

67th Avenue Overpass at Northern Avenue and Grand Avenue (US60)

Draft Environmental Assessment

Project No. STP-060-B(007)
TRACS No. 060 MA 153 H5601 01C

August 2002

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Federal Highway
Administration



Arizona Department
of Transportation

Arizona Department of Transportation
Intermodal Transportation Division
Environmental Planning Group
205 South 17th Avenue
Phoenix, Arizona 85007

Draft Environmental Assessment

for

67th AVENUE OVERPASS AT NORTHERN AVENUE AND GRAND AVENUE (US 60)
Maricopa County, Arizona
Project No. STP-060-B(007)
TRACS No. 060 MA 153 H5601 01C

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This environmental assessment has been prepared in accordance with provisions and requirements of Chapter 1, Title 23 USC, 23 CFR Part 771, relating to the implementation of the National Environmental Policy Act of 1969.

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LIST OF ACRONYMS AND ABBREVIATIONS

AASHTO	American Association of State Highway and Transportation Officials
ADEQ	Arizona Department of Environmental Quality
ADES	Arizona Department of Economic Security
ADOT	Arizona Department of Transportation
ADT	average daily traffic
APS	Arizona Public Service
ARS	Arizona Revised Statutes
ASC	Alternative Selection Committee
BNSF	Burlington Northern Santa Fe Railway
CAAA	Clean Air Act Amendments
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CO	carbon monoxide
dBA	A-weighted sound level in decibels
DCS	Design Concept Study
EA	Environmental Assessment
ED	Enumeration District
EPA	Environmental Protection Agency
EPG	Environmental Planning Group
FHWA	Federal Highway Administration
LOS	level of service
MAG	Maricopa Association of Governments
MHP	mobile home park
MIS	Major Investment Study
NAAQS	National Ambient Air Quality Standards
NAC	Noise Activity Category
NAP	Noise Abatement Policy
NEPA	National Environmental Policy Act
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
O ₃	ozone
PA	Programmatic Agreement
PISA	Preliminary Initial Site Assessment
PM ₁₀	particulate matter less than 10 microns
ROW	right-of-way
RPTA	Regional Public Transportation Authority
SHPO	State Historic Preservation Office
SRP	Salt River Project
SWPPP	Storm Water Pollution Prevention Plan
TCP	Traditional Cultural Property
US	United States
U.S.C.	United States Code
vpd	vehicles per day

MITIGATION MEASURES

The following mitigation measures and commitments are not subject to change without the prior written approval of the Federal Highway Administration.

Arizona Department of Transportation Environmental Planning Group Responsibilities:

1. Any parcels requiring additional hazardous materials investigation would be completed by the Arizona Department of Transportation prior to right-of-way acquisition. (Refer to Page 49.)

Arizona Department of Transportation Design Responsibilities:

1. Arizona Department of Transportation would coordinate with Regional Public Transportation Authority to address impacts and/or relocation of any temporarily or permanently impacted bus stops or bus routes during final design. (Refer to Page 21.)
2. Arizona Department of Transportation would coordinate with the Burlington Northern Santa Fe Railway during development of the traffic control plan. (Refer to page 25.)
3. Arizona Department of Transportation would design, construct, and/or reconstruct new sidewalks or impacted sidewalks, respectively, within the 67th Avenue project limits to accommodate alternative transportation travel. (Refer to Page 26.)
4. Arizona Department of Transportation would construct an 8-foot-high sound barrier from the southwest corner of the Orange Grove Mobile Home Park to approximately 610 feet north to the Orange Grove Mobile Home Park entrance. Final details of the sound barrier would be coordinated with the City of Glendale prior to the completion of final design. (Refer to Page 42.)
5. The Storm Water Pollution Prevention Plan would be prepared during final design. (Refer to Page 45.)

Arizona Department of Transportation Roadside Development Section Responsibilities:

1. All embankment slopes, detention basins, and affected public right-of-way would be landscaped with low-water-use plants and the area covered with an inert ground cover. Trees would be planted along detention basins to screen the drainage facilities from motorists' views. (Refer to Page 44.)

Arizona Department of Transportation District Construction Responsibilities:

1. Any sidewalks that would be temporarily closed during construction would be identified with signs and alternative routes would be provided. (Refer to Page 26.)
2. District Construction Office would notify local residents prior to any temporary access impacts to pedestrians or motorists. Final details of any traffic or pedestrian restrictions would be evaluated during final design. (Refer to Page 26.)
3. District Construction Office would coordinate with the Maricopa County Environmental Services Department during the planning of nighttime road closures or detours during winter months for air quality purposes. (Refer to Page 38.)
4. Because 5 or more acres of land would be disturbed, a National Pollutant Discharge Elimination System permit would be required. The District Construction Office would submit the Notice of Intent and the Notice of Termination to the United States Environmental Protection Agency and copies to the Arizona Department of Environmental Quality. A Notice of Intent would be submitted to the United States Environmental Protection Agency at least 48 hours prior to the start of construction. (Refer to Page 45.)
5. District Construction Office would provide notice to the utility companies that could be affected prior to any disruption of service, so that adequate planning and notice to residents could be provided. (Refer to Page 49.)

Contractor's Responsibilities:

1. No full traffic closures would be permitted between Thanksgiving Day and January 1. (Refer to Page 25.)
2. Any full closures along 67th Avenue, Grand Avenue, and Northern Avenue would occur at night or during weekend hours. (Refer to Page 25.)
3. The contractor would comply with Maricopa Rules 310 and 360 regarding fugitive dust emissions and new-source performance standards, respectively, during construction. (Refer to Page 38.)
4. The contractor would be responsible for obtaining any necessary asbestos permits for demolition of any structures done by the contractor. (Refer to Page 38.)
5. In compliance with Executive Order 13112 regarding invasive species, all disturbed soils that would not be landscaped or otherwise permanently stabilized by construction would be seeded using species native to the project vicinity. Specifically, all embankment slopes would be landscaped with drought-tolerant plants and covered with an inert ground cover. (Refer to Page 44.)
6. In order to prevent the introduction of invasive species, all earth-moving and hauling equipment would be washed prior to arriving on site to prevent the introduction of invasive species seed. (Refer to Page 44.)
7. Because 5 or more acres of land would be disturbed, a National Pollutant Discharge Elimination System permit would be required. The contractor would submit the Notice of Intent and the Notice of Termination to the United States Environmental Protection Agency and copies to the Arizona Department of Environmental Quality. A Notice of Intent would be submitted to the United States Environmental Protection Agency at least 48 hours prior to the start of construction. (Refer to Page 45.)

Standard Specifications Included as Mitigation Measures:

1. According to *Arizona Department of Transportation's Standard Specifications for Road and Bridge Construction*, Section 107 Legal Relations and Responsibility to Public (2000 Edition) (Stored Specification 107.05 Archaeological Features), if previously unidentified cultural resources are encountered during activity related to the construction of the project, the contractor would stop work immediately at that location and take all reasonable steps to secure the preservation of those resources and notify the Arizona Department of Transportation Engineer. The Arizona Department of Transportation Engineer would contact the Environmental Planning Group immediately and make arrangements for the proper treatment of those resources. Arizona Department of Transportation would, in turn, notify the appropriate agency(ies) to evaluate the significance of the resource. (Refer to Page 34.)
2. During construction, the contractor would give special attention to the effect of its operations upon the landscape in accordance with *Arizona Department of Transportation's Standard Specifications for Road and Bridge Construction*, Section 104.09 (2000 Edition) *Prevention of Landscape Defacement; Protection of Streams, Lakes and Reservoirs* and the Water Quality Standards in Title 18, Chapter 11 of the Arizona Administrative Code as administered by the Arizona Department of Environmental Quality. (Refer to Page 47.)
3. During construction, care would be taken to ensure that construction materials comply in accordance with *Arizona Department of Transportation's Standard Specifications for Road and Bridge Construction* Section 104.09 (2000 Edition). Excess concrete, curing agents, formwork, loose embankment materials, and fuel would not be disposed of within the project boundaries. (Refer to Page 47.)
4. According to *Arizona Department of Transportation's Standard Specifications for Road and Bridge Construction*, Section 107 Legal Relations and Responsibility to Public (2000 Edition) (Stored Specification 107HAZMT, 01/15/93), if previously unidentified or suspected hazardous materials are encountered during construction, work would cease at that location and the Arizona Department of Transportation Engineer would be contacted to arrange for proper assessment, treatment, or disposal of those materials. Such locations would be investigated and proper action implemented prior to the continuation of work in that location. (Refer to Page 49.)

5. Excess waste material and construction debris would be disposed of at sites supplied by the contractor in accordance with *Arizona Department of Transportation's Standard Specifications for Road and Bridge Construction* Section 107.11, Protection and Restoration of Property and Landscape (2000 Edition). Disposal would be made at either municipal landfills approved under Title D of the Resource Conservation and Recovery Act, construction debris landfills approved under Article 3 of the Arizona Revised Statutes 49-241 (Aquifer Protection Permit) administered by the Arizona Department of Environmental Quality, or inert landfills. (Refer to Page 50.)

6. Any material sources required for this project outside of the project area would be examined for environmental effects, by the contractor, prior to use, through a separate environmental analysis in accordance with *Arizona Department of Transportation's Standard Specifications for Road and Bridge Construction*, Section 1001 Material Sources (2000 Edition) (Stored Specification 1001.2 General). (Refer to Page 50.)

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I. INTRODUCTION

A. Explanation of Environmental Assessment

This Environmental Assessment (EA) is being prepared to comply with the National Environmental Policy Act (NEPA) of 1969 and the policies of the Federal Highway Administration (FHWA), as the lead federal agency. The EA process provides steps and procedures to evaluate the potential social, economic, and environmental impacts of a proposed action, while providing an opportunity for public and local, state, or other federal cooperating agencies to provide input and/or comment through scoping, public information meetings, and a public hearing. These impacts are measured by the magnitude of their impacts based on the context and intensity as defined in the Council on Environmental Quality's (CEQ) regulations. In addition, this EA also provides FHWA and the Arizona Department of Transportation (ADOT) a detailed analysis to better examine and consider the levels of impact on any sensitive social and environmental resources and, by doing so, assists in the FHWA decision-making process.

B. Location

The proposed project is located at the 67th Avenue, Northern Avenue, and Grand Avenue intersection within the city of Glendale, Maricopa County, Arizona (refer to Figures 1, 2, and 3). Within the Phoenix Metropolitan Area this portion of United States Route 60 (US 60) is designated as Grand Avenue. Typically, arterial streets within the Phoenix Metropolitan Area intersect from north-south and east-west directions, which result in standard, four-legged intersections. Grand Avenue, however, orients in a northwest to southeast direction. This alignment of Grand Avenue creates six-legged intersections as it intersects main north-to-south and east-to-west arterial streets (refer to Figure 3).

C. Background and Overview

Grand Avenue was originally built to link the agricultural lands in the western portion of Maricopa County and their associated growing communities to downtown Phoenix and the State Capitol Building. Grand Avenue has undergone a series of studies by state and local agencies over the past two decades to identify and examine improvement alternatives, ranging from eliminating Grand Avenue altogether to reconstructing it as an expressway.

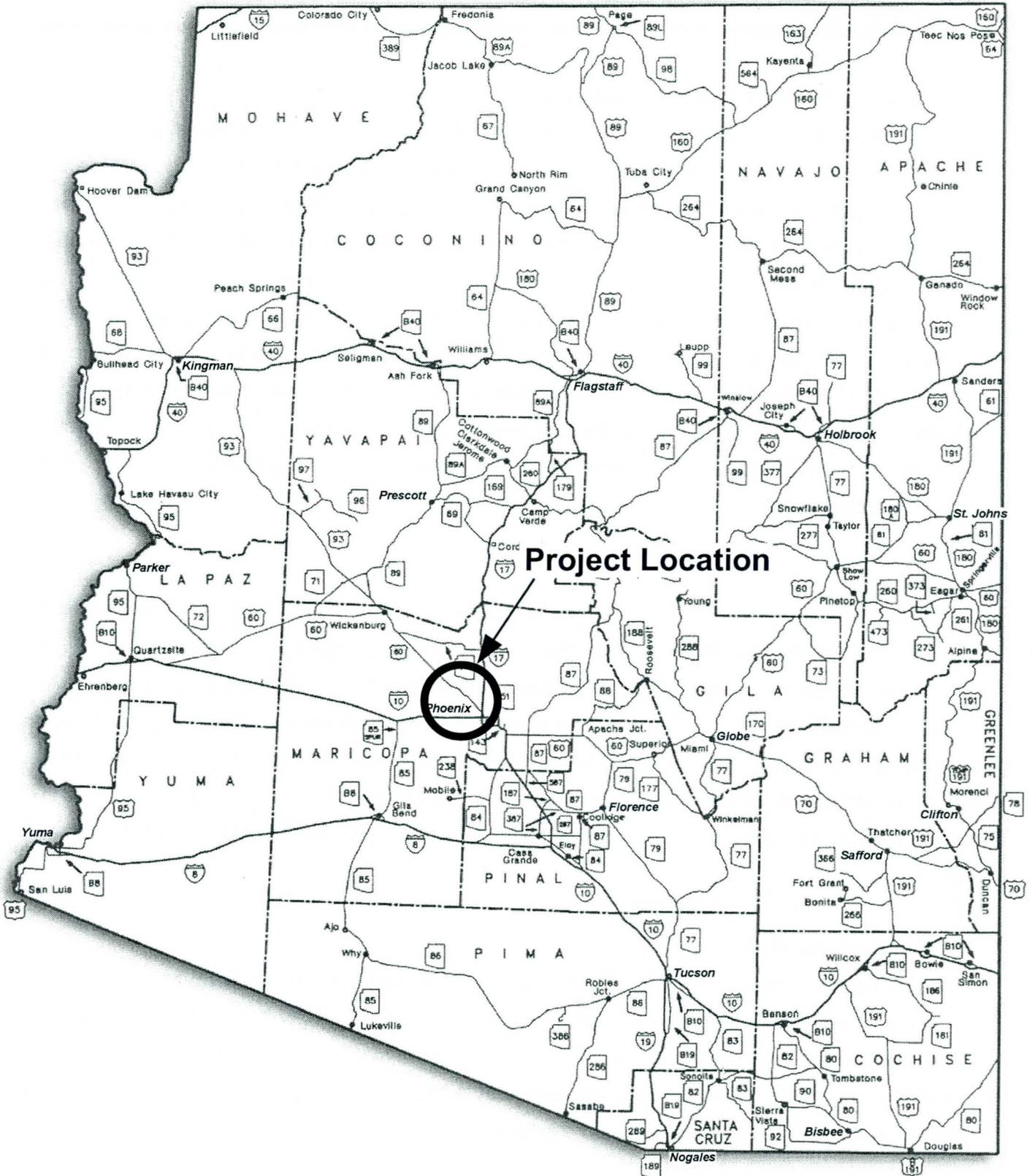
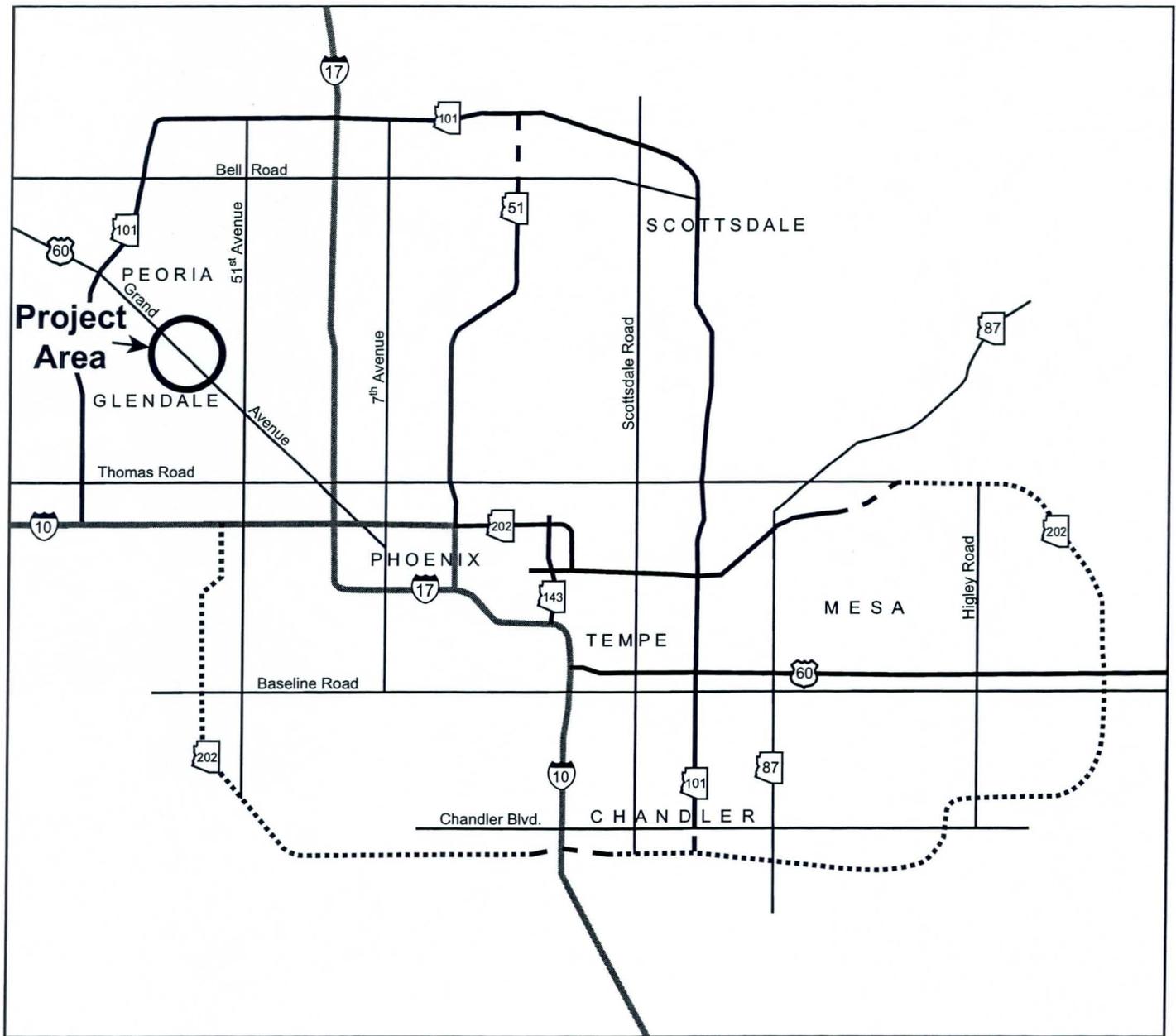


Figure 1. State Location Map





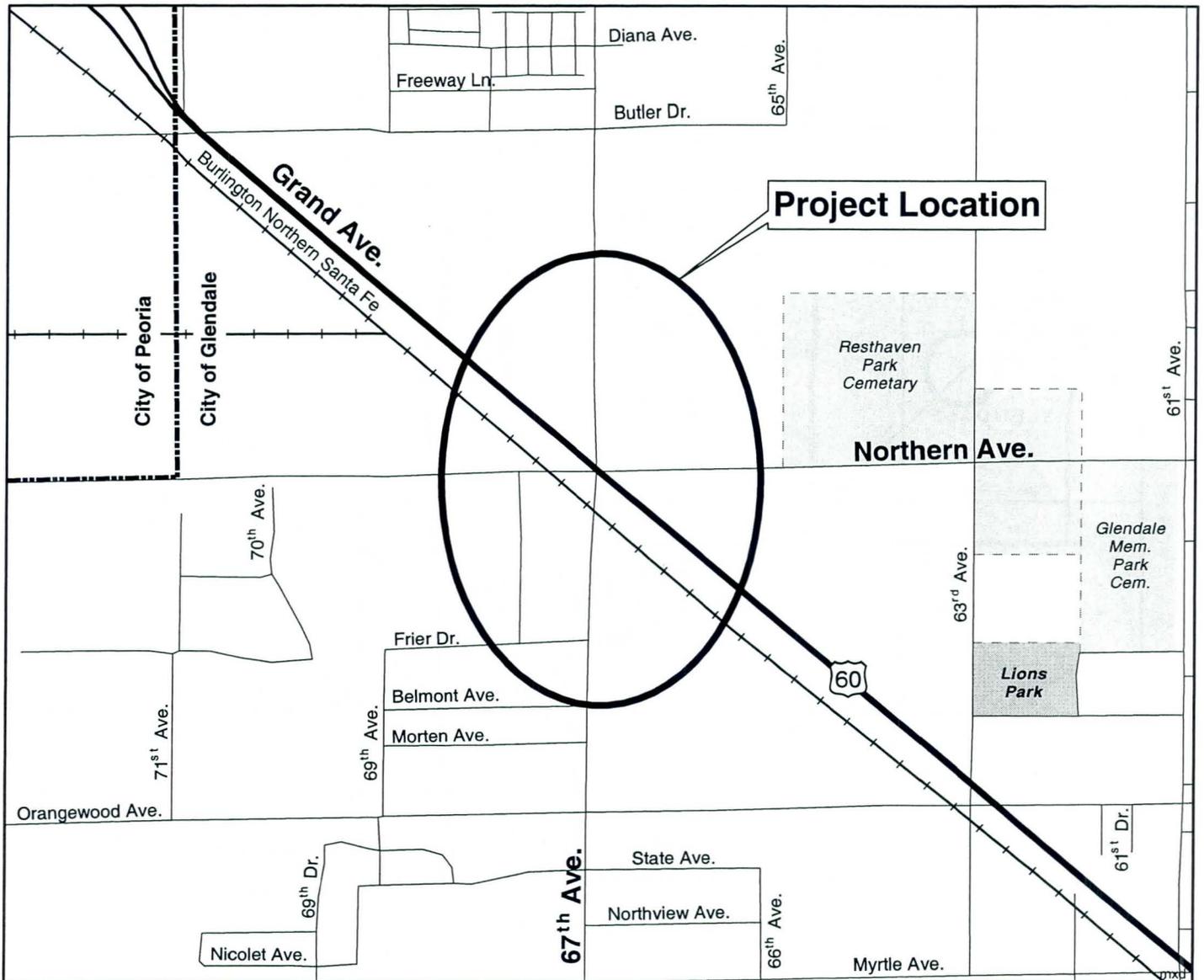
Key

- Built/Existing Freeway
- - - - - Freeways Under Construction
- Planned Freeways



Figure 2. Project Vicinity





Key

----- City Boundary



Figure 3. Project Location



In 1985, the Maricopa Association of Governments (MAG) completed the *West Area Transportation Analyses*. This report analyzed the option to build a freeway along the corridor and/or build grade-separation structures, which would remove one of the roads at each six-legged intersection. In 1990, the Interstate 10 (I-10) to Interstate 17 (I-17) connection was completed. This interstate-to-interstate connection reduced some of the through travel on Grand Avenue, but did not resolve all of the traffic operation problems, such as delay times during peak hour travel.

ADOT and MAG followed in 1996 with the *Grand Avenue Corridor Study*, which developed expressway concepts characterized and differentiated by their design speeds and levels of traffic service (refer to Table 1). The Grand Avenue Expressway concept was eliminated from planning by the governor of Arizona and MAG's Regional Council to bring program costs in line with the State's expected revenues.

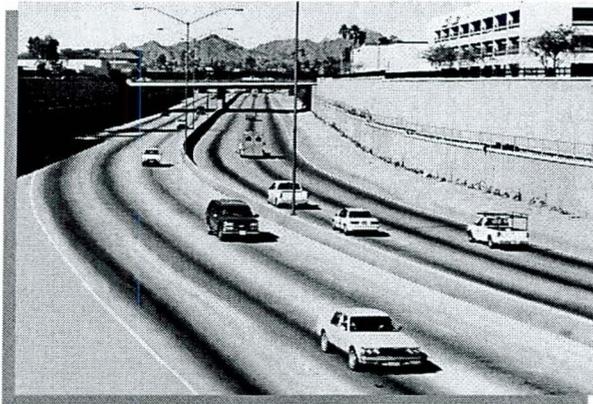
In January 1999, ADOT initiated the *Grand Avenue Major Investment Study (MIS)*. This study evaluated and recommended transportation improvements for the entire Grand Avenue corridor, and identified potential environmental impacts. A steering committee comprised of ADOT; the Cities of Glendale, Peoria, and Phoenix; MAG; Maricopa County; the Regional Public Transportation Authority (RPTA); WESTMARC (a private association for businesses and development in the West Valley); and the Burlington Northern Santa Fe Railway (BNSF) was formed as part of the MIS to identify improvement options to the Grand Avenue corridor. In addition, two public meetings and a stakeholders' meeting were held to provide opportunities for the public to solicit information and comment. Eight project objectives were identified for evaluation: 1) eliminate six-legged intersections, 2) eliminate railroad crossings, 3) improve regional mobility, 4) promote development opportunities, 5) improve the aesthetics of the corridor, 6) serve the statewide function of US 60, 7) promote multi-modal uses in the corridor, and 8) accommodate the projected travel demand in the corridor. The MIS narrowed the focus of improvements to eight locations along Grand Avenue. Two options from the 1996 *Grand Avenue Corridor Study*, which also had a public involvement process, were refined and evaluated in the MIS. These two alternatives were Option 4 - Alternating Grade Separations and Option 5 - Limited Expressway. While each alternative addressed the eight project objectives, Option 4 was determined to address railroad crossings more effectively and to be less expensive than Option 5. Therefore, Option 4 was identified as the preferred option.

ADOT's objectives for this project are to improve the traffic operation (reduce intersection delay times and eliminate the six-legged intersection) while minimizing environmental impacts and right-of-way (ROW) acquisition, reduce construction costs, and limit traffic restrictions during construction. The

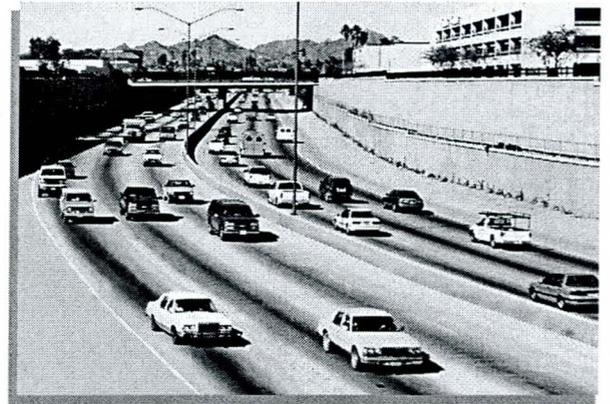
proposed improvements should comply with current ADOT and American Association of State Highway and Transportation Officials (AASHTO) design criteria and guidelines. The proposed improvements should also accommodate future traffic volumes projected for the design year 2025 (the year in which operational capacity and in turn design improvements target to improve). In addition, the facility should, when feasible, provide a level of service (LOS) of D or better and reduce intersection delay times. LOS is a qualitative measure referring to the degree of congestion or delay experienced by motorists. Levels of service range from A to F, with A being the best quality of traffic flow and F being the poorest (refer to Table 1 and Figure 4).

Level of Service	Average Delay per Vehicle (seconds/vehicle)
A	0.0 to 10.0
B	10.1 to 20.0
C	20.1 to 35.0
D	35.1 to 55.0
E	55.1 to 80.0
F	>80.0

Source: ADOT 2001



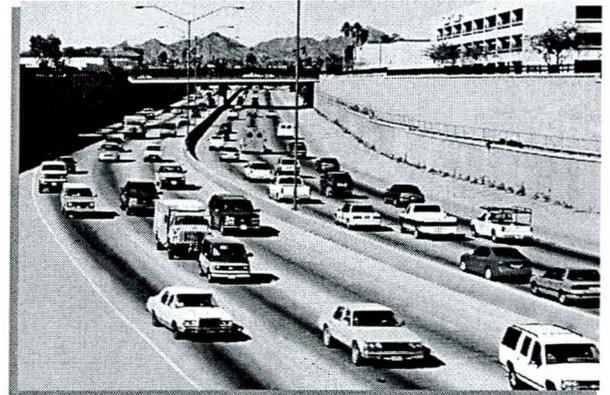
Level of Service A. Free flow at posted speed limit, frequent passing opportunities.



Level of Service D. Sluggish flow, no passing opportunities.



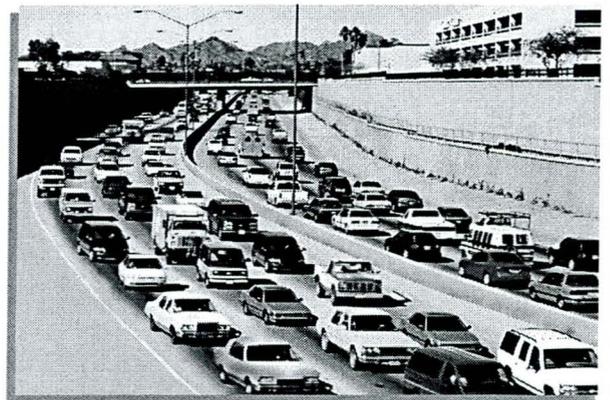
Level of Service B. Relatively free flow, limited passing opportunities.



Level of Service E. Very sluggish flow, reduced travel speeds, no opportunity for passing.



Level of Service C. Relatively free flow, but almost no passing opportunities.



Level of Service F. Heavy congestion, frequent stop and go conditions, no passing opportunities.

Figure 4. Level of Service Classifications

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II. PROJECT PURPOSE AND NEED

A. Purpose and Need

Grand Avenue and the adjacent BNSF tracks provide a transportation corridor serving the industrial and commercial businesses in the western Phoenix Metropolitan Area. Grand Avenue also provides through traffic mobility and local access to commercial and retail businesses and residences along the corridor. The six-legged intersection formed by 67th Avenue, Northern Avenue, and Grand Avenue causes existing average traffic delays of approximately 5 minutes during peak hours. This results in long delays for motorists during peak travel periods. Additionally, the BNSF tracks that parallel Grand Avenue create additional delays for those motorists traveling along 67th Avenue and Northern Avenue. In the 2025 design year, traffic volumes are expected to rise, resulting in increased traffic delays and congestion at this intersection, as well as at other six-legged intersections throughout the Grand Avenue corridor.

The current 67th Avenue, Northern Avenue, and Grand Avenue intersection operates at LOS F. Without traffic movement improvements, the intersection would continue to operate at LOS F in the 2025 design year (refer to Table 2). Removing 67th Avenue from the existing six-legged intersection by reconstructing it as a grade-separation overpass would improve the LOS for the remaining intersection legs. In addition, because a 67th Avenue grade-separation overpass would also pass over the BNSF tracks, traffic/train conflicts would also be reduced. As a result of these intersection improvements, the traffic capacity of the intersection would improve, resulting in reduced congestion and increased regional mobility throughout the Grand Avenue corridor.

Table 2 illustrates 2000 and projected 2025 traffic volumes and LOS classifications if no improvements (No Build Alternative) to the intersection were made. Traffic volumes are represented by the Average Daily Traffic (ADT) of number of vehicles per day (vpd). The vpd range illustrated in Table 2 reflects that vehicles could choose to turn onto another street such as Northern Avenue or 67th Avenue, and not necessarily travel through the intersection on that specific street (e.g., traffic on Grand Avenue could turn onto Northern Avenue or 67th Avenue instead of traveling through the intersection on Grand Avenue).

Table 2. Existing 2000 and Projected 2025 No Build Alternative Traffic Volumes and LOS Classifications						
Location	2000			2025 (No Build Alternative)		
	ADT (vpd) ¹	LOS		ADT (vpd)	LOS	
		Morning	Evening		Morning	Evening
Grand Avenue	22,500–25,000	F	F	33,500–33,700	F	F
67 th Avenue	24,300–24,600	F	F	36,500–36,900	F	F
Northern Avenue	13,200–14,000	F	F	19,800–21,000	F	F

Source: ADOT 2001

¹ ADT (vpd) - Average Daily Traffic (vehicles per day)

B. Conformance with Regulations, Land Use Plans, and Other Plans

The proposed project complies with the City of Glendale's *General Plan* and *Transportation Plan* and MAG's *Long Range Transportation Plan*.

C. General Project Schedule

Final design is planned for completion by the winter of 2002, with the acquisition of ROW being completed in spring 2003. Once project-area ROW is acquired, construction would begin, with fall 2003 being the current estimate. The proposed intersection improvements would be open to traffic in 2005.

D. Resource Issues Eliminated from Detailed Study

The following resources were eliminated from further evaluation because it was determined that no potential impacts would occur as a result of the proposed improvements. The proposed improvements would not impact the following: geological setting and mineral resources; farmland; ground water; sole source aquifers; waters of the United States under Section 404 of the Clean Water Act; wild and scenic rivers; biological resources including federally-listed threatened, endangered, proposed, or candidate species; Arizona Species of Concern: plants under the Arizona Native Plant Law; designated critical habitat for any species; wetlands; riparian habitat; or National Natural Landmarks.

III. ALTERNATIVES

A. Alternatives Considered and Eliminated From Further Consideration

Build alternatives and a No Build Alternative were evaluated based on public and stakeholder input and the overall feasibility and operation of the design concepts. The Alternative Selection Committee (ASC) included representatives from the FHWA, ADOT Valley Project Management, ADOT Phoenix Construction District, ADOT Right-of-Way Section, ADOT Roadway Section, ADOT Environmental Planning Group, and the City of Glendale.

Three build alternatives (Alternatives E-1, W-1, and W-2) were developed for a 67th Avenue overpass. The three 67th Avenue alternatives were developed and evaluated during ADOT's Design Concept Study based on the design criteria established for the project including ROW, traffic/operation issues, and total vehicular delay (refer to Table 3). The Design Concept Study included efforts to minimize ground disturbance and ROW acquisition, reduce construction costs where feasible, and minimize impacts to motorists and pedestrians during construction. The Design Concept Study was used to assist ADOT in the selection of an alternative to carry forward into the next phase of design and to this EA. All of the build alternatives would consider using a grade-separation overpass that would carry 67th Avenue over Northern Avenue, Grand Avenue, and the BNSF.

Table 3. Description of Alternatives

	Alternative E-1	Alternative W-1	Alternative W-2
Estimated Right-of-Way Required (acres)	38	16	19
Parcels Taken	Commercial-7 Residential-1	Commercial-13 Residential-2	Commercial-13 Residential-2
Estimated Costs (millions)	\$30	\$26	\$28
Total Vehicular Delay	a.m.-196 sec/veh p.m.-201 sec/veh	a.m.-244 sec/veh p.m.-304 sec/veh	a.m.-191 sec/veh p.m.-194 sec/veh
Operational Issues/ Considerations	<ul style="list-style-type: none"> • New signals along Grand and 67th Avenues • Modified access to local businesses • Widening Grand Avenue at Northern Avenue • No right turns permitted from southbound 67th Avenue Overpass to Frier Drive 	<ul style="list-style-type: none"> • New signal along 67th Avenue • Five-legged intersection at the intersection of Grand/Northern/67th Avenues • No movement between north-bound 67th Avenue to Northwest-bound Grand Avenue 	<ul style="list-style-type: none"> • New signals along Grand and 67th Avenues • Widening Grand Avenue at Northern Avenue

Source: ADOT 2001

1. No Build Alternative

The No Build Alternative would allow for minor improvements and routine maintenance. This alternative proposes no major improvements for the 67th Avenue, Northern Avenue, and Grand Avenue intersection. The intersection would remain as a six-legged intersection and the No Build Alternative would not decrease delay times, improve traffic movement through the intersection in the design year, or eliminate the BNSF at-grade track crossing when compared with current build recommendations. The No Build Alternative does not meet the operational needs of the project in the year 2025, but is the baseline condition used for comparison against the build alternatives to assess the magnitude of the impacts.

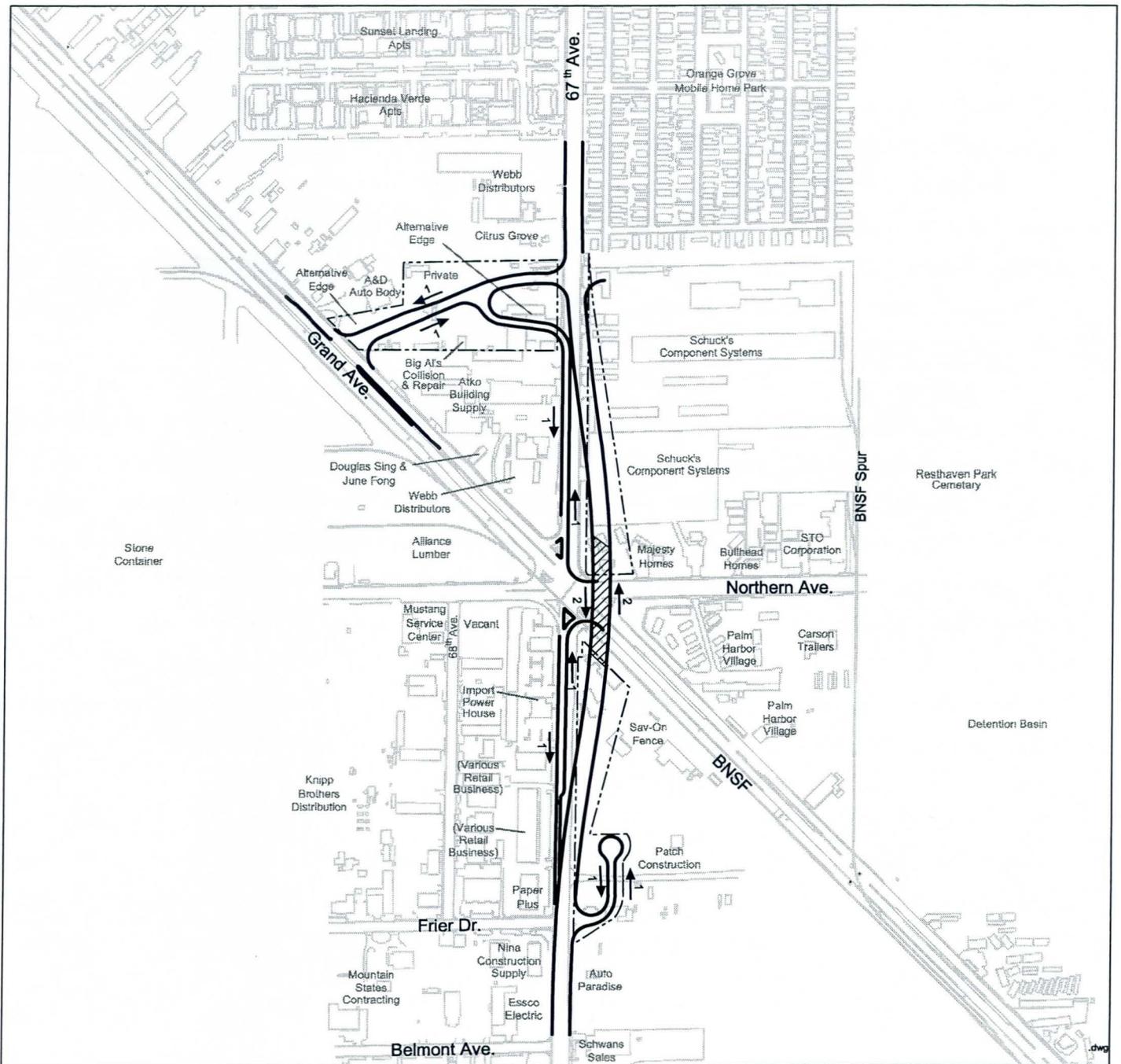
2. Build Alternatives

a. Alternative E-1

Alternative E-1 would include the construction of 67th Avenue as a grade-separation overpass along the east side of the existing 67th Avenue alignment. Approximately 38 acres of ROW would be required, which would include the removal and relocation of seven businesses and one residential property. Projected year 2025 delay times at the remaining Northern Avenue and Grand Avenue intersection would be approximately 3 minutes during both the morning (196 seconds) and afternoon (201 seconds) peak travel periods. Construction costs would total approximately \$30 million (refer to Table 3).

Access to adjacent properties would be obtained from one-way and two-way connector streets. Travel between Grand Avenue, Northern Avenue, and 67th Avenue would also be maintained along these connector roads. A total of four connector roads would be established as part of Alternative E-1. Two of the two-way connector roads would be located north of the existing 67th Avenue, Grand Avenue, and Northern Avenue intersection. A two-way and a one-way connector road would be constructed south of the existing intersection (refer to Figure 5).

Alternative E-1 was eliminated from further consideration because it would require approximately twice as much ROW as Alternative W-2 to construct (e.g., 38 acres vs. 20 acres) and would cost approximately 1 to 2 million dollars more than Alternative W-1 and Alternative W-2 respectively.



Key

-  Edge of Pavement
-  New Right-of-Way
-  Direction of Travel
- 1** Number of Through Lanes
-  Bridge Location

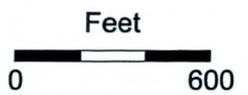


Figure 5. Alternative E-1

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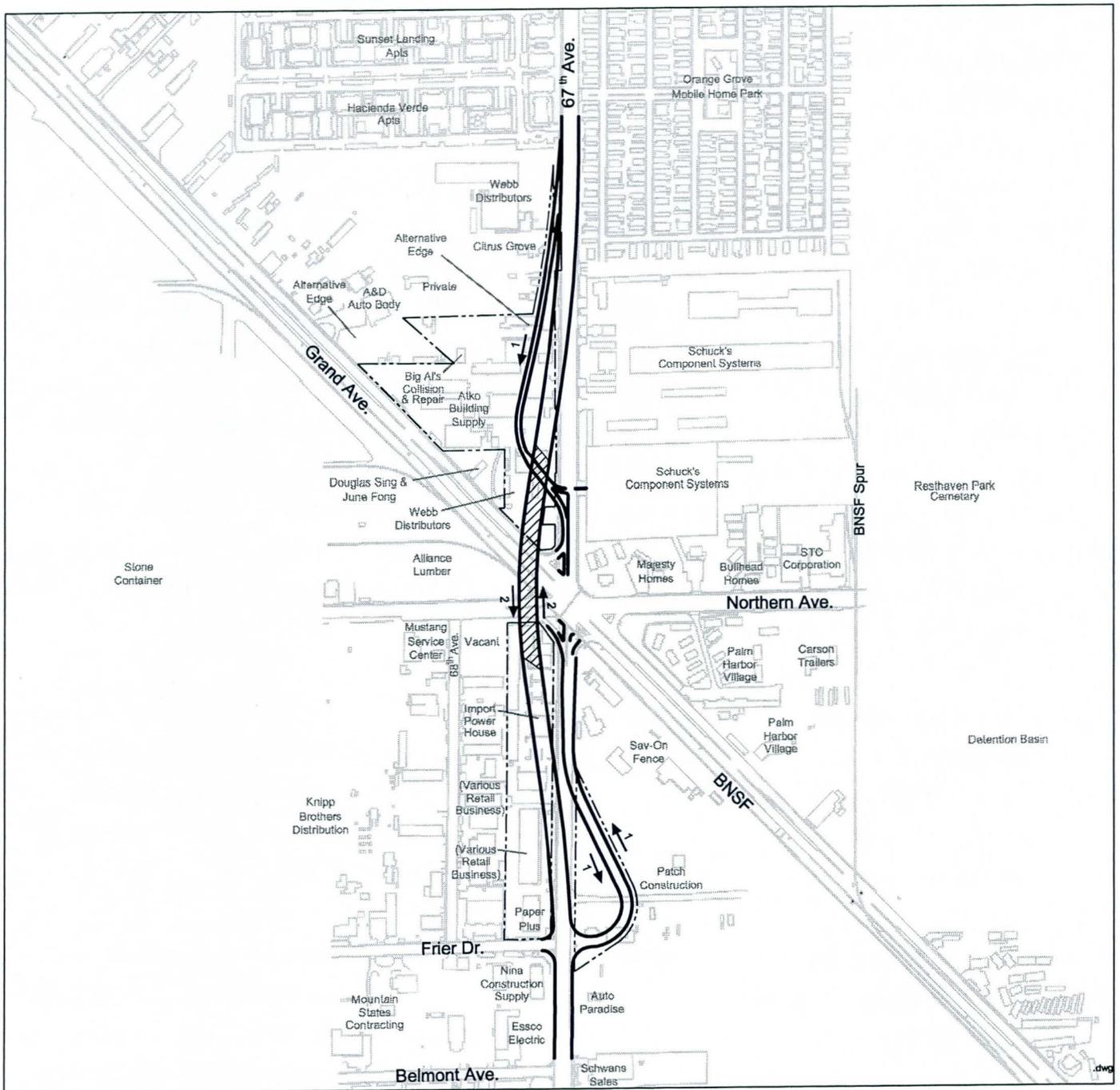
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b. Alternative W-1

Alternative W-1 would also include the construction of a grade-separation overpass that would take 67th Avenue over Grand Avenue, Northern Avenue, and the BNSF tracks, but would be constructed west of the existing alignment of 67th Avenue (refer to Figure 6). Approximately 17 acres of ROW would be required for the proposed improvements. As a result, 13 commercial properties and two residential properties would be impacted. Calculated year 2025 traffic delay times at the remaining Northern Avenue and Grand Avenue intersection would exceed 4 minutes (244 seconds) during the morning peak travel period and 5 minutes (304 seconds) during the afternoon. Alternative W-1 would cost approximately \$26 million to construct (refer to Table 3).

Similar to Alternatives E-1 and W-2, two-way and one-way connector roads would provide access to adjacent properties, as well as provide access to and from Grand Avenue and Northern Avenue. Motorists traveling southbound on 67th Avenue are provided access to Grand Avenue and Northern Avenue along a one-way connector road that passes under the 67th Avenue overpass and becomes a fully signalized fifth leg of the intersection. A fifth leg would mean that all turn movements (e.g., left and right turns, and straight through the intersection) would be provided. A two-way connector road to the south would provide access between the 67th Avenue overpass and the remaining Grand Avenue and Northern Avenue intersection. This connector road would use the Frier Drive alignment and require the installation of a traffic signal. Additional improvements on the existing Frier Drive would be required near the intersection with 67th Avenue.

Alternative W-1 was eliminated from consideration because it would include a fully functional fifth leg at the Grand Avenue and Northern Avenue intersection and, as a result of this additional leg of the intersection, delay times would be approximately one minute greater than Alternatives E-1 and W-2 (refer to Table 3).



Key

-  Edge of Pavement
-  New Right-of-Way
-  Direction of Travel
- 1** Number of Through Lanes
-  Bridge Location

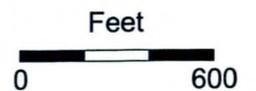


Figure 6. Alternative W-1

67th Avenue Overpass at Northern Avenue and Grand Avenue (US 60) Draft Environmental Assessment
 Project No. STP-060-B(007) TRACS No. 060 MA 153 H5601 01C

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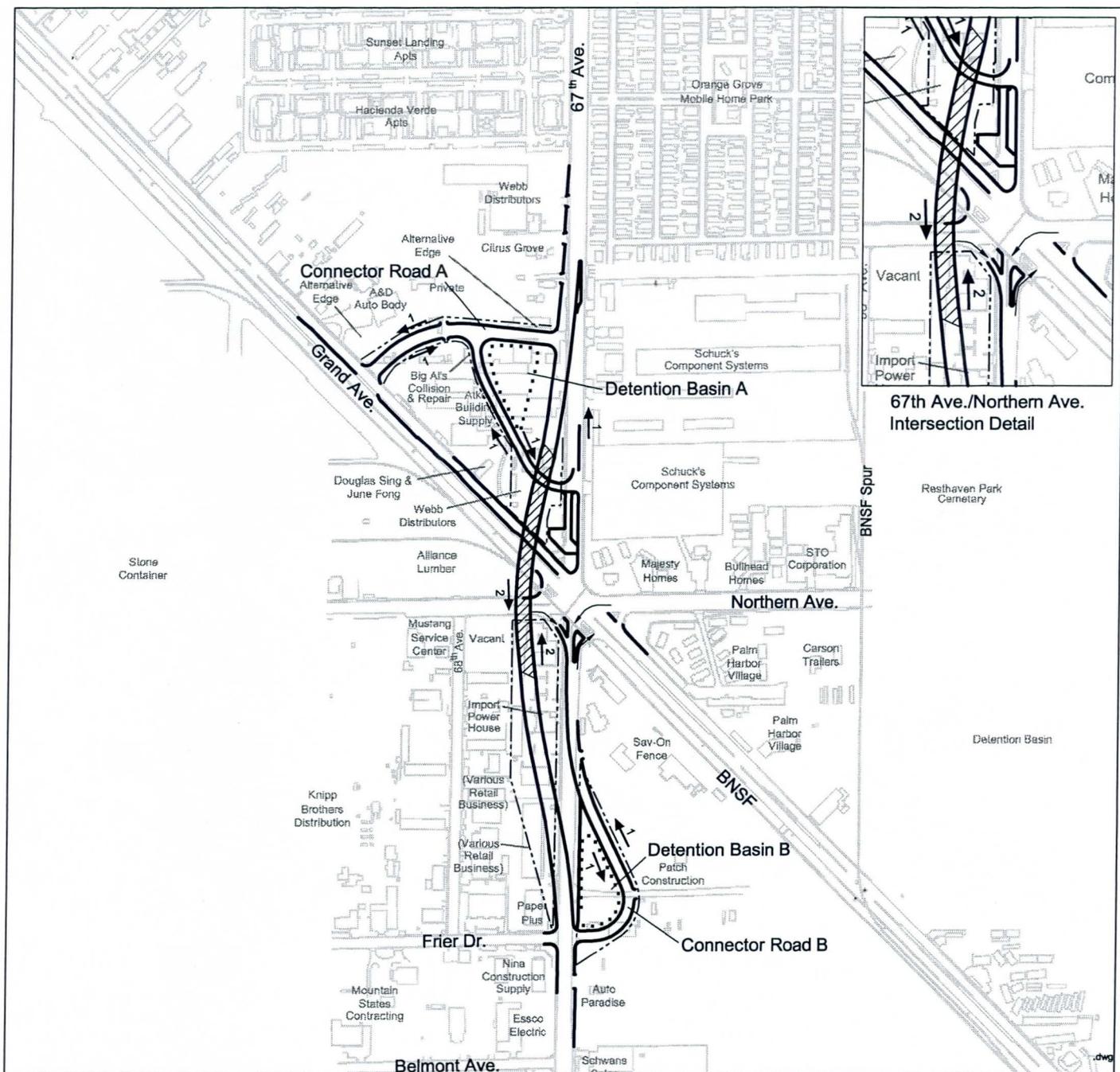
B. Preferred Alternative

Alternative W-2 is similar in configuration to Alternative W-1, although the 67th Avenue alignment was shifted slightly to the west to eliminate impacts to the Salt River Project well site located at the existing northwest quadrant of the 67th Avenue, Grand Avenue, and Northern Avenue intersection. Unlike Alternative W-1, southbound traffic on 67th Avenue would be allowed to fully access Grand and Northern Avenues without the construction of a fifth-leg to the Grand Avenue/Northern Avenue intersection. This would be accomplished by using a new two-way connector road (Connector A) that ties to Grand Avenue approximately 0.25 mile northwest of the existing six-legged intersection. An additional access road would be provided between Connector A and Schuck's to provide access for large truck traffic. A connector road south of the Grand Avenue and Northern Avenue intersection, Connector B, would be located on the opposing side of the existing Frier Drive and 67th Avenue intersection. Connector B would also provide two-way access between 67th Avenue, Grand Avenue, and Northern Avenue, but would not function as a fifth leg of the intersection. Turn movements from Connector B onto Grand Avenue and from Northern Avenue onto Connector B would be limited to right turns only. Motorists would also be able to turn left from westbound Northern Avenue onto southbound Connector B (refer to Figure 7).

Additionally, two detention basins would be constructed within the project area to minimize drainage impacts from embankment slopes and other miscellaneous project-area improvements. Detention Basin A would be located between Connector A and the access road, which links Connector A with Schuck's. Detention Basin B would be located immediately across from the Frier Drive and 67th Avenue intersection, between Connector B and 67th Avenue (refer to Figure 7).

Alternative W-2 would require the acquisition of approximately 20 acres of ROW that would impact 13 commercial properties and two residential properties. The proposed improvements would cost approximately \$28 million to construct. Projected design-year 2025 traffic delay times at the remaining Grand Avenue and Northern Avenue intersection would be approximately 3 minutes during both the morning (191 seconds) and afternoon (194 seconds) peak travel periods. These delay times would be slightly less (5 to 6 seconds) than Alternative E-1, and substantially less (53 to 110 seconds) than W-1, during both the morning and peak-travel periods, respectively (refer to Table 3).

Alternative W-2 was recommended by the ASC as the Preferred Alternative because it would eliminate the fully functional fifth leg of the intersection as proposed in Alternative W-1, provide the least amount of vehicular delay time at the remaining Grand Avenue and Northern Avenue intersection as compared to both Alternatives E-1 and W-1, and cost less than Alternative E-1.



Key

- | | | | |
|---|--------------------------------|---|-------------------------|
|  | Edge of Pavement |  | Direction of Travel |
|  | New Right-of-Way | 1 | Number of Through Lanes |
|  | Detention Basin General Locale |  | Bridge Location |

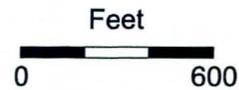


Figure 7. Alternative W-2 (Preferred Alternative)

67th Avenue Overpass at Northern Avenue and Grand Avenue (US 60) Draft Environmental Assessment
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IV. AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

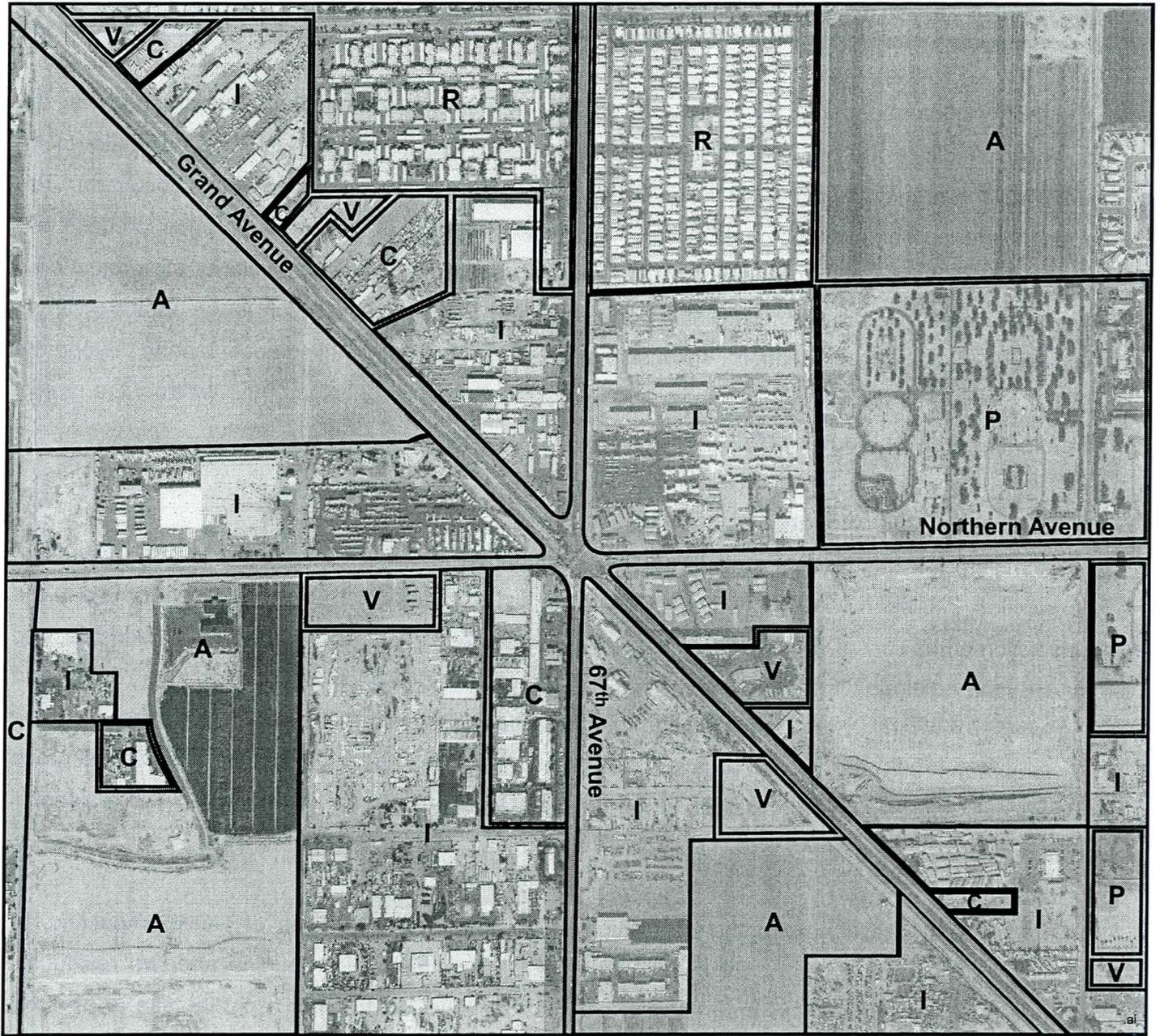
The following information describes the affected environment within the project area and presents the potential effects of the proposed project. Measures to avoid or minimize impacts have also been identified and are summarized in the mitigation measures beginning on page v of this document. The agency and public involvement activities undertaken as part of the environmental process are presented in Chapter V. For this document, the north-south and east-west limits of the project area are approximately a one-half mile radius from the center of the existing 67th Avenue, Grand Avenue, and Northern Avenue intersection. The visual or scenic resources identified could extend beyond the project limits. The figures in this document depict a graphic representation of the width of the project area for illustrative purposes only.

A. Ownership, Jurisdiction, and Land Use

For the purposes of this EA, land ownership is identified in terms of public or private ownership. Jurisdiction implies the authority to regulate land uses. Land in the project area is under the jurisdiction of the City of Glendale. Land ownership includes BNSF, ADOT, the City of Glendale, and private land holdings. Existing land uses within the project area include transportation (BNSF and roadways), residential, and industrial/commercial (refer to Figure 8). According to the *Glendale General Plan* (1996), the project area includes parcels identified as light industrial. Residential areas immediately adjacent and to the north of the project area are zoned for between 8 and 20 residential units per acre.

Alternative W-2 would require the acquisition of approximately 20 acres of ROW, impacting 14 property owners and parcels. Of these 14 parcels, 13 commercial properties and two residential properties would be impacted from either a full property take (six total) or a partial take of property (seven total). One railroad take would also be required.

Access changes could limit future consideration for redevelopment of some impacted parcels and, in some cases, isolate parcels, especially in areas that would require investments to connect the operational components of the business to existing facilities (e.g., sewer, water, electricity) and roads. In addition, these access changes could limit the types of businesses that could potentially use these sites to those such as wholesale businesses or distributors that do not rely on direct customer access. Therefore, the proposed improvements as identified in Alternative W-2 would notably impact local businesses, although the exact magnitude of this would depend on the final availability of land for



Key

C Commercial	A Agricultural
R Residential	P Public/Quasi-public
I Industrial	V Vacant

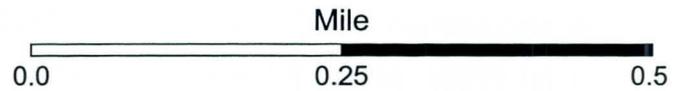


Figure 8. Existing Land Use

future development. Therefore, impacts to existing land uses would occur. In addition, potential impacts to planned future land uses may also occur: however, it is not anticipated that these would be substantial. Property owners would be compensated at fair market value for property acquired for project ROW in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act, as amended in 1987.

B. Socioeconomic Resources

According to 23 U.S.C. § 109(h), proposed federally funded highway projects must ensure that possible adverse economic, social, and environmental effects have been fully considered in developing the project and that the final decisions on the project are made in the best overall public interest, taking into account the need for fast, safe, and efficient transportation; public services; and the cost of eliminating or minimizing such adverse effects. The following information specifically identifies and evaluates those potential impacts on the social and economic environment within the proposed project area. Specific topics to be evaluated in this section include 1) neighborhood continuity; 2) social services, schools, and recreation; 3) emergency services; 4) relocations/displacements; and 5) temporary and/or permanent impacts to access, traffic patterns, and businesses.

Neighborhood continuity can be defined as the local area's connectivity or community cohesion among services including hospital; government office; school; post office; and businesses. Neighborhood continuity can also include the connectivity between the local area's residents and other residents and service functions in nearby neighborhoods. Impacts to neighborhood continuity can vary in magnitude ranging from eliminating these services altogether from direct takes of these properties to simply impacting the traffic or pedestrian flow (motorists or pedestrian) to and from these services.

Grand Avenue, due to its six lanes of travel and high traffic volume, and the BNSF currently create a barrier between those residents living southwest of Grand Avenue to and from respective community services. As a result, these residents have to navigate across the six-legged intersection formed by 67th Avenue, Northern Avenue, Grand Avenue, and the BNSF or attempt to find alternative routes when excessive traffic delays or train-related delays occur.

In summary, neighborhood continuity is currently affected by Grand Avenue due to its six travel lanes and high traffic volume. The BNSF tracks also contribute to this barrier effect between the areas to the northeast and to the southwest. The improvements associated with 67th Avenue would impact 13

commercial businesses and two residential properties, but would not likely contribute to further separation of any residential neighborhoods or businesses or create any additional division of neighborhoods and their residents from any community services.

The fire services within the city of Glendale, as well as most other cities within the Phoenix Metropolitan Area, use the Regional Dispatch System operated by the City of Phoenix Fire Department. This system consists of a computer-aided dispatch system for 15 fire departments located in the metropolitan area. Intergovernmental agreements are established with each participating city. The advantage for all cities involved is that units are dispatched as if they were one single fire department. This system was first implemented in 1982 and upgraded in 1994.

The City of Glendale currently has seven fire stations providing community services to residents; no fire stations, however, occur within the project area or immediate vicinity. The station located within a reasonable response time for incidents near the project area is Glendale Fire Station Number 52, which is located approximately two miles south of the project area at 68th Avenue and Bethany Home Road.

Ambulance services and police services are also provided by the City of Glendale. Ambulance services are typically a part of the individual fire station or in some cases provided by a contract service provider. Police services are typically assigned patrols or routes and cover the entire jurisdiction of Glendale. No hospitals occur within or adjacent to the project area.

Grand Avenue is a multi-modal transportation corridor. Even though train, automobile, and truck travel are the primary transportation uses, bus routes and pedestrian and bicycle travel are also important transportation uses within the Phoenix Metropolitan Area. Sidewalks are located 1) along both sides of 67th Avenue north of Grand Avenue, 2) on the west side of 67th Avenue south of Grand Avenue, 3) along both sides of Northern Avenue east of Grand Avenue, 4) on the north side only west of Grand Avenue, and 5) along the northeast side of Grand Avenue.

The RPTA bus line provides routes along Grand Avenue and other arterials within the Grand Avenue corridor. The RPTA bus service within the project area includes the Yellow Line (Grand Avenue route) and Route 67 (67th Avenue). The RPTA Yellow Line operates every 30 minutes and provides ridership between downtown Peoria and the State Capitol, and provides transfers to other connections such as 67th Avenue (Route 67). Bus stops for these above-mentioned routes are located 1) along the west side of 67th Avenue just south of the Grand Avenue, Northern Avenue, and

67th Avenue intersection; 2) along the east side of 67th Avenue just north of the Grand Avenue, Northern Avenue, and 67th Avenue intersection; 3) along the south side of Grand Avenue just southeast of the Grand Avenue, Northern Avenue, and 67th Avenue intersection; and 4) along the north side of Grand Avenue just northwest of the Grand Avenue, Northern Avenue, and 67th Avenue intersection.

In summary, no social services, including schools and recreation areas, occur within the proposed project area. Because some minor construction-related delays would occur from typical traffic slowing, response times for fire and/or other emergency services (e.g., police and ambulance) could be temporarily impacted. Although, these impacts would not be anticipated to be substantial due to the fact that emergency units are dispatched based on "closest to scene" concepts and therefore, would mean that these delays would be included in the initial emergency response decision. Additionally, emergency services responding to incidents using "Code 3" (i.e., lights and sirens) would be afforded the right-of-way through these areas, as provided under current state law.

Minimal impacts to the Yellow Line would be expected because the majority of the work would be performed along the new 67th Avenue alignment, and only temporary impacts during placement of bridge structures could impact Grand Avenue. Because 67th Avenue would be disconnected from Grand Avenue, passengers would not be able to transfer easily between these two bus routes. During construction, however, bridge placement work would primarily be completed during nighttime or weekend hours, when either bus ridership would be lower or not operating at all; therefore, temporary impacts would be minimal. ADOT would coordinate with RPTA to address impacts and/or relocation of any temporarily or permanently impacted bus stops or bus routes during final design. Therefore, Alternative W-2 would not substantially impact social or emergency services, temporarily or long term.

Currently, businesses are located on all sides of the 67th Avenue, Grand Avenue, and Northern Avenue intersection (refer to Figure 9). In addition, areas of both single-family residential and multi-family units are located south and north of the project area along 67th Avenue. Project area businesses currently have their main access points located along 67th Avenue. Access to residences located both north and south of the project area also have their main access from 67th Avenue.

A survey of 26 project-area businesses was conducted by ADOT for this project (refer to Appendix C). The interviews were intended to address issues of Environmental Justice (e.g., potential impacts to

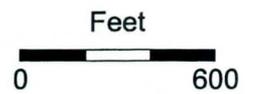
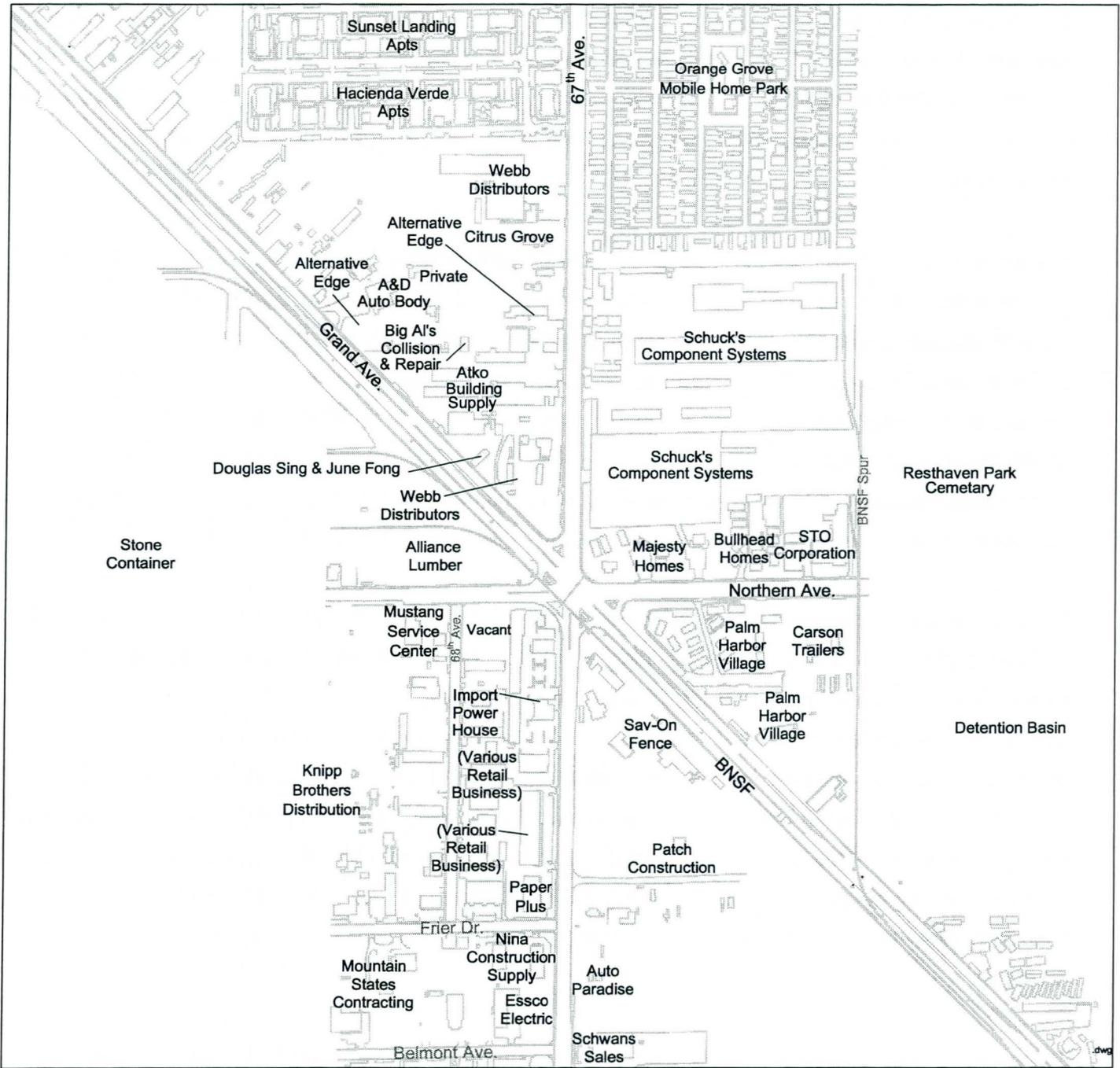


Figure 9. Existing Business Locations



minority and low-income populations) as well as provide some background data on economic factors. A review of this survey and additional on-site observations of the businesses and the general area was completed by ADOT to verify and refine the definitions of business types, gain additional insight into their operations, and look for other issues that might be relevant to this EA (ADOT 2002).

The review focused on issues relating, primarily, to economic effects, compared to the survey that focused primarily on potential minority and low-income population impacts (refer to Appendix C). The economic effects were initially assumed to pertain primarily to the businesses themselves rather than to the city or the immediate neighborhood. The previous business interviews were structured to address questions about the racial and ethnic composition of business owners, workers, and customers and about the proximity of the customer base. The interviews also addressed businesspersons' perceptions about how the intended improvements would affect them. Some of these responses were recorded directly by the interviewers and some reported anecdotally by the researchers.

In summary, Alternative W-2 would require the acquisition of 13 commercial businesses and two residential properties. Approximately 26 businesses occur within proximity of the project area. Retail establishments, as a rule, tend to be more sensitive to the kinds of changes that would occur as a result of the intersection project. There are few true retail businesses among the group of 26. Some of the auto-related businesses offer retail goods as a secondary activity, and there is a retail component to the business at the southeast corner of Northern and 67th Avenues. There are three retail establishments in the southwest quadrant, out of sixteen located there. The only other true retail establishment is located in the northeast quadrant of the intersection and is not subject to being acquired under the Preferred Alternative. All of these retail establishments could be classified as "destination" retail places in that they deal with either specialized or high-dollar goods and not convenience or everyday goods or they are places with some degree of regional name recognition. The nature of these retail businesses would therefore tend to minimize losses of business activity due to relocations or to disruptions and changes to business access.

Of the "service" businesses among the group investigated, some are more dependent than others on visual exposure and on establishing customer familiarity with their location. For example, an auto detailing business in the southwest quadrant has large posters or banners at the front of its space that are essentially brief advertisements while the adjacent auto body repair shop has few if any attention-getting materials at its site. We estimate that no more than 30 percent of the service-type businesses in the southwest quadrant have a special need for visual exposure as exemplified by this example.

Businesses in the southwest quadrant have an additional issue that relates in part to the type of businesses located there and in part to the informal interrelationships among these businesses. In the interview process, a majority of businesses at this location were concerned about the fact that most of the businesses there refer customers to one another. The interview process identified seven automotive-related businesses (and there may now be two more) in the building complex at the most northerly portion of the intersection. The complex of buildings shares a common parking lot. The range of auto service, repair and customization shops in this complex form a natural “cluster” of businesses. It is quite realistic, just on observation, to assume that referrals within the complex are a meaningful source of customers for these establishments.

The project effects that potentially apply to the wholesale and manufacturing businesses are primarily a matter of changes in access. The business most likely to be affected in this case is the large manufacturing plant (Schuck’s) in the northeast quadrant (discussion follows below). Access to Grand Avenue via Connector Road A and an additional access road branching from Connector Road A would be provided. Other access changes for businesses appear to be manageable.

Temporary access restrictions and/or detours could be necessary during construction, although access to businesses and nearby residences would be maintained. Permanent changes to routing of traffic would occur as a result of removing 67th Avenue from its current connection to Grand Avenue and Northern Avenue. Connector Road A and B (refer to Figure 7) would provide opportunities for motorists to gain access to the remaining business. Some out-of-direction travel (less than 1 mile) would, however, be required.

Several businesses could be affected during construction from typical traffic-related delays and, as a result, driver avoidance. A traffic plan would be implemented to address traffic-related construction issues for the remaining businesses that are not acquired. Impacts would not be anticipated to be substantial because customers would still be provided access during construction. In addition, even though permanent access changes would occur, creating some out-of-direction travel, these impacts would not be expected to be substantial. The net changes in business access due to these overall improvements are not expected to be substantial because the project’s connector roads would provide continued access.

Traffic control would be in accordance with Part VI of the current *Manual on Uniform Traffic Control Devices for Streets and Highways*, published by the U.S. Department of Transportation, FHWA (2000) and ADOT’s Traffic Control Supplement (1996). Maintenance of traffic and access would be

addressed in the traffic control plan, which would be developed during final design. Key aspects to be evaluated includes: 1) maintenance of traffic on 67th Avenue, Grand Avenue, and Northern Avenue and access to local commercial/industrial and residential developments; 2) minimization of impacts to the BNSF mainline during construction of the overpass structure; and 3) maintenance of traffic flow during bridge construction and utility relocations. ADOT would coordinate with the BNSF during the development of the traffic control plan. In addition, no full traffic closures would be permitted between Thanksgiving Day and January 1. Detours would be coordinated with adjacent projects to minimize potential conflicts. Final details of detours would be evaluated during final design. Any full closures along 67th Avenue, Grand Avenue, and Northern Avenue would occur at night or during weekend hours.

Short-term economic impacts could occur as a result of the added congestion typical during roadway construction projects. The proposed project could, however, provide short-term employment opportunities for local residents as part of the construction workforce. During construction, some workers may purchase food and other commodities, thereby generating revenue for the nearby businesses.

Alternative W-2 would require the acquisition of approximately 20 acres of land to complete the proposed improvements. Excluding businesses that would be acquired for project-specific ROW, no permanent disruptions would be anticipated. Specific access concerns were addressed in the preliminary design of Alternative W-2 to connect major businesses that require regular truck traffic to enter and exit the facility. In fact, a connector road as identified in Alternative W-2 would allow either a right turn onto 67th Avenue or direct access to the connector road between 67th Avenue and Grand Avenue by gaining access to the road along a secondary connector road passing underneath the 67th Avenue overpass. Due to the location of Schuck's, a fabricated truss manufacturer along the east side of the existing 67th Avenue just north of the Grand Avenue and Northern Avenue intersection, ADOT evaluated current and future traffic operations to allow the continued operation of this business. Schuck's transports constructed trusses by large diesel trucks. Alternative W-2 would provide adequate access for large trucks entering and exiting this business.

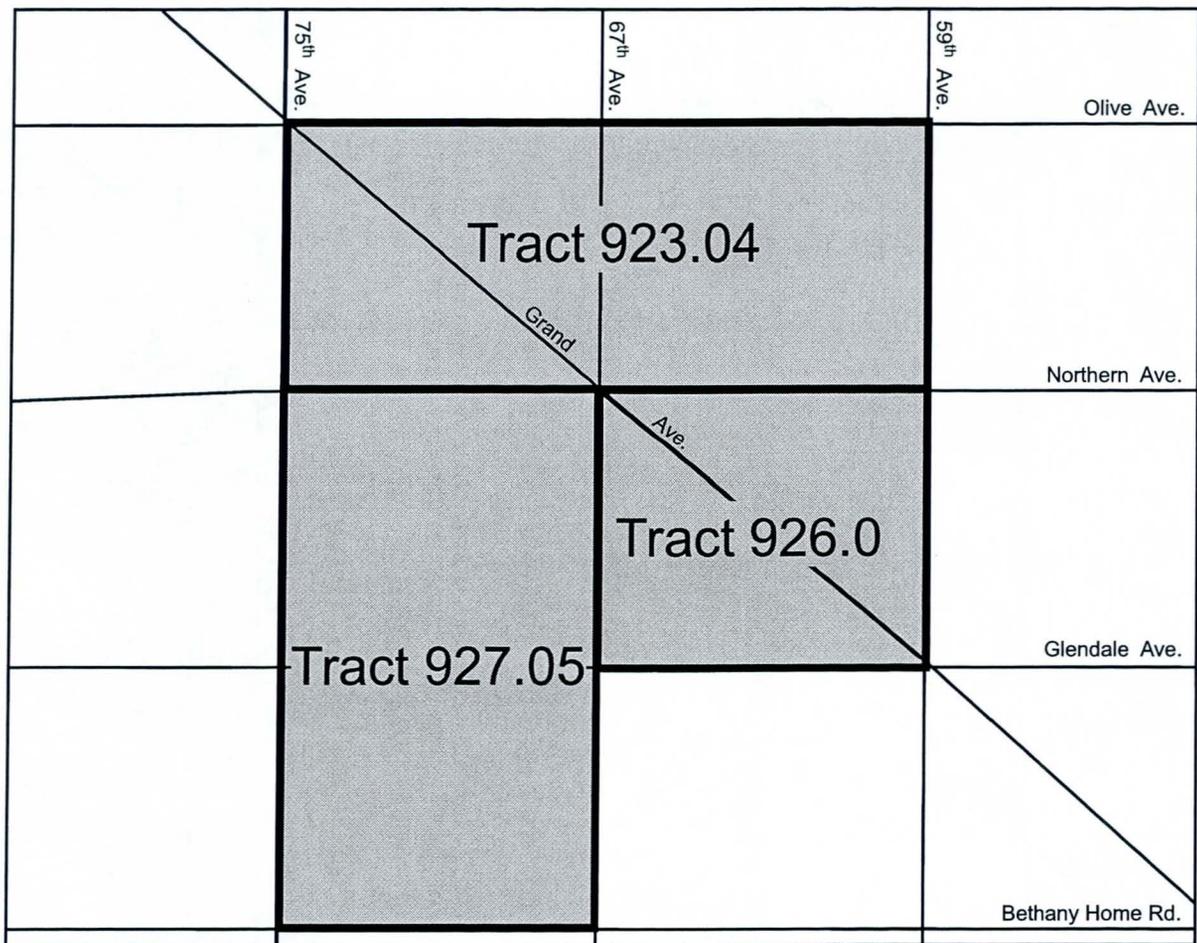
The unused portions of parcels acquired to construct connector roads or detention basins could be used for future businesses or for the expansion of remaining businesses after construction is completed. These locations could be limited to certain business types such as manufacturing or wholesale operations because they might not offer the major street frontage, which tends to limit business types to those that do not rely on drive-by customers.

Property owners would be compensated at fair market value for property acquired for project ROW in accordance with the *Uniform Relocation Assistance and Real Property Acquisition Policies Act*, as amended in 1987. Any sidewalks that would be temporarily closed during construction would be identified with signs and alternative routes would be provided. The District Construction Office would notify local residents prior to any temporary access impacts to pedestrians or motorists. Final details of any traffic or pedestrian restrictions would be evaluated during final design. ADOT would design, construct, and/or reconstruct new sidewalks or impacted sidewalks, respectively, within the 67th Avenue project limits to accommodate alternative transportation travel.

C. Title VI/Environmental Justice

The MAG 1995 Special Census of Maricopa County and the U.S. Department of Commerce, Bureau of the Census, 1990 Census of Population and Housing were used to compare and contrast the demographic and economic characteristics of the project area with those of the City of Glendale and Maricopa County. Census tracts are small, relatively permanent statistical subdivisions of a county and do not cross county boundaries (refer to Figure 10). Block groups, as used in this document, are even smaller statistical subunits of census tracts (refer to Figure 11). For this document, block groups are used as the smallest level of census resolution representing 1990 census data. Enumeration districts (EDs) are similar to block groups, but reflect information from the 1995 Special Census of Maricopa County (refer to Figure 11). Both 1990 and 1995 census data are reported in the following tables to represent the use of the most recent statistics for the smallest geographic area. The statistics reported may extend outside the project area; therefore, the exact population and demographic characteristics of the project area may vary from these data. In addition, shaded numbers in the following tables illustrate those represented census units with percentages greater than the respective city and/or county.

Minority racial populations, as defined by the US Census, include the following racial categories: African American, American Indian/Eskimo and Aleut (Native American), Asian and Pacific Islander, and "other race." In addition, the category "Hispanic" was used for all Hispanics (regardless of race), even for those Hispanics who identified themselves as "White." As illustrated in Table 4, the racial group "White" is the largest population represented within the project area vicinity. However, large populations of Hispanics do occur, as identified in ED's 926.00.300 and 927.05.316, with a representative population estimate of 45.4 and 29.2 percent respectively. The total population for the city of Glendale approaches 200,000 people, while Maricopa County exceeds 2.5 million people.



Key

 Tract Boundary

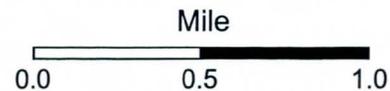
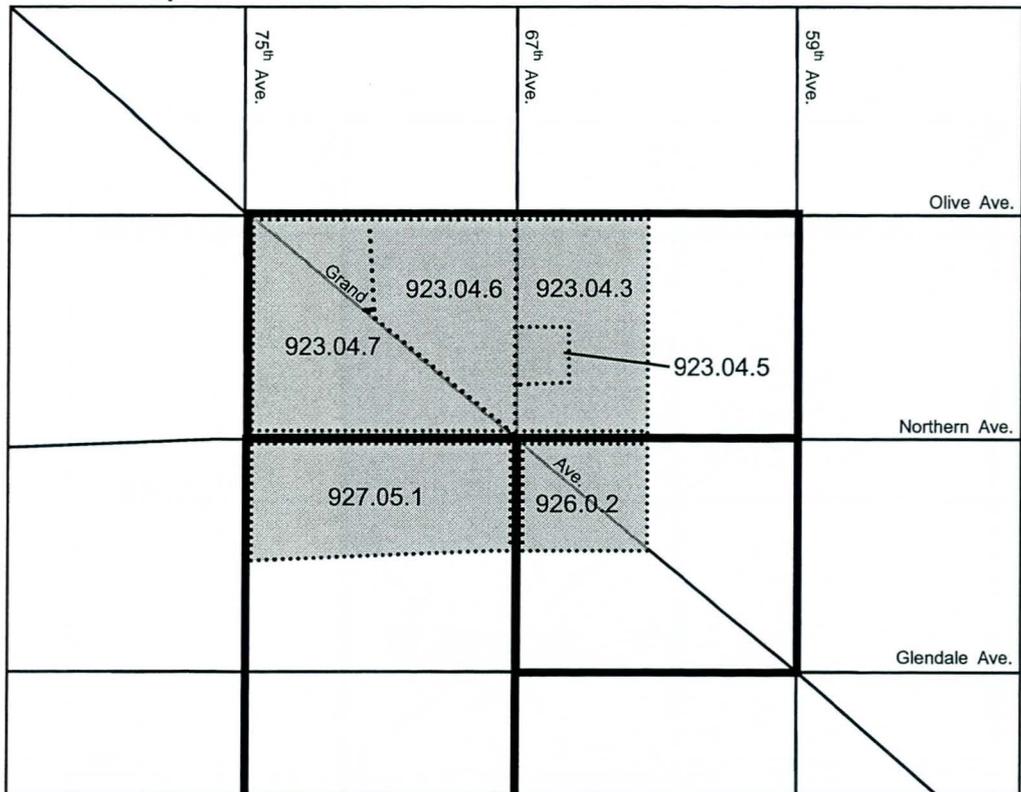


Figure 10. Census Tracts



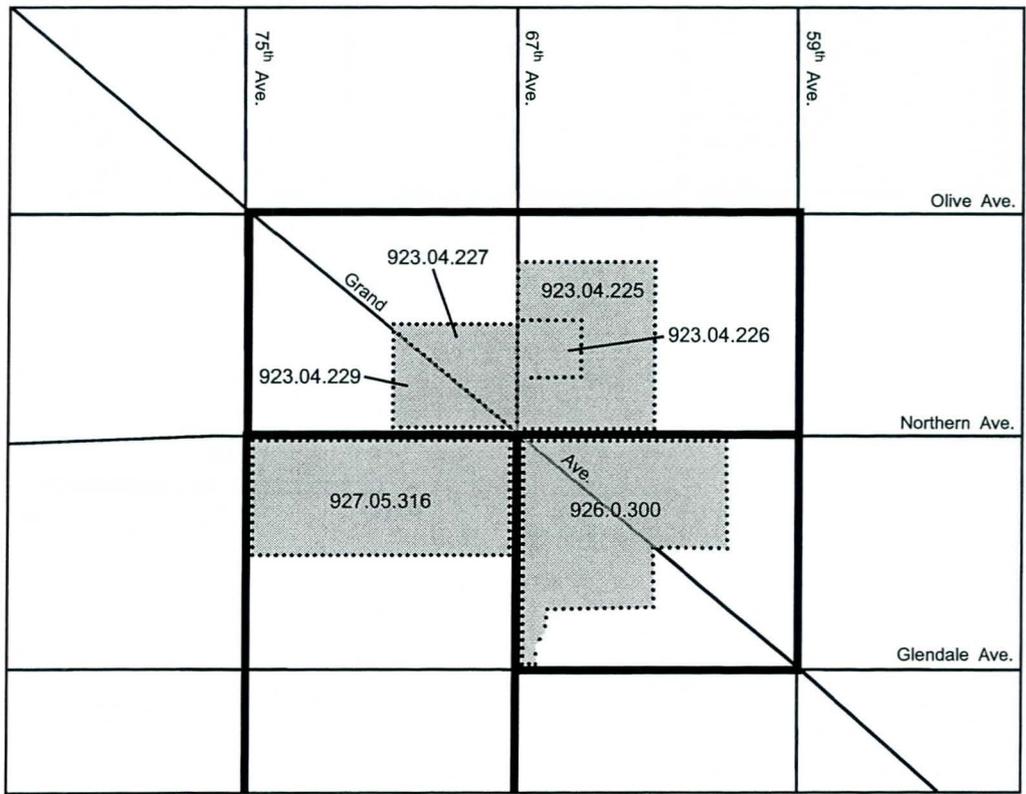
Block Groups



Key

-  Tract Boundary
-  Block Group Boundary

Enumeration Districts



Key

-  Tract Boundary
-  Enumeration District Boundary

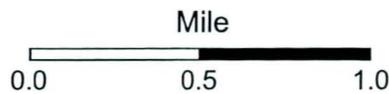


Figure 11. Block Groups and Enumeration Districts



Table 4. 1995 Population and Racial Demographics

Area (EDs)	Population	White		African American		Native American		Asian		Other		Hispanic ¹	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
923.04.225	869	853	98.2	3	0.3	1	0.1	2	0.2	10	1.2	18	2.1
923.04.226	646	631	97.7	5	0.8	7	1.1	3	0.5	0	0.0	127	19.7
923.04.227	1268	1021	80.5	67	5.3	21	1.7	21	1.7	138	10.9	228	18.0
923.04.229	4	4	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
926.00.300	637	527	82.7	37	5.8	11	1.7	12	1.9	50	7.8	289	45.4
927.05.316	24	23	95.8	0	0.0	0	0.0	1	4.2	0	0.0	7	29.2
All EDs	3448	3059	88.7	112	3.2	40	1.2	39	1.1	198	5.7	669	19.4
City of Glendale	182,615	144,626	79.2	8129	4.5	2688	1.5	4353	2.4	22,819	12.5	36,093	19.8
Maricopa County	2,551,765	2,019,556	79.1	93,358	3.7	45,843	1.8	51,231	2.0	341,777	13.4	522,487	20.5

Source: Maricopa Association of Governments. 1995 Special Census for Maricopa County: Summary Tables, September 1997.
¹Hispanic is considered an ethnicity and likely includes people who have also identified themselves within a given race (e.g., White)

The demographic characteristics of the population of the project area were examined to determine if minority and low-income populations would be disproportionately affected by the proposed project (refer to Table 4). Under Title VI of the Civil Rights Act of 1964 and related statutes, federal agencies are required to ensure that no person is excluded from participation in, denied benefits of, or subjected to discrimination under any program or activity receiving federal financial assistance on the grounds of race, color, religion, national origin, sex, age, or disability. Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, signed by President Clinton on February 11, 1994, requires federal agencies to identify and address as appropriate, disproportionately high and adverse effects on minority, elderly, low-income, disabled individuals (mobility disability), and women as heads of household. A minority population means people who are African American, Hispanic, Asian American, Native American, or Alaskan Natives. Disabled individuals are persons older than 16 years of age who are either work disabled, have self-care limitations, or have a mobility disability. A low-income person is defined as a person 18 years old or older who is below the poverty level estimated from the 1995 Special Census for Maricopa County. Elderly refers to individuals who are older than 60 years of age.

Table 5 indicates that the largest representative population of those persons equal to or greater than 60 years of age occurs within ED 923.04.225. This ED is represented by 97.4 percent of persons greater than 60 years of age. Overall, the ED average is approximately twice the population percentage when compared to data obtained for the City of Glendale and Maricopa County.

Area	Total Population	> 60 Years of Age	
		No.	%
ED 923.04.225	869	846	97.4
ED 923.04.226	646	148	22.9
ED 923.04.227	1268	37	2.9
ED 923.04.229	4	0	0.0
ED 926.00.300	637	87	13.7
ED 927.05.316	24	5	20.8
All EDs	3448	1123	32.6
City of Glendale	182,615	20,193	11.1
Maricopa County	2,551,765	411,213	16.1

Source: Maricopa Association of Governments. 1995 Special Census for Maricopa County: Summary Tables, September 1997.

Percentages of households living below poverty within the project area are larger than those for both the City of Glendale and Maricopa County (refer to Table 6). Data obtained for Tract 926.00 indicate that this population percentage is three times higher than those defined for both the City of Glendale and Maricopa County. However, as mentioned earlier, the largest census unit recorded for which the U.S. Census records data is at the tract level and, in this specific case, includes census information for households outside of the proposed project area. No smaller geographic census-unit-level data were available for this location.

Area	Households With Income Reported	Below Poverty	
		No.	%
Tract 923.04	3266	449	13.8
Tract 926.00	834	263	31.5
Tract 927.05	1417	240	16.9
All Tracts	5517	952	17.3
City of Glendale	42,583	4857	11.4
Maricopa County	608,777	63,392	10.4

Source: Maricopa Association of Governments. 1995 Special Census for Maricopa County: Summary Tables, September 1997.

Data from 1990 Block Group census units indicating a rate of mobility disability near the proposed project was, on average, approximately one and one-half as large as the city of Glendale and Maricopa County (refer to Table 7). On a relative, percentage basis, population data for Block Groups

923.04.2 and 926.00.2 substantially exceed the population statistics for both the city of Glendale and Maricopa County.

Area	Population > 16 Years of Age	Mobility Disability	
		No.	%
Block Group 923.04.2	1094	375	34.3
Block Group 923.04.5	480	81	16.9
Block Group 923.04.6	1849	161	8.7
Block Group 923.04.7	0	0	0.0
Block Group 926.00.2	40	26	65.0
Block Group 927.05.1	9	0	0.0
All Block Groups	3472	643	18.5
City of Glendale	108,107	13,790	12.8
Maricopa County	1,595,853	207,610	13.0

Source: U.S. Department of Commerce, Bureau of the Census. 1990 Census of Population and Housing, Summary Tape File 3A for Arizona and Utah. 1992.

Data from the 1990 census identifying the percentage of females as heads of household indicate that the project area and adjacent neighborhoods have approximately the same relative composition as both the city of Glendale and Maricopa County (refer to Table 8). However, on a relative percentage basis, population estimates for Block Groups 923.04.5 and 923.04.6 exceed both the city of Glendale and Maricopa County.

Area	Total Households	Female Head of Household	
		No.	%
Block Group 923.04.3	699	33	4.7
Block Group 923.04.5	273	46	16.8
Block Group 923.04.6	1100	185	16.8
Block Group 923.04.7	0	0	0.0
Block Group 926.00.2	26	0	0.0
Block Group 927.05.1	4	0	0.0
All Block Groups	2102	264	12.6
City of Glendale	53,871	6463	12.0
Maricopa County	808,162	79,646	9.9

Source: U.S. Department of Commerce, Bureau of the Census. 1990 Census of Population and Housing, Summary Tape File 3A for Arizona and Utah. 1992.

As a result of Title VI data obtained during the early phases of project analysis, the following factors triggered a survey of the project area businesses: 1) the identification of large representative populations of Hispanics, 2) large populations of individuals greater than 60 years of age, 3) a relatively high number of low-income households, and 4) the potential for project improvements to displace a Title VI-related business or impact customers or employees of a Title VI-related business. This survey was designed specifically to obtain information about potential impacts to owners, employees, and customers, all or some of whom could be a Title VI population (refer to Appendix C). These impacts could include a direct impact to a Title VI population through loss of business directly as the owner, impact to customers or employees, permanent/temporary access changes resulting in inability or difficulty in a customer reaching the business, and/or a permanent change in the local Title VI population's job possibilities. A total of 26 businesses were surveyed within the project area.

Potential impacts to Title VI populations through 1) loss of business directly as the owner, impact to customers or employees, 2) permanent/temporary access changes resulting in inability or difficulty in a customer reaching the business, and/or 3) a permanent change in the local Title VI population's job possibilities were assessed at a total of 26 businesses within the project area. Survey results indicated that these businesses do not rely on the local residents (those within the immediate vicinity of the business) and most employees are not from the immediate area. In addition, ownership, customers, and employees varied by race and/or ethnicity. No substantial differences were noted, when assessing either the potential acquisition of businesses by ADOT or just those affected by other impacts such as access changes during and/or after construction for Alternative W-2.

Although 1) temporary traffic delays typical of construction activities associated with road improvements projects would impact minority, elderly, disabled, and low-income populations, and 2) despite the fact that 13 commercial businesses would be acquired for project ROW, no disproportionate impacts on Title VI populations could be reasonably discerned from implementation of the proposed improvements. Therefore, the proposed project would not substantially impact minority, elderly, disabled, or low-income populations.

D. Cultural Resources

A number of federal and state acts have been established to provide protection for cultural resources and to ensure "future generations" a genuine opportunity to appreciate and enjoy the rich heritage of our nation (Public Law 89-665). Cultural resources (historic properties) must be evaluated under each of these acts to ensure adequate protection of our cultural heritage.

Historic properties include prehistoric and historic districts, sites, buildings, structures or objects included in or eligible for inclusion in the National Register of Historic Places (NRHP). Historic properties may be eligible for nomination to the NRHP if they "...possess integrity of location, design, setting, materials, workmanship, feeling and association..." and if these resources are either associated with significant themes in history, significant persons in history, embody distinctive construction characteristics or works of a master, and/or have the potential to yield information important to history or prehistory.

A Programmatic Agreement (PA) has been prepared and executed to address the cultural resource concerns of this project and the seven other proposed intersection improvements along Grand Avenue (refer to Appendix A). This PA provides a detailed agreement of the inventory, evaluation, and if necessary, treatment and/or data recovery plan for the proposed project. Furthermore, the PA stipulates that any effects on properties eligible for or listed on the NRHP would be mitigated through appropriate treatment plans or data recovery. The PA ensures that FHWA adheres to all laws pursuant to 36 Code of Federal Regulations (CFR) Part 800.

The PA represents a commitment of consultation and coordination among FHWA; ADOT; State Historic Preservation Officer (SHPO); the Cities of Phoenix, Glendale, and Peoria; the Hopi Tribe; the Salt River Pima-Maricopa Indian Community; the Fort McDowell Mohave-Apache Indian Community; the Yavapai-Prescott Indian Tribe; and the Yavapai-Apache Indian Tribe. The PA was executed and filed with the Advisory Council on Historic Preservation in April 2001.

An archaeological survey of the entire project area was completed in 2001 and documented in *A Class III Archaeological Survey of Four Intersections Along Grand Avenue (US 60) (55th Avenue at Maryland Avenue, 59th Avenue at Glendale Avenue, 67th Avenue at Northern Avenue, and 75th Avenue at Olive Avenue), Maricopa County, Arizona (ADOT 2001).*

Several historic property surveys have been conducted along this portion of Grand Avenue within the last 20 years. Recent assessment of present historic resources within the project area occurred in two phases. An historic property reconnaissance survey, was undertaken by ADOT in April 2001 and documented in *Historic Property Reconnaissance Survey Report for Selected Intersections along Grand Avenue (ADOT 2001)*. Several areas identified as being within and adjacent to the project area would require additional investigation. The results of the study of those areas requiring

additional analysis were documented in *Grand Avenue Intersections Phase II Historic Property Documentation and Evaluation* (ADOT 2001).

According to the National Register bulletin *Guidelines for Evaluating and Documenting Traditional Cultural Properties*, a Traditional Cultural Property (TCP) can generally be defined as a place that is eligible for inclusion, or listed on, the NRHP “because of its association with cultural practices or beliefs of a living community that (a) are rooted in that community’s history, and (b) are important in maintaining the continuing cultural identity of the community.” FHWA has conducted early and continual consultation with agencies and Native American tribes that may attach religious or cultural importance to affected properties throughout the Grand Avenue corridor project area. No TCP’s were identified by the consulted agencies and Native American Tribes invited to participate in the PA for this project.

No NRHP-listed archaeological or historic property resources or those requiring further testing/research for eligibility or determined to be eligible for inclusion in the National Register of Historic Places (NRHP) were identified within the 67th Avenue, Northern Avenue, and Grand Avenue project area. Therefore, the proposed project would have no effect on known archaeological or historic resources. SHPO concurred with the recommendation that no historic properties would be affected by the proposed project (refer to Appendix A). Therefore, no impacts to cultural resources would occur as a result of the proposed improvements.

According to *Arizona Department of Transportation’s Standard Specifications for Road and Bridge Construction*, Section 107 Legal Relations and Responsibility to Public (2000 Edition) (Stored Specification 107.05 Archaeological Features), if previously unidentified cultural resources are encountered during activity related to the construction of the project, the contractor would stop work immediately at that location and would take all reasonable steps to secure the preservation of those resources and notify the ADOT Engineer. The ADOT Engineer would contact Environmental Planning Group (EPG) immediately and make arrangements for the proper treatment of those resources. ADOT would, in turn, notify the appropriate agency(ies) to evaluate the significance of those resources.

E. Section 4(f) of the Transportation Act

Section 4(f) of the U.S. Department of Transportation Act of 1966 states that the FHWA

may approve a transportation program or project requiring publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, state or local significance, or land of a historic site of national, state, or local significance (as determined by the Federal, State, or local officials having jurisdiction over the park, area, refuge, or site) only if there is no prudent or feasible alternative to using that land and the program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use. (49 U.S.C. § 303)

A "use" of a Section 4(f) resource, as defined as in 23 CFR 771.135 (p) occurs 1) when land is permanently incorporated into a transportation facility, 2) when there is a temporary occupancy of land that is adverse in terms of the statute's preservationist purposes, or 3) when there is a constructive use of land. A constructive use of a Section 4(f) resource occurs when the transportation project does not incorporate land from the Section 4(f) resources, but the project's proximity impacts are so severe that the protected activities, features, or attributes that qualify a resource for protection under Section 4(f) are substantially impaired. For example, a constructive use can occur when

- a) The projected noise level increase attributable to the project substantially interferes with the use and enjoyment of a noise-sensitive facility of a resource protected by Section 4(f);
- b) The proximity of the proposed project substantially impairs aesthetic features or attributes of a resource protected by Section 4(f), where such features or attributes are considered important contributing elements to the value of the resource. An example of such an effect would be the location of a proposed transportation facility in such proximity that it obstructs or eliminates the primary views of an architecturally significant historical building, or substantially detracts from the setting of a park or historic site which derives its value in substantial part due to its setting; and/or
- c) The project results in a restriction on access, which substantially diminishes the usefulness of a significant publicly owned park, recreation area, or historic site.

There is no publicly owned park, recreation area, wildlife and waterfowl refuge or any significant historic site in the project area; therefore, there is no Section 4(f) involvement with the construction of this project.

F. Air Quality Analysis

The 1990 Clean Air Act Amendments (CAAA) and NEPA require that air quality impacts be addressed in the preparation of the environmental document. Evaluating these impacts may vary from simple descriptions to detailed, microscale analyses, depending on factors such as the type of environmental document to be prepared, the project location and size, the micro meteorology of the project area, the air quality attainment status of the area, and the State Air Quality Standards.

The air quality analysis for the proposed improvements to the 67th Avenue, Northern Avenue, and Grand Avenue intersection focused on vehicle emissions of carbon monoxide (CO). Other pollutants, such as particulate matter and oxides of nitrogen are also components of vehicular emissions; the impacts of CO are most easily assessed, however, and provide a convenient measure of air quality impact.

An air quality study of this project area was completed in October 2001, and reported in a document entitled *67th Avenue Overpass at Grand Avenue (US 60) and Northern Avenue Air Quality Analysis Report, Glendale, Arizona* (ADOT 2001). The purpose of this study was to provide information regarding potential air quality changes as a result of the proposed project when comparing the existing conditions with the 2025 No Build Alternative and the proposed build alternatives. Existing peak-hour traffic volumes and 2025 peak-hour traffic volumes were used for this analysis.

The project lies within an area that is designated as non-attainment for carbon monoxide (CO), ozone (O₃), and particulate matter (PM₁₀). The Phoenix CO and O₃ non-attainment area is defined as the boundaries of MAG's planning area. The Phoenix PM₁₀ non-attainment area is defined as an area within eastern Maricopa County measuring approximately 60 miles by 48 miles and an additional area within Pinal County that is 6 miles by 6 miles.

The CAAA requires that transportation plans, programs, and projects in non-attainment or maintenance areas funded or approved by FHWA be in conformity with State Implementation Plans. The proposed improvements to the Northern Avenue, 67th Avenue, and Grand Avenue intersection are included in the approved Transportation Improvement Program for Fiscal Years 2002-2006, as approved by the Maricopa Association of Governments on July 25, 2001, which conforms to the State Implementation Plan and the Federal Implementation Plan. This project is therefore in conformity.

Maximum 1-hour and 8-hour concentrations of CO were calculated for the current traffic conditions and roadway configurations (2001), the projected traffic conditions in 2025 with the current roadway configurations (No Build Alternative), and the estimated traffic conditions for Alternative W-2. Under the 2025 No Build Alternative, maximum projected 1-hour concentrations of CO were generally higher than for the existing (2001) projected concentrations due to the increase in traffic volume projected for 2025. The projected 1-hour and 8-hour concentrations do not exceed the federal and state standards. Under the National Ambient Air Quality Standard (NAAQS) guidelines, the acceptable limit for CO concentration for the 1-hour averaging time is 35 parts per million (refer to Table 9).

Projected maximum 1-hour and 8-hour concentrations associated with the Preferred Alternative (Alternative W-2) were lower than those values obtained for the No Build Alternative. No projected concentrations exceed Federal or State Air Quality Standards. The CO concentrations projected for both the 2025 No Build and the Preferred Alternative are below the NAAQS (refer to Table 9). The proposed improvements to 67th Avenue at the Grand Avenue and Northern Avenue intersection are expected to reduce long-term impacts (i.e., those for design year 2025) on the area's air quality.

Table 9. Results of Air Quality Modeling

Scenario Modeled	Year	Maximum Afternoon CO Concentration (ppm ¹)	
		1-Hour Averaging Time (NAAQS Standard = 35 ppm)	8-Hour Averaging Time (NAAQS Standard = 9 ppm)
Existing	2001	3.8–12.6	2.7–8.8
No Build Alternative	2025	4.1–11.6	2.9–8.1
Alternative W-2	2025	3.8–10.5	2.7–7.4

Source: ADOT 2001. ¹Parts per million

Under Alternative W-2, short-term impacts to CO may occur during construction due to the interruption of normal traffic flow. Efforts should be made to reduce traffic slowing, especially during the peak travel hours. Impacts to CO levels associated with the proposed alignment are considered minor. Short-term impacts to PM₁₀ levels may also occur during the construction phase with Alternative W-2, but these impacts may be reduced through using watering or other dust control measures. Air quality impacts would be reduced as a result of less traffic congestion with the implementation of Alternative W-2 (refer to Table 9). This reduction of impacts is also due to anticipated technological advances in vehicular emission systems by the design year 2025.

The contractor would comply with Maricopa Rules 310 (refer to Appendix B) and 360 regarding fugitive dust emissions and new-source performance standards, respectively, during construction. The contractor would be responsible for obtaining any necessary asbestos permits for demolition of any structures done by the contractor. In addition, the District Construction Office would coordinate with the Maricopa County Environmental Services Department during the planning of nighttime road closures or detours during winter months for air quality purposes.

Alternative W-2 would result in decreased levels of CO or other pollutants by the 2025 design year. Therefore, Alternative W-2 would beneficially impact the local and regional air quality.

G. Noise Analysis

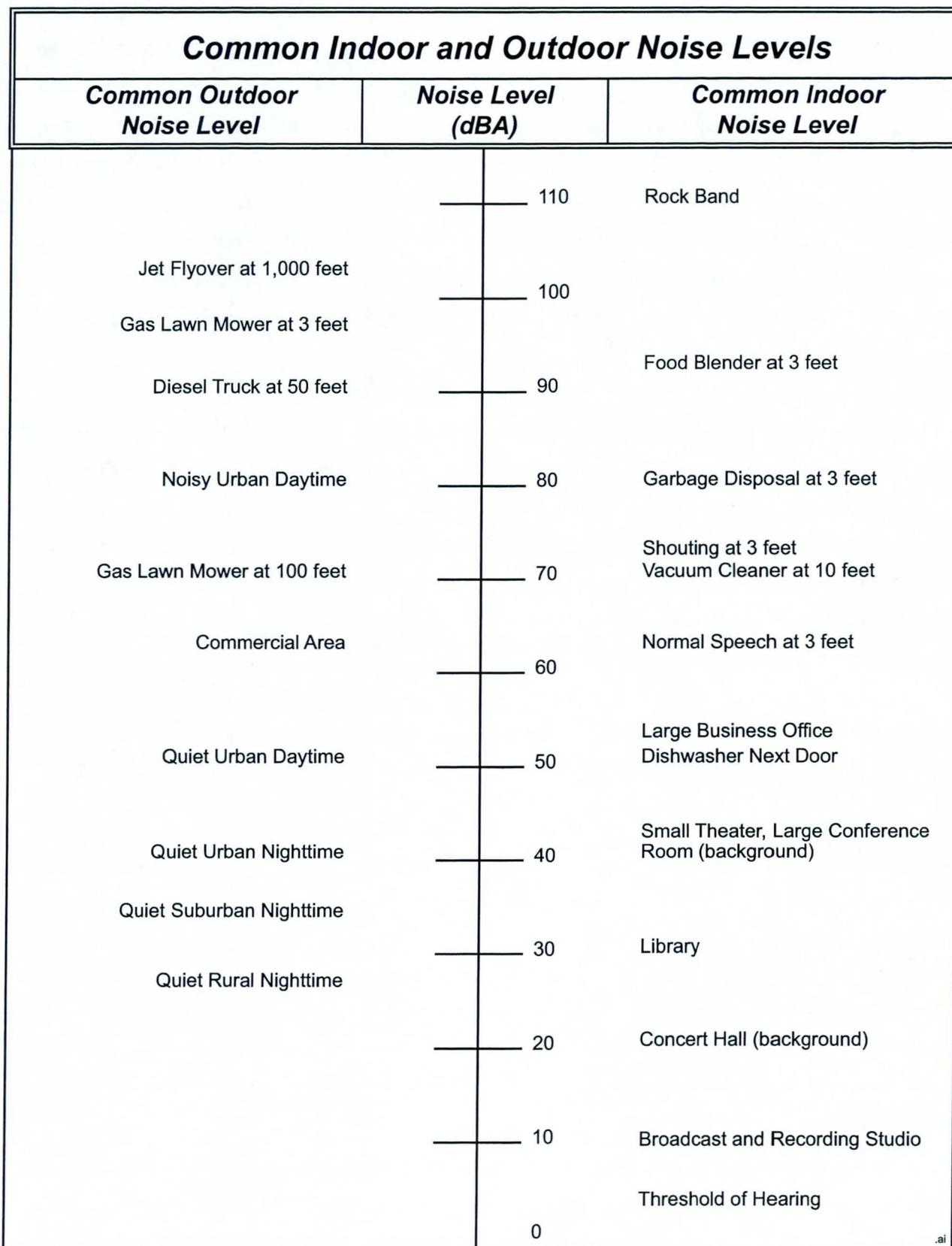
An analysis of potential noise impacts was conducted within the project area, pursuant to the ADOT Noise Abatement Policy (NAP), dated March 21, 2000, and in accordance with the provisions of Title 23 CFR Part 772 - Procedures for Abatement of Highway Traffic Noise and Construction Noise. The analysis was documented in *Noise Study Technical Report, 67th Avenue Overpass at Grand Avenue (US 60)/ Northern Avenue, Glendale, Maricopa County, Arizona* (ADOT 2001). The purpose of the noise study was to analyze the potential traffic-generated noise impacts from the proposed improvements as identified in Alternative W-2.

As identified in Table 10, FHWA’s Noise Activity Categories (NAC) are used to compare results of field monitoring. The NAC are formulated by combining land use designations with the acceptable exterior noise levels. The range of common indoor and outdoor noise levels is illustrated in Figure 12.

Activity Category	L_{Aeq1h}	Description of Activity Category
A	57 (exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 (exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.
C	72 (exterior)	Developed lands, properties, or activities not included in Categories A or B above.
D		Undeveloped lands.

The decibel (dB) is a logarithmic unit that expresses the ratio of the sound pressure level being measured to a standard reference level. It has been found that the A scale on a sound-level meter best approximates the frequency response of the human ear. (dBA)
The hourly equivalent sound level, L_{Aeq1h}, represents the A-weighted sound level which contains the same amount of acoustic energy as the actual time-varying, A-weighted sound level over one hour.

Source: 23 Code of Federal Regulations 772



Source: AASHTO Guide on Evaluation and Abatement of Traffic Noise, 1993

Figure 12. Common Noise Levels

Noise measurements were taken at potentially affected locations within the project area (refer to Figure 13). The NAC land use categories that are found within or adjacent to the project area are Categories B (residences) and C (commercial businesses). FHWA noise abatement guidelines state that abatement strategies should be considered when the noise levels “approach,” or exceed 67 dBA for a Category B land use, or 72 for a Category C land use. The “approach” threshold as defined by ADOT is 3 dBA, i.e., 64 dBA for a Category B land use and 69 dBA for a Category C land use, respectively. These guidelines also state that noise abatement should be considered when the noise levels “substantially exceed the existing noise levels.” This criterion, as defined by ADOT, is the increase of 15 dBA or more above existing conditions. ADOT’s policy does not provide for mitigation of commercial sites.

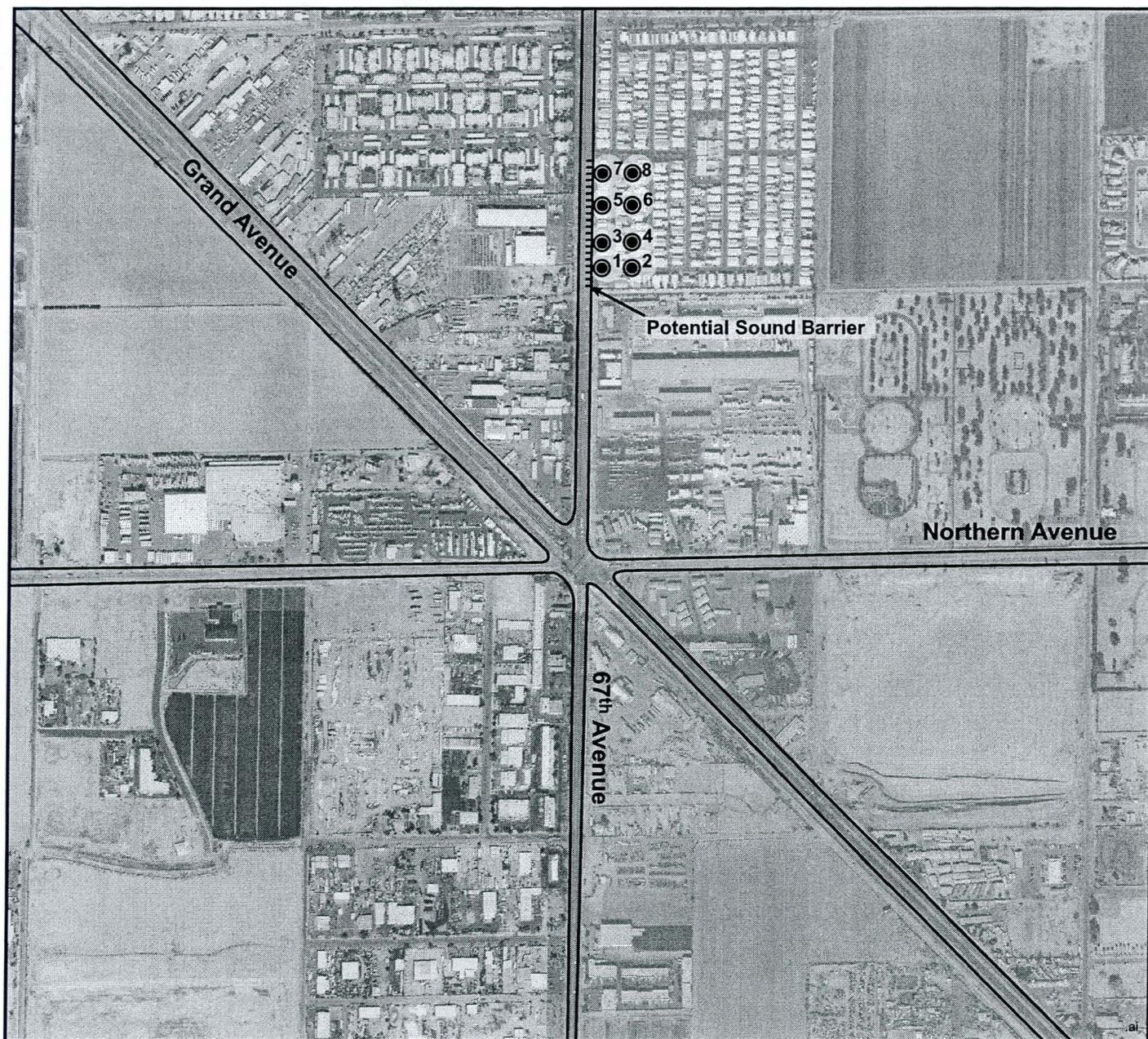
Existing noise levels were measured at eight receptor sites, representing 26 existing residences, within the project limits (refer to Table 11). All eight monitoring sites are located in the Orange Grove Mobile Home Park, located along 67th Avenue north of the 67th Avenue, Northern Avenue, and Grand Avenue intersection (refer to Figure 13). These receptor sites were chosen because of their land use (Activity Category B) and proximity to the proposed roadway alignment.

Table 11. Summary of Noise Analysis

Receptor Site	NAC	Receiver Description	Existing	No Build	Alternative W-2	² Mitigation (dBA Insertion Loss)
			Peak 2000 (dBA)	Peak 2025 (dBA)	Unmitigated/Mitigated (dBA)	
1	B	Orange Grove Mobile Home Park (MHP) – Row 1	¹ 72	72	73/67	6
2	B	Orange Grove MHP – Row 2	68	68	69/65	4
3	B	Orange Grove MHP – Row 1	73	73	73/66	7
4	B	Orange Grove MHP – Row 2	69	69	70/64	6
5	B	Orange Grove MHP – Row 1	73	73	73/66	7
6	B	Orange Grove MHP – Row 2	70	70	70/64	6
7	B	Orange Grove MHP – Row 1	73	73	73/69	4
8	B	Orange Grove MHP – Row 2	70	70	70/67	3

Source: ADOT 2001. ¹ Bold Numbers indicate those receptor sites above the 64-dBA threshold for Category B land uses.
² Mitigation numbers indicate a reduction in dBA or insertion loss

Existing noise levels were modeled using traffic conditions at 50 miles per hour. These speeds were based on observations cited in the ADOT study *67th Avenue Overpass at Grand Avenue (US 60)/Northern Avenue Traffic Analysis Report* (ADOT 2001). Traffic volume information was also obtained from the ADOT traffic study.



Key

- 1 Noise Receptor Location
- Potential Sound Barrier Location



Figure 13. Noise Receptors and Potential Sound Barrier Locations

67th Avenue Overpass at Northern Avenue and Grand Avenue (US 60) Draft Environmental Assessment
 Project No. STP-060-B(007) TRACS No. 060 MA 153 H5601 01C

Adjacent residences could experience short-term noise increases during construction. These increases are due to the typical equipment used during large construction-related projects. Additionally, the quantification of such impacts is difficult to estimate without adequate data on the project's exact schedule and a detailed list of equipment to be used. Site clearing may involve an approximated temporary dBA of 88 from either the operation of dozers and/or backhoes. Earthwork activities that involve either graders or belly scrapers may temporarily increase noise levels to 93 dBA.

Projected peak noise levels for 2025 under Alternative W-2 range from 69 dBA to 73 dBA. Alternative W-2 would result in a 1-dBA increase of noise level at three of the eight receptor sites evaluated (Receptors 1, 2, and 4) and no change at the other five receptor-site locations. Both the No Build and W-2 Alternatives represent noise levels at all receptors that exceed the NAC threshold for mitigation consideration.

Noise mitigation considerations generally consist of sound barriers within proposed rights-of-way. When warranted, sound barriers are considered the most cost effective and accepted technique of mitigation. Other mitigation considerations such as speed or truck traffic restrictions are typically not viable for projects of this type. The noise modeling for the eight impacted receptor sites indicates a sound barrier could be used to reduce noise levels by 3 to 7 dBA, although noise levels would not be reduced below the 64-dBA threshold.

The benefits of a sound barrier were evaluated along the east side of 67th Avenue at the Orange Grove Mobile Home Park (refer to Figure 13). However, due to the ROW, which abuts 67th Avenue, being owned by the City of Glendale, the current City of Glendale Zoning Ordinance #5.3180, and discussions between the City of Glendale and the owner of the Orange Grove Mobile Home Park (refer to Appendix A), the sound barrier would be limited to 8 feet in height. The modeled sound barrier would begin along 67th Avenue at the southwest corner of the Orange Grove Mobile Home Park and extend 610 feet north to the Orange Grove Mobile Home Park entrance. The estimated sound barrier cost is approximately \$102,500, resulting in a cost per benefited residence of \$5,100. The modeled sound barrier would not achieve the goal of 63 dBA, but would achieve the insertion loss goal of 5 dBA at five of the eight receptors (refer to Table 11).

The existing conditions, No Build Alternative, and unmitigated Alternative W-2 have, or would result in, noise levels exceeding the 67-dBA criterion for mitigation consideration. Therefore, ADOT would construct an 8-foot high sound barrier from the southwest corner of the Orange Grove Mobile Home Park to approximately 610 feet north to the Orange Grove Mobile Home Park entrance. Final details

of the sound barrier would be coordinated with the City of Glendale prior to the completion of final design. Furthermore, the City of Glendale is currently evaluating extending the sound barrier that would be constructed simultaneously with Alternative W-2, extending it beyond the entrance to the Orange Grove Mobile Home Park to the northern MHP boundary. Although the sound barrier would be limited to 8-feet high by the City of Glendale Zoning Ordinance, the proposed sound barrier would still meet the ADOT Noise Abatement Policy insertion loss goal of 5 dBA at five of the eight receptors (1, 3, 4, 5, and 6), result in a loss of 4 dBA at two receptors (2 and 7), and a loss of 3 dBA at Receptor 8. Therefore, implementation of the proposed noise mitigation for Alternative W-2 would result in lower sound levels than currently exist or are projected for the No Build Alternative in year 2025, and therefore, would result in a beneficial impact on adjacent residences.

H. Visual Resources

In general, the visual character within the project area is dominated by older commercial and industrial land uses, as well as scattered residences. Prominent built features within the project area include commercial developments, the BNSF railroad tracks, traffic lights, street lighting, and billboards. These commercial and industrial buildings are constructed with a variety of materials and painted a variety of colors. In addition, there is a limited amount of landscaping at these commercial and industrial businesses. Distant views of the Estrella Mountains to the south and the White Tank Mountains to the west can be seen from portions of the project area, although the development in the immediate area limits expansive views.

The construction of the 67th Avenue grade-separation structure and associated service roads would create a notable change to the visual character and quality of the project area. The grade-separation structure would be highly visible to motorists and to the adjacent residential and commercial areas, because it would be constructed approximately 40 feet above the ground at its highest point. Because of the limited amount of plant material within the project area, the addition of landscaping on the embankments of the grade-separation structure and detention basins would improve the overall aesthetics. The result of these landscape enhancements and improved traffic facilities could revitalize the neighborhoods, improving future resale values. Overall, the proposed improvements would substantially change the visual character of the project area because of the contrast in the scale and size of the elevated grade-separation structure with the existing setting and the presence of landscape enhancements.

Because of improvements to the existing older traffic facilities and the addition of landscaping on embankments and detention basins, the overall visual quality of the project area would be improved.

However, the visual character would be notably changed due to these same modern improvements. Therefore, the proposed improvements would beneficially change the visual quality and substantially change the visual character of the project area.

Embankment slopes, detention basins, and affected public ROW would be landscaped with low-water-use plants and the area covered with an inert ground cover. Trees would be planted along detention basins to screen the drainage facilities from motorists' views.

I. Invasive Species

Under Executive Order 13112 dated February 3, 1999, projects which occur on federal lands or are federally funded must, "subject to the availability of appropriations, and within Administration budgetary limits, use relevant programs and authorities to: (i) prevent the introduction of invasive species; (ii) detect and respond rapidly to and control populations of such species in a cost-effective and environmentally sound manner; (iii) monitor invasive species populations accurately and reliably; and (iv) provide for restoration of native species and habitat conditions in ecosystems that have been invaded."

In accordance with Executive Order 13112, the project area was surveyed by a qualified invasive weed authority, and it was determined that there are no listed invasive species within the project boundaries.

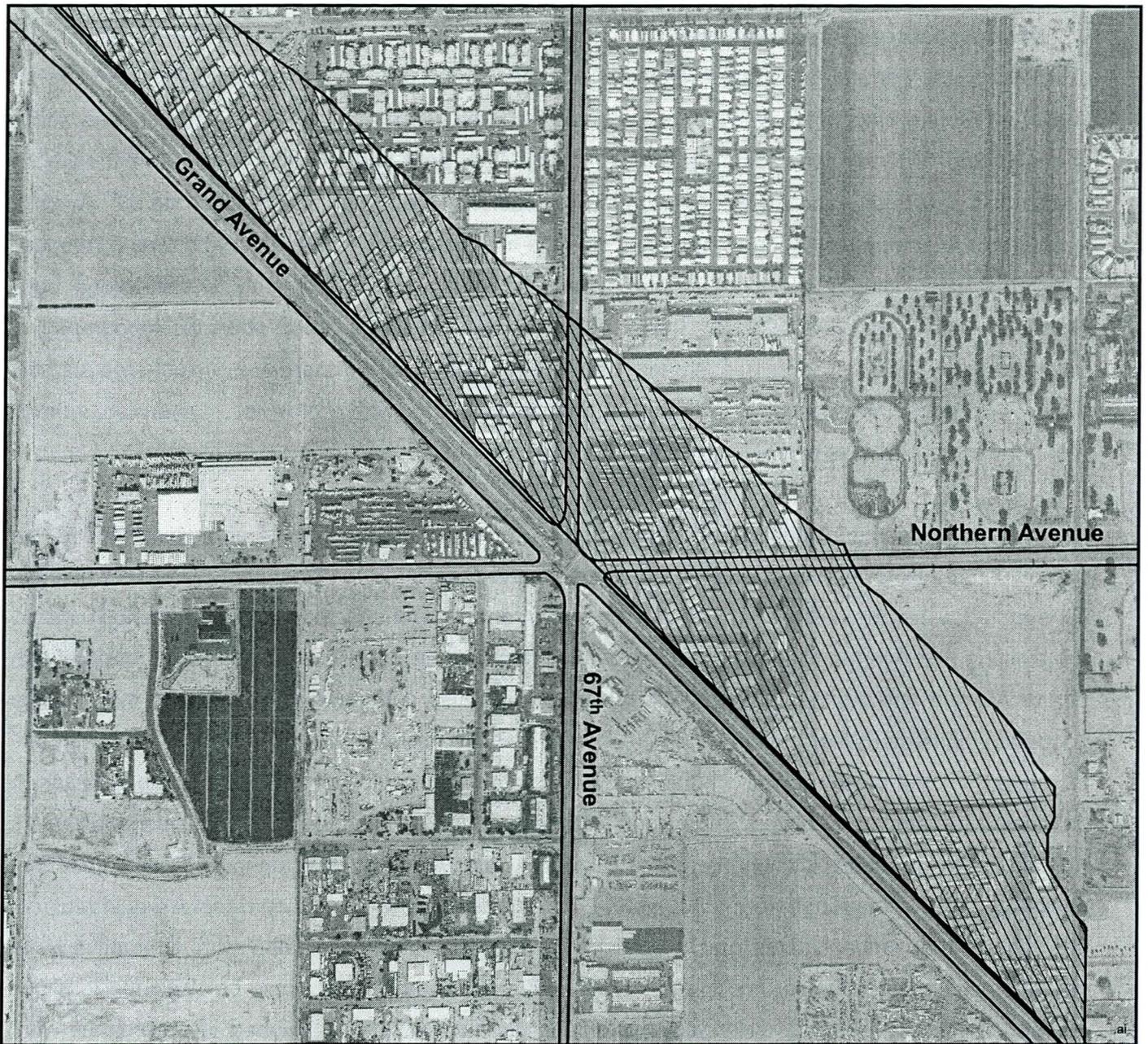
The proposed project would not result in the spread of invasive species because none were identified to occur within the project area. The existing ROW has been previously cleared of native vegetation for the construction of the respective roads and commercial development within the proposed project area. Alternative W-2 would require approximately 20 acres of ROW for the construction of the proposed improvements. The area required to construct the proposed improvements would be cleared. In order to prevent the introduction of invasive species, all earth-moving and hauling equipment would be washed prior to arriving on site to prevent the introduction of invasive species seed. In compliance with Executive Order 13112 regarding invasive species, all disturbed soils that would not be landscaped or otherwise permanently stabilized by construction would be seeded using species native to the project vicinity. Specifically, all embankment slopes would be landscaped with drought-tolerant plants and covered with an inert ground cover. An irrigation system would be needed to establish and maintain the plants. Therefore, Alternative W-2 would not result in the spread of invasive species.

J. Water Resources Considerations

A review of the Federal Emergency Management Agency and the Environmental Systems Research Institute Web site links to floodplain data for the project area indicates that the project is located within a designated 100-year floodplain (refer to Figure 14). This area abuts Grand Avenue and the BNSF tracks and parallels Grand Avenue along the northeast side from just northwest of the 59th Avenue and Grand Avenue intersection to approximately the intersection of 75th Avenue and Grand Avenue. The area also includes the land between Grand Avenue and approximately ¼ mile along both Northern Avenue and 67th Avenue. Impacts on floodplains typically occur when the topography is substantially modified either by placement or removal of materials. Furthermore, project-area surface water flows along the streets into storm water drainage systems, where provided. Otherwise, it flows along the surface across parcels in a southerly pattern.

Alternative W-2 would include the construction of a grade-separation structure and would require the use of fill material for embankments. Embankments and associated roadway improvements would be constructed within the designated 100-year floodplain on the northeast side of Grand Avenue west of the existing 67th Avenue alignment. Other features such as the connector roads located north of the Grand Avenue and Northern Avenue intersection would also contribute to changes to the existing floodplain characteristics. Alternative W-2 would require on-site detention basins to retain the increased volume of storm water within the project area that could potentially occur as a result of increasing the amount of paved, impervious surfaces and the construction of embankments using fill material for the grade-separation overpass. Detention Basin A and B (refer to Figure 7) would both be designed to retain the runoff from a 100 year, 24 hour storm event. Detention Basin A would replace the volume that embankments and miscellaneous improvements associated with Alternative W-2 displaces within the 100-year floodplain (ADOT 2002). Roadway curbs would be designed to allow rainfall to drain off the roadway surface. Drainage facilities would be designed in accordance with ADOT's policies and standards.

Because 5 or more acres of land would be disturbed, a National Pollutant Discharge Elimination System (NPDES) permit would be required. The Storm Water Pollution Prevention Plan (SWPPP) would be prepared during final design. The District Construction Office and contractor would submit the Notice of Intent and the Notice of Termination to the U.S. Environmental Protection Agency (EPA) and copies to the Arizona Department of Environmental Quality (ADEQ). A Notice of Intent would be submitted to the EPA at least 48 hours prior to the start of construction.



Source: Federal Emergency Management Agency (FEMA)

Key

 100-year Floodplain

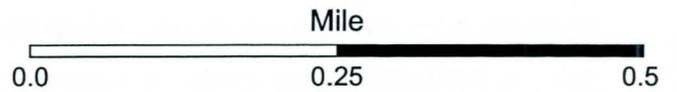


Figure 14. 100-Year Floodplain

During construction, care would be taken to ensure that construction materials would comply with *Arizona Department of Transportation's Standard Specifications for Road and Bridge Construction* Section 104.09 (2000 edition). Excess concrete, curing agents, formwork, loose embankment materials, and fuel would not be disposed of within the project boundaries.

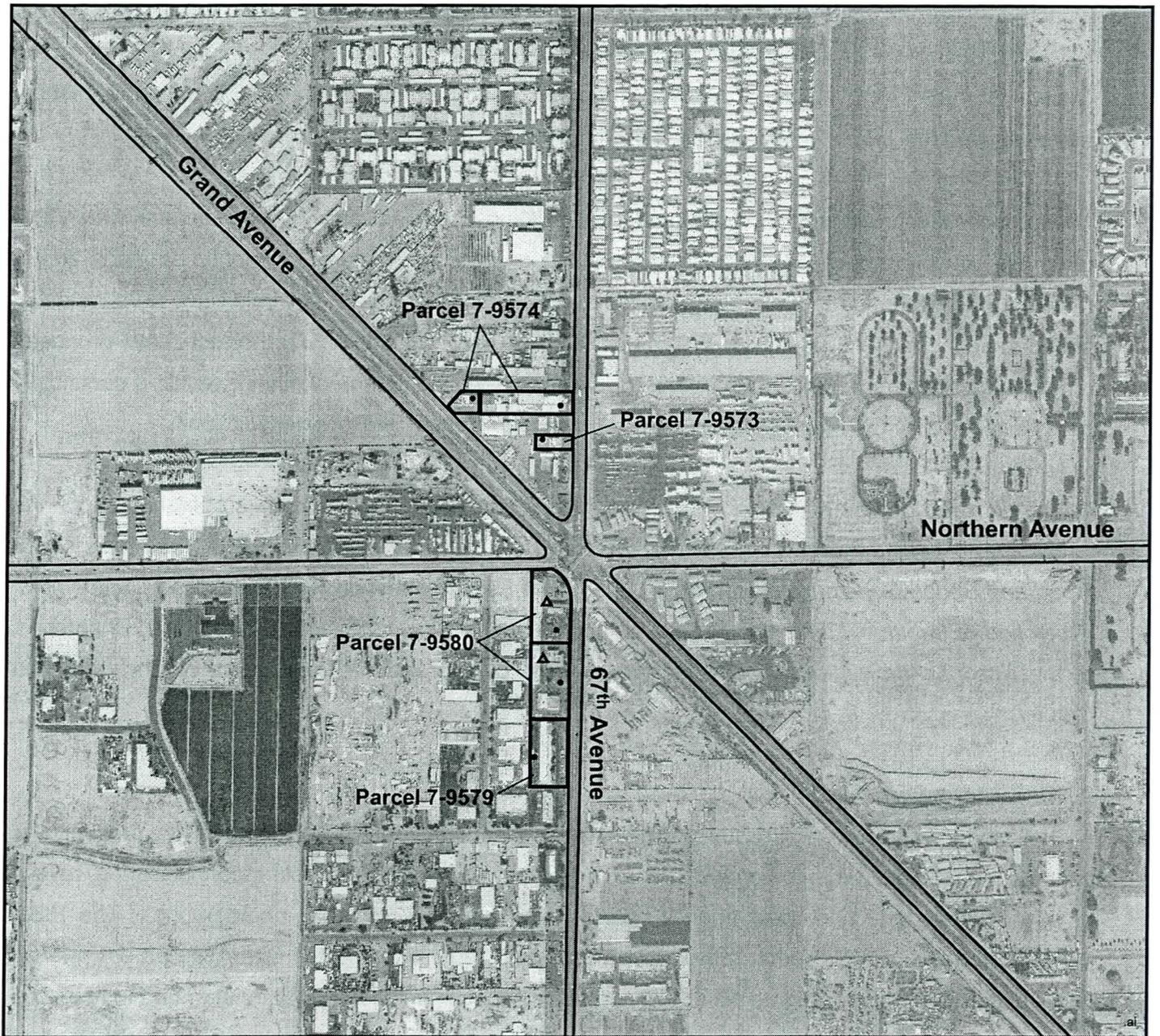
The proposed improvements would impact the existing floodplain and existing surface water flow patterns. However, because the project would include drainage features to contain drainage and/or maintain existing drainage patterns and minimize pooling, Alternative W-2 would have no substantial impacts on the existing floodplain or project area surface water flow. Furthermore, the proposed drainage facilities may also provide a link to future area-wide drainage planning, which is continually being evaluated by the Flood Control District of Maricopa County and local jurisdictions.

During construction, the contractor would give special attention to the effect of its operations upon the landscape in accordance with *Arizona Department of Transportation's Standard Specifications for Road and Bridge Construction*, Section 104.09 (2000 Edition) *Prevention of Landscape Defacement; Protection of Streams, Lakes and Reservoirs* and the Water Quality Standards in Title 18, Chapter 11 of the Arizona Administrative Code as administered by the Arizona Department of Environmental Quality.

K. Hazardous Materials

A Preliminary Initial Site Assessment (PISA) was conducted by ADOT EPG for the presence of hazardous materials within the project area. The assessment included a field reconnaissance, review of applicable federal and state agency records, and a review of aerial photographs. The PISA indicated that six parcels within the project area would require a Phase I Site Assessment prior to ROW acquisition (refer to Figure 15). A Phase I Site Assessment is the industry standard to meet the "due diligence" requirements of the Comprehensive Environmental Response, Compensation, and Liability Act. Requirements for Phase I reports are defined in American Society for Testing and Material's report *E1527-00 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*.

Of the six sites requiring a Phase I Site Assessment, two sites would require additional assessment. These two parcels are located along the west side of 67th Avenue immediately south of the 67th Avenue, Northern Avenue, and Grand Avenue intersection. The other four parcels were further evaluated and cleared, meaning no potential human health-related hazards exist. The PISA also indicated that six drywells were located within the project area and would need to be abandoned prior



Key

- Drywell
- ▲ Oil-water Separator

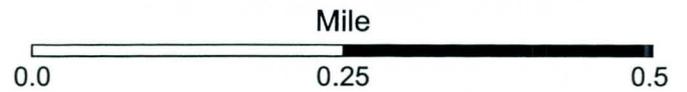


Figure 15. Hazardous Materials Assessment

67th Avenue Overpass at Northern Avenue and Grand Avenue (US 60) Draft Environmental Assessment
 Project No. STP-060-B(007) TRACS No. 060 MA 153 H5601 01C

to construction. Furthermore, two oil-water separator sites were located within two commercial businesses located at the southwest quadrant of the 67th Avenue, Northern Avenue, and Grand Avenue intersection. No other hazardous materials concerns were identified during this investigation.

According to *Arizona Department of Transportation's Standard Specifications for Road and Bridge Construction*, Section 107 Legal Relations and Responsibility to Public (2000 Edition) (Stored Specification 107HAZMT, 01/15/93), if previously unidentified or suspected hazardous materials are encountered during construction, work would cease at that location and the ADOT Engineer would be contacted to arrange for proper assessment, treatment, or disposal of those materials. Such locations would be investigated and proper action implemented prior to the continuation of work in that location. Any parcels requiring additional hazardous materials investigation would be completed by ADOT prior to ROW acquisition.

Because the proposed project would involve the identification and cleanup of hazardous sites or materials, it is anticipated that the construction of Alternative W-2 would be a beneficial impact to the project area concerning potential hazardous materials.

L. Utilities

The project area includes the following utilities: Arizona Public Service (APS) Power, Salt River Project (SRP) Agricultural and Power District (power and irrigation) Southwest Gas, Qwest, MCI Worldcom, Electric Lightwave, Cox Communications, AT&T Wireless Tower, and City of Glendale storm and sanitary sewer. The BNSF, APS Power, and SRP are claiming prior rights, an issue to be determined during final design.

Alternative W-2 would require the relocation of utilities. However, utilities owned by such companies as APS, SRP, Southwest Gas, and Qwest, are commonly relocated by the respective utility company itself prior to construction projects. Utility relocations not completed prior to construction would be included in the construction phasing of Alternative W-2 and completed by the project contractor. As a result of these relocations, temporary impacts to local utility customers could occur, but would be limited to the final tie-in of the relocated utility. Notice of any utility disruptions, would be provided by the utility company or contractor that is responsible for completing the relocation work. Therefore, no substantial impacts would be anticipated. The ADOT District Construction Office would provide notice to the utility companies that could be affected prior to any disruption of service, so that adequate planning and notice to residents could be provided.

M. Material Sources and Waste Materials

Specific details on quantity of materials needed for construction of embankment slopes or other project-related embankments and the availability or status of clearance of material source sites would be evaluated during final design.

Excess waste material and construction debris would be disposed of at sites supplied by the contractor in accordance with *Arizona Department of Transportation's Standard Specifications for Road and Bridge Construction* Section 107.11, Protection and Restoration of Property and Landscape (2000 Edition). Disposal would be made at either municipal landfills approved under Title D of the Resource Conservation and Recovery Act, construction debris landfills approved under Article 3 of the Arizona Revised Statutes (ARS) 49-241 (Aquifer Protection Permit) administered by the Arizona Department of Environmental Quality, or inert landfills.

Any material sources required for this project outside of the project area would be examined for environmental effects, by the contractor, prior to use, through a separate environmental analysis in accordance with *Arizona Department of Transportation's Standard Specifications for Road and Bridge Construction*, Section 1001 Material Sources (2000 Edition) (Stored Specification 1001.2 General).

Due to the requirements set forth in the above-mentioned regulations, the proposed project would not create an impact as a result of construction debris disposal.

N. Secondary Impacts

Secondary effects are broadly defined by the CEQ as those impacts that are caused by an action and occur later in time, or are farther removed in distance but are still reasonably foreseeable after the action has been completed (40 CFR 1508.8). They comprise a wide variety of secondary effects such as changes in land use, economic vitality, and population density. Secondary impact issues relevant to this project include access, noise and visual quality. Secondary land use impacts were not considered because most of the project area has been developed for the last decade or longer and most nearby vacant parcels would be purchased for the proposed improvements.

1. Multi-Modal Transportation Impacts and Access

If future planned RPTA bus routes are implemented along Northern Avenue, bus service routes would likely be required to use the proposed service roads to connect passengers to the existing Grand Avenue bus route and 67th Avenue bus route. Consequently the future RPTA Yellow Line (Grand

Avenue) may no longer function as it does today, and connections to other north-south bus routes, such as 67th Avenue, might not be possible. Although proposed improvements would allow for the opportunity for an expressway-like bus service from remaining bus stop locations, RPTA has not indicated whether this would be feasible or not. Therefore, the impacts to regional transit service are not anticipated to be substantial.

Specific commercial, retail, and residential marketability may improve within the project area due to the re-alignment of 67th Avenue, and the construction of new traffic facilities. Access points to the adjacent properties and known future expansion of the existing properties would be provided. The project improvements would provide ingress and egress for local residents and business employees and non-local motorists seeking access to these sites.

2. Visual Impacts and Economic Vitality

The proposed grade-separation structure would be in direct, line-of-sight from the residential area located immediately northeast of the project area. This might impact, to some degree, the future residential marketability, but landscaping would be provided to offset and improve the aesthetics of the proposed improvements and the local community. The structure would be of modern design and construction materials. This overall upgrading of traffic facilities throughout the project area would be an improvement to the general visual quality of the project area, but would notably change the visual character. However, the result of these changes is likely to improve future property marketability and overall economic vitality in the Grand Avenue corridor.

Parcels in the project vicinity could also increase in value because of reduced traffic congestion and delay times and because of changes that improve ingress and egress for the shipping or delivery of goods. Because the actual benefits of these improvements would not be known until sometime after completion, the contribution to the overall future economic vitality of the project area is unknown.

O. Cumulative Impacts

Cumulative effects are the combined impacts on the environment that result from the incremental effect of the proposed action when added to past, present, or reasonably foreseeable future actions within the immediate vicinity of the project area (40 CFR 1508.7). For this assessment, only those "at risk" critical resources would be evaluated. The cumulative effects of an action may be undetectable when viewed in the individual context of direct or indirect actions, but could add to a measurable environmental change. These include past actions that have occurred since 1990, and foreseeable

future actions based on the best available information from the associated planning agencies. However, the majority of the development within the project area occurred prior to 1990.

1. Population Growth and Transportation Facility Development

The western portion of the Phoenix Metropolitan Area is experiencing ongoing residential, commercial, and industrial development. The result of this growth is more population, employment, and revenue for the state and local jurisdictions and more demand upon the area's transportation facilities. The population in Arizona has grown steadily over the past 30 years, increasing from 1,775,399 persons in 1970 to 5,130,632 in 2000. Maricopa County's population has grown from 971,228 in 1970 to 2,122,101 according to the 1990 Census. According to the Arizona Department of Economic Security, the 2020 population in Maricopa County is estimated to grow to nearly 4,516,090 people. Transportation improvements contribute to the selection of future site development. It is unlikely, however, that any proposed improvements to Grand Avenue would greatly contribute to the selection of large-scale site development when compared to any future improvements to other key links to the West Valley such as I-10, Loop 101, and Loop 303. Any improvements to these thoroughfares would more likely promote large-scale development in the West Valley.

The most influential future actions associated with this project are the proposed realignments of other intersections along Grand Avenue and any future considerations for expansion or implementation of expressway facilities. ADOT is considering making improvements at a total of eight sites between I-17 and the Loop 101, which include the following:

- 27th Avenue and Thomas Road (under construction)
- 43rd Avenue and Camelback Road (approved for construction)
- 51st Avenue and Bethany Home Road (approved for construction)
- 55th Avenue and Maryland Road (under study)
- 59th Avenue and Glendale Avenue (under study)
- 67th Avenue and Northern Avenue (under study)
- 75th Avenue and Olive Road (under study)
- On-ramps to the Agua Fria (Loop 101L) from 91st Avenue at its intersection with Cactus Road (under construction)

As noted, 27th Avenue, 43rd Avenue, 51st Avenue, and the on-ramps to the Loop 101 have been cleared environmentally and are planned or are in the process of beginning construction. The

remaining projects are currently being evaluated. Depending on scheduling of other proposed improvement projects along the Grand Avenue corridor, the combined construction-related traffic impacts could limit or potentially impact the overall function and use of Grand Avenue during the construction period. Traffic control plans for each project would mandate that all local access to businesses and residential areas be maintained during construction. In addition, projects would be scheduled to limit construction-period overlap and also limit the overall impacts to the operation and function of the Grand Avenue corridor. Motorists could use other arterial streets such as Northern Avenue and Grand Avenue. This would require that motorists navigate around construction zones and would create longer travel times and inconvenience to motorists. It is not anticipated that these construction impacts would be substantial because they would be temporary and of limited impact.

It is anticipated that traffic operations on Grand Avenue would be considerably improved after the completion of the eight improvement projects. Current and projected average ADT numbers and LOS classifications illustrate that these eight intersections operate at the poorest traffic operation level of service, with substantial delay of up to 3 minutes. The recommended intersection improvements would not only improve the LOS at each of the proposed project sites, but also improve community mobility and access throughout the corridor. Therefore, it is not anticipated that the proposed project would result in any substantial impacts as a result of any known traffic improvement projects or substantially impact, either adversely or beneficially, population growth in the West Valley.

2. Natural Environment

The most notable cumulative impacts with respect to the natural environment of the associated Grand Avenue projects are the results of channelizing drainage and detention of storm water. Storm water would be routed to detention basins or existing storm drain facilities. These facilities would be beneficial because they would aid in the area's drainage and potentially alleviate some large-scale flooding near the proposed project sites. At a minimum, these drainage improvements would not increase area flooding. The proposed drainage facilities may also provide a link to future area-wide drainage planning, which is currently being evaluated by the Flood Control District of Maricopa County and local jurisdictions. Therefore, the proposed improvements would not substantially effect, either adversely or beneficially, the natural environment of the project area.

3. Human Environment

Because of the potential for new development as a result of improved traffic circulation and access through the corridor, the overall social and economic impacts should be positive. However, a number of businesses would be impacted from project-specific ROW acquisitions. These businesses would be afforded relocation, but locations are dependent on individual owner site preferences.

Retail establishments would, as a rule, tend to be more sensitive to the kinds of changes that would occur as a result of the intersection project. Of those within the Grand Avenue corridor, many could be classified as “destination” retail places, in that they deal with either specialized or high-dollar goods, and not convenience or everyday goods, or, they are places with some degree of regional name-recognition. The nature of these retail businesses would therefore tend to minimize losses of business activity due to relocations or to disruptions and changes to business access.

The potential effects that apply to the wholesale and manufacturing businesses are primarily a matter of changes in access. Temporary access restrictions and/or detours could be necessary during construction, although access to businesses and nearby residences would be maintained. Permanent changes to routing of traffic would occur as a result of grade-separating one leg at each of the respective intersections throughout the Grand Avenue corridor. However, in most cases less than one mile of “out-of-direction travel” would be required. In addition, because of substantial improvements to each respective intersection LOS, travel times along these alternative routes would not be substantially different than what occurs throughout the corridor today.

Several businesses could be affected during construction from typical traffic-related delays and, as a result, driver avoidance. A traffic plan would be implemented to address traffic-related construction issues for the remaining businesses that are not acquired. Impacts would not be anticipated to be substantial because customers would still be provided access during construction. In addition, even though permanent access changes would occur, creating some out-of-direction travel, these impacts would not be expected to be substantial. Traffic control plans would be established in accordance with Part VI of the *Manual on Uniform Traffic Control Devices for Streets and Highways*, published by the U.S. Department of Transportation, FHWA (1998) and ADOT’s Traffic Control Supplement (1996).

As a result of anticipated operational improvement and functionality of the Grand Avenue corridor, new development along the corridor may be encouraged. The shifting of roadway alignments would provide new opportunities at sites currently undeveloped, such as the agricultural land designated for

future industrial use along the 91st Avenue on-ramp project. These proposed alignment changes could promote improvements or expansion of existing commercial and retail developments, because better traffic operations could encourage additional patronage to the corridor. Therefore, the cumulative impacts of these eight projects may improve or promote the development of nearby vacant land, and encourage improvements to existing land uses within the Grand Avenue corridor while potentially improving the overall community character.

The RPTA bus line along Grand Avenue, the Yellow Line, would be altered with the completion of these grade-separation structures. The grade-separation structures may permanently disconnect portions of Grand Avenue from other RPTA bus lines. As a result, the RPTA Yellow Line may no longer function as it does today. A potential change that could benefit some of the bus users is that expressway-like bus service (e.g., bus service along Grand Avenue with fewer stops) would be possible. This could result in some commuters shifting from individual vehicle use to bus service, reducing congestion on Grand Avenue. Therefore, the proposed improvements throughout the Grand Avenue corridor would impact transit service. ADOT would coordinate with RPTA to address impacts and/or relocation of any temporarily or permanently impacted bus stops or bus routes during final design.

The visual quality of the existing Grand Avenue corridor is characterized by older commercial and industrial buildings along major urban streets carrying high traffic volumes, which are common throughout this segment of the corridor. Some of these existing developments would be acquired during ROW proceedings for the proposed realignment of the various intersections. The overall visual quality may be improved by the improvements made to parcels of lands where portions of these older commercial and/or industrial buildings occur and by landscaping embankment and detention basins. New developments could potentially be constructed adjacent to these new roadway alignments or additions could be made to existing commercial or industrial facilities. Therefore, the cumulative impacts on the visual quality of the Grand Avenue corridor are anticipated to create a positive change.

In summary, the proposed project would not substantially affect distinct minority or other protected populations, land uses, or regional public transit services. The visual character and quality of the corridor would, however, be changed.

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V. PUBLIC INVOLVEMENT/PROJECT COORDINATION

A. Agency and Stakeholder Coordination

Coordination letters were sent to the following agencies and stakeholders:

Arizona Department of Public Safety
Burlington Northern Santa Fe Railway
City of Glendale
City of Peoria
City of Phoenix
Cox Communications
Flood Control District of Maricopa County
Glendale Elementary School District
Glendale Union School District
Maricopa Association of Governments
Maricopa County
Maricopa County Department of Transportation
Qwest
Regional Public Transportation Authority
Salt River Project
Southwest Gas Company

An agency coordination meeting was held on November 27, 2000, at the City of Peoria Council Chambers at Peoria City Hall, Peoria, Arizona. Issues or comments that were received in either the responses to the coordination letters or during the meeting included the following: both MAG and Cox Communications stated that neither party had comments or concerns at this time and Maricopa County provided contact information for applicable earthmoving permits and abandonment or reconstruction of water or sewer lines within any unincorporated areas.

B. Public Involvement

A Web site was developed that included engineering details, environmental documents, project team member contact information, and a forum for both notification of upcoming public meetings and a place to download comment forms for these public meetings. The site includes information on all eight Grand Avenue projects. For further information on this site, please visit www.grandavenuecorridor.com.

Two public meetings were held for the 67th Avenue Overpass at Grand Avenue (US 60) and Northern Avenue Design Concept Study and EA. These public meetings included the presentation of detailed

engineering drawings and descriptions and the solicitation of public comments on these proposed configurations to be reviewed by ADOT. The first meeting was held in conjunction with the Olive Avenue at 75th Avenue and Grand Avenue project. The presentation given by project team members as well as meeting handouts were separated to ensure that questions and/or comments could be distinguished for each set of alternatives at the respective intersections. The meetings were held to obtain public input regarding the social, economic, environmental, and design issues for the project.

The first public meeting was held at the Santa Fe Elementary School Gymnasium on March 1, 2001, from 5:30 p.m. to 7:30 p.m. A total of 76 people signed in at the meeting. Notice of the public meeting was placed in the *Arizona Republic* on February 13, 2001, and again on February 23, 2001. Door hangers were created to notify the public of upcoming meetings. They were distributed about one week before meetings in a one-mile radius from the 67th Avenue, Grand Avenue, and Northern Avenue intersection. These door hangers were prepared in English and Spanish text.

Public concerns were received in the form of responses to questionnaires, verbal comments, and/or questions recorded by the project team at display boards and from questions posed during the open question and answer session at the meeting. Comments included general concerns about the vitality of individual businesses, access to individual businesses both during and after construction, and loss of business as a result of the removal/relocation of specific businesses. Other comments included apprehension about the alteration of traffic movement/patterns in the project area, concerns over the proposed height of the overpass, the alternative selection process, the probability of the project actually being constructed, a concern regarding the ADOT ROW acquisition process and its current progress, the accuracy of traffic reports, and potential hazardous materials.

The second public meeting was held at the Glendale Civic Center on Wednesday, September 5, 2001, from 6:00 to 8:00 p.m. The purpose of the Public Information Meeting was to present the preliminary results of the Alternative Selection Report and any preliminary environmental findings. A total of 57 people signed in at the meeting. To maximize dialogue with the public, a Spanish interpreter was also available at the meeting. However, no translations were requested from the interpreter. Notice of this public meeting was placed in the *Arizona Republic* on August 20, 2001, and again on August 27, 2001. In addition to these newspaper notices, approximately 9,000 door hangers, created to notify the public of the upcoming meeting, were distributed about one week before the meeting. These door hangers were prepared in both English and Spanish text.

Verbal and/or written comments taken or submitted at the meeting, or received via e-mail or through normal mailings included questions about how the project would affect connections between the Grand Avenue Yellow Line and Route 67; concerns about air pollution during construction; concerns over access to businesses both during and after construction; observations about how the Loop 101 traffic has affected Grand Avenue; support for Alternative E-1; support for the western alignment of 67th Avenue and the respective Alternatives; concerns about noise impacts; concerns about impacts to renters of future acquired properties; concerns that the delay between now and actual right-of-way acquisition would result in property owners' inability to rent facilities; concerns about current traffic and congestion at the existing 67th Avenue, Grand Avenue, and Northern Avenue intersection; and a concern regarding truck access to and from Schucks Enterprise.

A public hearing will be held to provide the public the opportunity to comment on the Draft Environmental Assessment. A copy of the public hearing notice is included in Appendix D.

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VI. CONCLUSION

The potential environmental impacts of the proposed improvements were evaluated based on both the context of the effects on the project area and the intensity or severity of impacts as defined in CEQ's Regulations. Table 12 summarizes the potential environmental impacts of the proposed project actions.

Table 12. Results of Environmental Analysis

Environmental Consideration	Result of Alternative Evaluation
Ownership, Jurisdiction, and Land Use	No substantial impact
Socioeconomic Resources	No substantial impact
Title VI/Environmental Justice	No substantial impact
Cultural Resources	No impact
Section 4(f) of the Transportation Act	No impact
Air Quality Analysis	Beneficial impact
Noise Analysis	Beneficial impact
Visual Resources	No substantial impact
Invasive Species	No impact
Water Resources Considerations	No substantial impact
Hazardous Materials	Beneficial impact
Utilities	No substantial impact
Material Sources and Waste Materials	No impact
Secondary Impacts	No substantial impact
Cumulative Impacts	No substantial impact

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VII. PROJECT PREPARERS AND CONTRIBUTORS

Federal Highway Administration

Stephen Thomas	Environmental Program Manager
Bill Vachon	Senior Area Engineer
Ken Davis	District Engineer
Ron Hill	Division Right-of-Way Officer
Rebeca Rivera	Professional Development Program Participant

Arizona Department of Transportation

Larry Lindner Environmental Planner	Environmental Planning Group Project Environmental Coordinator and Monitor
Karim Dada Senior Environmental Planner	Environmental Planning Group Project Environmental Coordinator and Monitor (Through March 2002)
Jim Romero Project Engineer	Valley Project Management Section Senior Project Manager
Trent Kelso Project Engineer	Valley Project Management Section Project Manager
Bettina Rosenberg Historic Preservation Coordinator	Environmental Planning Group, Historic Preservation Team Team Leader (Through May 2002)
Michael Ohnersorgen Archaeologist	Environmental Planning Group, Historic Preservation Team Cultural Resources (Through March 2002)
Fred Garcia Senior Transportation Planner	Environmental Planning Group Noise Analysis and Air Quality
Ed Green Hazardous Materials Specialist	Environmental Planning Group Team Leader
Mike Dennis Hazardous Materials Specialist	Environmental Planning Group Hazardous Materials
Pete Eno Right-of-Way Specialist	Right-of-Way Section
Tammy Flaitz Assistant Manager	Environmental Planning Group Title VI Environmental Justice
Lisa Wormington	Civil Rights Office

Logan Simpson Design Inc.

Diane Simpson-Colebank Environmental Planner	Project Manager
Michael Shirley Environmental Planner	Project Environmental Planner, Biological Resources
Shero Holland Environmental Planner	Title VI Environmental Justice, Document Reviewer
Patricia McCabe Environmental Planner	Title VI Environmental Justice
Justin Hoppmann Environmental Planner	Geographic Information Resources
Linda Simone Grafil Archaeologist/Environmental Planner	Cultural Resources, Document Reviewer
Greg Brown Archaeologist	Cultural Resources
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IX. APPENDIX

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A. Agency Coordination Correspondence

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Valley Metro

March 1, 2001

Regional Public
Transportation
Authority

Mr. Michael Shirley
Senior Environmental Planner
Logan Simpson Design, Inc.
51 West Third Street, Suite 450
Tempe, AZ 85281

Re: Grand Avenue (multiple intersections)
Design Concept Report and Environmental Assessment
Arizona Department of Transportation

Dear Mr. Shirley:

Thank you for giving us the opportunity to participate and comment on the Grand Avenue Improvement project. It is our understanding that over \$176 million has been programmed through 2006 to ease traffic congestion on Grand Avenue by constructing grade separations at seven of its troublesome six-legged intersections. The project will also provide a new link between Grand Avenue and the Loop 101 Agua Fria Freeway.

Grand Avenue has held challenges for quality transit operations for decades. The many complex six-legged intersections coupled with parallel railroad operations can create long delays and safety concerns for transit riders. In addition to the intersection geometric and the railroad operations, much of the roadway frontage does not feature street architecture that facilitates convenient pedestrian access.

Valley Metro currently has a regional transit route (the "Yellow" line, regional connector service from Peoria to Tempe) traveling on Grand Avenue between 19th Avenue and 83rd Avenue. Although Grand is not the best transit corridor under any circumstances, these new "flyovers" present additional challenges. The existing grade separation at Grand Avenue and Indian School Road has generated a number of transit passenger complaints over the years. We expect this history to be repeated in the other locations where grade separations are currently being designed. The fact that not all intersections will elevate the same direction will add to the transit rider's confusion with dissimilar geometrics.

Valley Metro bus service is primarily designed to operate on a grid system, complementary to almost all of the street network of the region. Change in the direction of a passenger's travel requires a route transfer, typically between east/west and north/south corridors. The inconvenience of these transfers is being mitigated somewhat by increased levels of service currently being implemented in much of the region. These transfers are considerably more troublesome at the six way intersections along Grand. To make these transfers in the future, a passenger will need to alight the bus prior to the elevation above grade. The passenger will then have a considerably longer distance to cover as a pedestrian before positioning himself at the pickup point for the intersecting route. This maneuver will

understandably be much more difficult for a person in a wheelchair. We have not seen, and would be interested in reviewing, site plans for these projects which illustrate pedestrian routing between these points. Removal of architectural barriers for the patron is a major factor in accommodating the disabled in our transit systems.

Valley Metro local and express bus services have short and long-term needs in this corridor:

Short-term:

- Construction re-routings - With all traffic, including buses, being detoured around construction, communication with our passengers is crucial. Average transit daily boardings along the Grand Avenue Corridor between 19th Avenue and 83rd Avenue are approximately 400 riders. There are approximately 145 boardings between 51st Avenue and 83rd Avenue alone. Passengers will need to be made aware of re-routings and schedule deviations. When a passenger is transferring between routes, timing is of the essence. If a connection is missed, significant delays may result.
- Accessibility issues - Currently, transit on Grand Avenue is hindered by a variety of architectural barriers. Most significant of these is the BNSF rail line. They control the right of way within one foot of the curb. This makes it difficult for transit to make these bus stop locations fully accessible under ADA guidelines. Easement requirements stipulate that no structures may be located within 15 feet of the railroad tracks. In many cases, we may be infringing upon that easement. Therefore, when improving these intersections we need to consider a number of pedestrian issues including curb ramp usability, curb ramp location slopes, pedestrian street crossings, handicapped accessible pedestrian signals, type of curb ramps at either the overpass or underpasses, and signs.

Long-term:

Grand Avenue, even with its low population density and industrial land uses, is a major transportation corridor that will always warrant attention in the transit plans of the region. Commuters, the elderly, and many other user groups will continue to depend upon this corridor as a link from the Northwest Valley to the central city and beyond. RPTA, MAG and other concerned stakeholders are currently addressing many of these issues in the region. Issues include:

- High capacity services like commuter and/or Limited stop transit services
- Arterial local services with transit connections EW and N/S

Therefore, during the design phase of the project, we have the following suggestions:

- We would like to review plan view schematics that show pedestrian circulation between the various far side transit stops at these intersections.
- We would like to review potential bus pull-out locations at these intersections where such improvements are not precluded by railroad rights of way.
- We would like to review a design concept draft that includes roadway spacing to enable two directional lanes to accommodate high occupancy modes. Such lanes might also be considered just for bus rapid transit (BRT) use.

RPTA believes that the incorporation of future transit capability into the design of the roadway and its intersections will best meet travel needs for decades by maximizing the effective capacity of the corridor. In the long term, we also feel that there is a great potential for the development of commuter rail service in this corridor. We realize the challenges of the Grand Avenue corridor, and the reality that there are no easy solutions to the problems caused by its alignment and location.

If you need further information, our Valley Metro Planning Staff will be glad to assist you. Also, please do not hesitate to contact me at any time at (602) 262-7242.

Sincerely,



Jim Dickey
Deputy Executive Director, Operations and Planning
RPTA

C: Ken Driggs
Teri Collins
Steve Brown

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Mike Shirley

From: Jeffrey S Trapp [jtrapp@dps.state.az.us]
Sent: Tuesday, February 13, 2001 11:27 AM
To: Mike Shirley
Subject: Grqnd Avenue Design Concept Report and Environmental Assessment ADOT

This message is a follow up to our phone converstation concerning the above listed project. The Arizona Department of Public Safety has no comments concerning any of the questions asked.

Sergeant Jeff Trapp
Central Patrol Bureau
(602) 223-2872

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COMMUNICATIONS
1550 W. Deer Valley Road
Phoenix, AZ 85027
Fax: (623) 322-0524
February 20, 2001

Bob Johnson
Logan Simpson Design Inc.
51 W. Third St. Suite 450
Tempe, Az. 85281

**RE: 67th Ave, Northern Ave. and Grand Ave.
Design Concept Report and Environmental Assessment**

Dear Mr. Johnson

With regard to the above mentioned project, Cox Communications has existing facilities which must be maintained on the east side of 67th Ave. for the length of the project. In conjunction with our system upgrade this will be reinforced with fiber optic cable with in the next year. Additional future routing has not been finalized at this time.

Additional east west cables on Northern Ave and through a commercial property north of Northern Ave. will probably be abandoned as they have little or no potential for future use.

Unless the commercial and light industrial nature of the Grand Ave corridor changes, little additional growth and few additional projects are foreseen in this area in the near future.

Thank you for the opportunity to respond in this matter.

Sincerely,

Walter R. Coombs
Utility Specialist
COX Communications
1550 W. Deer Valley Rd.
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Walter.Coombs@Cox.com.

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**MARICOPA
ASSOCIATION of
GOVERNMENTS**

February 16, 2001

302 North 1st Avenue, Suite 300 ▲ Phoenix, Arizona 85003
Phone (602) 254-6300 ▲ FAX (602) 254-6490
Email: mag@mag.maricopa.gov ▲ Website: www.mag.maricopa.gov

TO: Karim Dada, Project Manager, Arizona Department of Transportation
FROM: Chris Voigt, Senior Engineer *CV*
SUBJECT: REQUEST FOR COMMENTS ON PROPOSED PROJECTS FOR THE 75th, 67th, 59th and 55th AVENUE INTERSECTIONS WITH GRAND AVENUE

The Maricopa Association of Governments (MAG) has received four letters dated January 16, 2001 requesting comments identifying any issues or concerns with proposed improvements for four intersections along Grand Avenue. MAG has no comments at this time regarding these projects.

The letters also requested the identification of any major projects or developments over a twenty year period (ten years past to ten years in the future). Information we have available is documented in the MAG Long Range Transportation Plan (LRTP), which employs a twenty year planning horizon, and Transportation Improvement Program (TIP). The LRTP and TIP are updated annually, and historical versions of these documents are available. Improvements to these intersections are included in the current approved FY 2001-2005 TIP.

MAG also compiles socioeconomic data which may be of interest to your project. Some currently available information is listed on our website, located at www.mag.maricopa.gov. For further information, please contact Rita Walton at (602) 254-6300.

If you have any questions or comments, please contact me or Roger Herzog at (602) 254-6300.

c: Bob Johnson, Logan Simpson Design Inc.
Michael Shirley, Logan Simpson Design Inc.

----- A Voluntary Association of Local Governments in Maricopa County -----

City of Avondale ▲ Town of Buckeye ▲ Town of Carefree ▲ Town of Cave Creek ▲ City of Chandler ▲ City of El Mirage ▲ Town of Fountain Hills ▲ Town of Gila Bend ▲ Gila River Indian Community ▲ Town of Gilbert
City of Glendale ▲ City of Goodyear ▲ Town of Guadalupe ▲ City of Litchfield Park ▲ Maricopa County ▲ City of Mesa ▲ Town of Paradise Valley ▲ City of Peoria ▲ City of Phoenix ▲ Town of Queen Creek
Salt River Pima-Maricopa Indian Community ▲ City of Scottsdale ▲ City of Surprise ▲ City of Tempe ▲ City of Tolleson ▲ Town of Wickenburg ▲ Town of Youngtown ▲ Arizona Department of Transportation

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Albert F. Brown, M.P.A., R.S.
Director



MARICOPA COUNTY
Environmental Services Dept.
1001 North Central, #595
Phoenix, AZ 85004
(602) 506-6623
(602) 506-5141 FAX
(602) 506-6704 TDD

January 22, 2001

Mr. Michael Shirley
Senior Environmental Planner
Logan Simpson Design Inc.
51 West Third Street, #450
Tempe, AZ 85281

Dear Mr. Shirley:

This is in response to your letter of January 16, 2001 regarding an environmental assessment of the Grand Avenue intersections.

To ensure you have the earthmoving permits required by the Department, please contact Harold Monteith at 602-506-6734.

In addition, contact the Cities of Phoenix, Glendale and Peoria's Water and Wastewater departments regarding abandonment and reconstruction of water and sewer lines. If any affected land is within unincorporated areas, please contact the MCESD Water & Wastewater Division at 506-6666.

I wish you great success with this project.

Sincerely,

A handwritten signature in cursive script, appearing to read "Al Brown".

Al Brown
Director

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U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
ARIZONA DIVISION
234 N. Central Avenue, Suite 330
Phoenix, AZ. 85004
August 15, 2001

IN REPLY REFER TO

HA-AZ

NH-060-B(GEN)

060 MA 160 H5137 01R

060 MA 157 H5532 01R

060 MA 158 H5537 01C

060 MA 149 H5538 01C

060 MA 156 H5600 01D

060 MA 153 H5601 01D

Continuing Section 106 Consultation
Grand Avenue Intersections

Mr. David Moody
City of Peoria
8401 W. Monroe St.
Peoria, AZ 85345

Dear Mr. Moody:

As you are aware, the Federal Highway Administration (FHWA) and the Arizona Department of Transportation (ADOT) have proposed to make operational and safety improvements to eight intersections along Grand Avenue (US 60) in the cities of Phoenix, Glendale, and Peoria, Maricopa County, Arizona. FHWA has conducted early and continuing consultation with agencies and Native American tribes regarding this project and a Programmatic Agreement (PA) was signed and filed with the Advisory Council on Historic Preservation in April 2001.

The purpose of this letter is to notify all parties of a change in the funding status of two of the project intersections. ADOT has committed to fully fund all work associated with the improvements of the intersections at 59th Ave./Glendale Ave./Grand Ave. and at 75th Ave./Olive Ave./Grand Ave. Because federal-aid funds from the FHWA are no longer needed for improvements to these two intersections, they are no longer included within the scope of work for this FHWA undertaking, which would now include only the following six intersections: 27th/Thomas/Grand, 43rd/Camelback/Grand, 51st/Bethany Home/Grand, 91st/101 Loop/Grand, 55th/Maryland/Grand, and 67th/North.../Grand.

Improvements at 59th/Glendale/Grand and at 75th/Olive/Grand would be state funded and would be considered a separate ADOT undertaking for which ADOT would consult separately regarding eligibility and effect. ADOT remains committed to identifying, documenting, and treating any and all historic properties that may be identified in these two project intersections in a manner that is consistent with the terms in the Programmatic Agreement applicable to the remaining six project intersections.

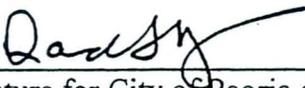
FHWA does not consider this change in project scope to require an amendment to the project PA since the proposed treatment of historic properties in the remaining six intersections would remain unchanged. By its continuing participation in the PA, ADOT would continue to satisfy its obligations under state law. FHWA considers this letter sufficient to adequately inform all parties of the change in scope and agency responsibility.

Please review the information in this letter. If you agree that this letter provides sufficient notice of the change in scope and that no amendment to the PA is necessary, please sign below to indicate your concurrence. If you have any questions or concerns, please call Michael Ohnersorgen (Historic Preservation Specialist, ADOT) at (602) 712-8148. Thank you for your continued cooperation with this agency.

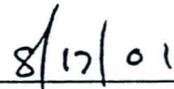
Sincerely,



 Robert E. Hollis
Division Administrator



Signature for City of Peoria concurrence



Date



U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
ARIZONA DIVISION
234 N. Central Avenue, Suite 330
Phoenix, AZ. 85004
August 15, 2001

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060 MA 149 H5538 01C
060 MA 156 H5600 01D
060 MA 153 H5601 01D

Continuing Section 106 Consultation
Grand Avenue Intersections

Mr. Bob Coons
City of Glendale
5850 W. Glendale Ave, Suite 315
Glendale, AZ 85301

Dear Mr. Coons:

As you are aware, the Federal Highway Administration (FHWA) and the Arizona Department of Transportation (ADOT) have proposed to make operational and safety improvements to eight intersections along Grand Avenue (US 60) in the cities of Phoenix, Glendale, and Peoria, Maricopa County, Arizona. FHWA has conducted early and continuing consultation with agencies and Native American tribes regarding this project and a Programmatic Agreement (PA) was signed and filed with the Advisory Council on Historic Preservation in April 2001.

The purpose of this letter is to notify all parties of a change in the funding status of two of the project intersections. ADOT has committed to fully fund all work associated with the improvements of the intersections at 59th Ave./Glendale Ave./Grand Ave. and at 75th Ave./Olive Ave./Grand Ave. Because federal-aid funds from the FHWA are no longer needed for improvements to these two intersections, they are no longer included within the scope of work for this FHWA undertaking, which would now include only the following six intersections: 27th/ Thomas/Grand, 43rd/Camelback/Grand, 51st/Bethany Home/Grand, 91st /101 Loop/Grand, 55th/Maryland/Grand, and 67th/Northern/Grand.

Improvements at 59th/Glendale/Grand and at 75th/Olive/Grand would be state funded and would be considered a separate ADOT undertaking for which ADOT would consult separately regarding eligibility and effect. ADOT remains committed to identifying, documenting and treating any and all historic properties that may be identified in these two project intersections in a manner that is consistent with the terms in the Programmatic Agreement applicable to the remaining six project intersections.

FHWA does not consider this change in project scope to require an amendment to the project PA since the proposed treatment of historic properties in the remaining six intersections would remain unchanged. By its continuing participation in the PA, ADOT would continue to satisfy its obligations under state law. FHWA considers this letter sufficient to adequately inform all parties of the change in scope and agency responsibility.

Please review the information in this letter. If you agree that this letter provides sufficient notice of the change in scope and that no amendment to the PA is necessary, please sign below to indicate your concurrence. If you have any questions or concerns, please call Michael Ohnersorgen (Historic Preservation Specialist, ADOT) at (602) 712-8148. Thank you for your continued cooperation with this agency.

Sincerely,



Robert E. Hollis
Division Administrator

 SPECIAL PROJECTS ADMINISTRATOR
Signature for City of Glendale concurrence

8/20/01
Date



City of Phoenix
STREET TRANSPORTATION DEPARTMENT

August 31, 2001

Mr. Robert E. Hollis
Division Administrator
U.S. Department of Transportation
Federal Highway Administration
Arizona Division
234 N. Central Avenue, Suite 330
Phoenix, AZ 85004

Dear Mr. Hollis:

RE: CHANGE IN FUNDING STATUS FOR 59th AVE./GLENDALE/GRAND &
75th AVE./OLIVE/GRAND PROJECTS

Please find enclosed the signed response regarding the change in funding status for the projects. This provides the concurrence from the City.

If you have any questions, please call me at 602-495-5817.

Sincerely,

A handwritten signature in black ink, appearing to read "Ray Dovalina".

Ray Dovalina, P.E.
Traffic Engineering Supervisor
Freeway Coordination Office

Enclosure

Rd/aff/fhwalet1.doc

c: Mr. Jacobson -
Mr. Bostwick

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U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
ARIZONA DIVISION
234 N. Central Avenue, Suite 330
Phoenix, AZ. 85004
August 15, 2001

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060 MA 149 H5538 01C

060 MA 156 H5600 01D

060 MA 153 H5601 01D

Continuing Section 106 Consultation
Grand Avenue Intersections

Mr. Thomas Godbee
City of Phoenix
200 W. Washington, 5th Floor
Phoenix, AZ 85003

Dear Mr. Godbee:

As you are aware, the Federal Highway Administration (FHWA) and the Arizona Department of Transportation (ADOT) have proposed to make operational and safety improvements to eight intersections along Grand Avenue (US 60) in the cities of Phoenix, Glendale, and Peoria, Maricopa County, Arizona. FHWA has conducted early and continuing consultation with agencies and Native American tribes regarding this project and a Programmatic Agreement (PA) was signed and filed with the Advisory Council on Historic Preservation in April 2001.

The purpose of this letter is to notify all parties of a change in the funding status of two of the project intersections. ADOT has committed to fully fund all work associated with the improvements of the intersections at 59th Ave./Glendale Ave./Grand Ave. and at 75th Ave./Olive Ave./Grand Ave. Because federal-aid funds from the FHWA are no longer needed for improvements to these two intersections, they are no longer included within the scope of work for this FHWA undertaking, which would now include only the following six intersections: 27th/Thomas/Grand, 43rd/Camelback/Grand, 51st/Bethany Home/Grand, 91st/101 Loop/Grand, 55th/Maryland/Grand, and 67th/Northern/Grand.

Improvements at 59th/Glendale/Grand and at 75thOlive/Grand would be state funded and would be considered a separate ADOT undertaking for which ADOT would consult separately regarding eligibility and effect. ADOT remains committed to identifying, documenting, and treating any and all historic properties that may be identified in these two project intersections in a manner that is consistent with the terms in the Programmatic Agreement applicable to the remaining six project intersections.

FHWA does not consider this change in project scope to require an amendment to the project PA since the proposed treatment of historic properties in the remaining six intersections would remain unchanged. By its continuing participation in the PA, ADOT would continue to satisfy its obligations under state law. FHWA considers this letter sufficient to adequately inform all parties of the change in scope and agency responsibility.

Please review the information in this letter. If you agree that this letter provides sufficient notice of the change in scope and that no amendment to the PA is necessary, please sign below to indicate your concurrence. If you have any questions or concerns, please call Michael Ohnersorgen (Historic Preservation Specialist, ADOT) at (602) 712-8148. Thank you for your continued cooperation with this agency.

Sincerely,



for Robert E. Hollis
Division Administrator



Signature for City of Phoenix concurrence

8/29/01
Date

cc: Mr. Bill Jacobson
City of Phoenix
Historic Preservation Office
200 W. Washington, 9th Floor
Phoenix, AZ 85003

Mr. Todd Bostwick
City of Phoenix Archaeologist
Pueblo Grande Museum
4619 E. Washington Street
Phoenix, AZ 85034

THE



OPI TRIBE

Wayne Taylor, Jr.
CHAIRMAN

Phillip R. Quochoytewa, Sr.
VICE-CHAIRMAN

August 27, 2001

Robert E. Hollis, Division Administrator
U. S. Department of Transportation
Federal Highway Administration
234 N. Central Ave., Suite 330
Phoenix, Arizona 85004

Re: Grand Avenue Intersections, Continuing Consultation

Dear Mr. Hollis,

Thank you for your letter dated August 15, 2001, regarding the Arizona Department of Transportation (ADOT) and Federal Highway Administration (FHWA) proposing to make operational and safety improvements to eight intersections along Grand Avenue (US 60) in Maricopa County. As you know the Hopi Tribe is a party to the Programmatic Agreement for this proposal, and therefore, we appreciate your continuing solicitation of our input and your efforts to address our concerns.

The Hopi Cultural Preservation Office acknowledges the change in the funding status for the 59th Ave./Glendale Ave./Grand Ave. and 75th Ave./Olive Ave./Grand Ave. proposed intersection improvements. We understand that these improvements would be considered a separate ADOT undertaking for which ADOT would consult separately regarding eligibility and effect, in a manner consistent with the terms in the Programmatic Agreement. We therefore concur that this change in project scope does not require an amendment to the Programmatic Agreement and that your letter is sufficient to adequately inform the Hopi Tribe of the change in the scope and agency responsibility.

Thank you again for consulting with the Hopi Tribe.

Respectfully,

Leigh J. Kuwanwisiwma, Director
Cultural Preservation Office

xc: Michael Ohnersorgen, Arizona Department of Transportation, Environmental Planning Group
205 South 17th Avenue, Room 213E, Mail Drop 619E, Phoenix, Arizona 85007-3212

P.O. BOX 123 — KYKOTSMOVI, AZ. — 86039 — (520) 734-3000

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U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
ARIZONA DIVISION
234 N. Central Avenue, Suite 330
Phoenix, AZ. 85004
August 15, 2001

IN REPLY REFER TO
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060 MA 149 H5538 01C
060 MA 156 H5600 01D
060 MA 153 H5601 01D
Continuing Section 106 Consultation
Grand Avenue Intersections

David Jacobs Ph.D.
Compliance Specialist
State Historic Preservation Office
Arizona State Parks
1300 West Washington Street
Phoenix, AZ 85007

Dear Dr. Jacobs:

As you are aware, the Federal Highway Administration (FHWA) and the Arizona Department of Transportation (ADOT) have proposed to make operational and safety improvements to eight intersections along Grand Avenue (US 60) in the cities of Phoenix, Glendale, and Peoria, Maricopa County, Arizona. FHWA has conducted early and continuing consultation with agencies and Native American tribes regarding this project and a Programmatic Agreement (PA) was signed and filed with the Advisory Council on Historic Preservation in April 2001.

The purpose of this letter is to notify all parties of a change in the funding status of two of the project intersections. ADOT has committed to fully fund all work associated with the improvements of the intersections at 59th Ave./Glendale Ave./Grand Ave. and at 75th Ave./Olive Ave./Grand Ave. Because federal-aid funds from the FHWA are no longer needed for improvements to these two intersections, they are no longer included within the scope of work for this FHWA undertaking, which would now include only the following six intersections: 27th/Thomas/Grand, 43rd/Camelback/Grand, 51st/Bethany Home/Grand, 91st/101 Loop/Grand, 55th/Maryland/Grand, and 67th/Northern/Grand.

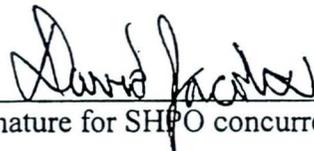
Improvements at 59th/Glendale/Grand and at 75th/Olive/Grand would be state funded and would be considered a separate ADOT undertaking for which ADOT would consult separately regarding eligibility and effect. ADOT remains committed to identifying, documenting and treating any and all historic properties that may be identified in these two project intersections in a manner that is consistent with the terms in the Programmatic Agreement applicable to the remaining six project intersections.

FHWA does not consider this change in project scope to require an amendment to the project PA since the proposed treatment of historic properties in the remaining six intersections would remain unchanged. By its continuing participation in the PA, ADOT would continue to satisfy its obligations under state law. FHWA considers this letter sufficient to adequately inform all parties of the change in scope and agency responsibility.

Please review the information in this letter. If you agree that this letter provides sufficient notice of the change in scope and that no amendment to the PA is necessary, please sign below to indicate your concurrence. If you have any questions or concerns, please call Michael Ohnersorgen (Historic Preservation Specialist, ADOT) at (602) 712-8148. Thank you for your continued cooperation with this agency.

Sincerely,


Robert E. Hollis
Division Administrator


Signature for SHPO concurrence

24 AUG 01
Date

cc: Michael Ohnersorgen, ADOT

PROGRAMMATIC AGREEMENT

AMONG

FEDERAL HIGHWAY ADMINISTRATION
ARIZONA DEPARTMENT OF TRANSPORTATION
ARIZONA STATE HISTORIC PRESERVATION OFFICE
CITY OF PHOENIX
CITY OF GLENDALE
CITY OF PEORIA
HOPI TRIBE
SALT RIVER PIMA-MARICOPA INDIAN COMMUNITY
FORT MCDOWELL MOHAVE-APACHE INDIAN COMMUNITY
YAVAPAI-PRESCOTT INDIAN TRIBE
AND
YAVAPAI-APACHE INDIAN NATION

REGARDING THE HISTORIC PROPERTIES ALONG

GRAND AVENUE (U.S. 60) AT EIGHT INTERSECTION LOCATIONS (27TH/THOMAS,
43RD/CAMELBACK, 51ST/BETHANY HOME, 91ST/101 LOOP, 55TH/GRAND,
59TH/GLENDALE, 67TH/GRAND, AND 75TH/GRAND)

MARICOPA COUNTY, ARIZONA

WHEREAS, the Federal Highway Administration (FHWA) has determined that improvements to eight intersections along Grand Avenue (27th/Thomas, 43rd/Camelback, 51st/Bethany Home, 91st/101 Loop, 55th/Grand, 59th/Glendale, 67th/Grand, and 75th/Grand), Maricopa County, Arizona, hereafter referred to as the Project, may have an adverse effect upon historic properties that are eligible for inclusion on the National Register of Historic Places (NHRP); and

WHEREAS, the area of potential effect (APE) for this project would consist of eight irregularly-shaped parcels, each encompassing one of the Project intersections illustrated on Figure 1 of this report; and

WHEREAS, FHWA, as the lead agency responsible for compliance under Section 106 of the National Historic Preservation Act (16 U.S.C. §470f) for the Project, by its involvement for providing Federal-aid funding, as authorized by 23 CFR 771, and the Arizona Department of Transportation (ADOT), as agent for FHWA, have consulted with the State Historic Preservation Officer (SHPO) and the Advisory Council on Historic Preservation (ACHP) pursuant to 36 CFR Part 800, regulations implementing Section 106 of the National Historic Preservation Act; and

WHEREAS, by their signature all parties agree that the existing ADOT standard specification will address the presence of cultural materials in potential material sources; and

WHEREAS, project construction will occur on private land to be purchased for the Project that is incorporated by the Cities of Phoenix, Glendale and Peoria, who have been invited to or have participated in consultation and been invited to concur in this agreement; and

WHEREAS, the Native American Tribes that may attach religious or cultural importance to affected properties have been invited to or have participated in consultation and have been invited to concur in this agreement;

NOW, THEREFORE, all parties agree that the Project shall be administered in accordance with the following stipulations in order to satisfy Section 106 of the National Historic Preservation Act and applicable state laws.

STIPULATIONS

FHWA shall ensure that the following measures will be carried out:

I. INVENTORY, EVALUATION, AND EFFECT DETERMINATION

- A. Inventory. FHWA, represented by ADOT, will complete a historic properties inventory of the eight intersection locations defined as the APE that is conducted in a manner consistent with the Secretary of the Interior's Standards and Guidelines (48 FR 44716-44742) for Identification of Historic Properties. FHWA, represented by ADOT, will further ensure that any areas not previously surveyed and any staging or use areas related to this undertaking shall be inventoried in a manner consistent with the Project inventory. Report(s) of the results of any and all inventories shall be submitted to all parties for a concurrent 30-calendar-day review and comment.
1. FHWA, represented by ADOT, will ensure that SHPO Historic Property Inventory Forms are completed for each historic building or structure within the APE. Completed inventory forms will be included in an appendix in the inventory report(s).
 2. FHWA represented by ADOT, has consulted with and will continue to consult with the Hopi Tribe, the Salt River Pima-Maricopa Indian Community, the Fort McDowell Mohave-Apache Indian Community, the Yavapai-Presecott Indian Nation, and the Yavapai-Apache Indian Nation to help identify potential properties of religious and cultural significance within the APE and within any additions to the APE by staging or use areas.

B. Evaluation. FHWA, represented by ADOT, in consultation with SHPO, the Cities of Phoenix, Glendale and Peoria, and Native American Tribes shall ensure that determinations of eligibility are made in accordance with 36 CFR 800.4(c) for all historic properties within the Project right-of-way, including any additional staging or use areas. Should any party to this agreement disagree with FHWA or ADOT regarding eligibility, the SHPO shall be consulted and resolution sought within 20 calendar days. If the FHWA and SHPO disagree on eligibility, determinations will be forwarded to the Keeper of the National Register for resolution.

1. FHWA, represented by ADOT, will ensure that archaeological site areas needing testing, according to §800.4(b)2, will be investigated in a manner to evaluate them for eligibility for the National Register of Historic Places. An Archaeological Testing Plan will be developed for such areas for submittal to SHPO, the Cities of Phoenix, Glendale and Peoria, and Native American Tribes for review and comment prior to implementation of the testing plan. The review and comment of the Archaeological Testing Plan will be consistent with the time frames specified in Stipulation III (A) and (B) below. The results of the testing will be detailed in an Archaeological Testing Report that will be reviewed and evaluated as per Stipulation III (A) and (B) below.

C. Effect Determination. FHWA, represented by ADOT, in consultation with SHPO shall apply the criteria of Adverse Effect in 36 CFR 800.5 to all historic properties within the Project APE, including any area proposed for geotechnical testing or additional new staging or use areas.

D. FHWA, represented by ADOT, has sought public comment on the effects of the undertaking on historic properties in coordination with its procedures for implementing the National Environmental Policy Act (NEPA). FHWA shall notify and consult with interested parties, as appropriate, regarding findings of eligibility, effect, and mitigation options.

E. If FHWA and the SHPO agree (per Stipulations IV A & B) that a portion of the undertaking shall have no effect on listed or eligible properties, FHWA may provide authorization to proceed with construction in that area, subject to obtaining any necessary permits and the conditions of any Monitoring Plan or Discovery Plan developed for the Project, provided that construction does not preclude options for avoidance of historic properties in other segments.

II. EFFECTS ON HISTORIC PROPERTIES

To the extent feasible, FHWA will avoid adverse effects to historic properties that are identified in the APE through project redesign or implementation of protective measures. Where avoidance is not feasible, FHWA, in cooperation with ADOT, and in consultation with SHPO and other consulting parties, shall ensure that the following measures are carried out:

A. Historic Buildings or Structures. A Treatment Plan for Historic Building and Structures (TPHBS) will be developed for the mitigation of effects on historic buildings and structures that will result from the Project and any related uses and activities. FHWA, in cooperation with consulting parties, will ensure that all options are considered for rehabilitation or alternative uses of historic buildings and structures within the project area. Where such options are not feasible, properties may be demolished. Further, FHWA, in cooperation with consulting parties, will ensure the development of location and property specific plans for each individual phase or segment of the Project that will be considered as Supplements to the TPHBS.

1. The TPHBS shall be consistent with Secretary of the Interior's Standards for Rehabilitation and Illustrated Guidelines for Rehabilitating Historic Buildings or the SHPO's Documentation Standards for Historic Properties, as appropriate, and shall minimally specify the following:

- a. The TPHBS will identify the historic buildings and structures to be affected by the Project as a whole and the nature of those effects.
- b. The TPHBS will contain an appropriate explanation of the relevance and importance of each property that reflects the concept of historic contexts as defined in National Register Bulletin 16 and shall take into consideration any such historic contexts established for the Project area.
- c. Where rehabilitation or alternative uses are feasible for a specific property, the FHWA, in cooperation with consulting parties, will ensure that the approaches recommended in the Secretary of the Interior's Standards for Rehabilitation and Illustrated Guidelines for Rehabilitating Historic Buildings are taken into account during plans for rehabilitation or use of the property.
- d. If rehabilitation or alternative use are not feasible options for a specific property, and demolition must occur, the property will be documented in accord with the SHPO's Documentation Standards for Historic Properties. Such documentation will include an appropriate narrative, relevant maps, reproductions of original plans or architectural drawings, and appropriate black and white photographs and color slides, as indicated in the SHPO Standards.
- e. All documentation relevant to TPHBS will be submitted to all consulting parties for review and comment and will be compiled into a final project report.

B. Archaeological Sites. A Treatment Plan for Archaeological Sites (TPAS) will be developed for the mitigation of anticipated effects on archaeological sites that will result from the Project and any related uses and activities. Further, FHWA, in cooperation with consulting parties, will ensure the development of location and property specific Data Recovery Plans for each individual phase or segment of the Project that will be considered as Supplements to the TPAS.

1. The TPAS shall be consistent with the Secretary of Interior's Standards and Guidelines (48 FR 44716-44742) and the Council's handbook Treatment of Archaeological Properties and shall minimally specify the following:

- a. The TPAS will identify the archaeological sites to be affected by the Project as a whole and the nature of those effects. Identification and description of the traditional and/or religious significance of traditional cultural properties identified with Native American Tribes may be done only with the permission of the appropriate tribe(s). Addressing and defining traditional cultural properties shall be consistent with the guidance provided in National Register Bulletin 38.
- b. The Research design will contain research questions and goals that are applicable to the Project area as a whole that will be addressed through data recovery, along with an explanation of their relevance and importance. These research questions and goals shall reflect the concept of historic contexts as defined in National Register Bulletin 16 and shall take into consideration any such historic contexts established for the Project area.
- c. Field and analysis methods and strategies applicable to the Project area that will be developed along with an explanation of their relevance to the research questions.
- d. Proposed procedures for dealing with discovery situations will be specified.
- e. Methods to be used in data management and dissemination of data will be specified.
- f. Methods and procedures for the discovery of human remains will be specified. In the event human remains are encountered on private land, FHWA and ADOT will coordinate with the Arizona State Museum (ASM) under the provisions of the ARS 41-844, and ARS 41-865, and a burial agreement will be developed. Appropriate procedures for the recovery, analysis, treatment, and disposition of human remains, associated grave goods, and objects of cultural patrimony would be developed in accordance with the provisions of applicable state laws and all promulgated regulations and would reflect any concerns and/or conditions identified as a result of consultations between FHWA, ADOT, ASM, and any affected Native American tribes.
- g. A Monitoring Plan will be included to ensure that historic properties are not affected by construction-related activities. This Monitoring Plan shall specify the location of all identified properties and the means by which they will be marked and avoided if construction or other ground disturbing activities are allowed in nearby portions of the right-of-way.

- C. Once the Treatment Plan for Archaeological Sites is determined adequate by all parties to the Agreement, FHWA shall issue authorization to proceed with the development of the Data Recovery Plan(s) which shall be reviewed in a manner consistent with Stipulations III (A) and (B) above.
- D. Once the Data Recovery Plan(s) is determined adequate by all parties to the Agreement (SHPO approval), FHWA shall issue authorization to proceed with the implementation of the Plan, subject to obtaining all necessary permits.
- E. Final drafts of the Treatment Plans and all subsequent and supplemental Data Recovery Plan(s) will be provided to the parties to the Agreement.
- F. Any party to the Agreement may choose not to review each plan.

IV. CONSTRUCTION

- A. FHWA, represented by ADOT, in consultation with the SHPO may issue authorization to proceed with construction or geotechnical testing in those portions of the Project area that lack cultural resources or that contain historic properties once the agreed-upon fieldwork/treatment specified in the Treatment Plans and Data Recovery Plan(s) has been completed. Authorization is subject to SHPO acceptance of the adequacy of the work performed under those Plans and to obtaining all necessary permits, and provided work does not preclude treatment options in other sections. For archaeological properties, acceptance will be based on field inspection and review of a preliminary report documenting the accomplishment of the Treatment Plan for Archaeological Sites and Data Recovery Plan(s) by FHWA, consulting agencies and SHPO. Any party to the Agreement may choose not to review each report.
- B. All parties will have 30 days from receipt of the preliminary archaeological report for review and comment. If no comments are received within this period, FHWA may assume that the reviewer accepts the adequacy of the work and agrees with an authorization to proceed.
- C. FHWA shall ensure that if an archaeological property is discovered after construction begins, the approved Discovery Plan, as specified in Stipulation II of this agreement, shall be implemented.

V. CHANGES IN CONSTRUCTION CORRIDORS AND ANCILLARY AREAS

Any changes or additions in construction corridors, staging, or use areas will be handled in a manner consistent with Stipulations I-IV.

VI. CURATION

FHWA, represented by ADOT, shall ensure that all records and materials resulting from identification and data recovery efforts are curated in accordance with standards and guidelines generated by the Arizona State Museum for private land and 36 CFR Part 79. Consultation with affected Native American tribes will be done according to ARS 41-844 and ARS 41-865, as applicable. All ARS 41-844 and 41-865 remains and cultural items will be treated with dignity and respect, and consideration for the specific cultural religious traditions applicable until their analysis is complete and their disposition has occurred.

VII. DISPUTE RESOLUTION

Should any party to this Agreement object within 30 calendar days to any action(s) or plans provided for review pursuant to this Agreement, FHWA shall consult with the objecting party to resolve the objection. The objection must be specifically identified, and the reasons for objection documented. If FHWA determines that the objection cannot be resolved, FHWA shall forward all documentation relevant to the dispute to the Council and notify SHPO as to the nature of the dispute. Within 30 calendar days of receipt of all pertinent documentation, the Council shall provide FHWA with recommendations which FHWA shall take into consideration in reaching a final decision regarding the dispute. Any recommendation or comment provided by the Council will be understood to pertain only to the subject of the dispute; FHWA responsibility to carry out all actions under this Agreement that are not the subject of the dispute will remain unchanged.

VIII. PUBLIC OBJECTION

At any time during the implementation of the measures stipulated in this Agreement, should an objection be raised by a member of the public, FHWA shall take the objection into account, notify SHPO of the objection, and consult as needed with the objecting party.

IX. AMENDMENT

FHWA, SHPO, or the Council may request that this Agreement be amended, whereupon the parties will consult to consider such amendment in accordance with 36 CFR 800.14.

X. TERMINATION

This agreement shall be null and void if its terms are not carried out within twenty (20) years from the date of its execution, unless FHWA, SHPO, and the Council agree in writing to an extension for carrying out its terms. FHWA, SHPO, or the Council may terminate this agreement by providing written notice within 30 calendar days to the other parties, provided that the parties will consult during that period to seek agreement on amendments or other actions that would avoid termination. In the event of termination or expiration, FHWA shall either execute a new agreement under 800.6(c)(1) or request the comments of the Council under 800.7(a).

XI. FAILURE TO CARRY OUT THE TERMS OF THE AGREEMENT

In the event that the terms of this Agreement are not accomplished, FHWA shall comply with 36 CFR 800.3 through 800.5 with regard to individual actions covered by this Agreement.

Execution and implementation of this Agreement is evidence that FHWA has afforded the Council an opportunity to comment on the Grand Avenue Project and its effect upon historic properties. In so doing, FHWA has satisfied the Section 106 responsibilities for all individual actions of this undertaking. Participation in this agreement also satisfies the State Historic Preservation Act responsibilities of the ADOT for this undertaking pursuant to ARS § 41-864.

CONSULTING PARTIES

FEDERAL HIGHWAY ADMINISTRATION

By David S. Nelson

Date 1-17-01

Title ASSIST DIVISION ADMIN.

ARIZONA STATE HISTORIC PRESERVATION OFFICER

By James W. Sawren

Date 3/1/01

Title AZSHPO

CONCURRING PARTIES

ARIZONA DEPARTMENT OF TRANSPORTATION

By  Date 1-17-01

Title Environmental Group Manager

CITY OF PHOENIX

By _____ Date _____

Title _____

CITY OF GLENDALE

By _____ Date _____

Title _____

CITY OF PEORIA

By _____ Date _____

Title _____

THE HOPI TRIBE

By: _____ Date: _____

Title: _____

THE SALT RIVER PIMA-MARICOPA INDIAN COMMUNITY

By: _____ Date: _____

Title: _____

CONCURRING PARTIES

ARIZONA DEPARTMENT OF TRANSPORTATION

By [Signature] Date 1-17-01

Title Environmental Group Manager

CITY OF PHOENIX

By _____ Date _____

Title _____

CITY OF GLENDALE

By _____ Date _____

Title _____

CITY OF PEORIA

By David Moody, P.E. Date 2/2/01

Title PWD

THE HOPI TRIBE

By: _____ Date: _____

Title: _____

THE SALT RIVER PIMA-MARICOPA INDIAN COMMUNITY

By: _____ Date: _____

Title: _____

CONCURRING PARTIES

ARIZONA DEPARTMENT OF TRANSPORTATION

By [Signature] Date 1-17-01

Title Environmental Group Manager

CITY OF PHOENIX

By _____ Date _____

Title _____

CITY OF GLENDALE

By _____ Date _____

Title _____

CITY OF PEORIA

By _____ Date _____

Title _____

THE HOPI TRIBE

By: Wayne Taylor Date: 2/06/01

Title: CHAIRMAN

THE SALT RIVER PIMA-MARICOPA INDIAN COMMUNITY

By: _____ Date: _____

Title: _____

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MAR 2002



U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
ARIZONA DIVISION
234 N. Central Avenue, Suite 330
Phoenix, AZ. 85004
March 19, 2002

IN REPLY REFER TO
HA-AZ
NH-060-B(AFU)
STP-060-B(AHR)
060 MA 156 H5600 01D
060 MA 153 H5601 01D
US-60; Grand Avenue Intersections
Section 106 Consultation

Mr. David Moody
City of Peoria
8401 W. Monroe St.
Peoria, AZ 85345

Dear Mr. Moody:

The Federal Highway Administration (FHWA) and the Arizona Department of Transportation (ADOT) are planning to make operational and safety improvements to eight intersections along Grand Avenue (US 60) in the cities of Phoenix, Glendale, and Peoria. FHWA has consulted with agencies and Indian tribes regarding this project and a Programmatic Agreement (PA) was signed and filed with the Advisory Council on Historic Preservation (ACHP) in April 2001. FHWA previously submitted historic property inventory survey reports and consulted with parties to the PA regarding project effects within four project intersections (27th Thomas, 43rd /Camelback, 51st /Bethany Home, and 91st /101 Loop). FHWA last consulted with you regarding this project by letter dated August 15, 2001 to inform you of a change in project funding, where funding for the improvements to two of the remaining four intersections (59th /Glendale and 75th /Olive) would be changed from federal to state. Improvements at the remaining two intersections (55th /Maryland and 67th /Northern) would continue to utilize Federal-aid funding.

Historic property inventory surveys have been completed for the remaining four intersections. The results of these surveys are reported in the following two reports: "*A Class III Archaeological Survey of Four Intersections Along Grand Avenue (US 60) (55th Avenue at Maryland Avenue, 59th Avenue at Glendale Avenue, 67th Avenue at Northern Avenue, and 75th Avenue at Olive Avenue), Maricopa County, Arizona*" (Grafil 2001 [Logan Simpson Design, Inc.]), and "*Grand Avenue Intersections: Phase II Historic Property Documentation and Evaluation*" (Doyel and Grandrud 2001 [Gerald A. Doyle and Associates, P.C.]). Copies of both reports recently were submitted to you by ADOT as part of their consultation under the State Historic Preservation Act for the state-funded projects at 59th /Glendale and 75th /Olive. FHWA presently is consulting with you regarding the Federal-aid projects at 55th /Maryland and 67th /Northern. A summary of the results of the historic property inventories at these two intersections is provided below, along with FHWA's recommendations of eligibility and project effect.

A-13

your concurrence. If you have any questions or comments, please call Michael Ohnersorgen (Historic Preservation Specialist, ADOT) at 602-712-8148. Thank you for your continued cooperation with this agency.

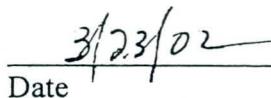
Sincerely,



for Robert E. Hollis
Division Administrator



Signature for City of Peoria Concurrence



Date



S.H.P.O.- 2000 - 1978 (10291)

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
ARIZONA DIVISION
234 N. Central Avenue, Suite 330
Phoenix, AZ. 85004
March 19, 2002



IN REPLY REFER TO
HA-AZ
NH-060-B(AFU)
STP-060-B(AHR)
060 MA 156 H5600 01D
060 MA 153 H5601 01D
US-60; Grand Avenue Intersections
Section 106 Consultation

David Jacobs, Ph.D.
State Historic Preservation Office
Arizona State Parks
1300 West Washington Street
Phoenix, AZ 85007

Dear Dr. Jacobs:

The Federal Highway Administration (FHWA) and the Arizona Department of Transportation (ADOT) are planning to make operational and safety improvements to eight intersections along Grand Avenue (US 60) in the cities of Phoenix, Glendale, and Peoria. FHWA has consulted with agencies and Indian tribes regarding this project and a Programmatic Agreement (PA) was signed and filed with the Advisory Council on Historic Preservation (ACHP) in April 2001. FHWA previously submitted historic property inventory survey reports and consulted with parties to the PA regarding project effects within four project intersections (27th Thomas, 43rd /Camelback, 51st /Bethany Home, and 91st /101 Loop). FHWA last consulted with you regarding this project by letter dated August 15, 2001 to inform you of a change in project funding, where funding for the improvements to two of the remaining four intersections (59th /Glendale and 75th /Olive) would be changed from federal to state. Improvements at the remaining two intersections (55th /Maryland and 67th /Northern) would continue to utilize Federal-aid funding.

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55th Ave./Maryland Ave. (060 MA 156 H5600 01D)

The archaeological survey by Logan Simpson Design (LSD) identified no historic properties within this project area. LSD did identify four isolated occurrences (IF1 – IF4). IF1 consists of a series of unlined canal culverts and headwalls that form part of the system of laterals to the Salt River Project (SRP) system, under the jurisdiction of the US Bureau of Reclamation. These laterals are not associated with historic farmsteads or districts, do not retain integrity of feeling or setting, and are not of unique design or construction. According to the February 2001 Programmatic Agreement among the BOR, the ACHP, the SHPO, and SRP, these canals do not meet specifications for lateral canals worthy of preservation. The BOR does not consider these lateral canals to be eligible individually or as contributing elements to the SRP system (Dave Gifford, BOR, personal communication, 2001). IF2, IF3, and IF4 are cement structure foundations that may be historic or modern in age. None of these isolated features can be considered a register-eligible historic property.

LSD's background research for this survey also identified portions of two historic alignments that extend through all project intersections, Grand Avenue and the Burlington Northern Santa Fe Railroad. Both of these properties within the Grand Avenue Intersections project area have been previously determined ineligible for the NRHP.

The historic building survey by Gerald A. Doyel and Associates (Doyel) identified six structures in the 55th/Maryland project area that form part of the Zenia Tract, a small historic subdivision. The six structures include two commercial buildings (5710 W. Maryland Ave. [West Valley Automotive] and 6534 N. 57th Ave.), neither of which meets the age criterion to be considered historic. Doyel also identified four historic residential structures at 6518 N. 57th Ave., 5526 N. 57th Ave., 6538 N. 57th Ave., and 6542 N. 57th Ave. These houses are in poor-to-moderate condition and lack historical and architectural significance. The Zenia Tract in general is in poor condition and lacks key characteristics of a historic residential district. The Zenia Tract, as well as the six specific buildings identified above, are recommended by FHWA to be ineligible for the National Register of Historic Places (NRHP).

67th Ave./Northern Ave. (060 MA 153 H5601 01D)

The LSD survey identified one archaeological site, AZ T:8:147 (ASM), which consists of the remains of a possible habitation or commercial structure. The site is represented by a concrete foundation and associated scatter of artifacts dating from the 1940s to the 1970s. The site is of questionable historic age, has no significant historic associations, lacks integrity, and has little or no potential to furnish important information. It is recommended by FHWA to be ineligible for the NRHP.

Doyel's historic building survey identified one historic commercial building in this project area, Triple R Sales at 7831 N. 67th Ave. Originally a cotton gin warehouse, the integrity of the building has been diminished by the removal of associated buildings and equipment, and its once rural setting has been urbanized. It is recommended by FHWA to be ineligible for the NRHP.

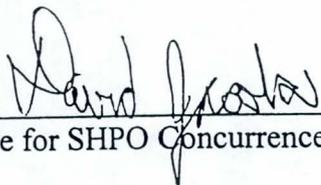
Please review the information in this letter and the previously submitted survey reports. Because no register-eligible historic properties were identified within the 55th/Maryland and 67th/Northern project areas, FHWA recommends a finding of "no historic properties affected" for these projects. If you agree that the survey reports are adequate, agree with FHWA's recommendations of eligibility, and agree that a finding of "no historic properties affected" is appropriate for the projects at 55th/Maryland and at 67th/Northern, please sign below to indicate

your concurrence. If you have any questions or comments, please call Michael Ohnersorgen (Historic Preservation Specialist, ADOT) at 602-712-8148. Thank you for your continued cooperation with this agency.

Sincerely,



for Robert E. Hollis
Division Administrator



Signature for SHPO Concurrence

4 APRIL 02

Date

CC: Dr. Michael Ohnersorgen, ADOT

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MEMORANDUM

City of Glendale
Engineering Department

Date: August 19, 2002

To: Trent Kelso, P.E., Project Manager
Valley Project Management
Arizona Department of Transportation
205 S. 17th Avenue, Room 295 Mail Drop 614E
Phoenix, AZ 85007

From: Bob Coons, Special Projects Administrator

Subject: CITY RECOMMENDED NOISE WALLS:
67TH AVENUE OVERPASS AT GRAND AVENUE/NORTHERN AVENUE
(TRAC NO. 060 MA 153 H5601 01C, RAM 060-B-508)

Trent,

In response to your request, the City has evaluated the preliminary information you provided orally from the preliminary draft EA on the above project and its recommendations for the consideration of noise walls to be constructed in conjunction with the project to mitigate noise/sound impacts to certain adjoining properties. This memorandum will identify the City of Glendale's preliminary recommendations for the design and construction of the noise wall being considered for this project. At such time as may be needed in the future, the City will provide a more formal letter containing the City's final recommendations and position in regards to the noise walls for this ADOT project.

It is our understanding that the draft EA for this project recommends that ADOT consider the construction of an 8' high wall along the east side of 67th Avenue adjacent to the south portion of the Orange Grove Mobile Home Park (from south corner of the MHP to the MHP entrance) to mitigate noise impacts from the project to this adjoining residential property. Due to limited existing street right-of-way and existing overhead and underground utilities in this area, the preliminary recommendation from the design engineer is that the 8' noise wall would likely be located approximately 2' - 3' back of the existing street curb along 67th Avenue.

After a field review of the project area, a review of the 30% plans for the project, discussions with the City Engineer, and very preliminary discussions with the owner of the mobile home park, the City requests that the following alternative recommendations be considered for the design and location of the noise walls in this project:

1. The City concurs with the recommendation and need to provide an 8' noise wall along 67th Avenue adjacent to the Orange Grove Mobile Home Park. Today, the mobile home park is buffered from 67th Avenue traffic and associated noise only by a very low (3' +/-) wall. However, the City does not concur with the draft proposal for the location of this wall approximately 2' - 3' from the street curb, as that would preclude the installation of a much needed sidewalk along 67th Avenue at this location.
2. The City recommends that an 8' high decorative noise wall be constructed in the project along the same alignment as the existing 3' +/- high perimeter wall, or within a small amount of additional right-of-way, easement or TCE obtained by the City from the adjacent MHP owner. Based upon a preliminary discussion with our City Councilmember for this area, the owner of the MHP has indicated a willingness to provide the additional land area needed (2' - 4') within which an appropriate noise wall could be constructed to

May 13, 2002

City Recommended Noise Walls: 67th Avenue Overpass

Page 2 of 2

provide sound mitigation and buffering from 67th Avenue traffic. City staff will be meeting with the mobile home park owner in the very near future to further discuss the potential for the noise wall and to preliminarily evaluate the amount of additional right-of-way, easement, or TCE needed from the owner. After this initial meeting, subsequent meetings with ADOT and Aztec Engineering would then be appropriate to discuss and evaluate the design and technical elements for the wall and the process to include the 8' noise wall within the project design plans.

3. In concert with the inclusion of the 8' high decorative wall in the project plans along the south portion of the Orange Grove MHP property, the City would also like to explore with ADOT the possibilities of including within the project the extension of this 8' high wall north from the MHP entrance to the north corner of the MHP. This additional northern portion of the noise wall would be the same design and alignment as the southern portion, and would be a City enhancement to the project with City funding.
4. In addition to the inclusion of the additional north wall section in the project as noted in the previous paragraph, the City also requests that the design and installation of a 5' minimum sidewalk along 67th Avenue adjacent to the mobile home park be included in the project as an additional City enhancement to the project.

cc: Scott McKenzie, AZTEC Engineering

B. Maricopa County Dust Abatement Rule No. 310

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Revised 07/13/88
Revised 07/06/93
Revised 09/20/94
Revised 06/16/99
Revised 02/16/00

MARICOPA COUNTY
AIR POLLUTION CONTROL REGULATIONS
REGULATION III - CONTROL OF AIR CONTAMINANTS

RULE 310
FUGITIVE DUST SOURCES

SECTION 100 - GENERAL

- 101 **PURPOSE:** To limit particulate matter emissions into the ambient air from any property, operation or activity that may serve as a fugitive dust source. The effect of this rule shall be to minimize the amount of PM₁₀ entrained into the ambient air as a result of the impact of human activities by requiring measures to prevent, reduce, or mitigate particulate matter emissions.
- 102 **APPLICABILITY:** The provisions of this rule shall apply to all dust generating operations except: normal farm cultural practices under Arizona Revised Statutes (ARS) §49-457 and ARS §49-504.4 and open areas, vacant lots, unpaved parking lots, and unpaved roadways which are not located at sources that require any permit under these rules.

SECTION 200 - DEFINITIONS: For the purpose of this rule, the following definitions shall apply.
See Rule 100 (General Provisions And Definitions) of these rules for definitions of terms that are used but not specifically defined in this rule.

- 201 **BULK MATERIAL** - Any material, including but not limited to, earth, rock, silt, sediment, sand, gravel, soil, fill, aggregate less than 2 inches in length or diameter (i.e., aggregate base course (ABC)), dirt, mud, demolition debris, cotton, trash, cinders, pumice, saw dust, feeds, grains, fertilizers, and dry concrete, which are capable of producing fugitive dust at an industrial, institutional, commercial, governmental, construction, and/or demolition site.
- 202 **BULK MATERIAL HANDLING, STORAGE, AND/OR TRANSPORTING OPERATION** - The use of equipment, haul trucks, and/or motor vehicles, such as but not limited to, the loading, unloading, conveying, transporting, piling, stacking, screening, grading, or moving of bulk materials, which are capable of producing fugitive dust at an industrial, institutional, commercial, governmental, construction, and/or demolition site.
- 203 **CARRY-OUT/TRACKOUT** - Any and all bulk materials that adhere to and agglomerate on the exterior surfaces of motor vehicles, haul trucks, and/or equipment (including tires) and that have fallen onto a paved public roadway.

- 204 CONTROL MEASURE** - A technique, practice, or procedure used to prevent or minimize the generation, emission, entrainment, suspension, and/or airborne transport of fugitive dust. Control measures include but are not limited to:
- 204.1 Curbing.
 - 204.2 Paving.
 - 204.3 Pre-wetting.
 - 204.4 Applying dust suppressants.
 - 204.5 Physically stabilizing with vegetation, gravel, recrushed/recycled asphalt or other forms of physical stabilization.
 - 204.6 Limiting, restricting, phasing and/or rerouting motor vehicle access.
 - 204.7 Reducing vehicle speeds and/or number of vehicle trips.
 - 204.8 Limiting use of off-road vehicles on open areas and vacant lots.
 - 204.9 Utilizing work practices and/or structural provisions to prevent wind and water erosion onto paved public roadways.
 - 204.10 Appropriately using dust control implements.
 - 204.11 Installing one or more grizzlies, gravel pads, and/or wash down pads adjacent to the entrance of a paved public roadway to control carry-out and trackout.
 - 204.12 Keeping open-bodied haul trucks in good repair, so that spillage may not occur from beds, sidewalls, and tailgates.
 - 204.13 Covering the cargo beds of haul trucks to minimize wind-blown dust emissions and spillage.
- 205 DISTURBED SURFACE AREA** - A portion of the earth's surface (or material placed thereupon) which has been physically moved, uncovered, destabilized, or otherwise modified from its undisturbed native condition, thereby increasing the potential for the emission of fugitive dust. For the purpose of this rule, an area is considered to be a disturbed surface area until the activity that caused the disturbance has been completed and the disturbed surface area meets the standards described in Section 301 and Section 302 of this rule.
- 206 DUST CONTROL IMPLEMENT** - A tool, machine, equipment, accessory, structure, enclosure, cover, material or supply, including an adequate readily available supply of water and its associated distribution/delivery system, used to control fugitive dust emissions.

- 207 **DUST CONTROL PLAN** - A written plan describing all control measures.
- 208 **DUST GENERATING OPERATION** - Any activity capable of generating fugitive dust, including but not limited to, land clearing, earthmoving, weed abatement by discing or blading, excavating, construction, demolition, material handling, storage and/or transporting operations, vehicle use and movement, the operation of any outdoor equipment, or unpaved parking lots. For the purpose of this rule, landscape maintenance and/or playing on a ballfield shall not be considered a dust generating operation. However, landscape maintenance shall not include grading, trenching, nor any other mechanized surface disturbing activities performed to establish initial landscapes or to redesign existing landscapes.
- 209 **DUST SUPPRESSANT** - Water, hygroscopic material, solution of water and chemical surfactant, foam, non-toxic chemical stabilizer or any other dust palliative, which is not prohibited for ground surface application by the U.S. Environmental Protection Agency (EPA) or the Arizona Department of Environmental Quality (ADEQ) or any applicable law, rule, or regulation, as a treatment material for reducing fugitive dust emissions.
- 210 **EARTHMOVING OPERATION** - The use of any equipment for an activity which may generate fugitive dust, such as but not limited to, cutting and filling, grading, leveling, excavating, trenching, loading or unloading of bulk materials, demolishing, blasting, drilling, adding to or removing bulk materials from open storage piles, back filling, soil mulching, landfill operations, or weed abatement by discing or blading.
- 211 **FREEBOARD** - The vertical distance between the top edge of a cargo container area and the highest point at which the bulk material contacts the sides, front, and back of a cargo container area.
- 212 **FUGITIVE DUST** - The particulate matter, which is not collected by a capture system, which is entrained in the ambient air, and which is caused from human and/or natural activities, such as but not limited to, movement of soil, vehicles, equipment, blasting, and wind. For the purpose of this rule, fugitive dust does not include particulate matter emitted directly from the exhaust of motor vehicles and other internal combustion engines, from portable brazing, soldering, or welding equipment, and from piledrivers, and does not include emissions from process and combustion sources that are subject to other rules in Regulation III (Control Of Air Contaminants) of these rules.
- 213 **GRAVEL PAD** - A layer of washed gravel, rock, or crushed rock which is at least one inch or larger in diameter, maintained at the point of intersection of a paved public roadway and a work site entrance to dislodge mud, dirt, and/or debris from the tires of motor vehicles and/or haul trucks, prior to leaving the work site.
- 214 **GRIZZLY** - A device (i.e., rails, pipes, or grates) used to dislodge mud, dirt, and/or debris from the tires and undercarriage of motor vehicles and/or haul trucks prior to leaving the work site.

- 215 HAUL TRUCK** - Any fully or partially open-bodied self-propelled vehicle including any non-motorized attachments, such as but not limited to, trailers or other conveyances which are connected to or propelled by the actual motorized portion of the vehicle used for transporting bulk materials.
- 216 INTERMITTENT SOURCE** - A fugitive dust generating operation and/or activity that lasts for a duration of less than six consecutive minutes.
- 217 MOTOR VEHICLE** - A self-propelled vehicle for use on the public roads and highways of the State of Arizona and required to be registered under the Arizona State Uniform Motor Vehicle Act, including any non-motorized attachments, such as but not limited to, trailers or other conveyances which are connected to or propelled by the actual motorized portion of the vehicle.
- 218 NORMAL FARM CULTURAL PRACTICE** - All activities by the owner, lessee, agent, independent contractor, and/or supplier conducted on any facility for the production of crops and/or nursery plants. Disturbances of the field surface caused by turning under stalks, tilling, leveling, planting, fertilizing, or harvesting are included in this definition.
- 219 OFF-ROAD VEHICLE** - Any self-propelled conveyance specifically designed for off-road use, including but not limited to, off-road or all-terrain equipment, trucks, cars, motorcycles, motorbikes, or motorbuggies.
- 220 OPEN AREAS AND VACANT LOTS** - Any of the following described in subsection 220.1 through subsection 220.4 of this rule. For the purpose of this rule, vacant portions of residential or commercial lots that are immediately adjacent and owned and/or operated by the same individual or entity are considered one vacant open area or vacant lot.
- 220.1** An unsubdivided or undeveloped tract of land adjoining a developed or a partially developed residential, industrial, institutional, governmental, or commercial area.
- 220.2** A subdivided residential, industrial, - institutional, governmental, or commercial lot, which contains no approved or permitted buildings or structures of a temporary or permanent nature.
- 220.3** A partially developed residential, industrial, institutional, governmental, or commercial lot.
- 220.4** A tract of land, in the nonattainment area, adjoining agricultural property.
- 221 OWNER AND/OR OPERATOR** - Any person who owns, leases, operates, controls, or supervises a dust generating operation subject to the requirements of this rule.

- 222 **PAVE** - To apply and maintain asphalt, concrete, or other similar material to a roadway surface (i.e., asphaltic concrete, concrete pavement, chip seal, or rubberized asphalt).
- 223 **PUBLIC ROADWAYS** - Any roadways that are open to public travel.
- 224 **ROUTINE** - Any dust generating operation which occurs more than 4 times per year or lasts 30 cumulative days or more per year.
- 225 **SILT** - Any aggregate material with a particle size less than 75 micrometers in diameter, which passes through a No. 200 Sieve.
- 226 **TRACKOUT CONTROL DEVICE** - A gravel pad, grizzly, wheel wash system, or a paved area, located at the point of intersection of an unpaved area and a paved roadway, that controls or prevents vehicular trackout.
- 227 **UNPAVED HAUL/ACCESS ROAD** - Any on-site unpaved road used by commercial, industrial, institutional, and/or governmental traffic.
- 228 **UNPAVED PARKING LOT** - Any area larger than 5,000 square feet that is not paved and that is used for parking, maneuvering, or storing motor vehicles.
- 229 **UNPAVED ROAD** - Any road or equipment path that is not paved. For the purpose of this rule, an unpaved road is not a horse trail, hiking path, bicycle path, or other similar path used exclusively for purposes other than travel by motor vehicles.
- 230 **URBAN OR SUBURBAN OPEN AREA** - The definition of urban or suburban open area is included in Section 220 (Definition Of Open Areas And Vacant Lots) of this rule.
- 231 **VACANT LOT** - The definition of vacant lot is included in Section 220 (Definition Of Open Areas And Vacant Lots) of this rule.
- 232 **VACANT PARCEL** - The definition of vacant parcel is included in Section 220 (Definition Of Open Areas And Vacant Lots) of this rule.
- 233 **WIND-BLOWN DUST** - Visible emissions from any disturbed surface area, which are generated by wind action alone.
- 234 **WIND EVENT** - When the 60-minute average wind speed is greater than 25 miles per hour.
- 235 **WORK SITE** - Any property upon which any dust generating operations and/or earthmoving operations occur.

SECTION 300 - STANDARDS

301 OPACITY LIMITATION FOR FUGITIVE DUST SOURCES: The owner and/or operator of a source engaging in dust generating operations shall not allow visible fugitive dust emissions to exceed 20% opacity.

301.1 Wind Event: Exceedances of the opacity limit that occur due to a wind event shall constitute a violation of the opacity limit. However, it shall be an affirmative defense in an enforcement action if the owner and/or operator demonstrates all of the following conditions:

- a. All control measures required were followed and 1 or more of the control measures in Table 2 were applied and maintained;
- b. The 20% opacity exceedance could not have been prevented by better application, implementation, operation, or maintenance of control measures;
- c. The owner and/or operator compiled and retained records, in accordance with Section 502 (Recordkeeping) of this rule; and
- d. The occurrence of a wind event on the day(s) in question is documented by records. The occurrence of a wind event must be determined by the nearest Maricopa County Environmental Services Department Air Quality Division monitoring station, from any other certified meteorological station, or by a wind instrument that is calibrated according to manufacturer's standards and that is located at the site being checked.

301.2 Emergency Maintenance Of Flood Control Channels and Water Retention Basins: No opacity limitation shall apply to emergency maintenance of flood control channels and water retention basins, provided that control measures are implemented.

301.3 Vehicle Test And Development Facilities And Operations: No opacity limitation shall apply to vehicle test and development facilities and operations when dust is required to test and validate design integrity, product quality, and/or commercial acceptance, if such testing is not feasible within enclosed facilities.

302 STABILIZATION REQUIREMENTS FOR FUGITIVE DUST SOURCES:

302.1 Unpaved Parking Lot: The owner and/or operator of any unpaved parking lot shall not allow visible fugitive dust emissions to exceed 20% opacity, and either:

- a. Shall not allow silt loading equal to or greater than 0.33 oz/ft²; or
- b. Shall not allow the silt content to exceed 8%.

302.2 Unpaved Haul/Access Road: The owner and/or operator of any unpaved haul/access road (whether at a work site that is under construction or at a work site that is temporarily or permanently inactive):

- a. Shall not allow visible fugitive dust emissions to exceed 20% opacity, and either:
 - (1) Shall not allow silt loading equal to or greater than 0.33 oz/ft²; or
 - (2) Shall not allow the silt content to exceed 6%.
- b. Shall, as an alternative to meeting the stabilization requirements for an unpaved haul/access road, limit vehicle trips to no more than 20 per day and limit vehicle speeds to no more than 15 miles per hour. If complying with subsection 302.2(b) of this rule, must include, in a Dust Control Plan, the number of vehicles traveled on the unpaved haul/access roads (i.e., number of employee vehicles, earthmoving equipment, haul trucks, and water trucks).

302.3 Open Area And Vacant Lot Or Disturbed Surface Area: The owner and/or operator of an open area and vacant lot or any disturbed surface area on which no activity is occurring (whether at a work site that is under construction, at a work site that is temporarily or permanently inactive) shall meet at least 1 of the standards described in subsection 302.3(a) through subsection 302.3(g) below, as applicable. The owner and/or operator of such inactive disturbed surface area shall be considered in violation of this rule if such inactive disturbed surface area is not maintained in a manner that meets at least 1 of the standards described in subsection 302.3(a) through subsection 302.3(g) below, as applicable.

- a. Maintain a visible crust; or
- b. Maintain a threshold friction velocity (TFV) for disturbed surface areas corrected for non-erodible elements of 100 cm/second or higher; or
- c. Maintain a flat vegetative cover (i.e., attached (rooted) vegetation or unattached vegetative debris lying on the surface with a predominant horizontal orientation that is not subject to movement by wind) that is equal to at least 50%; or
- d. Maintain a standing vegetative cover (i.e., vegetation that is attached (rooted) with a predominant vertical orientation) that is equal to or greater than 30%; or
- e. Maintain a standing vegetative cover (i.e., vegetation that is attached (rooted) with a predominant vertical orientation) that is equal to or greater than 10% and where the threshold friction

velocity is equal to or greater than 43 cm/second when corrected for non-erodible elements; or

- f. Maintain a percent cover that is equal to or greater than 10% for non-erodible elements; or
- g. Comply with a standard of an alternative test method, upon obtaining the written approval from the Control Officer and the Administrator of the Environmental Protection Agency (EPA).

302.4 Vehicle Test And Development Facilities And Operations: No stabilization requirement shall apply to vehicle test and development facilities and operations when dust is required to test and validate design integrity, product quality, and/or commercial acceptance, if such testing is not feasible within enclosed facilities.

303 DUST CONTROL PLAN REQUIRED: The owner and/or operator of a source shall submit to the Control Officer a Dust Control Plan with any permit applications that involve earthmoving operations which would equal or exceed 0.10 acre. Compliance with this section does not effect a source's responsibility to comply with the other standards of this rule. The Dust Control Plan shall describe all control measures to be implemented before, after, and while conducting any dust generating operation, including during weekends, after work hours, and on holidays.

303.1 A Dust Control Plan shall, at a minimum, contain all the information described in Section 304 of this rule. The Control Officer shall approve, disapprove, or conditionally approve the Dust Control Plan, in accordance with the criteria used to approve, disapprove or conditionally approve a permit. Failure to comply with the provisions of an approved Dust Control Plan is deemed to be a violation of this rule. Regardless of whether an approved Dust Control Plan is in place or not, the owner and/or operator of a source is still subject to all requirements of this rule at all times. In addition, the owner and/or operator of a source with an approved Dust Control Plan is still subject to all of the requirements of this rule, even if such owner and/or operator is complying with the approved Dust Control Plan.

303.2 At least one primary control measure and one contingency control measure must be identified in the Dust Control Plan for all fugitive dust sources. Should any primary control measure(s) prove ineffective, the owner and/or operator shall immediately implement the contingency control measure(s), which may obviate the requirement of submitting a revised Dust Control Plan.

303.3 The following subsections, subsection 303.3(a) and subsection 303.3(b) of this rule, describe the permit applications with which a Dust Control Plan must be submitted.

- a. If a person is required to obtain an Earthmoving Permit under Regulation II (Permits And Fees) of these rules, then such person must first submit a Dust Control Plan and obtain the Control Officer's approval of the Dust Control Plan before commencing any dust generating operation.
- b. If a person is required to obtain or has obtained a Title V Permit, a Non-Title V, or a General Permit under Regulation II (Permits And Fees) of these rules, then such person must first submit a Dust Control Plan and obtain the Control Officer's approval of the Dust Control Plan before commencing any routine dust generating operation.

303.4 A Dust Control Plan shall not be required:

- a. To play on a ballfield and/or for landscape maintenance. For the purpose of this rule, landscape maintenance does not include grading, trenching, nor any other mechanized surface disturbing activities.
- b. To establish initial landscapes or to redesign existing landscapes of legally-designated public parks and recreational areas, including national parks, national monuments, national forests, state parks, city parks, and county regional parks, hiking paths, horse trails, bicycle paths, ballfields, playgrounds at camp sites, and camp sites, which are used exclusively for purposes other than travel by motor vehicles. For the purpose of this rule, establishing initial landscapes or redesigning existing landscapes does not include grading, trenching, nor any other mechanized surface disturbing activities.

304 ELEMENTS OF A DUST CONTROL PLAN: A Dust Control Plan shall contain, at a minimum, all of the following information:

304.1 Names, address(es), and phone numbers of person(s) responsible for the submittal and implementation of the Dust Control Plan and responsible for the dust generating operation.

304.2 A drawing, on at least 8½x 11" paper, which shows:

- a. Entire project site boundaries;
- b. Acres to be disturbed with linear dimensions;
- c. Nearest public roads;
- d. North arrow; and
- e. Planned exit locations onto paved public roadways.

304.3 Control measures or combination thereof to be applied to all actual and potential fugitive dust sources, before, after, and while conducting any dust generating operation, including during weekends, after work hours, and on holidays.

- a. At least one primary control measure and one contingency control measure must be identified, from Table 1 of this rule, for all fugitive dust sources. Should any primary control measure(s) prove ineffective, the owner and/or operator shall immediately implement the contingency control measure(s), which may obviate the requirement of submitting a revised Dust Control Plan.
- b. Alternatively, a control measure(s) that is not in Table 1 of this rule may be chosen, provided that such control measure(s) is implemented to comply with the standard(s) described in Section 301 and Section 302 of this rule, as determined by the corresponding test method(s), as applicable, and must meet other applicable standard(s) set forth in this rule.
- c. If complying with subsection 302.2(b) (Stabilization Requirements For Fugitive Dust Sources-Unpaved Haul/Access Roads) of this rule, must include the number of vehicles traveled on the unpaved haul/access roads (i.e., number of employee vehicles, earthmoving equipment, haul trucks, and water trucks).

304.4 Dust suppressants to be applied, including product specifications or label instructions for approved usage:

- a. Method, frequency, and intensity of application.
- b. Type, number, and capacity of application equipment.
- c. Information on environmental impacts and approvals or certifications related to appropriate and safe use for ground application.

304.5 Specific surface treatment(s) and/or control measures utilized to control material trackout and sedimentation where unpaved and/or access points join paved public roadways.

305 DUST CONTROL PLAN REVISIONS: If the Control Officer determines that an approved Dust Control Plan has been followed, yet fugitive dust emissions from any given fugitive dust source still exceed Section 301 and Section 302 of this rule, then the Control Officer shall issue a written notice to the owner and/or operator of such source explaining such determination. The owner and/or operator of such source shall make written revisions to the Dust Control Plan and shall submit such revised Dust Control Plan to the Control Officer within three working days of receipt of the Control Officer's written notice, unless such time period is extended by the Control Officer, upon request, for good cause. During the time that such owner and/or operator is preparing revisions to the approved

Dust Control Plan, such owner and/or operator must still comply with all requirements of this rule.

306 **CONTROL MEASURES:** The owner and/or operator of a source shall implement control measures before, after, and while conducting any dust generating operation, including during weekends, after work hours, and on holidays. See subsection 304.3, Table 1, and Table 2 of this rule. For the purpose of this rule, any control measure that is implemented must meet the applicable standard(s) described in Section 301 and in Section 302 of this rule, as determined by the corresponding test method(s), as applicable, and must meet other applicable standard(s) set forth in this rule. Failure to comply with the provisions of Section 308 (Work Practices) of this rule, as applicable, and/or of an approved Dust Control Plan, is deemed a violation of this rule. Regardless of whether an approved Dust Control Plan is in place or not, the owner and/or operator of a dust generating operation is still subject to all requirements of this rule at all times. In addition, the owner and/or operator of a dust generating operation with an approved Dust Control Plan is still subject to all of the requirements of this rule, even if such owner and/or operator of a dust generating operation is complying with the approved Dust Control Plan.

307 **PROJECT INFORMATION SIGN:** The owner and/or operator of a source shall erect a project information sign at the main entrance, that is visible to the public, of all sites with an Earthmoving Permit that are five acres or larger. Such sign shall be a minimum of four feet long by four feet wide, have a white background, have black block lettering which is at least four inches high, and shall contain the following information:

307.1 Project name; and

307.2 Name and phone number of person(s) responsible for conducting the project; and

307.3 Text stating: "Complaints? Call Maricopa County Environmental Services Department (insert the current/accurate phone number for the complaint phone line)."

308 **WORK PRACTICES:** When engaged in the following specific activities, the owner and/or operator of a source shall comply with the following work practices in addition to implementing, as applicable, the control measures described in Table 1 of this rule. Such work practices shall be implemented to meet the standards described in Section 301 and Section 302 of this rule.

308.1 **Bulk Material Hauling Off-Site Onto Paved Public Roadways:**

a. Load all haul trucks such that the freeboard is not less than three inches; and

b. Prevent spillage or loss of bulk material from holes or other openings in the cargo compartment's floor, sides, and/or tailgate(s); and

- c. Cover all haul trucks with a tarp or other suitable closure; and
- d. Before the empty haul truck leaves the site, clean the interior of the cargo compartment or cover the cargo compartment.

308.2 Bulk Material Hauling On-Site Within The Boundaries Of The Work Site: When crossing a public roadway upon which the public is allowed to travel while construction is underway:

- a. Load all haul trucks such that the freeboard is not less than three inches; and
- b. Prevent spillage or loss of bulk material from holes or other openings in the cargo compartment's floor, sides, and/or tailgate(s); and
- c. Install a suitable trackout control device that controls and prevents trackout and/or removes particulate matter from tires and the exterior surfaces of haul trucks and/or motor vehicles that traverse such work site. Examples of trackout control devices are described in Table 1 (Trackout-1J, 2J, 3J) of this rule.

308.3 Spillage, Carry-Out, Erosion, And/Or Trackout:

- a. Install a suitable trackout control device (Examples of trackout control devices are described in Table 1 (Trackout-1J, 2J, 3J) of this rule) that controls and prevents trackout and/or removes particulate matter from tires and the exterior surfaces of haul trucks and/or motor vehicles that traverse such work site at all exits onto a paved public roadway:
 - (1) From all work sites with a disturbed surface area of five acres or larger.
 - (2) From all work sites where 100 cubic yards of bulk materials are hauled on-site and/or off-site per day.
- b. Cleanup spillage, carry-out, erosion, and/or trackout on the following time-schedule:
 - (1) Immediately, when spillage, carry-out, and/or trackout extends a cumulative distance of 50 linear feet or more; or
 - (2) At the end of the work day, when spillage, carry-out, erosion, and/or trackout are other than the spillage, carry-out, erosion, and/or trackout described above, in subsection 308.3(b)(1) of this rule.

308.4 Unpaved Haul/Access Roads: Implement 1 or more control measure(s) described in Table 1 (Unpaved Haul/Access Roads-1C through 5C) of this rule, before engaging in the use of or in the maintenance of unpaved haul/access roads.

308.5 Easements, Rights-Of-Way, And Access Roads For Utilities (Electricity, Natural Gas, Oil, Water, And Gas Transmission) Associated With Sources That Have A Non-Title V Permit, A Title V Permit, And/Or A General Permit Under These Rules:

- a. Inside the PM₁₀ nonattainment area, restrict vehicular speeds to 15 miles per hour and vehicular trips to no more than 20 per day; or
- b. Outside the PM₁₀ nonattainment area, restrict vehicular trips to no more than 20 per day; or
- c. Implement control measures, as described in Table 1 (Unpaved Haul/Access Roads-1C through 5C) of this rule.

308.6 Open Storage Piles: For the purpose of this rule, an open storage pile is any accumulation of bulk material with a 5% or greater silt content which in any one point attains a height of three feet and covers a total surface area of 150 square feet or more. Silt content shall be assumed to be 5% or greater unless a person can show, by testing in accordance with ASTM Method C136-96A or other equivalent method approved in writing by the Control Officer and the Administrator of EPA, that the silt content is less than 5%.

- a. During stacking, loading, and unloading operations, apply water, as necessary, to maintain compliance with Section 301 of this rule; and
- b. When not conducting stacking, loading, and unloading operations, comply with one of the following work practices:
 - (1) Cover open storage piles with tarps, plastic, or other material to prevent wind from removing the coverings; or
 - (2) Apply water to maintain a soil moisture content at a minimum of 12%, as determined by ASTM Method D2216-98, or other equivalent as approved by the Control Officer and the Administrator of EPA. For areas which have an optimum moisture content for compaction of less than 12%, as determined by ASTM Method D1557-91(1998) or other equivalent approved by the Control Officer and the Administrator of EPA, maintain at least 70% of the optimum soil moisture content; or

- (3) Meet one of the stabilization requirements described in subsection 302.3 of this rule; or
- (4) Construct and maintain wind barriers, storage silos, or a three-sided enclosure with walls, whose length is no less than equal to the length of the pile, whose distance from the pile is no more than twice the height of the pile, whose height is equal to the pile height, and whose porosity is no more than 50%. If implementing this subsection, subsection 308.6(b)(4), must also implement either subsection 308.6(b)(2) or subsection 308.6(b)(3) above.

308.7 Earthmoving Operations On Disturbed Surface Areas 1 Acre Or Larger: If water is the chosen control measure, operate water application system (e.g., water truck) while conducting earthmoving operations on disturbed surface areas 1 acre or larger.

308.8 Weed Abatement By Discing Or Blading:

- a. Apply water before weed abatement by discing or blading occurs; and
- b. Apply water while weed abatement by discing or blading is occurring; and
- c. Pave, apply gravel, apply water, or apply a suitable dust suppressant, in compliance with subsection 302.3 of this rule, after weed abatement by discing or blading occurs; or
- d. Establish vegetative ground cover in sufficient quantity, in compliance with subsection 302.3 of this rule, after weed abatement by discing or blading occurs.

SECTION 400 - ADMINISTRATIVE REQUIREMENTS

401 DUST CONTROL PLAN POSTING: The owner and/or operator of a source shall post a copy of the approved Dust Control Plan in a conspicuous location at the work site, within on-site equipment, or in an on-site vehicle, or shall otherwise keep a copy of the approved Dust Control Plan available on-site at all times. The owner and/or operator of a source that has been issued a Block Permit shall not be required to keep a copy of the plot plan, an element of a Dust Control Plan, on-site.

402 COMPLIANCE SCHEDULE: The requirements of this rule supercede any conflicting requirements that may be found in existing Dust Control Plans.

402.1 For Earthmoving Permits: If any changes to a Dust Control Plan, associated with an Earthmoving Permit, are necessary as a result of the

most recent revisions of this rule, such changes shall not be required until the Earthmoving Permit is required to be renewed.

- 402.2 **For Non-Title V Permits And For Title V Permits:** If any changes to a Dust Control Plan, associated with a Non-Title V Permit or with a Title V Permit, are necessary as a result of the most recent revisions of this rule, then the owner and/or operator shall submit a revised Dust Control Plan to the Control Officer, according to the minor permit revision procedures described in Rule 220 and Rule 210 of these rules respectively, no later than 6 months after the effective date of the most recent revisions to this rule.

SECTION 500 - MONITORING AND RECORDS

- 501 **COMPLIANCE DETERMINATION:** To determine compliance with this rule, the following test methods shall be conducted:

501.1 Opacity Observations:

- a. **Dust Generating Operations:** Opacity observations of a source engaging in dust generating operations shall be conducted in accordance with Appendix C, Section 3 (Visual Determination Of Opacity Of Emissions From Sources For Time-Averaged Regulations) of these rules, except opacity observations for intermittent sources shall require 12 rather than 24 consecutive readings at 15-second intervals for the averaging time.
- b. **Unpaved Parking Lot:** Opacity observations of any unpaved parking lot shall be conducted in accordance with Appendix C, Section 2.1 (Test Methods For Stabilization-For Unpaved Roads And Unpaved Parking Lots) of these rules.
- c. **Unpaved Haul/Access Road:** Opacity observations of any unpaved haul/access road (whether at a work site that is under construction or at a work site that is temporarily or permanently inactive) shall be conducted in accordance with Appendix C, Section 2.1 (Test Methods For Stabilization-For Unpaved Roads And Unpaved Parking Lots) of these rules.

501.2 Stabilization Observations:

- a. **Unpaved Parking Lot:** Stabilization observations for unpaved parking lots shall be conducted in accordance with Appendix C, Section 2.1 (Test Methods For Stabilization-For Unpaved Roads And Unpaved Parking Lots) of these rules. When more than 1 test method is permitted for a determination, an exceedance of the limits established in this rule determined by any of the applicable test methods constitutes a violation of this rule.

- b. Unpaved Haul/Access Road:** Stabilization observations for unpaved haul/access roads (whether at a work site that is under construction or at a work site that is temporarily or permanently inactive) shall be conducted in accordance with Appendix C, Section 2.1 (Test Methods For Stabilization-For Unpaved Roads And Unpaved Parking Lots) of these rule. When more than 1 test method is permitted for a determination, an exceedance of the limits established in this rule determined by any of the applicable test methods constitutes a violation of this rule.
- c. Open Area And Vacant Lot Or Disturbed Surface Area:** Stabilization observations for an open area and vacant lot or any disturbed surface area on which no activity is occurring (whether at a work site that is under construction, at a work site that is temporarily or permanently inactive) shall be conducted in accordance with at least one of the techniques described in subsection 501.2(c)(1) through subsection 501.2(c)(7) below, as applicable. The owner and/or operator of such inactive disturbed surface area shall be considered in violation of this rule if such inactive disturbed surface area is not maintained in a manner that meets at least 1 of the standards described in subsection 302.3 of this rule, as applicable.
- (1) Appendix C, Section 2.3 (Test Methods For Stabilization-Visible Crust Determination) (The Drop Ball/Steel Ball Test) of these rules for a visible crust; or
 - (2) Appendix C, Section 2.4 (Test Methods For Stabilization-Determination Of Threshold Friction Velocity (TFV)) (Sieving Field Procedure) of these rules for threshold friction velocity (TFV) corrected for non-erodible elements of 100 cm/second or higher; or
 - (3) Appendix C, Section 2.5 (Test Methods For Stabilization-Determination Of Flat Vegetative Cover) of these rules for flat vegetation cover (i.e., attached (rooted) vegetation or unattached vegetative debris lying on the surface with a predominant horizontal orientation that is not subject to movement by wind) that is equal to at least 50%; or
 - (4) Appendix C, Section 2.6 (Test Methods For Stabilization-Determination Of Standing Vegetative Cover) of these rules for standing vegetation cover (i.e., vegetation that is attached (rooted) with a predominant vertical orientation) that is equal to or greater than 30%; or
 - (5) Appendix C, Section 2.6 (Test Methods For Stabilization-Determination Of Standing Vegetative Cover) of these rules for standing vegetation cover (i.e., vegetation that is attached (rooted) with a predominant vertical orientation)

that is equal to or greater than 10% and where the threshold friction velocity is equal to or greater than 43 cm/second when corrected for non-erodible elements; or

- (6) Appendix C, Section 2.7 (Test Methods For Stabilization-Rock Test Method) of these rules for a percent cover that is equal to or greater than 10%, for non-erodible elements; or
- (7) An alternative test method approved in writing by the Control Officer and the Administrator of the EPA.

502 **RECORDKEEPING:** Any person who conducts dust generating operations that require a Dust Control Plan shall keep a daily written log recording the actual application or implementation of the control measures delineated in the approved Dust Control Plan. Any person who conducts dust generating operations which do not require a Dust Control Plan shall compile and retain records that provide evidence of control measure application, by indicating the type of treatment or control measure, extent of coverage, and date applied. Upon verbal or written request by the Control Officer, the log or the records and supporting documentation shall be provided within 48 hours, excluding weekends. If the Control Officer is at the site where requested records are kept, records shall be provided without delay.

503 **RECORDS RETENTION:** Copies of approved Dust Control Plans, control measures implementation records, and all supporting documentation shall be retained for at least six months following the termination of the dust generating operation. Copies of approved Dust Control Plans, control measures implementation records, and all supporting documentation shall be retained for at least 1 year from the date such records were initiated. If a person has obtained a Title V Permit and is subject to the requirements of this rule, then such person shall retain records required by this rule for at least 5 years from the date such records are established.

504 **TEST METHODS ADOPTED BY REFERENCE:** The test methods listed in this section are adopted by reference. These adoptions by reference include no future editions or amendments. Copies of the test methods listed in this section are available for review at the Maricopa County Environmental Services Department, 1001 North Central Avenue, Phoenix, AZ, 85004-1942.

504.1 ASTM Method C136-96A ("Standard Test Method For Sieve Analysis Of Fine And Coarse Aggregates"), 1996 edition.

504.2 ASTM Method D2216-98 ("Standard Test Method For Laboratory Determination Of Water (Moisture) Content Of Soil And Rock By Mass"), 1998 edition.

504.3 ASTM Method 1557-91(1998) ("Test Method For Laboratory Compaction Characteristics Of Soil Using Modified Effort (56,000 ft-lbf/ft³ (2,700 kN-m/m³)*), 1998 edition.

TABLE 1

SOURCE TYPE AND CONTROL MEASURES	
Vehicle Use In Open Areas And Vacant Lots:	
1A	Restrict trespass by installing signs.
2A	Install physical barriers such as curbs, fences, gates, posts, signs, shrubs, and/or trees to prevent access to the area.
Unpaved Parking Lots:	
1B	Pave.
2B	Apply and maintain gravel, recycled asphalt, or other suitable material, in compliance with subsection 302.1 of this rule.
3B	Apply a suitable dust suppressant, in compliance with subsection 302.1 of this rule.
Unpaved Haul/Access Roads: (The control measures listed below (1C-5C) are required work practices, per subsection 308.4 of this rule.)	
1C	Limit vehicle speed to 15 miles per hour or less and limit vehicular trips to no more than 20 per day.
2C	Apply water, so that the surface is visibly moist and subsection 302.2 of this rule is met.
3C	Pave.
4C	Apply and maintain gravel, recycled asphalt, or other suitable material, in compliance with subsection 302.2 of this rule.
5C	Apply a suitable dust suppressant, in compliance with subsection 302.2 of this rule.
Disturbed Surface Areas:	
Pre-Activity:	
1D	Pre-water site to the depth of cuts.
2D	Phase work to reduce the amount of disturbed surface areas at any one time.
During Dust Generating Operations:	
3D	Apply water or other suitable dust suppressant, in compliance with Section 301 of this rule.
4D	Apply water as necessary to maintain a soil moisture content at a minimum of 12%, as determined by ASTM Method D2216-98 or other equivalent as approved by the Control Officer and the Administrator of EPA. For areas which have an optimum moisture content for compaction of less than 12%, as determined by ASTM Method D1557-91(1998) or other equivalent approved by the Control Officer and the Administrator of EPA, maintain at least 70% of the optimum soil moisture content.
5D	Construct fences or 3 foot - 5 foot high wind barriers with 50% or less porosity adjacent to roadways or urban areas that reduce the amount of wind blown material leaving a site. If constructing fences or wind barriers, must also implement 3D or 4D above.
Temporary Stabilization During Weekends, After Work Hours, And On Holidays:	
6D	Apply a suitable dust suppressant, in compliance with subsection 302.3 of this rule.
7D	Establish vegetative ground cover in sufficient quantity, in compliance with subsection 302.3 of this rule.
8D	Restrict vehicular access to the area, in addition to either of the control measures described in 6D and 7D above.

Permanent Stabilization (Required Within 8 Months Of Ceasing Dust Generating Operations):

- 9D Restore area such that the vegetative ground cover and soil characteristics are similar to adjacent or nearby undisturbed native conditions, in compliance with subsection 302.3 of this rule.
- 10D Pave, apply gravel, or apply a suitable dust suppressant, in compliance with subsection 302.3 of this rule.
- 11D Establish vegetative ground cover in sufficient quantity, in compliance with subsection 302.3 of this rule.

Open Areas And Vacant Lots:

- 1E Restore area such that the vegetative ground cover and soil characteristics are similar to adjacent or nearby undisturbed native conditions.
- 2E Pave, apply gravel, or apply a suitable dust suppressant, in compliance with subsection 302.3 of this rule.
- 3E Establish vegetative ground cover in sufficient quantity, in compliance with subsection 302.3 of this rule.

Control measures 1F – 1M below are required work practices and/or methods designed to meet the work practices, per Section 308 (Work Practices) of this rule.

Bulk Material Handling Operations And Open Storage Piles:

During Stacking, Loading, And Unloading Operations:

- 1F Apply water as necessary, to maintain compliance with Section 301 of this rule; and

When Not Conducting Stacking, Loading, And Unloading Operations:

- 2F Cover open storage piles with tarps, plastic, or other material to prevent wind from removing the coverings; or
- 3F Apply water to maintain a soil moisture content at a minimum of 12%, as determined by ASTM Method D2216-98, or other equivalent as approved by the Control Officer and the Administrator of EPA. For areas which have an optimum moisture content for compaction of less than 12%, as determined by ASTM Method D1557-91(1998) or other equivalent approved by the Control Officer and the Administrator of EPA, maintain at least 70% of the optimum soil moisture content; or
- 4F Meet the stabilization requirements described in subsection 302.3 of this rule; or
- 5F Construct and maintain wind barriers, storage silos, or a three-sided enclosure with walls, whose length is no less than equal to the length of the pile, whose distance from the pile is no more than twice the height of the pile, whose height is equal to the pile height, and whose porosity is no more than 50%. If implementing 5F, must also implement 3F or 4F above.

Bulk Material Hauling/Transporting:

When On-Site Hauling/Transporting Within The Boundaries Of The Work Site When Crossing A Public Roadway Upon Which The Public Is Allowed To Travel While Construction Is Underway:

- 1G Load all haul trucks such that the freeboard is not less than 3 inches when crossing a public roadway upon which the public is allowed to travel while construction is underway; and

- 2G Prevent spillage or loss of bulk material from holes or other openings in the cargo compartment's floor, sides, and/or tailgate(s); and
- 3G Install a suitable trackout control device that controls and prevents trackout and/or removes particulate matter from tires and the exterior surfaces of haul trucks and/or motor vehicles that traverse such work site. Examples of trackout control devices are described in Table 1 (Trackout 1J, 2J, 3J) of this rule; and

When On-Site Hauling/Transporting Within The Boundaries Of The Work Site But Not Crossing A Public Roadway Upon Which The Public Is Allowed To Travel While Construction Is Underway:

- 4G Limit vehicular speeds to 15 miles per hour or less while traveling on the work site; or
- 5G Apply water to the top of the load such that the 20% opacity standard, as described in Section 301 of this rule, is not exceeded, or cover haul trucks with a tarp or other suitable closure.

Off-Site Hauling/Transporting Onto Paved Public Roadways:

- 6G Cover haul trucks with a tarp or other suitable closure; and
- 7G Load all haul trucks such that the freeboard is not less than 3 inches; and
- 8G Prevent spillage or loss of bulk material from holes or other openings in the cargo compartment's floor, sides, and/or tailgate(s); and
- 9G Before the empty haul truck leaves the site, clean the interior of the cargo compartment or cover the cargo compartment.

Cleanup Of Spillage, Carry Out, Erosion, And/Or Trackout:

- 1H Operate a street sweeper or wet broom with sufficient water, if applicable, at the speed recommended by the manufacturer and at the frequency(ies) described in subsection 308.3 of this rule; or
- 2H Manually sweep-up deposits.

Trackout:

- 1J Install a grizzly or wheel wash system at all access points.
- 2J At all access points, install a gravel pad at least 30 feet wide, 50 feet long, and 6 inches deep.
- 3J Pave starting from the point of intersection with a paved public roadway and extending for a centerline distance of at least 100 feet and a width of at least 20 feet.

Weed Abatement By Discing Or Blading:

- 1K Pre-water site and implement 3K or 4K below.
- 2K Apply water while weed abatement by discing or blading is occurring and implement 3K or 4K below.
- 3K Pave, apply gravel, apply water, or apply a suitable dust suppressant, in compliance with subsection 302.3 of this rule, after weed abatement by discing or blading occurs; or
- 4K Establish vegetative ground cover in sufficient quantity, in compliance with subsection 302.3 of this rule, after weed abatement by discing or blading occurs.

Easements, Rights-Of-Way, And Access Roads For Utilities (Electricity, Natural Gas, Oil, Water, And Gas Transmission) Associated With Sources That Have A Non-Title V Permit, A Title V Permit, And/Or A General Permit Under These Rules:

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C. Title VI Business Survey Questionnaire

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Grand Avenue Title VI Survey Protocol

Business Name:

Business Address:

Would you prefer that I speak Spanish? (if needed)

Hello, my name is _____ with Logan Simpson Design Inc. We are working for the Arizona Department of Transportation (ADOT). ADOT is currently assessing alternatives to improve the traffic operation at the 59th Avenue, Glendale Avenue, and Grand Avenue intersection and the 67th Avenue, Northern Avenue, and Grand Avenue intersection. If you have any specific questions regarding the proposed improvements or specific concerns you would like addressed, you can contact Karim Dada with ADOT's Environmental Planning Group at (602) 712-8858 or by email at kdada@dot.state.az.us, or Mike Shirley with Logan Simpson Design Inc. at (480) 967-1343 or by email at mshirley@lsdaz.com.

My purpose for visiting with you today is to conduct a survey regarding the ownership of this business and its employees and customers. We are going to use the information to specifically address any potential impacts to minority, elderly, and/or low-income populations in the area. This information will be considered confidential and will not be used for any other purpose. The answers you provide will be combined with the results from other business surveys in the area and will be made public in a future environmental document. Individual answers to questions **will not** be disclosed.

These questions should only take about 15 minutes of your time. Is this a good time for you or should I come back at another time?

(Begin Title VI survey questionnaire.)

The first set of questions is intended to provide us information specifically about this business. The questions are as follows: (Interviewer to fill in survey form)

1. What is the name of this business?
2. What year was this business established?
3. What are its hours of operation (including days of the week)?
4. What type of business do you operate? Please choose from the following:
 - Seasonal (for example, those businesses that are only open for a specific time period)
 - Service Oriented (automobile repair, etc.)
 - Retail
 - Commercial
 - Office
 - Other (if any of these preceding categories do not apply)
5. How many employees do you have? Please choose from the following ranges:
 - 0-5
 - 6-10
 - 11-15
 - 16-20
 - 21 or more
6. In your opinion, what months do you feel are your prime season?
What time of day is your busiest?
7. In your opinion, what months do you feel are your slowest season?
What time of day is your slowest?
8. In the event this proposed project required your business to be acquired and relocated, how far away would you prefer to relocate to maintain your customers and employees? Please choose from the following:
 - 0-1 mile
 - 1-3 miles
 - 3-5 miles
 - 5-10 miles
 - Anywhere in the west valley
 - Anywhere in the metropolitan area
 - Would not relocate
9. If access to your business was maintained both during and after construction, do you feel this project could affect your business? (Accept "Yes" or "No" answer only, but include a summary of comments if participant has added information.)
10. During construction, there may be congestion and long-term access changes. These long-term changes could include out-of-direction travel, one-way access, etc. If that happened, how do you think you will be affected? Please choose from the following:
 - Any changes could substantially impact this business.
 - No changes would impact this business, as long as any access is provided.
 - No changes would impact this business, as long as two-way access is provided.
 - Don't know.

These next questions will provide us information on this business' employees and customers. They are as follows:

EMPLOYEES

11. What category do your employees fit into? Please choose from the following: (check all that apply)
- Full-Time, How Many? _____
 - Part-Time, How Many? _____
 - Seasonal, How Many? _____
12. In your opinion, which of the following categories best describes your employees? Please choose from following list: (check all that apply; interviewer to explain each of these if necessary)
- All are Native American, African American, Asian American, Hispanic, or other race/ethnicity.
 - Most are Native American, African American, Asian American, Hispanic, or other race/ethnicity.
 - Some are Native American, African American, Asian American, Hispanic, or other race/ethnicity.
 - None are Native American, African American, Asian American, Hispanic, or other race/ethnicity.

 - All are elderly.
 - Most are elderly.
 - Some are elderly.
 - None are elderly.

 - All are disabled.
 - Most are disabled.
 - Some are disabled.
 - None are disabled.

 - All are female and a head of household.
 - Most are female and a head of household.
 - Some are female and a head of household.
 - None are female and a head of household.
13. How do your employees get to work and approximately what fraction of each of the following transportation choices do they use (if known)?
- Car/Truck:
- Less than a quarter
 - One quarter
 - About half
 - Three quarters
 - Almost all
- Bus:
- Less than a quarter
 - One quarter.
 - About half
 - Three quarters
 - Almost all
- Bicycle:
- Less than a quarter
 - One quarter
 - About half
 - Three quarters
 - Almost all

Walking:

- Less than a quarter
- One quarter
- About half
- Three quarters
- Almost all

- Other _____ (Interviewer to fill in answer if given.)

- Don't know

14. What is the average travel range of your employees from their homes to this business? Please choose from the following ranges:

- 0-1 mile
- 1-3 miles
- 3-5 miles
- 5-10 miles
- Greater than 10 miles
- Don't know

CUSTOMERS

15. In your opinion, which of the following categories best describes your customers? Please choose from following list: (check all that apply; interviewer to explain each of these if necessary)

- All are Native American, African American, Asian American, Hispanic, or other race/ethnicity.
- Most are Native American, African American, Asian American, Hispanic, or other race/ethnicity.
- Some are Native American, African American, Asian American, Hispanic, or other race/ethnicity.
- None are Native American, African American, Asian American, Hispanic, or other race/ethnicity.

- All are elderly.
- Most are elderly.
- Some are elderly.
- None are elderly.

- All are disabled.
- Most are disabled.
- Some are disabled.
- None are disabled.

- All are female and a head of household.
- Most are female and a head of household.
- Some are female and a head of household.
- None are female and a head of household.

16. How do your customers get to this business and approximately what fraction of each of the following transportation choices do they use (if known)?

Car/Truck:

- Less than a quarter
- One quarter
- About half
- Three quarters
- Almost all

Bus:

- Less than a quarter
- One quarter
- About half
- Three quarters
- Almost all

Bicycle:

- Less than a quarter
- One quarter
- About half
- Three quarters
- Almost all

Walking:

- Less than a quarter
- One quarter
- About half
- Three quarters
- Almost all

- Other _____ (Interviewer to fill in answer if given.)

- Don't know

17. What is the average travel range of your customers to this business? Please choose from the following ranges:

- 0-1 mile
- 1-3 miles
- 3-5 miles
- 5-10 miles
- Greater than 10 miles
- Don't know

Finally, these three questions are intended to provide us information specifically about you as the provider of information on this questionnaire. Please remember that the responses to them will be kept strictly confidential.

18. What is your name?

19. Are you the business owner and/or manager? If not, what is your job title?

20. What race/ethnicity are you?

- White
- Native American
- African American
- Asian American
- Hispanic
- Other

This concludes our survey; I, along with ADOT, would like to thank you for your participation. The information that you have provided to us will be analyzed and written into an environmental document that will be made publicly available some time next year. Individual answers to questions will be considered confidential and **will not** be disclosed. Again, if you have any more specific questions, you can contact Karim Dada with ADOT's Environmental Planning Group at (602) 712-8858 or by email at kdada@dot.state.az.us, or Mike Shirley with Logan Simpson Design Inc. at (480) 967-1343 or by email at mshirley@lsdaz.com.

In addition, a web site will be constructed some time within the next month, where you can look at all of the proposed improvements, information about these potential improvements, and obtain any of the upcoming meeting dates. Just out of curiosity, did you receive a flyer/notice of the last public meeting? _____ The web site is www.GrandAvenueUS60.com. We would like to encourage you to continue to participate in the upcoming public meetings. Thank you and have a nice day.

D. Public Hearing Notice

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