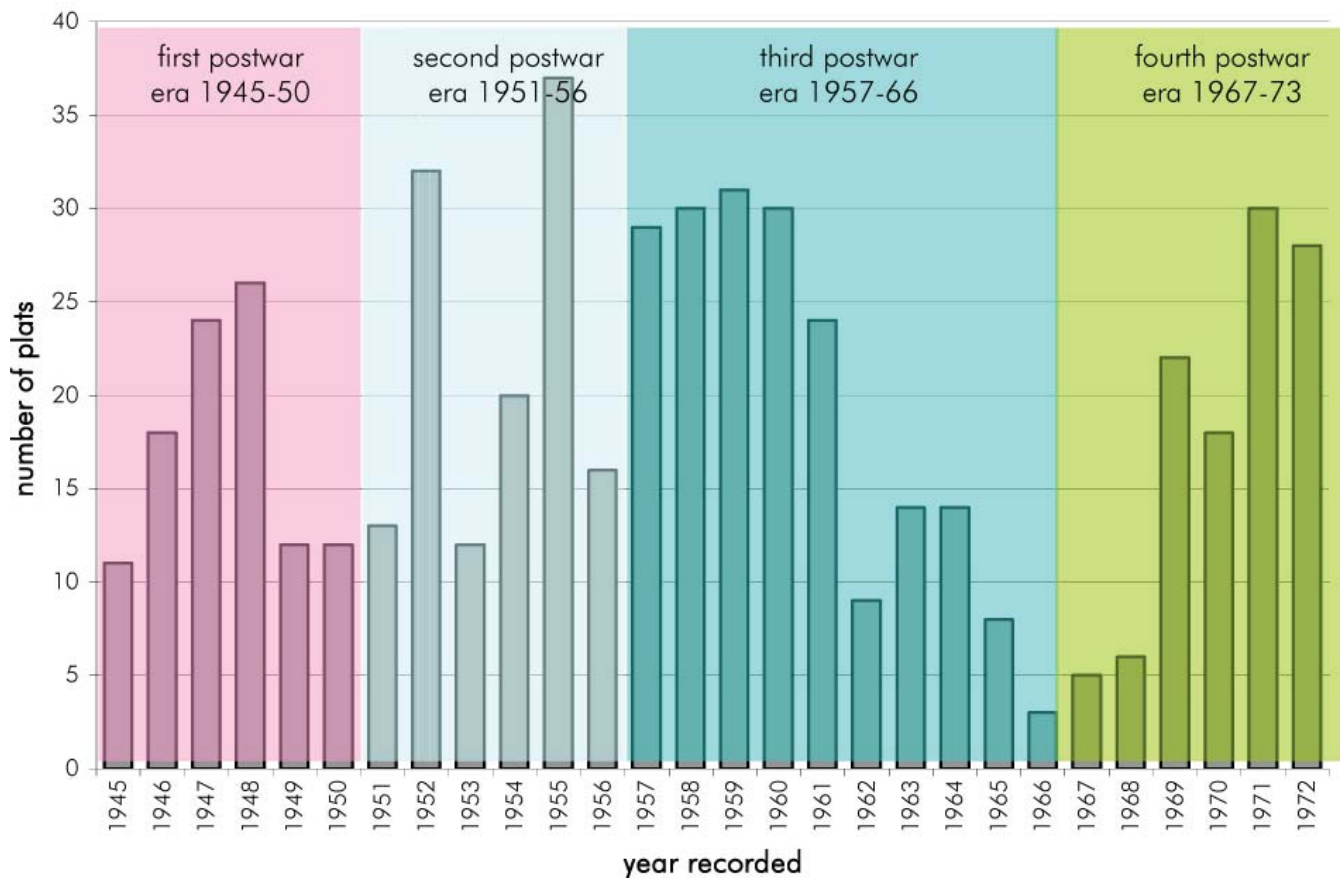


# Residential Subdivision Development

## Single Family Development Trends and Patterns, 1945 - 73

Single family housing production patterns in Tucson show four growth cycles in the post World War II period between 1945 and 1973. During this 28 year span, 304 new developments and 524 separately recorded subdivision plats were successfully started and substantially completed, resulting in the construction of more than 41,000 single family homes in the city. (See Appendix A Figure 1 for a map and list of the 304 developments.) Most postwar growth was

Tucson Subdivisions, Plat Year and Development Eras



directed to the east. As the postwar period of growth progressed, development also appeared to the west where desert lots with rolling topography and retained natural vegetation was offered.

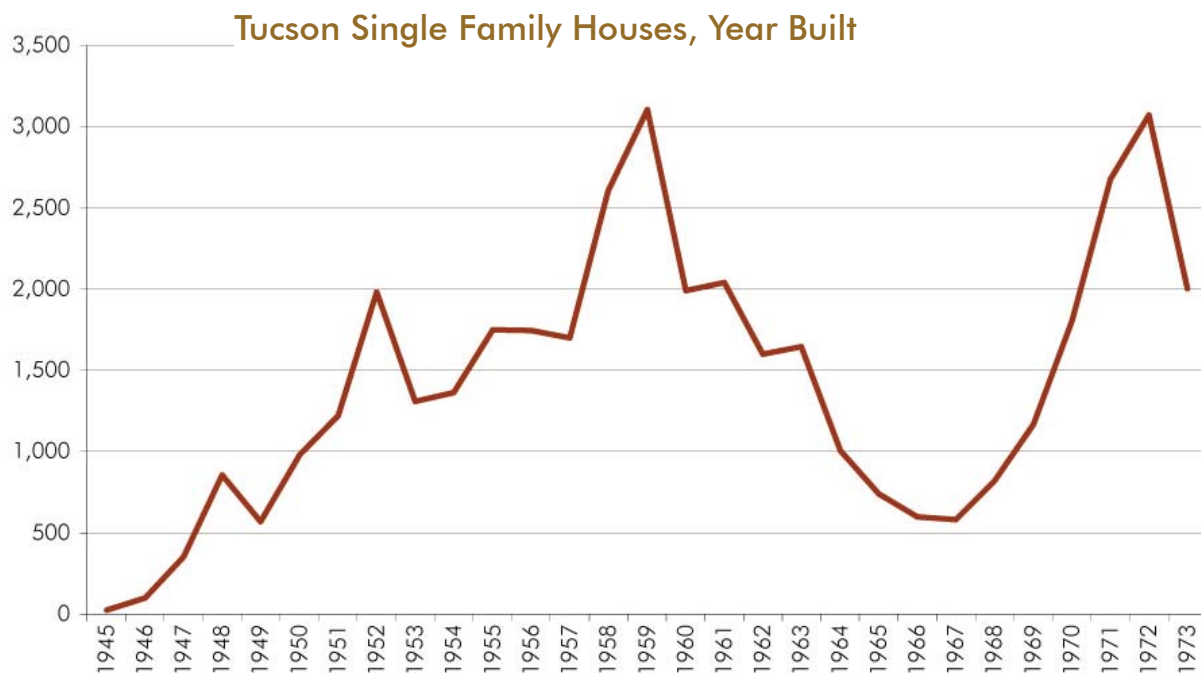
The first development burst began at the conclusion of World War II and lasted until 1950 when closure of the Consolidated-Vultee Aircraft Corporation plant triggered a brief recession. New subdivision plat recordings dropped off briefly, and then began increasing again in 1951.

This early postwar growth period was characterized by a construction rate averaging almost 500 new homes per year. A typical development averaged 119 houses. A peak year during this first postwar boom was 1948, when 26 new subdivision plats were recorded and 858 new houses completed. Many of these early houses were part of a “mom and pop” development, a single, small subdivision plat typically recorded by a husband and wife outside the city limits.

Between 1951 and 1956 Tucson experienced a second postwar growth period, following concerted efforts by community boosters to diversify

the economy and attract new industry. This translated into a pronounced housing boom, with an average of almost 22 new subdivision plats recorded each year, and an average yearly construction rate of 1,600 new single family homes – more than triple the production rate in the first early postwar period. This period of activity was characterized by developments that were larger, averaging 132 single family houses, and more sophisticated, as the corporate subdivider and professional development companies played an increasingly greater role in residential subdivision practices.

Tucson experienced a third period of growth in residential subdivision development between 1957 and 1966. The annual average number of new plats dropped slightly from 22 to 19, but the average number of single family homes completed annually grew to 1,700. The typical development in this period had 170 houses. These trends illustrate that developers were relying on economies of scale and vertical development practices to improve overall productivity. Housing developments continued to move farther out



from the city center in this third period of postwar growth.

The Tucson economy faltered in the mid-1960s but then stabilized and a fourth period of housing growth occurred between 1967 and 1973. Annual production rates, expressed in terms of new plats recorded and single family houses completed and the average number of single family homes per development, remained similar to those from the third postwar boom period. Developers also continued the pattern of building new developments in a concentric pattern moving out from downtown. Single family residential developments during this last period of housing growth were completed faster than in earlier boom periods. Ten neighborhoods which were developed in the fourth housing boom were completely built out, that is houses constructed on all the available lots, in less than two years.

In the early 1970s the national energy crisis, combined with high interest rates and inflation, caused single family housing production to decline and Tucson experienced a sustained housing slump after 1973. (See Appendix A Figure

2 for a map of single family house construction dates and Figure 3 for a map of single family development plat approval dates.)

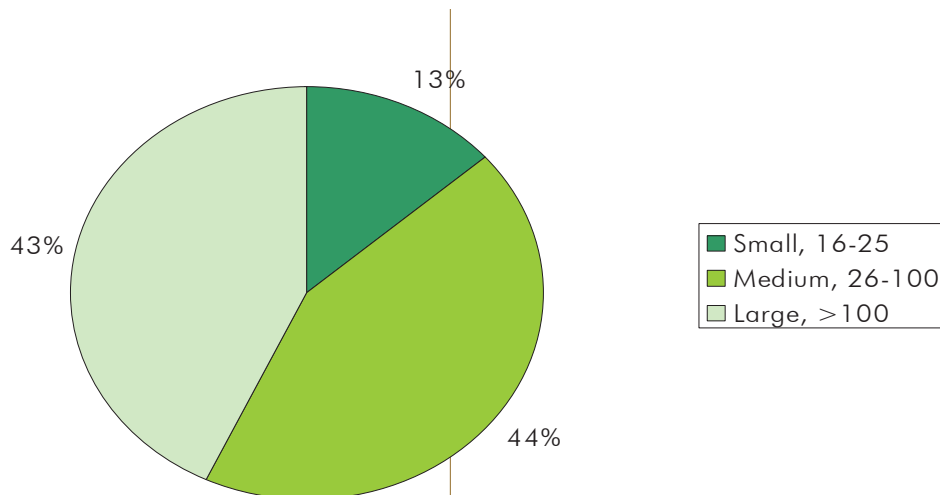
A single plat totaling 49 acres with 133 houses completed between 1945 and 1973 comprised the average postwar development in Tucson. Single subdivision plats during the postwar period ranged in geographic size from one-third an acre to more than 200 acres. When built out, the subdivision developments in Tucson ranged in size from fewer than 16 homes, typically both sides of one street block, to as many as 1500.

More than two-thirds of Tucson's postwar developments were completed with only one recorded subdivision plat, with fewer than fifteen percent completed in more than two separately recorded plats. Terra del Sol stands out as the largest development, totaling fourteen plats and more than 500 acres.

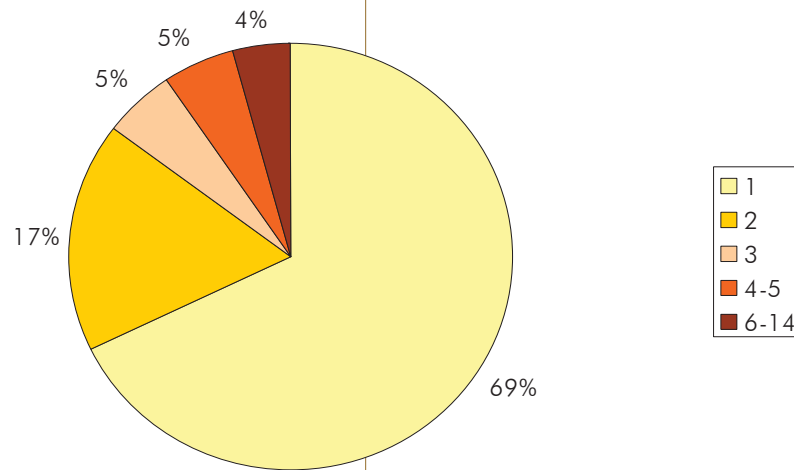
### Single Family Houses

Following national trends, homes in Tucson's

**Size of Tucson's Postwar Developments  
(per # of single family houses completed)**



## Tucson Postwar Residential Subdivisions, Number of Plats per Development



postwar developments became larger over time, with more rooms and bathrooms even though the average household size decreased. Between the first and fourth periods of postwar growth, the average home in Tucson grew from 1,200 square feet, five rooms, and one bathroom, to 1,560 square feet, six rooms, with two bathrooms. Tucson's postwar house size tended to increase during slower periods of housing production, suggesting a higher proportion of upscale developments during these times.

(See Appendix A Figure 4 for a map of the average house size.)

In the 1950s developers began offering extra features such as additional bedrooms and master bathrooms that could customize basic FHA house models. A family room as well as a living room was often available. In addition, the kitchen became a point of focus, and items such as cabinetry and modern appliances became selling points. John Wesley Miller, a local builder during that time, refers to the 1950s as a "tipping point" when customers began demanding appointments such colored bathroom fixtures,

more built-in features and carports. By the end of the 1960s standard features included garbage disposals and Formica counter tops. Developers also placed more emphasis on marketing the setting for their subdivision as an amenity as they sought to distinguish their developments. Proximity to schools, shopping, and employers was frequently mentioned in promotional advertising.

The energy crisis of the 1970s prompted a shift in housing tastes as buyers began to seek more energy efficient housing. Houses of the 1950s and 1960s had little insulation because electricity was relatively inexpensive. Builders in the 1970s upgraded the insulation and windows on the houses in their projects.

### Postwar Development Classifications

Throughout the post World War II period, buyers could find a variety of homes with an array of features ranging widely in price. Housing prices were largely market driven and reflective of the various income brackets of the residents. The largest housing segment was the small to me-

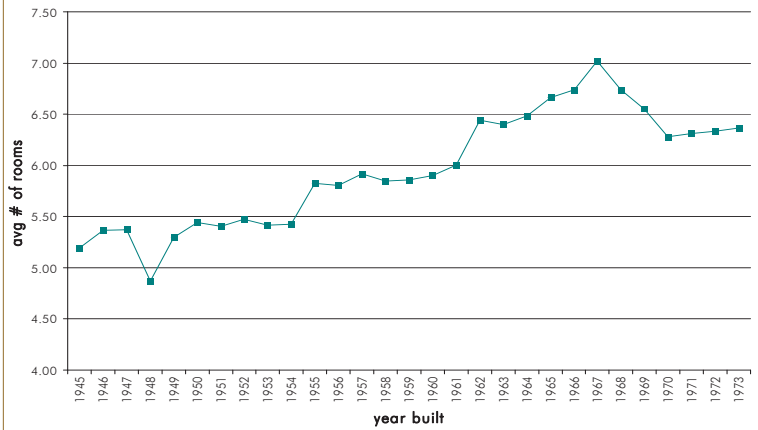
dium size house. Two-thirds of the houses built in Tucson between 1945 and 1973 had less than 1,600 square feet of living space. Local builder, Dale Chastain remembers that whenever Hughes Aircraft did well and hired more people, salaries rose and the size of houses increased.

The physical characteristics associated with Tucson’s postwar single family houses and developments illustrate socioeconomic and cultural influences reflecting the four periods of growth previously discussed. These characteristics provide a profile of the representative postwar home and development found. GIS analysis considering house size and the number of rooms and bath fixtures aided in the development of a preliminary classification of Tucson’s postwar single family subdivisions into four categories: Basic, Typical Economy, Typical Upscale and Luxury developments. Additional field survey work and analysis is needed to refine these classifications and to identify their associated architectural styles.

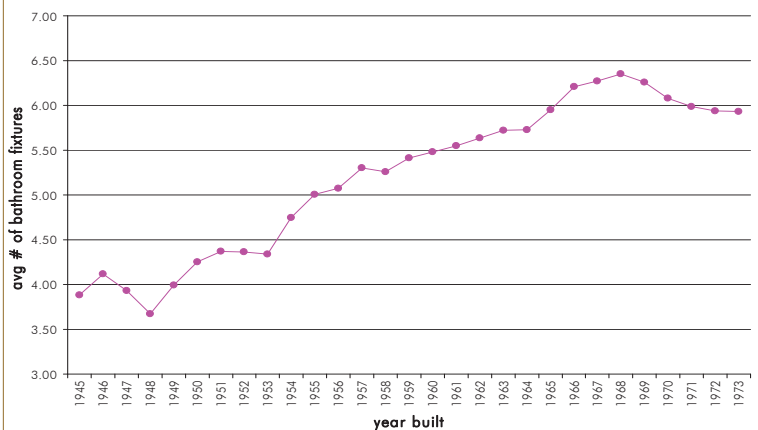
Basic developments are primarily associated with the first postwar growth period between 1945 and 1950. They are characterized by small sized houses with few amenities, reflecting the war related material shortages and the buyer’s willingness to accept any housing offered. Commonly homes in these developments are about 1,000 square feet, have no more than four rooms with one bathroom and frequently lack a carport or patio.

Typical Economy developments have larger houses up to 1,250 square feet with five or six rooms including three bedrooms, a family room plus one and a half bathrooms. They often have an one car carport but still may lack a covered patio. Typical Economy developments date from the initial postwar growth boom but are also associated with the second and third growth spurts.

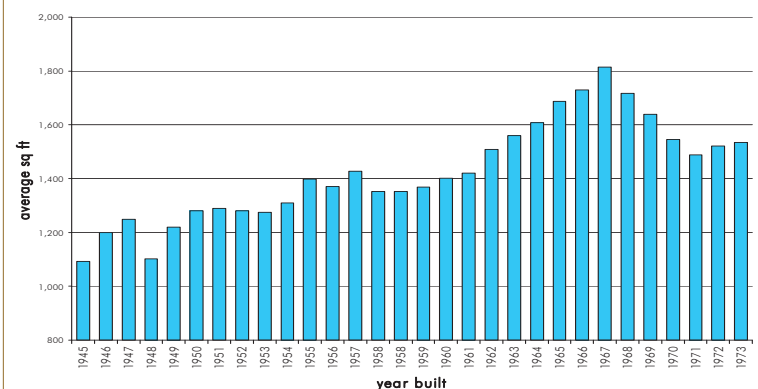
### Tucson Single Family Houses, Room Trends



### Tucson Single Family Houses, Bathroom Trends



### Tucson Single Family Houses, Average Size



Typical Upscale developments are distinguished from Typical Economy developments by their larger house size, up to approximately 1,800 square feet with as many as four bedrooms and two bathrooms. Family rooms are common and standard amenities include dishwashers, carports and covered patios. The developments have more stylistic variety due to a use of applied decoration to their facades. Upscale subdivisions are primarily associated with the third and fourth periods of postwar growth.

Luxury developments are less common, representing only about ten percent of Tucson's postwar neighborhoods. They date primarily from the city's third period of postwar growth between 1957 and 1966. These developments have large homes that typically exceed 1,800 square feet with four plus bedrooms, three or more bathrooms, carports or garages for at least two vehicles and more than one covered patio. Expensive materials such as asbestos or wood roof shingles are often found. The homes usually are sited on large lots that are least one-third of an acre.

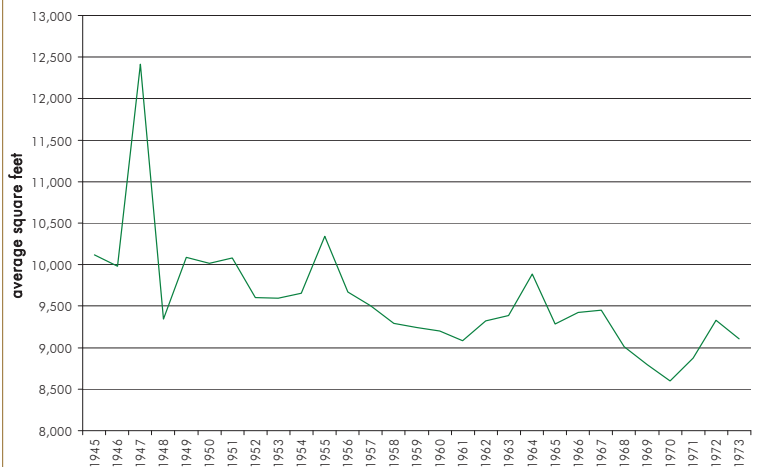
### Lots

The average single family lot in Tucson during the postwar period was 9,400 square feet. In the first development era, land was plentiful and lots were relatively large, averaging more than one quarter of an acre in 1947. In the 1950s the price of land became one of the fastest increasing components of housing costs. Tucson developers faced somewhat higher costs for infrastructure development than those in the Phoenix metropolitan area, since converting raw desert lands cost more than converting irrigated agricultural areas. As a result of increasing land costs and a reduced supply of land, average lot sizes in Tucson decreased as the postwar era progressed. However, comparatively, like house size, during years of slower postwar housing

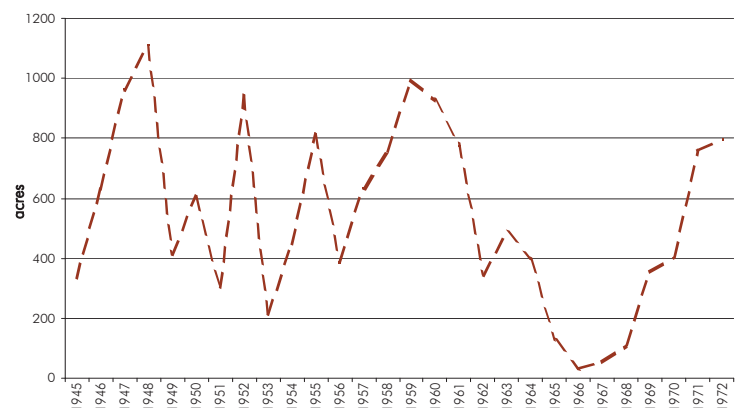
growth, the city's average lot sizes were larger than during boom periods. This trend suggests that upscale and custom housing developments were more characteristic of these years. However, in the late 1950s and early 1960s large one-plus acre outlying lots with city utilities became popular custom home sites for the affluent home buyers. (See Appendix A Figure 5 for a map of the single family house lot sizes.)

Throughout the postwar period, the annual average acreage platted for new residential developments varied. In boom years, the amount of new subdivided land rose with housing demand, though average lot sizes tended to decrease during these peak periods.

### Tucson Single Family Houses, Lot Size



### Tucson Single Family Houses, Subdivision Acres Platted 1945-72



## House Size and Plans

The overwhelming majority of Tucson's postwar single-family neighborhoods have homes with one level constructed on a concrete slab. This one-story characteristic is a defining feature of the ranch house design, lending to its long low horizontal appearance.

Split Level homes, with one main level and two half levels, one up and one down, comprised less than one percent of all of Tucson's postwar single family houses. They appeared in the late 1950s and early 1960s in several neighborhoods located primarily in the east end of the city. The Split Level plan was popular in the Carriage Hill, Manana Grande, Sherwood Village Terrace and Solano Estates subdivisions. This layout emerged in response to the demand for larger homes on smaller lots. They became a niche product for growing families, providing more space and an arrangement that afforded greater privacy and separation between activities. Those few constructed in Tucson are associated with typical developments.

## Build Out Trends

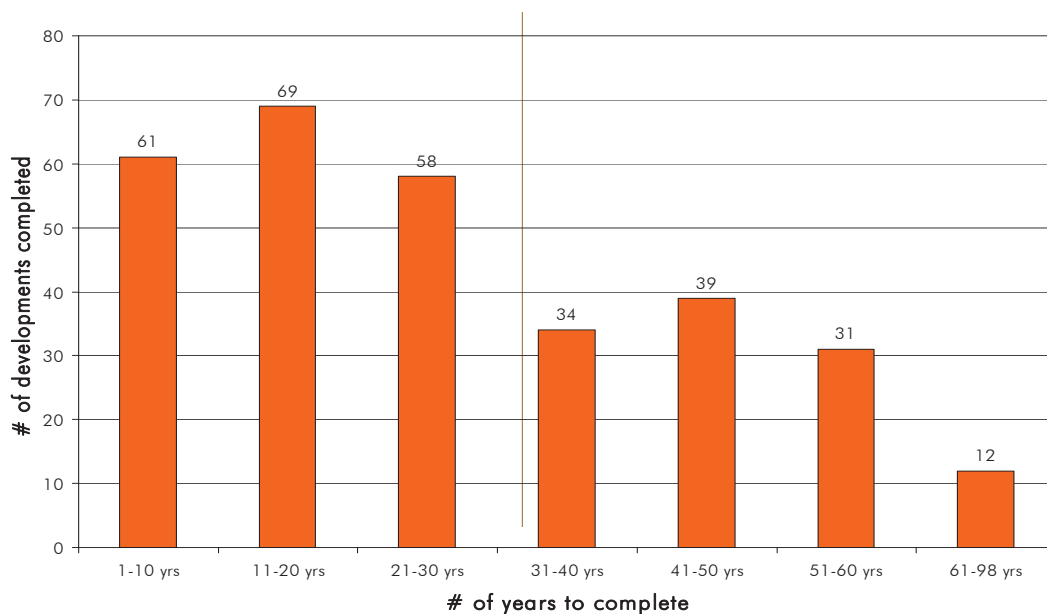
A diverse group of builders, realtors and devel-

opers were involved in the 304 different residential subdivisions developed during Tucson's 28 year post World War II boom. Scores of small, local builders and families were involved in subdividing land and constructing single family homes early in the postwar period. Larger developers that constructed neighborhoods in Tucson and elsewhere, also played a significant role in shaping the community's postwar development.

The average postwar neighborhood in Tucson took 28 years to completely build out with single family homes. In comparison, the average residential development in Scottsdale took 11 years to build out and the average in Mesa was 25 years. Successful Tucson developments were completed within ten years and these neighborhoods clearly convey patterns that reflect their respective periods of growth.

Neighborhoods with an extended build out typically contain mixed housing styles, plans, materials, and landscape patterns due to multiple builders and changing influences. Early postwar developments took an average of 41 years to complete, reflecting the influence of the mom and pop operations that characterized this early period. Developments associated with the sec-

**Tucson Single Family Developments, Build Out Trends**



ond and third postwar growth spurts averaged 25 years. Those in the fourth postwar boom cycle platted after 1966 averaged 14 years from start to finish, as larger corporate developers became more efficient in constructing and marketing their houses.

Only a handful of developments were completed within five years. Alvernon Terrace and South Manor, platted in 1957 and 1960 respectively were developed as part of the third postwar boom period. The other fourteen developments which built out in five years or less were platted after 1966.

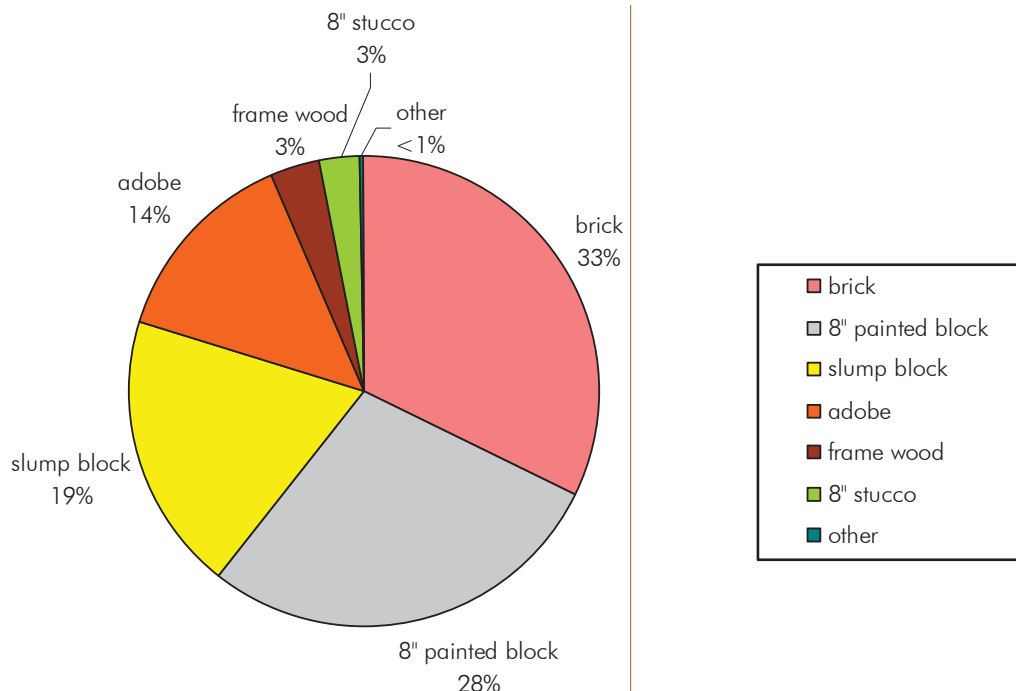
### Walls

Lumber was expensive and difficult to obtain in the early postwar years because of the huge demand for housing. As a result, most Arizona builders turned to other construction materials, choosing those that were readily available and affordable. In Tucson, the typical postwar single

family housing materials were locally manufactured clay bricks, concrete, burnt adobe, and slump blocks. In addition to their easy availability and low cost, masonry materials were also favored because they required less upkeep.

Some variety in wall materials was seen in Tucson's first and last postwar growth periods, though brick was the most common material used throughout the postwar years. In the late 1940s the high demand for housing, coupled with material shortages, encouraged builders to use whatever materials were at hand. As a result, the city's early postwar developments have homes constructed with painted block in various sizes, block sheathed in stucco, brick, wood frame and adobe. In the initial building boom, small builders used burnt adobe for their construction. The bricks were made on site with straw and soil. The hole dug to extract the soil was later used as a leaching field for septic tanks. The adobe brick was commonly finished with a coat of stucco.

**Tucson Single Family Houses, 1945-73, Exterior Wall Materials**





Block, and particularly block locally manufactured by Xavier Block Company was most common during the second postwar boom in Tucson from 1950 to 1956. By the beginning of the city's third growth period, brick replaced block as the most common building material. Manufactured adobe block was also in vogue during this third development era and was especially unique to the Tucson area, often used in the Postwar Territorial and Tucson Ranch styles that were popular at that time. However, fired adobe blocks proved structurally less stable than brick and other manufactured blocks. As a result, developers turned to slump block in the 1960s to execute postwar housing styles based on Spanish traditions.

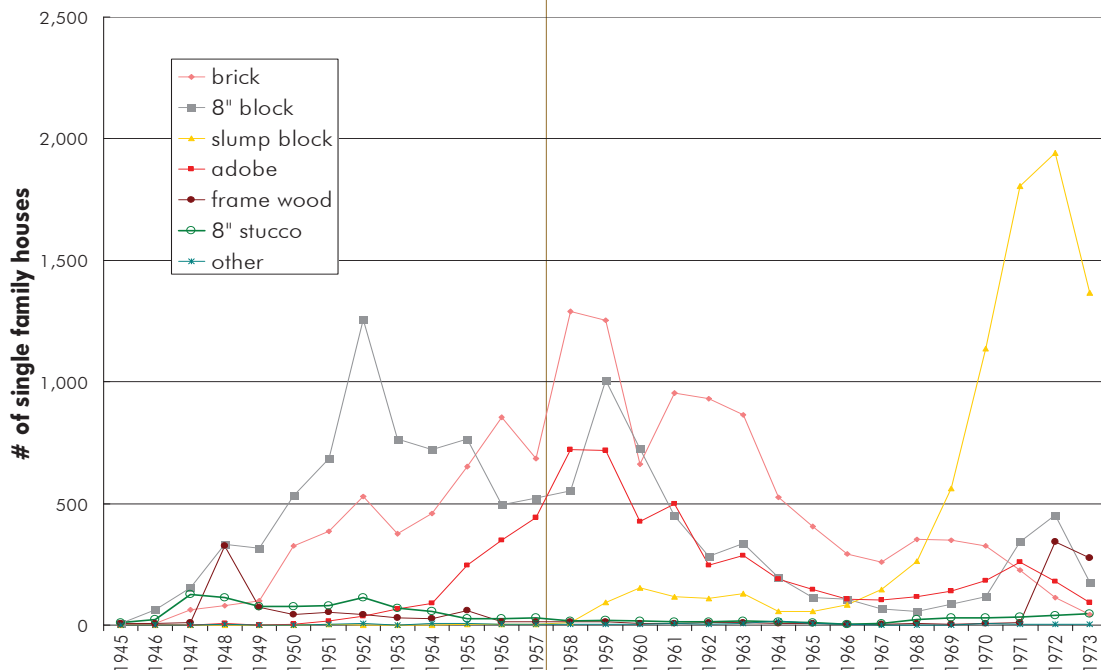
In comparison to Tucson where brick and adobe comprise nearly half the exterior wall materials, approximately 85 percent of the Phoenix metropolitan area's postwar housing was constructed with Superlite block. The Phoenix-based Su-

perlite Builders Supply Company manufactured mass-produced standardized concrete masonry units. Brick was a distant second in the Phoenix market and manufactured adobe bricks, which were prevalent in Tucson's single family residential neighborhoods in the late 1950s and early 1960s, were nearly nonexistent in postwar developments in Phoenix.

Tucson's builders sought inexpensive ways to vary developments and individualize the houses within them. In Tucson it became common to apply different treatments, such as mortar washes, to the exterior walls. Local builders also followed construction trends popular nationally and in the Phoenix market, dressing the street façade walls with applied wood, stone, and brick materials or altering the block pattern for decorative effect. These treatments brought variety to neighborhoods of similarly constructed homes.

After the 1965 Arizona construction strike was

### Tucson Single Family Houses, Exterior Wall Material Trends



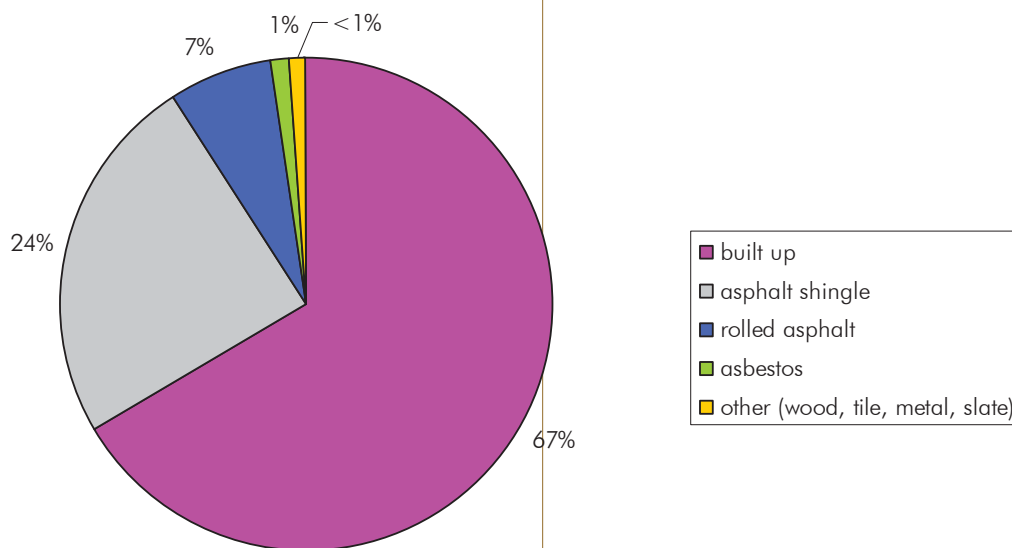
resolved, it gradually became more difficult to get skilled masons so labor costs for masonry construction rose. Housing styles began to change and developers sought ways to keep costs down in the face of rising inflation and continually increasing land costs. Design tastes also emphasized organic materials. In the late 1960s and early 1970s, these circumstances influenced builders to begin constructing with slump block, stucco over wood frame and a new, low-cost wood siding material.

Frame wood developments were usually associated with basic and typical economy housing. Neighborhoods with a mix of wall materials were often indicative of a mom and pop influenced development where building materials reflect a minimum of planning. Conversely, a variety of wall materials also identified a custom development where the developer deliberately planned for each house to have a different appearance. The use of slump block and stucco in the last postwar development period were usually associated with the Postwar Territorial and Postwar Pueblo housing styles. (See Appendix A Figure 6 for a map depicting single family exterior wall materials.)

## Roofs

Built up roofing was the most common material found on single family houses in Tucson's postwar neighborhoods. This material is a distinctive looking smooth membrane, usually white, applied to houses with a flat or very low pitch roof. It is used to create a water impermeable surface. Marble chip gravel was applied over the smooth surface which helped reflect light and keep the home cooler. Built up materials were inexpensive and easy to obtain locally. They were a nice aesthetic complement to low pitched roofs, which were popular in postwar neighborhoods because they cost less to build than more steeply sloped roofs and they did not obstruct mountain vistas enjoyed from around the city. Built-up roofs are a character-defining feature of the Tucson Ranch with its very low-pitched gable roofs. They are also found on the Postwar Territorial style's flat roof forms as well as the Contemporary with either a flat or low pitched gable roof. All these styles became common in the late 1950s and continued in popularity through the rest of the postwar era. Economy housing developments

**Tucson Single Family Houses, Roof Materials 1945-73**



often have a high number of houses with built up roofs. Rolled roofing was most prevalent during the first postwar boom period. It too is typically found on houses with flat or very low pitch roofs and is very economical to use in home construction because it is cheap to buy and quick and easy to install.

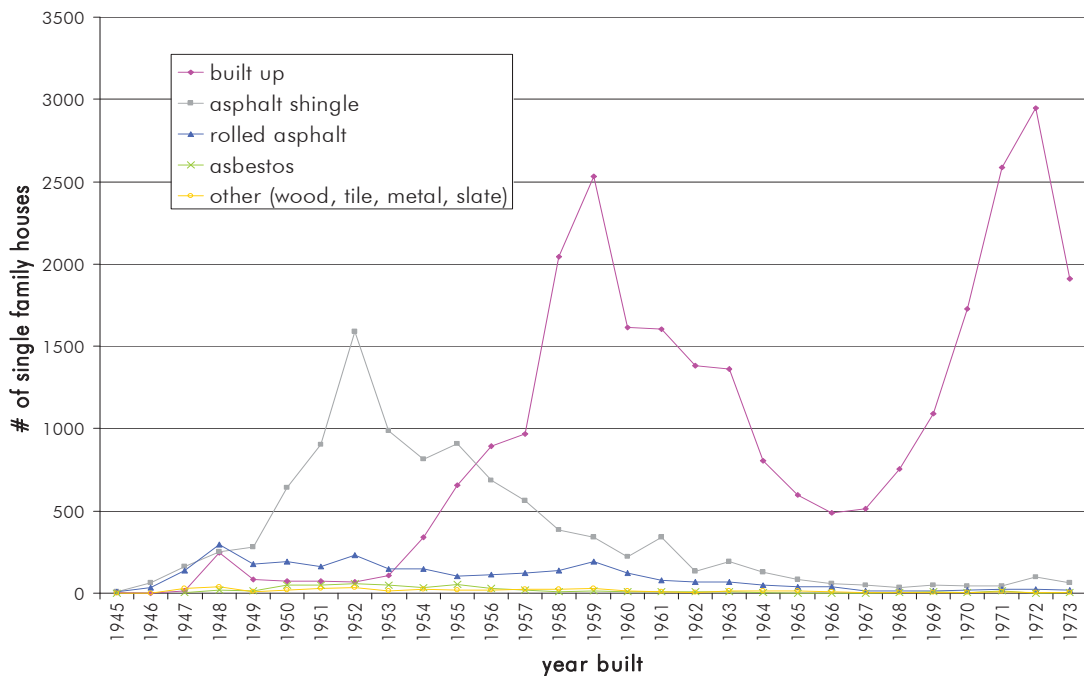
By the second postwar boom beginning in the early 1950s, asphalt shingle roofs had become the most common roofing material. This roofing material is associated with houses with steeper roofs, typically with a minimum 4:12 pitch. Asphalt shingle roofs were found on Simple and Custom Ranches throughout the postwar period and were associated with Character Ranches and Split Level homes found in late 1950s developments. (See Appendix A, Figure 7 for a map showing roof materials found on a single family houses in Tucson.)

## Carports and Garages

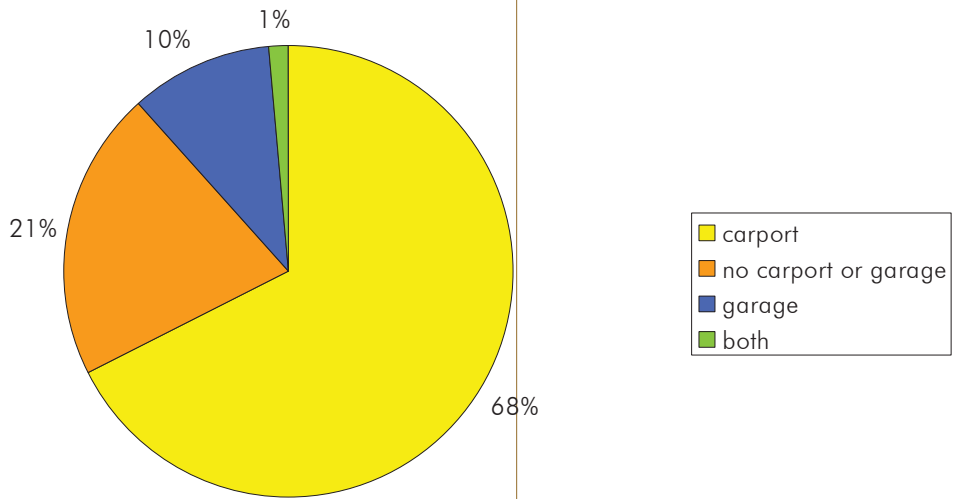
The increasing use of automobiles in the postwar period influenced housing designs, with most new homes in Tucson constructed with a single car carport under the same roof as the house. Carports were cheaper to construct than garages and were well suited to Tucson’s sunny, dry climate – factors that helped ensure their popularity. Though garages appeared throughout the postwar era, they were only built in ten percent of the city’s houses and never exceeded 500 total in any given year. Local builder, Dale Chastain, recalled that garages tended to be small.

More than 20 percent of the houses lacked any carport or garage. Many of the houses constructed in the late 1940s and early 1950s do not have carports or garages. However, this finding is based on current data and may be an indication that the original space set aside for a

**Tucson Single Family Houses, Roof Material Trends**

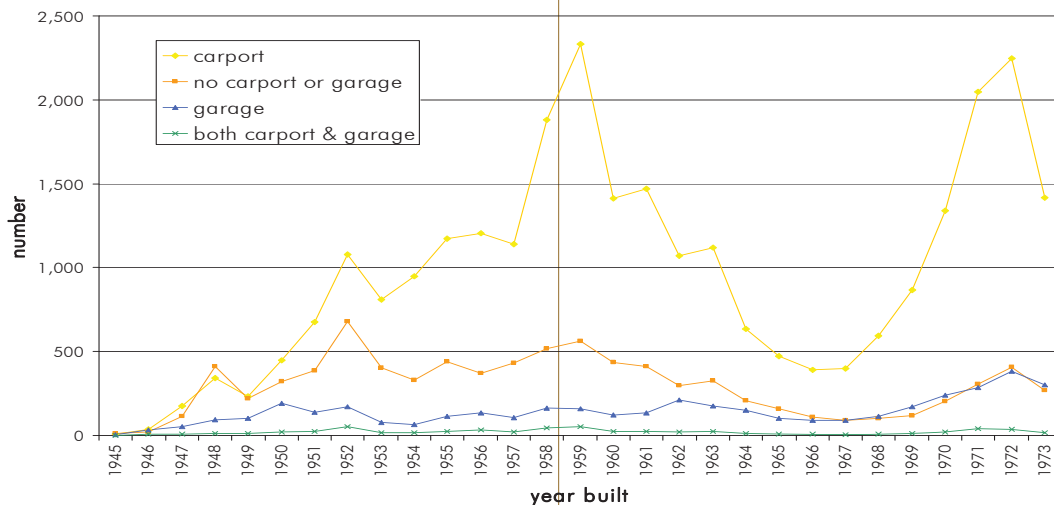


## Tucson Single Family Houses, Carports and Garages



carport was enclosed for additional living areas, including kitchen expansions, family rooms, offices, and extra bedrooms. (See Appendix A, Figure 8 for a map of carports and/or garages found on single family homes.)

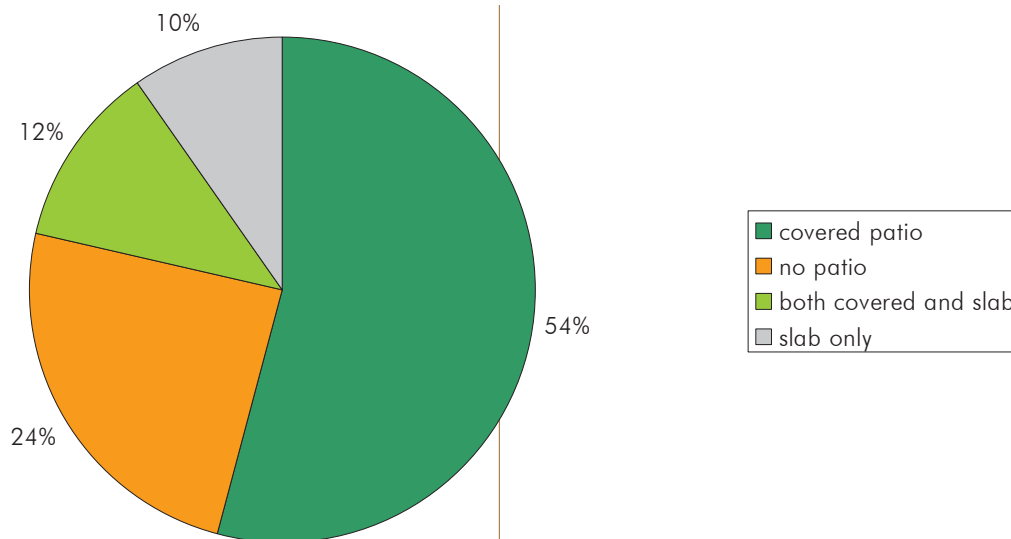
## Tucson Single Family Houses, Carports and Garages by Year



## Patios

An emphasis on indoor-outdoor living characterized postwar lifestyles and was especially suited to Tucson's sunny climate. Most homes incorporated a porch or patio into the design to create outdoor living spaces united with the interior. Front porches also were used to add architectural interest. As the postwar period progressed, more emphasis was placed on patio living at the back of the house, away from street noise and front porch designs were de-emphasized. Porches frequently shrunk to barely more than an extended overhang above the front entry. Houses in basic and economy subdivisions often lacked any porch or patio at all. Other modest neighborhoods had mainly slabs, without cover. Upscale neighborhoods featured a high percentage of homes with covered patios in their home designs. (See Appendix A Figure 9 for a map of single family patio types.)

**Tucson Single Family Houses,  
Patios 1945-73**





# Residential Architectural Styles

## Introduction

The architectural styles that characterized residential building in Tucson during the period following World War II were influenced by national phenomena as well as regional and local trends. By the mid-century the popular residential styles of the early twentieth century had lost their appeal. The exuberant design of the period revival styles became considered a luxury that could not be afforded during the Depression. The scarcity of materials in the ensuing war years further dictated sparser design and construction. As modernism tenets of clear and unpretentious architecture became more popular, the picturesque forms, multiplicity of materials and ornamental features of earlier twentieth century housing were replaced nationwide by more simplified designs.

In the West the rise of the Ranch house was a product of suburbanization and the need for an inexpensive solution for housing the rapidly expanding population. Its design also was influenced by the desire by business leaders, developers and architects to create local building forms based on regional influences rather than traditions imported from the east coast.

During the war years, many technology innovations were made in the fabrication of equipment and the streamlining of construction methods to support the war efforts. After World War II some of these techniques were applied to the development of products for home construction. Prefabricated and preassembled parts were brought to the building site. New light weight materials like aluminum replaced costly and heavier materials. The mass production techniques honed by the automobile industry in the early twentieth century

also began to be employed by home builders. Specialized labor was used to speed the construction process. Efficiencies were gained as the basic form of the houses was repeated with only minor variations in their features.

The financing programs of the federal government's Federal Housing Administration and Veterans Administration also were an important national influence on housing construction. To qualify for FHA backed loans, homes had to be built to specific standards related to such things as the height and size of walls, windows and doors; durability and safety of material, and the provision of utilities. The requirements stimulated the building industry countrywide to produce standardized products and prefabricated assemblies that also served to improve the efficiencies and cost effectiveness of housing construction.

In response to these influences the Ranch house became a prevalent style of residential architecture: locally, regionally and nationally. The Ranch's simple form was its most distinctive characteristic. Ranch style homes were built with asymmetrical shapes laid out in rectangular or L-shaped floor plans with a strong horizontal emphasis. They were one-story structures with low-pitched gable or hipped roofs. The roofs usually had moderate or wide overhanging eaves, both open and boxed. Open eaves frequently had exposed rafters. Masonry construction for exterior walls was most common in Arizona, although wood cladding was sometimes used on portions of the primary facades. Applied ornamentation was minimal. Decorative elements were limited to such things as false shutters or ironwork or

brackets on porch supports. Variation in appearance was achieved through minor modifications in plan layout and the use of different materials or construction techniques, such as weeping mortar on the home's front elevation. Porches and patios connected the home's interior to outdoor living areas. Visual and physical access to the outdoors was furthered through the employment of large picture windows and sliding glass doors. Secondary windows sat in punctuated openings in the exterior walls. Large and small, the shape of these windows were square or rectilinear with either horizontal or vertical orientation. Carports and garages were attached and often tucked under the house's main roof

In Tucson a variety of local influences created a post World War II housing population that, while similar to Ranch and Contemporary style houses built elsewhere, also had unique characteristics that set it apart. One of the more important influences on its distinctiveness was the availability and wide spread use of brick and fired adobe for local housing construction. After World War II concrete block construction became the most prevalent building material in Arizona. The warm red and brown hues of Tucson's Ranch homes, further individualized with the application of white washes and contrasting grouting, contributed to a decidedly different appearance than the painted Superlite block houses found in the Phoenix metropolitan area.

Ties to its early Hispanic heritage resulted in the construction of housing styles that closely resembled the Spanish influenced architectural styles of the early twentieth century. Similar in appearance to historic building traditions, these postwar homes only differed in how they were constructed and the modern building products that were used.

Another important influence on the form and appearance of the post World War II neighborhoods was the topography and underlying geology of the community. Unlike Phoenix, which grew over relatively flat farm land, the Tucson basin consists of rolling terrain with rock outcropping and desert washes that presented both challenges and opportunities for home construction. Unable to afford the cost of blasting and leveling areas for home sites, builders situated their houses and created lot configurations related to the terrain rather than efficiencies of construction. This, in turn, created a picturesque quality for the Tucson developments that was lacking in many postwar subdivisions in other communities with more standardized placement practices. Changes in grade also allowed for numerous houses to be sited such that the residents could enjoy views of the Catalina Mountains and the spectacular scenery of the environs surrounding the city. The tacit consensus to protect views for all is believed to have influenced the widespread popularity of the almost flat roof forms and low profiles of most housing.



## **Tucson Residential Architectural Styles Summary**

The following is a list of the stylistic categories of residential architecture found in the Tucson subdivisions that developed during the period 1945 – 1973. It is a preliminary categorization derived by sorting the 41,000 single family homes into groups that shared similar characteristics and features such as size, wall and roof materials, carports, garages and patios. The initially groupings were field checked. The information collected in field observations resulted in both combining the initial groups into larger groupings and dividing groups into smaller subsets to reflect further variations which were found. These

stylistic categories are by no means a definitive account of the residential building styles of the post World War II era in Tucson. Further study is need about the number of houses represented in each categories and changes over time. Terms applied should be compared to terminology used elsewhere in studies of other postwar residential populations and revised to reflect consensus being developed about appropriate nomenclature. These preliminary categories should, however, help guide further study to further refine the character-defining features of the historic era of building in Tucson.

- Transitional Ranch**
- Simple Builder Ranch**
- Simple Custom Ranch**
- Tucson Ranch**
- Spanish Colonial Ranch**
- Character Ranch**
- Modern Ranch**
- Contemporary**
- Postwar Territorial**
- Postwar Pueblo**
- Split Level**



## Transitional Ranch

Transitional architectural styles combine features found on earlier building styles with elements that eventually will define a new style of architecture. Transitional Ranches were built in great numbers throughout the nation in the years immediately preceding and following World War II. Their form is similar to the shape and floor plans of bungalows and period cottages of the early twentieth century. However their materials, features such as windows and doors and relative lack of ornamentation are like that found on the emerging Ranch style.

# Transitional Ranch

## Stylistic Elements

1. One story
2. Small, square or L-shape floor plan
3. Medium pitch gable or hipped roof with asphalt shingles
4. Brick, block or stucco exterior walls
5. No porch or small entry porch
6. Casement windows
7. Occasionally corner or shuttered windows





## Simple Builder Ranch

To meet the pent up demand for housing after World War II, builders were able to successfully market homes with very simple plans and minimal stylistic treatments. The design of the homes was dictated by efficiencies of construction and the use of mass produced building parts like pre-assembled roof trusses and window units. Costs were kept down by the use of a single material and practices such as incorporating the carport under the house's main roof.

# Simple Builder Ranch

## Stylistic Elements

1. One story
2. Medium pitched gable roof with asphalt shingles
3. Brick, burnt adobe or block exterior walls
4. No porch or small entry porches created by an extension of the main roof over some portion of the front façade
5. Single car carports
6. Casement and picture windows or window wall assemblies on front facade
7. No detailing or ornamental trim other than shutters





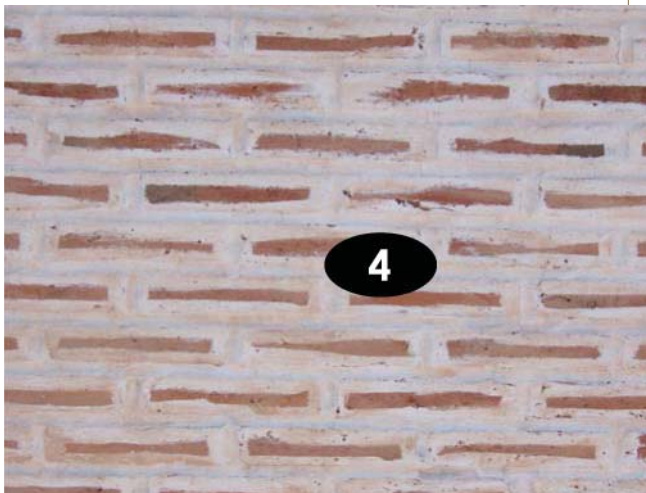
## Simple Custom Ranch

Throughout the postwar period the Simple Ranch remained one of the most popular styles of building. However, as time progressed, some variations to their spare form began to occur. Different materials were used to customize the appearance of their basic plans. Simple Custom Ranch houses were generally larger in size than the Simple Builder Ranch. Carports and garages were often attached in a manner that extended the plane of the front façade making the homes look even longer from the street.

# Simple Custom Ranch

## Stylistic Elements

1. One story
2. Rectilinear and L-shaped floor plans with a strong horizontal emphasis
3. Medium and low pitched gabled roofs often clad with tile, asbestos or wood shingles
4. Brick, burnt adobe, mortar washed brick or slump block exterior walls
5. Porches are a dominant element on the front façade, often spanning the full length of the house
6. One and two car carports and garages
7. Decorative window treatments including the inclusion of corner and bay windows, different materials on window surrounds and shutters.





## Tucson Ranch

In many communities that grew up in the postwar period, the practice of making minor variations in layout, roof forms and materials to give subdivisions a diverse appearance is what distinguishes the building during this time. In Tucson, however, a particular combination of features on a Ranch house became so popular that it was built throughout city in a wide array of developments. The distinctive feature of the Tucson Ranch is its extremely low, almost flat, broadside gable roof. This low profile provided unobstructed views of the surrounding mountain vistas which became a key selling point for many of the new developments. The roof was sheathed with built-up roofing which was both economical and practical as it reflected heat. Its bright white smooth surface and contrasting rustic masonry construction created a design aesthetic that appealed to many.



# Tucson Ranch

## Stylistic Elements

1. One story
2. Simple rectilinear floor plan
3. One exterior wall material, usually burnt adobe
4. Low-pitched broadside gabled roof with smooth white built-up sheathing
5. Broad roof overhang across front façade sometimes trimmed with a simple fascia board
6. One and two car carports
7. Picture windows on front façade





## Spanish Colonial Ranch

By the 1950s, the growth of the construction and development industries had produced an increased supply of houses relative to the demand. To remain competitive, builders were forced to be more creative in order to sell homes. To appeal to potential buyers they began varying the house types, styles and marketing the individuality of their developments. As in the past, Spanish influenced architectural treatments were some of the most popular, and the associated models were offered with names like Villa Bonita, Hacienda and Casa Grande.

# Spanish Colonial Ranch

## Stylistic Elements

1. One story
2. Rectilinear floor plans, often with asymmetrical facades created by offset wall planes
3. Red tiled gabled roofs
4. One exterior wall material, typically brick, burnt adobe or mortar washed brick
5. Minimal front porch area
6. One and two car carports and garages
7. Picture windows





## Character Ranch

While the Spanish Colonial Ranch was the most popular of the themed stylistic treatments in Tucson during the postwar era, other imagery was used to personalize the house models. Different roof forms, fanciful trim and ornamental features were tacked on the basic ranch form to give it an unusual character and make it stand out from other forms. In many ways the Character Ranch is a continuation of the building tradition of the Period Revival style of the first half of the twentieth century where picturesque forms and detailing created American Tudors, Missions and Mediterranean style homes.

# Character Ranch

## Stylistic Elements

1. One Story
2. Roof forms varied according to the style category, i.e. gambrel roofs on Dutch Colonial Ranches and hipped roofs with molded eaves on French Provincial Ranches
3. Roof trim applied according to style category such as scrolled fascia board on the Swiss Chalet Ranch
4. Wide array of exterior wall materials
5. Windows often set off with window hoods, bays or window boxes to evoke a particular desired imagery
6. Doors, shutters and hardware also customized to reflect desired characters such as plank doors, strap hinges and faux bird houses to create a country folk look





## Modern Ranch

Just as the Transitional Ranch combined forms and features from two different eras of building, the Modern Ranch combines features from two distinct stylistic influences. The flat roofed version of this style reflects the spare building traditions of the International style with its low geometric massing and no ornamentation. However they lack the stark white smooth walls which distinguish the high style International dwellings. Elements of the Contemporary Style are found in another subset of the Modern Ranch including broad low pitched front facing gabled roofs with overhanging eaves and wide fascia boards.

# Modern Ranch

## Stylistic Elements

1. One story
2. Rectilinear floor plan
3. Flat or low pitched gabled roofs built up using impermeable materials
4. Brick or block exterior walls
5. No or narrow porches created by the extension of the main roof over all or a portion of the front façade
6. One and two car carports
7. Prominent windows on front façades





## Contemporary

Contemporary Style houses built during the postwar period differ from Ranch houses as they relate to their openings and roof forms. Ranch houses have exterior walls with punctuated openings for windows and doors. Contemporary houses have a different pattern. Expanses of glass are interspersed with solid walls. The windows may be set in horizontal bands or in vertical window walls that span from the floor to the ceilings. There is much greater variety of roof forms and pitches on Contemporary Style homes as well as a wider range of architectural detailing.



# Contemporary

## Stylistic Elements

1. One story
2. Rectilinear and irregular floor plans with horizontal emphasis created by the employment of wing walls and planters
3. Low pitched front facing gable, flat and shed roofs often with wide fascia boards and broad overhangs
4. Brick, burnt adobe or block exterior walls
5. No defined porch but occasionally entry courtyards
6. One and two car garages and carports
7. Detailing through the combination and stylized treatment of wall materials, inclusion of wing walls and low yard walls and one of a kind architectural features.





## Postwar Territorial

The Territorial style developed during the settlement of Arizona and New Mexico in the late nineteenth century. Newcomers combined Spanish influenced building practices with detailing found on the houses in the communities from which they had come. The hallmark of this historic style is roof detailing along the building's flat roof. Often time brick coping was used for this detail. This stylistic tradition was continued after WWII with the construction of the Postwar Territorial homes. A "Territorial" was a model advertised in most upscale subdivisions and marketed to the new resident who wanted a southwestern look for their home.

# Postwar Territorial

## Stylistic Elements

1. One story
2. Rectilinear floor plan with the front façade articulated with projecting and recessed wall planes
3. Flat roof with varied parapets and roof levels
4. Brick or slump block exterior walls
5. Flat or shed entry overhangs, often tiled
6. Rectilinear or arched window openings
7. Attached carports and garages





## Postwar Pueblo

After World War II builders continued to construct homes in styles that reflected the community's Hispanic cultural traditions. The Postwar Pueblo was a popular design. It closely resembled the appearance of the Pueblo Revival homes constructed in the 1920s and 1930s. But instead of adobe, these houses were constructed of block on slab foundations. Modern window assemblies, often metal casement windows, replaced the wood double hung windows of the earlier era.

# Postwar Pueblo

## Stylistic Elements

1. One story
2. Square or irregular floor plan
3. Flat roof
4. Stucco covered exterior walls
5. Rounded walls and roof corners
6. Square or rectilinear window openings
7. Vigas and canales applied ornamentation





## Split Level

This housing style developed as the families of the baby boom grew in the 1950s and 1960s and there was need for additional rooms to separate the home's living zones. The one story Ranch house was expanded to two stories and intercepted with a one story wing to create three levels of living. This style of building was particularly suited to the varied terrains found in most cities across the nation but was far less common in the West.

This form of building was constructed with a variety of wall materials including wood siding which was relatively rare for construction of this period. Like the Character Ranches decorative detailing was sometimes used to give it a distinctive stylistic character.

# Split Level

## Stylistic Elements

1. One and half stories, one main floor and two half stories, up and down
2. Rectilinear floor plans
3. Flat and low pitched gable roofs
4. Block, brick or slump block exterior walls with some wood siding
5. No front porch
6. One and two car carports
7. Horizontal sliding windows, often paired







# Residential Landscape Design

## Introduction

For the purpose of this study, “landscape” is defined as both the lands immediately surrounding a home as well as the overall neighborhood layout. This section will discuss the general features that define a neighborhood’s character as well as the landscape details of an individual residence visible from the street. Individual residential landscapes characteristics have been grouped into landscape typologies that range from very green and lush to complex drought tolerant landscapes. Coincidentally, this range of landscapes provides a visible time-line in the landscape as Tucson adapted to it’s unique environment. Together the landscape typologies identified in this document describe a vernacular landscape that is unique to Arizona and, most likely, unique to the United States.

The residential landscape design in Post World War II Tucson, like architectural styles, reflect influences that mirror national trends, yet is uniquely Tucson. Unlike architecture however, the residential landscapes visible today reflect a complex layering of plant growth and decline personal preferences, rules, Economies, and popular landscape design principles.

There are several significant factors that shape the look and character of Tucson’s Post World War II residential landscapes. The home’s placement on a lot during this period follows patterns established in the Victorian Period where yards had both a functional and decorative purpose; homes set back from streets, small side yards and a more substantial rear yard. Influential factors that are more unique to Tucson are the region’s historic challenges with water availability, the Post World War II economic boom, and tourism.

With 12” of rainfall per year, the Tucson area

has never had an abundance of water. Unlike the Phoenix area with a sophisticated method of water management via reservoirs and canals, the Tucson area has relied until relatively recently, on ground water supplies. This limited source posed little problems until the post World War II population boom and the 1970s water shortages that resulted in water use restrictions, ordinances, and higher water costs. As landscape irrigation was a significant water consumer, residents were forced to look at their landscapes differently and explore designs and plants that fit more with the region’s climate and water availability. Until that time, Tucson Post World War II residential landscapes were more lush, green, tropical or Mediterranean in character, primarily to appeal to tourists and the potential new residents visiting from the Midwest and east coasts.

Though the desert character did play a large part in early tourism development in Tucson, (dude ranches) desert plants remained a largely exotic and seldom used item in landscapes until water shortages and the growing environmental movement popularized their use. Essentially, the water shortages of the 1970’s brought together the economic development community (out of necessity to keep Tucson economically competitive) and environmental communities (growing public knowledge about ecological processes) to jointly promote the preservation and promotion of the region’s unique landscape identity. Residential landscape design in Tucson has never been the same since.

## Neighborhood Site Characteristics

The layout of Tucson neighborhoods reflects national trends in subdivision development in the mid 20th century. Earlier and more close-in neighborhoods tended to extend the Tucson grid of north/south and east/west streets. Later

subdivisions incorporated more curvilinear streets and cul-de-sacs. Earlier neighborhoods typically did not acknowledge existing washes and drainage patterns, carrying drainage flows in streets. Later neighborhoods began building with the natural topography thus allowing off-street drainage corridors and streets that followed the natural curvature and contours of the land. More expensive neighborhoods which developed later in the study period, often preserved existing natural desert drainage corridors, thereby bringing slivers of the desert closer to every day lives. Other large-lot subdivisions preserved the desert around defined building envelopes, truly linking the desert and home life.

The pattern to develop subdivisions three miles beyond Tucson's incorporated boundaries resulted in neighborhoods without curbs, gutters, and sidewalks, creating a more rural character in suburban locations. Where sidewalks were included, earlier neighborhoods tended to provide generous separation between the curb and the sidewalk allowing for street trees and other plantings. The space was narrowed and eventually the sidewalk was attached to the curb in later neighborhoods. In these neighborhoods where the uniformity of street trees was not possible, neighborhood character is more dependent upon the landscape style of individual residences.

Themeing of neighborhoods became popular during this period and is still heavily in use today. Typical themeing elements include neighborhood entry signs, street side fencing, unique mailboxes, and street lighting, street and plant identification signs. Other larger scale elements of themeing include neighborhood development centered on a private or public park, (La Madera Park); and entry medians and landscape islands at intersections of curvilinear streets (Harold Bell Wright Estates).

## Neighborhood Elements

### Circulation Elements

- Public sidewalks
- Gridded street



- Curvilinear streets



### Engineering Elements

- Curbs and gutters



- Engineered drainage corridors



- Natural desert drainage corridors

### Site Features and Themes

- Theme street lights
- Entry signs
- Public park adjacency/relationship



- Private landscape islands



- Theme street signs and other signage



- Perimeter fencing and walls



- Mailboxes



### Residential Site Characteristics

In addition to the general character of the plantings, many other elements make up the landscape character of these individual home sites; some built concurrent with the home and others developed over time. Some elements reflect the overall urban or natural character of

the neighborhood. The surfaces of driveways contribute greatly to a neighborhood character; gravel where a rural character is desired and paved where a more urban character is desired.

Throughout most of the studied neighborhoods, there is a strong sense of public and private space delineation through the use of fencing, walls, gates and headers along the street's ROW line. The greatest demarcation of public vs. private spaces in front yards tends to correlate with the Mediterranean Typology as discussed below, which places a greater emphasis on outdoor living. Front courtyards with low walls, artistic gates and other amenities creates a sense of neighborhood connectedness by inviting residents and neighbors to socialize in the front yards.

## Site Elements

### Circulation Elements

- Driveways



- Private sidewalks



## Public/Private Space Definition

- Front patios
- Perimeter walls



- Courtyard walls



- Retaining walls and internal curbs



- Gates and fences



### Site Amenities and Ornamentation

- Fountains
- Benches
- Statues
- Pots



- Mail boxes



### Landscape Typologies

The unique look of Tucson's mid-20th Century homes and yards is apparent to any observer. They range from very lush landscapes typical of many other parts of the country to the preservation of the diverse and dense Sonoran Desert landscape where a home is perceived to be literally placed within the existing desert with little impact on the desert. Through a series of site visits to neighborhoods identified in the GIS analysis, general and repeated landscape characteristics became apparent. Landscape typologies were identified that addressed the gradation of green embodied in these landscapes. Within Tucson, landscapes exist that clearly and distinctly embody a particular stylistic typology. These include Pastoral, Mediterranean Exotic, Ornamental Desert and Natural Desert. Many others however, are emblematic of the shift in taste, style, water cost and availability, and have remnant pieces of different typologies mixed together thereby creating another typology: Remnant. These typologies are discussed in more detail below.



## Pastoral

This typology evokes the simple green look of typical landscapes of the Midwest, East and Southeast. It is the continued landscape character from the American Victorian Style, which strove to give a sense of psychological comfort to transplants from the east and Midwest by bringing familiarity plants to their new home in the southwest. (“Looking Backward to Cope With Water Shortages...A History of Native Plants in Southern Arizona, Walt Rogers) The best examples of this typology exhibit no plants that would look out of place in an eastern or Midwestern garden such as palms, cactus or citrus.

# Pastoral

1. **Trees:** Pines, Arbor vitae, Cedar, Ash, Cottonwood, Mulberry, flowering deciduous fruit trees like Plum
2. **Shrubs:** Deciduous flowering shrubs, Juniper shrubs, Privet hedge, Pyracantha
3. **Groundcovers and Vines:** Ivy, climbing roses
4. **Accent Plants:** Bush roses and flowering annuals
5. **Ground Plane:** Large, open Bermuda turf areas in summer and Winter Rye lawns in the winter. Less emphasis on rock. Exposed native soil in planting beds
6. **Layout:** Foundation plantings, front lawns, front stoops, paved driveways
7. **Details:** Decorative edging, hedged shrubs both deciduous and evergreen





## Mediterranean Exotic

This typology evokes the look of Mediterranean landscapes where there is more emphasis on plants that stay green and those that are more easily adaptive to hot and dry climates. Unlike the Pastoral Typology, more emphasis is given to outdoor living which is evident in more defined and detailed outdoor use areas. There is also a greater emphasis on exotic plants shapes, colorful flowering plants, and site furnishings and accessories like pots and fountains.



# Mediterranean Exotic

1. **Trees:** Date Palms, Fan Palms, producing Citrus and Sour Orange, Pines, Olives, Italian Cypress, African Sumac, Silk Oak, Eucalyptus
2. **Shrubs:** Broadleaf evergreen flowering shrubs- Bougainvillea, Texas Ranger, Myrtle, Pyracantha, Euonymus, Privet, Junipers, Arborvitae
3. **Groundcovers and Vines:** Evergreen and flowering - Vinca, Jasmine, Sweet Pea, Cat's Claw Vine, Verbena and Lantana
4. **Accent Plants:** Roses, bulbs, and flowering annuals, ornamental grasses, succulents and some cacti
5. **Layout:** Outdoor rooms - walled patios, courtyards, trellis, gravel or paved driveways
6. **Ground Plane:** Smaller to no turf areas, decomposed granite in planting areas, colored concrete, brick or other specialty pavers
7. **Details:** Potted plants, shaped and/or espaliered plants





## Ornamental Desert

The distinguishing characteristic of the Ornamental Desert is the desire to create visual impact with the more unusual and interesting plants of the Southwestern Desert. The plants were used as individual elements, most often planted without their native plant associations. As appreciation for the desert ecology became popularized, the desert's most interesting plants were the first to be widely promoted and made available to the homeowner. These plants were iconic symbols of all that was unique and different from other parts of the country. They tended therefore, to be used in an almost spot lighted way.

# Ornamental Desert

1. **Trees:** Minimal use. Some Mesquite, Palo verde, African Sumac
2. **Shrubs:** Minimal use. When used, they are used because of their unique shape, color, evergreen foliage, texture, flowers or fruit like Oleander, Cassia, Fairy Duster, Mexican Bird of Paradise, Rosemary
3. **Groundcovers and Vines:** Spring flowering wildflowers like African Daisy
4. **Accent Plants:** (major defining feature) Saguaro, Ocotillo, Prickly Pear, Barrel and other exotic cacti like Totem Pole Cactus, Organ Pipe Cactus, Joshua Tree, and various types of agaves and aloes
5. **Layout:** Deliberately organic and random. Specialty plants placed for maximum visual effect
6. **Ground plane:** Colored and uniform or artistically patterned decomposed granite or other rock surface
7. **Details:** Ornamental rocks and boulders. Western artifacts like wagon wheels, Saguaro skeletons, Cholla skeletons



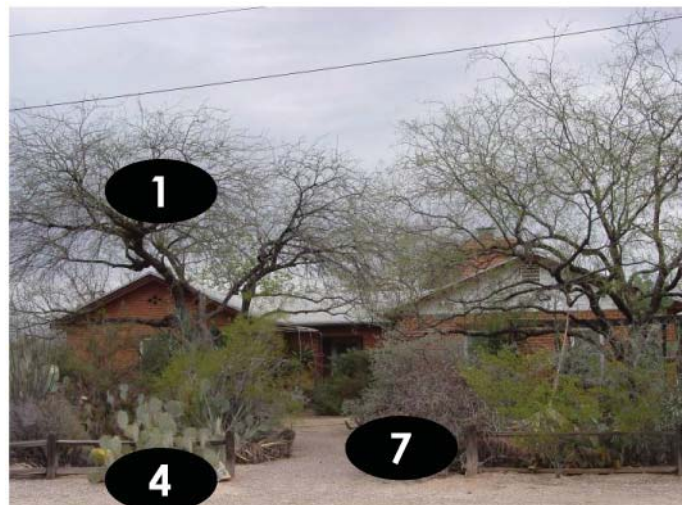


## Retained Desert

As appreciation and respect for the native desert ecology of the Tucson area grew so to did its incorporation into residential landscapes. Some neighborhoods with larger lots of at least one half acre, literally carved building sites and streets out of the natural desert. This typology is perhaps the most unique, as it can not happen anywhere else in the United States while it incorporates the Tucson area's uniquely dense and complex desert environment.

# Retained Desert

1. **Trees:** Palo Verde, Mesquite, Ironwood and other native trees
2. **Shrubs:** Creosote, Brittle Bush, Bursage and other native shrubs
3. **Groundcovers and Vines:** Little to none
4. **Accent Plants:** Saguaros, Ocotillo, Prickly Pear, Cholla, Barrel and other cacti and other native succulents
5. **Ground plane:** No turf. Native Desert ground plain of various colors, shapes and sizes of rock
6. **Layout:** Without design. Home placed within the natural elements of the desert
7. **Details:** Added Western artifacts like wagon wheels, Saguario skeletons, Cholla skeletons, split rail fences. Decomposed granite walkways and driveways





## Enhanced Desert

As the availability of drought tolerant and native plants grew, homeowners were free to convert previous landscapes of turf and ornamentals to landscapes that evoked and even enhanced the natural desert. A wide variety of desert adapted shrubs, accent plants, vines, perennials and annuals allowed for the creation of complex and ever evolving personal landscapes. These landscapes were based on the fundamental pieces of the Sonoran Desert like Palo Verde Trees and Saguaros, but are enhanced by more colors, textures and variety. These newly adapted plants allowed for all season visual interest.

# Enhanced Desert

1. **Trees:** Palo Verde, Mesquite, Ironwood and other native trees
2. **Shrubs:** Creosote, Brittle Bush, Bursage and other native shrubs; Cassia, Texas Ranges, and a variety of other drought tolerant species
3. **Groundcovers and Vines:** Myoporum, Morning Glory Bush, Lantana, Verbena, Cat's Claw Vine, and other drought tolerant species
4. **Accent Plants:** Saguaros, Ocotillo, Prickly Pear, Cholla, Barrel, Golden Barrel, Aloes, Desert Spoon, Agaves, and other cacti and succulents
5. **Ground plane:** Possibly small, contained turf areas, native Desert ground plane of various colors, shapes and sizes of rock and/or various colors and sizes or decomposed granite. Simplicity in color and choices per individual sites
6. **Layout:** Purposefully organic. Sense of foreground, mid-ground and background. Focal elements
7. **Details:** Simpler at the edges and more complex nearest outdoor living areas. Flagstone or decomposed granite walkways and driveways





## Remnant

This typology is perhaps the most common in Tucson as it is emblematic of shifts in taste, multiple property owners, water cost and availability. The resulting look therefore, combines remnant pieces and plants of typologies that required more water: Mediterranean Exotic and/or Pastoral. The remaining or remnant plants from these typologies were able to withstand reduced water either due to their drought tolerant habits or existing extensive root systems. These individual plants typically remain in an otherwise simple landscape where turf has been removed and replaced with decomposed granite.



# Remnant

1. **Trees:** Date Palms, Eucalyptus, Fan Palms, Pines, Olives, Italian Cypress, African Sumac, Arborvitae, Mulberry, some native trees
2. **Shrubs:** Bougainvillea, Texas Ranger, Pyracantha, Junipers, Cassia, Oleander
3. **Groundcovers and Vines:** Lady Bank's Rose, Cat's Claw Vine
4. **Accent Plants:** Ornamental grasses, succulents and some cacti
5. **Ground plane:** No turf. Decomposed granite or other rock ground material
6. **Layout:** Isolated plants surrounded by decomposed granite, some foundation plantings
7. **Details:** Sometimes delineation between driveways and planting areas. Flagstone pavers or sidewalks





# Recommendations

## Further Work Recommendations

As noted, a primary purpose of this survey is to identify those single family subdivisions which developed in Tucson in the period following World War II (WWII) that are eligible for listing on the National Register of Historic Places (NRHP) as historic districts. A district is a definable geographic area that contains a significant concentration of sites, buildings, structures or objects united historically or aesthetically by plan and/or physical development. The National Register criteria recognize that different types of values may be embodied in a district. Some districts may be significant for their associative value and linkage with important historic events or persons. Others may be significant for their design and construction and their representation of the manmade expressions of culture and technology. Additionally NRHP eligible post WWII subdivisions will possess integrity of location, setting, design, materials, workmanship, feeling and association

## Evaluating Integrity and Determining Eligibility

In evaluating integrity and making determinations of eligibility it is recommended that the subdivision development in its entirety should be considered. In those developments that consist of multiple contiguous plats, all plats and their component buildings should contribute to the historic district's significance, not just selected plats. Further, portions of a single or a two plat subdivision should not be considered eligible. The plats as they were historically recorded should serve as the geographic boundary for any proposed district.

At the onset of determining NRHP eligibility

for Tucson's Post WWII subdivisions, it must be recognized that there are hundreds of extant resources with thousands of single family homes that reflect the history and building practices of this era. The National Park Service Bulletins provide specific registration instructions for when numerous resources reflect the same areas of significance. In these instances, a comparative analysis must be done, and those resources that best reflect the historic context(s) in question should be considered eligible. Given the size of Tucson's resource population therefore, it is recommended that NRHP eligible postwar subdivisions should meet at least two of the criteria for significance. For example, a potential historic district could meet Criterion "A": association with events, or Criterion "B": association with important personages, and Criterion "C": Design/Construction.

Subdivisions which are potentially eligible only under Criterion "C" should also have integrity of at least two aspects of its physical characteristics such as the overall subdivision design, housing architecture, and/or its landscaping. Utilizing multiple significance criteria and strict assessments of the integrity components will result in eligibility determinations for those historic districts that do, in fact, best represent the contexts developed as part of this study.

## Categorize the Subdivision Population

The following steps for further study and evaluation of the post WWII residential subdivisions are recommended. First the population should be divided into logical subgroups that can be systematically studied and evaluated as part of

the annual work program of the Tucson Historic Preservation Office.

## Age and Chronological Development

One potential organizing method is to divide the population by their chronological development. This approach is recommended because change over time is a major influence on the physical form of the developments. Consequently, subdivisions that represent distinctly identifiable building eras should be evaluated together. The survey currently divides the population by five year increments. Research and field evaluations verified both changes in the forms of subdivision development practices and housing construction discernible approximately every five years.

Dividing the population into groups by age for further study could be done in several ways. The subdivisions could be sorted by the year that the initial plat was recorded or by the date that the houses were actually constructed. A combination of these two approaches might be most practical. First, identify the date of the initial plat, then overlay the dates of home construction with the population group related to the same five year period of study. For example, a large number of subdivisions were recorded in the period 1945-49. However, a review of the dates of construction of the homes within these early subdivision plats shows that many of them did not actually build out until the 1950s.

In studying the various age groups, it is important that the subdivisions with “like” characteristics be compared to one another to better judge the relative strengths of historic themes and architectural significance. As this study has identified, there are four general types of residential developments: “Basic, Typical Economy, Typical Upscale and Luxury.” The definition of these representative development types are based upon shared characteristics of house square footage,

number of rooms and bath fixtures. These development types illustrate the range of building that occurred related to local residents’ income and the growth and evolutionary stages of their family structure, as well as the building and marketing practice of the subdivision developers.

## Unique Characteristics

In addition to identifying those subdivisions that best reflect the representative practices and influences of the postwar era, it is also recommended that the population be studied to identify those unique characteristics that might set one subdivision apart from other subdivisions. For instance, a particular neighborhood might be considered eligible for its historic association with the life or career of an individual important to Tucson’s growth. Additionally, signature subdivision design features or the involvement of notable architects in a home’s design should also elevate the eligibility of one subdivision over another.

## Study Committee Creation

One approach that could be used to economically and efficiently undertake the next phase of survey would be for the Tucson/Pima County Historic Preservation Commission (HPC) to create a specialized subcommittee or committees to further study the postwar subdivision population. These working groups could include members of the HPC, interested citizenry, historic district residents and University of Arizona students. The committee could be organized into teams to conduct an initial review of the subdivisions within each of the subgroups. Experience in previous study has shown how working in small teams greatly facilitates the process of evaluating significance.

The teams would first field review the chronological and typological subdivision subtypes to gather information about their physical features, condition, and integrity. The applicable historic

context and associated significance theme would be identified. A numeric scoring system could be used to rate the subdivision's ability to represent and convey its significance. The scores should be ranked and a cut off point established for further consideration for NRHP or local designation. Summary statements should be prepared documenting the reason why those not considered eligible were eliminated. This will greatly assist in providing information for the National Historic Preservation Act, Section 106 process.

### Further Research and Field Analysis

Further research and more intensive field analysis should be conducted on the potentially eligible subdivisions. This population should be sorted again into two groups: 1) those subdivisions that are clearly eligible because of representation of multiple criteria and/or unique characteristics, and 2) those neighborhoods of which there are many of subdivisions that represent the same themes and areas of significance. Systematic study of these areas should be undertaken, perhaps involving the residents of these neighborhoods. Public outreach to ascertain the interest and support of the property owners for local or NRHP designation could also assist in ranking these subdivisions for further consideration.

These proposed work recommendations represents an ambitious commitment of time and effort over a number of years. However, by systematically studying the 304 post WWII residential subdivisions in this manner, a number of objectives important to the successful operation of the HP program will be accomplished.

- The HPC and their staff will be able to make informed decisions about which neighborhoods merit consideration for designation when they approach the fifty year threshold.

- These eligibility determinations will be based upon an understanding of the extent and nature of the postwar housing population based upon scholarly research and thorough analysis.
- As a result of this work, the HPC and HP staff will be able to articulate to the larger community and elected officials why these neighborhoods are important and warrant preservation assistance and protection.



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# Appendix A