



ARCADIA CAMELBACK SPECIAL PLANNING DISTRICT





ARCADIA CAMELBACK SPECIAL DISTRICT PLAN

Final City Council Adoption
June 16, 1999

City of Phoenix
Planning Department

ACKNOWLEDGMENTS



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ARCADIA CAMELBACK SPECIAL DISTRICT PLAN



Introduction

One of the most difficult challenges in a central city area is to maintain the vitality of its mature neighborhoods. Too often deteriorating forces such as property neglect, illegal land use, excessive rentals, cut thru traffic and a community laissez faire attitude result in neighborhood breakdown. They tear away at the soul of the neighborhood resulting in a loss of what once was a consistent and recognizable homogenous character.

The Arcadia Camelback area is a mature neighborhood within the Phoenix Central City planning area. Its setting (at the foot of Camelback Mountain), landscape character, and uniform quality of homes make it unique and an area worth maintaining. The Phoenix zoning provisions for a Special Planning District are designed to recognize the desired character of a neighborhood and identify strategies to maintain that quality and livability. See Appendix A: Purpose of a Special Planning District and Plan. The Arcadia Camelback Special Planning District location is within the northeast of the Camelback East Village as shown on Map 1: [Arcadia Camelback Special Planning District Vicinity](#). The District boundaries are from 44th to 64th Streets and the Stanford Drive alignment to Indian School Road as shown on Map 2: [Arcadia Camelback Special Planning District Boundaries](#).

The Central Arcadia Neighborhood Special District Plan was adopted by the City Council in 1987. This area was the southern portion of the larger Arcadia Camelback SPD. The boundaries of the planning area were 44th to 64th Streets and Lafayette Boulevard to the Arizona Canal. Several of the issues and recommendations addressed in the older plan are retained in the Arcadia Camelback document concerning encroachment of commercial land uses, increased traffic problems, and future flood control. The Central Arcadia Neighborhood Plan will be repealed once the Arcadia Camelback Special District Plan is adopted by the City Council.

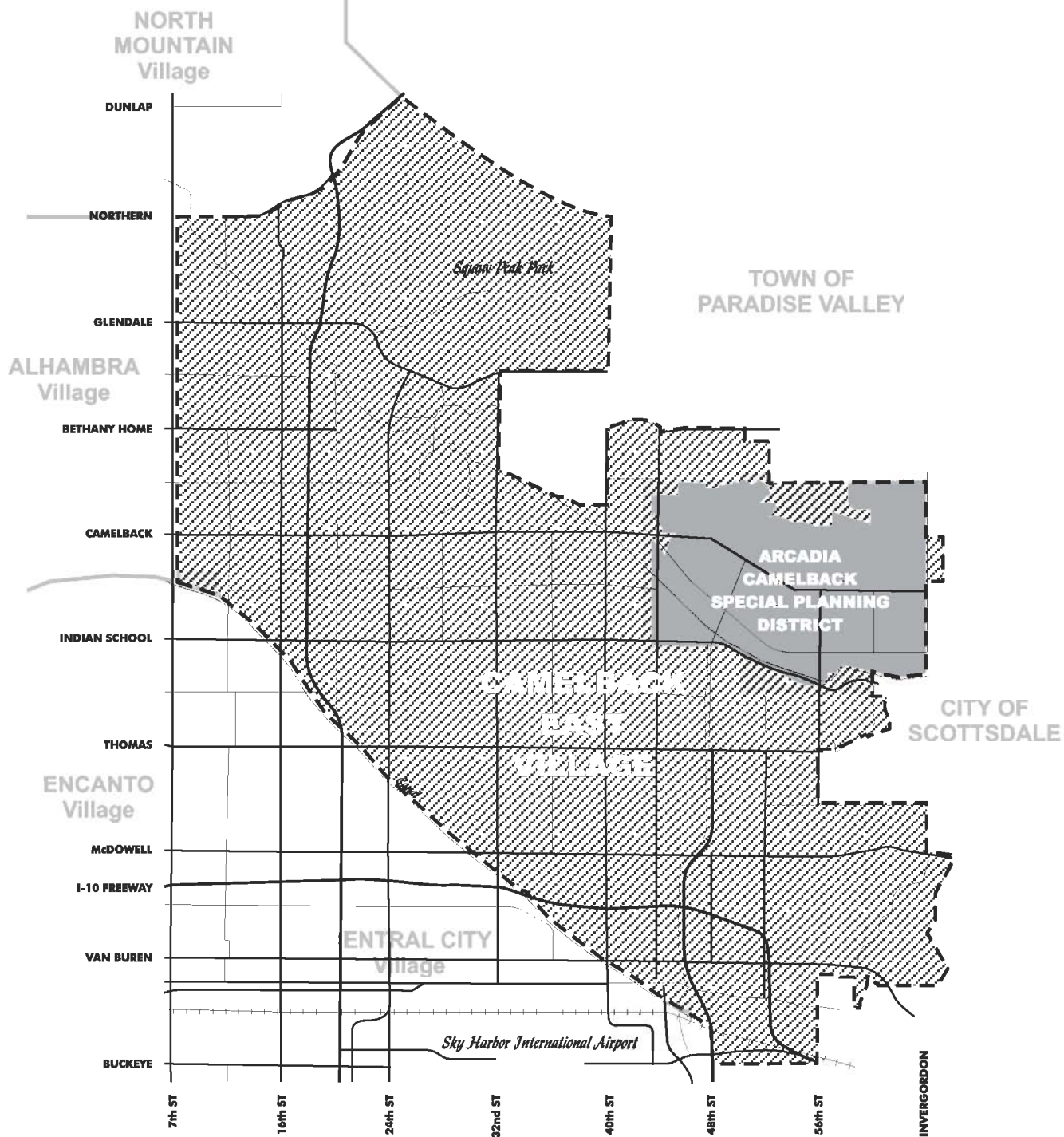
The Arcadia Camelback Special Planning District Plan is a policy document for the purpose of providing a consistent and ongoing planning program. The overall goal of the Special District Plan is to provide policies and preventive measures to sustain the residential character of this area. The General Plan shows predominantly 0-2 dwelling units an acre as shown on Map 3: [Arcadia Camelback Special Planning District General Plan](#). This density is to be maintained as a major policy of the Plan. It is the intent of this plan to preserve the current zoning in the area. However, as a policy document, the plan does not prohibit requests to modify zoning. Such requests should be evaluated with respect to their effects on the Arcadia neighborhood stability.

The Arcadia Camelback neighborhood is ideal for a special district plan for it is rich in history and has historically been an area where residents have been active to preserve what is good about their neighborhood. They have worked to improve other aspects of the district to make it a more distinctive and an attractive place to live. While the area typically has an older housing stock, it also has a higher quality of homes and higher average household income than the Camelback East Village or the





Map 1
**ARCADIA CAMELBACK
 SPECIAL PLANNING DISTRICT**
 Vicinity



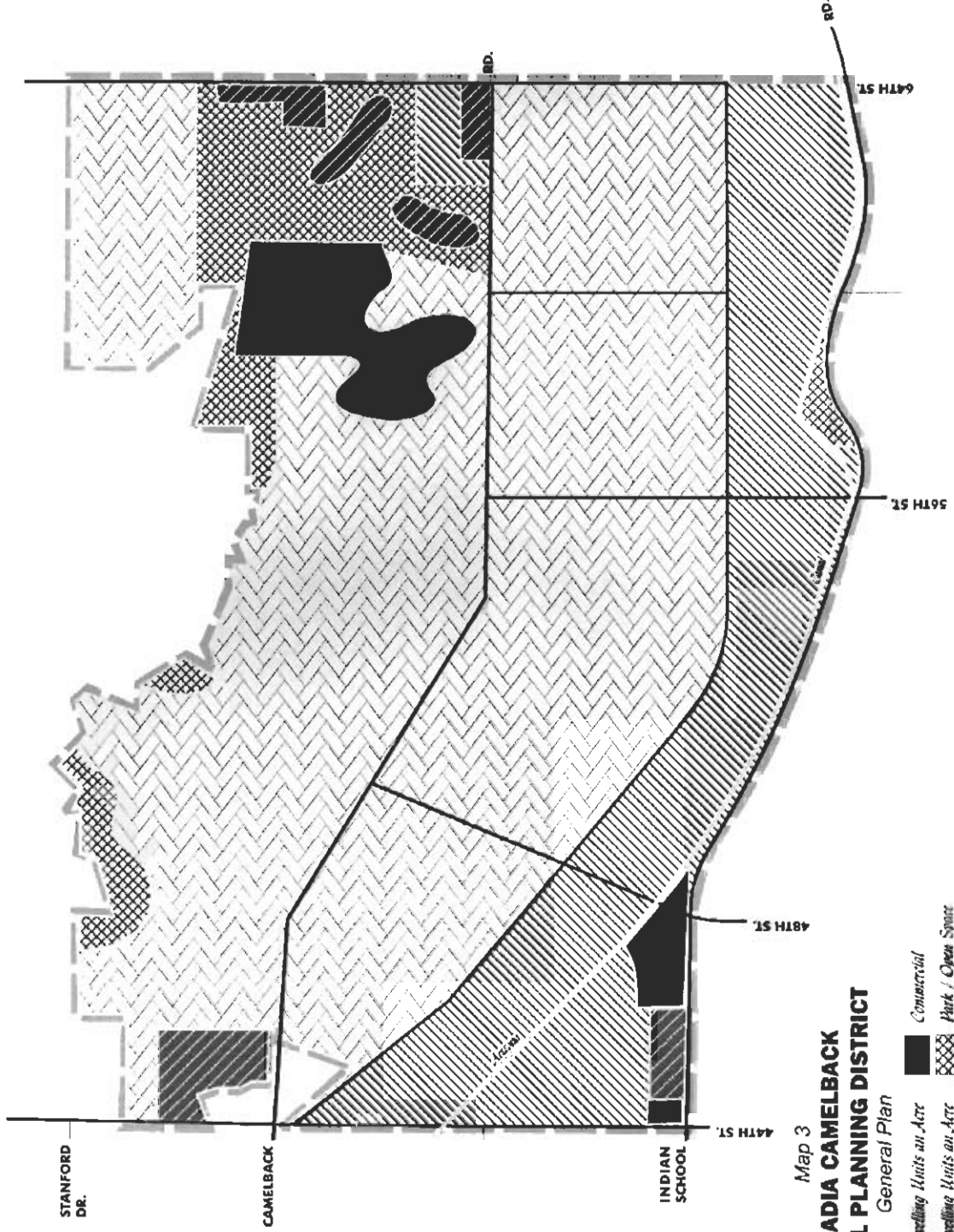


STANFORD
DR.

INDIAN
SCHOOL

Map 2
**ARCADIA CAMELBACK
SPECIAL PLANNING DISTRICT**
Boundaries





Map 3
**ARCADIA CAMELBACK
 SPECIAL PLANNING DISTRICT**
 General Plan

- LEGEND**
- 0-2 Dwelling Units an Acre
 - 2-5 Dwelling Units an Acre
 - 5-15 Dwelling Units an Acre
 - Commercial
 - Park / Open Space
 - Previous Special Planning District Boundaries

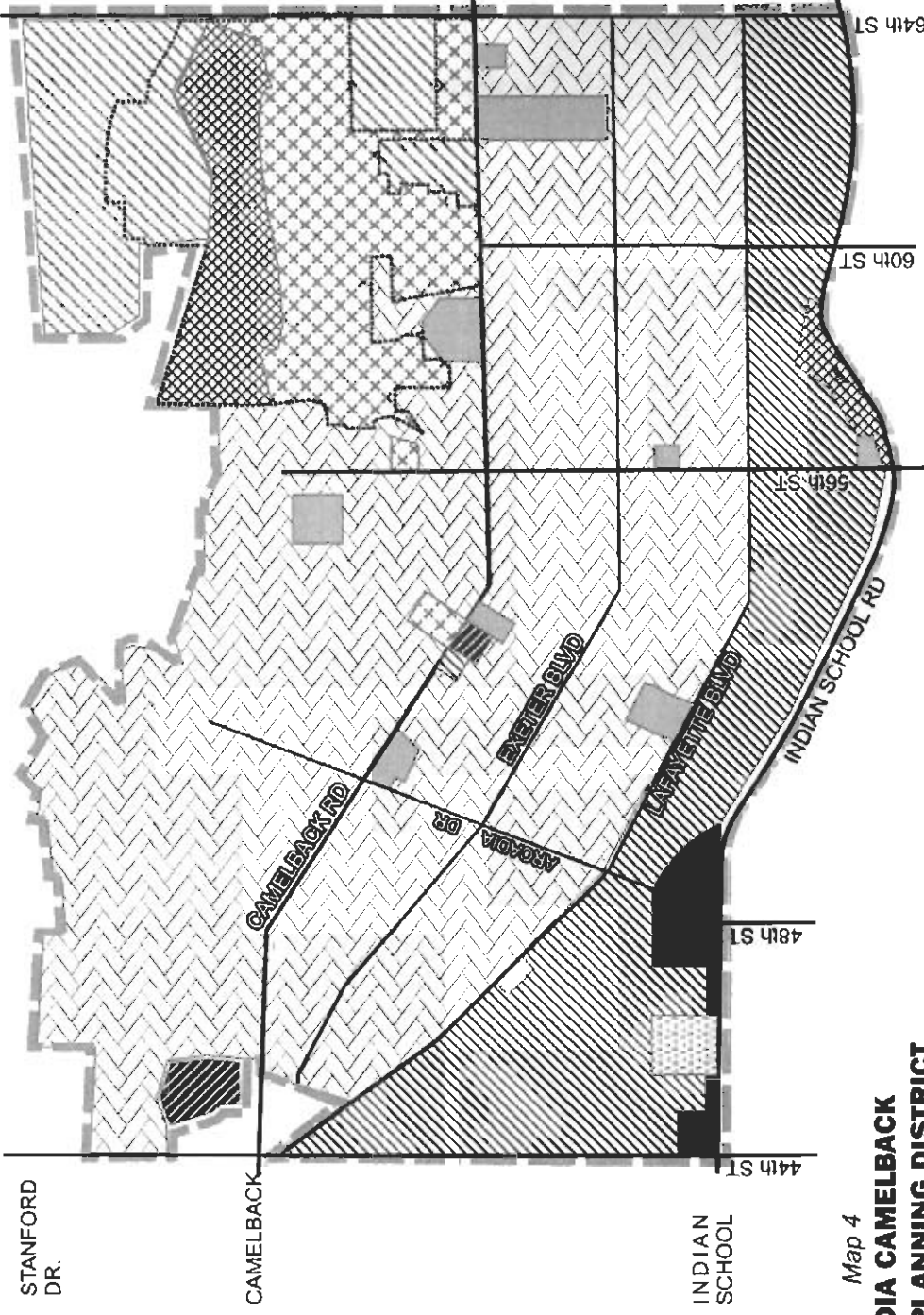




City. See Appendix B: Arcadia Demographic Profile for more information. This plan is a tool to help reinforce a stronger sense of pride and commitment to maintaining the Arcadia lifestyle while adding to the stability of the neighborhood.

Arcadia Camelback neighborhood is also served by existing business and commercial neighbors within its boundaries that serve to support the residential character of the area without detracting from it. See Map 4: Arcadia Camelback Special Planning District Existing Land Use, and Map 5: Arcadia Camelback Special Planning District Existing Zoning.



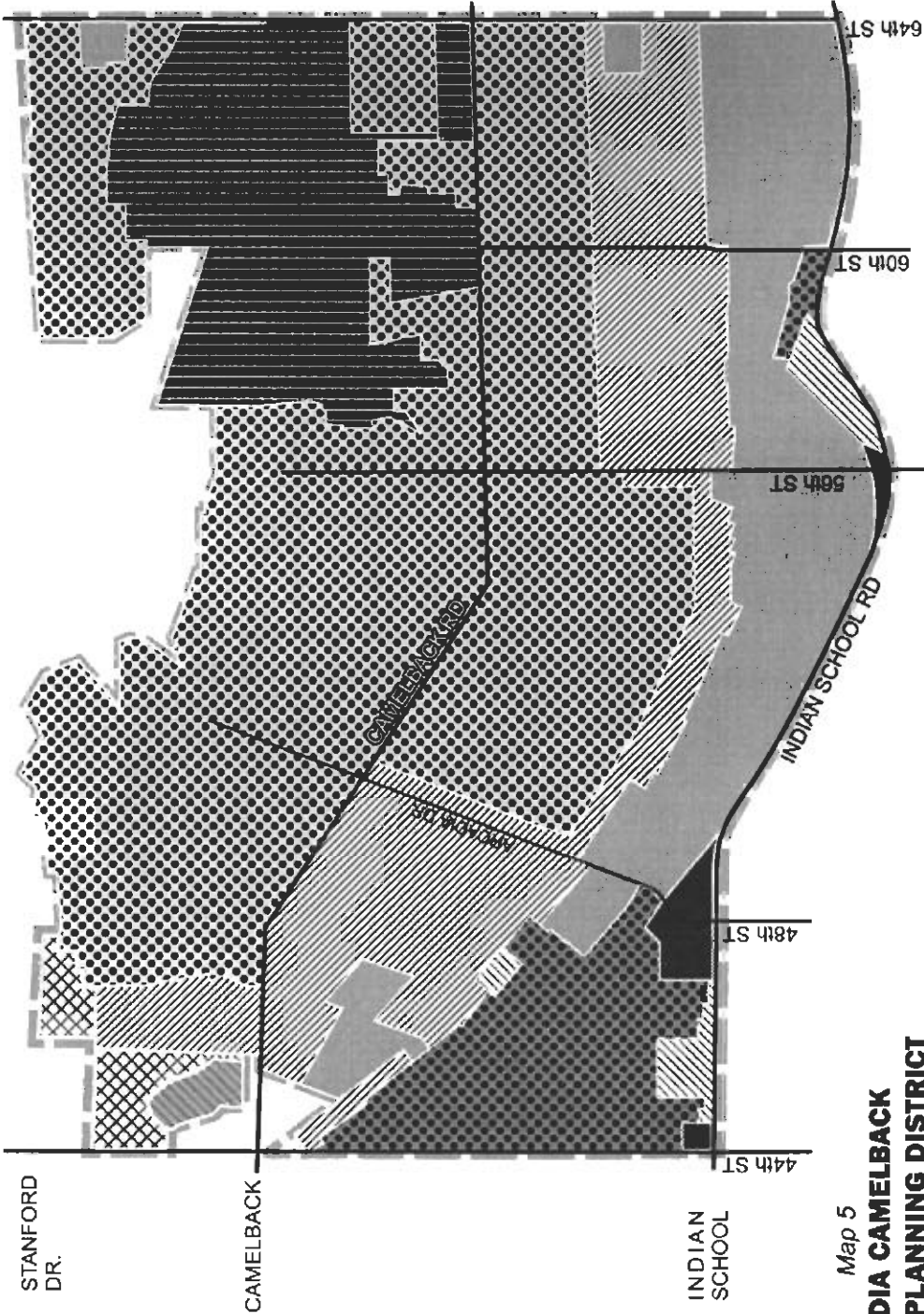


Map 4
**ARCADIA CAMELBACK
 SPECIAL PLANNING DISTRICT**

Existing Land Use

LEGEND	
	0-2 Dwelling Units an Acre
	2-5 Dwelling Units an Acre
	5-15 Dwelling Units an Acre
	15+ Dwelling Units an Acre
	Public / Quasi Public
	Park / Private Open Space
	Resort
	Commercial





Map 5
**ARCADIA CAMELBACK
 SPECIAL PLANNING DISTRICT**
 Existing Zoning

LEGEND

	RE-18 & -35		C-1, C-2, C-0		P.A.D. 9
	RE-24		RS-A, R-4, R-5		Proposed Special Planning District Boundaries
	R1-18 & -14		RH & PCD		District Boundaries
	R1-10 & -6		P.A.D. 4		





PLAN RECOMMENDATIONS

The overall goal of this plan is to provide direction on various issues to create a positive impact and a proactive neighborhood support program. This goal coincides with the desire to preserve and enhance the Arcadia Camelback residential character. There are three major interrelated issues that form the basis for this plan. These interrelated issues are: 1) Interior Neighborhoods, 2) Camelback Road Land Uses, and, 3) Resort Uses.

To provide direction from the community, the Arcadia Camelback Special Planning District Neighborhood Committee was formed following the initiation of the preliminary District boundaries by the City Council. The Neighborhood Committee consisted of several individuals from the Camelback Road property owners, representatives of the Arcadia Camelback Homeowners Association Board and representatives from the Phoenician Resort. It was this group that was involved in many discussions concerning the major issues in this Plan. (See [Appendix G: Special Planning District Neighborhood Committee.](#))

The general format of the plan is to provide an analysis of the three issues listed above, followed by proposals or issue recommendations. In addition, specific goals and objectives are stated for the Interior Neighborhood section. The appendices provide further background and detail of the plan.

1. INTERIOR NEIGHBORHOODS

Within the planning area, issues dealing with the stability and function of the interior of neighborhoods are noted by residents as being very important to meeting the goals of this plan. Following each identified issue are the goal and objective statements and a series of recommendations.

A. Neighborhood Traffic Mitigation

Most of the issues regarding traffic mitigation result from the impacts of cut through traffic from major streets such as 44th Street, 64th Street, Camelback Road, or Indian School Road. They increase the use of Lafayette Boulevard, Arcadia Drive, and Exeter Boulevard causing hazardous safety and speed conditions. See Map 6: [Arcadia Camelback Special Planning District Street Classification](#). See Appendix I: Current Street Network for a description of each road's improvement status.

Goals

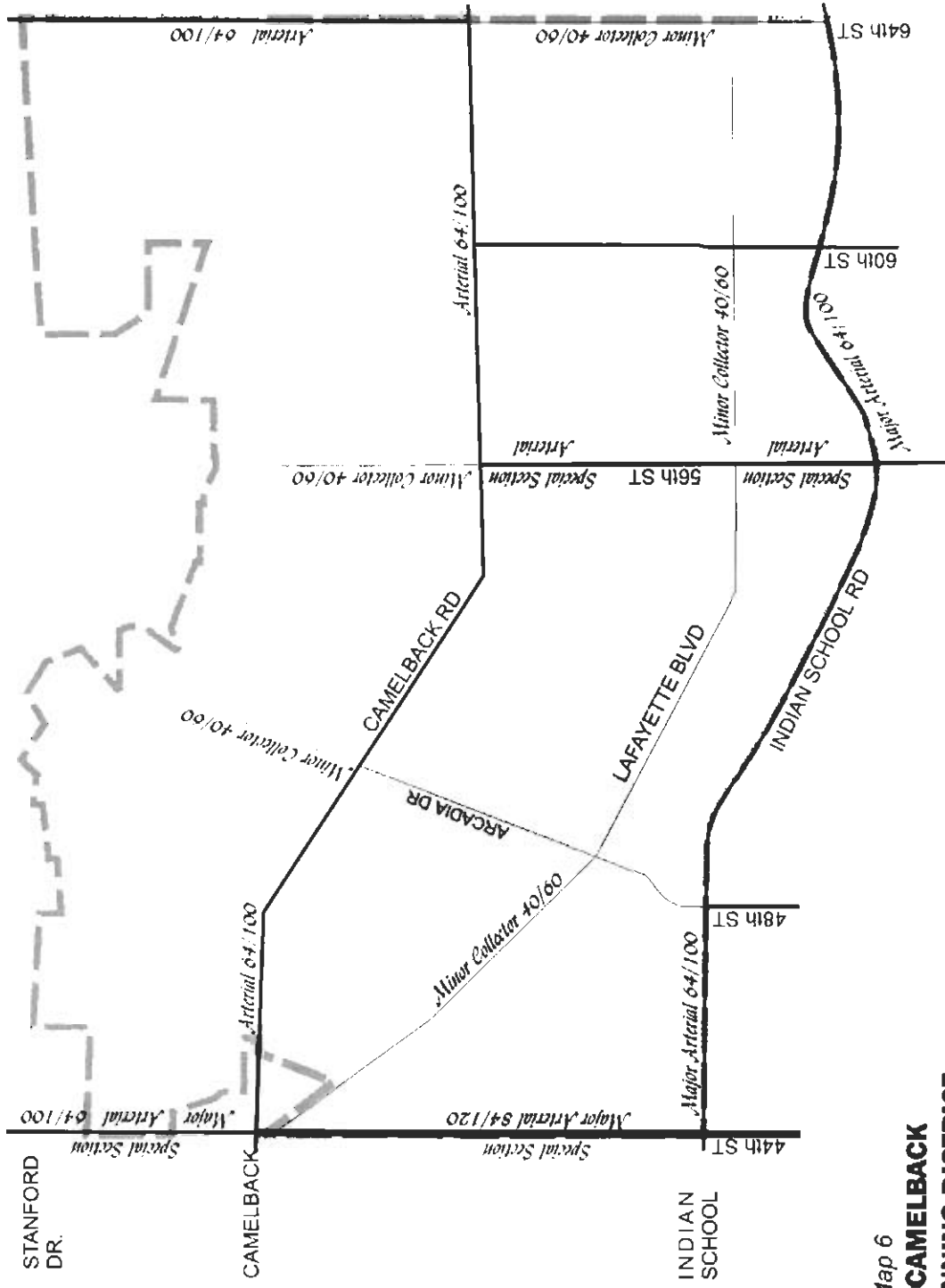
To protect the integrity and character of the neighborhoods by maintaining the distinct and appropriate function of the major, local and collector streets.

To preserve the south slope of Camelback Mountain from unsightly intrusions of roadways and lighting.

Objectives

- Prevent major cut through traffic on all local and minor collector streets in the neighborhood.





Map 6
ARCADIA CAMELBACK
SPECIAL PLANNING DISTRICT
 Street Classification



Street Width
 0/0 = Curb to Curb in feet / Total Right-of-Way





- Minimize traffic noise.
- Require increased speed enforcement in the neighborhood and in some locations the reduction of the speed limit.

Recommendations

- Involve the City’s Street Transportation Department to develop strategies for cut through traffic, traffic calming, and interior street maintenance.
- Study pavement surface treatment for noise control through the Street Transportation Department or a consultant. See Appendix J: Current Street Repavement Program.
- Consider roundabouts as one of the many options available to “calm” traffic on neighborhood local and collector streets when traffic is excessive.
- Study locations considered Special Planning District Gateways to place specialized signage such as “Residential Area: Speed Laws Strictly Enforced”. Some suggested intersections to consider are 45th and 64th Streets on Camelback Road, 56th Street at Indian School Road, 48th Street at Indian School Road, Sage on 64th Street. Other suggested key intersections are Arcadia Drive at Lafayette Boulevard, Jokake Road at Lafayette Boulevard, and Camelback Road at Arcadia Drive.
- Enforce the speed limit on Camelback Road to conform to the character of the proposed Special Planning District rather than using standard methods of determining speed limits.

B. Street and Public Utility Improvements

Street improvements, whether they are local, collector or major streets, have a significant impact in upgrading the circulation and safety for neighborhoods. With improvements to major streets, there is less inclination for traffic to cut through neighborhoods.

Goal

To create a continuous interrelated street system and circulation network which is appropriate and user friendly for vehicles, pedestrians and alternative modes of transportation.

Objectives

- Encourage the improvement and/or construction of bicycle and pedestrian facilities.



- Enforce speed limits on major streets where they go through the residential neighborhood.
- Design and construct drainage facilities to improve Arcadia drainage.
- Encourage major street designs to be done in a way which discourages cut through traffic in the neighborhoods.

Recommendations

- Involve the City’s Bikeway Task Force in the review of the locations for pedestrian and bicycle trails for 56th Street, Arcadia Drive, Lafayette Boulevard and the Arizona Canal. See Map 7: Arcadia Camelback Special Planning District Existing Bikeway System.
- Enforce the City’s Visibility Requirements for Landscaping Corner Lots to limit vegetation at intersections within the neighborhood and to insure good visibility.
- Support a resolution for the Arcadia drainage system by Maricopa County Flood Control District and the City of Phoenix. See Appendix K: Alternatives to Solving 100 Year Flood Plain Issues.
- Work with the City of Phoenix and the Maricopa County Flood Control District to approach FEMA with the goal of eliminating the 100 year flood plain designation for all or most of the homes currently designated to be in the 100 year flood plain in the Arcadia area based on remedial measures taken since 1972.
- Improve appearance of the Arizona Canal by working with SRP and/or City to provide park-like amenities along the canal.

C. Neighborhood Identification

One of the more effective ways to preserve the character of a neighborhood is to distinguish it from other areas. The Arcadia Camelback neighborhoods are truly unique, known for their citrus orchards and unique irrigation system, and include many representations of historic Phoenix “ranch” architectural styles and landscaping that date back to the early 1950’s. This identification should be enhanced through different means.

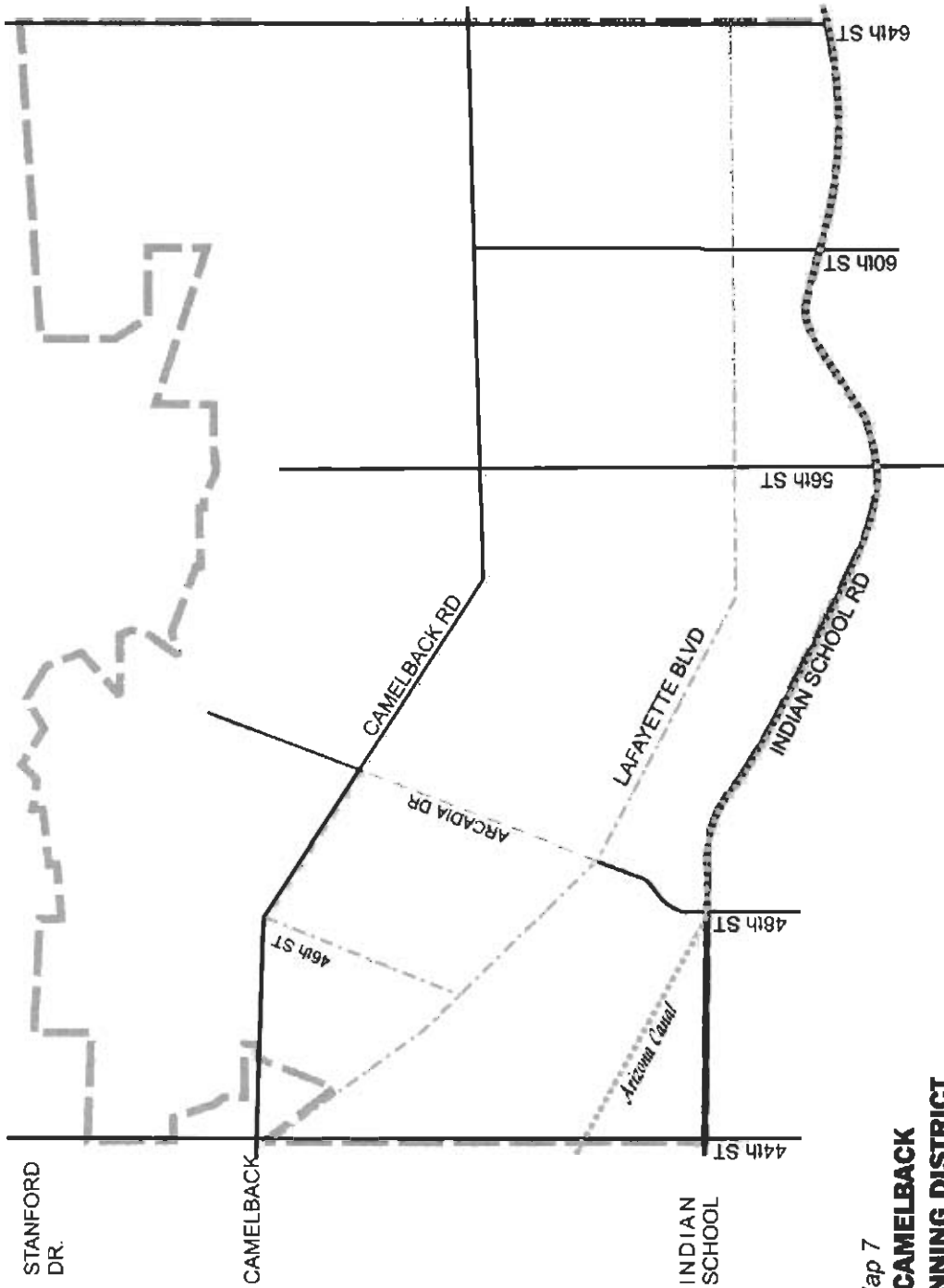
Goal

To encourage the unique identity of the Arcadia Camelback neighborhoods.

Objectives

- Create distinctive signage at gateway areas.





Map 7
**ARCADIA CAMELBACK
 SPECIAL PLANNING DISTRICT**
 Existing Bikeway System
 1996-1997
 *Bike Path Unpaved*
 (Arizona Canal Bank)
 - - - - - *Bike Lane*



- Support all signage in the area to be low profile and in keeping with the character of the Arcadia area.
- Encourage a design competition and invite artists, architectural students, and other designers to submit ideas for benches, entrance markers, landscaping and other installations which would unify appearances of the neighborhood and create a unique identity for the Special Planning District.
- Encourage the design and construction of distinctive bus stop shelters.
- Encourage the retention and maintenance of landscape material historically associated with residential parcels in the special Planning district.

Recommendations

- Support removal of obsolete and nonconforming signs at the time of receiving building permit approval along 44th Street and Indian School Road.
- Have the Arts Commission and Public Transit Department assist the SPD neighborhood with developing the design of the bus stop shelters.
- Through revegetation and landscape, support the use of plant species historically found in the area, with specific emphasis on retention or replacement of citrus trees.

D. **Zoning Enforcement**

It is critical for any mature neighborhood like Arcadia Camelback to strongly enforce the zoning laws to prevent potential blight problems. This includes the prevention of property neglect, illegal land uses, excessive rentals, removal of abandoned vehicles, and other neighborhood upkeep issues. This plan does not prohibit requests to modify zoning. However, such requests should be evaluated with respect to their effects on overall neighborhood stability.

Along 44th Street, the high traffic volume and single family homes which have small front or side yard setbacks affect the quality of residential living on that street. Conversion to residential office use or a higher density residential are options to consider and subject to the rezoning process.

Goal

- To enforce all zoning laws.

Objectives

- Adhere to strict enforcement of stipulations agreed to by proponents of and successors to prior zoning changes.





- Prevent any new commercial development to be permitted except along 44th Street.

Recommendations

- The guidance of the 44th Street Corridor Specific Plan, and the Residential Office (R-O) Guidelines which was prepared by the Camelback East Village Planning Committee, shall apply to locations considered for new commercial development along 44th Street.
- In any residential office setting (R-O zoning) along the 44th Street Corridor, present zoning regulations should be allowed to be modified so that:
 1. Building height for new offices shall be restricted to one story (15 feet) above natural grade.
 2. An eight (8) foot wall should be allowed for side and rear yards between new office construction and existing residential development.
 3. Vehicular access for new development requiring rezoning should be confined to 44th Street.

E. Neighborhood Involvement

There should be a coordinated effort to inform the neighborhood of various City activities including zoning requests. This keeps the neighborhood alert and depending on the format, creates a linkage to various neighborhood block leaders who might have information to share regarding the community issues.

Goal

To encourage existing neighborhood networks and future organizations to communicate about various City activities.

Objectives

- Encourage the discussion of a neighborhood communication system with residents on all rezoning requests.
- Encourage regular communication with the City police that operate in the Arcadia neighborhood.

Recommendation

- Support an annual meeting with the Squaw Peak Precinct. The meeting should be held for the purpose of conducting a dialog with the police concerning such items as cut through traffic, accident reports, traffic speed, the use of photo radar, and other appropriate issues.



2. LAND USE ON CAMELBACK ROAD

Both a physical and visual inventory of the 104 properties along Camelback Road was prepared for this plan. Appendix M: Camelback Road Adjacent Property Site Design Inventory provides this assessment and groups the properties into site design themes based on the properties' setbacks, acreage, driveway location, walls, and house orientation.

There was a significant amount of discussion from property owners fronting on Camelback Road which focused on the issue of whether residential uses can remain viable while adding variations of residential uses other than the traditional large lot single family or whether non-residential uses, compatible with adjoining residential homes, would be the only viable uses in this area. The process to address this issue required following one of two policy approaches, either:

- a) To preserve the residential character of the entire Camelback Arcadia study area by maintaining the existing low density single family dwellings along Camelback Road to encourage the retention of that character, **or**
- b) To accept a modified residential character for Camelback Road and to propose uses that can effectively transform that street while preserving compatibility with adjacent homes.

LAND USE RECOMMENDATION

The task of recommending Camelback Road land uses hinges on balancing the goals of maintaining the quality and integrity of homes throughout the Arcadia Camelback area against the unique circumstances found with properties abutting Camelback Road. The former policy approach is recommended, to preserve the residential character for the entire area. The primary land use will continue to be single family homes on large lots both now and in the future. After studies and field research evaluating the alternatives, it is felt that the entire neighborhood would be best preserved by maintaining the existing single family character and density along Camelback Road with mitigation features to reduce the impacts from the road.

There are factors that make maintaining residential uses and character on Camelback Road difficult, particularly coping with noise and traffic volume. (See Appendix L: Traffic Volume Trends). However, this recommendation is based on two factors. 1) There is a low probability of successfully converting residential properties to alternative uses that meet the stated goals of compatibility. 2) Wall treatment as a mitigation measure will minimize traffic impacts on Camelback Road. It is recognized that each of these properties will still remain impacted by their location adjacent to the major street, but they can be mitigated to a sufficient level to maintain their desirability for residential uses.

Based on a detailed lot by lot analysis of properties adjacent to Camelback Road, similar land use patterns in other locations and observation on the market for changing areas of land uses, following are the factors that argue against conversion to non-residential or medium density residential uses.

Factors Against Conversion to Non Residential or Medium Density Residential Uses:

- High initial property values substantially reduce the economic feasibility for conversion of existing homes to offices, particularly when in competition with large amounts of available, zoned land.
- There are no examples of successful conversion of such a large area, two lineal miles, to alternative uses. The number of available properties for conversion to R-O zoning is greater than the number of such cases city wide over a multi year time frame.
- If a policy for conversion were adopted, the transition time would be lengthy. This could lead to deterioration and blight in properties available for conversion but not yet bought. This occurred in the Willo area until the plan set policies for the commercial boundaries. There would no longer be an incentive to maintain residential properties waiting for purchase for redevelopment.
- High residential property values argue against land assemblage for larger commercial projects which would compete with already zoned but vacant land, priced at raw land values.
- Without penetrating into the adjacent neighborhood, assemblage of middle sized, 5-10 acre, office or residential projects would be unlikely or result in difficult to develop parcel configurations.
- Public design review standards do not have the degree of design control to ensure the uniform design features or desired quality to assure a transition would result in the desired design character for non residential uses.

Factors that argue for maintaining residential uses on Camelback Road:

- Not all properties are equally impacted. All lots are of at least one acre in size, among the largest fronting on any major street in the metropolitan area.
- Many lots have mitigating factors; generous front yard setbacks, often 75 feet or more, frontage roads, access to side street or are oriented to internal neighborhood streets.
- The plan's proposed noise wall policy can help to visually buffer homes fronting to the road while reducing traffic noise.
- New construction and upgrading continues on the lots abutting Camelback.

In summary, homes fronting on Camelback Road do have factors resulting from this orientation that interior homes within the neighborhood don't have. However, it has been shown that most of the homes along Camelback Road have mitigation features such as lot size or orientation, and deep setbacks and can be further improved with additional noise mitigation. This observation is supported by the low level of vacant or blighted homes and the very high quality of maintenance on the vast majority of homes fronting on Camelback Road.

A. Noise Mitigation: Camelback Road Properties

Noise and accessibility are perhaps the most significant impacts on maintaining liveability in dwelling units adjacent to major streets. In the case of accessibility, it is recommended that additional access points to properties or extensions of frontage roads be made where possible and in conjunction with new platting. Noise is a more pervasive issue since there are only limited things that can modify the traffic volumes and speeds which translate into noise impacts that radiate from the street.

Urban areas are noisy. One of the prices we pay for the convenience of mobility in cities is an elevated noise level that results primarily from traffic. Even within the interior of neighborhoods, background noise levels are higher than in the traditional “country setting”. It is against this background of generally elevated noise that the impacts from major streets is judged.

There is no feasible way to reduce traffic noise to background levels everywhere. Since traffic is the single most significant generator of community noise and since its level is principally related to the number of vehicles and their speed, traffic noise levels are closely tied to the street hierarchy.

In the Camelback Arcadia plan area, the most significant location where residences are impacted from relatively high noise levels is near Camelback Road. Although not carrying the highest traffic volumes of Phoenix major streets, volumes combined with relatively high traffic speeds contributes to sound levels above desired norms.

There are no absolute standards for acceptable community noise levels. People’s responses to noise vary as much as individuals vary. Recognizing that people near major traffic carriers, such as major streets or freeways, will have higher base noise levels, the most commonly used goal for outdoor noise in these areas is 65 decibels, averaged day and night. This means that the passage of an individual vehicle may emit more noise than that level, but that quiet periods will reduce the average.

When noise levels near the street are found to be in the high 60's or into the 70 decibel range, mitigation should be considered if it is desired to reduce the noise level near the outdoor or indoor living spaces of adjacent homes. The appendix describes the mechanics and options for noise mitigation in some detail.

In the vicinity of Camelback Road, the most feasible mitigation technique will be erection of sound barrier walls. This section will describe the options proposed for mitigation walls.

1) Existing Wall Policies and Regulations

Wall heights are regulated by their location on a lot, with different standards for the required front yard setback and within the side or rear yard of a lot. Facing Camelback there are both these circumstances. Some homes front on

the street, others side or back onto it. For those in the latter category, six foot high walls are allowed.

In front yards, three foot high fences are allowed by right, although for homes fronting on major streets, walls may go to 4 ½ feet with a Use Permit approval. If a higher wall is approved, it must also leave a “view triangle” 10 feet deep and 20 feet along the street frontage wherever driveways enter the major street.

Variations from the ordinance height limit may be requested, but it is often difficult to justify the requirement to demonstrate that, on a specific parcel, there is the basis for a variance while the neighboring property must maintain the code height limit. For this reason, a proposed Camelback Road zoning overlay is proposed to allow for over height walls for noise mitigation. The overlay would allow mitigation walls “by right” and would set the process for their review and approval. The overlay district would also set the design standards for the over height walls so that those erected would maintain the high quality of design and landscaping that characterize both the street and the area.

2) Summary of Camelback Road Noise Survey Results

To reflect the varying physical settings of residential properties abutting Camelback, the noise survey categorized properties as one of four classes: 1) homes fronting on Camelback, 2) homes fronting on a neighborhood side street, 3) homes buffered by having a frontage road or backing onto Camelback, or 4) homes having a significant sized lot and setback.

A noise analysis was performed for sample properties in each category and for homes with and without existing walls (see Appendix N).

Noise measurements were taken roadside at peak noise times of the day. Calculations were then made for what the noise level would be at each sample location for the noise level on the property at the building setback line assuming three conditions:

- a. 4 ½ foot high wall placed at the right of way or front property line,
- b. Six foot high wall, set 15 feet back from the property line and,
- c. Eight foot high wall set 19 feet back.

Appendix N: the table entitled Camelback Road - Private Walls as Noise Walls notes that if there is an existing wall, calculations were made as if the existing wall was replaced in turn by each of the three test walls.

Traffic noise at the street edge ranged in the high 60 to mid 70 decibel range. As might be expected, all of the walls reduced noise levels, with the eight foot high wall being the most effective. In most cases it is possible to reduce the noise to or below the 65 decibel goal. The issue becomes acceptability of the noise walls to individual property owners and the visual effects on the appearance and landscape of walls along Camelback.

Considering acceptability of noise walls to property owners, we must recognize that noise levels for homes on a major street will remain higher than for interior neighborhoods, maybe still higher than desired. This survey was taken at a single point in time. Variations in traffic and traffic conditions will change noise levels over time. However, this survey gives a good approximation of the general and relative noise conditions in this area. Traffic growth could change noise, but often higher volumes are accompanied by offsetting slower speeds. Thus, these numbers will give a good indication of the relative amount of mitigation possible by the use of noise walls.

3) Mitigation Wall Policy Recommendation

Additional wall height can clearly increase liveability of homes adjacent to Camelback Road. They will reduce noise, add privacy and add protection. Current ordinance standards limit the height and placement of walls. We recommend that the major element of an overlay zoning district applying to Camelback Road properties would provide for these new walls by right, that is without needing a special review and approval.

Not every property owner will wish to place a noise wall on his property. To some, the noise level is not as significant as it is to others. The choice should be left to the individual property owner as to whether to take advantage of a noise wall, or whether to trade off lesser mitigation from a lower wall at the front property line for greater mitigation with a higher wall farther into his property.

Erecting higher walls on a residential character street can alter the traditional street front appearance, and alter the historic Arcadia character. Thus, we recommend that if wall allowances are made, standards be included to help ensure that walls will reflect area design elements, maintain the intensity of landscaping found along Camelback Road, and provide variety and articulation that will prevent a uniform, sterile appearance.

Following are suggested design standards that would apply to walls:

Over height Walls in Front Yards: (Appendix N: Private Walls as Noise Barriers provides a detailed explanation of the process used to determine wall height to mitigate noise.) The following recommendations are based on a noise study conducted on ten properties along Camelback Road. Private 4 ½ foot walls are now permitted on the property line with a Use Permit. A policy allowing 6 feet to 8 feet high private walls along Camelback Road should be based on the following design criteria:

- a. A six foot high wall shall be allowed on any property line abutting Camelback Road, subject to providing required visibility triangles at street intersections and at driveway openings.
- b. Landscaping placed outside walls should be similar to existing Camelback Road landscaping themes. The property owner will be responsible for the maintenance of this landscaped area.

- c. Additional heights of walls may be permitted, so long as for every foot of additional height, the wall is set back from the property line by four feet.
- d. Setbacks provided in conjunction with c, above, may be averaged so that for the entire width of the subject property, an average setback is maintained.
- e. Except as provided below, wall height increases shall not be allowed beyond those which require a setback equaling one half of the required side, rear or front yard setback at that location.
- f. Additional wall heights, beyond those specified above, may be allowed upon approval of a Use Permit and upon a showing that average noise levels in either rear yard areas or portions of a lot beyond the front of the dwelling will exceed 65db when determined in accordance with current standards issued by the U.S. Department of Housing and Urban Development.
- g. The wall shall consist of a masonry material and the design shall include the following features:
 - A cap or decorative reveal at the top of the wall.
 - Columns set off at all wall openings to create a finished appearance
 - The block wall should be designed to integrate with the design of nearby walls
 - For every 30 feet of wall, there should be offsets or columns to break up the straightness of the wall.
- h. Wall heights on sloping land shall be determined by standards contained in Section 703 of the Zoning Ordinance.

B. Camelback Road Overlay District

It is recommended that a Camelback Road Overlay District be established to provide the framework and/guidance to allow the 6 foot and 8 foot wall provision as described in the Camelback Road Mitigation Wall Policy recommendation.

C. Camelback Road Widening

Neighborhood concerns about proposed widening of Camelback Road traffic resulted in a concept plan adopted by City Council in the late 1980's for a limited widening and upgrading of the street through the study area. The plan envisioned flaring the four lanes to six at signalized intersections, providing a raised median, widening lanes to standard widths, opening up sight lines at the curves and adding sidewalks. This plan was the result of negotiations with the neighborhood to minimize the impacts that a fully enlarged arterial street would have on existing abutting properties and the characteristic

landscaping. Subsequent to that action, the Street Transportation Department has made several of the safety improvements, but the street remains essentially as a four lane, unimproved arterial.

To evaluate the proposed plan, citizen committee members, abutting neighbors and city staff conducted a field evaluation of the entire plan and its impact on abutting properties, and existing landscaping. Their general conclusion was that, even in its limited scope, the plan would have an intrusive and negative impact on these properties and landscaping. Following is the consensus recommendation for Camelback Road:

1. That improvements not be made that require widening the existing travel lanes or median or adding turn or merging lanes.
2. Because pathways are available within the interior of the neighborhood and based on safety concerns, sidewalks should not be included in any street improvement plans.
3. That all practical safety improvements be made.
4. That a major street landscape enhancement and maintenance program be initiated.
5. That the recommended Flood Control District drainage plan be initiated and linked with the program for enhancement of the major street landscaping.

3. RESORTS

Many locations north of Camelback Road have historically been associated with resorts and guest lodges. Presently the area is occupied by two resort facilities, the Royal Palms Inn and the Phoenician Resort.

The Royal Palms Inn, the smaller of the two, primarily focuses on guest lodging, dining and some recreational activity. The inn is a nonconforming use since it was built prior to the area's annexation. If the owners of the Royal Palms, with expressed intent, were to discontinue the resort use for 1 year, the property would revert back to the underlying zoning of RE-35. Recently, the adjoining executive golf course on the west side of the site was sold and replaced with the Royal Palms Estate Subdivision.

The Phoenician has become a major multi use destination facility offering tennis, swimming, spas, and golfing on a 27 hole course. Physically the Phoenician integrates well with the community through setbacks, landscaped buffering and control of access at its perimeter. The underlying zoning is PCD (Planned Community District). As new development is approved the PCD is amended and replaced with specific zoning pertaining to the use such as RH (Resort Hotel).

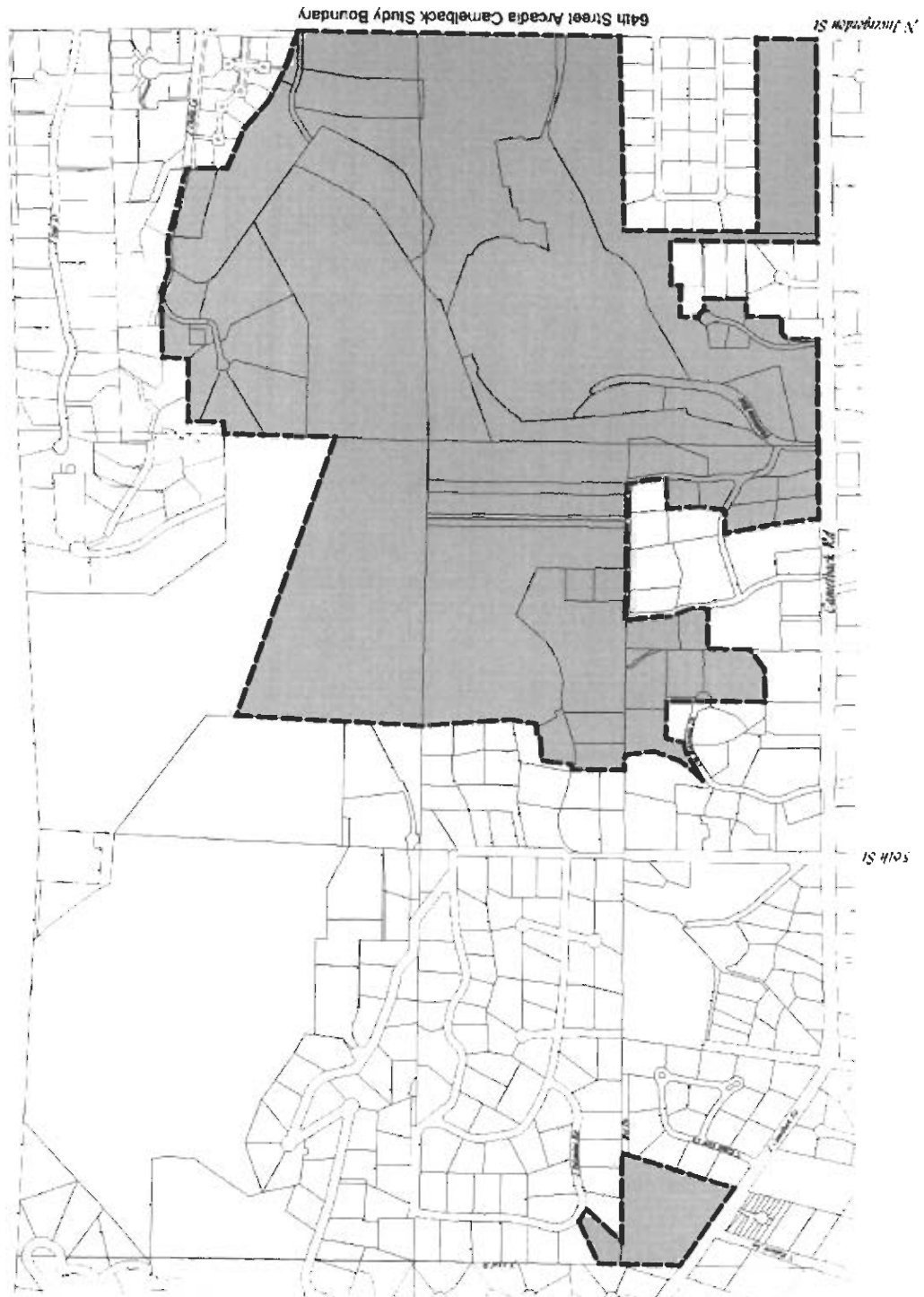
These resorts are significant operations. Currently, they are compatible land uses within the overall residential character of this community. However, this compatibility must be maintained to avoid future negative impacts. Therefore, the principal thrust of this plan pertaining to resort use is to provide some level of certainty as to their boundaries and perimeter activities. The proposed policies, below, are designed to create this predictability by defining resort boundaries, limitations on resort use adjacent to outside residential properties, and control in



public access. The following recommendations are suggested to be included as policies.

Recommendations

1. Present boundaries designating the resort land use areas are mapped in the plan. See Map 8: Arcadia Camelback Special Planning District Resort Master Planned Area.
2. Structures to facilitate the use of the golf course shall be designed to minimize their visual impacts.
3. Access to activities within the resort should be from an internal street system. Existing entrances at Camelback Road and at 64th Street are to continue to be the main public access points.
4. Recognition is made that development entitlement remain within the current master planned resort zoning approvals. If any new plans are proposed relating to the property within this area, they should include standards to ensure compatibility with the surrounding area.
5. If any new plans are proposed for the resort property, they should go through the required public hearing process.
6. Any new development will continue the earlier standards established by the resort including underground utilities, shielding light and noise, traffic impacts, and property maintenance.
7. All perimeter fencing and landscaping should be acceptable to the neighborhood.



LEGEND

--- Resort master Plan Area Boundary



Map 8

**ARCADIA CAMELBACK
SPECIAL PLANNING DISTRICT**
Resort Master Plan



Appendix A

Purpose of A Special Planning District and Plan

A Special Planning District is intended to provide property owners the opportunity to initiate and implement programs for the conservation and/or revitalization of neighborhoods. The district takes effect through the adoption of a Special District Plan. A SPD plan is specifically intended to address neighborhood preservation issues such as maintenance and upgrading of the neighborhood, development of vacant or under used lots, incompatible mixtures of land uses, and the improvement and orderly development of the neighborhood.

Appendix B

Arcadia Demographic Profile

Based on the 1995 Special Census, there are 6,413 people living in the Arcadia Camelback area. This is about 5% of the total amount of people living in the Camelback East Village which is 130,594. The total number of Arcadia households is 2,389. The area has 2,561 housing units of which 2,283 are single family detached units.

The average income of the Arcadia Camelback households in 1990 was \$73,432. This compares with the Camelback East Village of \$40,481 and Citywide of \$37,140. In 1990, Arcadia Camelback neighborhood had 2,259 homes built during the decade of 1950-1959. This was 41% and the highest percentage of the total number of housing units built. Camelback East Village also had the highest amount of homes built during 1950-1959. However, the percentage was 29% of the total. The data shows that a higher amount of homes were built in the 1960's and 1970's in the village.

The Special Planning District has 355 businesses and 4,072 employees in 1995.

Appendix C

General Plan Designation

The 0-2 dwelling units an acre is the dominant General Plan designation in the Arcadia Camelback area as shown on Map 3: Arcadia Camelback Special Planning District General Plan. This low density housing is located primarily north and south of Camelback Road. The 2-5 dwelling units an acre is generally located between Lafayette Boulevard and Indian School Road. The 5-15 dwelling units an acre developments are located near the intersections of 44th Street and Camelback Road and 44th Street and Indian School Road. The Phoenician also has some residential pockets of this higher density located in the central part of the development and there is development in the same density category at the northwest corner of Camelback Road and 64th Street.

Commercial designations are located at the 44th Street intersections of Camelback Road and Indian School Road. The old Main Chance property, now owned by the Phoenician, has been redeveloped to a golf course, and is currently shown as commercial on the General Plan map.

An open space designation is predominantly for Camelback Mountain and the Phoenician golf course. There is open space shown at the northwest corner of Arcadia Drive and Camelback Road however this was the old Royal Palms golf course which has been redeveloped to residential lots. The General Plan has been amended to reflect the 0-2 dwelling units an acre designation.

Appendix D History of Area

With the implementation of the Salt River Valley Reclamation Project after the turn of the century, development of irrigable lands in the suburbs of Phoenix as large, rural homesites became a viable alternative land use. Single, independent construction efforts by some wealthy landowners were not uncommon. An alternative and more ambitious concept was the development of large tracts of land, specifically for the purpose of creating upper class, rural estates suburbs. The concept involved assembling sizeable real estate holdings from several owners, then surveying, platting, and marketing the subdivision. Because assembling the necessary real estate in the Valley's relatively mature agricultural environment was difficult, only one such subdivision emerged in the central Salt River Valley: the Arcadia Subdivision.

The part of Phoenix commonly referred to as Arcadia encompasses the area north of the Arizona Canal and south of Camelback Mountain between 44th Street and Scottsdale Road. However, the first tract of land platted within this land area was not the original Arcadia development, but rather a development called Citrus Homes. First recorded in June 1915 by L.E. Froman, Citrus Homes was bounded by Camelback Road and Lafayette Blvd. to the north, 56th Street to the east, and the Arizona Canal to the south. The Citrus Homes development contained 25 lots which ran from north to south with the southern boundary of each lot bordering on the Arizona Canal.

Located directly north and northeast of the Citrus Homes development was the original Arcadia development first recorded in December 1919. Developed by the Jordan, Grace and Phelps Land Company and the Charles Keafer firm, Arcadia was bounded by Lafayette Blvd. to the south, Scottsdale Road to the east, approximately Rockridge Road to the north, and 44th Street to the east. The physical layout of the plat was divided into two distinct sections. First, the area east of 56th Street was divided into 23 blocks with each block further divided into 4 lots of approximately ten acres. Second, the area west of 56th Street was divided into 18 blocks with the majority of the blocks further divided into 8 lots of approximately five acres. One distinct feature of this plat was the designation of Block L, located north of Camelback Road and west of 56th Street, as the Arcadia Townsite.

By dividing the Arcadia Tract into relatively large five to ten acre lots and mandating that no home could be constructed for less than \$5,000, the developers were clearly attempting to attract the more affluent homeowner who wanted to live in a rural setting. In effect, these large lots were designed to be sold as small citrus orchards. To this end, Arcadia's developers, including Seymour Jordan, Robert Grace, and Charles Keafer, highlighted the area's agricultural potential and hoped that "the purchasers of this land will engage in the growing of citrus fruits."



In order to successfully develop citrus groves in Arcadia, however, there had to be a stable water source from which the orchards could be irrigated. While Arcadia was located near the Arizona Canal, because of the slope of the land only the lots south of Camelback Road benefited from this water source. Therefore, the developers, led by Seymour Jordan, formed the Arcadia Water Company in 1919. This organization constructed several large pumping plants in Paradise Valley capable of supplying 2,100 acres with water. In order to transport this water throughout the Arcadia development, an underground irrigation system was planned. By 1924, construction crews had laid fifteen miles of underground concrete pipe in the area. The dwelling which is currently the Shemer Art Center and Museum was built in 1919 as a residence for the foreman of the water company.

The original financing for the Arcadia plat had fallen through by the mid-1920's, resulting in much of the area being refinanced and replatted by a variety of different owners between 1925 and 1931. These subdivisions included Glencoe Highlands (1925), Arcadia Estates (1926), Arcadia Replatted (1926), Hacienda Allenada (1930), and Alta Hacienda (1931). Although Arcadia was no longer under single ownership, for the most part the new developers still promoted "Arcadia" as a community for affluent people looking for a rural, estate atmosphere. Not only did lot size remain relatively large, ranging from 4 to 10 acres, but minimum cost restrictions for the construction of houses increased. Additionally, the agricultural potential of the area, particularly the cultivation of citrus groves, continued to be a priority.

There existed several stated requirements concerning house construction in the Arcadia Replat. First, the cost of building a house had to exceed \$10,000. This was an increase from a minimum outlay of \$5,000 in the 1919 Arcadia Plat. This cost requirement was implemented in order to attract only the most wealthy investors and thereby create an exclusive community. A second requirement for construction concerned wood buildings. All wood buildings had to be stained or painted immediately upon construction. Additionally, in an effort to establish continuity of appearance among houses, all new houses were required to "conform and harmonized with the type and exterior design of neighboring buildings within Arcadia Replatted."

One of the charming older homes located on the west side of the Central Arcadia area was built by Mrs. Jane Cotton around 1919 or 1924. A later owner had been told the house was built in 1924, but when some cement work for a porch was done, a 1919 edition of a newspaper was found in a brick, leading the owners to believe that it could have been built then. The house is constructed of brick with hardwood floors, and it also has a basement. When Mrs. Cotton first lived in the home, wild horses could be seen running on Lafayette Boulevard and, indeed, had the right of way.

On the southeast corner of Lafayette and Avenida del Puente is a home built in 1935 for Ruth Wendell, who was the original founder of the Phoenix Crippled Children's Hospital. Ms. Wendell was a school nurse from the Globe-Miami area. When she moved to Phoenix, she was concerned for the crippled Indian and Mexican children and began caring for them. The parents of the children she helped wanted to build a house for her. The lot she purchased extended from Lafayette Boulevard south to the canal. The home had cement tile floors, and was made from adobe bricks that were made on the property. When they were working on the house, an Indian put a piece of bread in the wet frame of the doorway. He told Miss Wendell that, "Whoever entered the house would never go away hungry."

The 1930's also saw the first of the resorts that have graced the district, attracted by the affluent, relaxed residential character of the area as it developed. The Cook Mansion, built by the Thomas Cook Travel Agency family, was converted at that time for this purpose and became the original structure for the Royal Palms Inn. Others developed in the early years in the area were the Jokake Inn, the Paradise Inn, and Elizabeth Arden's Main Chance retreat, adding to the ambience of the area.

In the mid 1950's, Phoenix growth reached Arcadia. Although most of Arcadia is now in Phoenix, the area east of 64th Street is in Scottsdale.

Zoning originally limited development to one house per five acres. Large setbacks were provided around the periphery of the five acre parcels. By the mid 1950's, a number of residential developments had begun. One example is the Mountgrove area, formerly the Sphinx Date Ranch, extending from 46th Place to 47th Place and from the Arizona Canal north to Lafayette Boulevard. The majority of the homes were built in 1954 with careful attention to preserving the sphinx date palms, since it was believed that this was the only area in the United States where this variety would grow. To watch for violation of zoning restrictions, the Mountgrove Property Owners Association was quickly formed and a declaration of restrictions was prepared and registered. There was strong feeling of keeping the area residential and, in 1960, the association successfully concluded a lengthy objection to commercial zoning of the date processing plant area on Lafayette between 46th Place and 47th Street.

The quality of construction in the late 50's and early 60's in Arcadia has influenced many people in the area to renovate their homes rather than relocate to newer areas. Home values have steadily increased and the few remaining parcels in the neighborhood have been developed with high quality homes.

In the late 1980's the Phoenician Resort located at 60th Street on the north side of Camelback Road was developed. With its 27 hole golf course and luxurious guest accommodation, it has gained international recognition as a 5 star resort. The old Royal Palms Inn has also been renovated with unprecedented elegance. Its location is on the north side of Camelback Road at Rubicon Drive. Two new residential subdivisions have been developed in the 1990's. Arcadia Estates is located at the southeast corner of Arcadia Drive and Lafayette Boulevard. Royal Palms Estates is developed on what once was the Royal Palms Inn executive golf course.

The area remains in demand because of the unique irrigation system, citrus groves, a quality school system, a strong and active neighborhood association, proximity to neighboring communities and relatively easy access to downtown Phoenix. The natural boundaries of the Arizona Canal on the south and Camelback Mountain on the north have kept the area quiet and insulated from traffic. These advantages are attracting many young families to the area.

Appendix E

Existing Land Use

Map 4: Arcadia Camelback Special Planning District Existing Land Use and Character. Low density single family residential is the major land use in the area. Most of the existing residential estate sites are located north of Lafayette Boulevard.



There are two elementary schools in the area: the Arcadia Neighborhood Learning Center at 4330 North 62nd Street and Hopi Elementary School at 5510 E. Lafayette Boulevard.

There is one public recreation area known as Herberger Park located east of 56th Street and north of Indian School Road. This park has picnic tables and tennis courts.

Most of the retail is located at the intersections of 44th Street and Camelback Road, and at 44th and 48th Streets and Indian School Road. The largest employer in the area is the Phoenician Resort with a staff of over 1,000 employees. The location of this resort is in the vicinity of 62nd Street and Camelback Road. The second largest employer is the Royal Palms Inn with 135 employees. The location of the recently renovated Royal Palms Inn is at the northeast section of Rubicon Avenue and Camelback Road.

The closest police and fire facilities are located outside the special planning district. The Squaw Peak Precinct is located at 6206 North 24th Street. The nearest fire station is located at 4247 North 32nd Street.

Appendix F Current Zoning

Map 5 Arcadia Camelback Special Planning District Zoning shows the RE-35 zoning classification as the dominant zoning district in the area. The district extends on both the north and south side of Camelback Road. The RE-24 zoning category is designated west of Arcadia Drive and along the north and south side of Lafayette Boulevard. R1-14 extends south of Lafayette Boulevard to Indian School Road. The Central Arcadia Neighborhood Special Planning District designation is shown in this area. The R1-10 and R1-6 designations are generally located west of 48th Street and south of Lafayette Boulevard.

The Phoenician is designated primarily as a PCD or planned community development. The Village development is zoned for both office and commercial use and had a P.A.D. 9 designation for the residential portion of the development. The area from 44th to 48th Street is zoned for both commercial and multi family development.

Appendix G Special Planning District Neighborhood Committee

According to the Zoning Ordinance, Section 402, A, 2 c, following the initiation of the preliminary Special Planning District, the City Council instructs the Planning Department to prepare a Special District Plan in accord with the direction of a citizens committee. The plan shall consist of details on land use and related regulations in substantial conformity with the Phoenix General Plan.

The opportunity to participate on the citizen committee was extended to any of the residents in the area at the Planning Commission and City Council public hearings during the time of the initiation. No limit was set on the size of the committee.



The official committee participant list consisted of 22 Arcadia Camelback Homeowners Association Board members, nine Camelback Road property owner representatives and two representatives from the Phoenician resort. There have been five committee meetings.

Appendix H
Staff Meetings with Camelback Road Property Owners. Arcadia Camelback Homeowners Association Board Representatives and Phoenician Resort Representatives

Introduction

At the November 13, 1996 City Council hearing, the Council approved the initiation of the Arcadia Camelback Special Planning District process. At that meeting there were several speakers from the neighborhood who expressed their reluctance to initiation of the process. Based on this concern, and following City Council's meeting, the Planning Department staff met with some of the neighbors including property owners along Camelback Road and representatives from the Arcadia Camelback Homeowner's Association board and the Phoenician Hotel for the purpose of identifying their issues.

It became clear early on with each meeting that a major focus is land uses and the street design and eventual improvements of Camelback Road. The issues of traffic, air pollution, speed, safety and, the decline in maintenance of properties adjacent to Camelback Road, were identified as problems to be addressed in the planning process. There were other concerns which are described below in a summary of the meeting highlights.

Camelback Road Property Owners Who Suggest Land Use Change

There were five individual meetings held between City staff and Camelback Road property owners who have lived and/or owned property in the area and who plan to continue to live in the area. One of their major concerns is, that over time, some sections of Camelback Road will become inappropriate for single family residences. As an alternative, they suggest the development of transitional uses which they believe would be more compatible to the interior neighborhoods such as patio homes, residential office, and resort uses. Commercial use options were not identified at any of the meetings.

One of the property owners described the impact of two cores east and west end of Arcadia along Camelback Road. It was stated in their opinion, additional traffic will be generated along Camelback Road as these cores continue to develop resulting in a continuous decline in the quality of life for some who reside along the road. A solution proposed was to allow the opportunity to rezone some of the properties to R-O for residential office.

A suggestion by another property owner was to allow the opportunity to develop small scale resorts particularly for those parcels east of 56th Street known as the Alta Hacienda neighborhood. This subdivision, recorded in 1929, recognized and tried to protect the land use by allowing "Attractive hotels for tourists may be erected and operated on any of the lots."



One of the major concerns expressed is the traffic volume and number of accidents particularly at 54th Street, since the intersection is on the high speed curved portion of the road.

Most of the property owners agreed that the current Arcadia Camelback Special Planning District working document addressed many of the interior neighborhood concerns. The document had no discussion with regard to their needs and was objectionable where the existing statements related to maintaining houses as the future land use along Camelback Road. Other comments noted a lack of confidence in the special planning district process and question whether there is really the need to add another layer of regulation or policy other than what the General Plan and Zoning Ordinance provides. In regards to the mitigation of noise along Camelback Road, they all agreed that walls higher than 6 feet should be considered at the property boundaries. They also thought that bike lanes should be located in the interior neighborhoods and not on Camelback due to the lack of safety. Lastly, at the closing of each of the meetings, property owners stated that they would work with the neighborhood committee and participate in a spirit of compromise.

Two major issues that were suggested to be addressed in the plan are beautification of existing properties and preservation of the view of the mountains. He related the future of Camelback Road to that of North Central Avenue.

Camelback Arcadia Board Representatives

Two of the representatives were concerned about maintaining the character of Camelback Road as it exists today. Adjacent land use mitigation features should be considered for parcels along Camelback Road including walls higher than 6 feet and frontage roads. They would like to address the idea of an overlay district and design review process for Camelback Road and develop a design review board similar to Scottsdale and Tempe.

As leaders of the special planning district process, they now have concerns with what happens with the process and how the working document will be reviewed. Their goal throughout this process is to find ways to maintain the quality and integrity of the Arcadia neighborhoods. And while residents are happy today who live in the area, they would like to have the same experience for the next generation. At this point, the board finds no reason to change the zoning along Camelback Road. And what the plan will do, once it is approved, is provide some assurance, predictability and stability to the area.

Resort Representatives

Initially the two representatives from the Phoenician resort questioned their role in this neighborhood planning process. One of their major concerns was the negative language with regard to resorts in the original working document. They stated that they couldn't reach an agreement on acceptable language with the Board. Also, while they are trying to be good neighbors to the Arcadia residents, many of the resort's issues are different. However, after further discussion they understood that their participation was vital to ensure the support and success of their own future development plans. They recognize that the Phoenician is a dominant land use whatever is planned for its future, and compatibility with the neighborhood is the key to making it work.

Appendix I Current Street Network

Map 6: Arcadia Camelback Special Planning District Streets Classification shows the major arterials to be 44th Street and Indian School Road. The planned 64'/100' (curb to curb/right of way) dimensions for Indian School Road appear to be fairly consistent throughout the two mile stretch. However, 44th Street has a special section which shows a 84'/120' dimension south of Camelback Road and narrows north to a 64'/100' dimension.

The entire length of Camelback Road, 56th Street (from Indian School to Camelback Road) and 64th Street (north of Camelback Road) are designated Arterial streets. The current standard width for Camelback Road is 64'/100'. Fifty-sixth Street from Indian School to Camelback Roads is considered a special section and there is no design for the road at this time. Sixty-fourth Street, north of Camelback Road, is designated to be 64'/100'.

Fifty-sixth Street is the only major street east of 44th Street that crosses the Arizona canal within Phoenix. Any restriction to 56th Street would likely increase traffic on Arcadia Drive. Being relatively short, 56th Street will never carry as much traffic as most other major streets in Phoenix.

The minor collectors with 40'/60' right of way dimensions are Arcadia Drive, 56th Street north of Camelback Road, Lafayette Boulevard, and 64th Street south of Camelback Road to Lafayette Boulevard.

In the fall of 1997 the speed limit was lowered to 25 miles per hour and a four way stop sign was placed at Exeter Boulevard and Arcadia Drive. Bike lanes are planned to be installed on both sides of Arcadia Drive from Camelback Road to Lafayette Boulevard.

Map 7: Bike Trail Map shows the Arizona Canal banks as unpaved bike paths for its entire location within the district. Lafayette Boulevard has bike lanes on both sides of the street with the exception of a short stretch from 44th to 46th Streets. Camelback Road also has bike lanes from 46th Street to 56th Street.

Appendix J Current Street Repavement Program

All local streets north of Camelback Road to Stanford Drive were slurry sealed or overlaid since 1990. Nothing more is planned for this area. The streets between Arizona Canal and Lafayette Boulevard and 44th Street to Arcadia Drive were overlaid in 1996. Lafayette Boulevard from Arcadia Drive to 56th Street was repaved in spring, 1997 and 56th to 64th Streets will be done in 1998. There are plans to start on the streets between Lafayette Boulevard and Camelback Road in 1999. The corner north of Indian School Road to the Arizona Canal, 44th to 48th Streets is on the 1999 overlay program.

There are many streets in this area which are not dedicated as public streets. This issue should be resolved since the improvements to the undedicated streets in the area must wait until the status of their right of way is resolved.

Appendix K 100 Year Flood Control Area

In 1994, the Maricopa Flood Control District was invited by the City to evaluate drainage and flooding problems in the Arcadia area and to recommend solutions to those problems. Both in 1994 and again in 1995, the District presented the project to the citizens of the Arcadia area at public meetings. During those meetings, the citizens asked that the Flood Control District look into mitigating the existing 100-year flood plain. Presently, storm water runoff in the Arcadia area flows south from Camelback Mountain to the Arizona Canal, occasionally flooding streets, and in years past, homes in the area. Prior to remedial measures taken since 1972, ponding on the north bank of the canal created a 100 year flood plain designation in some areas.

The Flood Control District, with input from the City and Salt River Project, has completed its assessment of flooding and drainage problems and offered five alternatives for consideration and possible implementation.

Of the five alternatives the one most acceptable in terms of cost and neighborhood impact would consist of underground storm drains along Camelback Road, Lafayette Boulevard and Arcadia Drive and 40th, 44th, and 64th Streets. It will alleviate the 10-year flooding problems along Camelback Road corridor, with residual benefits to the areas south of Camelback Road. The estimated cost is about \$9,650,000.

Appendix L

ARCADIA\CAMELBACK SPECIAL PLANNING AREA Traffic Volume Trends						
Year	Location					
	1	2	3	4	5	6
1971	25,400	21,400	10,300	15,600	21,300	16,900
1973	29,800	24,400	10,000	24,200	20,300	18,400
1975	30,800	25,400	11,000	24,000	21,200	19,800
1977	29,000	25,000	11,600	33,700	21,500	20,000
1979	32,000	29,000	10,200	27,300	26,000	21,000
1982	31,800	27,400	10,900	32,800	28,800	19,900
1985	36,500	33,400	12,200	40,000	35,300	22,000
1988	42,500	40,000	16,000	45,000	36,000	25,800
1993	43,800	38,200	9,000	36,000	30,200	23,000
1996	42,400	38,600	12,100	40,500	31,300	23,500
2015	46,200	43,700	20,000	46,000	38,400	29,600

1. Camelback, 44th to Arcadia
2. Camelback, 56th to 60th
3. 56th St., Indian School to Camelback
4. 44th St., Indian School to Camelback
5. Indian School, 44th to 48th
6. Indian School, 56th to 60th

Appendix M
Camelback Road 44th to 64th Streets Property Site Design Inventory

Following is an assessment of the visual and physical characteristics of properties along Camelback Road.

Because parcel size, access and home orientation significantly affect the relation of the house to impacts from Camelback Road, we have created these groupings to analyze characteristic properties.

Site Design Themes A through G provide some context and grouping for the 104 properties. This information was based on an inventory of each property which included setbacks, acreage, land use and zoning, walls, driveway location and house orientation. The themes are summarized below and each property’s design characteristics are provided in a table at the end of this appendix.

Residential Site Design Themes

- A. Vacant parcels
- B. Nonresidential properties
- C. Significant Size and Setback Properties
 - 1. Greater than 1 acre
 - 2. Building setback from Camelback Road greater than 100 feet
- D. Buffered Properties
 - 1. Frontage road along Camelback Road
 - 2. Mature landscaping outside of 6 foot wall along Camelback Road
 - 3. Orientation of property backs up to Camelback Road
- E. Neighborhood Side Street Oriented Properties
 - 1. Front of house is oriented to side street
 - 2. Driveway is on side street
- F. Camelback Road -Side Street Properties
 - 1. Front of House is oriented to Camelback Road
 - 2. Driveway is on side street
- G. Camelback Road Properties
 - 1. Front of house is oriented to Camelback Road
 - 2. Driveway is on Camelback Road

Maps of the different sections of Camelback Road have each property numbered, setback identified and driveway locations shown. This information is provided in the attached table. The table indicates the setback, acreage, wall height, driveway location and house orientation for each parcel adjacent to Camelback Road. Also, each property is categorized according to one of the seven design themes described above.



This information is provided below by summarizing the property design characteristics of five different sections of Camelback Road. There is a corresponding map which shows the parcel number, the property location, setback from the property boundary abutting Camelback Road and driveway location if not accessible from Camelback Road.

44th Street to Camelhead Road

Seventeen lots have homes, except for the nursery shown on parcel 10. Most of the parcels are zoned RE-24. Parcels #11, 12, and 13 are zoned RE-35. The lot sizes range from $\frac{1}{2}$ to 1 acre. The nursery contains 3.24 acres. Only five of the sites have 6-foot walls and six have frontage roads as shown on the map. There are only four parcels which have driveway access only to Camelback Road. The others either access from a side street or from the frontage road.

This inventory shows that 7 of the 17 parcels are classified “buffered” properties from Camelback Road as described under the residential site design themes. All of the sites are located on the north side of Camelback Road with six sites having a frontage road parallel to Camelback Road. The remaining buffered site has a 6-foot wall and some mature landscaping along Camelback.

On the south side of Camelback Road there are four adjacent parcels where the site theme shows an orientation facing Camelback Road and access is only from Camelback Road.

Camelhead Road to Rubicon Avenue

This section has 25 parcels, the majority of which are developed with single family homes. The Shemer Center is located in this section and a bed and breakfast establishment. There is one vacant parcel. The zoning is RE-24 up to Arcadia Drive and RE-35 east of Arcadia Drive and along the north side of Camelback Road. Setbacks range from 35 to 200 feet and the acreage is approximately $\frac{1}{2}$ acre to 4 acres in parcel size. Over half of the parcels have six foot walls buffering Camelback Road while less than half have driveway access only from Camelback Road. About half of the homes face Camelback Road.

Based on this description, there appears to be no common site design theme in this section of Camelback Road. While three of the parcels on the north side between Dromedary and Camelhead Roads have homes that orient to Camelback and have driveway access to Camelback only, they also have deep setbacks ranging from 75 to 80 feet.

Rubicon Avenue to 56th Street

There are 27 parcels which are containing single homes. One lot has a 12 unit development and another has what appears to be five units. The Royal Palms Inn is also in this area. There is a church site and a



vacant parcel as well. The zoning for all 27 parcels is RE-35. Acreage of lots ranges from 2/3 to almost five acres and the largest parcel is vacant. Setbacks range from 15 to 110 feet. More than half of the 27 parcels have six foot walls which buffer Camelback Road. Only two of the sites have access to Camelback Road only while nine of the homes front onto Camelback.

Based on these conditions, more than half of the properties in this area are classified as “buffered”.

56th Street to 60th Street

Most of the 24 parcels in this area are residential. On the north side of Camelback Road, east of 56th Street, there are residential parcels where there are indications of containing more than one dwelling unit. There are five vacant parcels, a church and the Phoenician Resort parking lot. The zoning is RE-35. Setbacks range from 40 feet to 240 feet. Parcel sizes are 3/4 of an acre to 2.85 acres. This section has only four 6-foot walls along Camelback Road. There are six lots that have driveway access from Camelback Road and only three homes face Camelback Road. This area contains the most vacant land and nonresidential properties. Also, the north side of Camelback has more lots greater than one acre and building setbacks from Camelback Road greater than 100 feet. The south side has no set pattern, falling into a mixture of different site design themes.

60th to 64th Streets

There are 11 parcels on the south side of Camelback Road in this section included in the study. The north side has a time share residential development which is not included in the study area. Properties are residential with the exception of a school and church. The zoning is RE-35. Camelback Road setbacks range from 50 to 17 feet and the acreage ranges from 4/5 to 4.32 acres. All driveways are accessible from the side streets except for one lot. Only three of the 11 houses are oriented to Camelback Road.

These lots appear to be the least impacted from Camelback Road. Generally they are either well buffered or have significant size and building setbacks.



**Appendix M
(continued).**

**CAMELBACK ROAD/44TH TO 64TH STREETS
PROPERTY DESIGN CHARACTERISTICS
(in relationship to Camelback Road)**

SECTION/ PROPERTY #	SITE DESIGN THEMES	LAND USE and ZONING	CAMELBACK SETBACK	ACREAGE	6' WALLS	DRIVEWAY LOCATION	ORIENTATION OF HOUSE
44th St. to Camelhead/Rd.							
1	E	Residential, RE-24	80'	.66	Yes	45th St	45th Street
2	F	Residential, RE-24	95'	.70	No	45th St	Camelback Rd.
3	G	Residential, RE-24	95'	.54	No	Camelback Rd.	Camelback Rd.
4	G	Residential, RE-24	90'	.54	No	Camelback Rd.	Camelback Rd.
5	G	Residential, RE-24	90'	.54	No	Camelback Rd.	Camelback Rd.
6	G	Residential, RE-24	95'	.54	Yes	Camelback Rd.	Camelback Rd.
7	F	Residential, RE-24	60'	.75	No	46th St.	Camelback Rd.
8	F	Residential, RE-24	90'	.72	Yes	46th St.	Camelback Rd.
9	C	Residential, RE-24	195'	.96	Yes	46th St, Camelback Rd.	Camelback Rd.
10	B	Nursery, RE-24		3.24			
11*	D	Residential, RE-35	60'	.82	No	frontage road	Camelback Rd.
12*	D	Residential, RE-35	45'	.82	No	frontage road, 46th Pl.	Camelback Rd /SW
13*	D	Residential, RE-35	40'	.80	No	frontage road	Camelback Rd.
14*	D	Residential, RE-24	55'	.56	No	frontage road	Camelback Rd.

*Buffer area: Lot containing mature landscaping area outside 6' wall or a frontage road.

SECTION/ PROPERTY #	SITE DESIGN THEMES	LAND USE and ZONING	CAMELBACK SETBACK	ACREAGE	6' WALLS	DRIVEWAY LOCATION	ORIENTATION OF HOUSE
15*	D	Residential, RE-24	50'	.54	No	frontage road	SE/Camelback Rd.
16*	D	Residential, RE-24	50'	.56	No	frontage road, 45th Pl.	Camelback Rd.
17*	D	Residential, RE-24	50'	.56	Yes	45th Pl.	45th Pl.
Camelhead Rd. to Rubicon Ave							
1	D	Residential, RE-24	80'	.68	Yes	Mariposa	Mariposa
2	D	Residential, RE-24	60	.55	Yes	Mariposa	Mariposa
3	D	Residential, RE-24	50	.58	Yes	Mariposa	Mariposa
4	E	Residential, RE-24	45'	.51	Yes	Launfal	Launfal
5*	E	Residential, RE-24	90	1.14	Yes	Launfal	Launfal
6*	G	Residential, RE-24	90	1.06	Yes	Camelback Rd.	Camelback Rd.
7	A	Vacant, RE- 24		.58	Yes		
8*	D	Residential, RE-24	35'	.58	Yes	Camelback Rd.	Camelback Rd.
9	F	Residential, RE-24	90'	.67	No	49th Pl.	Camelback Rd./NE
10	E	Residential, RE-24	50'	.67	No	49th Pl.	49th Pl.
11	F	Bed & Breakfast, RE-24, SP	40'	2.02	Yes	Arcadia Dr., Camelback Rd.	Camelback Rd.
12	B	Shemer Center, RE- 24, RE-35	110'	2.02			
13*	D	Residential, RE-35	60'	.76	Yes	Royal Palm Circle	Royal Palm Circle
14	E	Residential, RE-35	55'	.74	No	Royal Palm Circle	Royal Palm Circle
15	C	Residential, RE-35	290'	4.62	No	Camelback Rd.	Camelback Rd.

*Buffer area: Lot containing mature landscaping area outside 6' wall or a frontage road.

SECTION/ PROPERTY #	SITE DESIGN THEMES	LAND USE and ZONING	CAMELBACK SETBACK	ACREAGE	6' WALLS	DRIVEWAY LOCATION	ORIENTATION OF HOUSE
16	D	Royal Palm Subdivision, RE-35*		22.00	Yes		
17	F	Residential, RE-35	85'	1.04	No	Arcadia Dr.	Camelback Rd.
18	C	Residential, RE-35	100'	1.41	No	Camelback Rd.	Camelback Rd.
19*	D	Residential, RE-35	90'	1.25	Yes	Dromedary	Camelback Rd.
20	C	Residential, RE-35	120'	1.34	No	Dromedary	Camelback Rd.
21	C	Residential, RE-35	100'	1.27	No	Camelback Rd.	Camelback Rd.
22	G	Residential, RE-35	80'	1.16	Yes	Camelback Rd.	Camelback Rd.
23	G	Residential, RE-35	75'	1.65	No	Camelback Rd.	Camelback Rd.
24	G	Residential, RE-35	75'	1.36	Yes	Camelback Rd.	Camelback\SW
25	C	Residential, RE-35	200'	1.59	No	Camelhead Rd.	Camelhead Rd.
Rubicon Ave to 56th St							
1	F	7 Units, RE- 35	70'	.98	No	Rubicon, Camelback Rd	Camelback Rd.
2	E	12 Units, PAD-9	25'	1.14	Yes	52nd St.	52nd St.
3	B	Church, RE- 35		3.04			
4	D	Residential, RE-35	70'	.78	Yes	53rd St.	53rd St.
5	D	Residential, RE-35	45'	.67	Yes	53rd St.	53rd St.
6	E	Residential, RE-35	50'	.63	Yes	54th St	54th St.
7	E	Residential, RE-35	100'	.77	No	54th St.	54th St.
8	G	Residential, RE-35	100'	.78	No	Camelback Rd.	Camelback Rd.

*Buffer area: Lot containing mature landscaping area outside 6' wall or a frontage road.



SECTION/ PROPERTY #	SITE DESIGN THEMES	LAND USE and ZONING	CAMELBACK SETBACK	ACREAGE	6' WALLS	DRIVEWAY LOCATION	ORIENTATION OF HOUSE
9	A	Vacant, RE-35		4.87			
10*	D	Residential, RE-35	47'	.79	Yes	55th St.	55th St.
11*	D	Residential, RE-35	75'	.80	No	frontage road	Camelback Rd.
12*	D	Residential, RE-35	40'	.80	No	frontage road	Camelback Rd.
13*	D	Residential, RE-35	50'	.80	No	frontage road	Camelback Rd.
14	E	Residential, RE-35	15'	.51	Yes	56th St.	56th St.
15	D	Residential, RE-35	15'	.62	Yes	Camel Hill Rd.	Camel Hill Rd.
16	D	Residential, RE-35	15'	.59	Yes	Camel Hill Rd.	Camel Hill Rd.
17	D	Residential, RE-35	85'	.85	Yes	Camel Hill Rd.	Camel Hill Rd.
18	D	Residential, RE-35	130'	.92	Yes	Camel Hill Rd.	Camel Hill Rd.
19	D	Residential, RE-35	45'	.92	Yes	Camel Hill Rd.	Camel Hill Rd.
20	D	Residential, RE-35	30'	.95	Yes	Camel Hill Rd.	Camel Hill Rd.
21	D	Residential, RE-35	110'	1.24	Yes	Camel Hill Rd.	Camel Hill Rd.
22	F	Residential, RE-35	75'	1.71	No	54th St/Camelback Rd.	Camelback Rd.
23*	D	Residential, RE-35	70'	1.02	Yes	Camelback Rd.	Camelback Rd.
24	F	Residential, RE-35	75'	.94	Yes	Camelback Rd., Royal View	Camelback Rd.
25	F	Residential, RE-35	75'	.93	No	Royal View	Camelback Rd.
26	B	Royal Palms Inn, RE-35		4.05			
27	B	Royal Palms Inn, RE-35		3.09			
56th St to 60th St.							

*Buffer area: Lot containing mature landscaping area outside 6' wall or a frontage road.





SECTION/ PROPERTY #	SITE DESIGN THEMES	LAND USE and ZONING	CAMELBACK SETBACK	ACREAGE	6' WALLS	DRIVEWAY LOCATION	ORIENTATION OF HOUSE
1	E	4 Units, RE-35	30'	2.07	No	Camelback Rd, 56th St.	56th St.
2	A	Vacant, RE-35		.84			
3*	F	Residential, RE-35	110'	.81	Yes	Los Vecinos	Camelback Rd.
4	G	Residential, RE-35	150'	.91	No	Camelback Rd.	Camelback Rd.
5	A	Vacant, RE-35		.91			
6	F	Residential, RE-35	80'	.91	No	Allenada	Camelback Rd.
7	G	Residential, RE-35	65'	.90	No	Camelback Rd	Camelback Rd.
8	A	Vacant, RE-35		.79			
9	F	Residential, RE-35	50'	1.00	Yes	Arcadia Lane	Camelback Rd.
10	F	Residential, RE-35	60'	.76	Yes	Arcadia Lane	Camelback Rd.
11	A	Vacant, RE-35		.62			
12	F	Residential, RE-35	70'	.82	No	59th Pl.	Camelback Rd.
13	F	Residential, RE-35	65'	.74	Yes	59th Pl., Camelback Rd.	Camelback Rd.
14	B	Parking Lot, P-1		.96			
15	B	Parking Lot, P-1		1.03			
16	B	Church, RE-35		3.52			
17	B	Church, RE-35		1.00			
18*	D	Residential, RE-35	80'	1.30	Yes	Hilltop Rd.	Hilltop Rd.
19	C	Residential, RE-35	115'	1.16	No	Camelback Rd.	Camelback Rd.

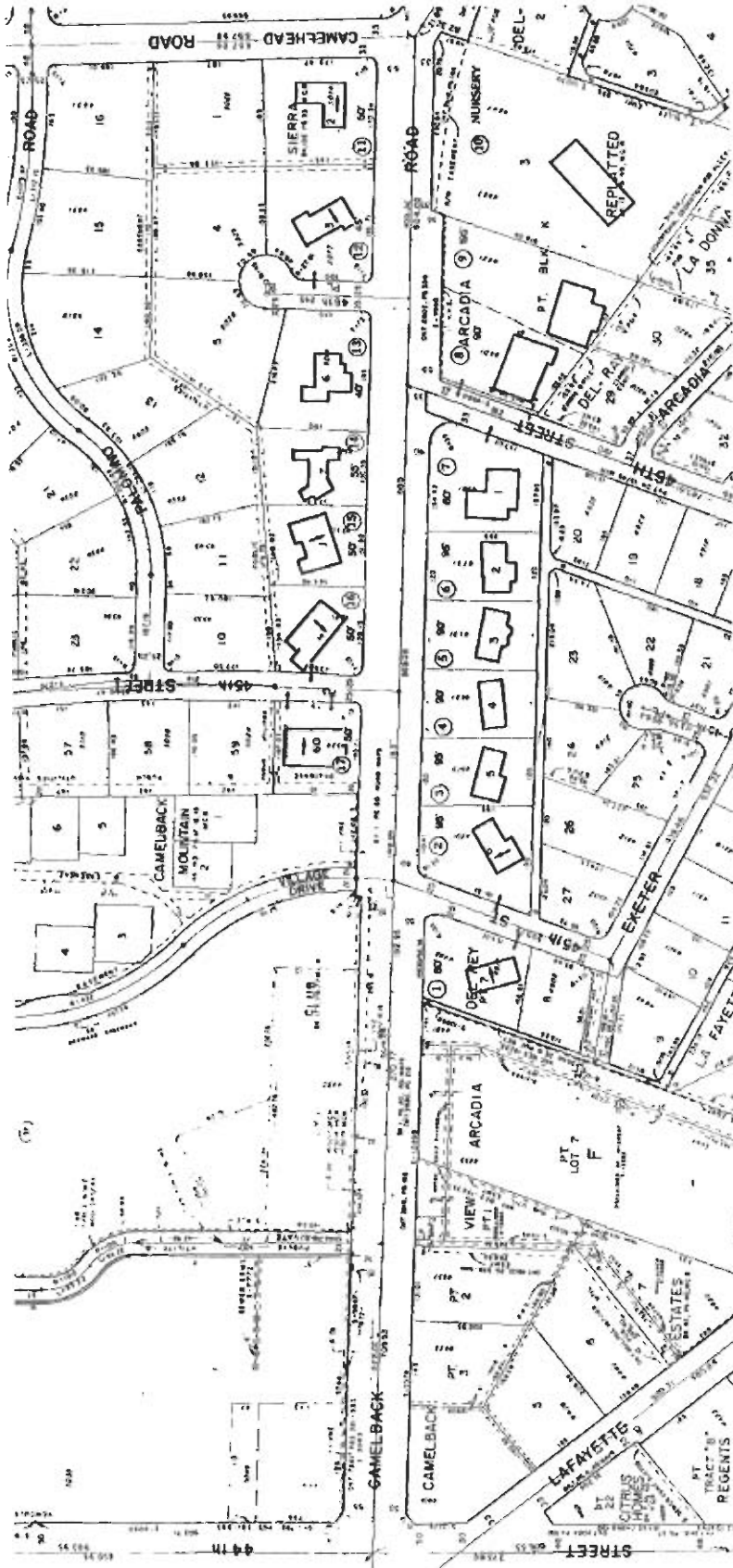
*Buffer area: Lot containing mature landscaping area outside 6' wall or a frontage road.



SECTION/ PROPERTY #	SITE DESIGN THEMES	LAND USE and ZONING	CAMELBACK SETBACK	ACREAGE	6' WALLS	DRIVEWAY LOCATION	ORIENTATION OF HOUSE
20	C	2 units, RE-35	235'	2.85	No	Camelback Rd.	Camelback Rd.
21	C	Residential, RE-35	165'	1.68	No	Camelback Rd.	Camelback Rd.
22	G	Residential, RE-35	200'	.78	No	Camelback Rd.	Camelback Rd.
22A	C	Residential, RE-35	240'	2.84	No	Camelback Rd., Alta Dr.	Camelback Rd.
23	E	Residential, RE-35	30'	.83	No	Alta Hacienda	Alta Hacienda
24	A	Vacant, RE- 35		1.52			
60th St. to 64th St.							
1	E	Residential, RE-35	50'	.80	Yes	60th St.	60th St.
2	D	Residential, RE-35	170'	.97	Yes	Mariposa	Mariposa
3	D	Residential, RE-35	170'	.95	Yes	Mariposa	Mariposa
4	D	Residential, RE-35	150'	.94	Yes	61st St.	Mariposa
5	F	Residential, RE-35	50'	.97	No	61st St.	Camelback Rd.
6	B	School, RE- 35		4.32			
7	C	Residential, RE-35	130'	2.30	Yes	62nd St.	Camelback Rd.
8	B	Church, RE- 35		4.54			
9	C	Residential, RE-35	130'	2.28	No	Camelback Rd.	Camelback Rd.
10*	D	Residential, RE-35	90'	.92	Yes	Mariposa	Mariposa
11*	D	Residential, RE-35	90'	.98	Yes	Mariposa	Mariposa

*Buffer area: Lot containing mature landscaping area outside 6' wall or a frontage road.





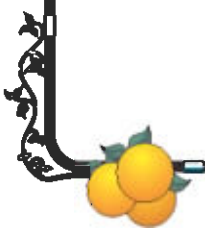
Section #1

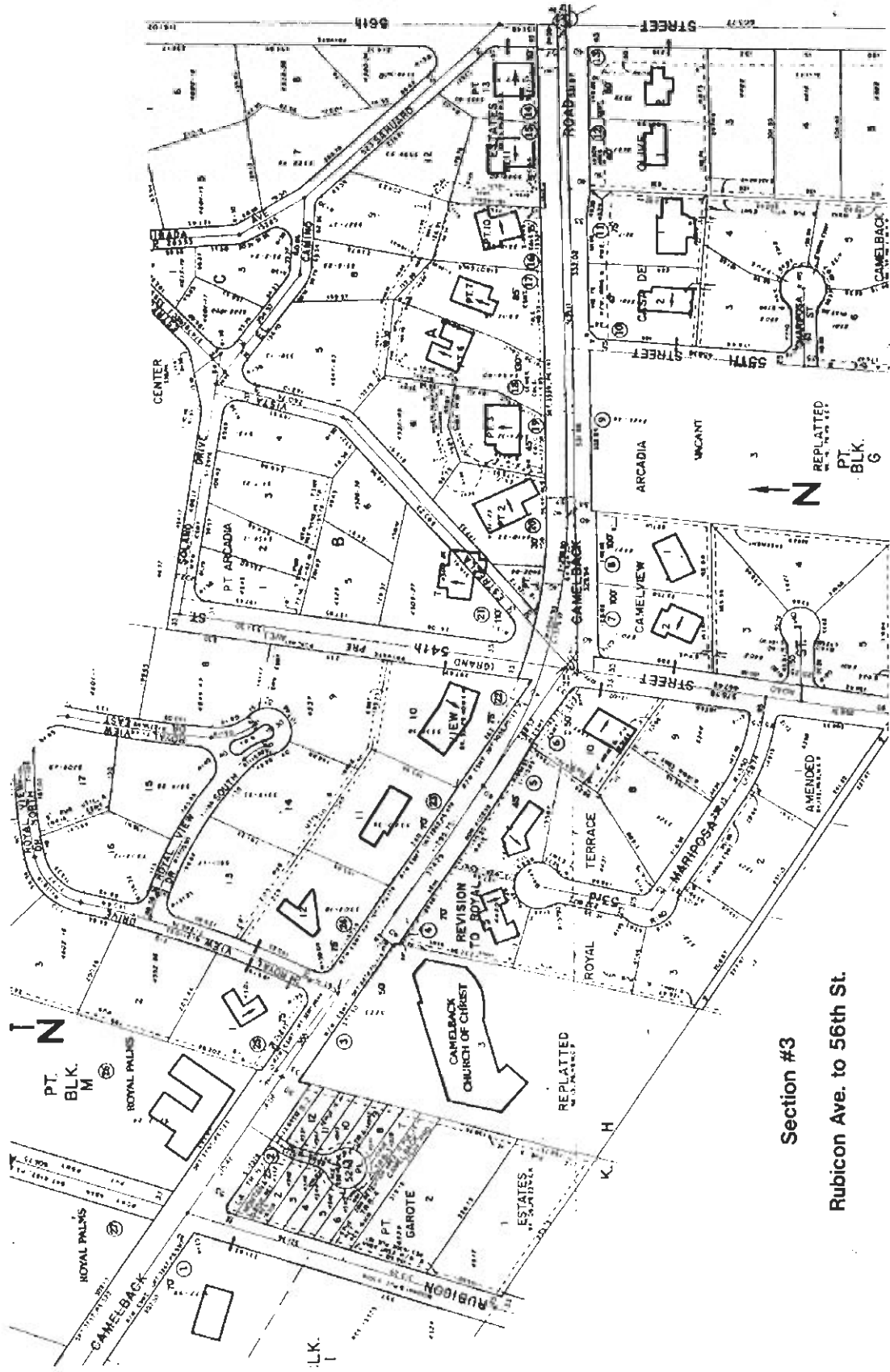
44th St. to Camelhead Rd.





Section #2
Camelhead Rd. to Rubicon Ave.

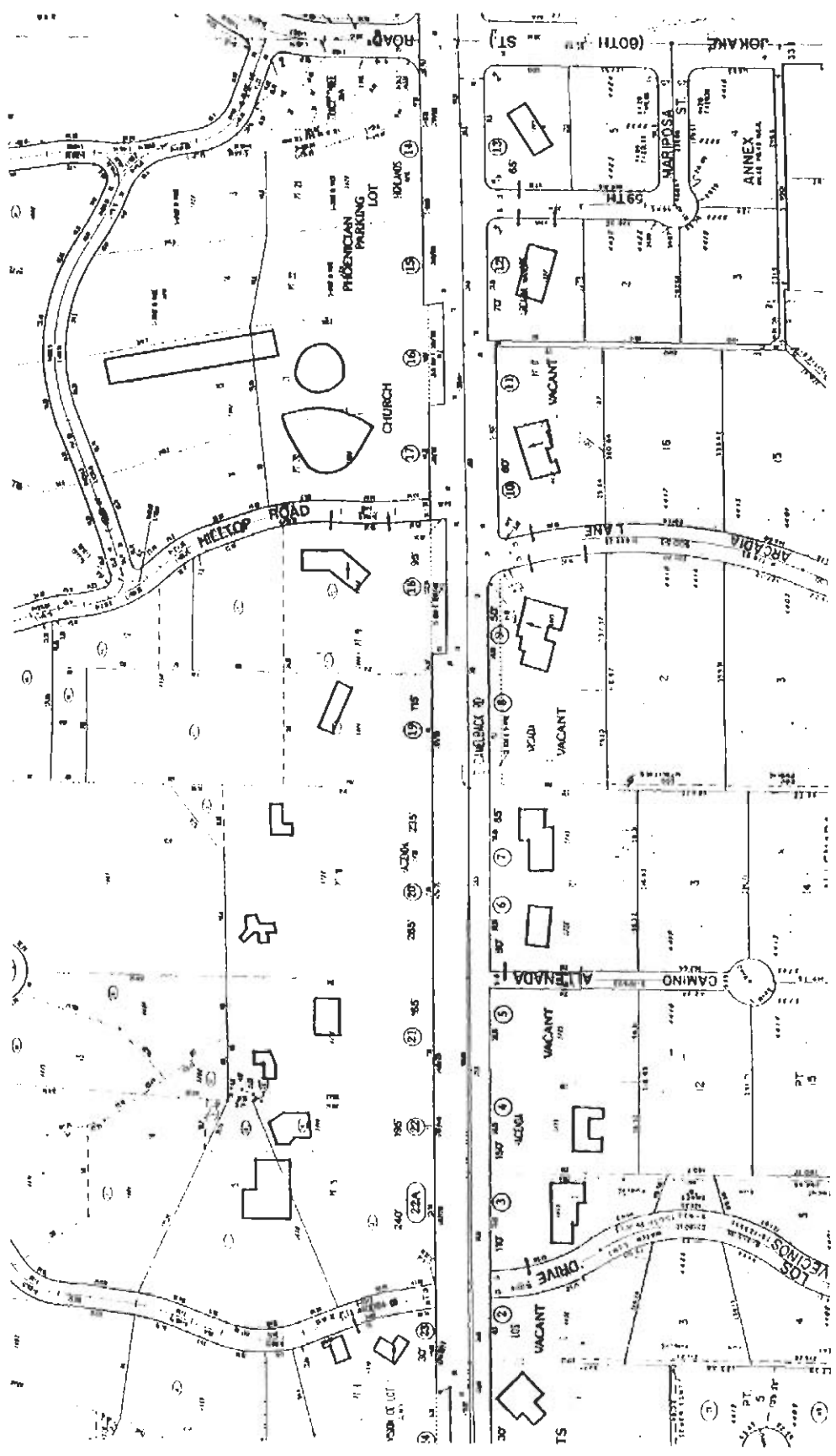




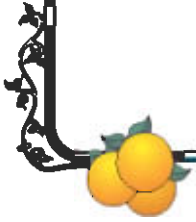
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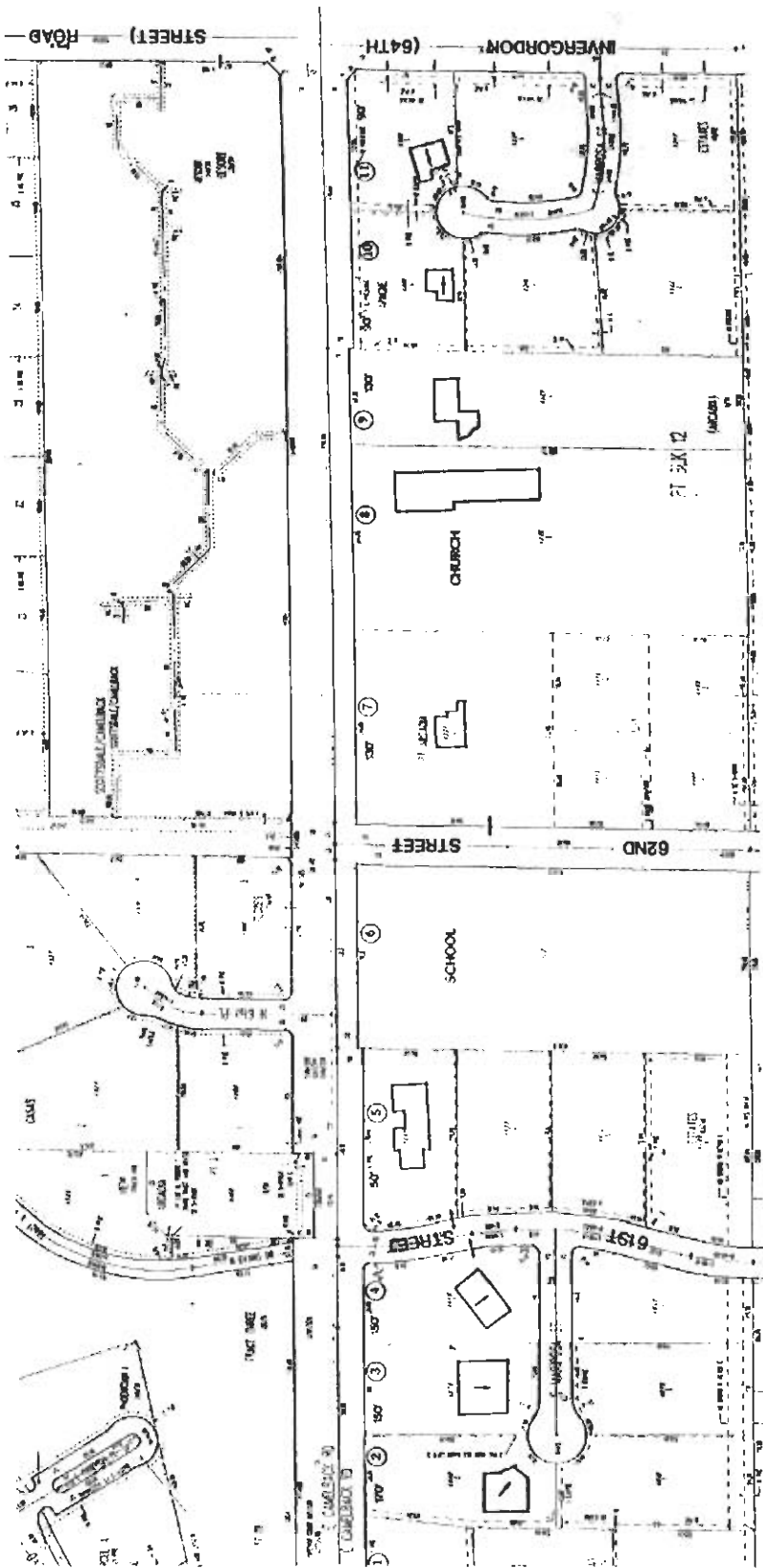
Rubicon Ave. to 56th St.





Section #4
56th St. to 60th St.





Section #5
60th St. to 64th St.



Appendix N: Private Walls as Noise Barriers

One recommendation for Camelback Road calls for a policy of building noise walls on private property to mitigate traffic noise levels. There are already some walls present on Camelback Road, and it is the intention of this analysis to propose new walls where none exist as all replacement with higher walls. These new walls vary up to 8-feet high depending on their setback from the property line. Before a detailed explanation of the process used to determine which wall height mitigates noise best for each property, a basic overview of noise is desirable.

Noise Dynamics

Noise can be described as having both physical impacts as well as psychological or perceived impacts. Physical impacts can be successfully mitigated to recognized standards, while perceived impacts are not as easily solved. Perceived impacts can result from changes in the ambient neighborhood noise level -what was once a quiet street. Is now more noticeable because of the increased traffic volumes. These impacts can be reduced by implementing various mitigation techniques in combination with reducing average noise levels to accepted standards.

Noise (sound) level refers to a logarithmic measure of small, but rapid pressure changes in the air. A decibel (dB) is the unit scale of sound level and dB(A) is a weighting where an electronic filter in a sound level meter is used to approximate the frequency response of the human ear. A sound change of 1 dB(A) is imperceptible to the human ear and a change of 3 dB(A) is barely perceptible. However, a change of 5 dB is clearly noticeable and a 10 dB(A) change is perceived as a doubling of noise.

Any noise source generates a given amount of energy that travels along a path to arrive at the receiver. The dynamics of noise perception are based on the relationship between the noise source, the person or place exposed to the noise (receiver), and the path the noise will travel from the source to the receiver. (See figure below).

Given the source-receiver-path relationship, noise can be attenuated by three basic methods:

1. Reduce the amount or intensity of noise coming from the source.
2. Increase the distance (length of path) between the source and the receiver.
3. Physically block the path of the noise from the source to the receiver.

The first method can be accomplished by reducing the total number of vehicles or by reducing their speed. This will reduce the noise emitted from the vehicles traveling on Camelback Road. Method Two applies where residences have significant size lots or change setbacks, only a few residences on Camelback Road have that advantage. Method Three involves the construction of noise berms or walls.

Walls are the most common noise mitigation alternative. Berms require more physical space than walls and are practical in settings only where adequate land is available. The purpose of this noise mitigation recommendation is to provide alternatives to property owners along Camelback Road where new wall construction may be most feasible. Since some properties already have walls in place, the following analysis also provides insight as to how well existing walls mitigate road noise.

Camelback Road Analysis

Using the Department of Housing and Urban Development (HUD) guidelines on noise mitigation, the goal is to reduce roadway noise at the receiver to an acceptable level. Since outdoor living spaces are an important part of home life, these areas need to be shielded from traffic noise of Camelback Road. The Phoenix City Council has adopted the HUD standard decibel rating of 65 dB(A) for noise mitigation in residential areas citywide. Once outside noise levels have been reduced to this level, interior noise levels can also be reduced additionally with standard home retrofit methods, such as installing solid core exterior doors and double pane windows.

Standard measuring techniques of average noise level account for a 24-hour period. The measurement averages day/night level (Ldn), where nighttime noises, between 10:00 p.m. and 7:00 a.m., receive an extra 10 dB(A) rating. This considers the added annoyance of unwanted sound during sleeping hours.

Wall height recommendations in this plan were derived through a two-step process. First, using a noise meter, reconnaissance noise assessments were conducted by planning staff in the field to determine noise levels. Fourteen sites were chosen which best exemplified the typical conditions of properties along Camelback Road. Characteristics of these properties are described in Appendix M, Camelback Road 44th to 64th Streets Property Site Design Inventory. They were grouped in five categories:

- A) Significant Size and Setback Lots
- B) Buffered Properties
- C) Neighborhood Side Street Oriented Lots
- D) Camelback Road -Side Street Properties
- E) Camelback Road Properties

The normal location for measuring acceptable noise standards is the outside living area or backyard. Yet, a significant number of properties have front yards oriented to Camelback Road, nine of the fourteen sample properties. Therefore, readings were taken as close to the noise source as possible and noise levels of front or rear building setbacks calculated. Tests were on weekday mornings, after peak commute times. This best represents noise conditions conducive to free-flowing traffic, whereas stop-and-go traffic of the morning or afternoon commute is slower and quieter. This methodology does not alter any conclusions based on the HUD standard. Rather, it reveals which property needs greater noise mitigation from Camelback Road.

Second, using formulas from the HUD Noise Guidebook, noise levels were mathematically projected to hypothetical receivers in the outdoor living space near the house. For properties that have existing walls, four noise calculations were done. Shown on the Table, the first calculated noise level describes what the noise level is at the receiver with any existing wall. Subsequently, the three other decibel levels offer a comparison with proposed noise wall heights and setbacks. The proposed walls are 4-foot 6-inch high walls on the property line, 6-foot high walls set back 15 feet from the property line, and 8-foot high walls set back 19 feet from the property line. Every calculation for proposed walls, assumes a concrete wall thickness of 8 inches. See the wall construction criteria below for an explanation.

On most properties with existing walls, traffic noise levels were mitigated to near or below the HUD standard decibel rating of 65 dB(A). However, some locations have better noise mitigation with the proposed walls than others. Since noise fluctuates according to traffic levels, some areas experience higher traffic levels than other sites and need increased mitigation measures.

For properties that have low or no existing walls, three calculations were done at proposed wall heights and locations. The Table describes how much each proposed wall would mitigate noise levels for a receiver standing outside in the front yard. This table shows which combination of wall height and setback distance works best to achieve a standard decibel rating of 65 dB(A).

Noise mitigation in the outdoor living area is more effective when a solid structure blocks the sound source path. On some properties facing Camelback Road, one or two driveway openings are necessary to gain access. Any opening in a wall reduces noise mitigation potential. Therefore, installing solid driveway gates or wing walls along driveways helps retain some noise mitigation. See the wall construction criteria, below, for a detailed explanation.

Wall Construction Criteria

There are a few criteria that need to be understood when considering what type of wall will effectively mitigate noise, height, length, material and construction techniques. Height of a wall needed to intercept the path of sound waves is best described by “blocking the direct line-of-sight.” If one cannot see where the source of the sound is, then noise mitigation from the wall is effective. The best location of a wall in this case is when the wall is built as close as possible to the noise source. Sound waves generated from traffic noise can be quickly blocked. Conversely, a wall of equal height that is built closer to the home does not have as much noise mitigation. Another factor to consider is that walls offer the best noise reduction when they are employed in areas where building height is not over two stories.

Ideally, an infinitely long wall has the best potential for mitigating noise coming from roadway sources. Although infinite walls are not possible to build, turning the walls inward toward the receiver in the outdoor space offers measurable differences in lowering the sound level. A perimeter wall around the property also works better. In respect to wall height, moving a barrier closer to the receiver increases its noise attenuation potential. This may seem as a contradiction, but in reality, these two conditions, height and length, need to be coordinated to offer the best attenuation possible.

Wall materials also play an important role in the amount of noise mitigation provided. A wall that is built of sturdy materials will provide more noise protection than a wall built of lighter materials. Dense materials such as concrete, brick or granite do not easily transmit sound waves in contrast to woods, metal, or glass. One of the best noise mitigation measures is to have a wall constructed of mortared concrete blocks at least 8 inches thick.

In relation to wall material, the way a wall is constructed also plays a key role in its ability to mitigate noise. A prime concern is any openings in the wall. In this situation, if a wall has openings exposing at least 50% of total wall area, then the wall would have no



mitigation potential. For example, a wall constructed of dense concrete 6-feet high by 100-feet long with openings totaling 300 square feet (two 6-foot by 25-foot openings for instance) will provide no mitigation. In any case, the best solution is to limit wall openings to 1% of total wall area.

However, in areas where driveway openings are necessary, then these openings should be closed as much as possible. Using a solid material such as wood or metal will provide more noise mitigation than a gate made of lighter material. Gate construction may be solid wood at least two inches thick or solid metal up to 1/4 inch thick.

Photo Study

At the end of this section, seven properties without walls were chosen to envision what each would look like if the owner chose to build a 4-foot 6-inch high wall or a 6-foot high wall. These photos are of existing conditions and through computer enhancement show how each would visually change with additions of the two noise wall alternatives. Taking into account the openings necessary for driveways, no gates are shown, but the proposed walls were turned inward, toward the receiver, to accentuate noise mitigation potential. Accompanying plans for each property show how the walls would be designed.

Actual decibel levels at the observer may vary depending on property type, traffic volumes and noise, forecast growth, diverted traffic or number of openings in the wall. All these factors should be accounted for, yet it is up to the individual property owners to decide if additional noise mitigation is necessary for their property.



**Camelback Road - Private Walls as Noise Walls
Mitigation Noise Levels with Existing and Proposed Walls**

Location Address	Property Classification	Noise Level at Source dB(A)	Existing Wall Conditions	Noise Level at Observer dB(A) Ldn:			
				with Existing Wall	4'-6" High Wall @ Prop. Line	6' High Wall Setback 15'-0"	8' High Wall Setback 19'-0"
4742 Launfal Avenue	Nghbd. Side Street	69.6	5'-0" x 4"	63.3	64.8	62.3	59.9
4945 E. Camelback Road	Buffered Prop.	72.8	5'-8" x 8"	65.2	68.3	64.4	62.2
4502 Royal View Drive	Camelback Road - Side	74.7	6'-5" x 8"	66.2	69.2	67.7	65.2
4450 N. 53rd Street	Buffered Prop.	70.3	6'-0" x 4"	62.5	65.0	63.2	60.9
5320 E. Camelback Road	Buffered Prop.	69.7	7'-0" x 8"	61.1	64.4	62.4	60.3
5716 E. Camelback Road	Sign. Size & Setback	73.9	5'-0" Berm	68.7	67.4	66.6	63.1
6030 E. Mariposa Street	Buffered Prop.	75.5	8'-3" x 8"	65.5	70.0	68.4	66.4

Mitigation Noise Levels with Proposed Walls Only

Location Address	Property Classification	Noise Level at Source dB(A)	Existing Wall Conditions	Noise Level at Observer dB(A) Ldn:			
				with Existing Wall	4'-6" High Wall @ Prop. Line	6' High Wall Setback 15'-0"	8' High Wall Setback 19'-0"
4521 E. Camelback Road	Camelback Road	72.2	none	-----	66.8	65.1	62.8
4562 E. Camelback Road	Buffered Prop.	75.1	2'-0" x 4"	-----	71.0	68.1	66.4*
4830 E. Camelback Road	Camelback Road	72.1	none	-----	65.1	64.8	62.2
4920 E. Camelback Road	Sign. Size & Setback	71.4	none	-----	66.4	64.6	61.6
4453 N. 54th Street	Nghbd. Side Street	67.2	none	-----	59.9	58.7	57.5
5517 E. Camelback Road	Buffered Prop.	70.3	none	-----	67.3	64.5**	62.4
5725 E. Camelback Road	Camelback Road	72.9	none	-----	68.8	66.8	65.0

* Note: Noise level at observer of 66.8 dB(A) with an 8' high wall at median between access road and Camelback Road.

** Note: Noise level at observer of 62.4 dB(A) with a 6' high wall at median between access road and Camelback Road.

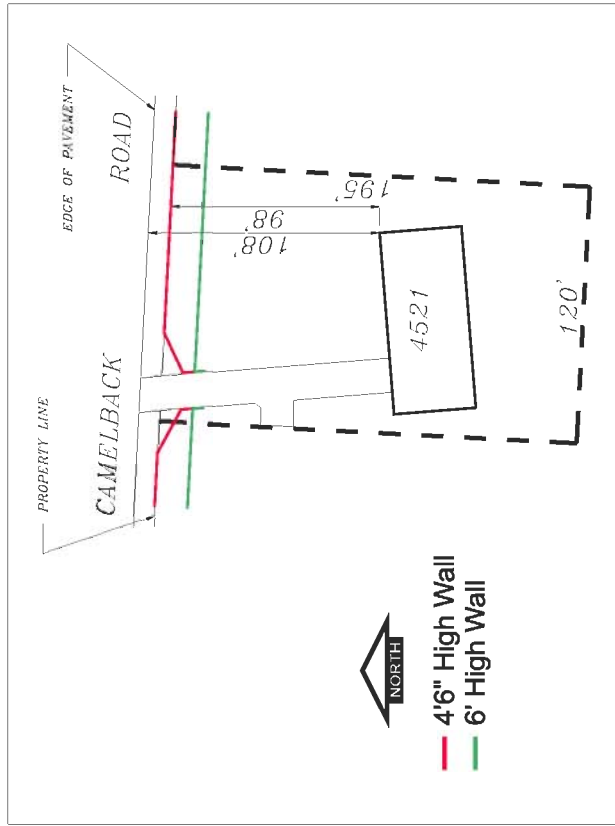




Existing Conditions:
 Property Classification: Camelback Road
 Address: 4521 E. Camelback Road
 Noise Level @ Source: 72.2 dB(A)



Proposed 4'6" High Wall at Property Line:
 Noise Level @ Source: 66.8 dB(A)



Proposed 6' High Wall Setback 15' from Property Line:
 Noise Level @ Source: 65.1 dB(A)

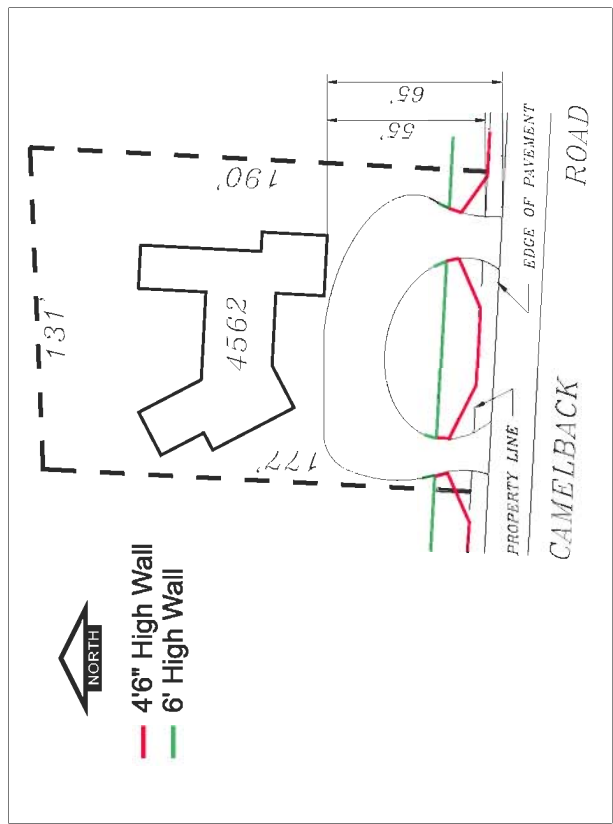




Existing Conditions:
 Property Classification: Buffered Property (frontage road)
 Address: 4562 E. Camelback Road
 Noise Level @ Source: 75.1 dB(A)



Proposed 4'6" High Wall at Property Line:
 Noise Level @ Source: 71.0 dB(A)



Proposed 6' High Wall Setback 15' from Property Line:
 Noise Level @ Source: 68.1 dB(A)

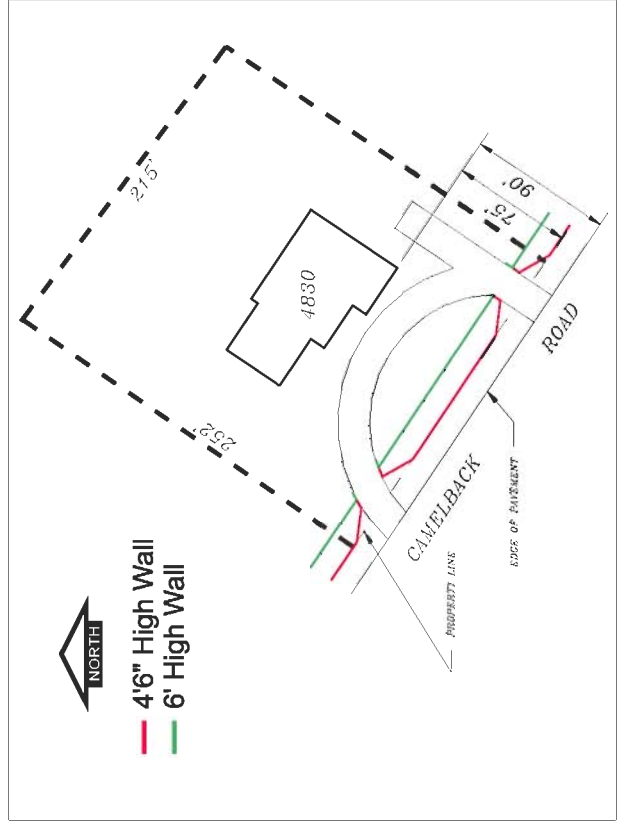




Existing Conditions:
 Property Classification: Camelback Road
 Address: 4830 E. Camelback Road
 Noise Level @ Source: 72.1 dB(A)



Proposed 4'6" High Wall at Property Line:
 Noise Level @ Source: 65.1 dB(A)

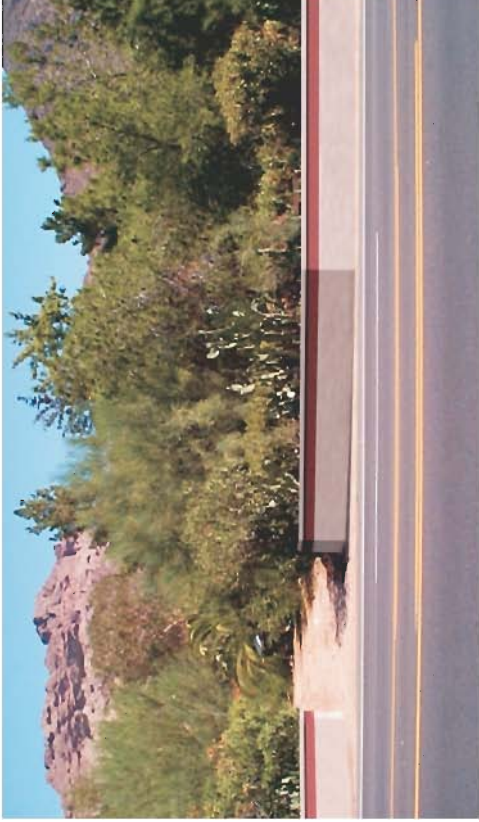
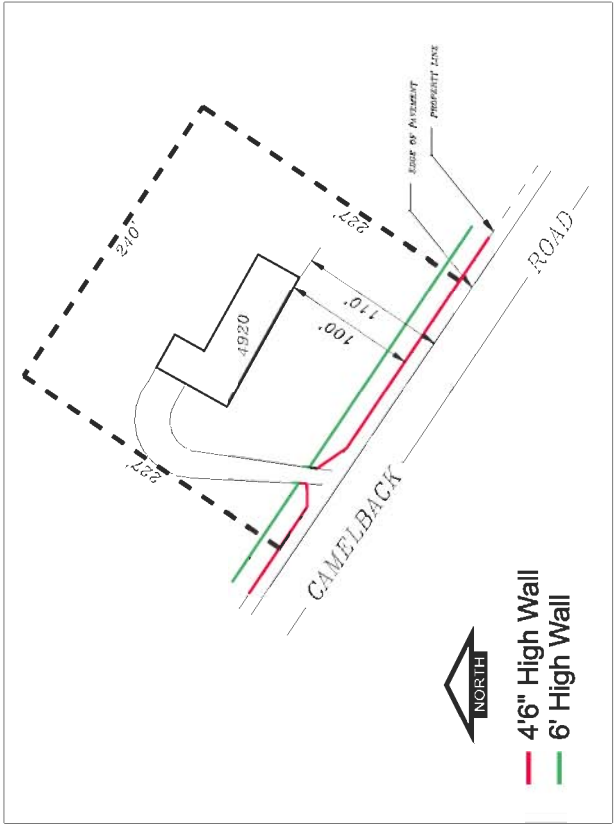


Proposed 6' High Wall Setback 15' from Property Line:
 Noise Level @ Source: 64.8 dB(A)

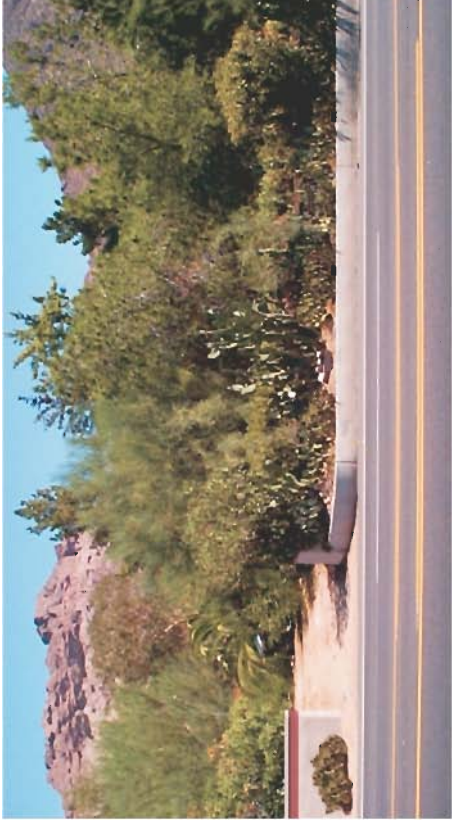




Existing Conditions:
 Property Classification: Sign, Size & Setback
 Address: 4920 E. Camelback Road
 Noise Level @ Source: 71.4 dB(A)



Proposed 4'6" High Wall at Property Line:
 Noise Level @ Source: 66.4 dB(A)

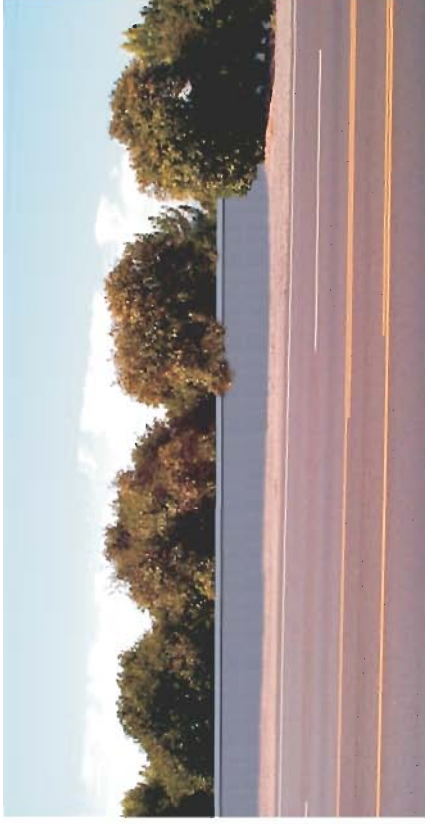


Proposed 6' High Wall Setback 15' from Property Line:
 Noise Level @ Source: 64.6 dB(A)

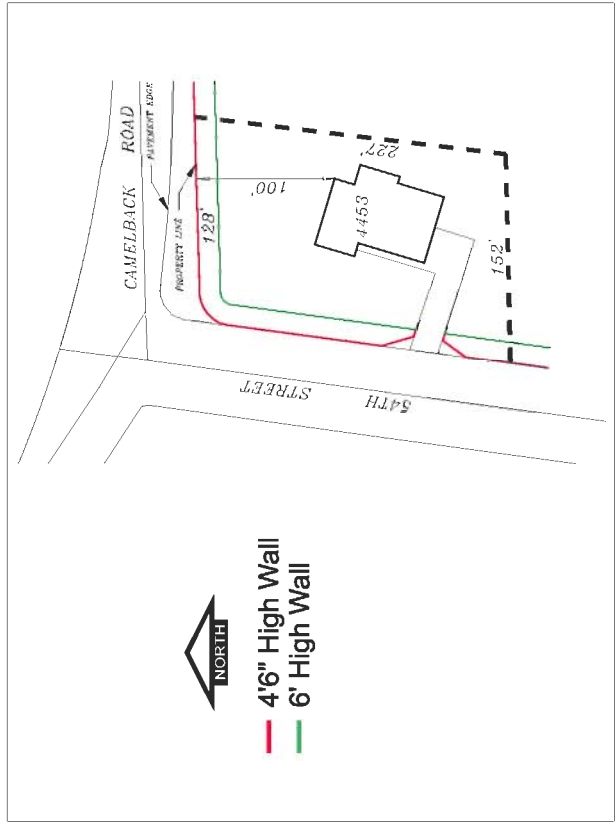




Existing Conditions:
 Property Classification: Neighborhood Side Street
 Address: 4453 N. 54th Street
 Noise Level @ Source: 67.2 dB(A)



Proposed 4'6" High Wall at Property Line:
 Noise Level @ Source: 59.9 dB(A)



Proposed 6' High Wall Setback 15' from Property Line:
 Noise Level @ Source: 58.7 dB(A)

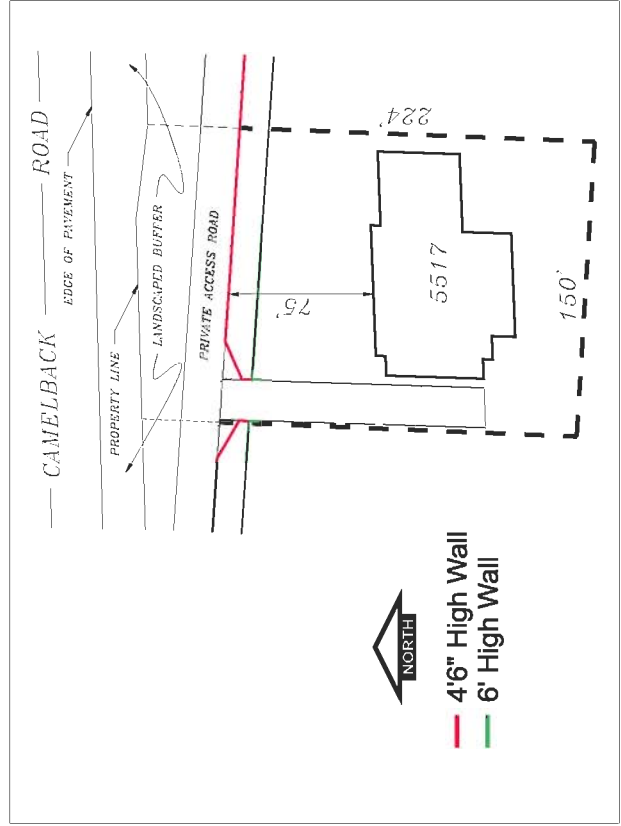




Existing Conditions:
Property Classification: Buffered Property
Address: 5517 E. Camelback Road
Noise Level @ Source: 70.3 dB(A)



Proposed 4'6" High Wall at Property Line:
Noise Level @ Source: 67.3 dB(A)



Proposed 6' High Wall Setback 15' from Property Line:
Noise Level @ Source: 64.5 dB(A)

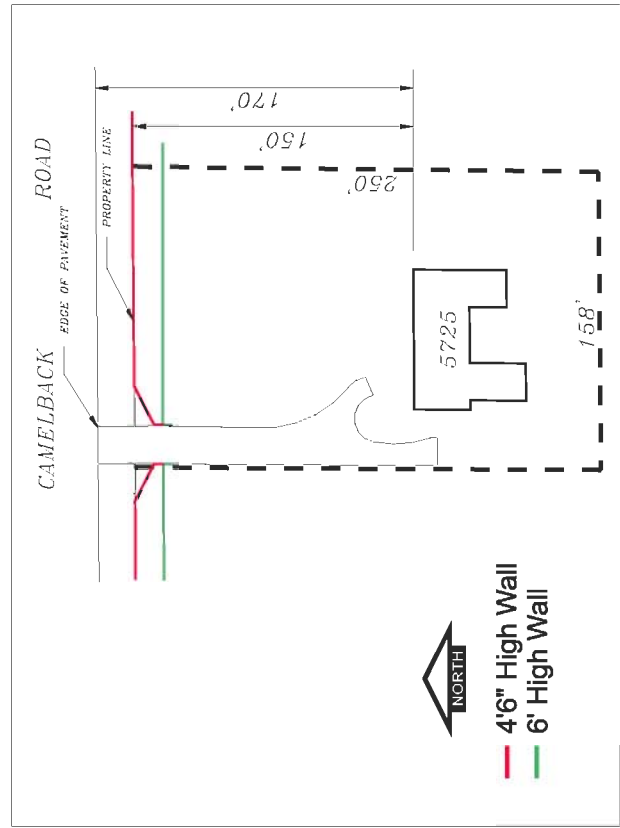




Existing Conditions:
 Property Classification: Camelback Road
 Address: 5725 E. Camelback Road
 Noise Level @ Source: 72.9 dB(A)



Proposed 4'6" High Wall at Property Line:
 Noise Level @ Source: 68.8 dB(A)



Proposed 6' High Wall Setback 15' from Property Line:
 Noise Level @ Source: 66.8 dB(A)

