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DESIGN CONCEPT REPORT
for the
SUPERSTITION FREEWAY
State Route 360
Gilbert Road to U.S. Route 60-80-89

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Prepared by
Superstition Study Group
Arizona Department of Transportation
Highways Division
Highway Plans Services

June 2, 1975

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FOREWARD

The purpose of this report is to present the recommended concept for design of the eastern 17 miles of the Superstition Freeway (State Route 360). During the evolution process of this proposed concept, information from many sources was obtained, analyzed, and incorporated into the developmental criteria in an effort to define a functional facility featuring Community Compatibility and Effective Operational Capability.

This report and the concept presented herein is the result of a specially assembled task force comprised of representatives from local consulting engineer firms and the Arizona Department of Transportation. The members of this task force were:

Choosin Bhandhusavee, P. E. - Phoenix Engineering

Don Sloat, P. E. - L. H. Bell & Associates

Ron Haught - Phoenix Engineering

Del Fox - Dibble & Associates

Rich Dvorak - E. V. Miller Engineering

Bob Hall - ADOT, Highway Plans Services

SUMMARY

The recommended concept for the eastern portion of the Superstition Freeway is presented as a combination of features selected with regard to community compatibility, desirable freeway operational characteristics, and transportation needs.

1. Horizontal Alignment

The freeway will continue on an easterly, tangential configuration from the end of the preceding section near Gilbert Rd. in Mesa, to an interchange at U.S. 60, 80 & 89 southeast of Apache Junction in Pinal County, a distance of approximately 16.5 miles. From Gilbert Road east to Power Road (6 miles), the freeway will be centered on the midsection line between Baseline Road and Southern Avenue, while east of Power Road (10.5 miles) the centerline will be located 200 feet north of the midsection line which undergoes a lateral shift at the township boundary.

2. Vertical Alignment

Drainage and land development features divide the project into four general areas of profile consideration. The recommended concept for each area follows:

A. From Gilbert Road to the Roosevelt Water Conservation District (RWCD) Canal (5 miles), the freeway will be gener-

ally depressed 14 feet but will pass over the canals at 20 feet elevated. Crossroads at Gilbert Road, 24th Street, Val Vista Road and Higley Road will pass over the freeway at 10 to 12 feet above natural ground. Crossroads at Lindsay Road and Greenfield Road will pass under the freeway at existing grade and 4 feet depressed respectively.

B. Between the RWCD Canal and Ellsworth Road (4 miles), the freeway will continue to maintain a depressed profile of varying depth except at existing drainways where the freeway will be elevated about 5 feet above ground. Crossroads will pass over the freeway at 10 to 12 feet above natural ground.

C. East of Ellsworth Road, to the proposed Central Arizona Project (CAP) Aqueduct (approximately 2.8 miles), the freeway will be typically elevated 4 to 5 feet but will dip to 14 feet depressed at the crossroads. Crossroads within this segment will pass over the freeway at 10 to 12 feet above ground.

D. From the CAP Aqueduct to U.S. 60, 80, & 89 (approximately 4.7 miles), the freeway will continue to be elevated 4 to 5 feet and will pass over the crossroads at 14 feet above ground. Within this segment, the crossroads will be depressed approximately 10 feet at the freeway.

3. Drainage

Overland drainage will be collected in parallel channels on the north side of the freeway from Gilbert Road to Ellsworth Road with the roadway drainage being pumped into the channels. West of the RWCD Canal, drainage discharge will be integral with the City of Mesa drainage plan. Between the RWCD Canal and Ellsworth Road, the parallel channel will discharge into existing drainways for passage to the south of the freeway. East of Ellsworth Road, the drainage will be passed under the roadway in existing desert washes.

4. Traffic Interchanges and Grade Separations

Traffic interchanges will be located at Gilbert Road, Val Vista Road, Higley Road, Power Road, Ellsworth Road, Signal Butte Road, Vineyard Road, Tomahawk Drive and U.S. 60, 80, & 89. Grade separations will be located at 24th Street, Lindsay Road, Greenfield Road, Sossaman Road, Hawes Road, Crisman Road, Meridian Road, and Highway Drive.

5. Right of Way

The basic right of way limits between Gilbert Road and the RWCD Canal will vary between 200 feet and 300 feet to the south and 400 feet to the north of the median centerline (midsection line). Between the RWCD Canal and U.S. 60, 80 & 89 the limits will narrow to 200 feet to the south but remain at 400 feet to the north of the centerline.

East of Power Road, the midsection line shifts to the south and becomes the southern right of way limit. Flares for interchanges will be included as required on the south side. Flaring of the right of way along the crossroads will also be necessary.

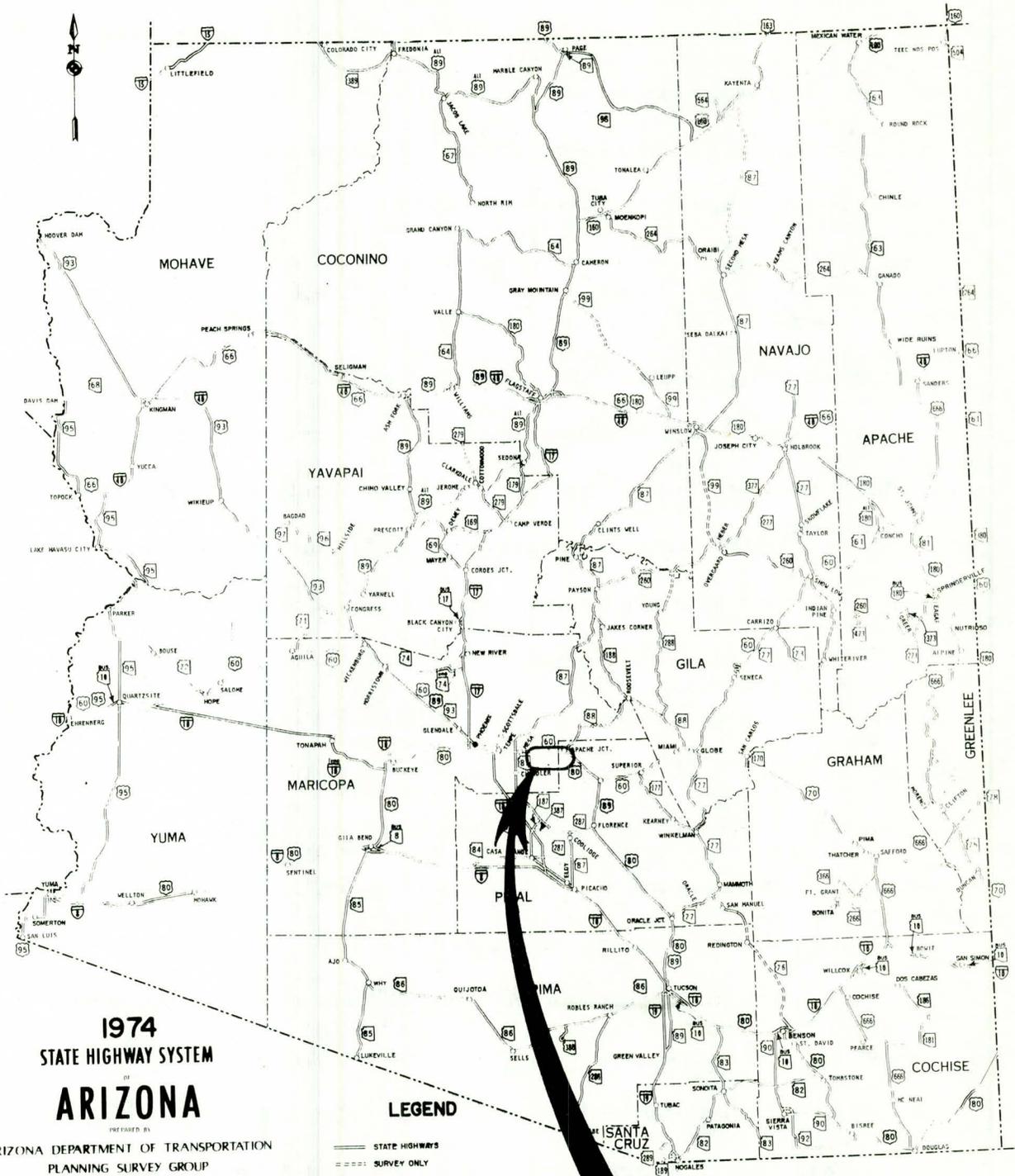
I. INTRODUCTION

1. General Background

Upon completion, the Superstition Freeway will provide fast, efficient, and safe inter-urban service between the metropolitan area of Phoenix and the growing communities of Tempe and Mesa in eastern Maricopa County, and Apache Junction in western Pinal County. It will also provide a free flowing route for long distance trips currently served by U.S. 60. The freeway begins at Interstate 10 in Tempe and progresses east along the southern edge of Mesa to join U.S. 60, 80 & 89 near the foothills of the Superstition Mountains and slightly southeast of the community of Apache Junction (see Figure 1). While the western portion has been completed, other portions are either under construction or are in some stage of design.

The segment of the freeway that will be discussed in this report is the easternmost seventeen miles, from Gilbert Road in the City of Mesa, to U.S. 60, 80 & 89, (see Figure 2). The freeway corridor lies between Baseline Road on the south and Southern Avenue on the north and is approximately two miles south of and parallel to the Apache Boulevard (existing U.S. 60, 80 & 89).

Beginning with major studies in 1965, the Superstition Freeway has progressed in stages through the Location Public Hearing on Feb. 19, 1966, Location Approval by the Bureau of Public Roads (FHWA) on Jan. 23, 1967, Environmental Impact Statement Approval on Oct. 5,



1974
STATE HIGHWAY SYSTEM

ARIZONA

PREPARED BY
ARIZONA DEPARTMENT OF TRANSPORTATION
PLANNING SURVEY GROUP

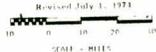


FIGURE 1
LOCATION MAP

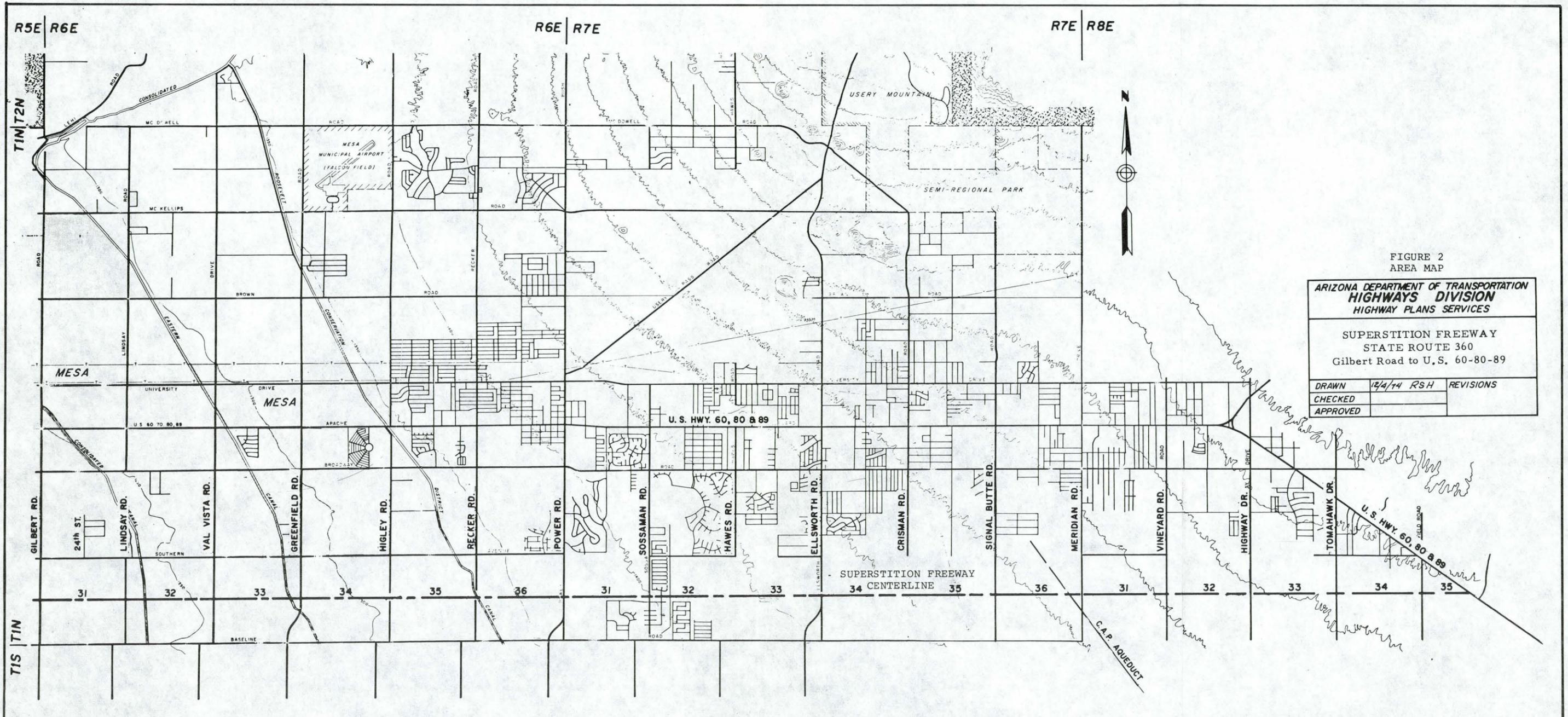


FIGURE 2
AREA MAP

ARIZONA DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
HIGHWAY PLANS SERVICES

SUPERSTITION FREEWAY
STATE ROUTE 360
Gilbert Road to U.S. 60-80-89

DRAWN	12/4/74 RSH	REVISIONS
CHECKED		
APPROVED		

1973 by the FHWA, and subsequent FHWA design approval for those segments either completed or under construction.

2. Current Corridor Development

As the land use patterns along the freeway corridor are changing, development activities are occurring in an irregular or spotty form (see photos, Figures 3-a, 3-b, and 3-c, Appendix B).

The present general pattern is described as follows:

1. Gilbert Road to the Roosevelt Water Conservation District Canal - primarily irrigated agricultural activities with some localized development such as a residential tract under construction near Gilbert Road.
2. The RWCD Canal and Ellsworth Road - agricultural activities to the south of the freeway location and raw desert to the north with development activity centered about Sossaman Road on both sides of the proposed freeway. The developed area consists of a large mobile home park with an internal golf course and residential subdivisions.
3. Ellsworth Road to U.S. 60 - primarily raw desert but with some localized agricultural and development activities such as a trailer park and subdivision near Tomahawk Drive.

Present drainage patterns vary and tend to follow the land use activities. In the agricultural areas, where natural drainage ways have been obliterated, storm runoff patterns are generally regulated by the canals and other irrigation facilities. In the desert areas,

however, the natural drainage washes remain effective in dispensing storm runoff. A transitional area exists between the RWCD Canal and Ellsworth Road where drainage from the raw desert to the north meets the agricultural and development areas to the south. Several drainways have been constructed to channel and control runoff through this area.

3. Future Corridor Activity

Future development along the freeway corridor could at some point in time place the freeway within an urban environment throughout its length. Several development activities are now in the design or planning stages including two large Planned Area Developments: Leisure World, which will extend from the RWCD Canal to the present development at Sossaman Road; and Dreamland Village located west of Signal Butte Road. At the present time, the City of Mesa is actively pursuing annexation of a large segment of unincorporated land adjacent to the corridor and east of the current city limits. Due to the probability of the freeway, it is anticipated that developmental activities near Apache Junction, in Pinal County, will gravitate toward the corridor.

Other activities which would affect the freeway corridor include the CAP Aqueduct, which is currently projected to cross the corridor west of Meridian Road within a three to five year time frame, and the RWCD flood control project, currently under design by Maricopa County Flood Control District and the Soil Conservation Service, which

will consist of a flood channel located on the eastern side of the RWCD Canal. Construction of this channel is also anticipated within a three to five year time frame. Similar floodways are also planned for the Consolidated and Eastern Canals but with no apparent target dates.

4. Traffic

Traffic data, consistent with the anticipated development activities along the corridor and in adjacent communities, was formulated by the Maricopa Association of Governments Transportation and Planning Office (MAGTPO) for the portion of the freeway within Maricopa County. Coordinated traffic data for the portion of the freeway located in Pinal County (outside the MAGTPO planning area) was obtained from the ADOT Planning Survey Group. The traffic data was determined for a design year of 1995 using a projected population base (1.89 million) and distribution current for the Phoenix metropolitan area as of November, 1974. The traffic volumes are presented in Figure 4, Appendix B.

II. ROADWAY CONCEPTS

The following roadway concepts are presented as the recommended concept for this portion of the Superstition Freeway. Although alternate concepts are mentioned herein, the reader should refer to the Concept Evaluation Report for discussion in greater detail.

The basic roadway concepts such as horizontal and vertical alignment, interchange and grade separation location, and right of way are illustrated in Figures 5-a through 5-h, Appendix B. They are shown in this manner so that the interrelation of those features and the topographical features of the corridor are readily appreciated.

1. Design Criteria

The following list of criteria is based on current ADOT standards for design and used as a minimum acceptable condition in the establishment of the concept elements.

A. Freeway

1. Design year	1995
2. Horizontal min. design speed	70 mph
3. Vertical min. design speed	80 mph
4. Access control	Full
5. Number of lanes (initial)	4
6. Lane width	12 feet
7. Shoulder width - Left	4 feet
8. Shoulder width - Right	10 feet
9. Median width (initial)	46 feet
10. Maximum gradient	3%
11. Maximum degree of curvature	4°
12. Slope standards (ADOT)	C-2.01
13. Maximum slope rate (cuts)	3:1
14. Maximum slope rate (fills)	4:1
15. Cross drainage design frequency	50 years

- | | | |
|-----|------------------------------------|----------|
| 16. | Pumping stations design frequency | 50 years |
| 17. | Channel design frequency | 50 years |
| 18. | Pavement drainage design frequency | 10 years |

B. Ramps

- | | | |
|-----|------------------------------------|---|
| 1. | Design year | 1995 |
| 2. | Horizontal min. design speed | 60 mph at nose |
| 3. | Vertical min. design speed | 60 mph at nose |
| 4. | Access control | Full |
| 5. | Number of lanes | 1 at nose;
flared at cross-
road as necess-
ary. |
| 6. | Lane width | 12 feet |
| 7. | Shoulder width - Left | 2 feet |
| 8. | Shoulder width - Right | 8 feet |
| 9. | Maximum gradient | 6% |
| 10. | Slope rates | Same as free-
way. |
| 11. | Cross drainage design frequency | 50 years |
| 12. | Channel design frequency | 50 years |
| 13. | Pavement drainage design frequency | 10 years |

C. Crossroads

- | | | |
|-----|------------------------------------|---------------------------|
| 1. | Design year | 1995 |
| 2. | Horizontal min. design speed | 50 mph |
| 3. | Vertical min. design speed | 50 mph |
| 4. | Access control | Varies |
| 5. | Number of lanes | |
| | Gilbert Road | 6 |
| | All other crossroads | 4 |
| 6. | Lane width | 12 feet |
| 7. | Shoulder width | Varies |
| 8. | Maximum gradient | 6% |
| 9. | Slope standards | C-2.01 |
| 10. | Maximum slope rate (cuts) | 3:1 |
| 11. | Maximum slope rate (fills) | 4:1 |
| 12. | Pavement Drainage Design Frequency | |
| | a. Grade Separations | Per local
jurisdiction |
| | b. Interchanges | 10 years |

2. Horizontal Alignment

The horizontal alignment of the proposed freeway is illustrated on Figures 5-a through 5-h, Appendix B. From Gilbert Road to Power Road the median centerline follows the midsection line between Base-line Road and Southern Avenue. Easterly from Power Road the alignment continues at substantially the same bearing, however, due to a southerly shift of the midsection line at the township boundary (Power Road), the median centerline will be located 200 feet north of the midsection line.

Alternate alignments were studied which shifted the centerline 300 feet north of the midsection line between Gilbert Road and the RWCD Canal in an effort to avoid wells and irrigation facilities. These alternates were rejected on the basis of being economically unjustifiable.

3. Vertical Alignment

During the course of the study, many plausible profiles were examined relative to redetermined criteria and physical constraints. The resulting profile, as illustrated in Figures 5-a through 5-h, Appendix B, represents the most viable solution which is compatible with the corridor characteristics and the freeway criteria.

A general description of the profile is as follows:

A. From Gilbert Road to the Roosevelt Water Conservation District (RWCD) Canal (5 miles), the freeway will be generally

depressed 14 feet but will pass over the canals at 20 feet elevated. Crossroads at Gilbert Road, 24th Street, Val Vista Road and Higley Road will pass over the freeway at 10 to 12 feet above natural ground. Crossroads at Lindsay Road and Greenfield Road will pass under the freeway at existing grade and 4 feet depressed respectively.

B. Between the RWCD Canal and Ellsworth Road (4 miles), the freeway will continue to maintain a depressed profile of varying depth except at existing drainways where the freeway will be elevated about 5 feet above ground. Crossroads will pass over the freeway at 10 to 12 feet above natural ground.

C. East of Ellsworth Road, to the proposed Central Arizona Project (CAP) Aqueduct (approximately 2.8 miles), the freeway will be typically elevated 4 to 5 feet but will dip to 14 feet depressed at the crossroads. Crossroads within this segment will pass over the freeway at 10 to 12 feet above ground.

D. From the CAP Aqueduct to U.S. 60, 80 & 89 (approximately 4.7 miles), the freeway will continue to be elevated 4 to 5 feet and will pass over the crossroads at 14 feet above ground. Within this segment, the crossroads will be depressed approximately 10 feet at the freeway.

Due to the precedent set concerning canal crossing options in a preceding segment of the freeway, both a fully elevated crossing (20 feet elevated, allowing 13.5 feet clearance) or a fully depressed crossing (35 feet depressed) were evaluated. Both types of crossings included allowances for maintenance roads 20 feet wide each side of the canal. The elevated crossing was selected as being the more feasible due to the proximity of proposed floodways of considerable width likely to be developed immediately east of the Consolidated and Eastern Canals at some point in the future. Due to a considerably shorter development time frame and proposed dimensions (250± feet in width) for the Maricopa County Flood Control District floodway adjacent to the east side of the RWCD Canal, the elevated crossing alternate was also selected for this location. Since the preceding constraints were not a factor in the crossing of the Central Arizona Project Aqueduct, it was determined that the desired clearance requirements of 4.5 feet above the waterline, as indicated by the U.S. Bureau of Reclamation, would be met by the geometrics of the freeway being elevated 14 feet at Meridian Road.

Further discussion of specific profile alternates are found in the Concept Evaluation Report.

4. Drainage

During the course of this study, several reports concerning local and area wide drainage and flood control concepts were examined.

Although certain plans or portions of them are well advanced toward early implementation, others are in the very early stages of firm concept development, often contingent upon inter-jurisdictional influences. Some of the drainage plans that were considered in relation to the proposed freeway are: (1) the City of Mesa Drainage Plan which concerns the corridor area from Gilbert Road to Higley Road, (2) the Southeast Maricopa County Storm Drain and Flood Control Study, and (3) the Central Arizona Project and associated retardance structures near Meridian Road.

The freeway drainage concept offered below has been developed with consideration given to the various features of these plans so that a feasible and operational highway drainage system could, at a later date, be incorporated into the ultimate area-wide system. Due to possible changes in design criteria and the progress of the other drainage and flood control plans, it will be necessary to reevaluate the validity of the freeway drainage concept features upon reaching the design stages.

The present drainage patterns along the corridor vary but tend to form three distinct areas for analysis based on land activity, both present and future. In the case of one area, channelization and drainage control measures are already in existence (see Figure 6, Appendix B).

1. In the westernmost area, Gilbert Road to the RWCD Canal, the drainage will be contained in a parallel channel on the north

side of the freeway, part of which will result from cooperative efforts between the City of Mesa and ADOT. Freeway runoff will be collected and pumped into the channel through this area.

2. Between the RWCD Canal and Ellsworth Road, overland runoff will be contained in a parallel channel on the north side of the freeway partially discharging into existing channels for passage to the south. The volumes discharged in this manner will be controlled so that the capacities of the existing channels will not be exceeded. The parallel channel will terminate at the Maricopa County Flood Control District floodway on the east side of the RWCD Canal.

3. East of Ellsworth Road, which remains essentially raw desert, structures will maintain the existing drainage patterns wherever possible. Due to depression of the crossroads, some pumping and local channelization will be required.

5. Traffic Interchange and Grade Separation Location

Through the evaluation of criteria such as projected traffic demands, surface street capacities, desirable freeway operations, and community service, a preliminary interchange spacing was established. This spacing was 2 mile intervals from Gilbert Road to Power Road and from Ellsworth Road to U.S. 60. A 3 mile interval occurs between Power Road and Ellsworth Road.

An alternate spacing of one mile intervals was also examined, by request, between Gilbert Road and Higley Road. This spacing

necessitated the addition of interchanges at Lindsay Road and Greenfield Road. This alternate was rejected because additional traffic studies did not show an appreciable difference in the projected volumes (overloading) on the surface streets and because of the proximity of canals which would dictate undesirable interchange geometrics.

The location of grade separations was determined to be at all section line roads having the potential of developing into multi-lane arterial streets exclusive of the interchange locations. An exception is at Recker Road where it is understood that there are no plans for making this road continuous across the RWCD Canal.

An alternate to this arrangement consisted of locating grade separations on midsection roads between Gilber Road and Higley Road. Study of this alternate indicated that such an arrangement would be feasible and compatible with other freeway characteristics while providing a greater degree of cross freeway community cohesion. It is recommended, therefore, that provisions would be made such that the half-mile grade separations may be installed at some time in the future but as independent elements of the system. However, the 24th Street grade separation, one half mile east of Gilbert Road, because of present development, will be included in the initial freeway facility (see Figure 7).

Potential frontage roads between Gilbert Road and the RWCD Canal and the half mile grade separations are considered to be a viable alternative to additional interchanges of less than desirable geometrics.

6. Right of Way

From Gilbert Road east to Power Road, the basic right of way width to the north of the median centerline (midsection line) will be 400 feet. Due to fill slope requirements, the right of way width to the south of the median centerline will vary between 200 feet and 300 feet. The additional width occurs in the vicinity of the canal crossings. The right of way will be adequate to provide for drainage channels, interchange ramps, noise attenuation berms and future frontage roads west of the RWCD Canal.

Between Power Road and U.S. 60, the right of way width will be 600 feet, 400 feet to the north of the median centerline and 200 feet to the south with flaring on the south side for interchanges. East of Power Road, the south right of way limit will be at the midsection line except at interchange areas. Right of way for the interchange at U.S. 60 will be a function of the interchange geometrics but adequate to include all slopes and drainage facilities.

The limit of access control at interchange crossroads will be

extended to 300 feet beyond the end of the return radius of the ramps. On non-interchange crossroads, the control of access limit will be at the freeway right of way or extended to the touch-down point, whichever is greater (see Figure 8, Appendix B).

7. Typical Section

The typical section of the roadway is shown in Figure 9, Appendix B. Although these sections illustrate several elements, the configuration of the basic roadway features remains unchanged. The roadway will consist of four lanes, two in each direction, each twelve feet wide, with shoulders of 4 feet on the left and 10 feet on the right. The unpaved median width will be thirty-eight feet. Standard cross slopes and median slopes will be utilized.

In view of the anticipated urbanization of the surrounding areas, the urban spacing of travelways (70 feet centerline to centerline) was recommended. This spacing is sufficient for an additional lane on the median side of each travelway as may be required in the future. The resulting median width (14 feet) would be sufficient to include the median barrier section.

8. Amenities

The anticipated urban environment of the freeway necessitates consideration of additional factors such as landscaping and noise abatement. Landscaping treatment will be commensurate with the availability of water and the character of adjacent land uses.

Preliminary noise studies show that noise abatement features will be required along various reaches of this portion of the freeway. Generally these features will consist of berms or combinations of berm and wall varying in height depending upon the location of the freeway profile grade in relation to the adjacent ground line. Since the projected degree of urbanization and projected freeway traffic decreases toward the east, the need for noise abatement becomes less demanding. Also, due to the width of the right of way, noise levels at the right of way line are not as great as one might anticipate. Figure 9 shows the placement of the berms in various freeway configurations.

III. . ECONOMICAL, SOCIAL, AND ENVIRONMENTAL EFFECTS

The tendency for community growth to follow the development of a transportation corridor is readily apparent in respect to the Super - stition Freeway. The influence tends to draw and center development activity well in advance of construction. Evidence of such a condition can be observed along the corridor of this section of the freeway where various types of development exist, are under construction, or are in some stage of planning.

Consideration of factors associated with the anticipated environment adjacent to the freeway logically necessitates the freeway to be a positive feature of the community relative to both service and influence. In an effort to attain this goal, many concept elements were examined relative to their effect on the anticipated community values of the future.

A comprehensive evaluation of the general corridor appears in the Environmental Impact Statement. Since agriculture is presently the major land use activity other than raw desert within the study area little effect is anticipated relative to public facilities, community cohesion, or displacement of people. The establishment of the freeway concept will enable planning and zoning agencies to structure community development to achieve maximum benefits from the facility in terms of service and to minimize detrimental effects to sensitive

adjacent features such as hospitals, schools, churches, parks and residential lots.

APPENDIX A
CORRESPONDENCE AND CONTACTS

1. October 18, 1973

Requested, by letter, Maricopa County Highway Department's comments concerning location and features of interchanges and grade separations, profile, and drainage treatment. Information received January 23, 1974.

2. January 23, 1974

Letter to City of Mesa requesting data to aid in the location of interchanges and grade separations within the jurisdictional area. Information received February 6, 1974.

3. February 1, 1974

Letter to Pinal County Engineer requesting data to aid in the location of interchanges and grade separations within Pinal County.

4. October 17, 1974

Contacted the Maricopa County Flood Control District and obtained information available concerning the floodway on the eastern side of the RWCD Canal such as right of way and tentative discharge (Q) at freeway.

5. October 17, 1974

Contacted the Roosevelt Water Conservation District and obtained information concerning canal and lateral right of way.

6. October 18, 1974

Contacted the Bureau of Reclamation requesting information concerning the location, plan, profile, typical section, discharge, and right of way of the CAP Aqueduct. Information received by

letter on October 25, 1974.

7. October 20, 1974

Contacted Maricopa County Planning and Zoning Department and obtained information concerning developments in various stages along the corridor.

8. October 29, 1974

Contacted City of Mesa Planning and Zoning Department and obtained information concerning developments in various stages along the corridor.

9. November 1, 1974

Contacted Bureau of Reclamation and obtained information concerning clearance requirements for the freeway over the CAP Aqueduct. Also requested the location and quantities involved in pass through drainage relative to the aqueduct. Information received on November 21, 1974.

10. November 7, 1974

Meeting with representatives from the City of Mesa during which was presented the concept of the freeway as developed to this point in time. Items discussed included the spacing of interchanges and grade separations, drainage, canal crossings, and future development of the area.

11. November 8, 1974

Transmitted by letter to Pinal County Engineer, current

concept features of the freeway concerning location of interchanges and grade separations, and right of way information.

12. December 26, 1974

Meeting with representatives from Pinal County during which the freeway concept was presented. Items discussed included interchange location, development trends and drainage.

13. May 6, 1975

Public Forum held by ADOT in Apache Junction.

APPENDIX B

Figure 3	Aerial Photographs
Figure 4	Traffic Volumes
Figure 5	Concept Plan and Profile
Figure 6	Drainage Concepts
Figure 7	Traffic Interchange and Grade Separation Locations
Figure 8	Control of Access Limits
Figure 9	Typical Sections

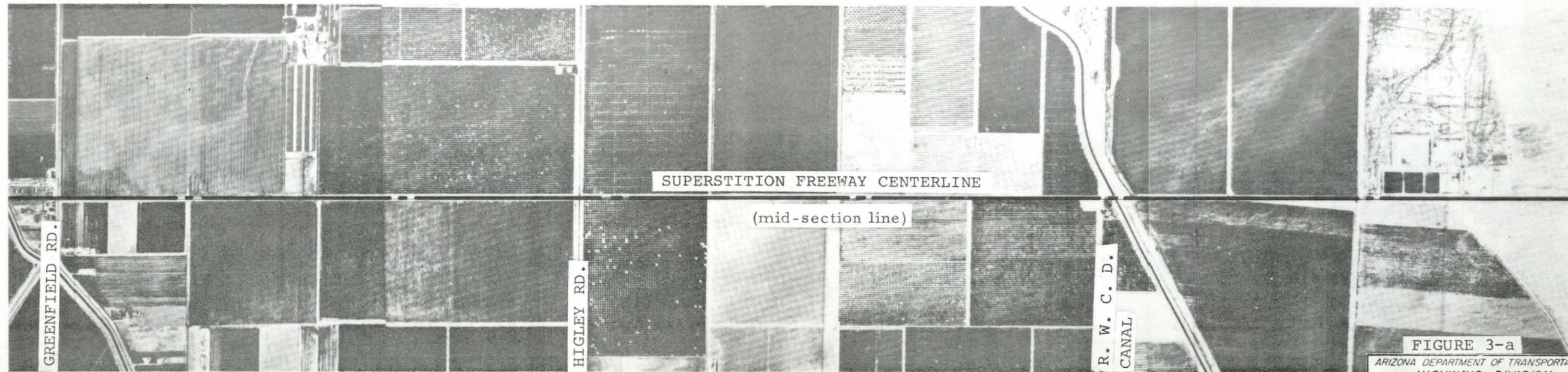
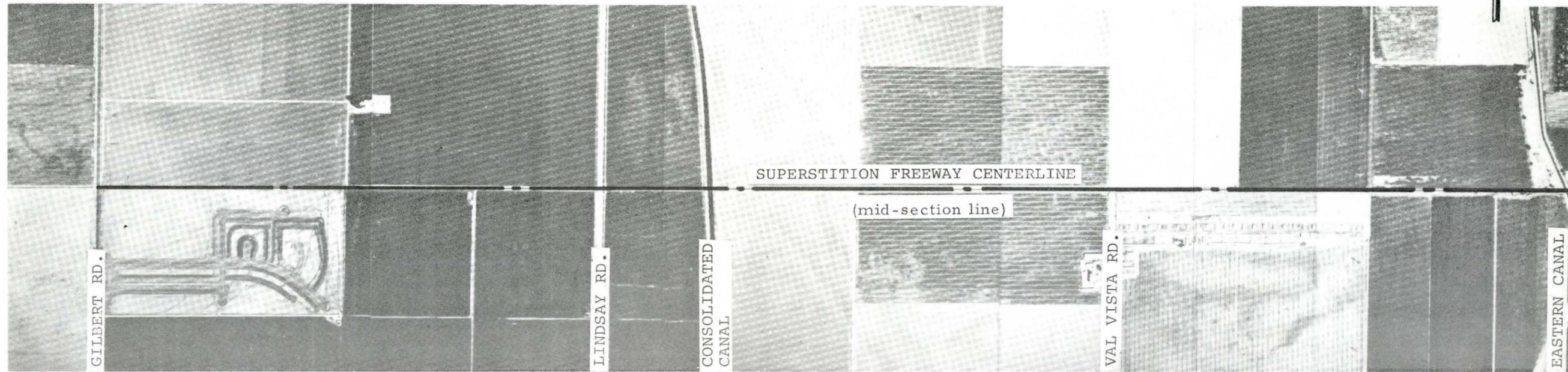


FIGURE 3-a

ARIZONA DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
HIGHWAY PLANS SERVICES

SUPERSTITION FREEWAY
STATE ROUTE 360
GILBERT ROAD to U.S. ROUTE 60-80-89

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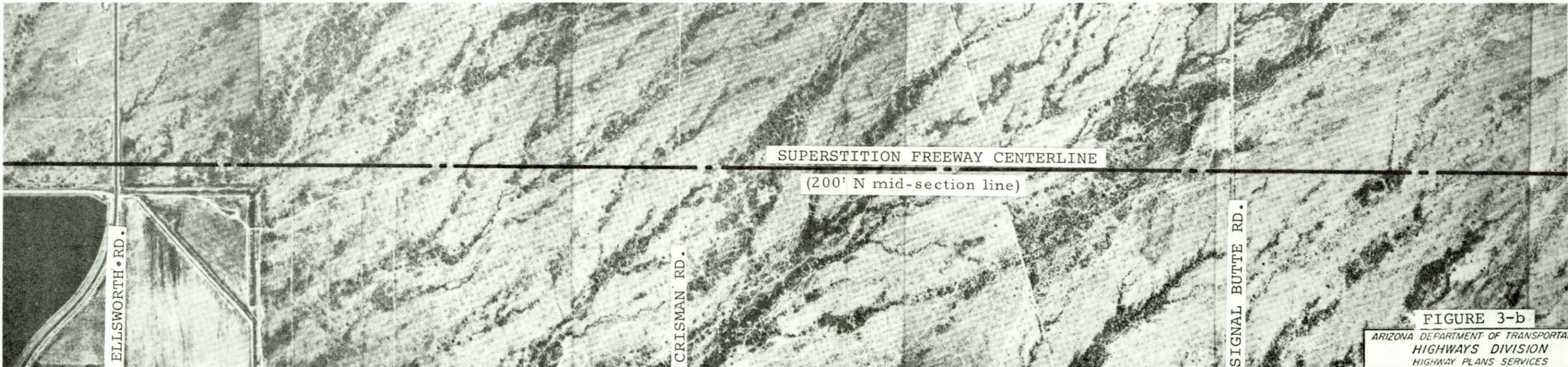
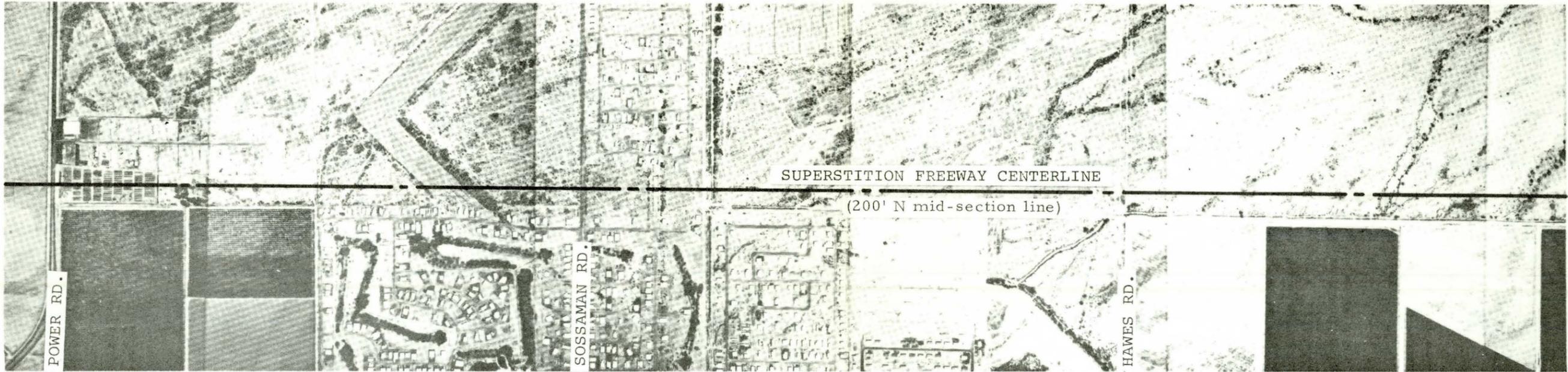


FIGURE 3-b

ARIZONA DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
HIGHWAY PLANS SERVICES

SUPERSTITION FREEWAY
STATE ROUTE 360
GILBERT ROAD to U.S. ROUTE 60-80-89

DRAWN	V2/6/79	RSH	REVISIONS
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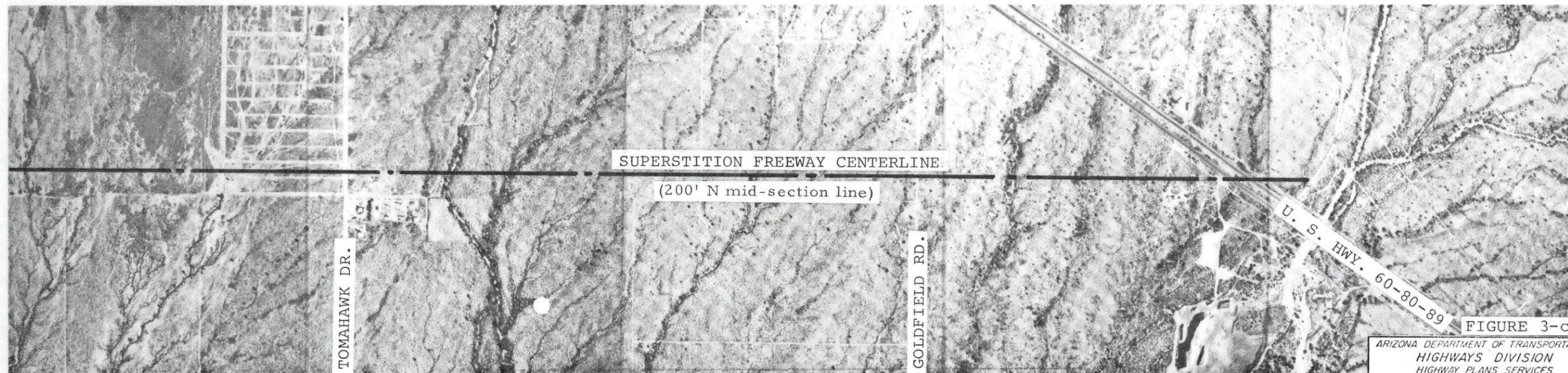
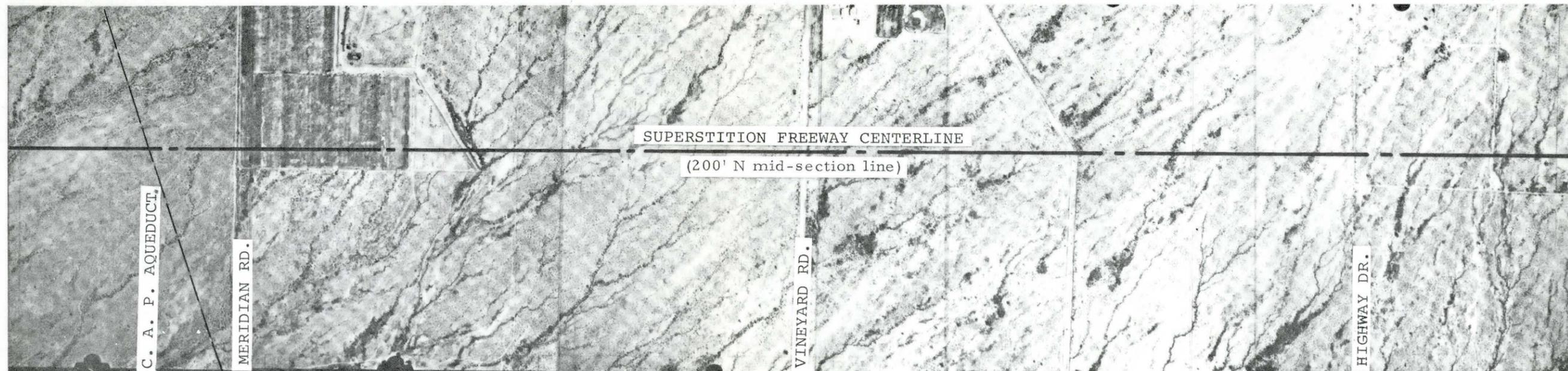
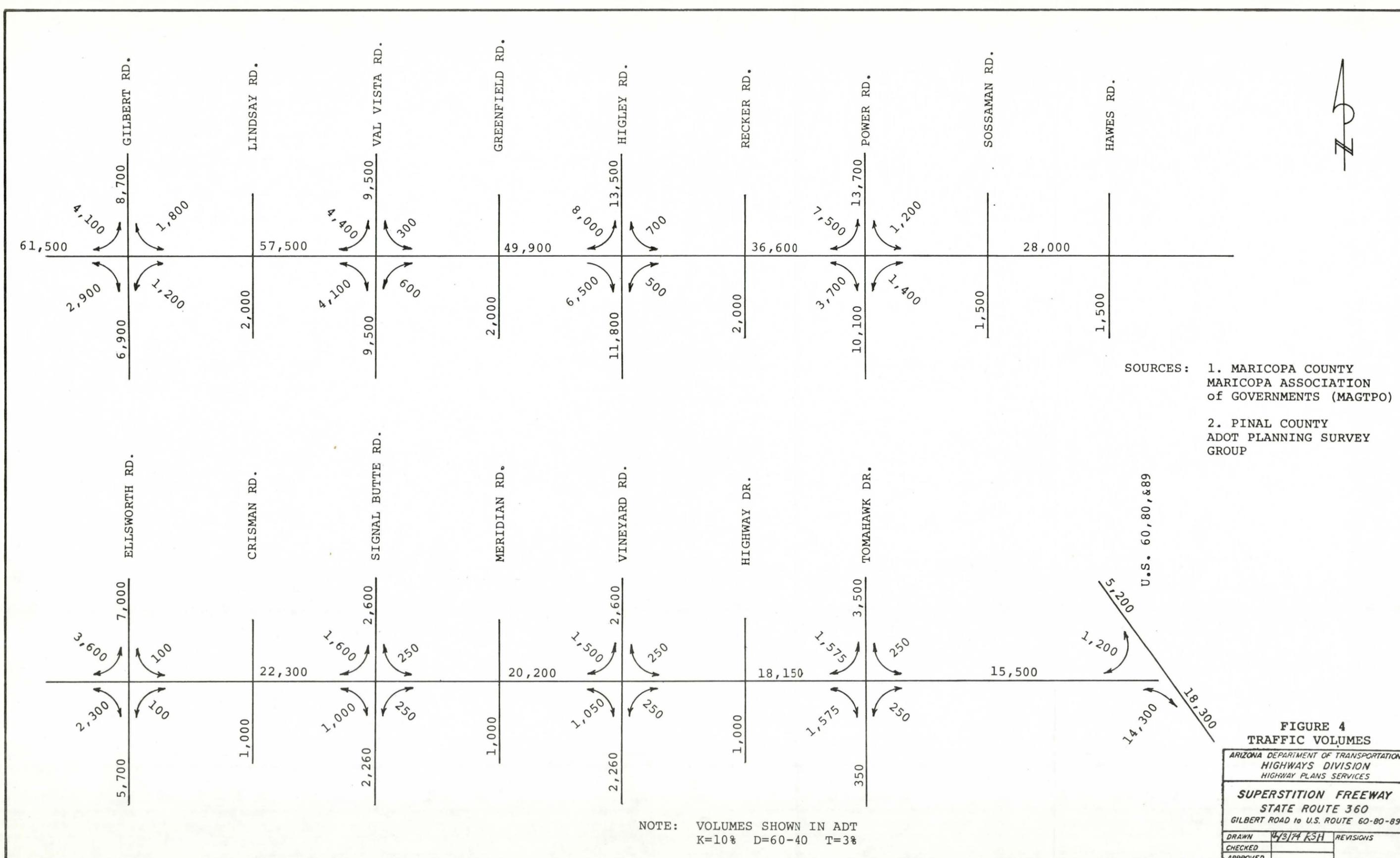


FIGURE 3-c

ARIZONA DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
HIGHWAY PLANS SERVICES

SUPERSTITION FREEWAY
STATE ROUTE 360
GILBERT ROAD to U.S. ROUTE 60-80-89

DRAWN	12/5/74 RH	REVISIONS
CHECKED		
APPROVED		



SOURCES: 1. MARICOPA COUNTY MARICOPA ASSOCIATION OF GOVERNMENTS (MAGTPO)
2. PINAL COUNTY ADOT PLANNING SURVEY GROUP

NOTE: VOLUMES SHOWN IN ADT
K=10% D=60-40 T=3%

FIGURE 4
TRAFFIC VOLUMES

ARIZONA DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
HIGHWAY PLANS SERVICES

SUPERSTITION FREEWAY
STATE ROUTE 360
GILBERT ROAD to U.S. ROUTE 60-80-89

DRAWN	4/3/74 KSH	REVISIONS
CHECKED		
APPROVED		

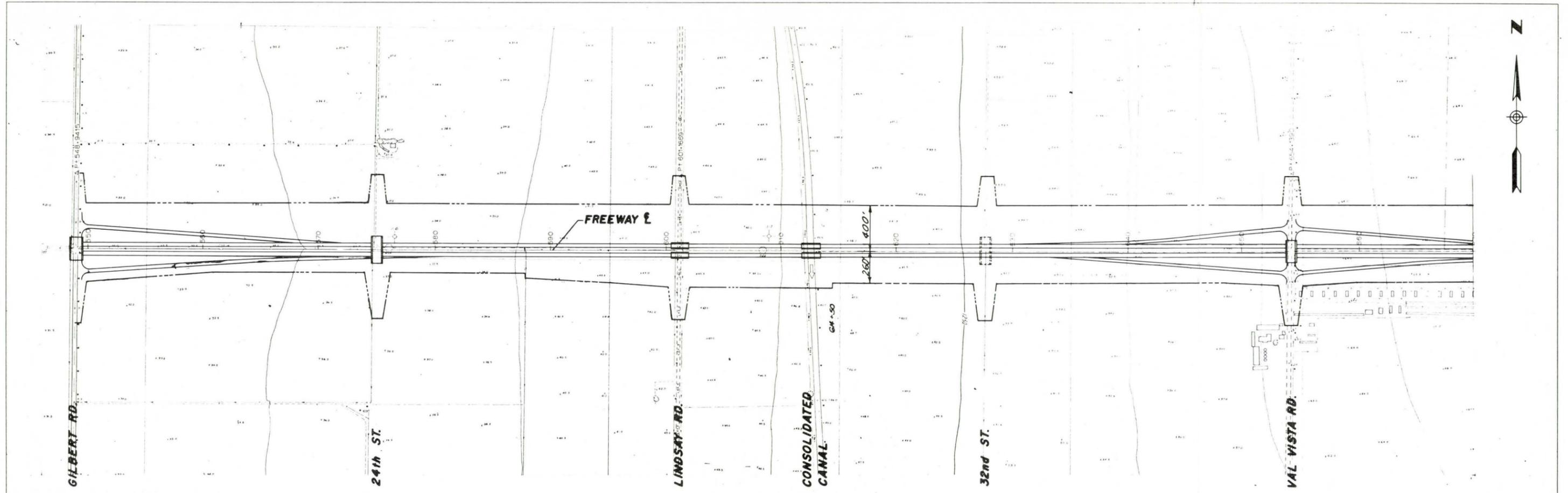


FIGURE 5-a

ARIZONA DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
HIGHWAY PLANS SERVICES

SUPERSTITION FREEWAY
STATE ROUTE 360
GILBERT ROAD TO U.S. ROUTE 60-80-89

DRAWN	12/5/74	RSH	REVISIONS
CHECKED			
APPROVED			SHEET 1 OF 8

REDUCED SIZE
DO NOT SCALE



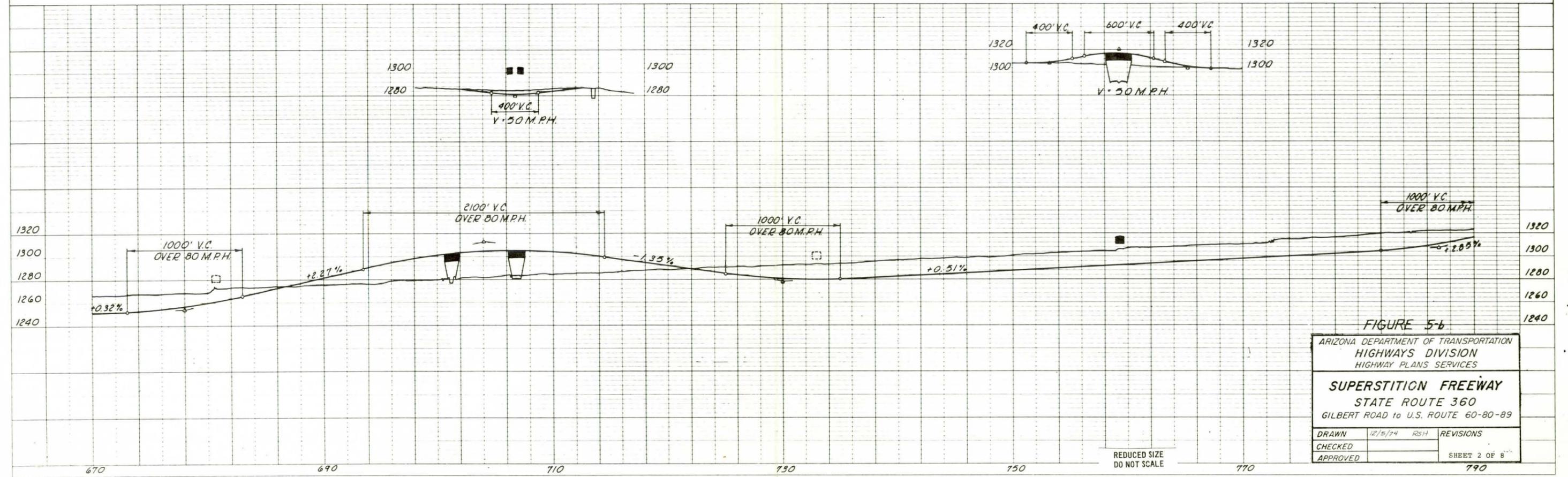
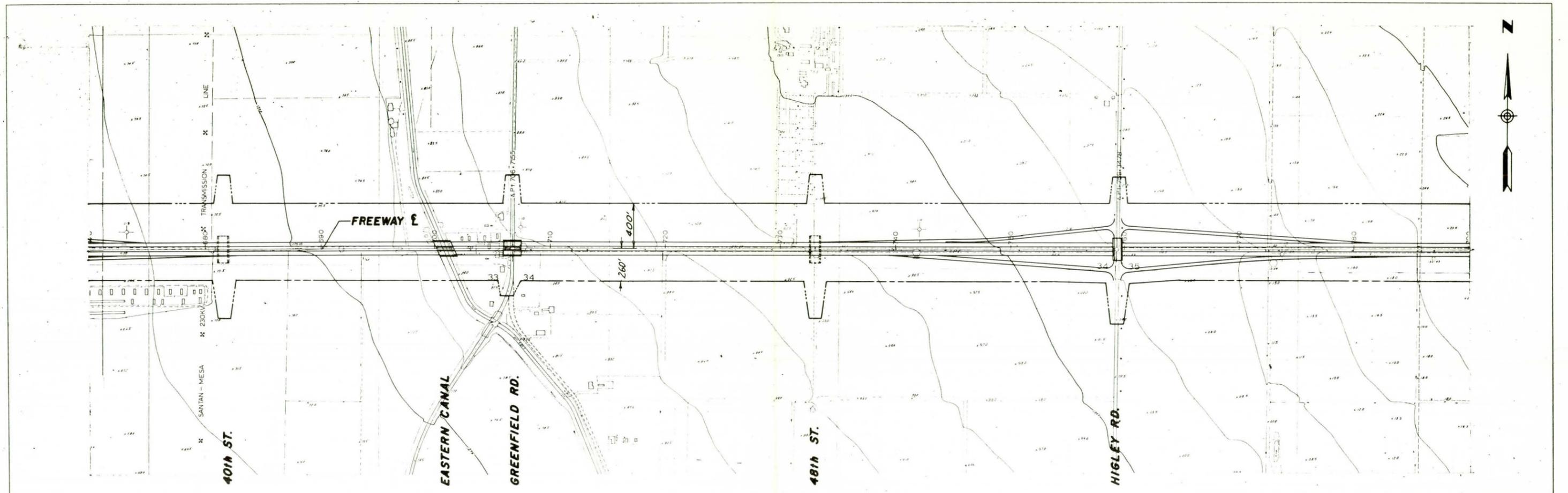


FIGURE 5-b
 ARIZONA DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
 HIGHWAY PLANS SERVICES
SUPERSTITION FREEWAY
 STATE ROUTE 360
 GILBERT ROAD to U.S. ROUTE 60-80-89
 DRAWN 12/5/74 RSH REVISIONS
 CHECKED
 APPROVED SHEET 2 OF 8
 790

REDUCED SIZE
 DO NOT SCALE

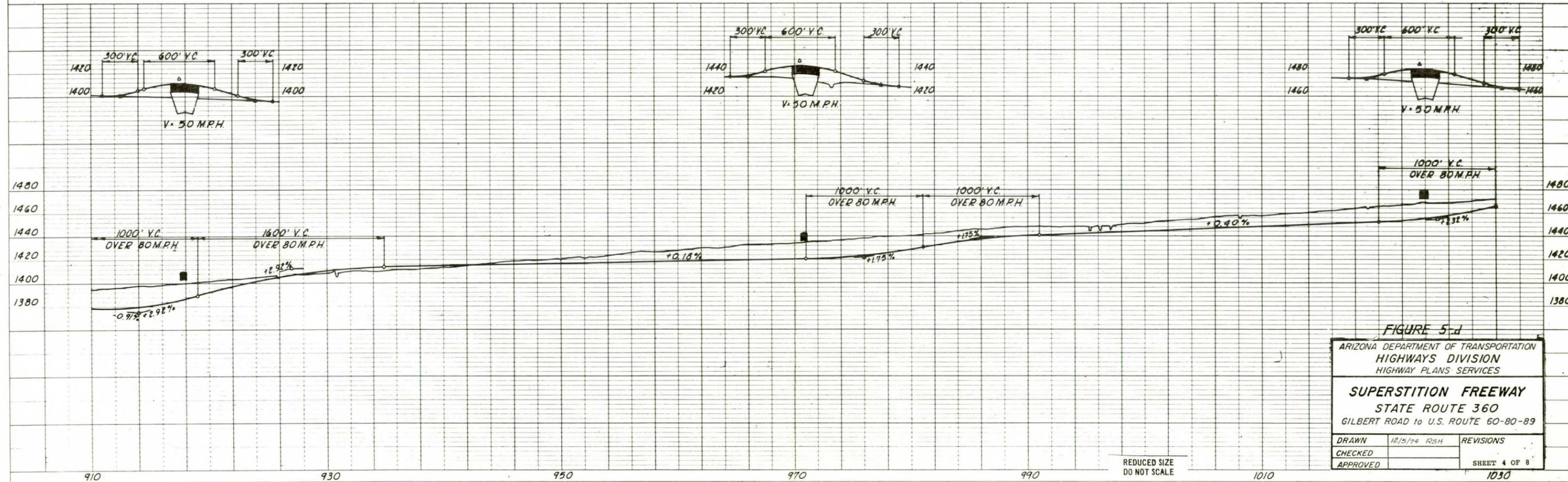
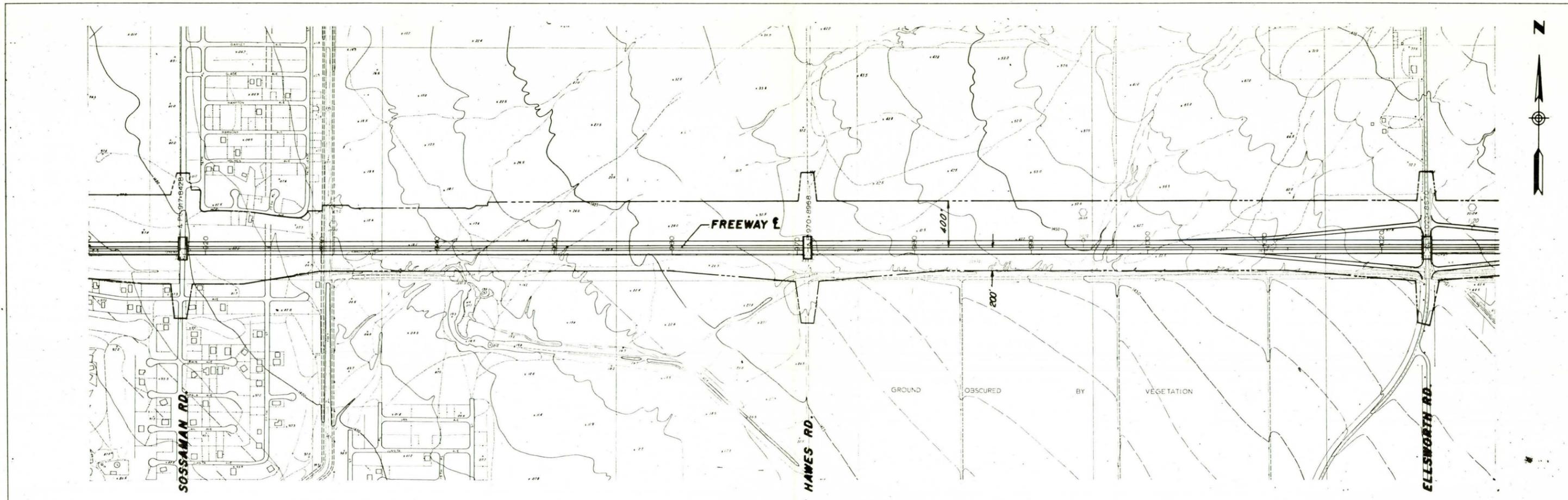


FIGURE 5-1
 ARIZONA DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
 HIGHWAY PLANS SERVICES
SUPERSTITION FREEWAY
 STATE ROUTE 360
 GILBERT ROAD TO U.S. ROUTE 60-80-89

DRAWN	12/5/74 RSH	REVISIONS
CHECKED		
APPROVED		SHEET 4 OF 8

REDUCED SIZE
DO NOT SCALE

910

930

950

970

990

1010

1030

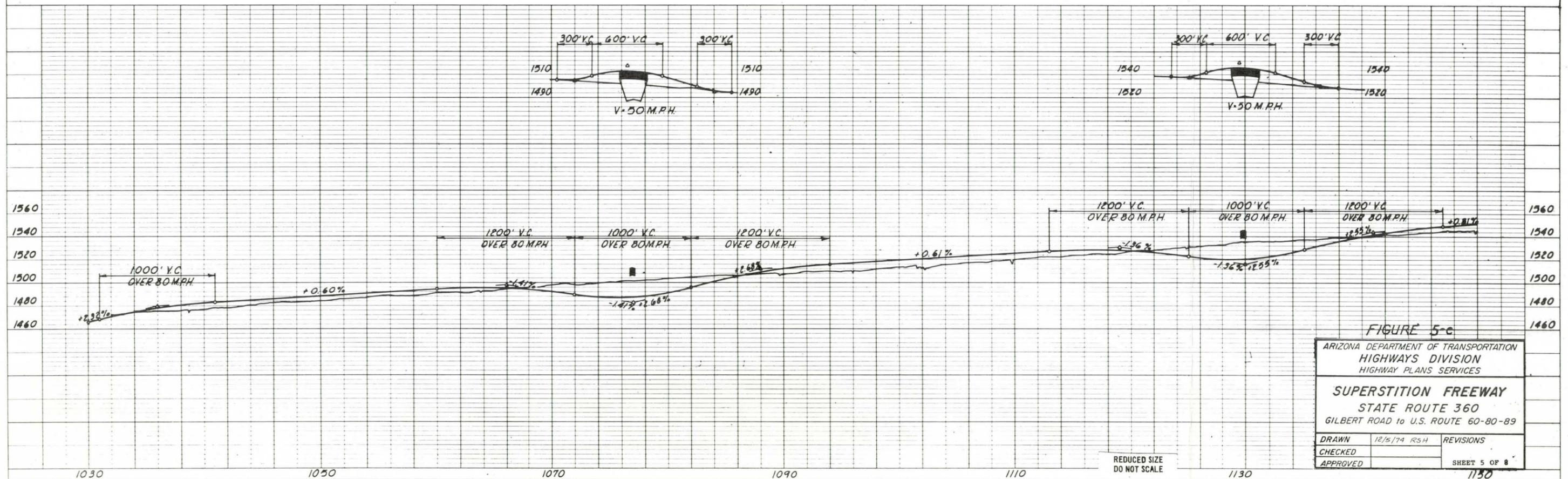
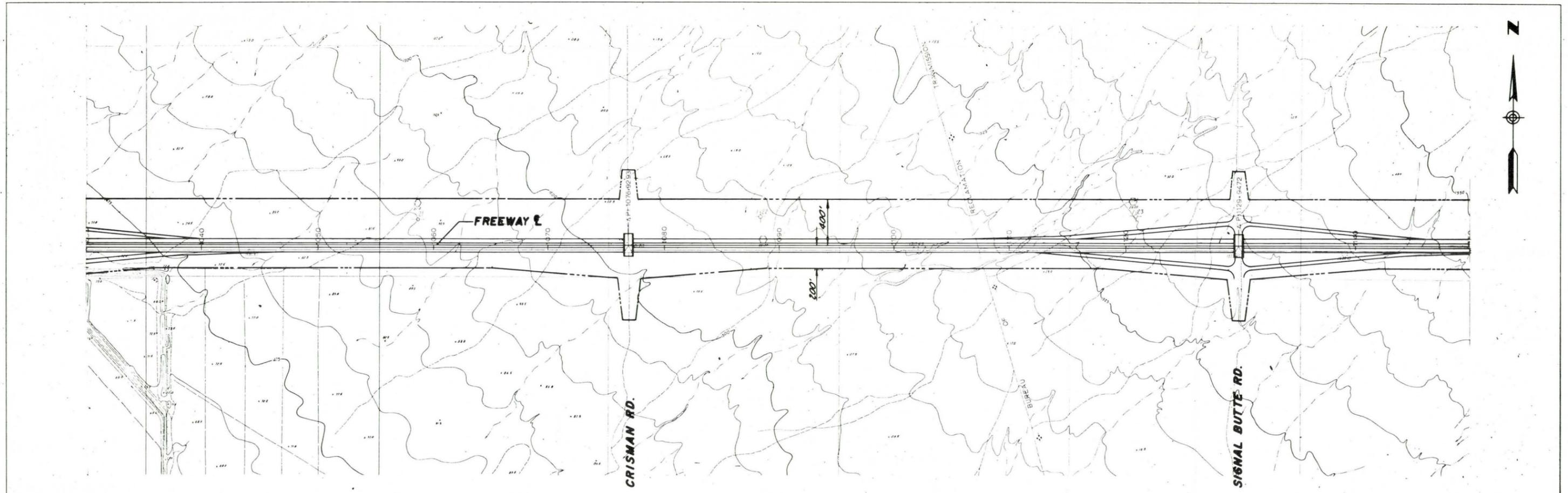


FIGURE 5-c

ARIZONA DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
HIGHWAY PLANS SERVICES

SUPERSTITION FREEWAY
STATE ROUTE 360
GILBERT ROAD to U.S. ROUTE 60-80-89

DRAWN	12/5/74 RSH	REVISIONS
CHECKED		
APPROVED		

SHEET 5 OF 8

REDUCED SIZE
DO NOT SCALE

1030 1050 1070 1090 1110 1130

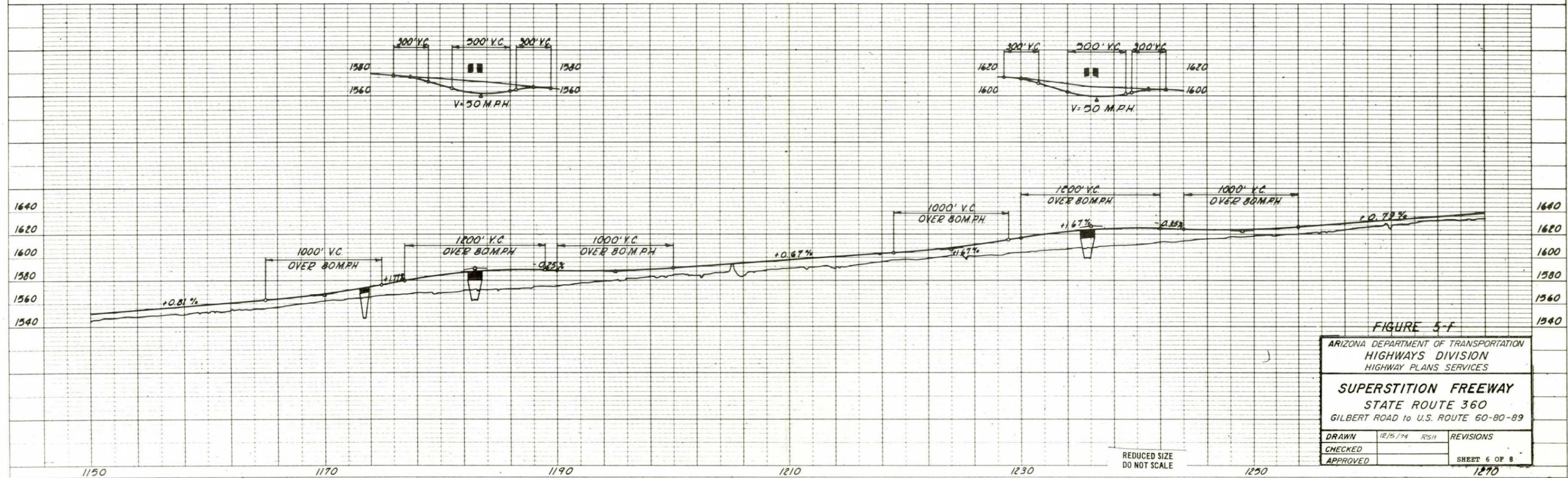
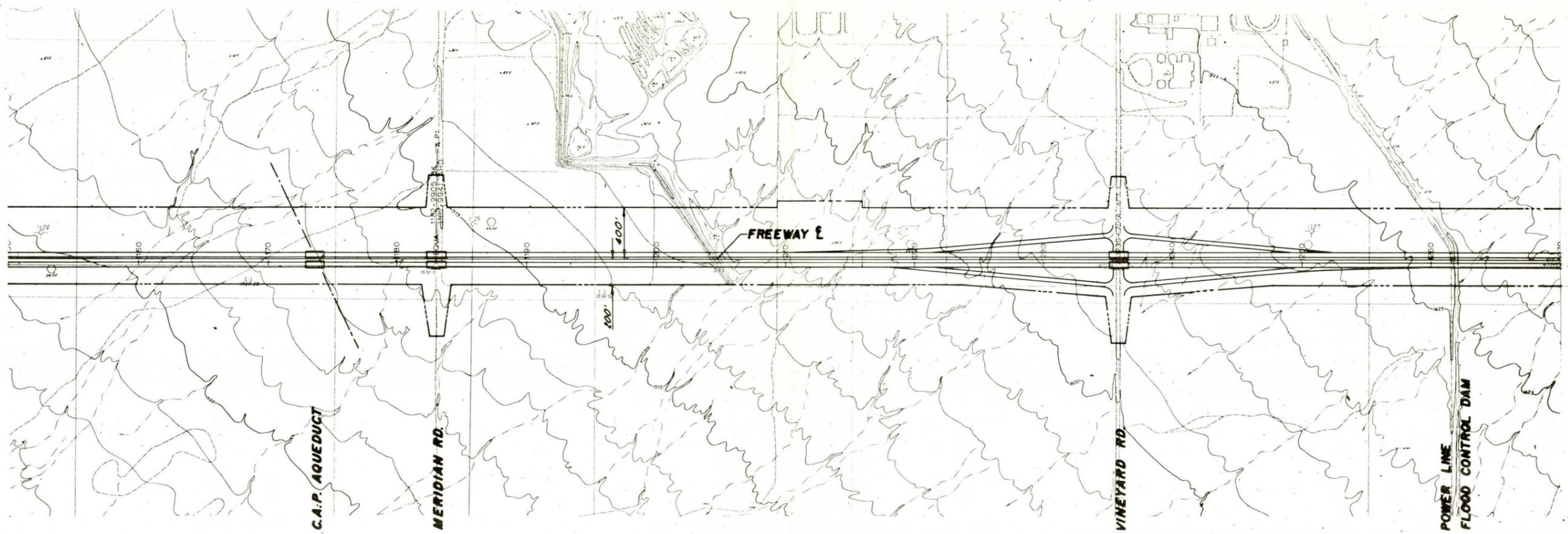


FIGURE 5-F

ARIZONA DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
HIGHWAY PLANS SERVICES

SUPERSTITION FREEWAY
STATE ROUTE 360
GILBERT ROAD to U.S. ROUTE 60-80-89

DRAWN	12/5/74	RSB	REVISIONS
CHECKED			
APPROVED			SHEET 6 OF 8

1270

REDUCED SIZE
DO NOT SCALE

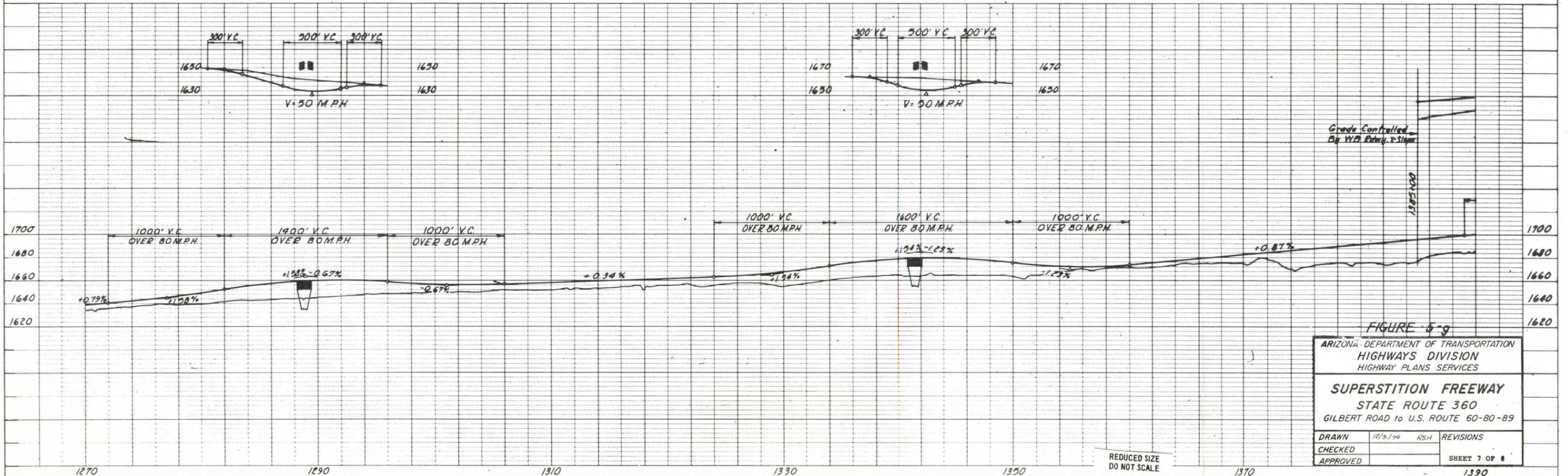
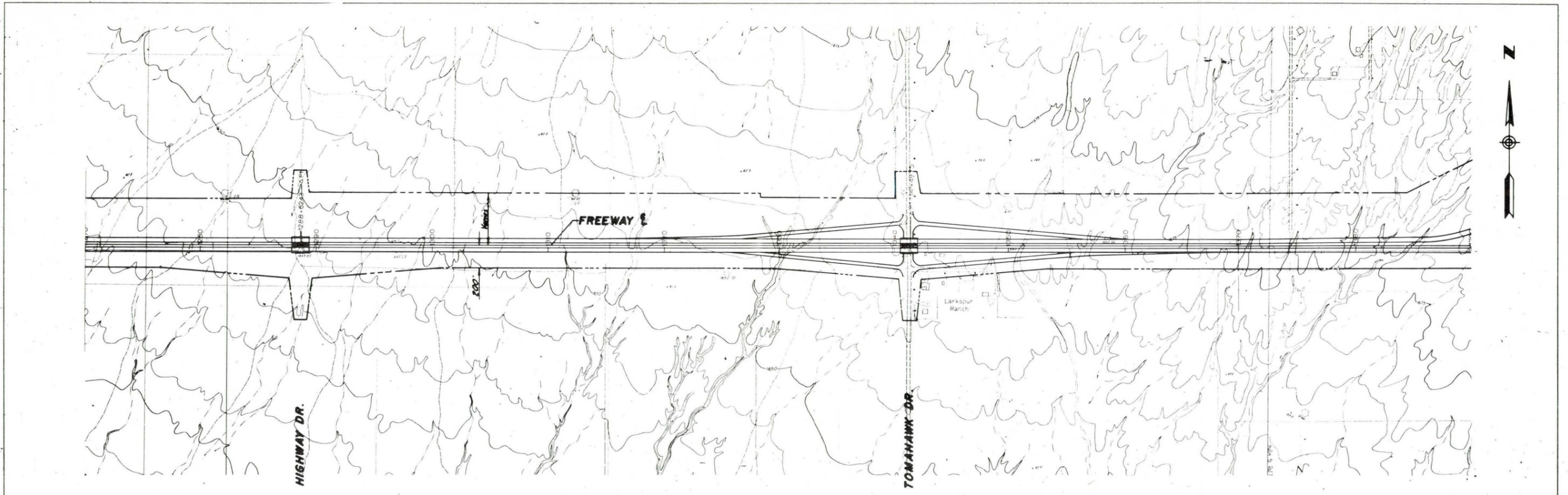


FIGURE 5-9

ARIZONA DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
HIGHWAY PLANS SERVICES

SUPERSTITION FREEWAY
STATE ROUTE 360
GILBERT ROAD to U.S. ROUTE 60-80-89

DRAWN	12/5/74	RSH	REVISIONS
CHECKED			
APPROVED			SHEET 7 OF 8

REDUCED SIZE
DO NOT SCALE

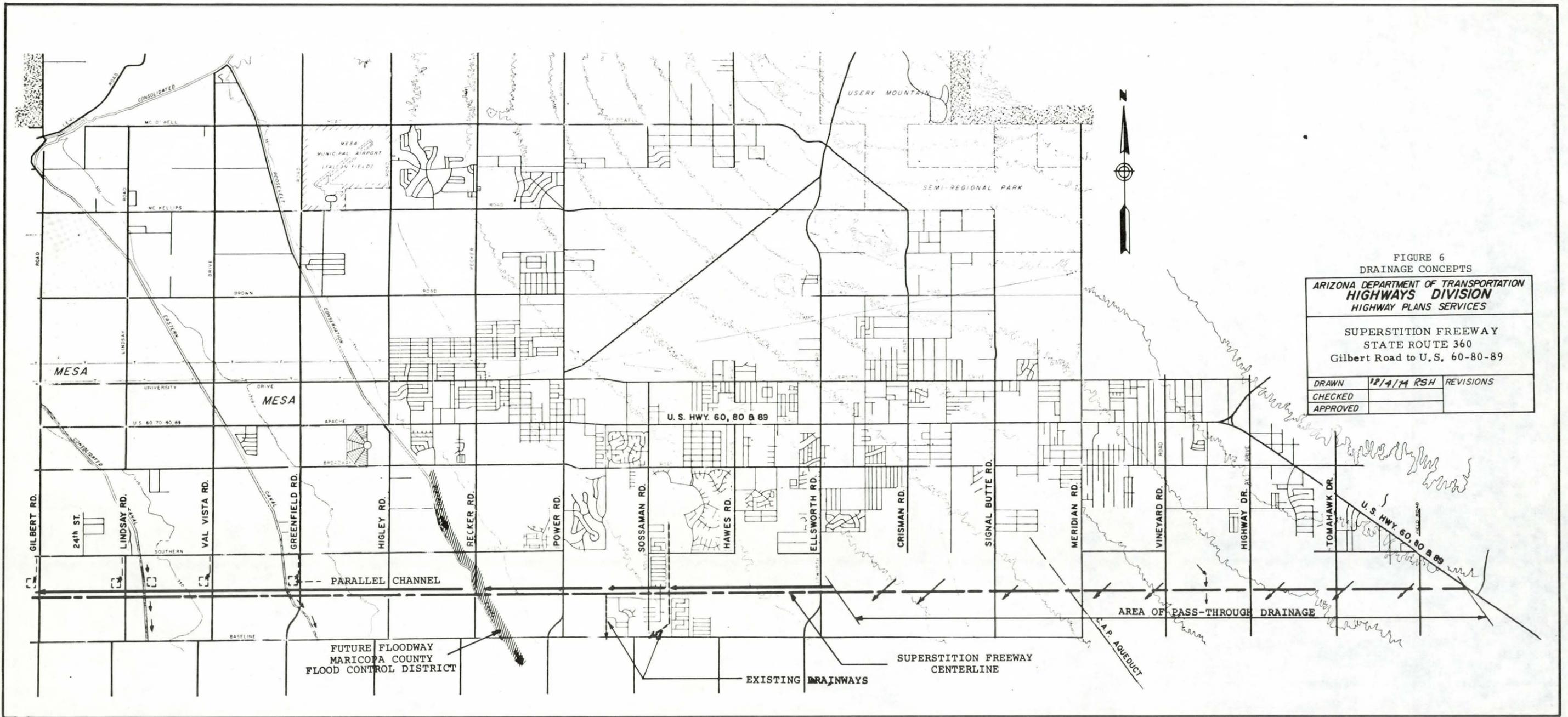
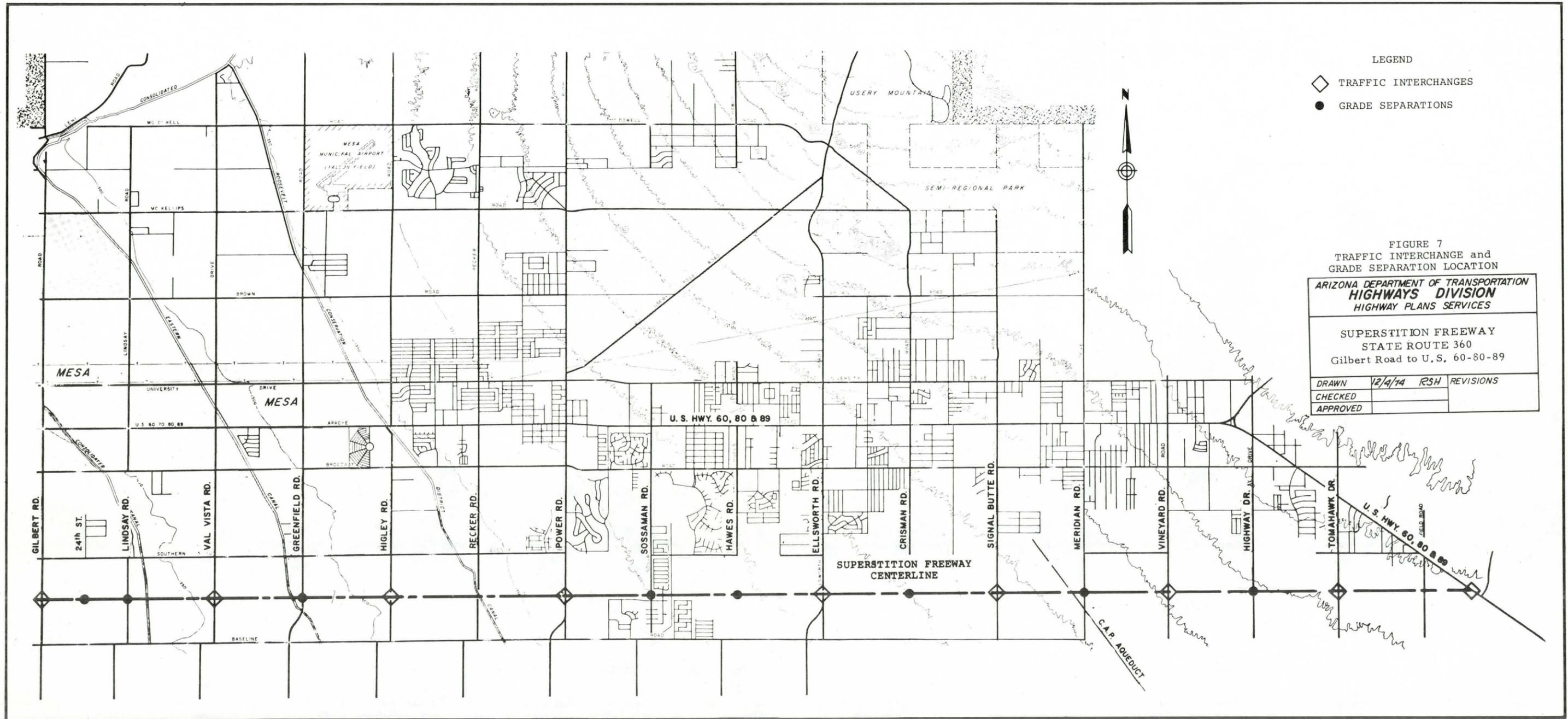


FIGURE 6
DRAINAGE CONCEPTS

ARIZONA DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
HIGHWAY PLANS SERVICES

SUPERSTITION FREEWAY
STATE ROUTE 360
Gilbert Road to U.S. 60-80-89

DRAWN	12/4/74 RSH	REVISIONS
CHECKED		
APPROVED		



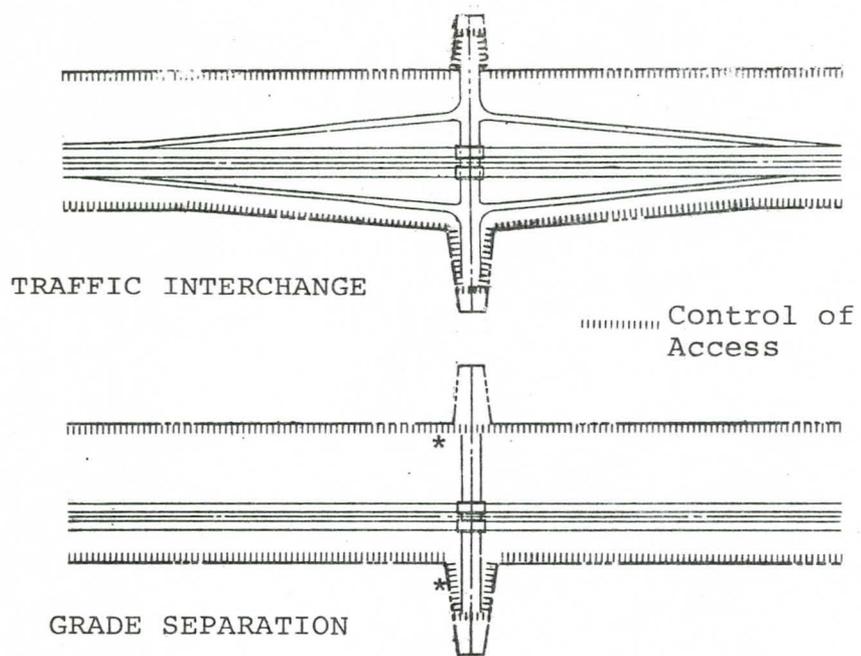


FIGURE 8

LIMIT of ACCESS CONTROL

* location determined by
profile considerations
see text

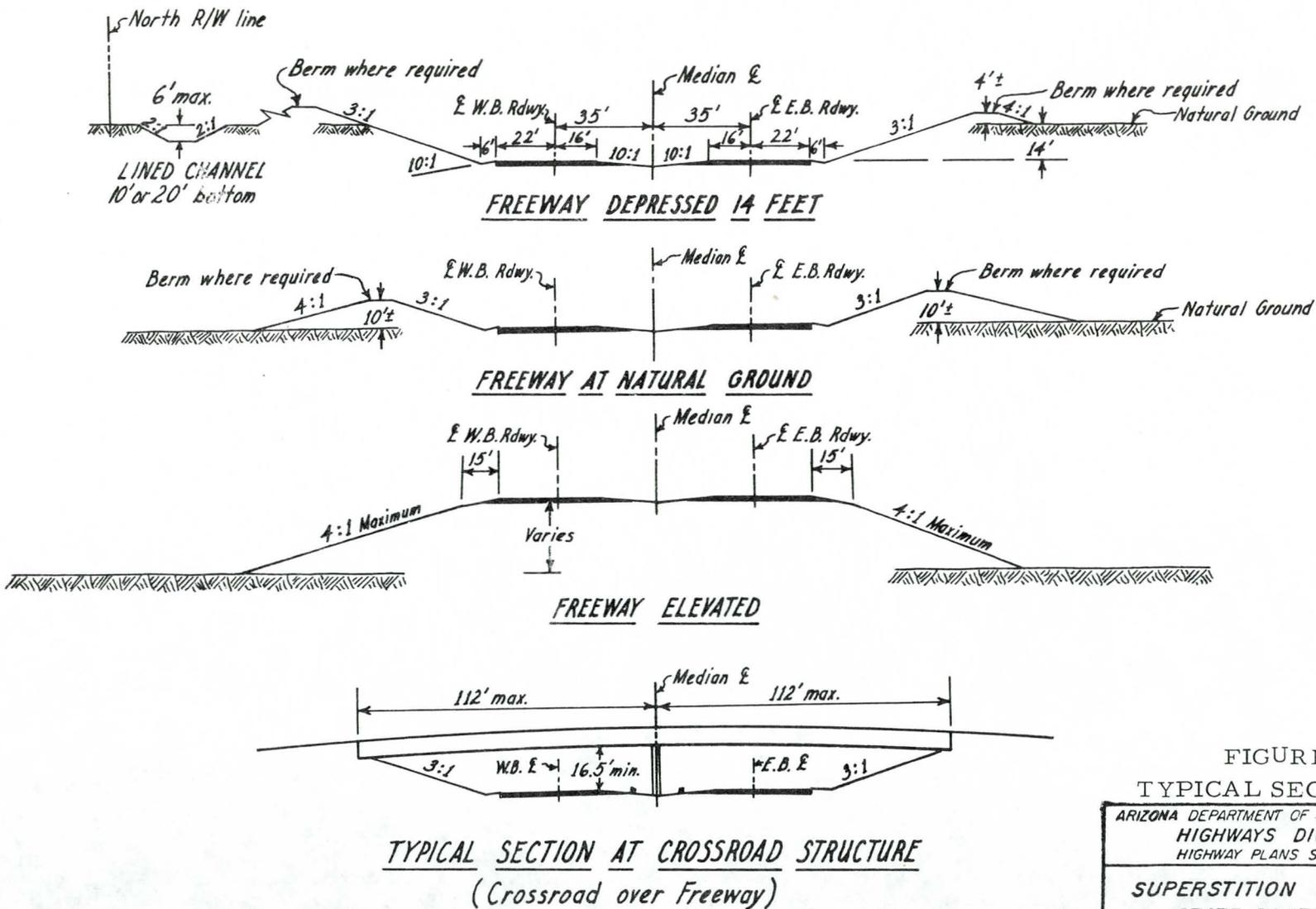


FIGURE 9

TYPICAL SECTIONS

ARIZONA DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
HIGHWAY PLANS SERVICES

SUPERSTITION FREEWAY
STATE ROUTE 360
GILBERT ROAD to U.S. ROUTE 60-80-89

DRAWN	12/2/74 RSH	REVISIONS
CHECKED		5/21/75 M.C.N.
APPROVED		