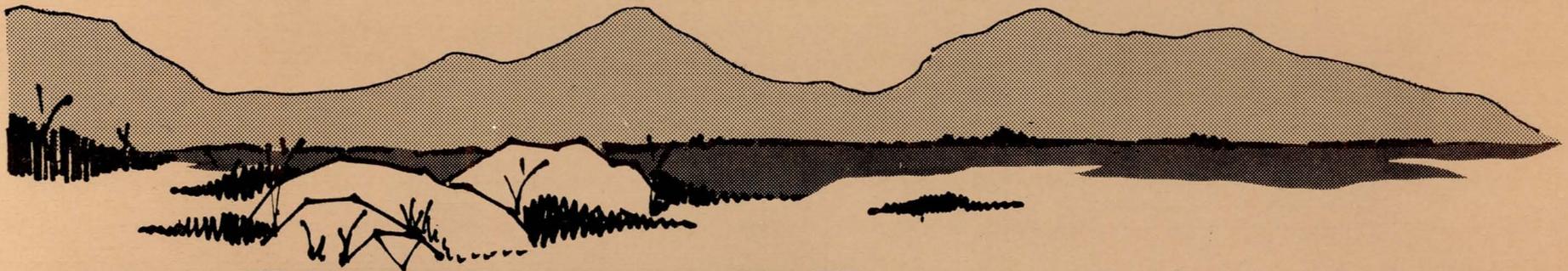


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ADOBE DAM

AESTHETIC TREATMENT ALTERNATIVES DOWNSTREAM FACE

BRIDGERS, TROLLER ASSOCIATES

FINAL DOCUMENT 05 JULY 1978

AESTHETIC TREATMENT ALTERNATIVES
FOR THE DOWNSTREAM FACE OF ADOBE DAM

WORK ORDER NO. 6 CONTRACT NO. DACW09-77 -C0014
U.S. ARMY CORPS OF ENGINEERS, LOS ANGELES DISTRICT

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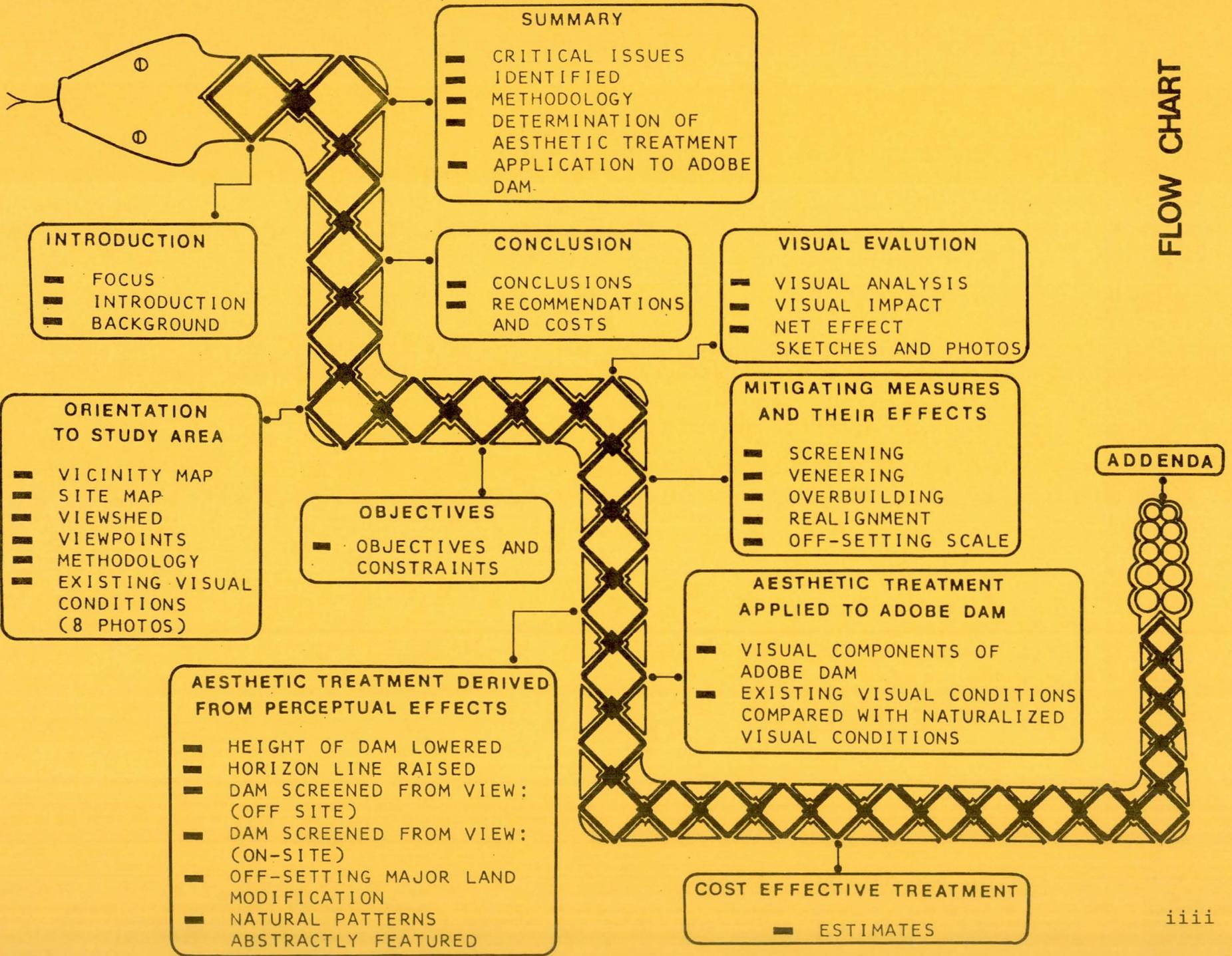
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ADDENDA

A. APPENDIX A - CRITERIA LIST OF VISUAL ELEMENTS.	121
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FLOW CHART



FOCUS The following study attempts to clarify, through graphic illustrations, additional systems of aesthetic treatment that recapture the unique character of the area after major land modifications. The study also illustrates how these treatments can be applied to Adobe Dam.

This study is an expanded and closer analysis of a previous report that determined the need for aesthetic treatment on the downstream face of Adobe Dam.¹

It is hoped that this will serve as a field guide for site orientation and as an aid in realistic visualization of the possible aesthetic treatments.

1. Aesthetic Treatment Analysis for Adobe Dam, Downstream Face, Bridgers, Troller Associates, 15 November 1977, Work Order No. 5, Contract No. DACWO 9-77-C-0014, U.S. Army, Corps of Engineers. This report determined that an appropriate aesthetic treatment would be one that would visually blend in with its surroundings.

INTRODUCTION The methodology for determining aesthetic treatments appropriate for the Adobe Dam considers the appearance and visual quality of a desert landscape setting as viewed from a series of representative viewpoints "before" and "after" major land modification. These viewpoints establish reference points for the inventory of existing visual features, visual patterns and character. These existing conditions can then be easily compared with the new conditions of the treatment. The procedures to select representative viewpoints are based on the ease of anticipated visibility of the structure from the surrounding area. Duplicate photos of each representative viewpoints are altered to portray the viewscape condition with the modified land condition. A series of sketches derived from the photos becomes a format for evaluating the visual quality of each viewpoint.

The overall evaluation of the series of photographs and sketches reveals several important aspects that need to be studied.

- 1) The potential loss in visual quality relates strongly to the proximity of the viewpoint to the proposed dam. Viewpoints very close to the dam would undergo complete

redefinition of spatial relationships. The new dominant land modification would exchange the feeling of expansive horizon for the sense of hillside barrier.

- 2) In the surrounding area, more distant from the dam, where most of the impact might be anticipated to occur, many viewpoints are located in "visual shadows" where the proposed dam would be obscured from view. The dam would be most apparent at viewpoints on the fringes of those visual shadows, i.e. on the perimeter of development or heavy vegetation, and in higher terrain.
- 3) The entire length and mass of the dam would be very difficult to observe from any single viewpoint.

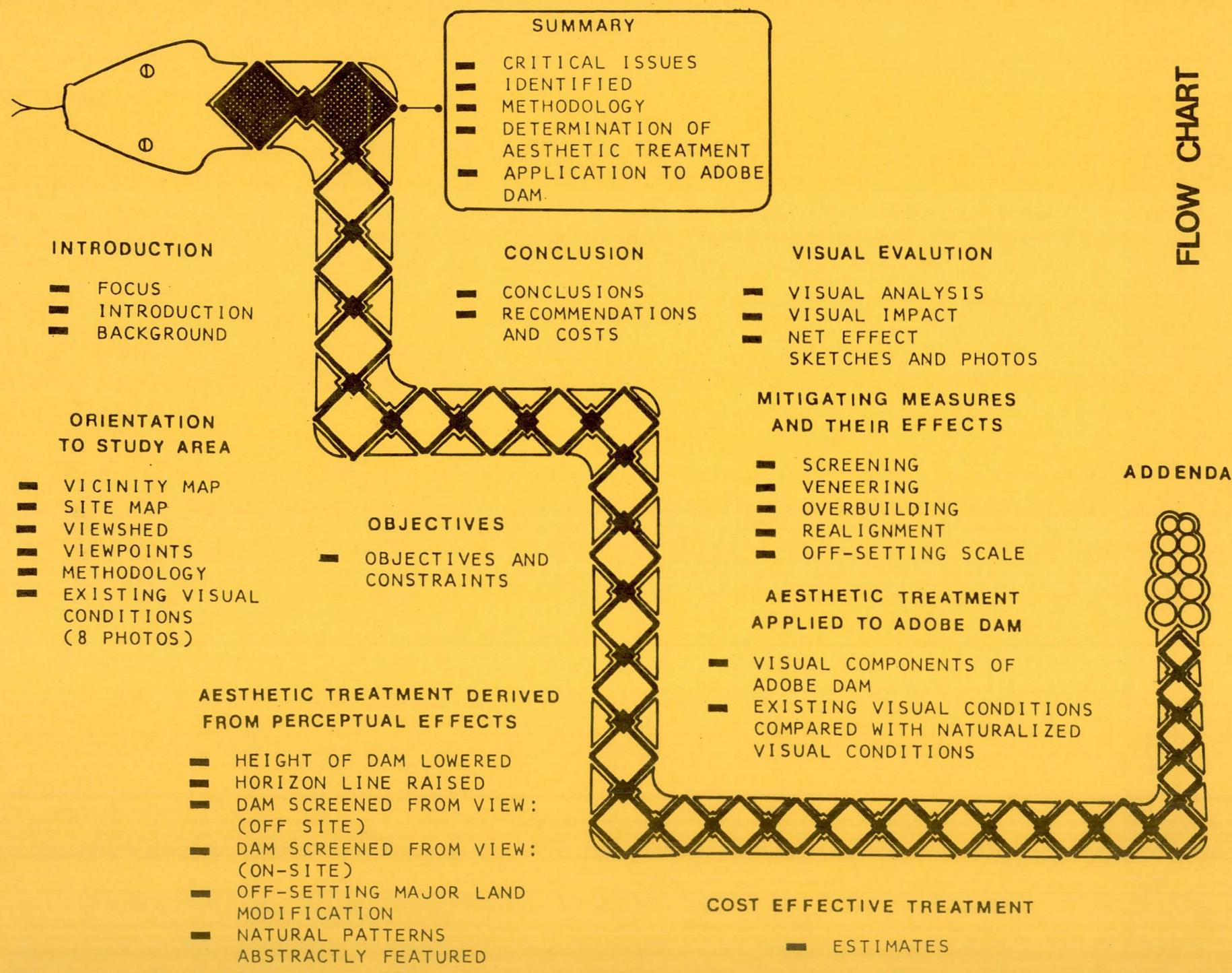
As a result of these findings, it seems logical that this study should focus on the anticipated visual appearance of the dam from the vantage points of representative key locations. Thus, the dam is no longer viewed in its entirety, as a single structure, but is portrayed in portions, as a series of views. This individual consideration to the various visual portions of the structure differs from the various approaches described in other reports which consider the visual impact in terms of the whole dam.

BACKGROUND - Previous reports describe the various techniques used to ameliorate the unrelieved, visual impact of massive land modification similar to that of the proposed Adobe Dam project.¹ The application of these techniques is intended to: 1) alter the surface of the dam face into textures and colors that are similar to the surrounding area; 2) obscure the strong, engineered lines of the dam which are not consistent with the surrounding irregular features.

The application of these techniques is often accomplished in a manner of massive uniformity with unpredictable results. Such monolithic applications often run the risk of being cost inefficient and appearing to be transparent in cosmetic effect. Part of the intent of this report is to establish guidelines for making aesthetic treatment techniques both cost effective and visually effective.

¹ "Aesthetic Treatment Analysis", Bridgers, Troller Associates, 15 November 1977.

FLOW CHART



SUMMARY

- CRITICAL ISSUES IDENTIFIED
- METHODOLOGY
- DETERMINATION OF AESTHETIC TREATMENT
- APPLICATION TO ADOBE DAM.

INTRODUCTION

- FOCUS
- INTRODUCTION
- BACKGROUND

ORIENTATION TO STUDY AREA

- VICINITY MAP
- SITE MAP
- VIEWSHED
- VIEWPOINTS
- METHODOLOGY
- EXISTING VISUAL CONDITIONS (8 PHOTOS)

OBJECTIVES

- OBJECTIVES AND CONSTRAINTS

AESTHETIC TREATMENT DERIVED FROM PERCEPTUAL EFFECTS

- HEIGHT OF DAM LOWERED
- HORIZON LINE RAISED
- DAM SCREENED FROM VIEW: (OFF SITE)
- DAM SCREENED FROM VIEW: (ON-SITE)
- OFF-SETTING MAJOR LAND MODIFICATION
- NATURAL PATTERNS ABSTRACTLY FEATURED

CONCLUSION

- CONCLUSIONS
- RECOMMENDATIONS AND COSTS

VISUAL EVALUATION

- VISUAL ANALYSIS
- VISUAL IMPACT
- NET EFFECT
- SKETCHES AND PHOTOS

MITIGATING MEASURES AND THEIR EFFECTS

- SCREENING
- VENEERING
- OVERBUILDING
- REALIGNMENT
- OFF-SETTING SCALE

AESTHETIC TREATMENT APPLIED TO ADOBE DAM

- VISUAL COMPONENTS OF ADOBE DAM
- EXISTING VISUAL CONDITIONS COMPARED WITH NATURALIZED VISUAL CONDITIONS

COST EFFECTIVE TREATMENT

- ESTIMATES

ADDENDA

L. SUMMARY. Critical issues identified. Several key issues need to be faced in dealing with major land modification:

FIRST, the development of a process for visual analysis.

SECOND, a description of the physical properties of an aesthetic treatment.

THIRD, an investigation into the visual effects that would be generated by the use of particular aesthetic treatments.

FOURTH, methods in which the effects of aesthetic treatment could be used in order to achieve predictable results.

FIFTH, guidelines for making aesthetic treatments cost effective.¹

Familiarity with these five issues helps to remove the randomness and uncertainty usually associated with aesthetic treatment. The treatments seen in this light become a tool which can be used with facility to accomplish predetermined objectives. It should be understood that physical properties have a spectrum of visual effects; for physical properties are not themselves aesthetic treatments just as a land modification is not a dam until location, design and specific construction techniques are combined with the physical

1. "Cost effective": Getting the best visual impact for amount of funds expended.

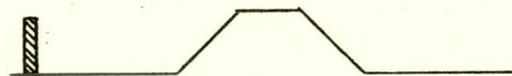
properties of earth, rock and gravel.

The first step is a description of the base material to be used in an aesthetic treatment.

a. Physical Properties. Most of the properties are the existing techniques normally associated with current practice of landscape re-vegetation, earthwork, rock placement and engineering. These techniques can be loosely grouped in the few categories described as follows:

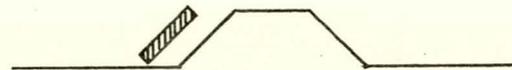
1. Off site screening.

Trees, shrubs, earth berms, structures, development. (Dam obscured)



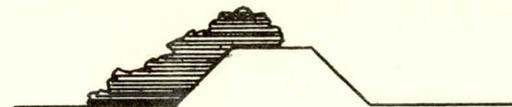
2. On site screening

Trees, shrubs, berms, boulders, structures. (Dam obscured)



3. Overbuilding

Earthwork, boulders, terracing. (Dam covered)



4. Veneering

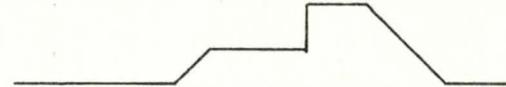
Varnish, paint, layers of rock or soil, grasses or groundcovers. (Change in surface texture.)



5. Altering of the structure.¹

Realignment - vertical or horizontal, change or supplement in base material.

(Structure changed)



These physical properties are the base material to be used in nearly all aesthetic treatments, and are used as such for those recommended in this study for the treatment of Adobe Dam. However, they are used knowing that each technique has inherent visual effects which influence its application.

- b. Visual effects. In the open desert terrain each technique is highly visible and is easily individualized by its characteristics of texture, color form, and mass. These are illustrated in the analysis of the photo studies from the various representative viewpoints (See pages 54-69).

¹ Screening, overbuilding and veneering are techniques widely used that are external to the engineered structure. Other techniques which fall in the "integral to construction" group are not widely used due to heavy penalties in construction costs.

- c. Visual effects controlled. The photo studies also reveal how the combinations of techniques, in naturally occurring situations, create another dimension in perceptual effect.¹ These combinations form visual contrasts, silhouettes, relief, and scale relationships which, in turn, are perceived as depth, perspective and sense of space. The perceptual effects are used to camouflage the structure by creating illusions, such as: a sky line that perceptually dips below the crest of the dam, or the pattern and relief of distant background hills on the face of the dam. The most appropriate perceptual effect for the different portions of the structure can be predetermined by 1) analyzing and 2) graphically visualizing the need from the representative viewpoints. This means that the site no longer needs to be treated in massive uniformity, but can be treated selectively and in portions.
- d. Cost effectiveness. The total area to be treated is now reduced by focusing intense treatment only in those areas determined to be visually important. The remaining areas require only minimal treatment.

These critical issues require that a method be established for representing critical viewing locations and how visual effects can be anticipated.

1. Perceptual effect differs from visual effect in that the perceptual effect is illusory and "suggests" to the viewer that there is apparently more to the view-scape than what actually exists (See pages 52, 53).

Methodology. In order to anticipate the effects of an aesthetic treatment for its visual impact and cost effectiveness, a methodology is used involving photos and sketches from representative viewpoints in the surrounding area. The residual analysis from these viewpoints yields several products.

- 1) The visual character at this viewpoint is recorded.
- 2) The essential visual components are inventoried.
- 3) The alteration of visual quality is graphically illustrated.
- 4) The potential for the creation of an entirely new type of spatial relationship is made apparent.
- 5) The opportunity to experiment with a series of aesthetic treatments in order to determine the most visually appropriate is made possible.
- 6) The most cost effective visual technique can be utilized where several have similar impact.

These results make it possible to identify unique areas along the area of the dam face, each area requiring varying intensities of treatment.

Determination of aesthetic treatments. The severe visual character and desert environmental setting for the site are forceful constraints on the selection of aesthetic treatment alternatives. In such conditions, a large scale land modification becomes very prominent in its domination of the surrounding area. This dominance is harmonized with its surroundings as the aesthetic treatments are systematically and creatively applied.

The function of each treatment is to restore the visual quality by restoring the area's sense of vividness, unity, and intactness.¹ This restoration can be achieved by: 1) either altering the structure so it physically does restore the area's harmony and intactness; or 2) treating the exterior and surrounding area so as to perceptually reduce the viewer's awareness to the land modification. In the expansive, open desert setting both physical

1.

Jones and Jones, "A Method for the Quantification of Aesthetic Values", Nuclear Technology, Vol. 25, April 1975. The components of visual quality are: a) the memorability of a scene, b) the wholeness of a scene and c) the harmony of its parts.

alterations of the structure and perceptual devices are viable aesthetic treatments. Major cost constraints, however, dictate that perceptual devices, with greater range in cost of application, be considered as the primary method for determining appropriate aesthetic treatments.

In order to harmonize with its surroundings, the proposed structure needs to be treated in a comparatively radical manner. If the line, mass and form are sheathed only in a colored or textured treatment, they still remain as the dominant visual force in the area. The step beyond transparent cosmetics is to perceptually alter the physical characteristics and dimension of the dam, or screen the structure from view, or diminish its significance in the area. This can be accomplished through a series of landform and landscape technique combinations that have wide ranging perceptual effects and can be grouped as several aesthetic treatments. These general approaches can be applied to any similar structure and are particularly appropriate for specific portions of the proposed Adobe Dam project as outlined in this report. The generalized aesthetic treatments recommended are listed on the following page.

1. HEIGHT OF DAM LOWERED
2. HORIZON LINE RAISED
3. DAM SCREENED FROM VIEW: OFF-SITE
4. DAM SCREENED FROM VIEW: ON-SITE
5. OFF-SETTING MAJOR LAND MODIFICATION
6. NATURAL PATTERNS ABSTRACTLY FEATURED

The major determinants in selection of an aesthetic treatment are costs of implementation and anticipated visual impact for existing and future viewer and user groups.

Application to Adobe Dam. No single aesthetic treatment seems to be visually appropriate as a massive, uniform application. From the representative viewpoints in the surrounding area, it is apparent that a combination of aesthetic treatments is needed to adequately treat the site. The most appropriate combination is one that best fulfills the needs of the site over the lifespan of the dam. This requires that the treatment be one that could adapt to a variety of future viewers and users.

In a broad brush approach the dam is characterized by three major components of nearly equal size which are described as follows (see illustration on page 91):

- A. The western portion which abutts the Hedgpeth Hills and extends along Skunk Creek includes the areas of most extreme height of dam.
- B. The eastern portion which extends from Adobe Mountain to 35th Avenue includes the section of lower dam height and will be the section nearest to future urban development.

C. The remaining area is one of transition between A and B and includes the portion of the dam which is of median height and in closest proximity to an existing residential area.

Due to the great disparity in the height of the dam, each of the three components requires a different approach in its treatment. This, by itself, does much to relieve the dam's massive horizontal character. As an example, the barrier like height of the low eastern third of the dam can be perceptually reduced so that only the remaining two-thirds remain visible. This particular treatment is intensive and costly, and not practical as a uniform application over the entire structure. This element of cost then acts as a constraint or screen in determining each aesthetic treatment. Costly applications are limited only to those areas where the need has been predetermined. As a general guideline in dealing with the various treatments, the lowest cost technique is to be applied over the largest and least significant areas to be treated. It is anticipated that the greatest cost efficiency will occur when the dam is treated segment by segment, with precedence given to the most visually critical. This will allow many areas to pass with minimal attention.

SUMMARY

- CRITICAL ISSUES IDENTIFIED
- METHODOLOGY
- DETERMINATION OF AESTHETIC TREATMENT
- APPLICATION TO ADOBE DAM

CONCLUSION

- CONCLUSIONS
- RECOMMENDATIONS AND COSTS

VISUAL EVALUATION

- VISUAL ANALYSIS
- VISUAL IMPACT
- NET EFFECT
- SKETCHES AND PHOTOS

MITIGATING MEASURES AND THEIR EFFECTS

- SCREENING
- VENEERING
- OVERBUILDING
- REALIGNMENT
- OFF-SETTING SCALE

AESTHETIC TREATMENT APPLIED TO ADOBE DAM

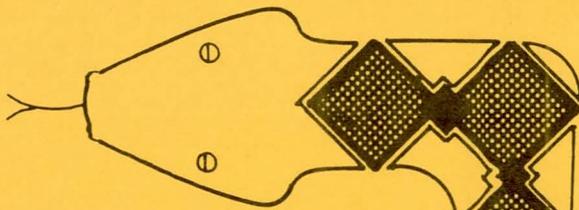
- VISUAL COMPONENTS OF ADOBE DAM
- EXISTING VISUAL CONDITIONS COMPARED WITH NATURALIZED VISUAL CONDITIONS

COST EFFECTIVE TREATMENT

- ESTIMATES

FLOW CHART

ADDENDA



INTRODUCTION

- FOCUS
- INTRODUCTION
- BACKGROUND

ORIENTATION TO STUDY AREA

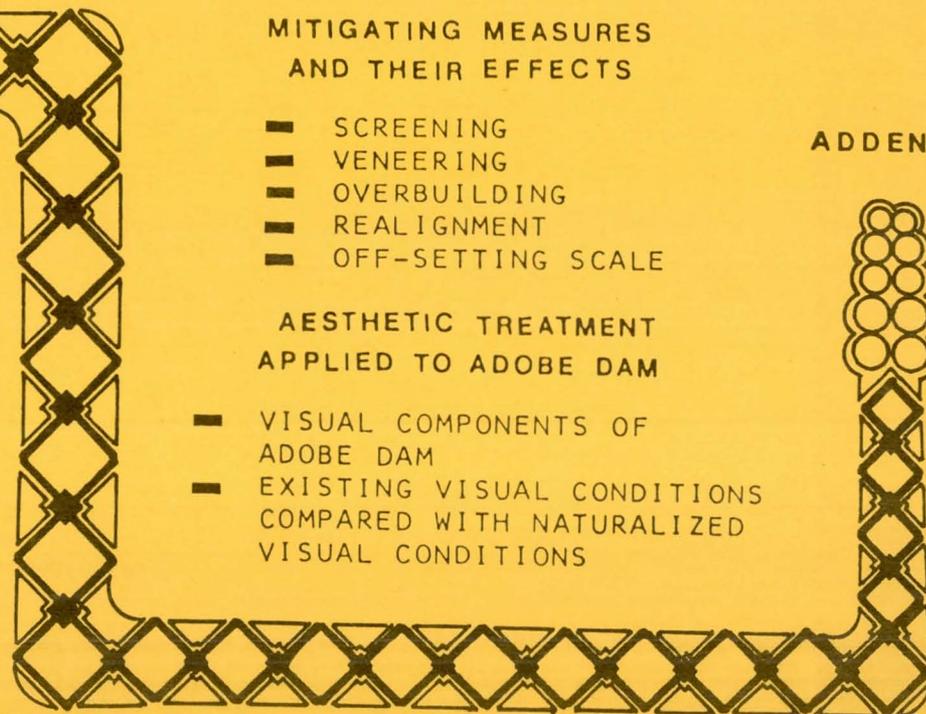
- VICINITY MAP
- SITE MAP
- VIEWSHED
- VIEWPOINTS
- METHODOLOGY
- EXISTING VISUAL CONDITIONS (8 PHOTOS)

OBJECTIVES

- OBJECTIVES AND CONSTRAINTS

AESTHETIC TREATMENT DERIVED FROM PERCEPTUAL EFFECTS

- HEIGHT OF DAM LOWERED
- HORIZON LINE RAISED
- DAM SCREENED FROM VIEW: (OFF SITE)
- DAM SCREENED FROM VIEW: (ON-SITE)
- OFF-SETTING MAJOR LAND MODIFICATION
- NATURAL PATTERNS ABSTRACTLY FEATURED



II. CONCLUSIONS. The aesthetic treatments appropriate for Adobe Dam are listed on the following page. It should be noted that the final selection cannot be based on visual consideration alone. The decision maker must also evaluate the cost of implementation and, more importantly, the long term, future effectiveness of each treatment as it relates to future land uses, densities and types of development in the surrounding area. Unlike many major land modifications, this particular one has the potential for a diversified series of uses from a nearby population center. This requires that flexibility for future considerations be a major element in the aesthetic treatment process. The recommendations for aesthetic treatment that follow reflect this need for flexibility and are to be used as guidelines both for the initial application of treatments and also when future revisions become necessary as the surrounding area undergoes change.

Because this study is not a design but basically a guideline for selecting appropriate aesthetic treatments, it is anticipated that gaps and overlaps will occur. The visual analysis process determines that the gaps are visually insignificant at this time and should be treated without significance and minimal cost. Areas of overlap are critical visually and require careful consideration.

RECOMMENDATIONS AND COSTS

COMPONENT SECTIONS OF ADOBE DAM	APPLICATION OF AESTHETIC TREATMENT	TECHNIQUES	COSTS
A. HIGH END	Height of dam lowered	Overbuilding (undulating top and toe of slope)	\$200,181.00
	Offsetting major land modifica- tion	Veneering (rock, soil, hydro- seeding, varnish)	
		Landfill project	*
	Screening	Screening (off-site: plant material & structures)	
	Screening	Screening (on site: plant materials)	
	Abstract Feature	Veneering (rock, plant material, painting, varnish)	
B. LOW END	Horizon line raised	Overbuilding (taper grading rock, hydroseeding)	157,108.00
		Veneering (plant materials hydroseeding, rock, soil)	
	Screening	Screening (off-site: plant material & structures)	
	Screening	Screening (on-site: plant materials)	
C. TRANSITION SECTION	Screening	Screening (on/off-site: plant materials.)	350,451.00
		Overbuilding (Undulating top & toe of slope)	
<u>Total</u>			<u>\$707,740.00</u>

* BY OTHERS

SUMMARY

- CRITICAL ISSUES IDENTIFIED
- METHODOLOGY
- DETERMINATION OF AESTHETIC TREATMENT
- APPLICATION TO ADOBE DAM

CONCLUSION

- CONCLUSIONS
- RECOMMENDATIONS AND COSTS

VISUAL EVALUATION

- VISUAL ANALYSIS
- VISUAL IMPACT
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- VENEERING
- OVERBUILDING
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- OFF-SETTING SCALE

AESTHETIC TREATMENT APPLIED TO ADOBE DAM

- VISUAL COMPONENTS OF ADOBE DAM
- EXISTING VISUAL CONDITIONS COMPARED WITH NATURALIZED VISUAL CONDITIONS

COST EFFECTIVE TREATMENT

- ESTIMATES

FLOW CHART

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- FOCUS
- INTRODUCTION
- BACKGROUND

ORIENTATION TO STUDY AREA

- VICINITY MAP
- SITE MAP
- VIEWSHED
- VIEWPOINTS
- METHODOLOGY
- EXISTING VISUAL CONDITIONS (8 PHOTOS)

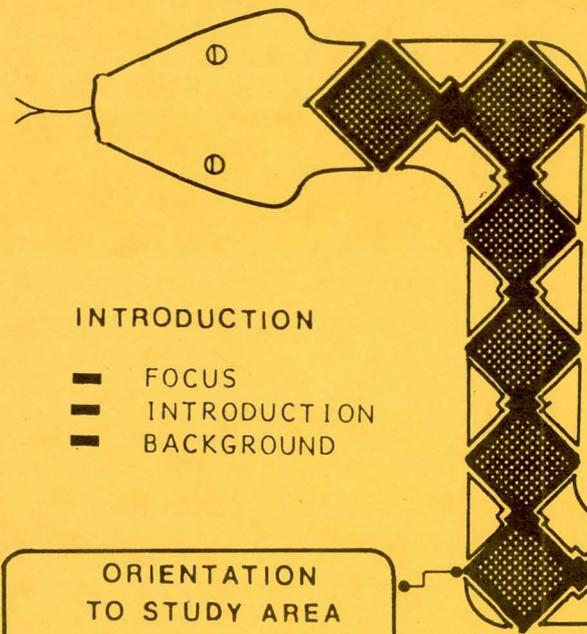
OBJECTIVES

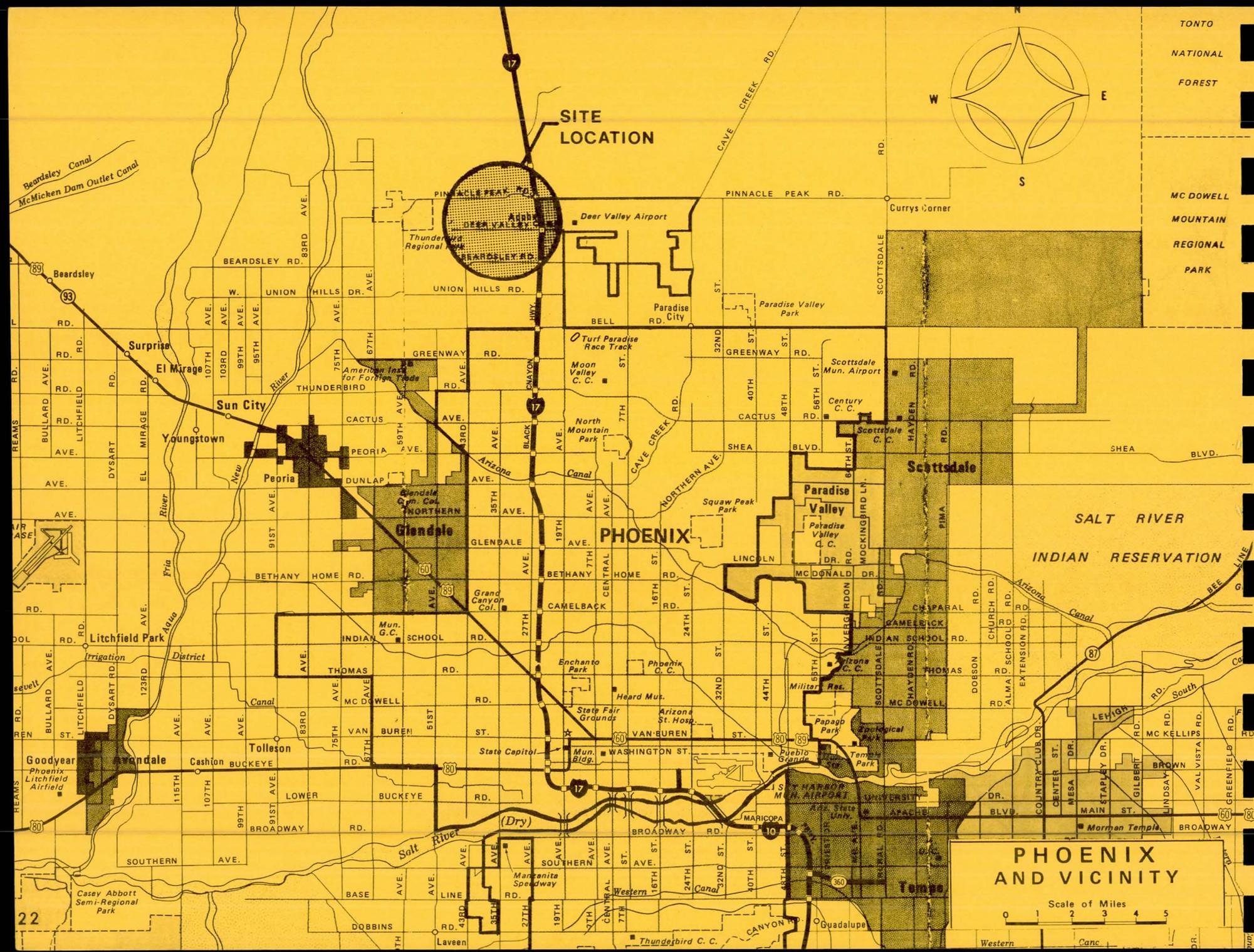
- OBJECTIVES AND CONSTRAINTS

AESTHETIC TREATMENT DERIVED FROM PERCEPTUAL EFFECTS

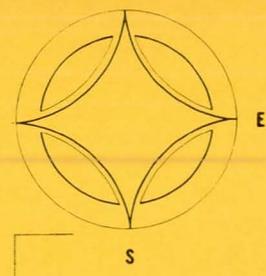
- HEIGHT OF DAM LOWERED
- HORIZON LINE RAISED
- DAM SCREENED FROM VIEW: (OFF SITE)
- DAM SCREENED FROM VIEW: (ON-SITE)
- OFF-SETTING MAJOR LAND MODIFICATION
- NATURAL PATTERNS ABSTRACTLY FEATURED

ADDENDA





**SITE
LOCATION**



PHOENIX

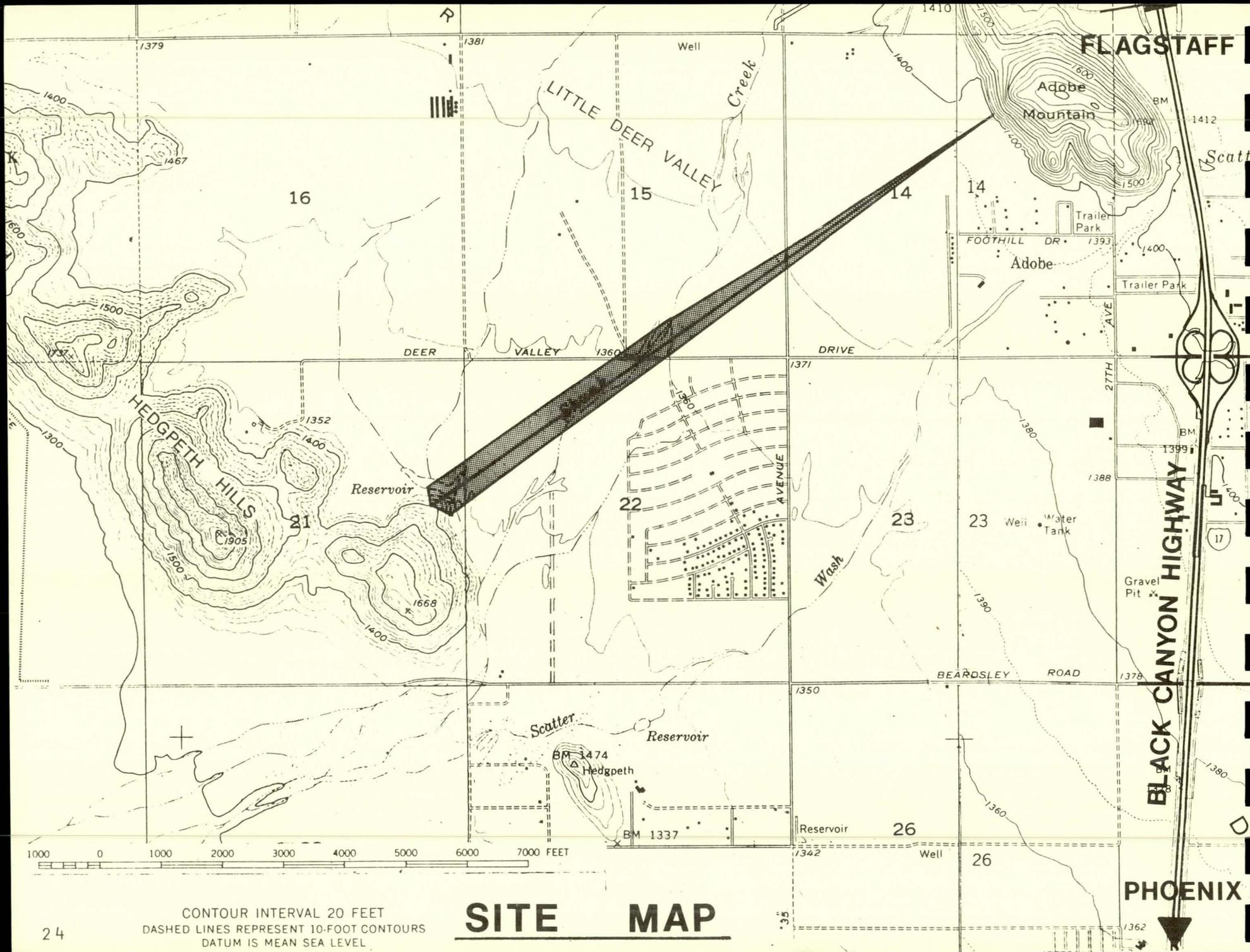
**PHOENIX
AND VICINITY**

Scale of Miles
0 1 2 3 4 5

III. ORIENTATION TO THE STUDY AREA

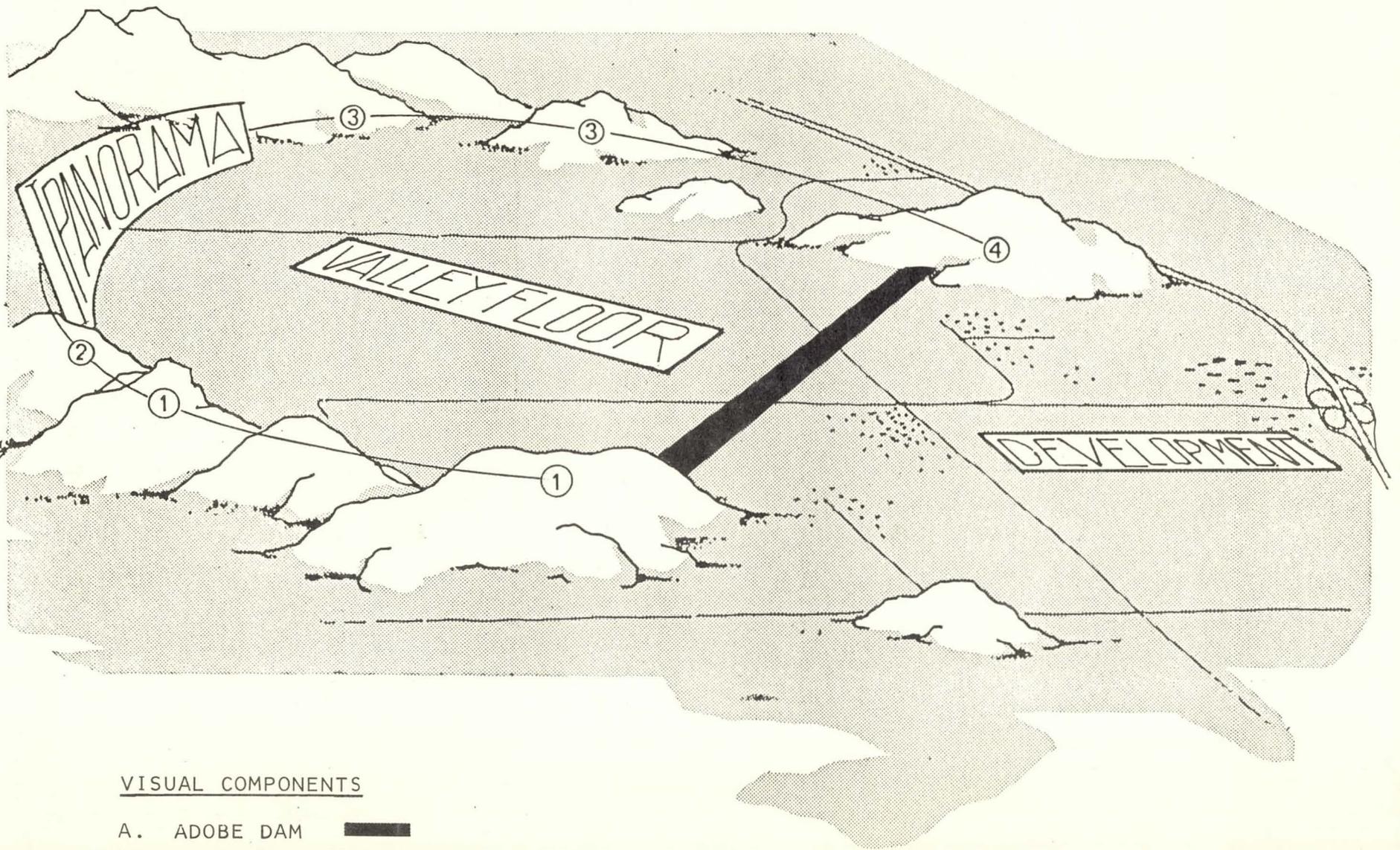
The Adobe Dam site is near a major population center and will be subject to regular visibility. Although it is relatively near a major highway, this study shows that its exposure from there may not be significant. However, the potential for visibility will increase as the number of "close-in viewers"¹ increase with the anticipated growth in recreation and urban development.

¹ "Close-in" within one mile distance.



CONTOUR INTERVAL 20 FEET
 DASHED LINES REPRESENT 10-FOOT CONTOURS
 DATUM IS MEAN SEA LEVEL

SITE MAP



VISUAL COMPONENTS

- A. ADOBE DAM
- B. PANORAMA VIEW: LITTLE DEER VALLEY & HILLS BEYOND
- C. VALLEY FLOOR: FUTURE LOCATION OF ADOBE DAM RECREATION AREA
- D. DEVELOPMENT: RESIDENTIAL (HOME, MOBILE HOME)
- E. HILLS: ① HEDGPETH HILLS, ② LUDDEN MNT., ③ DEEM HILLS, ④ ADOBE MNT.

The viewer groups in the surrounding area currently include those viewers living in the town of Adobe, those in the mobile home park, those in a few scattered residences and those viewers travelling on 35th Avenue, Deer Valley Road, Beardsley Road and 41st Avenue. Future recreational uses may place more people in open terrain.

The visibility of the dam is most apparent at changes in elevation and at the perimeter of masses of vegetation and urban development. Future lateral development will move this perimeter closer to the dam and will further obscure the dam for the majority of viewers. If development includes vertical elements, increases in visibility will be offset by the screening effect of the structure.

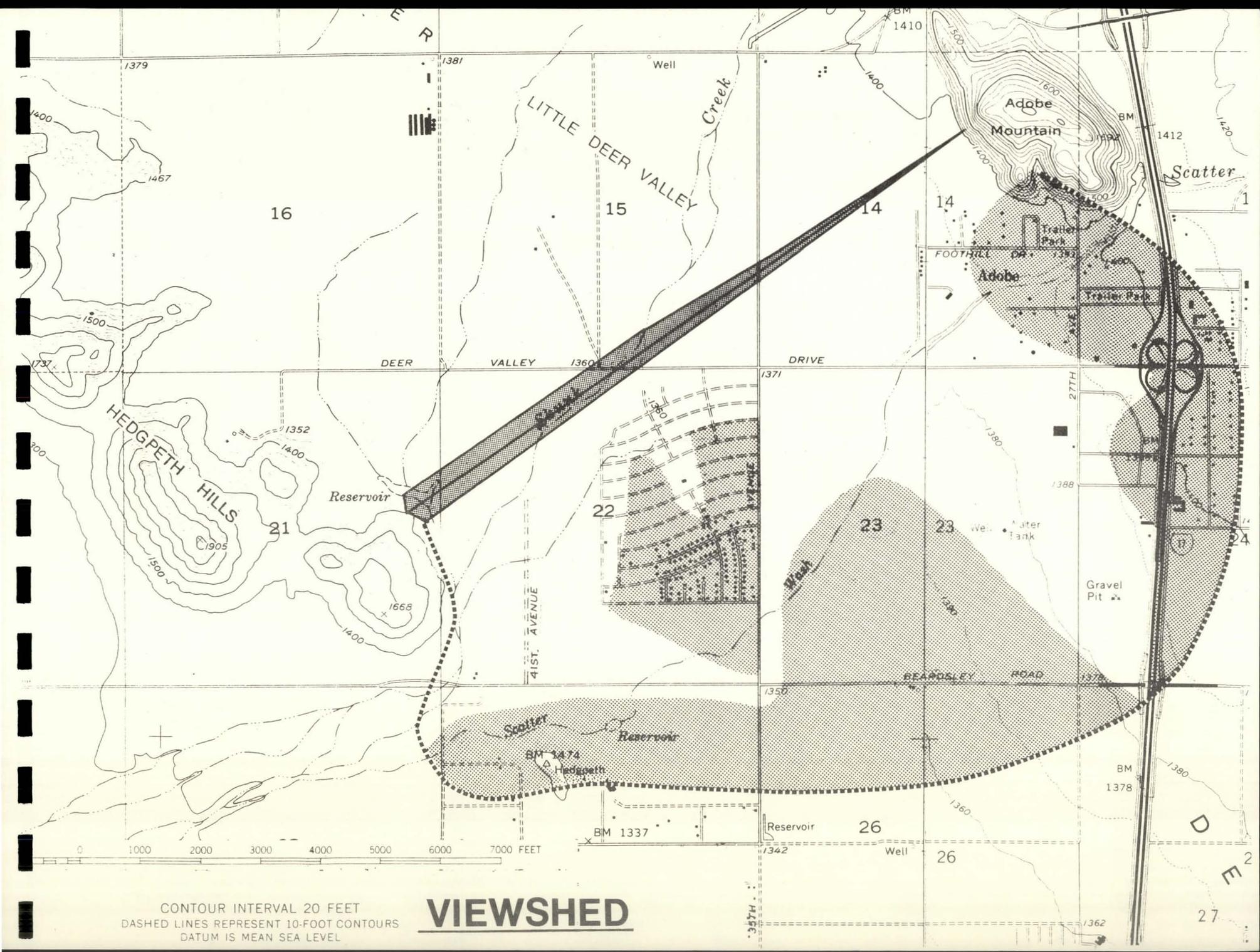
VIEWSHED

.....

THE SURROUNDING AREA OF LAND IN WHICH POTENTIAL VIEWING LOCATIONS MAY BE FOUND BY RESIDENT OR TRANSIENT VIEWERS.



VISIBILITY SHADOWS OCCUR AS VISIBILITY DECREASES WITH DISTANCE AND AS IT IS SCREENED OFF BY DEVELOPMENT AND ENVIRONMENTAL FEATURES.



CONTOUR INTERVAL 20 FEET
 DASHED LINES REPRESENT 10-FOOT CONTOURS
 DATUM IS MEAN SEA LEVEL

VIEWSHED

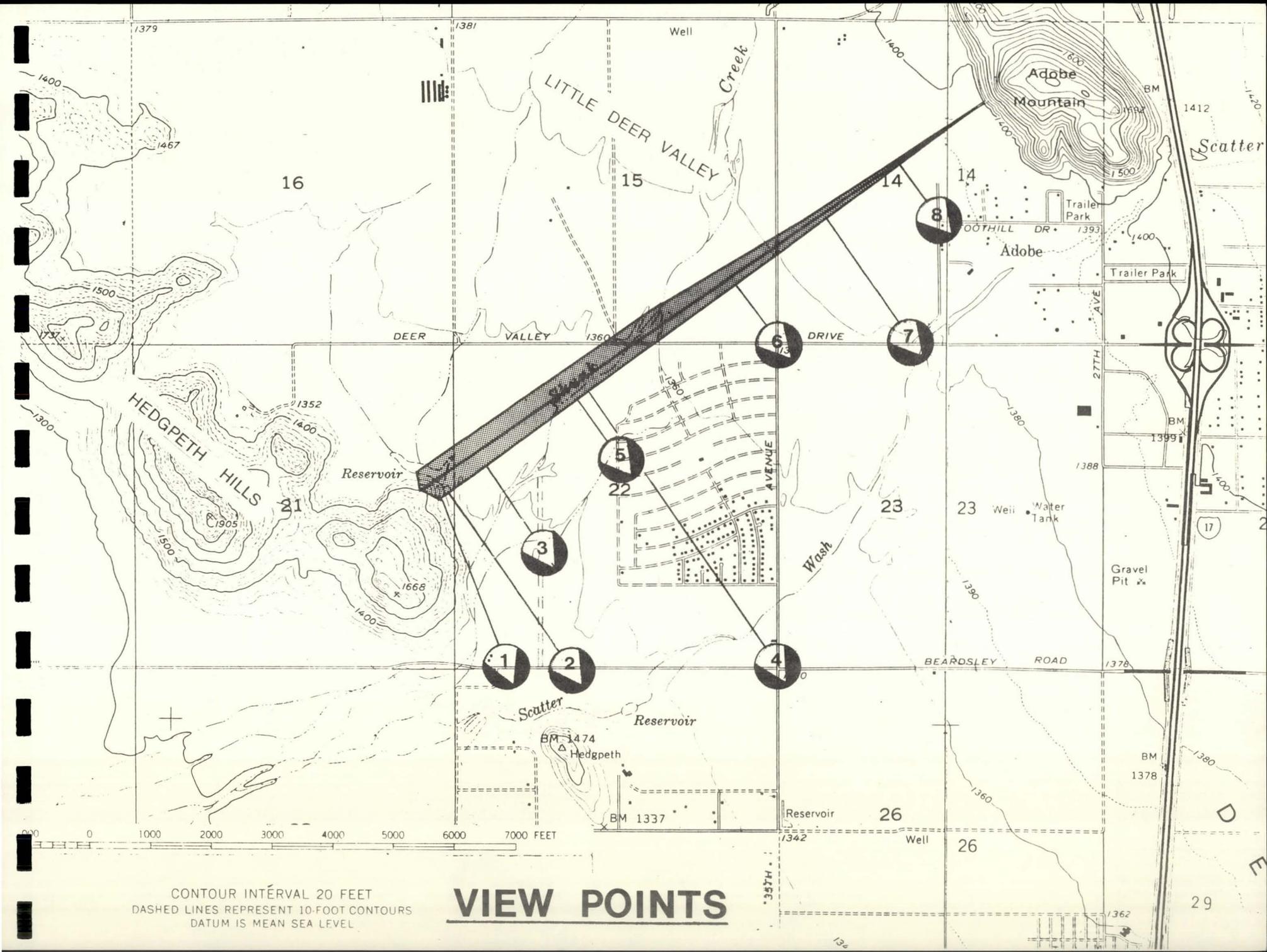
VIEWPOINTS

The eight representative viewpoints in this study consider only those viewpoints where the observer position is equal to an observer on foot in open terrains, as a passenger in a car and as a resident in a single story building. This position can be described as equal or inferior to the height of the dam.¹ This satisfies a short term need. In the long term the superior observer position, equal to that of a multi-story building would be necessary to adequately represent the area.

1. Appendix A, p. 125.

- ① BEARDSLEY RD.,
NEAR 43RD. AVE.
3300 FT.*
- ② BEARDSLEY RD.,
NEAR SCATTER WASH
3600 FT.*
- ③ 41ST. AVE.
2100 FT.*
- ④ BEARDSLEY RD.
& 35TH AVE.
5600 FT.*
- ⑤ MOBILE HOME
PERIMETER RD.
1300 FT.*
- ⑥ DEER VALLEY DR.
& 35TH AVE.
1175 FT.*
- ⑦ DEER VALLEY DR.
& SCATTER WASH
2450 FT.*
- ⑧ FOOTHILL DR.
IN ADOBE
1175 FT.*

* DISTANCE FROM DAM



CONTOUR INTERVAL 20 FEET
 DASHED LINES REPRESENT 10-FOOT CONTOURS
 DATUM IS MEAN SEA LEVEL

VIEW POINTS

29

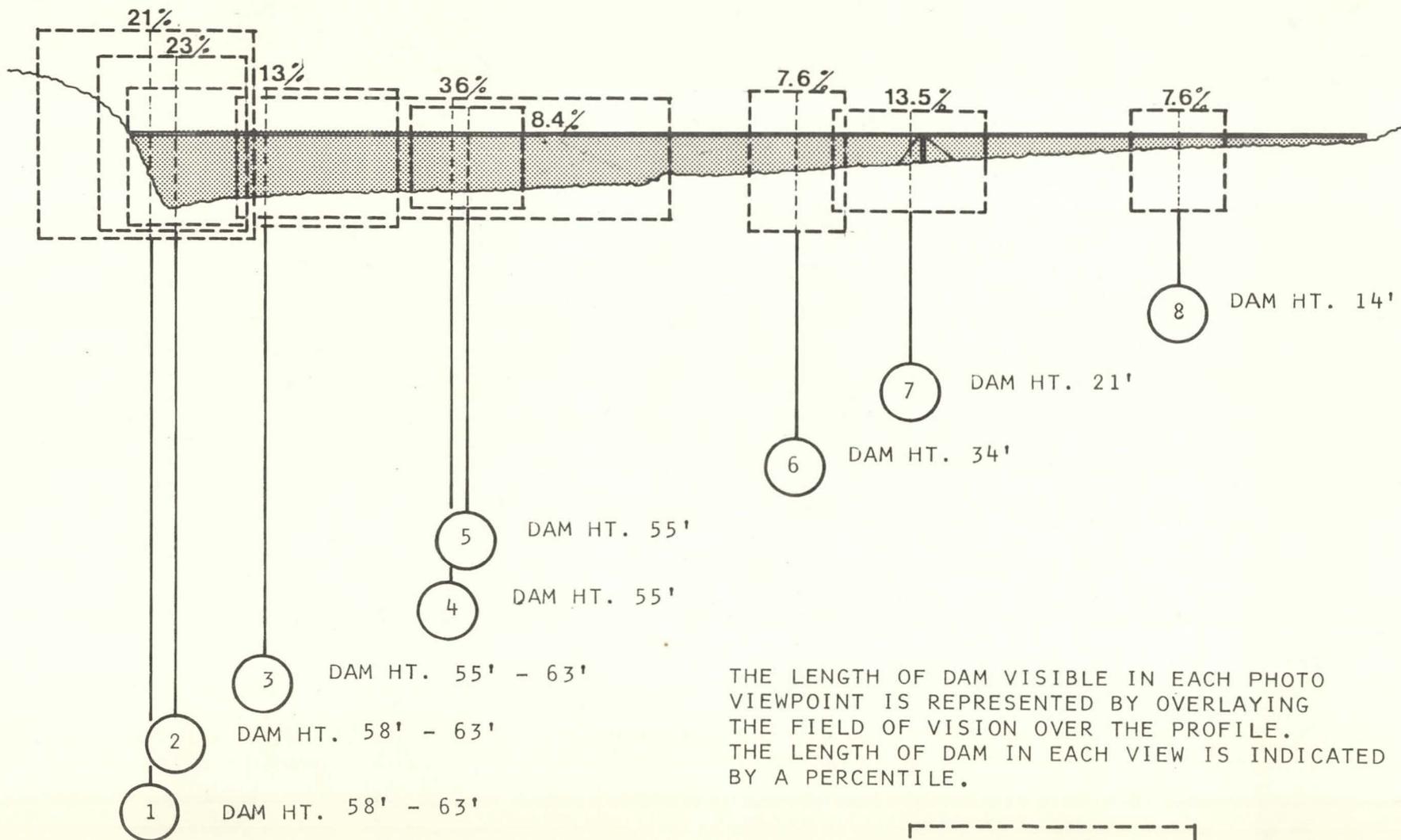
VIEWPOINTS

For the majority of the viewers it will be visually impossible to view the entire mass and length of the dam at one time. Only portions of the dam will be visible from each representative viewpoint, as this figure illustrates. The field of vision of the photos on pages 36-43 are graphically portrayed against a scaled profile of the dam.

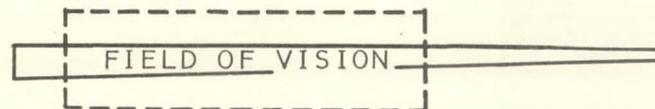
- ① BEARDSLEY RD.
NEAR 43RD. AVE.
3300 FT.*
- ② BEARDSLEY RD.
NEAR SCATTER WASH
3600 FT.*
- ③ 41ST. AVE.
2100 FT.*
- ④ BEARDSLEY RD.
& 35TH AVE.
5600 FT.*
- ⑤ MOBILE HOME
PERIMETER RD.
1300 FT.*
- ⑥ DEER VALLEY DR.
& 35TH AVE.
1175 FT.*
- ⑦ DEER VALLEY DR.
& SCATTER WASH
2450 FT.*
- ⑧ FOOTHILL DR.
IN ADOBE
1175 FT.*

* DISTANCE FROM DAM

PROFILE VIEW OF DOWNSTREAM FACE OF ADOBE DAM



THE LENGTH OF DAM VISIBLE IN EACH PHOTO VIEWPOINT IS REPRESENTED BY OVERLAYING THE FIELD OF VISION OVER THE PROFILE. THE LENGTH OF DAM IN EACH VIEW IS INDICATED BY A PERCENTILE.

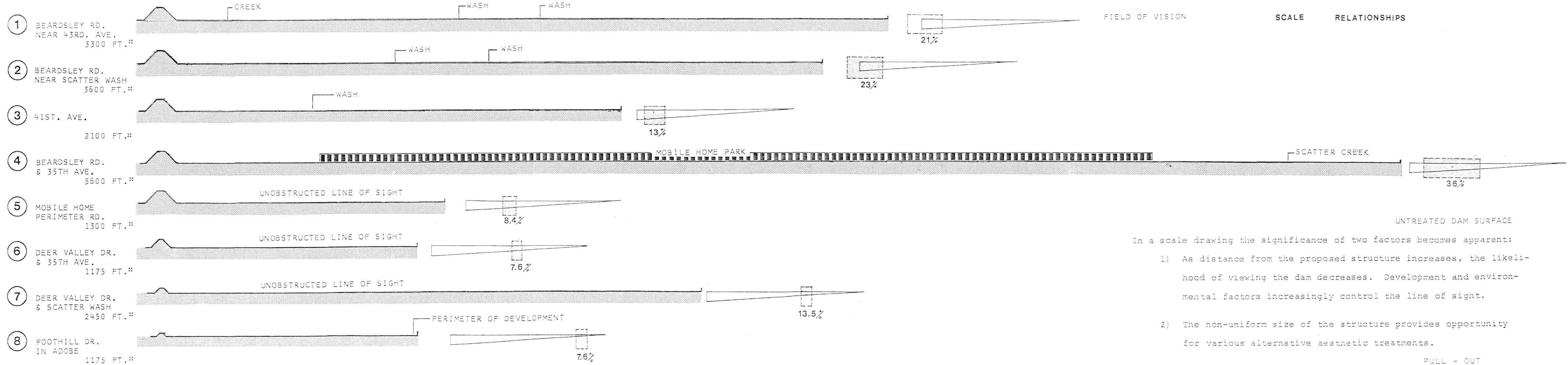


VIEWPOINTS

- | | | |
|---|---|---|
| ① | BEARDSLEY RD.
NEAR 43RD. AVE.
3300 FT.* | ROADWAY VIEW AS SEEN FROM AUTOMOBILE. |
| ② | BEARDSLEY RD.
NEAR SCATTER WASH
3600 FT.* | ROADWAY VIEW AS SEEN FROM AUTOMOBILE |
| ③ | 41ST. AVE.
2100 FT.* | RESIDENTIAL VIEW AS SEEN FROM FRONT YARD. |
| ④ | BEARDSLEY RD.
& 35TH AVE.
5600 FT.* | ROADWAY VIEW AS SEEN FROM AUTOMOBILE. |
| ⑤ | MOBILE HOME
PERIMETER RD.
1300 FT.* | RESIDENTIAL VIEW AS SEEN FROM MOBILE HOME YARD. |
| ⑥ | DEER VALLEY DR.
& 35TH AVE.
1175 FT.* | ROADWAY VIEW AS SEEN FROM AUTOMOBILE |
| ⑦ | DEER VALLEY DR.
& SCATTER WASH
2450 FT.* | ROADWAY VIEW AS SEEN FROM AUTOMOBILE |
| ⑧ | FOOTHILL DR.
IN ADOBE
1175 FT.* | RESIDENTIAL VIEW AS SEEN FROM FRONT YARD. |

* DISTANCE FROM DAM

VIEWPOINTS



FIELD OF VISION

SCALE

RELATIONSHIPS

UNTREATED DAM SURFACE

In a scale drawing the significance of two factors becomes apparent:

- 1) As distance from the proposed structure increases, the likelihood of viewing the dam decreases. Development and environmental factors increasingly control the line of sight.
- 2) The non-uniform size of the structure provides opportunity for various alternative aesthetic treatments.

PULL - OUT

* DISTANCE FROM DAM
 SCALE: 1"=250'

Methodology. In developing a reliable method in which to measure visual quality, it seemed necessary to first record and inventory the existing visual conditions. These conditions were to be representative of the site by using the following criteria:

- a) They would represent a spectrum of distances from the dam, from extreme visual dominance to where its impact verged upon insignificance.
- b) The variations in the height of dam would be recorded.
- c) The dam would be shown in its relation to those viewing areas where it was most likely to be seen - from the highways, from mobile homes and from side roads.
- d) It was evident that the horizon panorama would be affected by the dam and that its significance and visual components would be recorded.

The documentation of existing visual quality is represented in the following series of eight photographs.

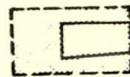


VIEWPOINT - EXISTING

1

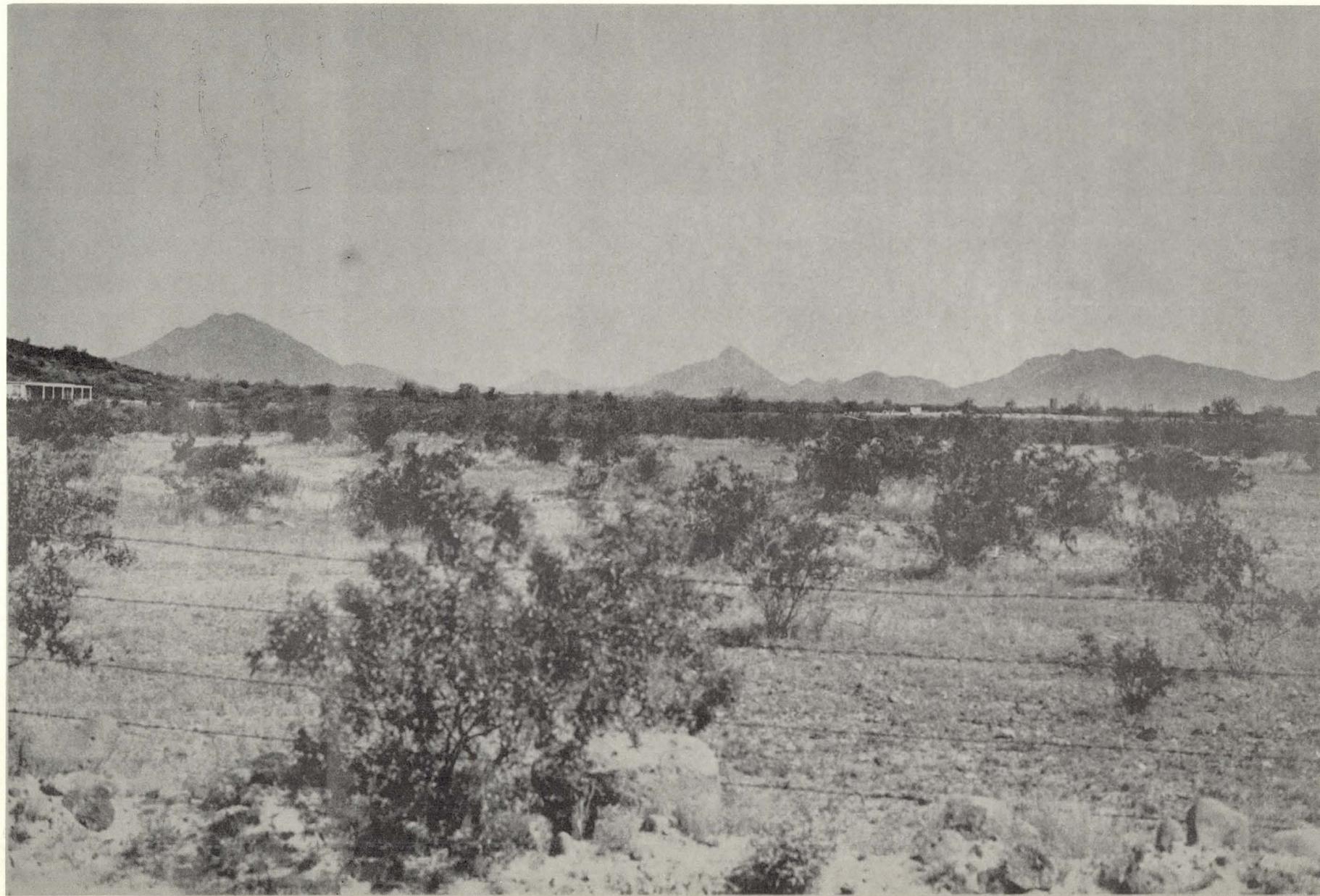
3300 FT.

BEARDSLEY RD.
NEAR 43RD. AVE.



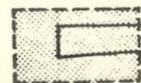
21%

FIELD OF VISION



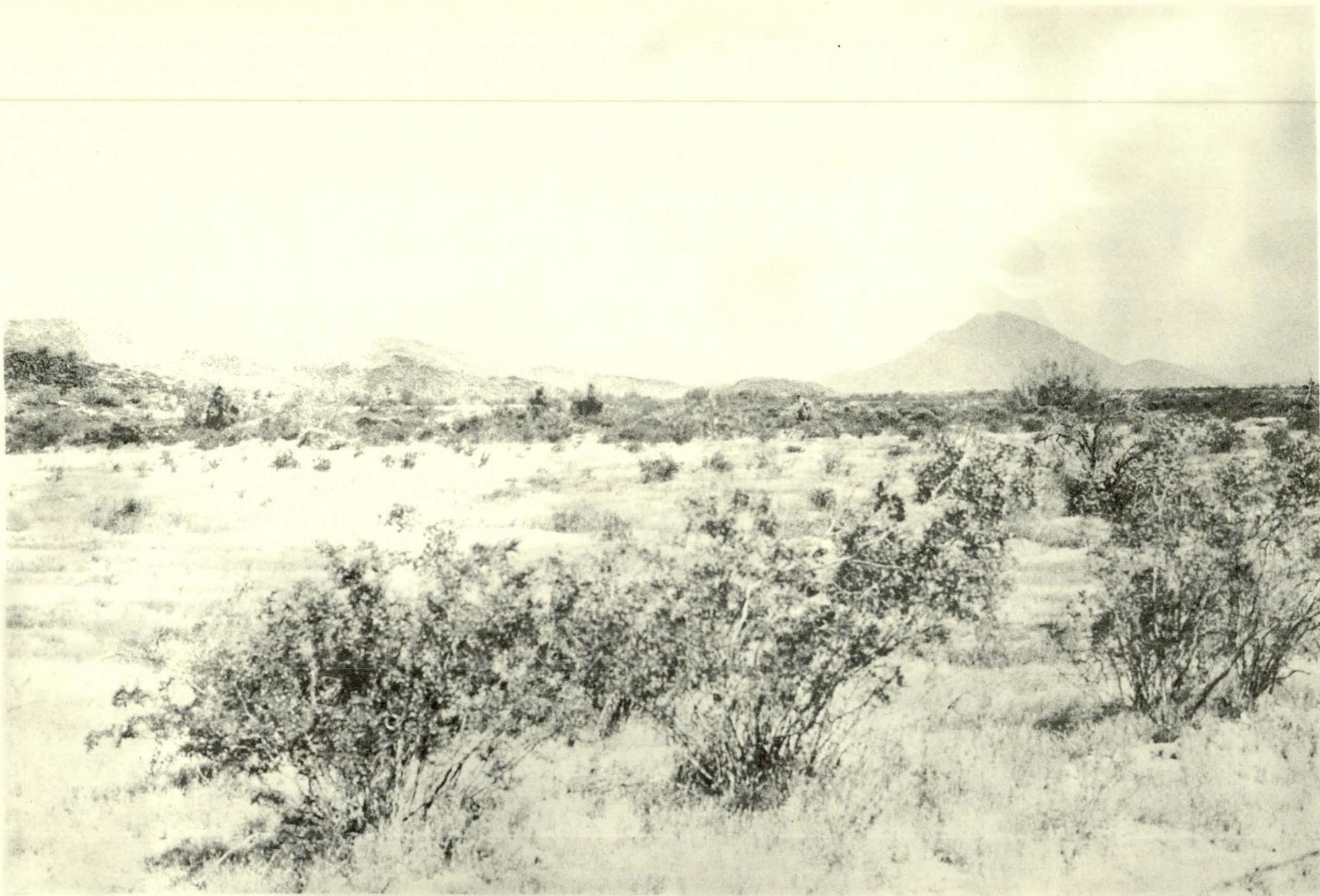
VIEWPOINT - EXISTING
2 3600 FT.

BEARDSLEY RD.
NEAR SCATTER WASH



23%

FIELD OF VISION

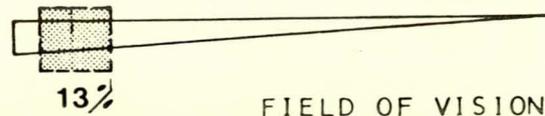


VIEWPOINT - EXISTING

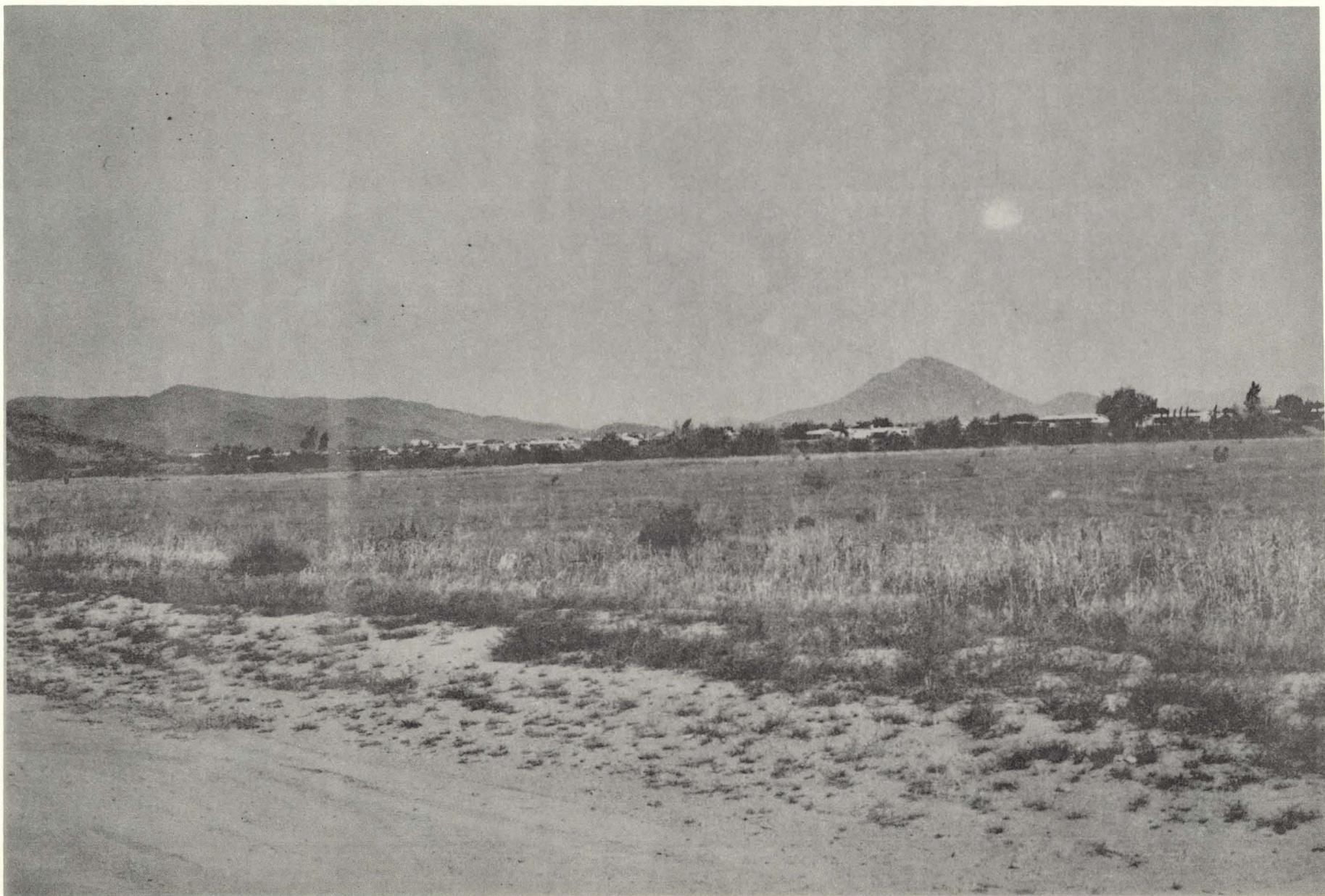
3

2100 FT.

41ST. AVE.



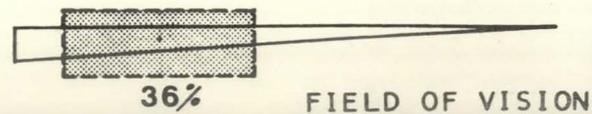
FIELD OF VISION



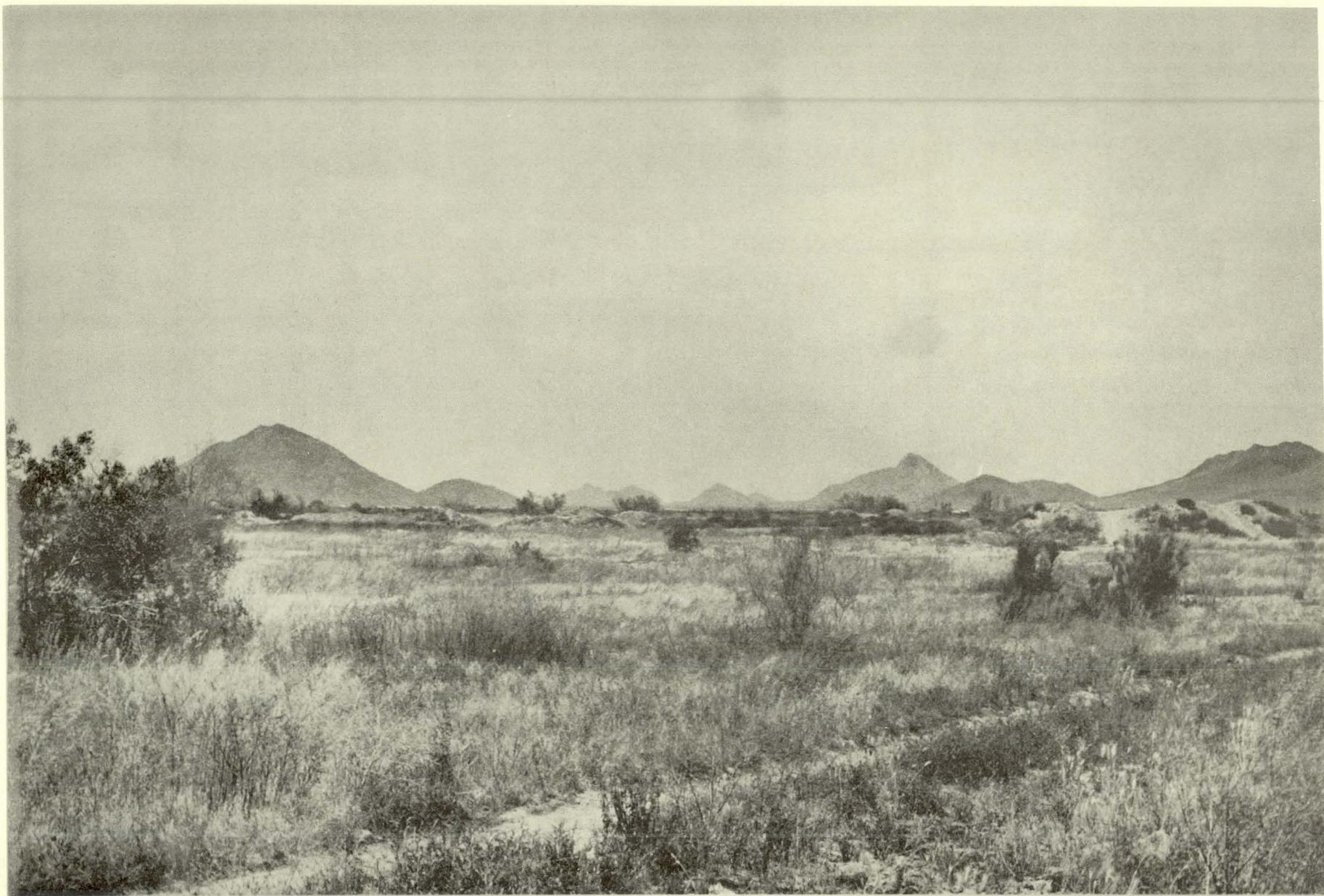
VIEWPOINT EXISTING
5600 FT.

4

BEARDSLEY RD.
& 35TH AVE.

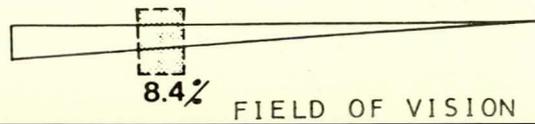


FIELD OF VISION



VIEWPOINT - EXISTING
5 1300 FT.

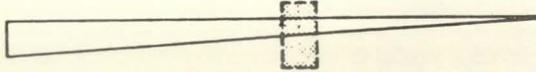
MOBILE HOME
PERIMETER RD.





VIEWPOINT- EXISTING
6 1175 FT.

DEER VALLEY DR.
& 35TH AVE.


FIELD OF VISION 7.6%

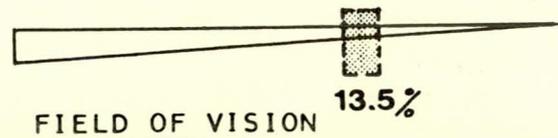


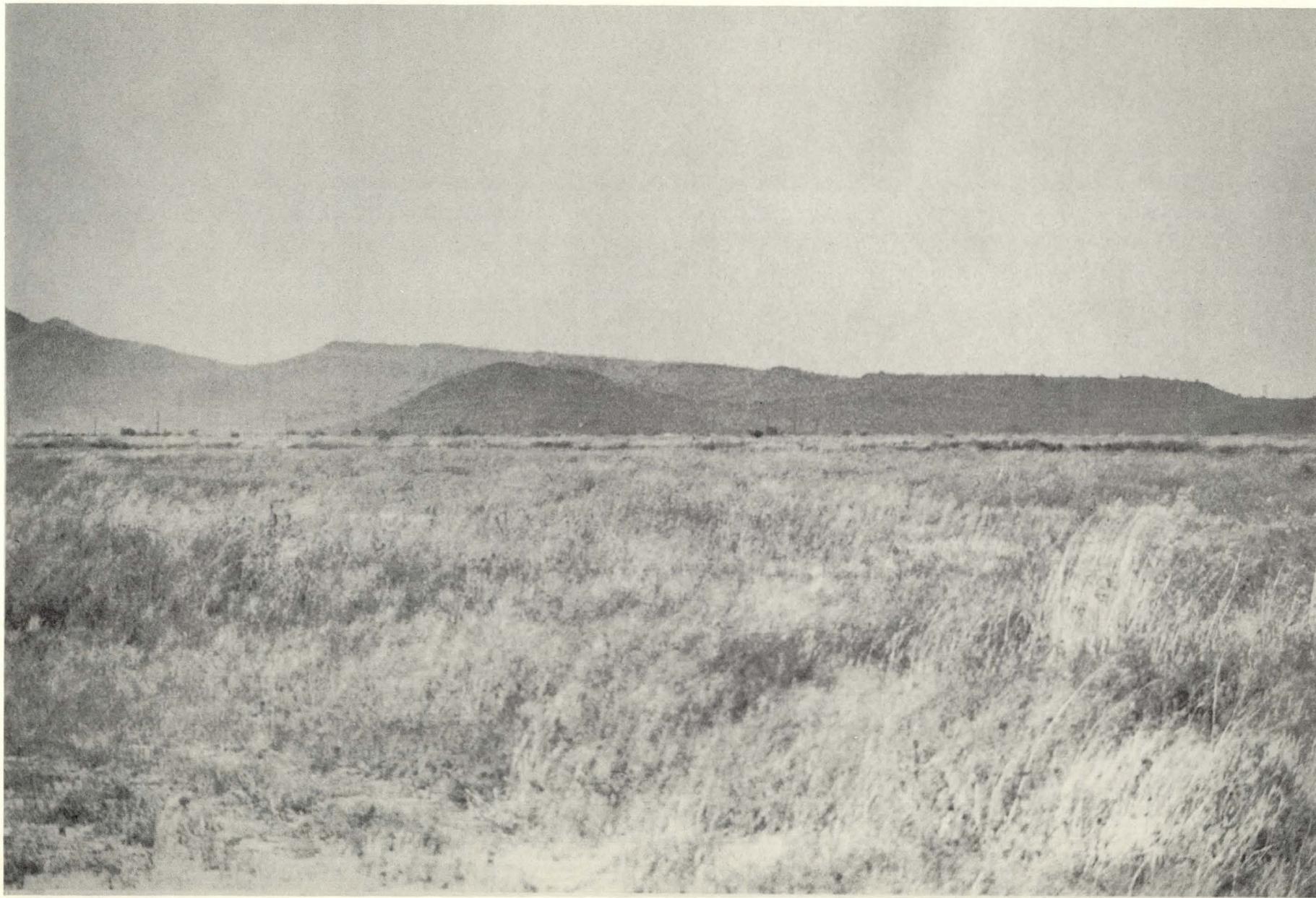
VIEWPOINT- EXISTING

7

2450 FT.

DEER VALLEY DR.
& SCATTER WASH



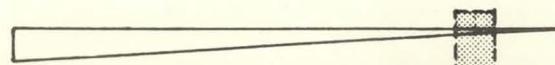


VIEWPOINT - EXISTING

8

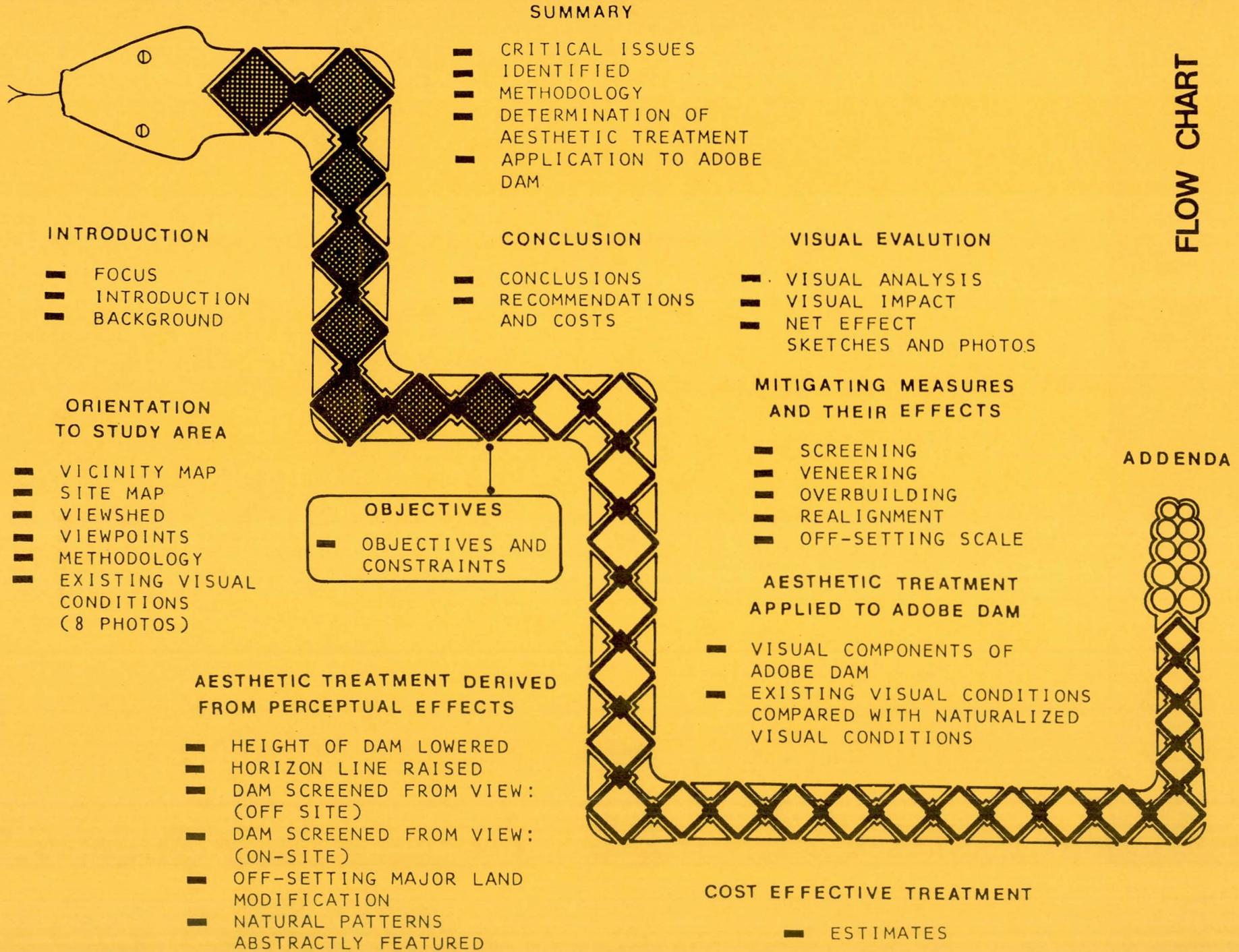
1175 FT.

FOOTHILL DR.
IN ADOBE



FIELD OF VISION

7.6%



IV. OBJECTIVES As the proposed dam is not uniform in height, it can be anticipated that it will not have a uniform visual impact on the surrounding area. For portions of the dam which are relatively low in height it may be possible to recapture the essential character of the desert floor setting. At the other extreme are those areas of the dam of great height where the full dominance of the dam will have its impact. The scale in this area dictates a redefinition of the entire area. These two extreme areas will also require a transitional section.

A previous report already has dictated that the overall objective is to achieve an effect of a naturalizing blend.¹

The objective of this report is to describe how the original objective can be accomplished within a fixed budget constraint and to propose several methods of aesthetic treatments that are cost effective and flexible in concept. It is important to maintain a degree of flexibility in the approach to aesthetic treatment, as the short and long term plans for development have not yet fully exerted their pressure upon the surrounding area.

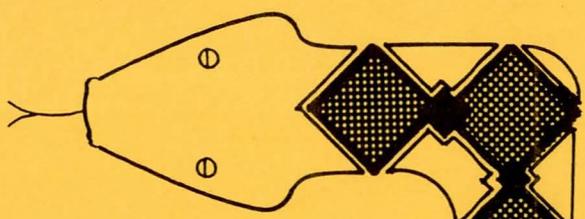
¹ Bridgers, Troller Associates, "Aesthetic Treatments for Adobe Dam" 15 Nov.1977

The constraints placed upon aesthetic treatment are not only those concerning future development. There are several other constraints which are visual, environmental and budgetary in nature.

The major visual constraint is related to the surrounding desert setting in which vegetative matter is a minimal component. Landforms (distant and near), colored rocks and open sand and gravel plain are the major ingredients in the desert environment. These ingredients need to be repeated in similar ratios in order for the aesthetic treatment to harmonize with the environs.

The environmental constraints are those associated with the aridity, wind, heat and dust which sharply limit the selection and maintenance of planting material.

A heavy budgetary constraint forces this study to seek alternative aesthetic treatments only for those areas on the downstream face which are determined to be most visually essential. In order to remain within this constraint this study confines itself to "guidelines" for aesthetically treating the dam, and should not be considered as a design for its treatment.



SUMMARY

- CRITICAL ISSUES IDENTIFIED
- METHODOLOGY
- DETERMINATION OF AESTHETIC TREATMENT
- APPLICATION TO ADOBE DAM

INTRODUCTION

- FOCUS
- INTRODUCTION
- BACKGROUND

CONCLUSION

- CONCLUSIONS
- RECOMMENDATIONS AND COSTS

VISUAL EVALUATION

- VISUAL ANALYSIS
- VISUAL IMPACT
- NET EFFECT
- SKETCHES AND PHOTOS

ORIENTATION TO STUDY AREA

- VICINITY MAP
- SITE MAP
- VIEWSHED
- VIEWPOINTS
- METHODOLOGY
- EXISTING VISUAL CONDITIONS (8 PHOTOS)

MITIGATING MEASURES AND THEIR EFFECTS

- SCREENING
- VENEERING
- OVERBUILDING
- REALIGNMENT
- OFF-SETTING SCALE

OBJECTIVES

- OBJECTIVES AND CONSTRAINTS

ADDENDA



AESTHETIC TREATMENT DERIVED FROM PERCEPTUAL EFFECTS

- HEIGHT OF DAM LOWERED
- HORIZON LINE RAISED
- DAM SCREENED FROM VIEW: (OFF-SITE)
- DAM SCREENED FROM VIEW: (ON-SITE)
- OFF-SETTING MAJOR LAND MODIFICATION
- NATURAL PATTERNS ABSTRACTLY FEATURED

AESTHETIC TREATMENT APPLIED TO ADOBE DAM

- VISUAL COMPONENTS OF ADOBE DAM
- EXISTING VISUAL CONDITIONS COMPARED WITH NATURALIZED VISUAL CONDITIONS

COST EFFECTIVE TREATMENT

- ESTIMATES

V. VISUAL EVALUATION Visual Analysis. In order to measure the "wholeness", "intactness" and "unity" of the representative views toward the dam it is necessary to divide each scene into its component parts.¹ These component parts make it possible to analyze each scene in its existing, "before" and to place it alongside its altered "after" state. This comparison graphically indicates those views which would undergo the greatest change. It also reveals the measurable proportion that the dam would have in each field of view.

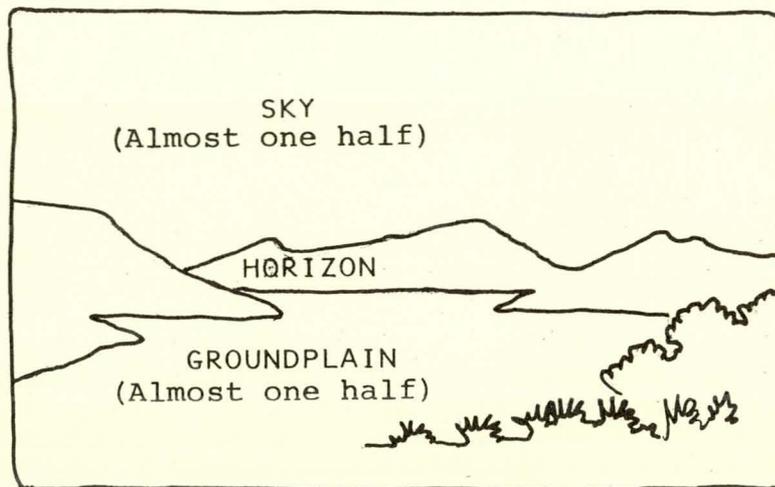
Visual Impact. Generally, the foreground, middleground and overhead sky remain as the larger, measurable components in each viewpoint. However, the proportionately thin horizon band, in most cases, will be obscured by the dam. Of course, this will mean the loss of the expansive, distant panoramas typical of the desert area.

Net Effect. The visually severe desert setting of expansive sky and ground plane is relieved by one strong, active component of visual interest, the horizon. In each viewscape, the proposed extreme, horizontal aspect of the

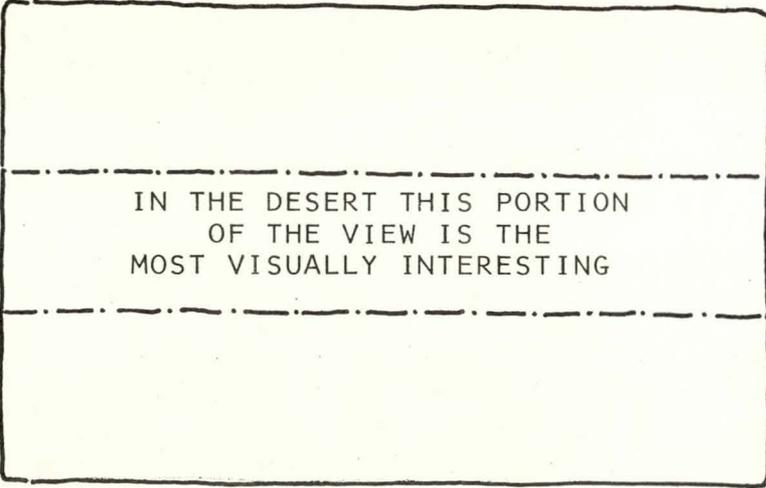
1. Jones and Jones, "A Method for the Quantification of Aesthetic Values", Nuclear Technology, Vol. 25, April 1975.

dam obscures proportionately the same area as the horizon. The permanent loss of this feature will be replaced by aesthetic treatments that also must be visually stimulating. This assessment is supported by the following series of annotated photos and sketches.

In the sketches, based on the photos of each representative viewpoint, the scene is reduced to its basic elements of line, texture and mass. This is done because the photo is too representative of the actual view, while the sketch is more removed from the actual and allows more objective consideration of the visual components.

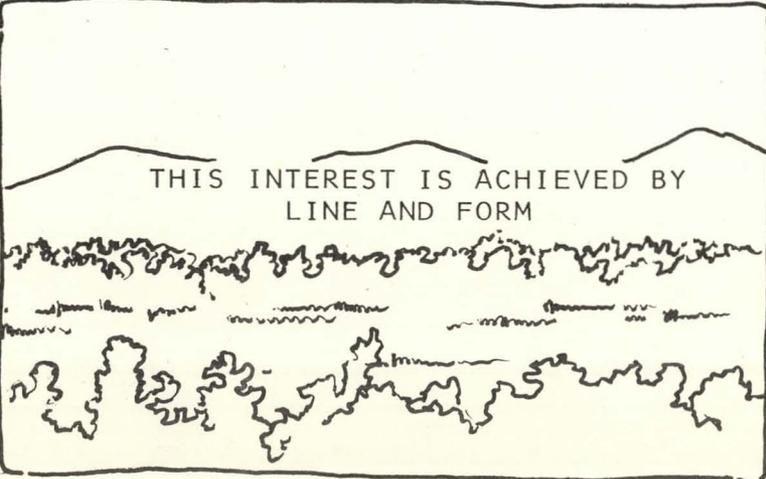


The desert setting, of expansive sky and broad groundplain converging at a very narrow horizon, is graphically seen through the simple line quality of the sketch. The irregularity of these few lines is responsible for the visual interest so characteristic of the desert area.



IN THE DESERT THIS PORTION
OF THE VIEW IS THE
MOST VISUALLY INTERESTING

A criteria list for evaluating visual elements includes the basic principles of visual interest and dominance. The factors of form, line, color and texture, as well as, how these factors are used in convergence, contrast, sequence, enframement, unity and order are described on pages 121-129 in Appendix A.



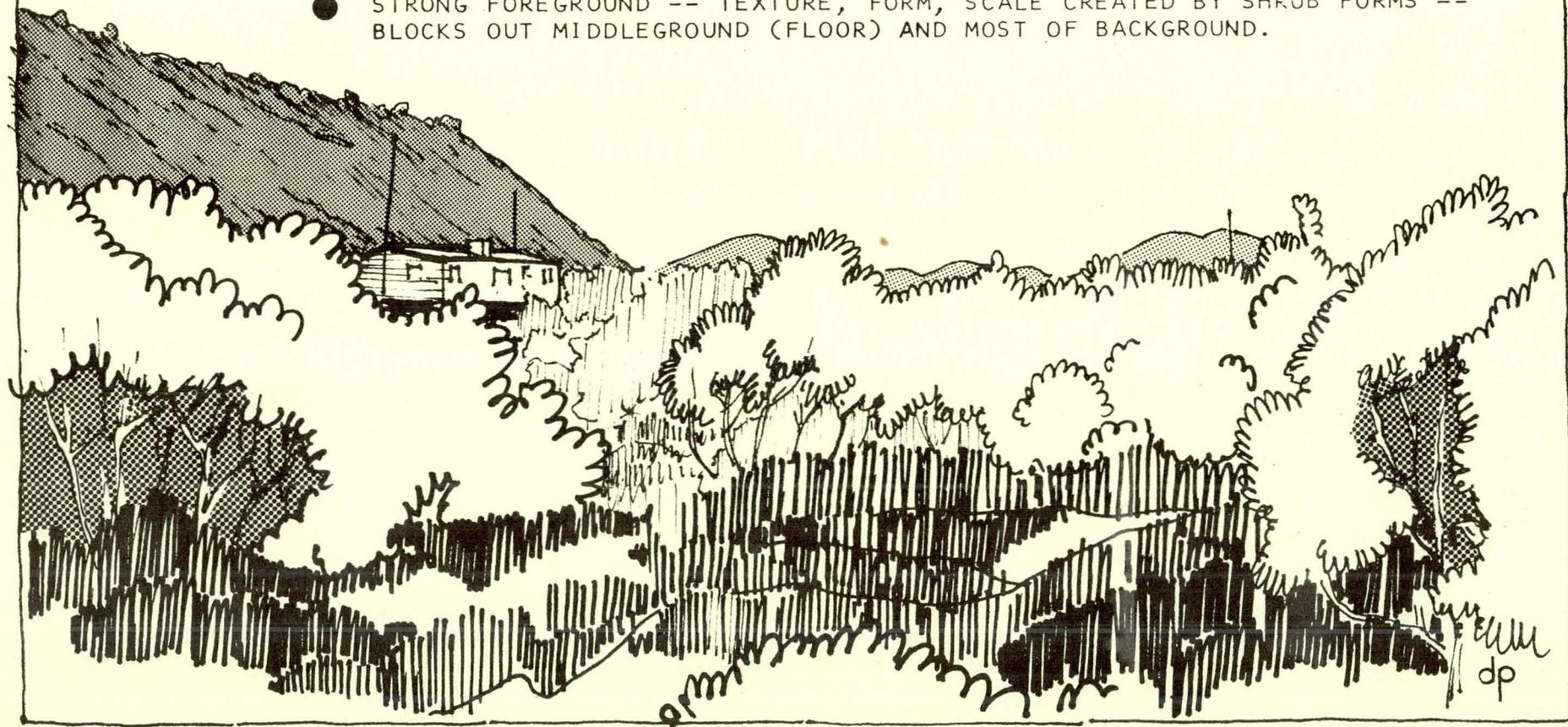
THIS INTEREST IS ACHIEVED BY
LINE AND FORM

The background is mainly dominated by line and form. Colors, textures and details seem to fade. Objects in this area are strongly affected by atmospheric conditions.

The middleground is mainly dominated by texture. Patterns also emerge.

The foreground has lots of distinctive detail where form and line can be overbearing.

- OBSERVER POSITION: EQUAL, SEMI-ENCLOSED SENSE OF SPACE DUE TO LARGE SHRUBS ENCLOSING VIEWER.
- DOMINANT MOUNTAIN FEATURE -- ASYMETRICAL BALANCE -- MIDDLEGROUND.
- HARMONIOUS RELATIONSHIP OF FORMS, TEXTURES, COLORS (HOUSE EXCEPTED).
- MINIMAL IMPACT FROM BACKGROUND MOUNTAIN FORM -- SCREENED BY FOREGROUND SHRUBS.
- STRONG FOREGROUND -- TEXTURE, FORM, SCALE CREATED BY SHRUB FORMS -- BLOCKS OUT MIDDLEGROUND (FLOOR) AND MOST OF BACKGROUND.

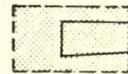


VIEWPOINT - EXISTING

1

3300 FT.

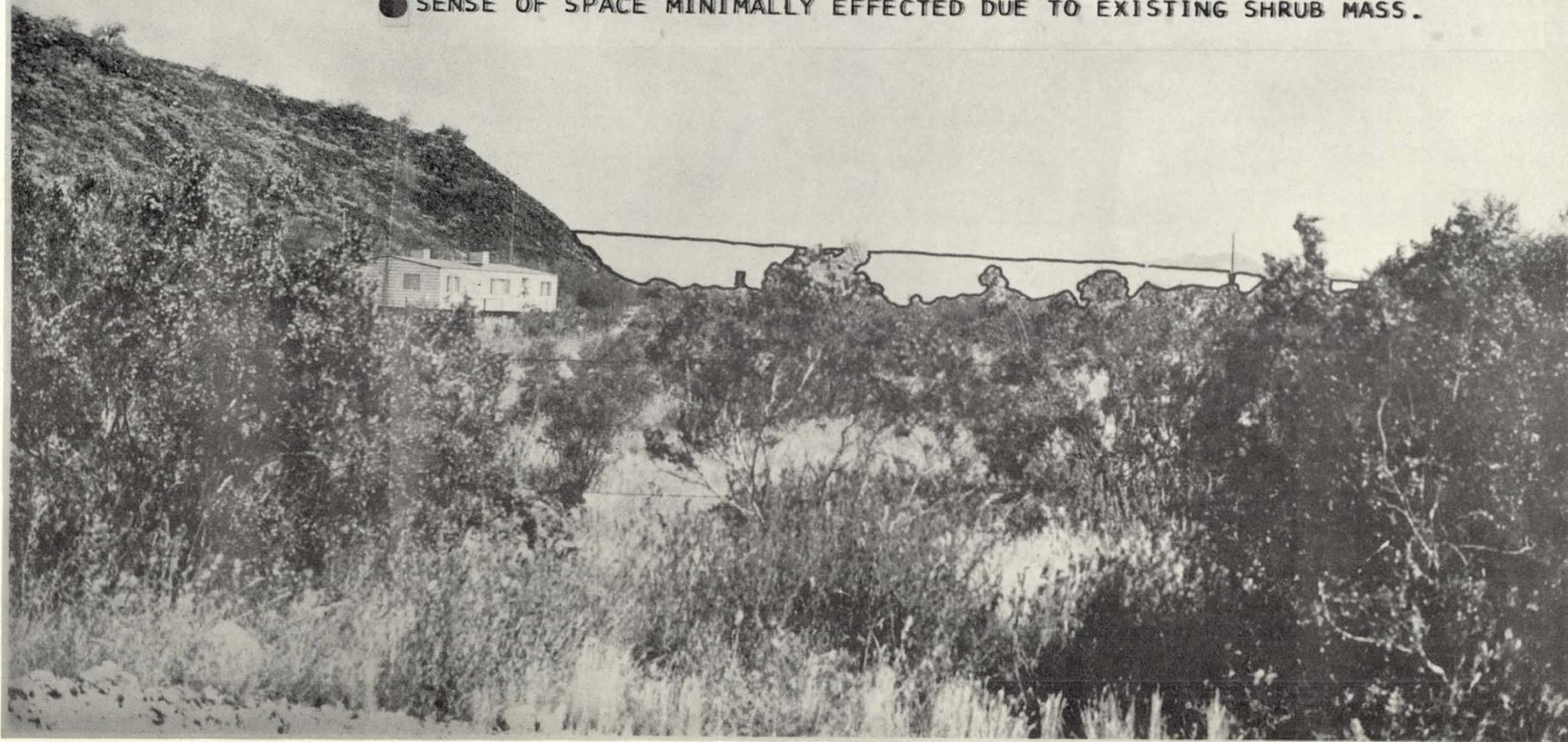
BEARDSLEY RD.
NEAR 43RD. AVE.



21%

FIELD OF VISION

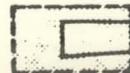
- STRONG LINEAR ELEMENT IS EMPHASIZED.
- LARGE SHRUB MASSING IN FOREGROUND SCREENS MOST OF VIEW TO DAM FACE.
- VIEW OF SILHOUETTED MOUNTAINS IN BACKGROUND IS LOST.
- SENSE OF SPACE MINIMALLY EFFECTED DUE TO EXISTING SHRUB MASS.



VIEWPOINT-VISUAL IMPACT

3300 FT.

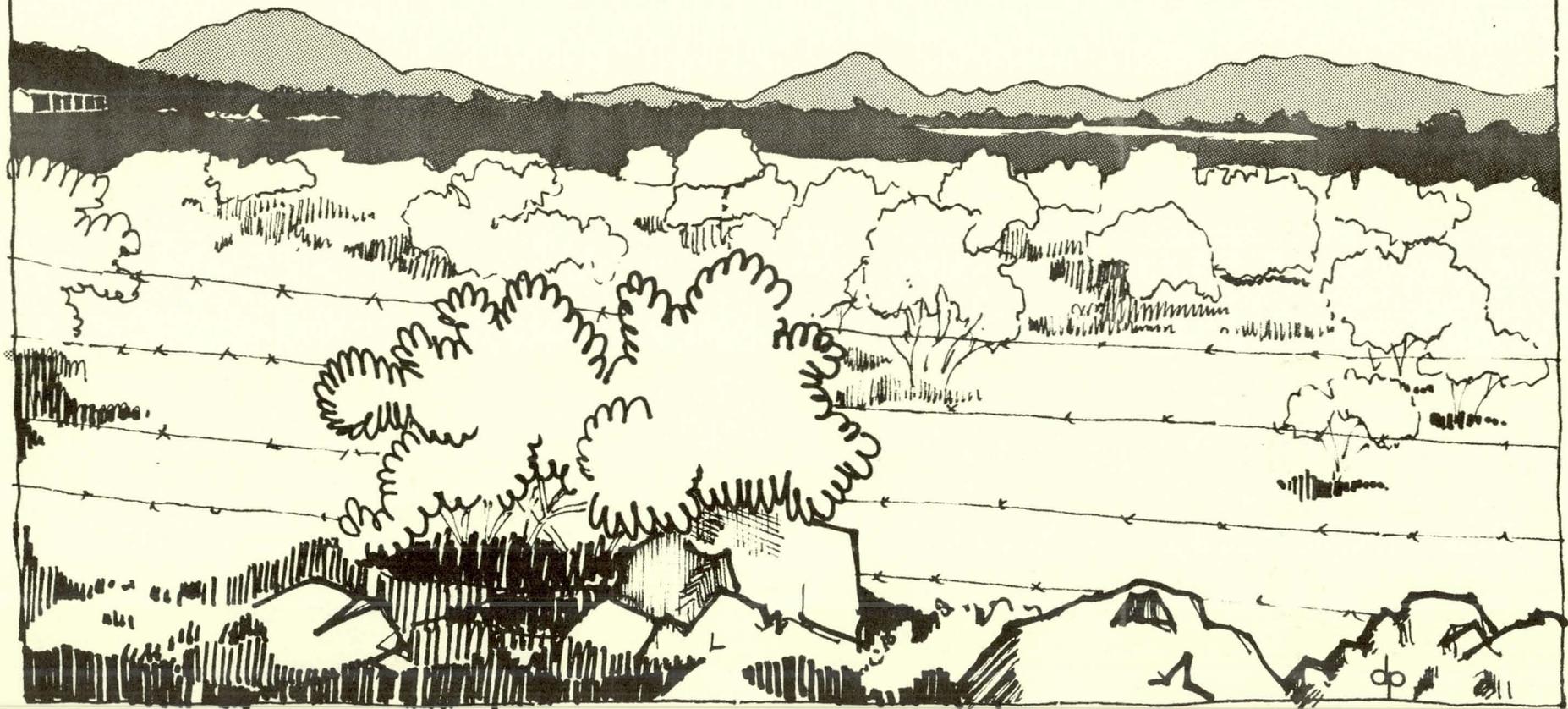
1



21%

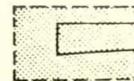
FIELD OF VISION 55

- MASSING OF SHRUBS FORM STRONG HORIZONTAL EMPHASIS -- REINFORCED BY SILHOUTTED MOUNTAINS IN BACKGROUND (CONTRAST).
- HARMONIOUS RELATIONSHIP BETWEEN ELEMENTS (EXCEPT FENCE).
- STRONG FEELING OF OPEN SPACE -- MOUNTAINS FORM DISTANT BOUNDARIES. SENSE OF PLACE.
- STRONG TEXTURES -- FOREGROUND -- MIDDLEGROUND -- CREATE STRONG TACTILE AWARENESS.



VIEWPOINT - EXISTING
 2 3600 FT.

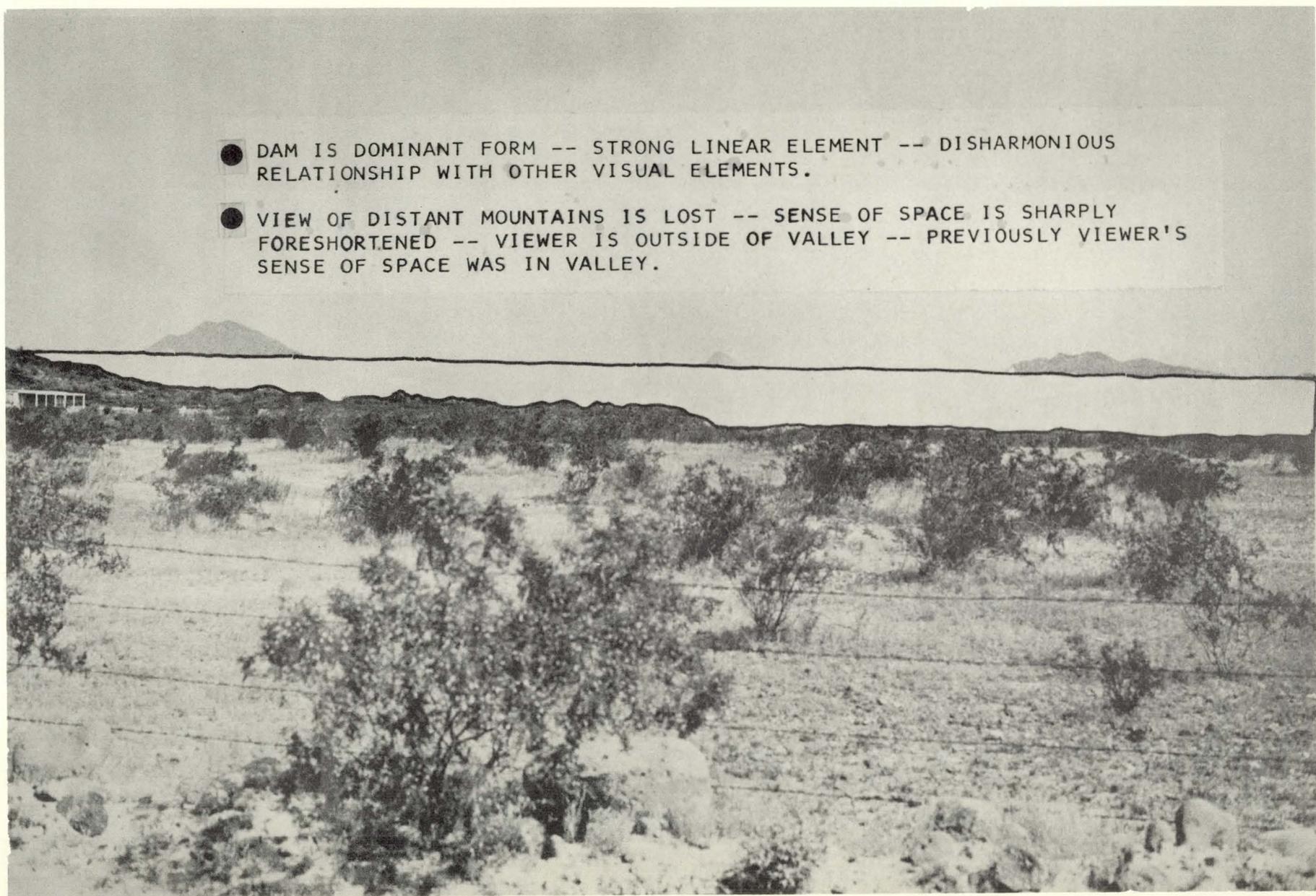
BEARDSLEY RD.
 NEAR SCATTER WASH



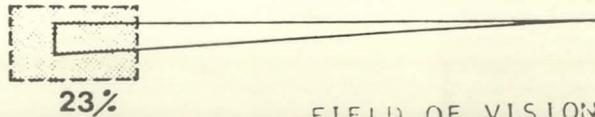
23%

FIELD OF VISION

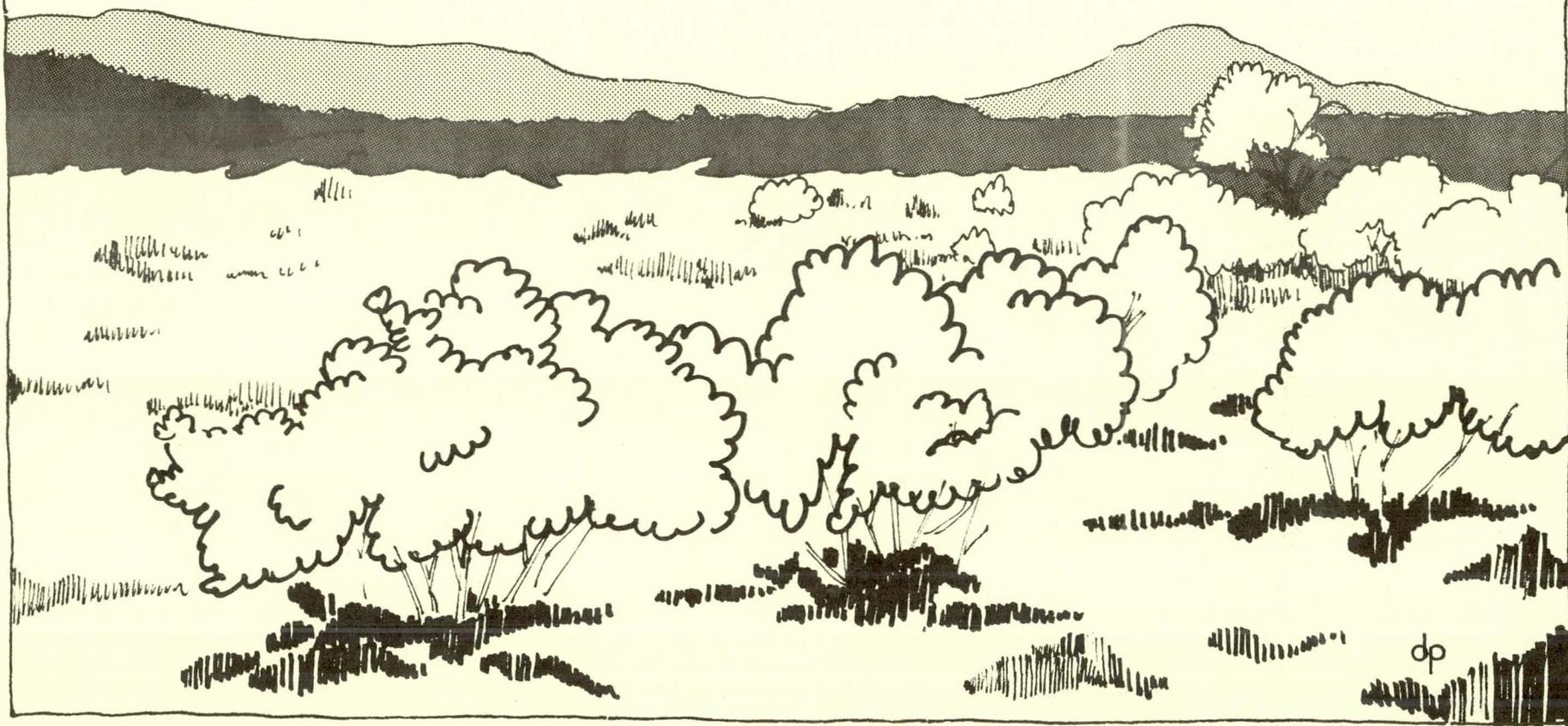
- DAM IS DOMINANT FORM -- STRONG LINEAR ELEMENT -- DISHARMONIOUS RELATIONSHIP WITH OTHER VISUAL ELEMENTS.
- VIEW OF DISTANT MOUNTAINS IS LOST -- SENSE OF SPACE IS SHARPLY FORESHORTENED -- VIEWER IS OUTSIDE OF VALLEY -- PREVIOUSLY VIEWER'S SENSE OF SPACE WAS IN VALLEY.



VIEWPOINT - VISUAL IMPACT
2 3600 FT.



- SHRUB MASS FORMS STRONG HORIZONTAL ELEMENT WHICH IS REINFORCED BY SILHOUETTED MOUNTAINS (HARMONIOUS RELATIONSHIP).
- STRONG FEELING OF OPEN SPACE -- BACKGROUND MOUNTAINS FORM SPACIAL DEFINITION -- SENSE OF PLACE.
- SHRUBS IN FOREGROUND ADD INTEREST BY TEXTURE AND RANDOM PATTERN -- LEAD VIEW TO DISTANCE.

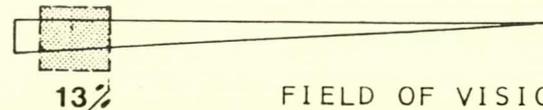


VIEWPOINT- EXISTING

3

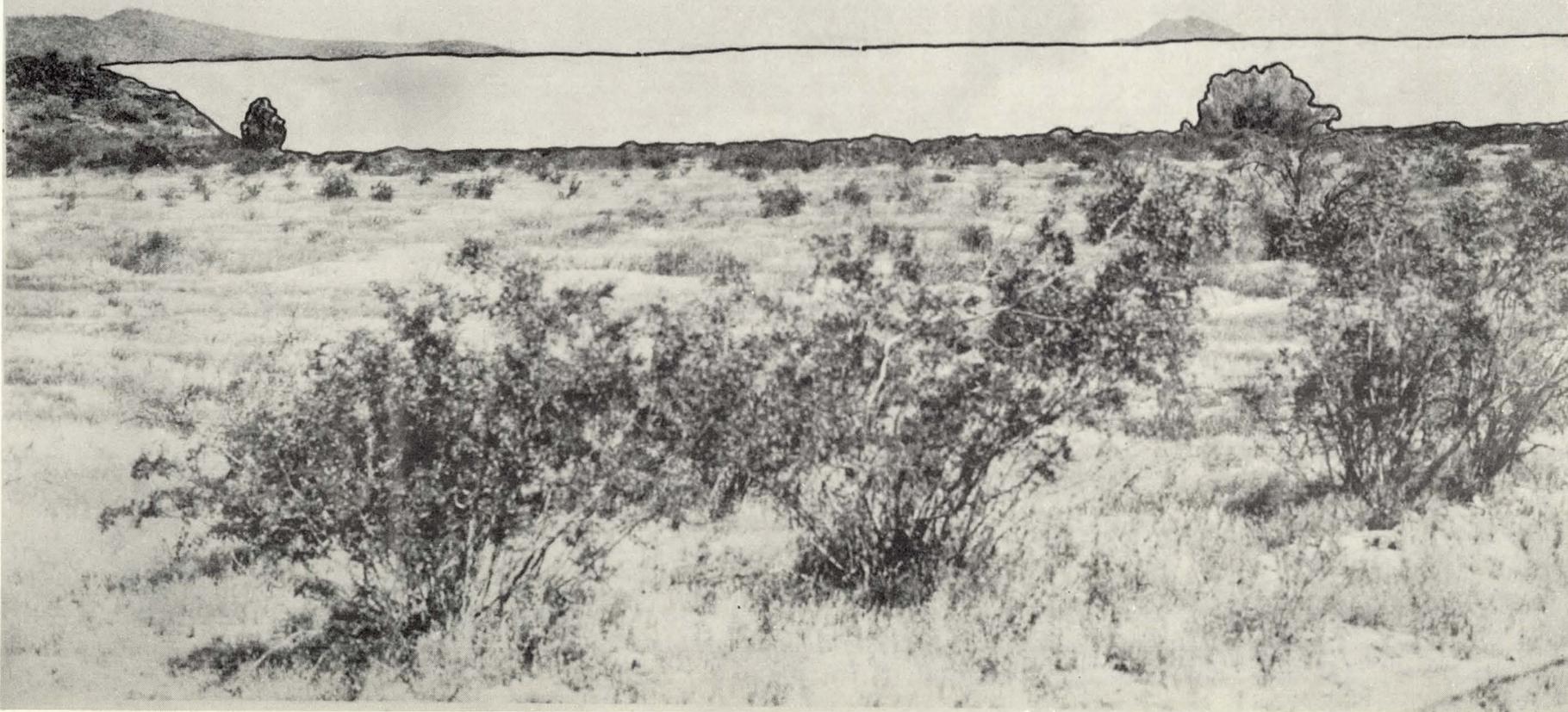
2100 FT.

41ST. AVE.



FIELD OF VISION

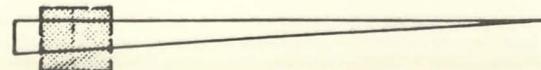
- SAME VISUAL IMPACT AS NOTED FOR VIEWPOINT #2, VISUAL IMPACT THIS FRAME SHOWS CLOSER VIEWER POSITION: RESULT IS THAT DAM APPEARS HIGHER AND BECOMES EVEN MORE DOMINANT. OTHER VISUAL ELEMENTS CAN'T COMPETE FOR VIEWER'S ATTENTION.
- NOTE: FORESHORTENING IN SENSE OF SPACE.



VIEWPOINT - VISUAL IMPACT

3

2100 FT.



13%

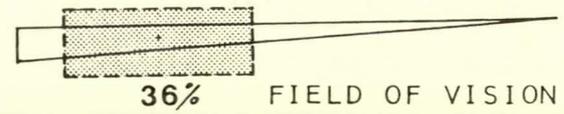
- MASSING OF SHRUBS SCREEN MOST OF MOBILE PARK--CREATES SIMILAR CONDITION OF HORIZONTAL ELEMENT. RESIDENTIAL IMPACT IS MINIMAL. CONTRAST OF TEXTURES AND COLORS (ROOFING AND SHRUBS) CREATES INTEREST.
- MOUNTAINS IN BACKGROUND REINFORCE HORIZONTAL EMPHASIS -- CREATE BOUNDARY.
- FEELING OF OPEN SPACE -- SENSE OF PLACE.
- FOREGROUND OFFERS LITTLE VISUAL INTEREST -- NO FORM ELEMENTS. LOW TEXTURAL AND COLOR QUALITIES -- FOCUSES ATTENTION TO MIDDLE AND BACKGROUND.



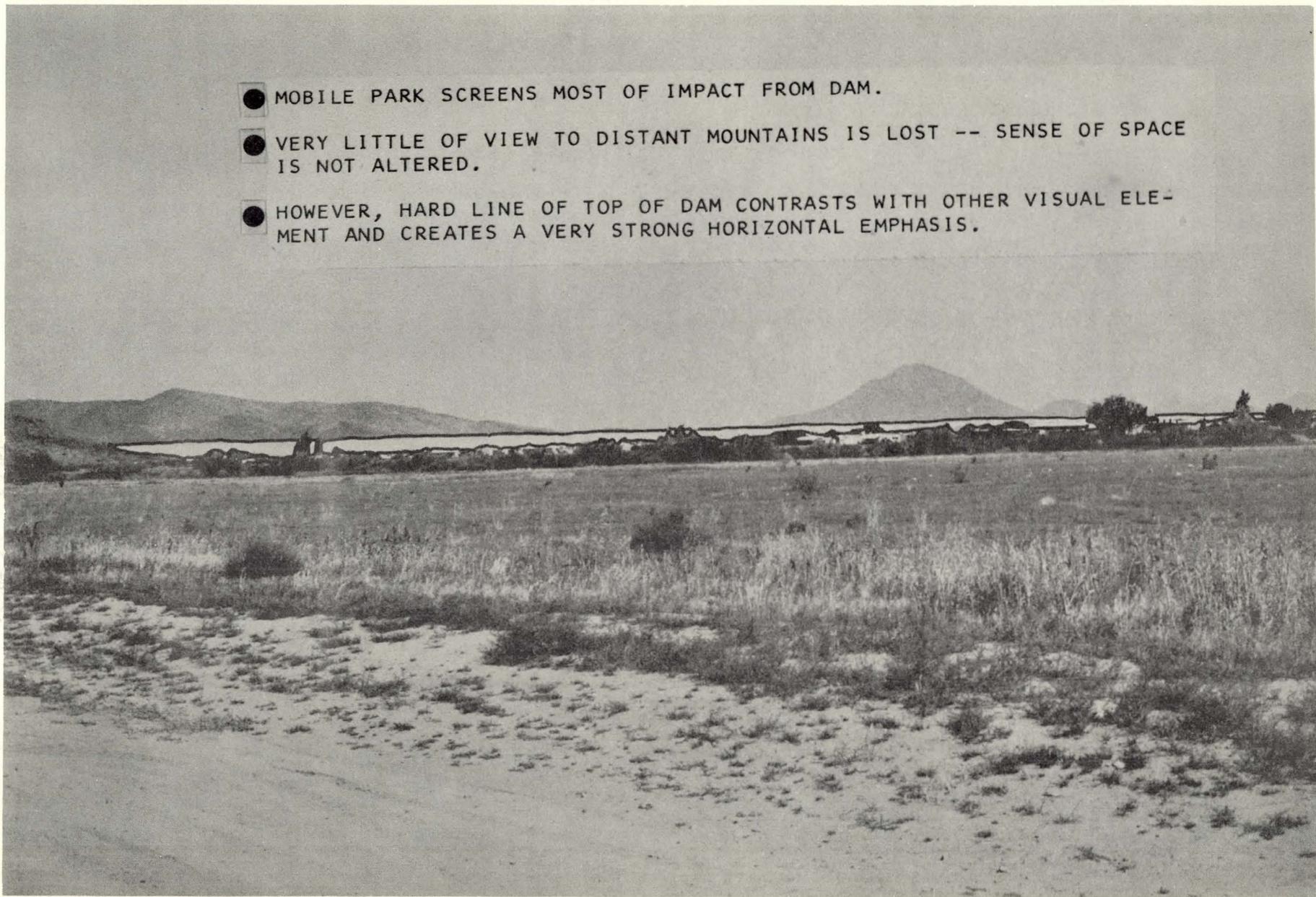
VIEWPOINT EXISTING
5600 FT.

4

BEARDSLEY RD.
& 35TH AVE.



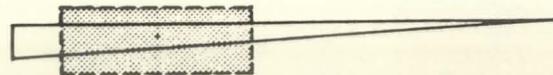
- MOBILE PARK SCREENS MOST OF IMPACT FROM DAM.
- VERY LITTLE OF VIEW TO DISTANT MOUNTAINS IS LOST -- SENSE OF SPACE IS NOT ALTERED.
- HOWEVER, HARD LINE OF TOP OF DAM CONTRASTS WITH OTHER VISUAL ELEMENT AND CREATES A VERY STRONG HORIZONTAL EMPHASIS.



VIEWPOINT VISUAL IMPACT

4

5600 FT.



36%

FIELD OF VISION 61

- MOUNTAIN FORMS HAVE IRREGULAR UNDULATION THAT CREATES INTERESTING SILHOUETTE.
- MIDDLEGROUND SHRUB MASSING HAS STRONG TEXTURE AND COLOR CONTRAST.
- FOREGROUND SHRUB FORMS ADD INTEREST TO OPEN DESERT FLOOR AND HAVE GOOD COLOR AND TEXTURE CONTRAST WITH GRASSES.
- STRONG FEELING OF OPENNESS WITH EDGE OF SPACE DEFINED BY MOUNTAIN BOUNDARY. A FEELING OF PLACE.
- HARMONIOUS COMPOSITION OF VISUAL ELEMENTS.
- LINEAR PATTERN IN FOREGROUND LEADS VIEWER'S FOCUS TO MIDDLE GROUND.

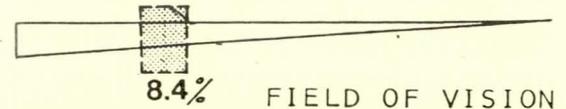


VIEWPOINT - EXISTING

5

1300 FT.

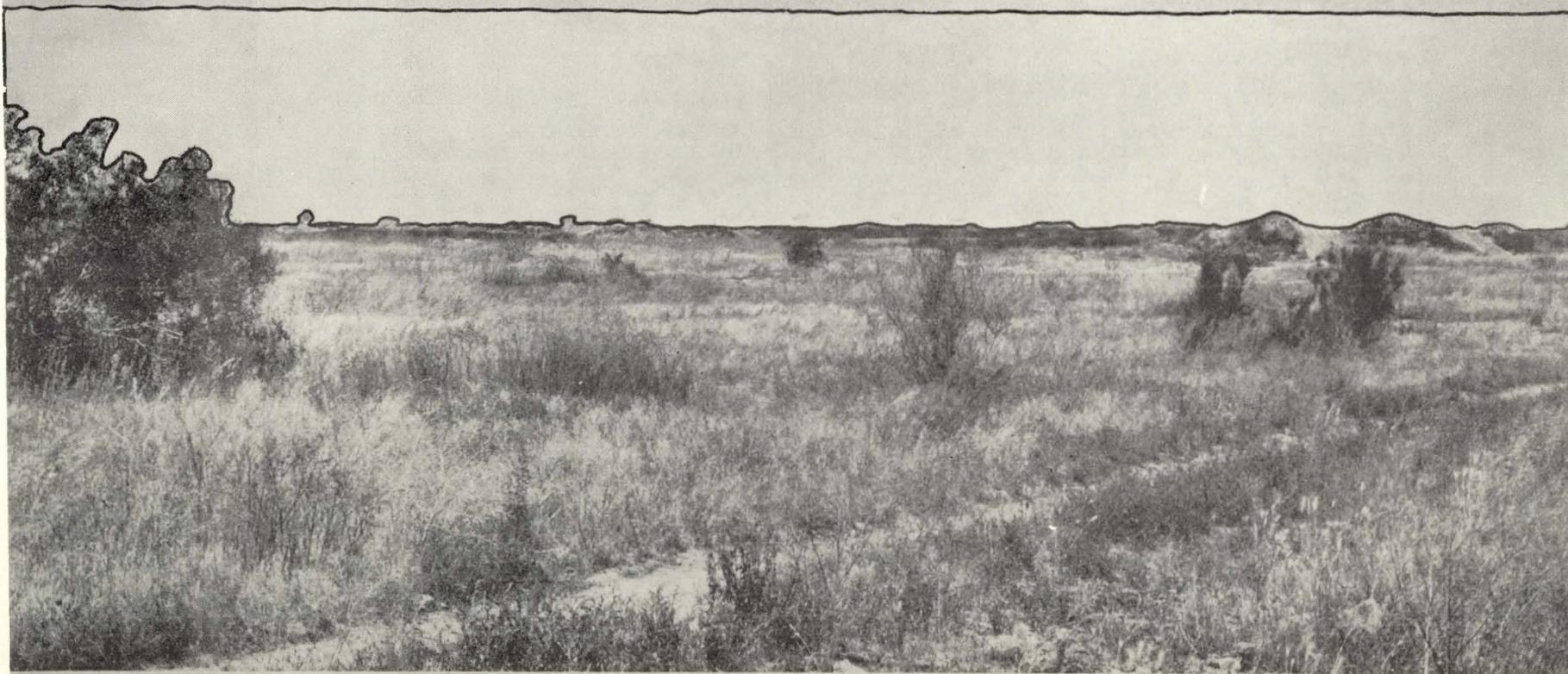
62 MOBILE HOME
PERIMETER RD.



8.4%

FIELD OF VISION

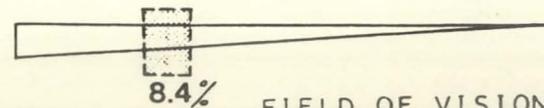
- CLOSER VIEWER POSITION (APPROXIMATELY ONE-QUARTER MILE) SHOWS VISUAL IMPACT OF DAM ON RESIDENTS IN MOBILE PARK.
- ALL VIEW OF BACKGROUND MOUNTAINS IS BLOCKED.
- SENSE OF SPACE IS RADICALLY ALTERED -- FORESHORTENED.
- LINE OF TOP OF DAM CONTRASTS SHARPLY WITH NATURAL VISUAL ELEMENTS.
- INTEREST OF FOREGROUND TEXTURES, FORMS AND COLORS IS LOST DUE TO OVERPOWERING VISUAL DOMINANCE OF DAM.



VIEWPOINT-VISUAL IMPACT

5

1300 FT.



FIELD OF VISION 63

- MOUNTAIN SILHOUETTE HAS IRREGULAR FORM -- INTEREST.
- SHRUB MASSING IN MIDDLEGROUND CREATES HORIZONTAL LINE ELEMENT -- CONTRASTS NICELY WITH LINE OF TOP OF MOUNTAIN SILHOUETTE.
- FOREGROUND HAS GOOD TEXTURAL QUALITIES BUT LACKS IN FORM, COLOR AND CONTRAST.
- STRONG SENSE OF OPEN SPACE -- BOUNDARY DEFINED BY MOUNTAINS.

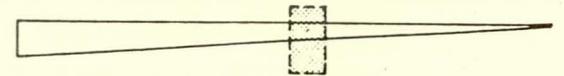


VIEWPOINT- EXISTING

6

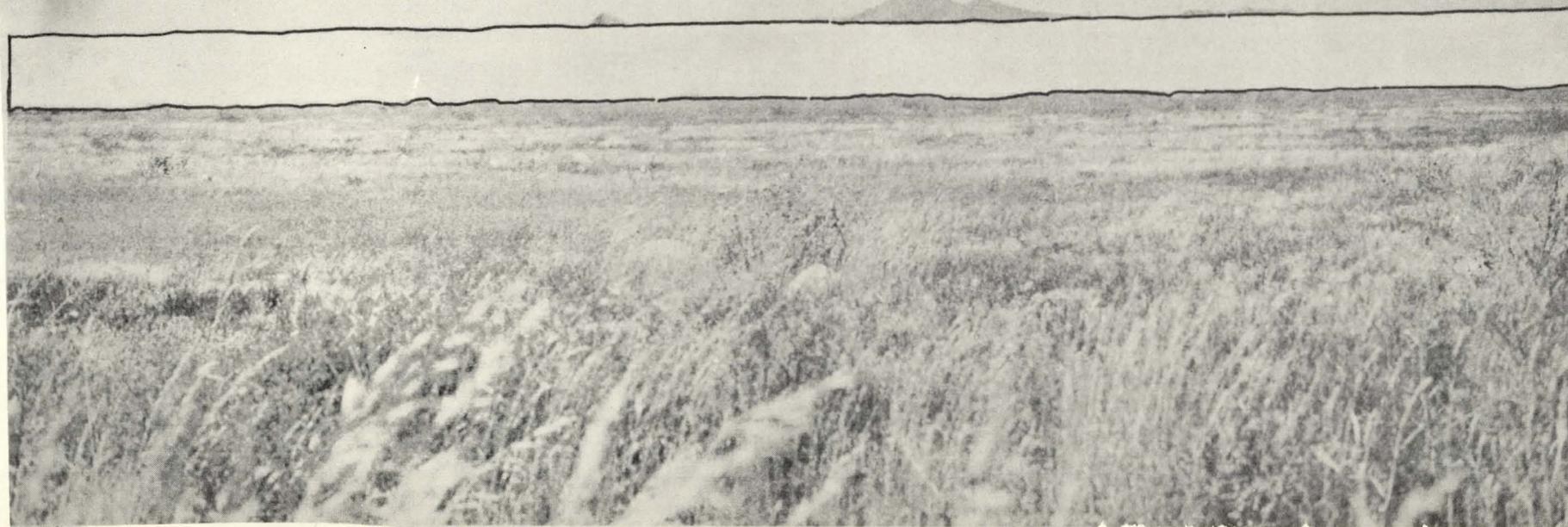
1175 FT.

DEER VALLEY DR.
& 35TH AVE.



FIELD OF VISION 7.6%

- VIEW TO MOUNTAINS IS LOST -- SENSE OF SPACE IS GREATLY ALTERED.
- LINE OF TOP OF DAM AND LINE OF HORIZON OF DESERT FLOOR ALMOST PARALLEL -- NO CONTRAST TO DEVELOP INTEREST -- VERY STRONG HORIZONTAL EMPHASIS.
- DAM DOMINATES VISUAL FRAME.



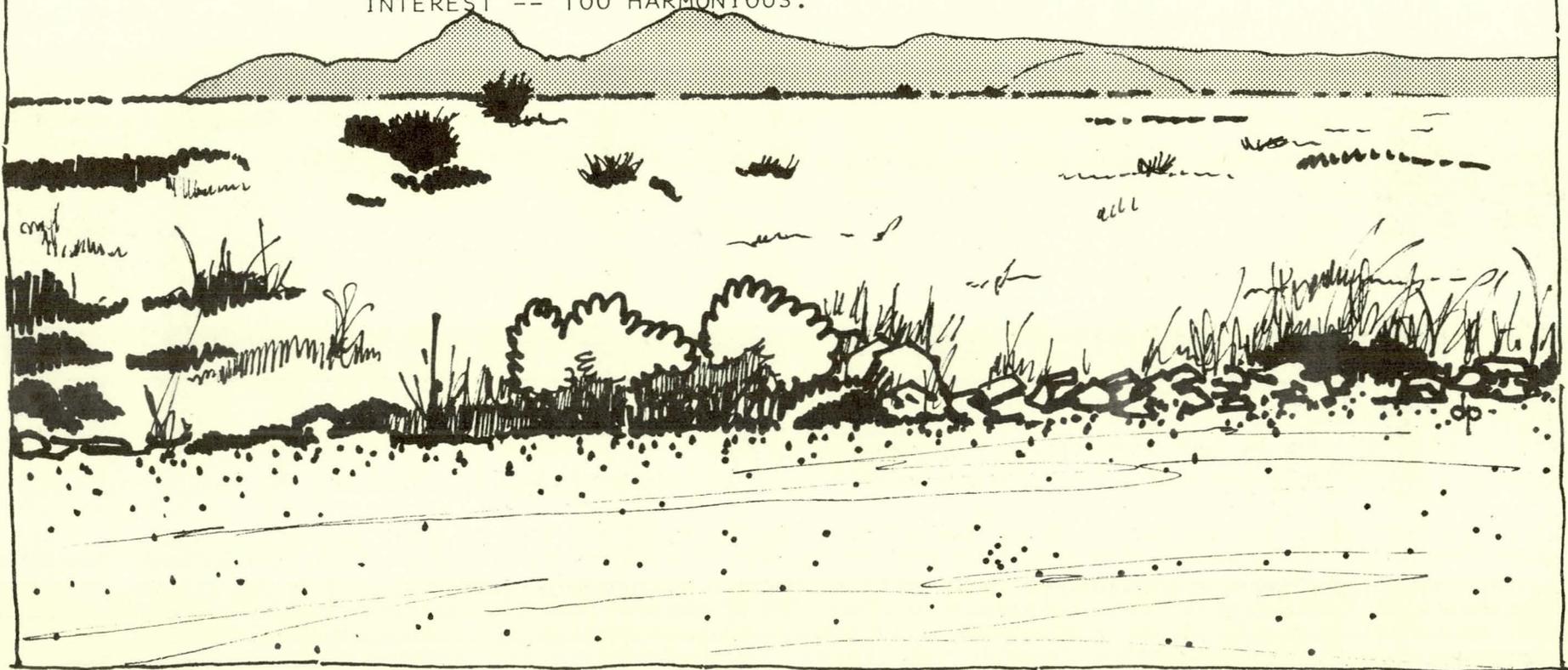
VIEWPOINT - VISUAL IMPACT

6

1175 FT.

FIELD OF VISION 7.6%

- MOUNTAINS HAVE VERY WEAK CHROMATIC VALUE -- ALMOST LOST TO SKY.
- VERY STRONG OPEN SPACE QUALITIES -- WEAK BOUNDARIES OF SPACE -- LITTLE SENSE OF PLACE.
- SHRUB MASSING FORMS WEAK VISUAL ELEMENT OF LINE (MIDDLEGROUND).
- MIDDLEGROUND AREA HAS LITTLE CONTRAST, TEXTURE, OR FORM TO GIVE IT INTEREST.
- FOREGROUND DEVELOPS A LITTLE INTEREST IN TEXTURE, COLOR, CONTRAST AND LINE -- BUT QUALITIES ARE MINIMAL.
- OVERALL THIS VIEW HAS FEW VISUALLY EXCITING QUALITIES TO GIVE IT INTEREST -- TOO HARMONIOUS.

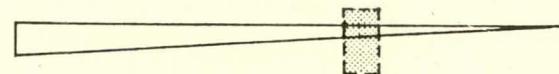


VIEWPOINT- EXISTING

7

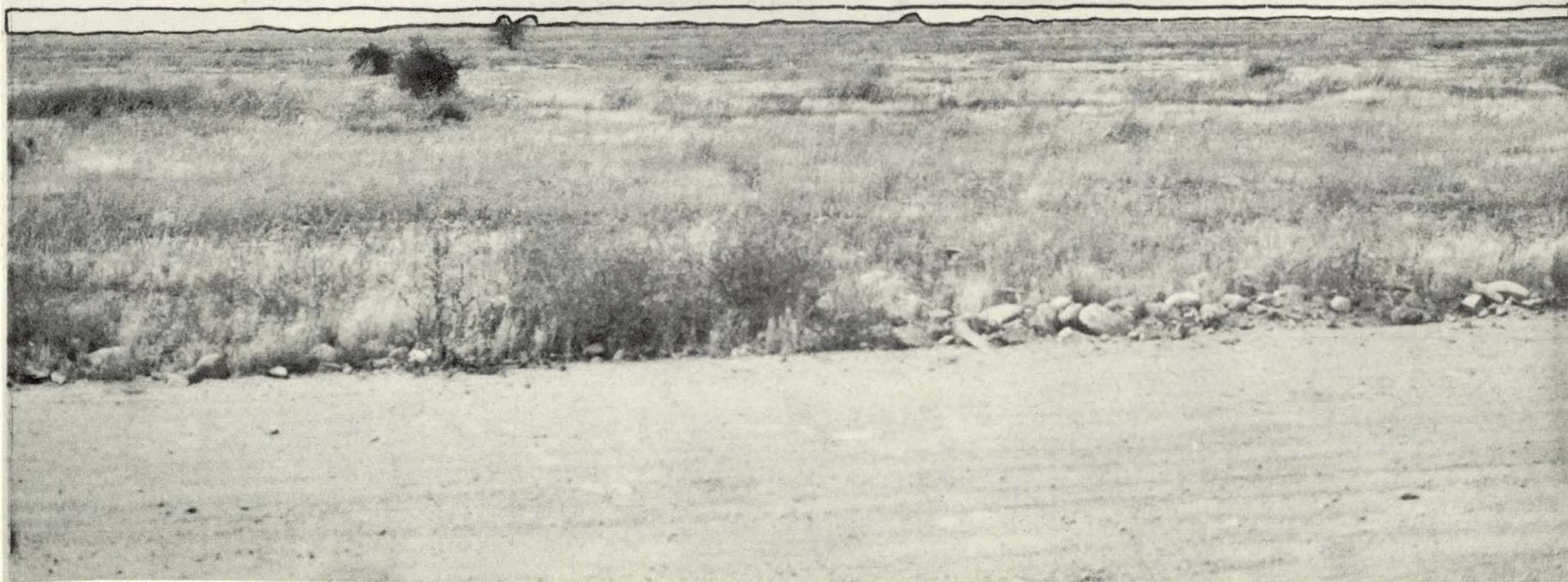
2450 FT.

DEER VALLEY DR.
& SCATTER WASH



FIELD OF VISION 13.5%

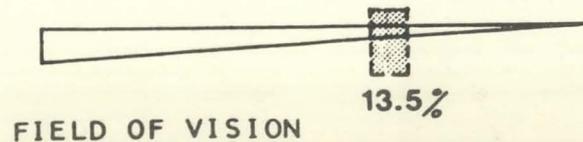
- LOWER END OF DAM, VIEWED FOR APPROXIMATELY ONE-HALF MILE.
- DAM HAS LITTLE OVERALL IMPACT ON VIEWER.
- LINE OF TOP OF DAM CREATES A LITTLE STRONGER EMPHASIS ON THE HORIZON.
- SENSE OF SPACE ISN'T EFFECTED DUE TO DAM'S LOW HEIGHT.
- WEAK VIEW OF MOUNTAIN SILHOUETTES ISN'T EFFECTED BY DAM.



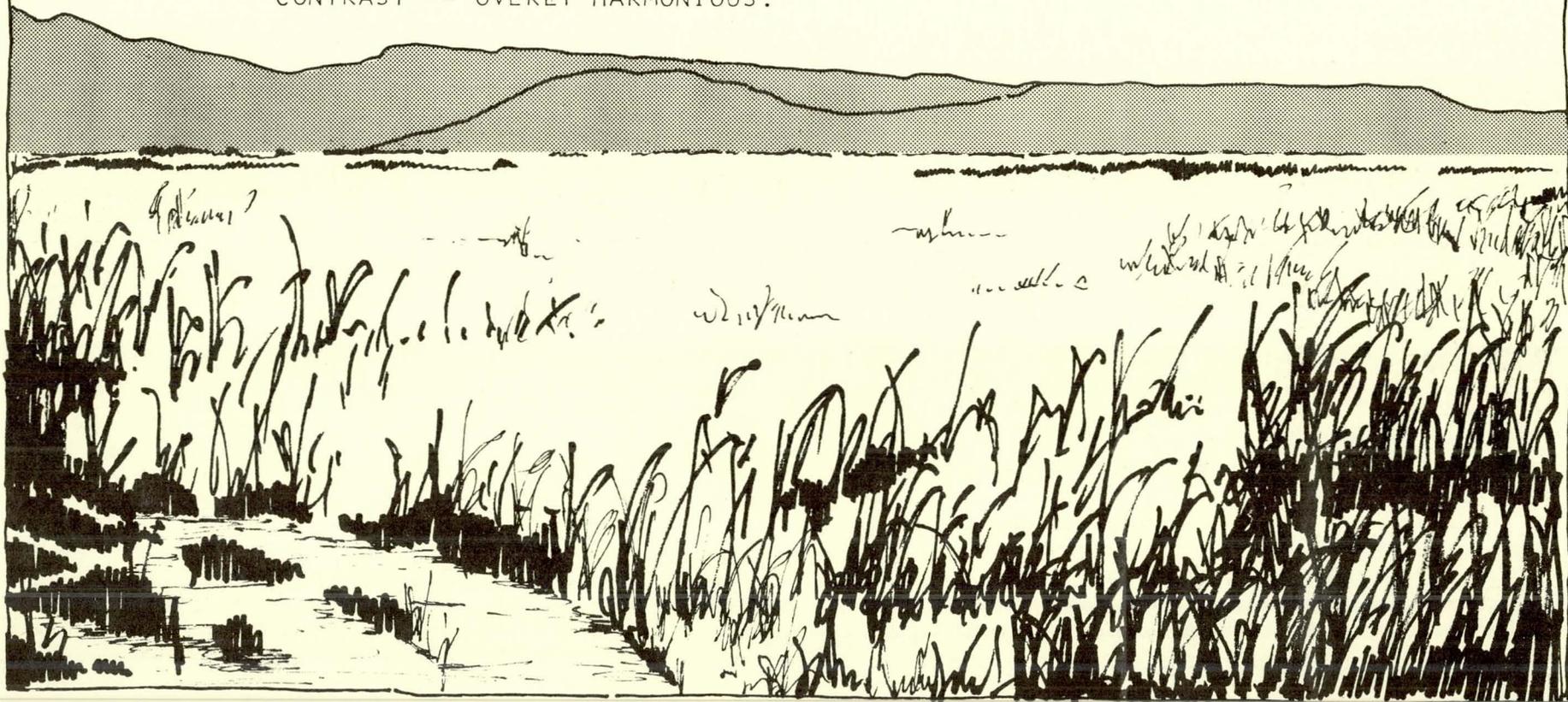
VIEWPOINT - VISUAL IMPACT

7

2450 FT.



- MOUNTAIN SILHOUETTES HAVE SMOOTH FORM -- ALMOST REGULAR -- LITTLE UNDULATION.
- HORIZON OF DESERT FLOOR IS WEAKLY DEFINED BY SHRUB MASSING.
- LOW CONTRAST OF LINE PATTERNS (TOP OF MOUNTAINS AND HORIZON OF DESERT FLOOR).
- OPEN SENSE OF SPACE WITH STRONG DEFINITION OF BOUNDARIES. GOOD SENSE OF SPACE.
- GRASSES IN FOREGROUND PROVIDE STRONG TEXTURAL QUALITIES.
- FOREGROUND AND MIDDLEGROUND OFFER LITTLE FORM, LINE, COLOR OR CONTRAST -- OVERLY HARMONIOUS.

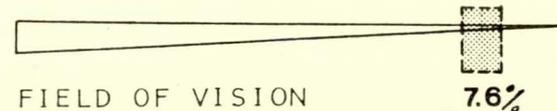


VIEWPOINT - EXISTING

8

1175 FT.

FOOTHILL DR.
IN ADOBE



FIELD OF VISION

7.6%

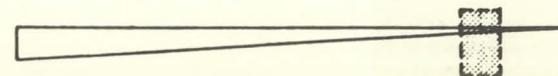
- LOWER END OF DAM, VIEWED FROM APPROXIMATELY ONE-HALF MILE.
- DAM HAS LITTLE OVERALL IMPACT ON VIEWER.
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- WEAK VIEW OF MOUNTAIN SILHOUETTES ISN'T EFFECTED BY DAM.



VIEWPOINT-VISUAL IMPACT

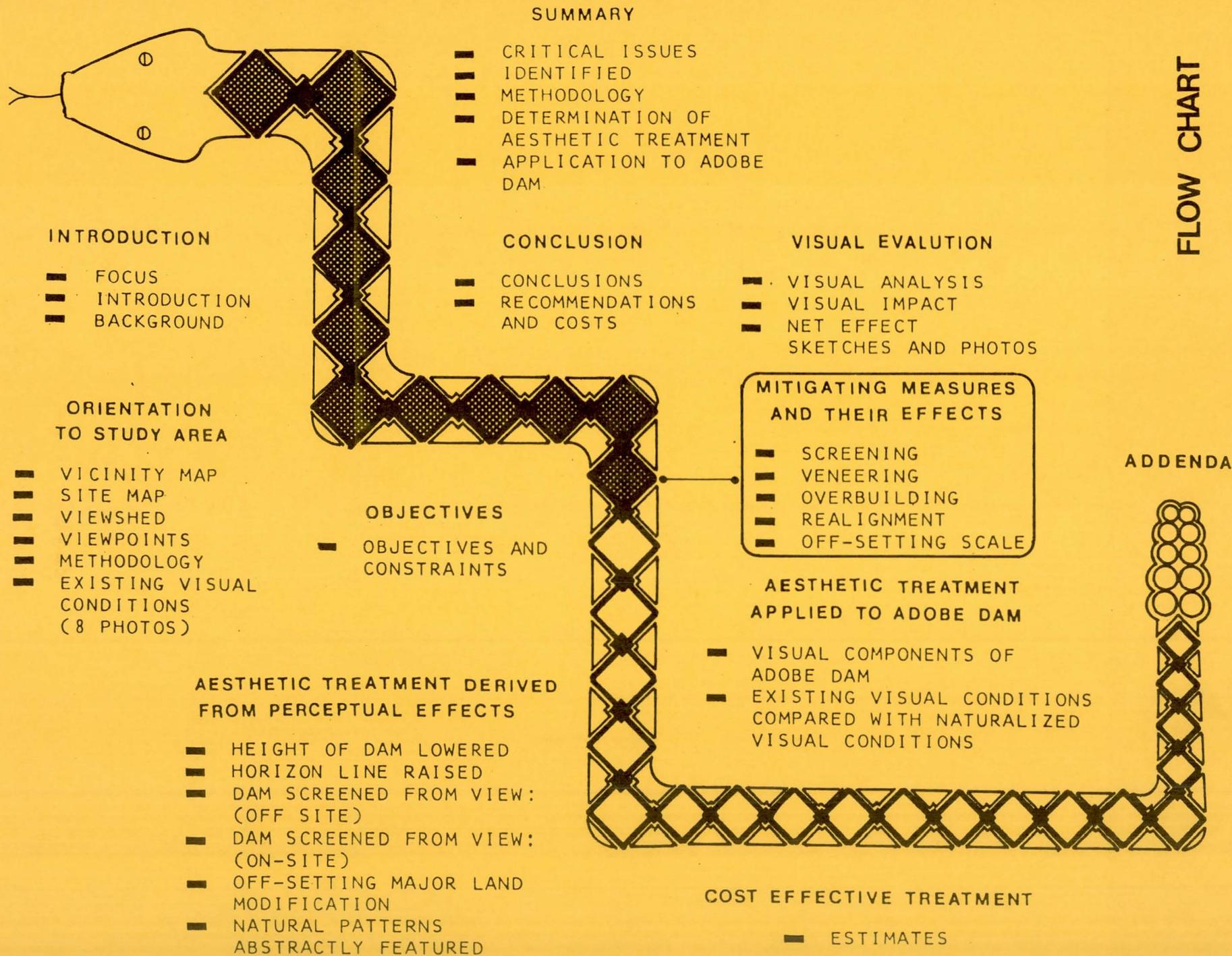
8

1175 FT.



FIELD OF VISION

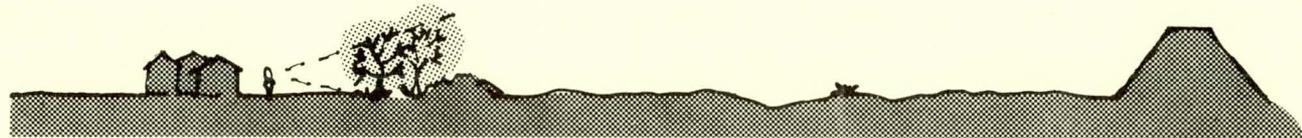
7.6%



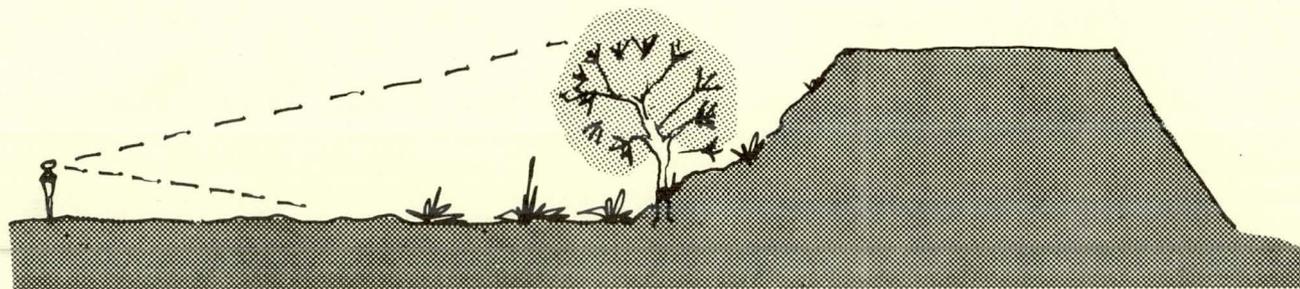
VI. MITIGATING MEASURES AND THEIR EFFECTS. The visual analysis reveals that the lost horizon component of each viewscape requires a replacement of equal visual interest and activity. The measures to be used in achieving this goal fall into general descriptive categories: Those measures that "screen" the site from view, thus allowing the surface of the structure to remain relatively unchanged and those measures which physically "cover" the structure's surface. Measures involving "re-alignment" physically remove portions of the structure from view or into configurations where they may be easily obscured. "Off-setting scale" measures neutralize the out-of-scale land modification by the creation of a counter-balancing visual effect.

These measures are used to approximate the naturally occurring and random patterns in the surrounding area. This approximation of the existing natural environment is accomplished through a combination of measures. The individual measures and their combinations are described in the following figures.

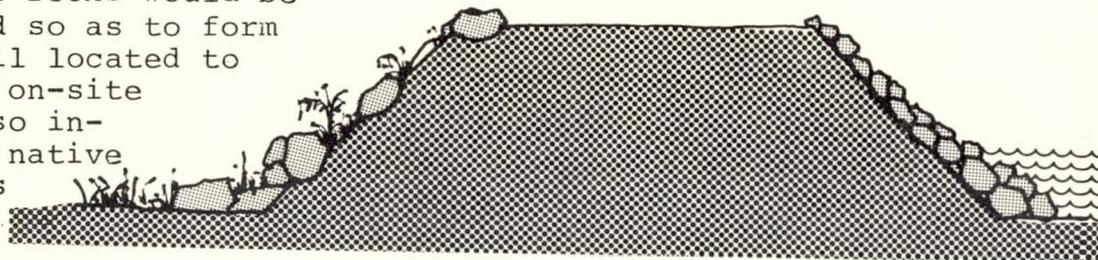
OFF-SITE SCREENING is the location and placement of plant materials, earth and rock mounding or structures in predetermined key viewpoints to maximize the amount of area screened from view. This technique is particularly useful at the perimeter of residential developments or along roads and highways.



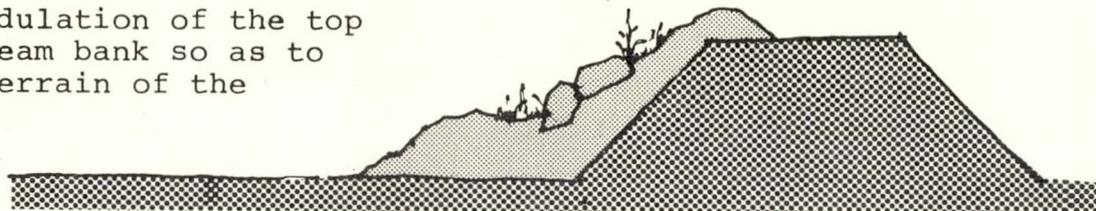
ON-SITE SCREENING is the use of trees and shrubs in predetermined areas on or adjacent to earth structures. The plant material obscures views to the structure allowing minimal aesthetic treatment to the surfaces screened from views.



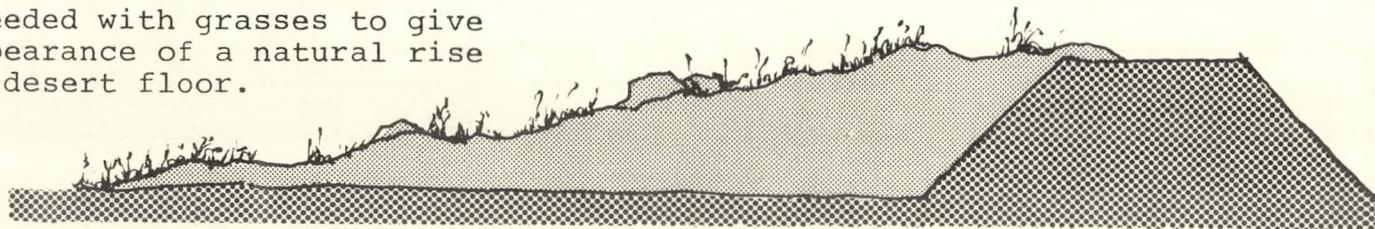
VENEERING is the placement of rock and earth in ratios similar to that of the surrounding area. The rocks would be located and structured so as to form "plant pockets" of soil located to maximize retention of on-site water. This would also involve hydroseeding of native or naturalized grasses typical of the surrounding area.



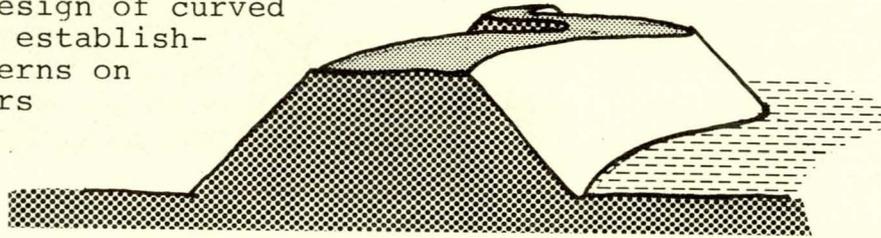
OVERBUILDING is the undulation of the top and toe of the downstream bank so as to simulate the natural terrain of the surrounding area.



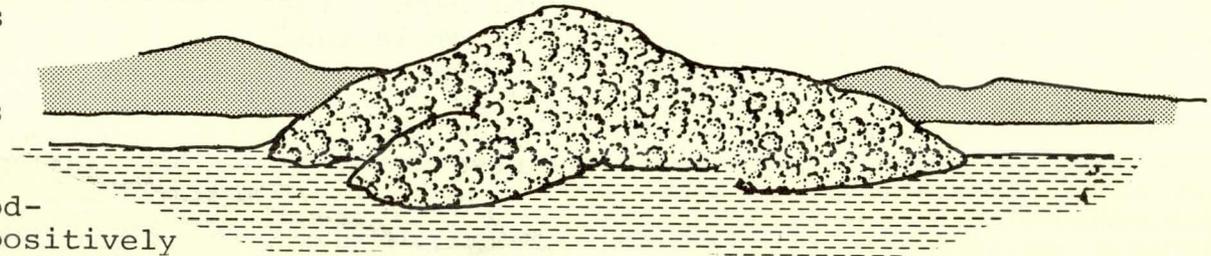
TAPERED OVERBUILDING is the placement and grading of soil and rock in a 5:1 (or less) slope from the top of the downstream bank. The final surface grading would resemble the slight undulation of the surrounding desert floor. The area would be hydroseeded with grasses to give the appearance of a natural rise of the desert floor.



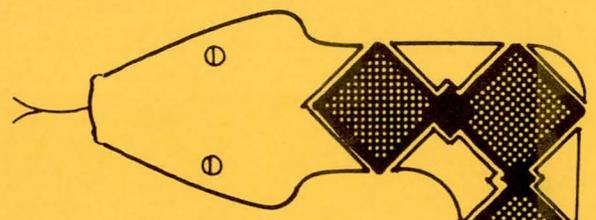
RE-ALIGNMENT is the engineering and design of earth structures so that character of the structure is compatible to the surrounding environmental setting. This technique encourages the design of curved sections necessary for the establishment of shade and sun patterns on coves, pockets and shoulders necessary for visual relief and interest.



OFF-SETTING SCALE is the construction of large scale land formations, positive in height or negative in depth. (e.g. hills or canyons). These are intended to off set or break up out-of-scale projects not consistent in character to the environmental setting. These formations are useful as stockpiles, land fills and borrow pits. Paradoxically it is conceivable that the concentration of two visually degrading land modifications might be used positively to offset the impact of the other.



FLOW CHART



SUMMARY

- CRITICAL ISSUES IDENTIFIED
- METHODOLOGY
- DETERMINATION OF AESTHETIC TREATMENT
- APPLICATION TO ADOBE DAM

INTRODUCTION

- FOCUS
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CONCLUSION

- CONCLUSIONS
- RECOMMENDATIONS AND COSTS

VISUAL EVALUATION

- VISUAL ANALYSIS
- VISUAL IMPACT
- NET EFFECT
- SKETCHES AND PHOTOS

ORIENTATION TO STUDY AREA

- VICINITY MAP
- SITE MAP
- VIEWSHED
- VIEWPOINTS
- METHODOLOGY
- EXISTING VISUAL CONDITIONS (8 PHOTOS)

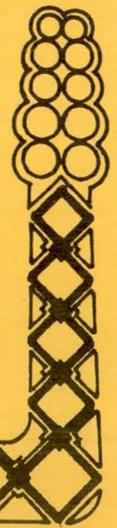
MITIGATING MEASURES AND THEIR EFFECTS

- SCREENING
- VENERING
- OVERBUILDING
- REALIGNMENT
- OFF-SETTING SCALE

OBJECTIVES

- OBJECTIVES AND CONSTRAINTS

ADDENDA



AESTHETIC TREATMENT APPLIED TO ADOBE DAM

- VISUAL COMPONENTS OF ADOBE DAM
- EXISTING VISUAL CONDITIONS COMPARED WITH NATURALIZED VISUAL CONDITIONS

AESTHETIC TREATMENT DERIVED FROM PERCEPTUAL EFFECTS

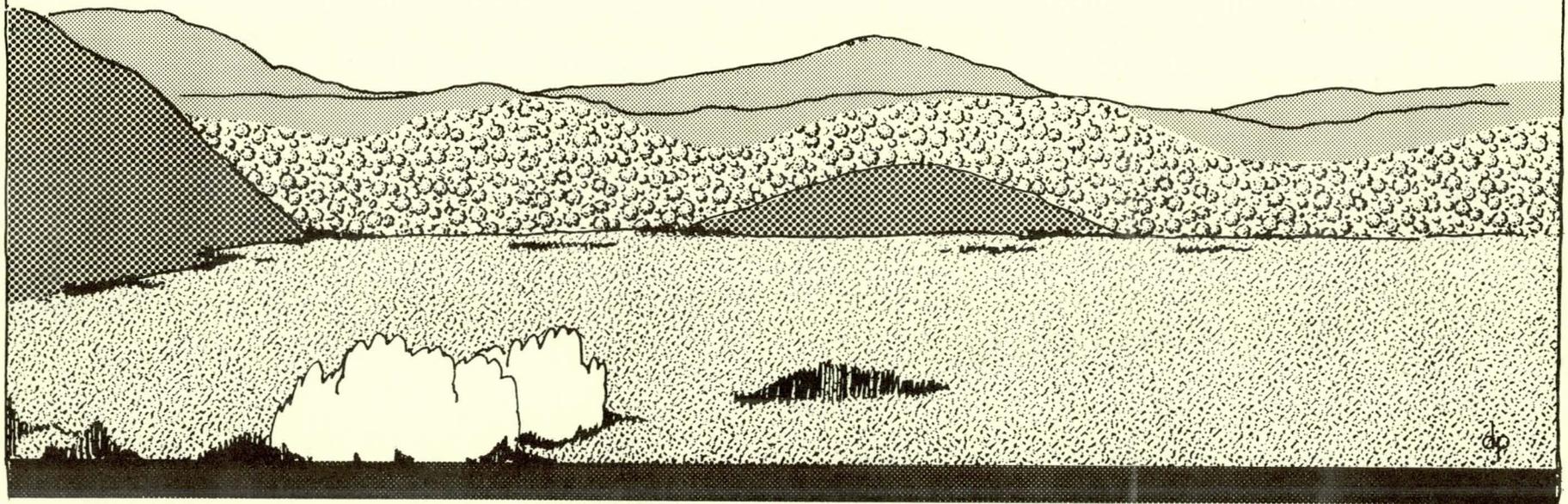
- HEIGHT OF DAM LOWERED
- HORIZON LINE RAISED
- DAM SCREENED FROM VIEW: (OFF SITE)
- DAM SCREENED FROM VIEW: (ON-SITE)
- OFF-SETTING MAJOR LAND MODIFICATION
- NATURAL PATTERNS ABSTRACTLY FEATURED

COST EFFECTIVE TREATMENT

- ESTIMATES

VII. AESTHETIC TREATMENT Each of the aesthetic treatments on the following pages was derived from the combination of several mitigating measures or techniques. Specific visual effects are associated with each technique. These effects, such as texture, volume, transparency, opacity, color, volume and mass, can all be combined into a perceptual effect. This is the effect which suggests to the viewer that there is apparently more to the viewscape than what actually exists. Particular focus has been placed on those combinations in which spatial definition, depth and perspective are implied. These combinations are critical to the aesthetic treatment of desert environmental settings. As represented in this study they may be applied to any land modification in the desert. To be specifically applied to Adobe Dam they should be considered in the light of the type of visual analysis described in this study. The massive uniform application of any one of these combinations or aesthetic treatments to the dam face would be as inappropriate as the monolithic application of any of the mitigating measure techniques to the dam.

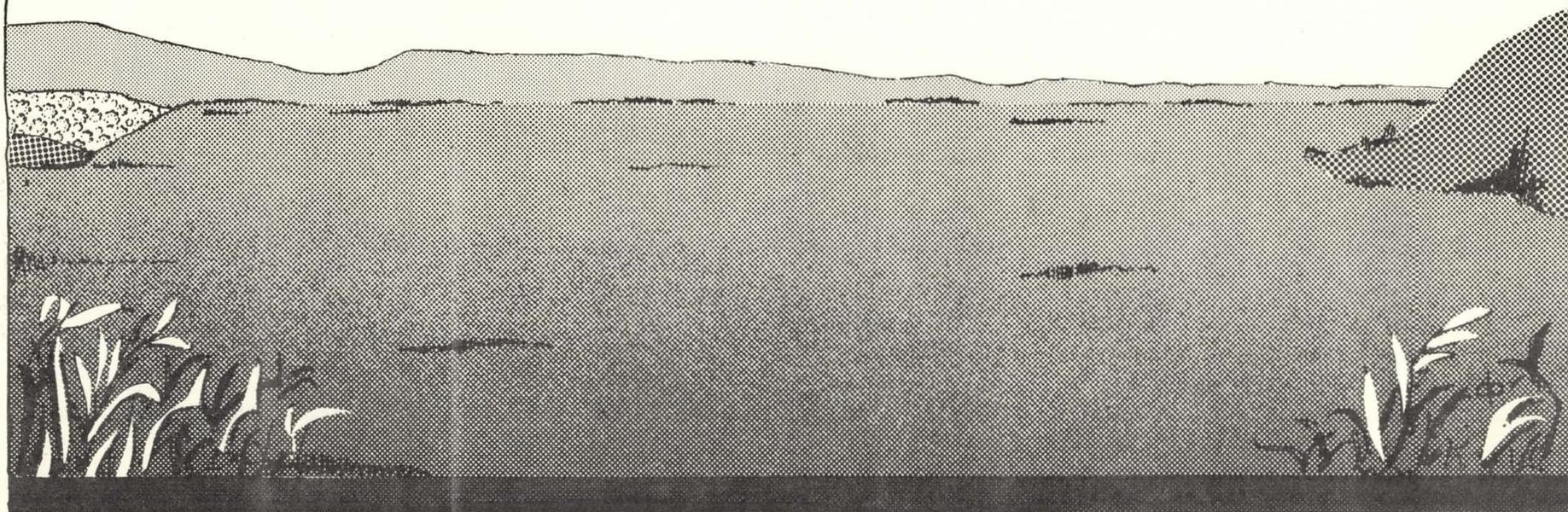
The aesthetic treatment alternatives are presented here in general terms so that they might be considered applicable to any desert site.



KEY TECHNIQUE: An undulating rock veneer along the crest is painted in light tones compatible with colors and shapes of the distant panorama.

SUPPORTING TECHNIQUE: Undulated on-site screening and overbuilding in dark tones for contrast with the light veneer.

PERCEPTUAL EFFECT: "HEIGHT OF DAM LOWERED."



KEY TECHNIQUE: Tapered overbuilding with minimal undulation.

SUPPORTING TECHNIQUE: Minimal rock work and vegetative veneering.

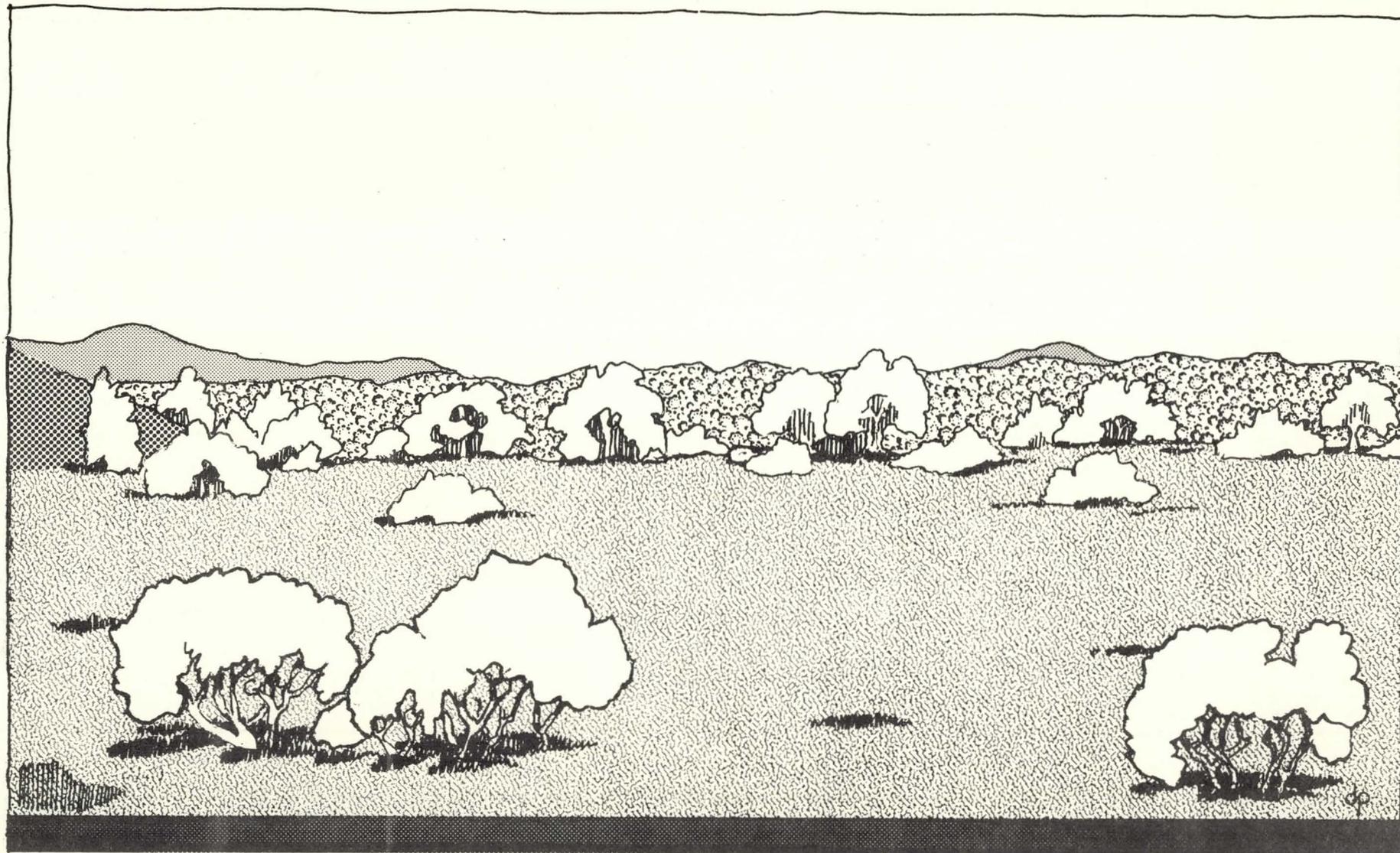
PERCEPTUAL EFFECT: "HORIZON RAISED"



KEY TECHNIQUE: Off-site screening through landscaping and earthwork established in close proximity to viewer location.

SUPPORTING TECHNIQUE: Minimal treatment is required on the surface as the main intent is to visually break up mass of dam at viewing location.

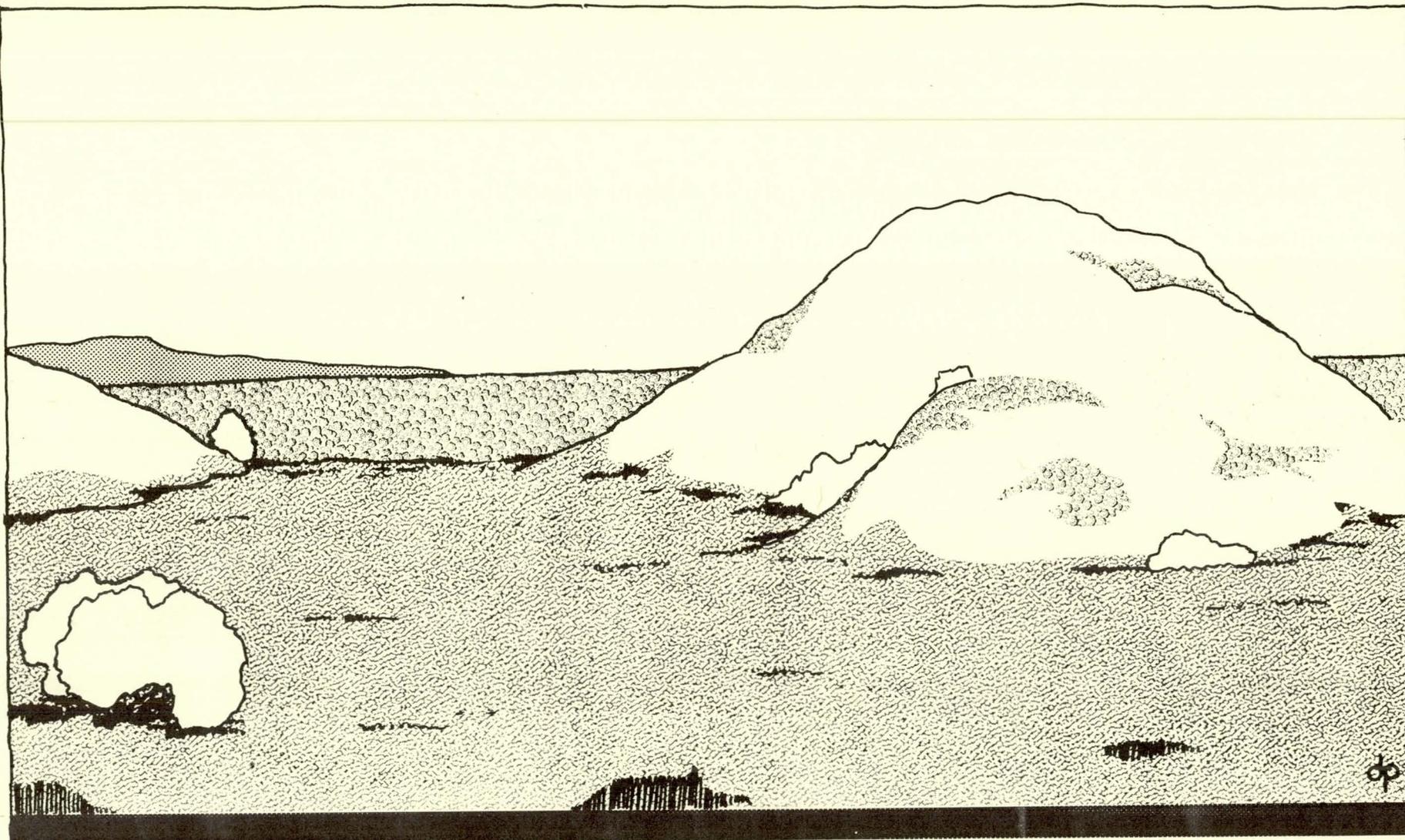
PERCEPTUAL EFFECT: "OFF-SITE SCREENING".



KEY TECHNIQUE: On-site screening through landscaping and earthwork to visually obscure minimal treatment on surface.

SUPPORTING TECHNIQUE: Undulated overbuilding with rock pockets, terrace and berms.
Veneering with painted rocks.

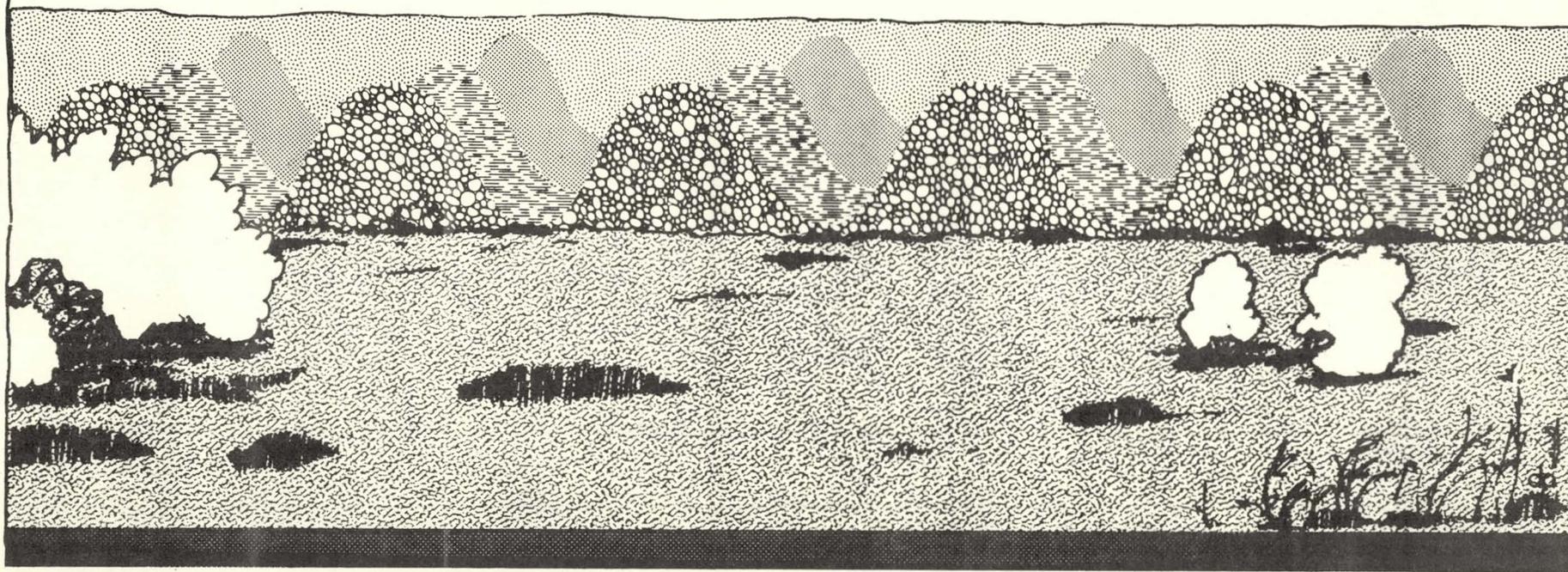
PERCEPTUAL EFFECT: "ON-SITE SCREENING".



KEY TECHNIQUE: Potential exists for the location of a second large scale earth modification (i.e. a landfill site) in the same area. The vertical aspect of one would offset the horizontal of the other.

SUPPORTING TECHNIQUE: The landfill would also be aesthetically treated with veneer rock and screening.

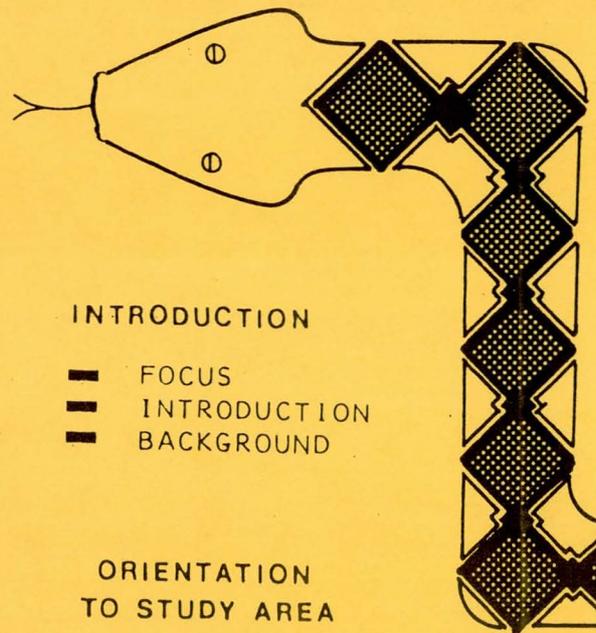
PERCEPTUAL EFFECT: "OFF-SETTING LAND MODIFICATION."



KEY TECHNIQUE: Veneering with painted rock placed in patterns derived from features extant in the desert extant in the desert environmental setting.

SUPPORTING TECHNIQUE: No others needed. This is pure design done at minimal cost.

PERCEPTUAL EFFECT: "FEATURING BY ABSTRACT PATTERNS".



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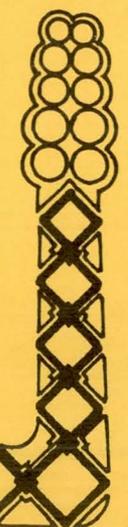
OBJECTIVES

- OBJECTIVES AND CONSTRAINTS

MITIGATING MEASURES AND THEIR EFFECTS

- SCREENING
- VENEERING
- OVERBUILDING
- REALIGNMENT
- OFF-SETTING SCALE

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AESTHETIC TREATMENT APPLIED TO ADOBE DAM

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COST EFFECTIVE TREATMENT

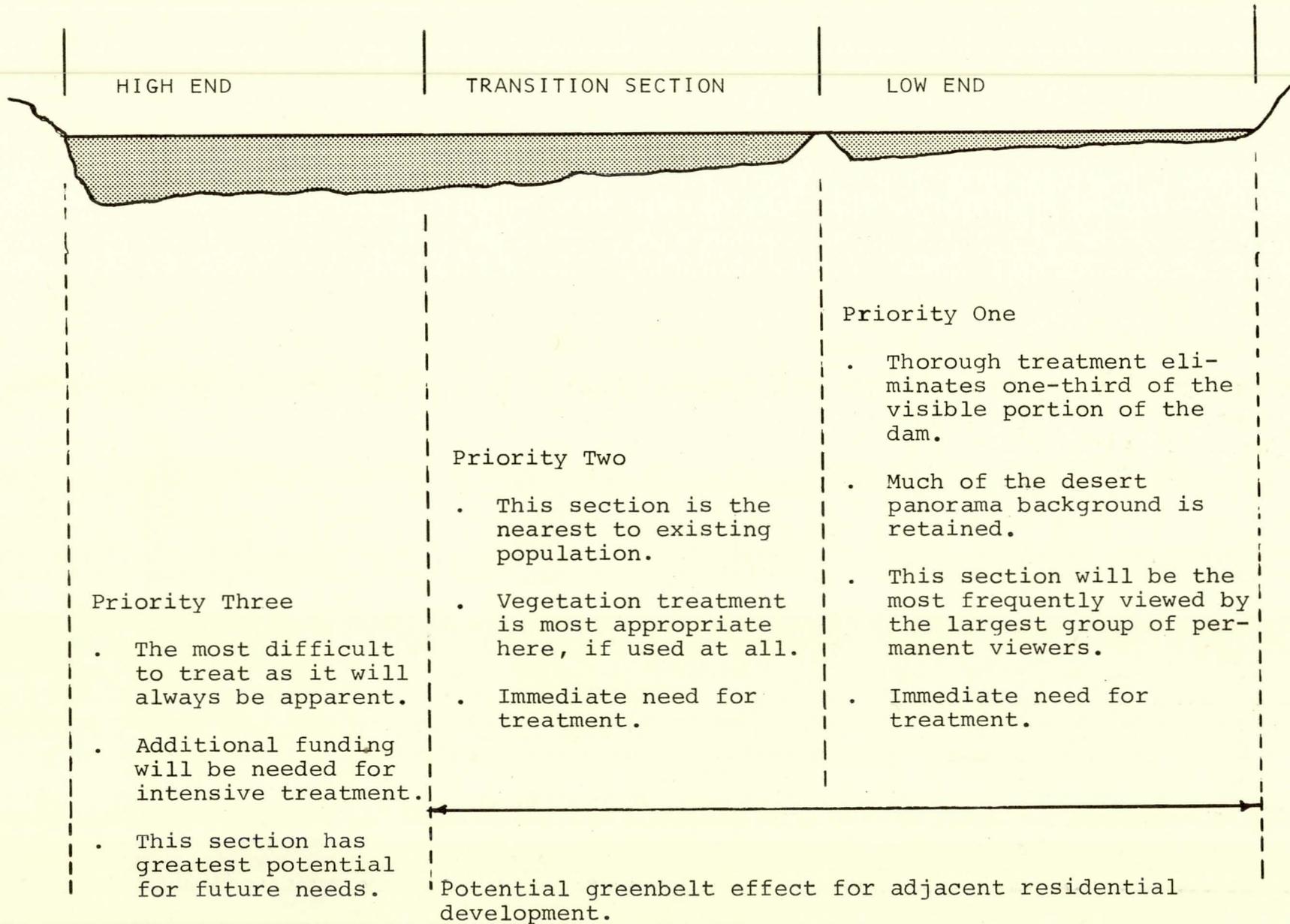
- ESTIMATES

VIII. APPLICATION TO
ADOBE DAM

Three components - The dam is actually two dams, a low one and a high one. The differences between the two are significant enough to pursue two entirely separate approaches as to their aesthetic treatment. The transition area between the high and low end would be considered as a third component.

Low end. This is the one portion of the dam of which the entire face could be positively obscured from view. This would be most effectively accomplished by tapered overbuilding which would raise the horizon. It could be anticipated that this would be the most cost effective application of this technique. The visual impact of the dam would be reduced by almost a third.

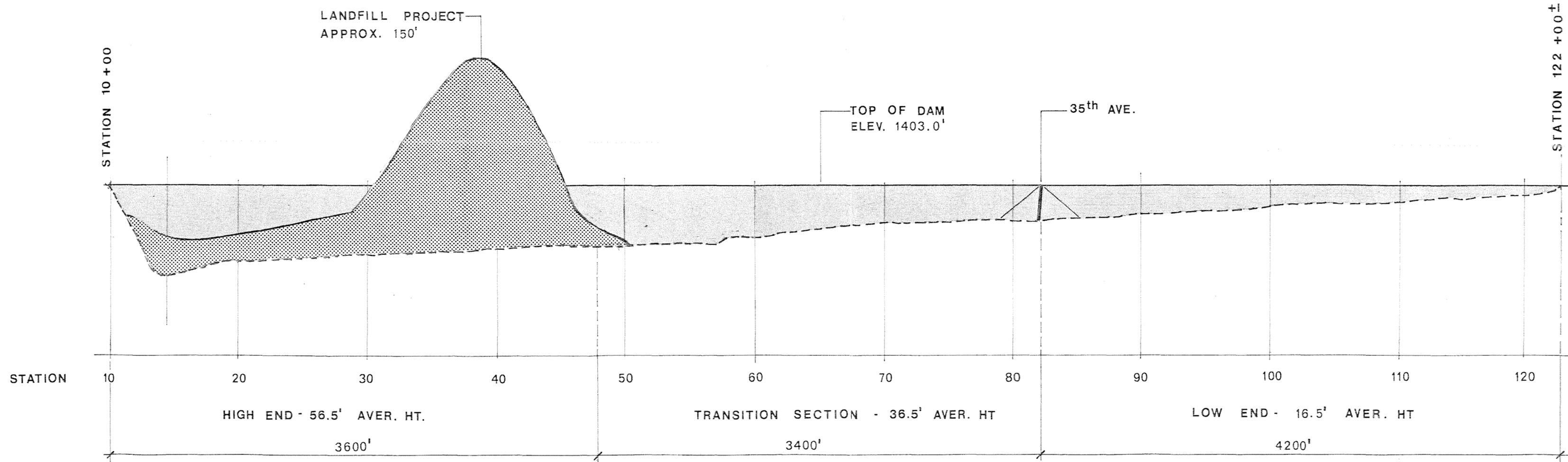
Transition area. The remaining two thirds of the dam always will have some degree of visibility. It is possible that this section will also require localized areas of intensive treatment, as it is the one area adjacent to existing residential development. An effort should be made to physically and visually link the residential area to the new "hillside" land mass. This link occurs via vegetative and earth work screens. Undulating toe and top may also occur as deemed of visual interest.



High end. It will not be practical to entirely obscure this portion of the dam, due to financial constraints. The area of greatest height may always be characterized by high visibility. Two courses of action are suggested here which are very unique. Both courses of action might be undertaken outside the contract for aesthetic treatment. And both courses will be highly visible but to the smallest viewing population. Both courses require minimal expenditures.

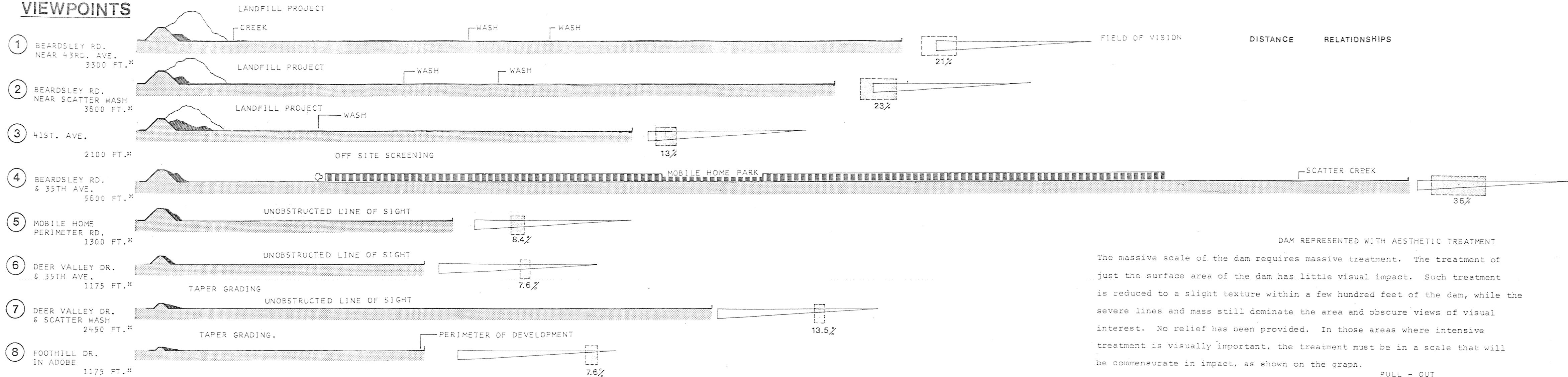
1. Featuring through abstract patterns. This requires the sponsoring or commission of an artist to use a portion of the dam at its extreme height for a painted pattern effect on rock veneer consistent with the environmental setting. SUPER GRAPHICS.
2. Off-setting land modification. A landfill project in the area might be located adjacent to the dam. This would have three positive effects after the fill was also aesthetically treated. SUPER SCALE.
 - a. Visual interest and relief would be created.
 - b. An entirely new spatial definition would become possible for future recreational use.
 - c. A site for an essential public service would become available.

It is recommended that the high end be treated with minimal cost as its dominance will be difficult to overcome.



SCALE HORIZONTAL - 1" = 1000'
VERTICAL - 1" = 100'

VIEWPOINTS



DAM REPRESENTED WITH AESTHETIC TREATMENT

The massive scale of the dam requires massive treatment. The treatment of just the surface area of the dam has little visual impact. Such treatment is reduced to a slight texture within a few hundred feet of the dam, while the severe lines and mass still dominate the area and obscure views of visual interest. No relief has been provided. In those areas where intensive treatment is visually important, the treatment must be in a scale that will be commensurate in impact, as shown on the graph.

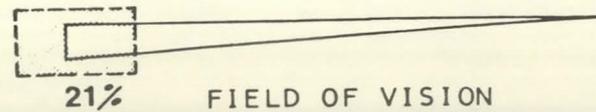
PULL - OUT

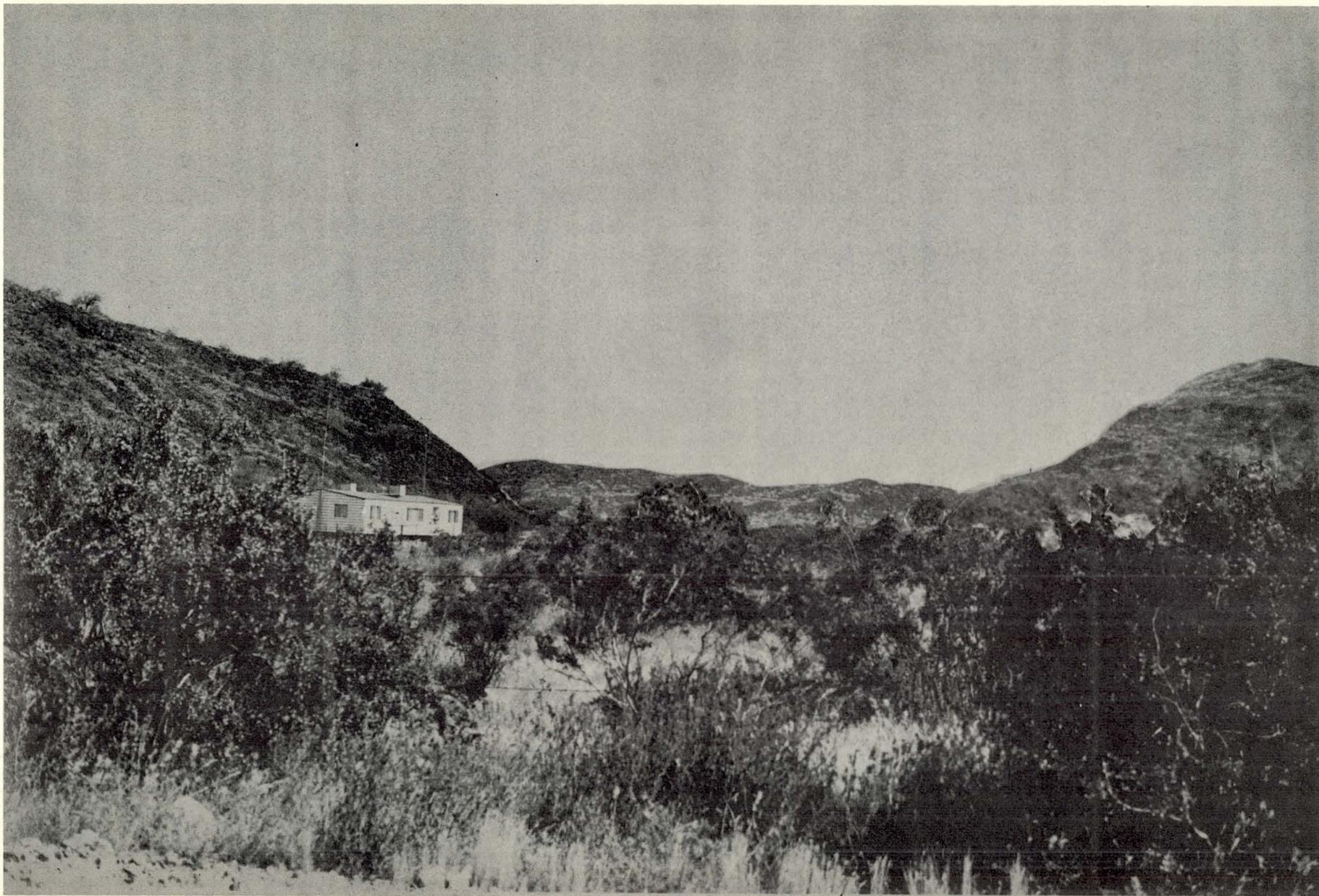
* DISTANCE FROM DAM
SCALE: 1"=250'



VIEWPOINT - EXISTING
1 3300 FT.

BEARDSLEY RD.
NEAR 43RD. AVE.

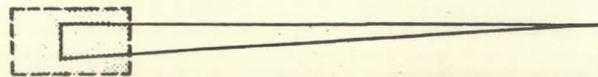




VIEWPOINT - NATURALIZED EFFECT

1

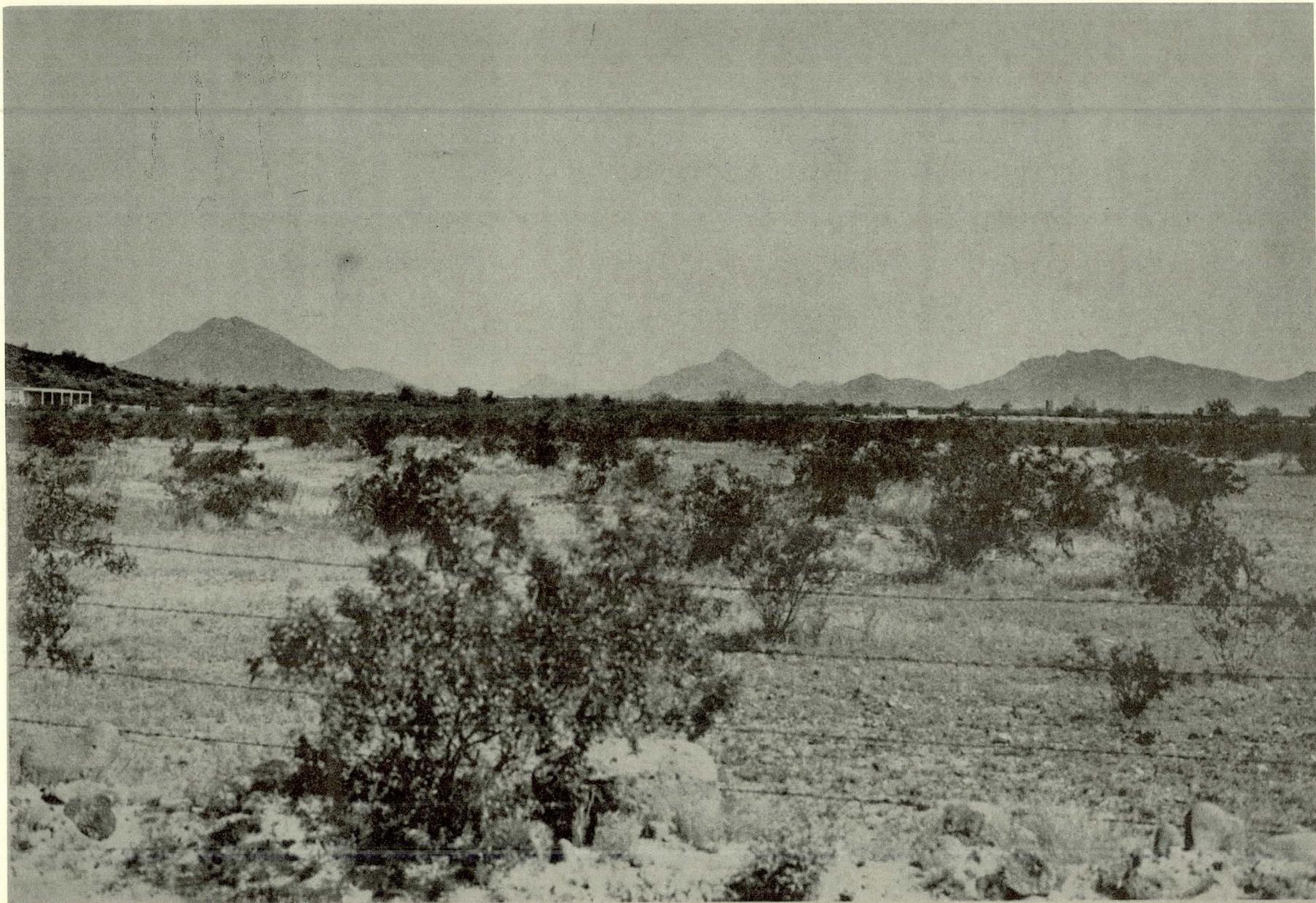
3300 FT.



21%

FIELD OF VISION

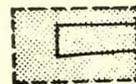
97



VIEWPOINT- EXISTING
3600 FT.

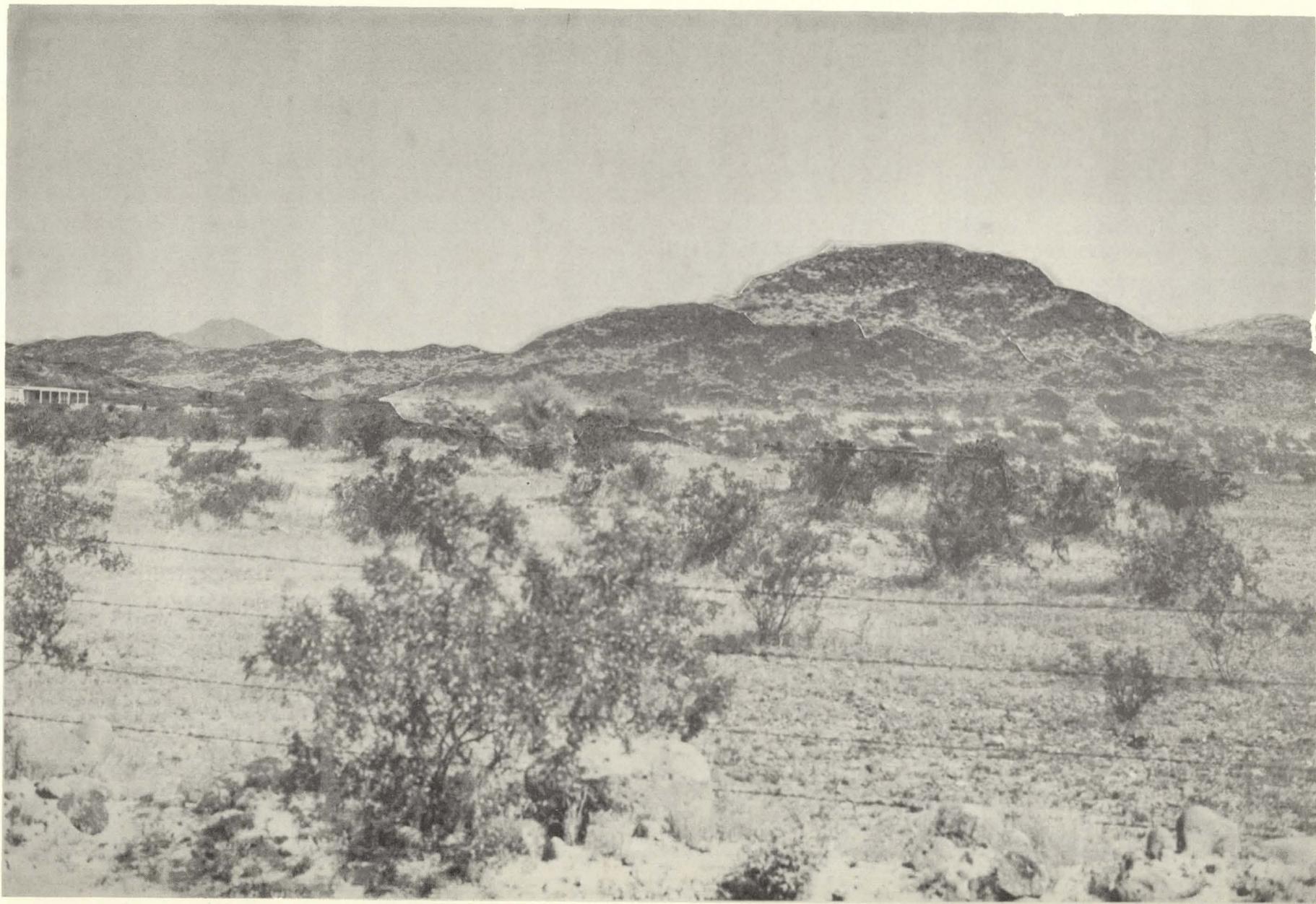
2

BEARDSLEY RD.
NEAR SCATTER WASH



23%

FIELD OF VISION



VIEWPOINT - NATURALIZED EFFECT

2

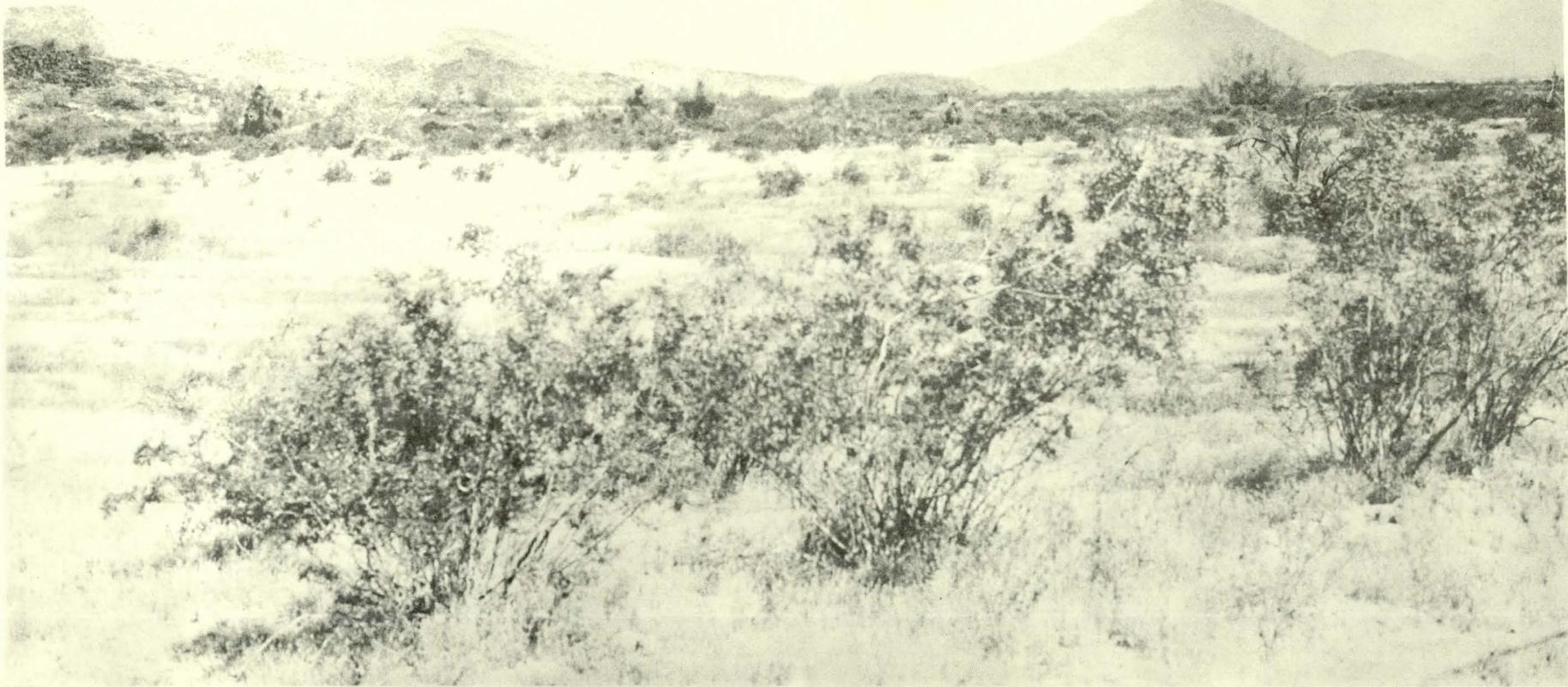
3660 FT.



23%

FIELD OF VISION

99

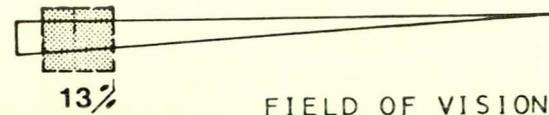


VIEWPOINT - EXISTING

3

2100 FT.

41ST. AVE.



13 1/2°

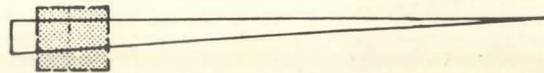
FIELD OF VISION



VIEWPOINT-NATURALIZED EFFECT

3

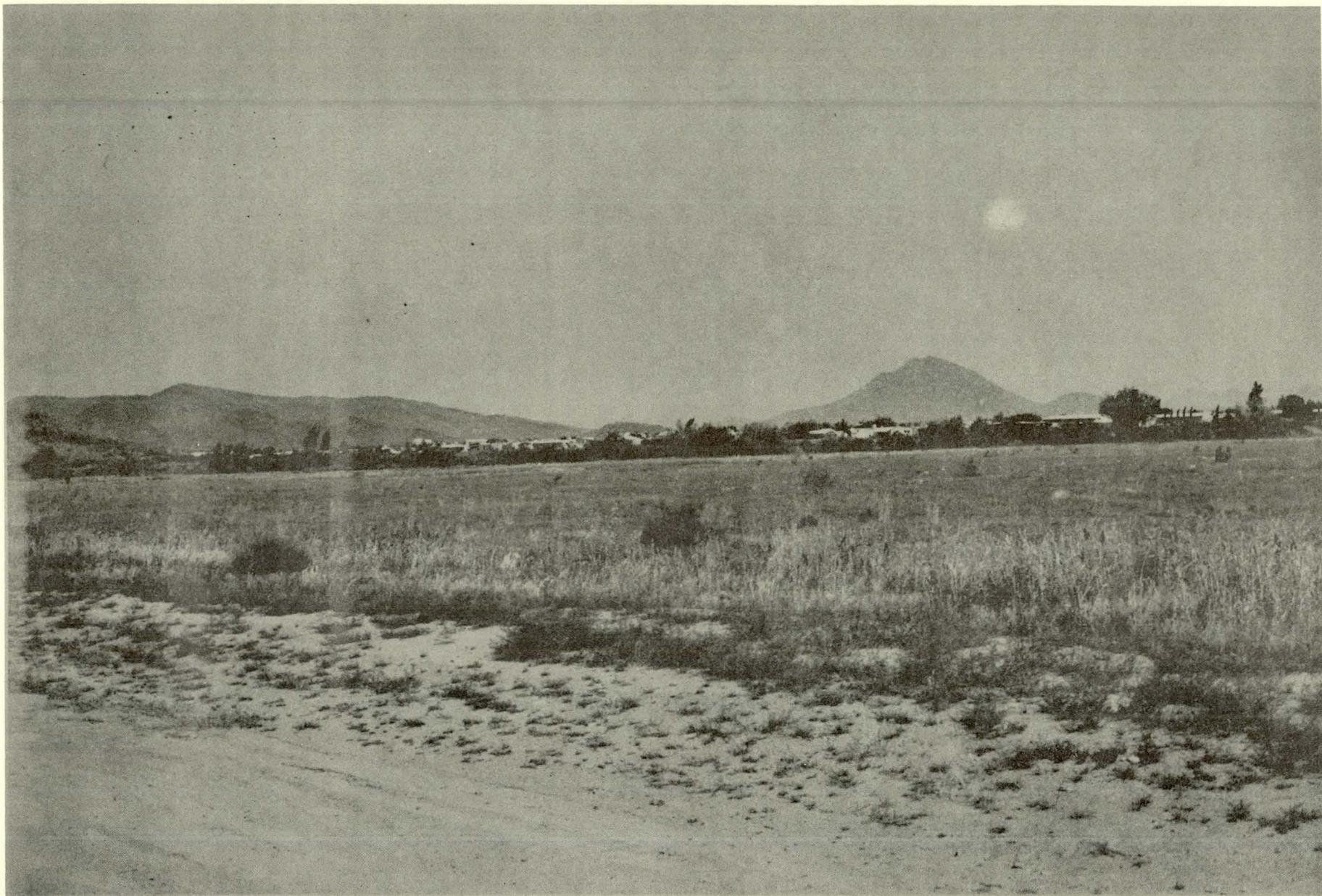
2100 FT.



13%

FIELD OF VISION

101

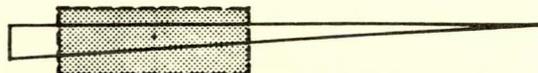


VIEWPOINT EXISTING

4

5600 FT.

BEARDSLEY RD.
& 35TH AVE.



36%

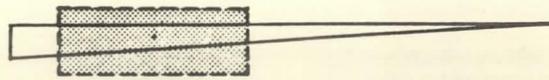
FIELD OF VISION



VIEWPOINT NATURALIZED EFFECT

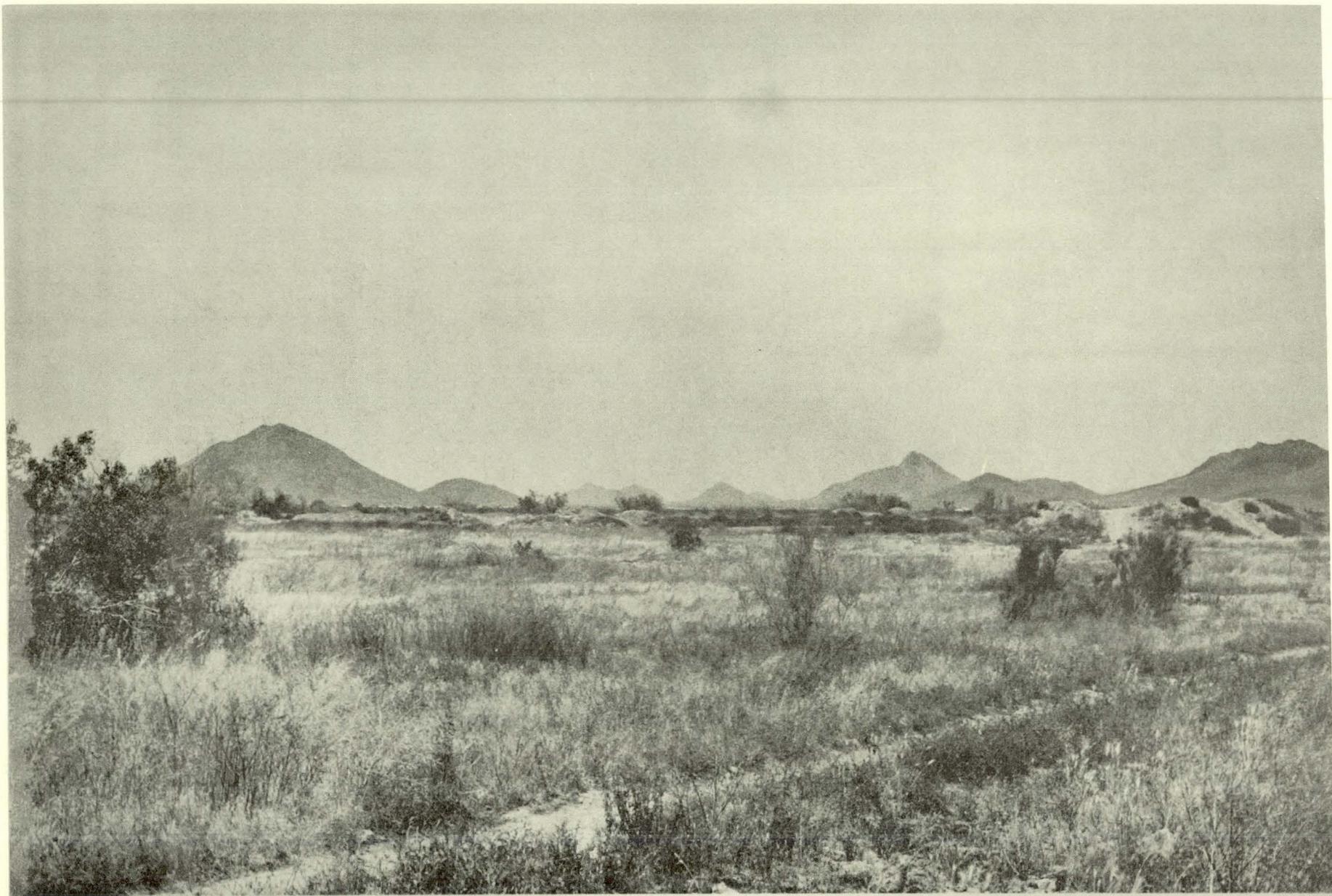
4

5600 FT.



36%

FIELD OF VISION 103

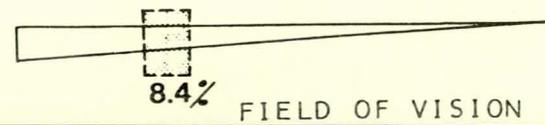


VIEWPOINT - EXISTING

5

1300 FT.

MOBILE HOME
PERIMETER RD.



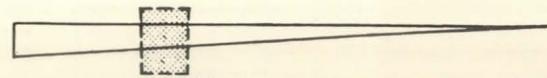




VIEWPOINT - NATURALIZED EFFECT

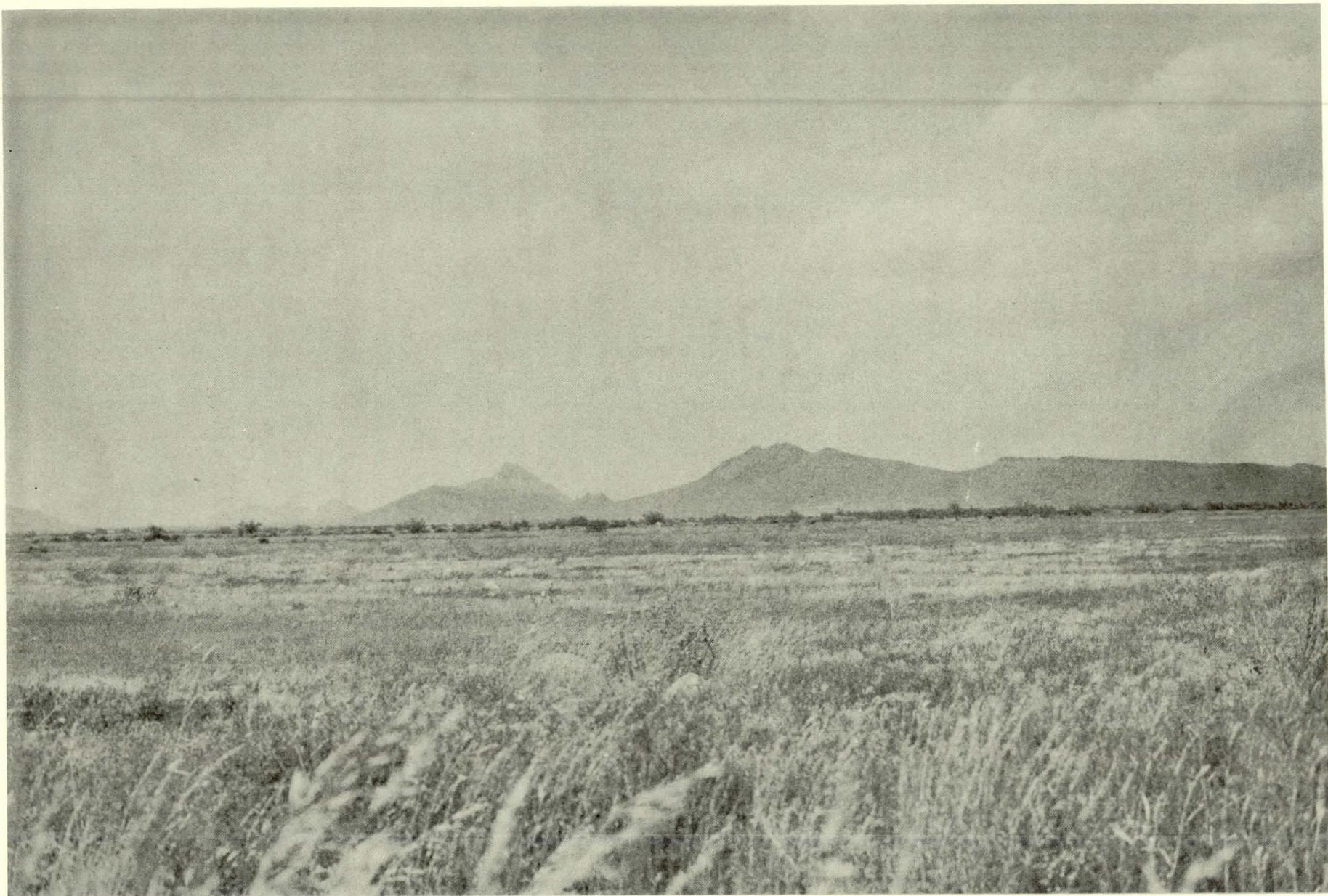
5

1300 FT.



8.4%

FIELD OF VISION 105



VIEWPOINT - EXISTING
1175 FT.

6

DEER VALLEY DR.
& 35TH AVE.

FIELD OF VISION 7.6%

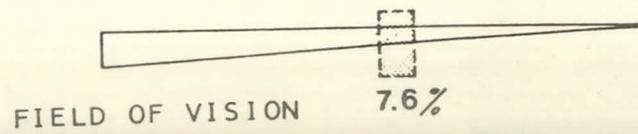
A diagram illustrating the field of vision. It consists of a horizontal line with a small square at its center. From the top and bottom corners of this square, two lines extend outwards and upwards, forming a narrow cone. The text 'FIELD OF VISION 7.6%' is positioned below the diagram.

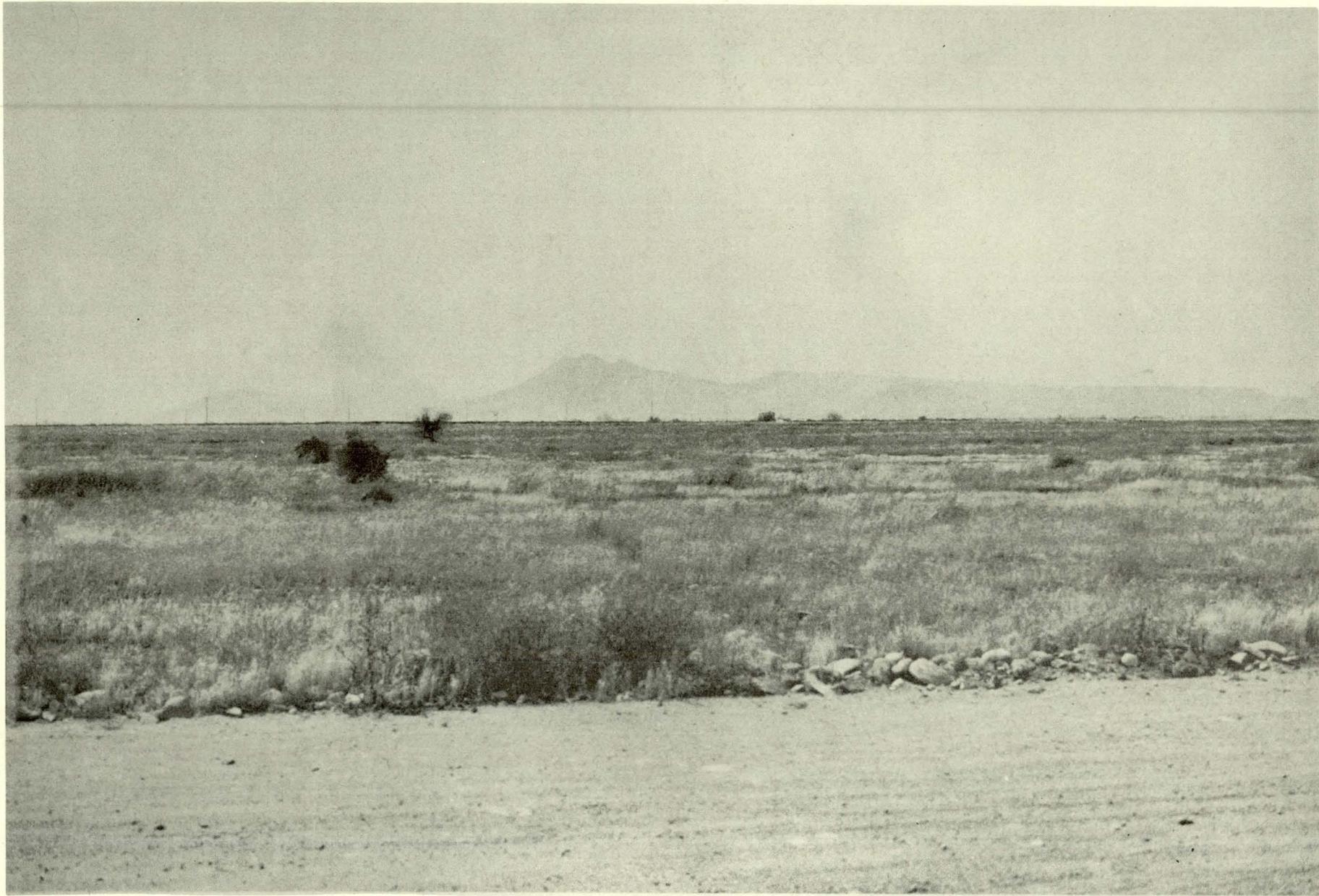


VIEWPOINT - NATURALIZED EFFECT

6

1175 FT.



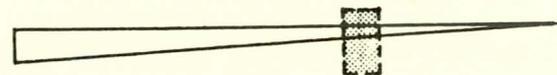


VIEWPOINT- EXISTING

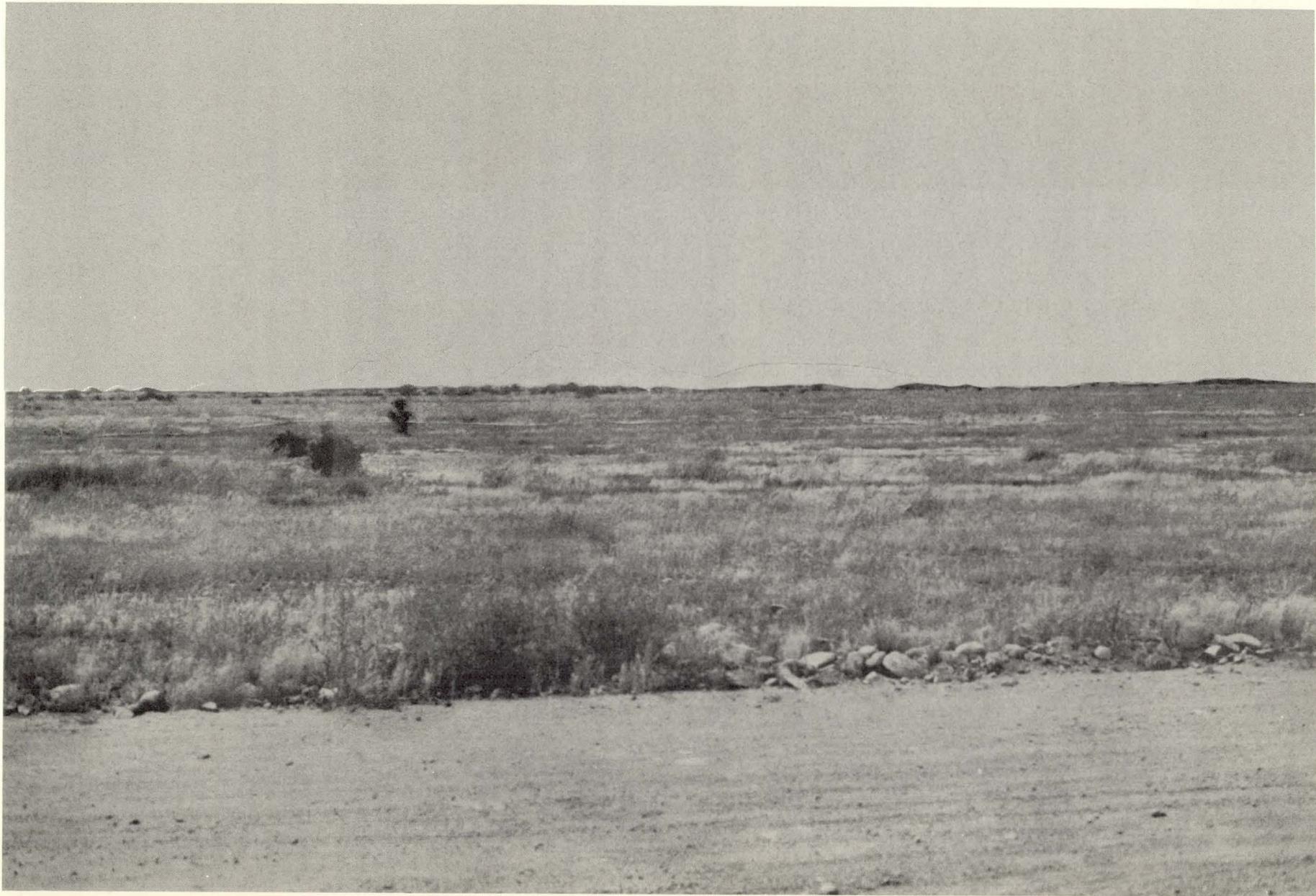
7

2450 FT.

DEER VALLEY DR.
& SCATTER WASH



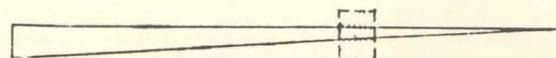
FIELD OF VISION 13.5%



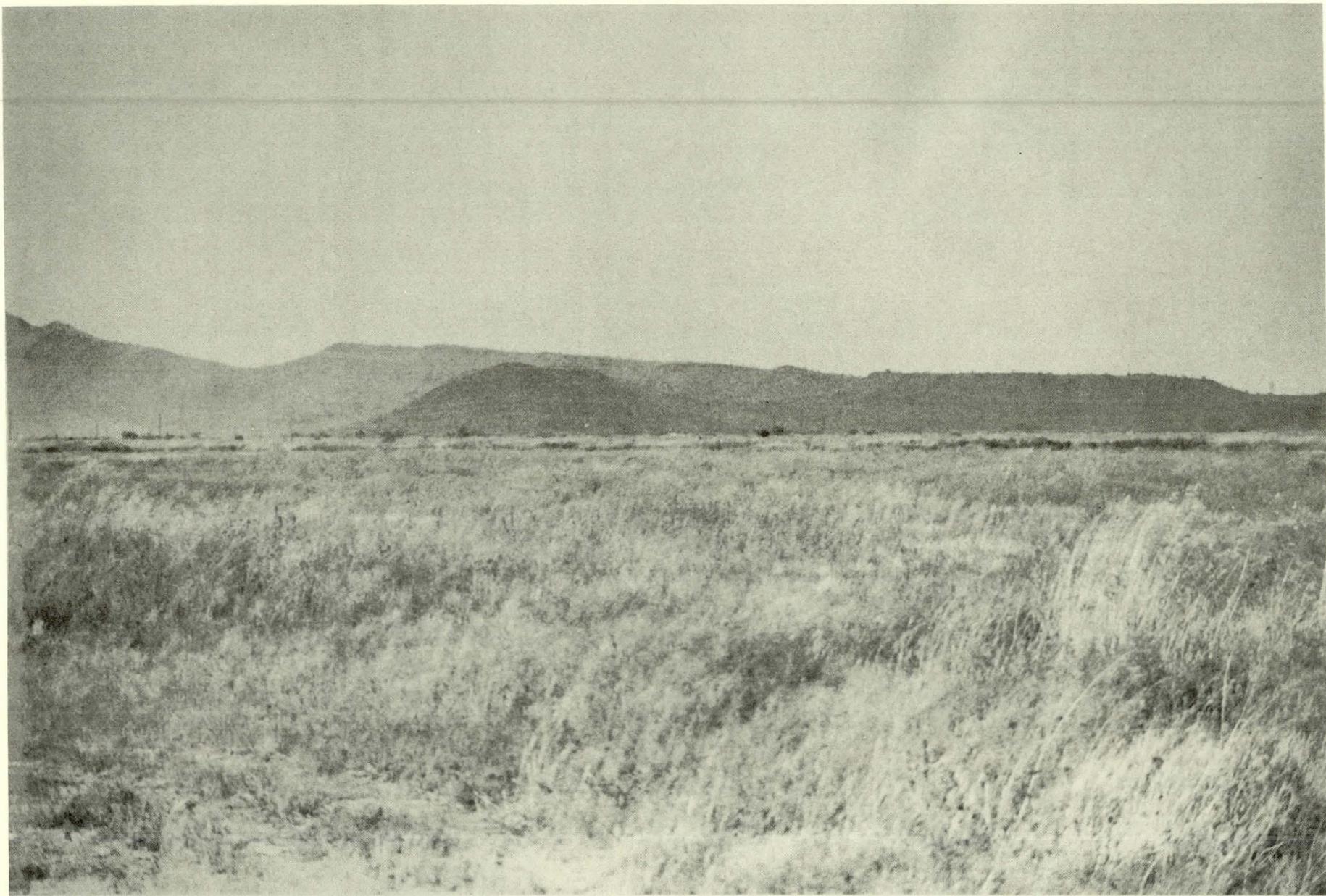
VIEWPOINT - NATURALIZED EFFECT

7

2450 FT.



FIELD OF VISION 13.5%

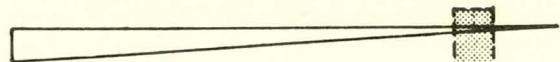


VIEWPOINT - EXISTING

8

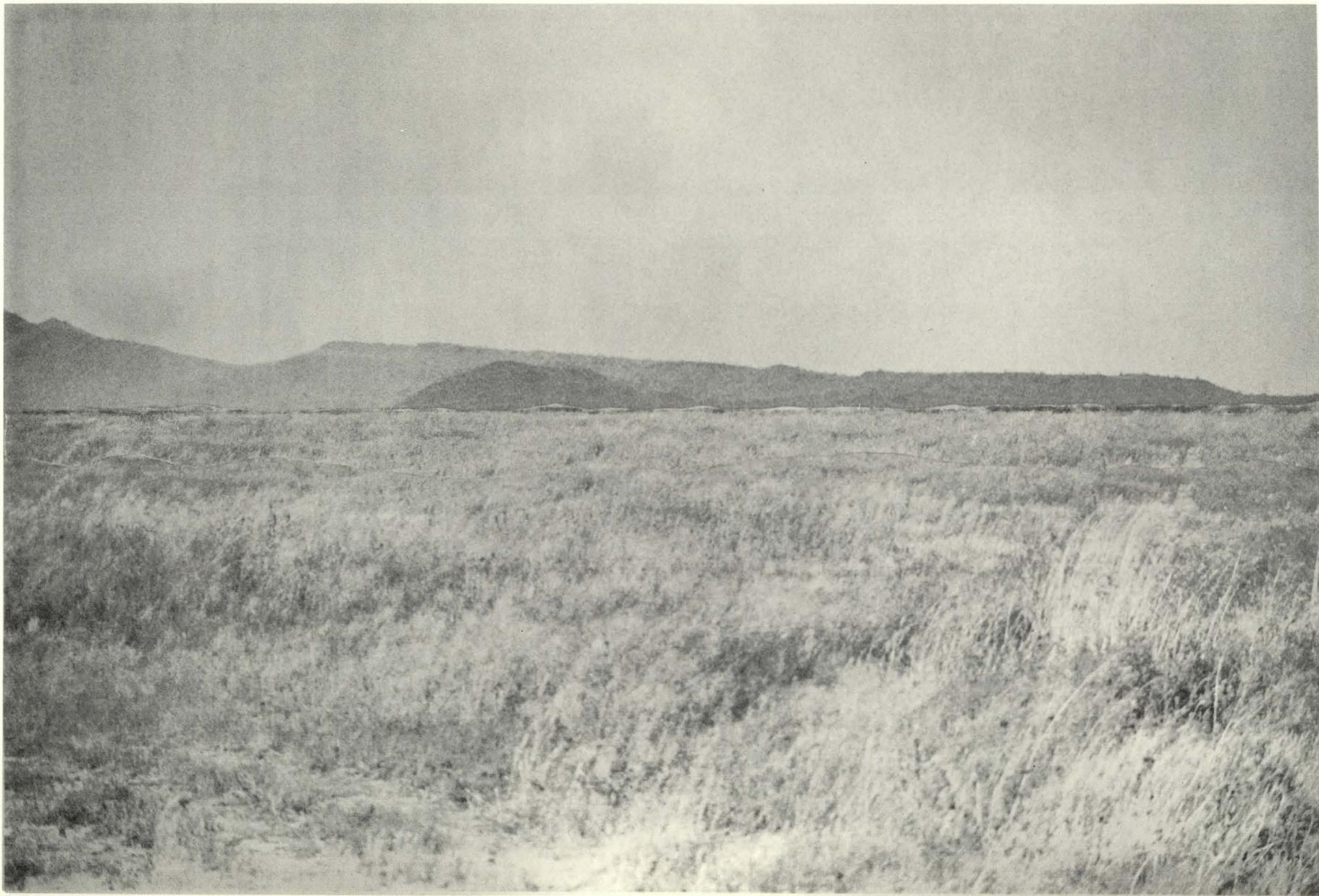
1175 FT.

FOOTHILL DR.
IN ADOBE



FIELD OF VISION

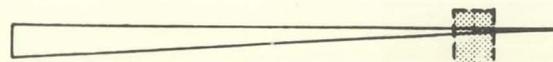
7.6%



VIEWPOINT - NATURALIZED EFFECT

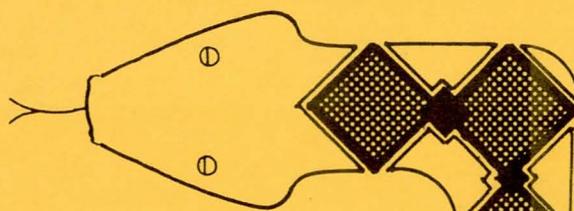
8

1175 FT.



FIELD OF VISION

7.6%



SUMMARY

- CRITICAL ISSUES IDENTIFIED
- METHODOLOGY
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INTRODUCTION

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- SCREENING
- VENEERING
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- REALIGNMENT
- OFF-SETTING SCALE

ADDENDA



AESTHETIC TREATMENT DERIVED FROM PERCEPTUAL EFFECTS

- HEIGHT OF DAM LOWERED
- HORIZON LINE RAISED
- DAM SCREENED FROM VIEW: (OFF SITE)
- DAM SCREENED FROM VIEW: (ON-SITE)
- OFF-SETTING MAJOR LAND MODIFICATION
- NATURAL PATTERNS ABSTRACTLY FEATURED

AESTHETIC TREATMENT APPLIED TO ADOBE DAM

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COST EFFECTIVE TREATMENT

- ESTIMATES

IX. COST EFFECTIVE TREATMENT The cost estimate that follows is an allotment of the funds available for aesthetic treatment spread over the three visual components of the dam. As indicated on page 90, the low end of the proposed structure is visually critical to the overall aesthetic treatment. This area is considered to be the first priority for the expenditure of funds. Second priority is the transition section which is the area of most intensive treatment. The allotment of funds in this study is intended to thoroughly treat these first two areas. The remaining funds are to be applied to the last section of the dam, the high end.

This area is the most difficult to treat in a cost-effective manner. If it is subsequently determined to be visually critical, it is recommended that an additional method of funding be explored, such as this report's recommendation for an off-setting land modification. The Landfill Division of the Maricopa County Department of Highways has already expressed an interest in this concept.

COST ESTIMATE FOR DOWNSTREAM FACE
OF ADOBE DAM DRAFT 15 JULY 1978

ITEM NO.	DESCRIPTION	ESTIMATED QUANTITY	UNIT	UNIT COST	TOTAL COST
LOW END (FROM WEST END OF ADOBE MOUNTAIN TO 35TH AVENUE CROSSING) 4200'±					
1	Landscape Earthwork at 5:1 Slope	57,750	c.y.	1.00	57,750
2	Hydroseeding 90% of Surface Area	317,520	s.f.	0.05	15,875
3	Stone 10% of Surface Area	1,307	c.y.	7.30	9,539
4	Desert Varnish (3 step conditioner)	1	Job	L.S.	6,470
		Subtotal			88,164
TRANSITION SECTION (FROM 35TH AVENUE TO STA. 46+00±) 3400'±					
5	Landscape Earthwork	137,889	c.y.	1.00	137,889
6	Hydroseeding 60% of Surface Area	183,600	s.f.	0.05	9,180
7	Stone 40% of Surface Area	4,533	c.y.	7.30	33,093
8	Desert Varnish (3 step conditioner)	1	Job	L.S.	16,500
		Subtotal			196,662

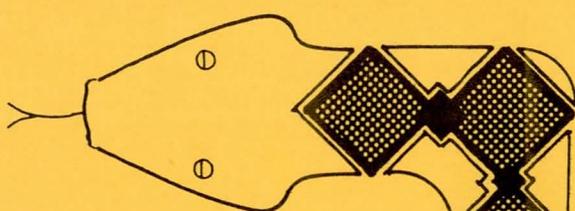
See page 91 for 3 sections of Adobe Dam

ITEM NO.	DESCRIPTION	ESTIMATED QUANTITY	UNIT	UNIT COST	TOTAL COST
HIGHEST END (FROM HEDGPETH HILLS TO STA. 46+00±) 3600'±					
9	Landscape Earthwork	78,933	c.y.	1.00	78,933
10	Hydroseeding 70% of Surface Area	176,400	s.f.	0.05	8,820
11	Stone 30% of Surface Area	3,200	c.y.	7.30	23,360
12	Desert Varnish (3 step conditioner)	1	Job	L.S.	1,222
13	Landfill	1	Job	L.S.	*
Subtotal					112,335

* The landfill is to be a coordinated project with the Landfill Division of the Maricopa County Department of Highways. The Landfill Division will bear the cost of construction, supervision and aesthetic treatment for the sanitary landfill.

In this estimate the landfill is anticipated to cover 50% of the downstream face of the high end of the proposed dam. The subtotal figure for this portion of the dam will cover the cost of treating only half the dam if the landfill is not used.

SUBTOTAL OF 3 SECTIONS OF ADOBE DAM		397,161
TREES Native or Naturalized Species	(Allow 10%)	39,716
SHRUBS Native or Naturalized Specied	(Allow 15%)	59,574
FINAL "TOUCH UP" FOR SPECIAL EFFECTS	(Allow 10%)	39,716
DIRECT CONSTRUCTION COSTS		536,166
	CONTINGENCIES (Allow 12%)	64,340
	E & D (Allow 10%)	53,617
	S & A (Allow 10%)	53,617
	TOTAL ESTIMATED COST FOR AESTHETIC TREATMENT OF DOWNSTREAM FACE OF ADOBE DAM	\$707,740



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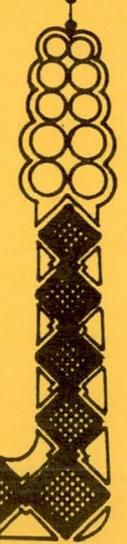
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ADDENDA



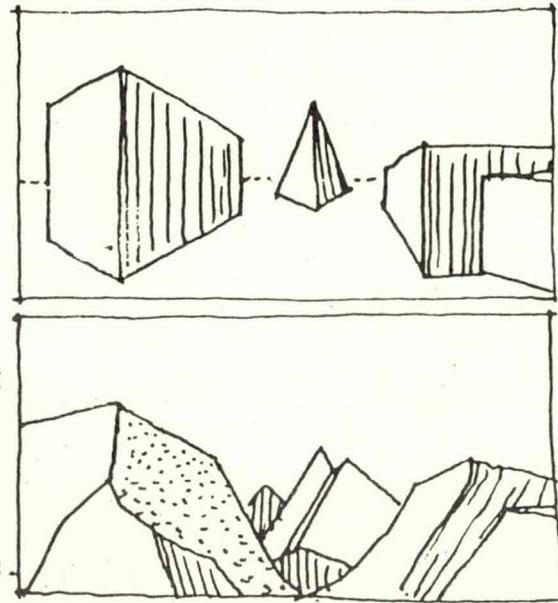
COST EFFECTIVE TREATMENT

- ESTIMATES

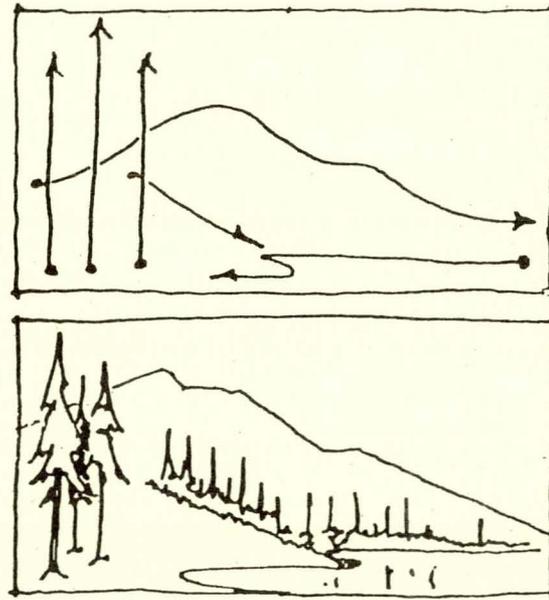
A. CRITERIA LIST OF VISUAL
ELEMENTS

Dominance factors: The degree of visual influence,
power, or dominance.

FORM: The three-dimens-
ional qualities of the objects
being viewed. The mass of an
object or of a combination of
objects that appears unified.
The external appearance of
objects defined by lines making
closed circuits. Form may be
destroyed, altered or accent-
uated depending on the elements.



LINE: A point that has been extended, anything arranged in a row or sequence. Line can make up the silhouette of form or be considered separately. Line can be used for directional purposes. Straight lines are bold and domineering. Vertical lines tend to give an upward motion and possess a dynamic quality. Diagonals are spirited and moving causing excitement.



COLOR: Light that is reflected, values and chroma tend to change with respect to distance. Foreground is the sharpest and brightest with the most contrast. The background is muted by haze. Middle ground is a transisition of color between foreground and background.

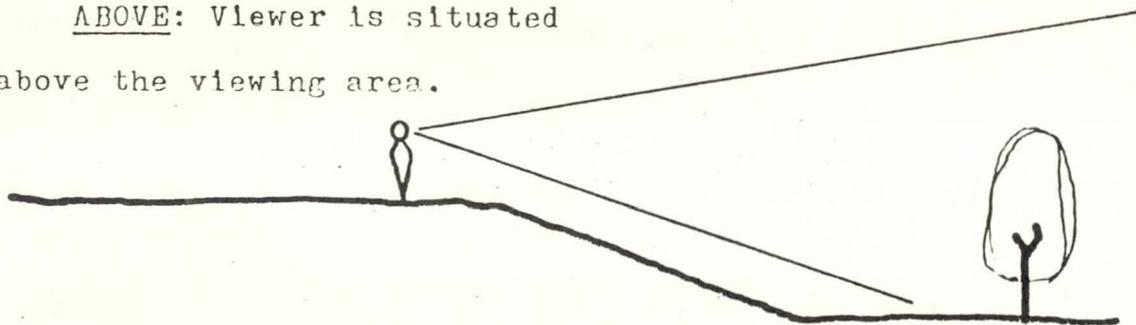
TEXTURE: The visual or tactile surface characteristics and appearance of something. Textures make up the surface characteristics. Textures are also caused by the distribution of lights and darks over surfaces caused by differences in light. Bold textures tend to be domineering when pronounced, when subdued they tend to be ponderous and primitive. Fine textures tend to be subtle and are very casual. Texture also varies with distance: up close major objects are prominate.



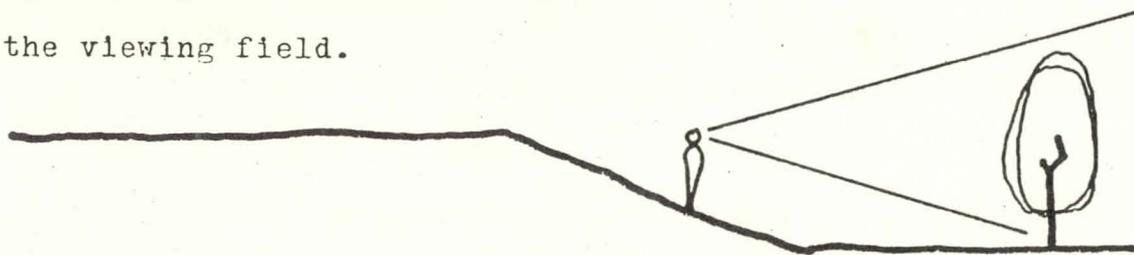
Branches, leaves, etc. tend to stand out. Far away entire groups or stands of trees may appear as textured surfaces.

Observer position: In relationship to the area being viewed.

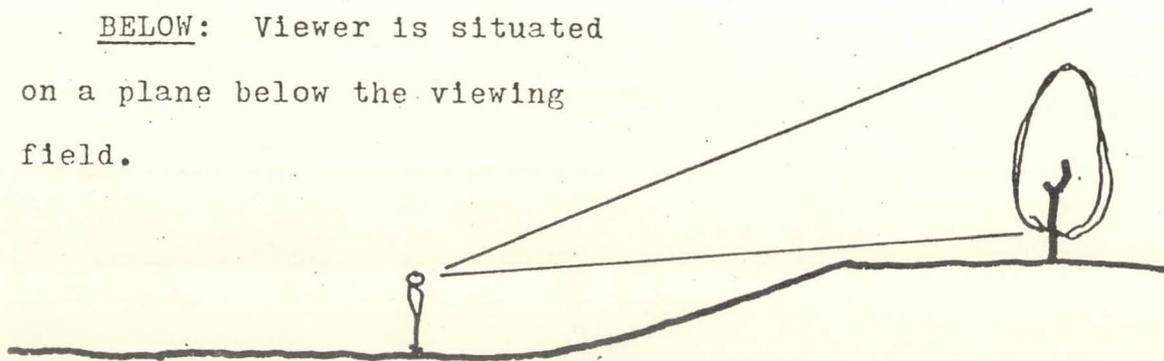
ABOVE: Viewer is situated above the viewing area.



SAME LEVEL: Viewer is on the same plane or level with the viewing field.



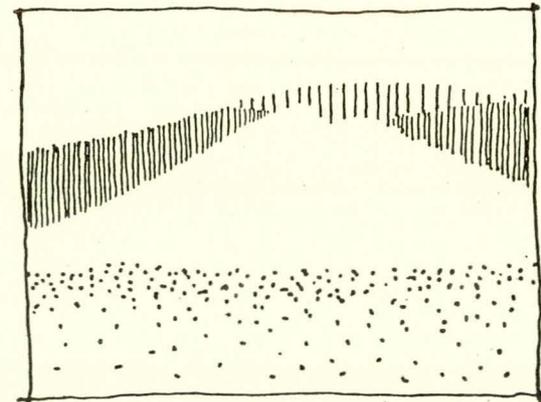
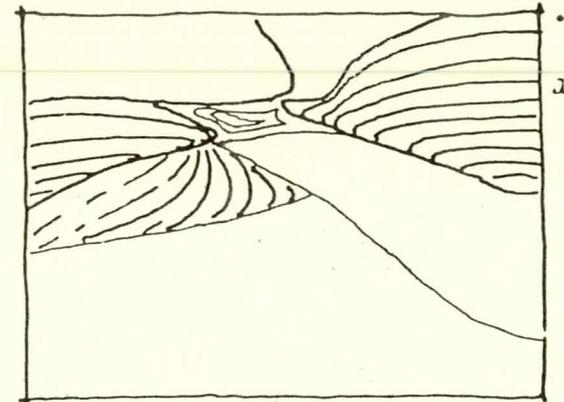
BELOW: Viewer is situated on a plane below the viewing field.



Basic principals which affect the dominance of visual factors.

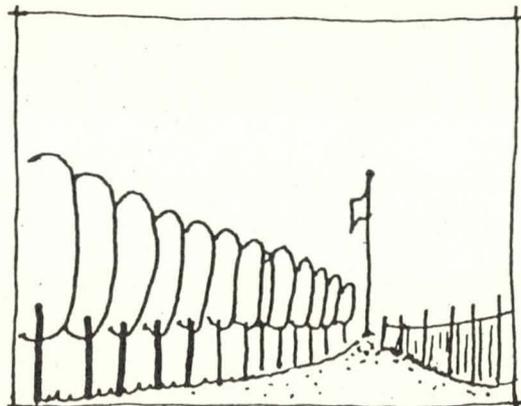
CONVERGENCE: Occurs when major landforms, lines, colors, and/or textures tend to focus attention on one point or a small area. These factors tend to be inclined toward each other as lines which are not parallel

CONTRAST: A recognizable difference for all parts of the whole. Great contrast is immediately apparent, low contrast is not perceived, or perceived only on a low level. Opposition of different forms, lines or colors intensify each others properties and produce a more dynamic expression. In maximum contrast one element dominates

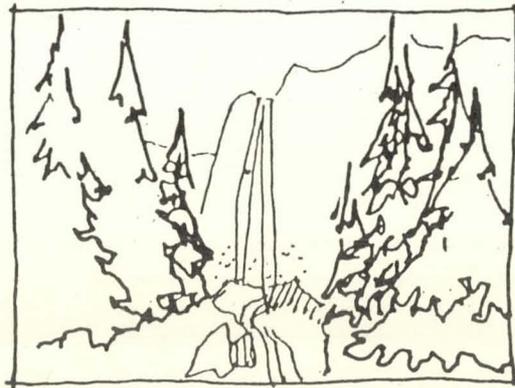


the other to heighten the visual impact of the forms being viewed. In contrasting elements that have equal dominance the forms, lines, or colors are destroyed or weakened by their impact.

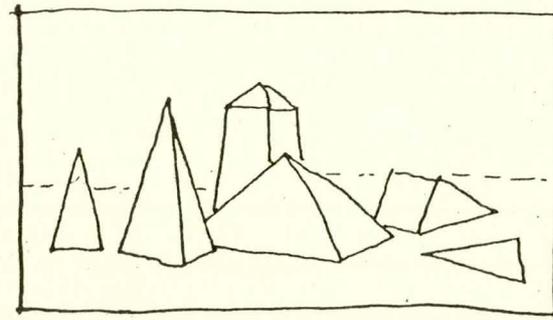
SEQUENCE: A continuous or connected series of lines or forms. It is the following of one form after another. Sequence may or may not be progressive. Progressive sequences may be ascending, directional, or inward. Sequences may also be progressions of enclosure, complexity, intensity, convenience or comprehension.



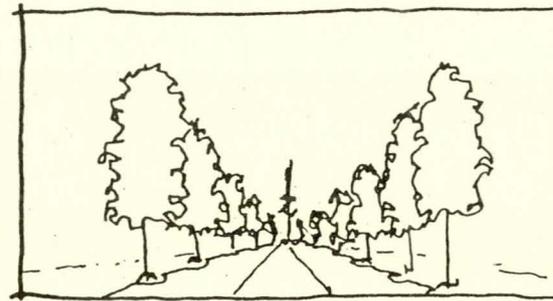
ENFRAMEMENT: Like the frame of a picture. Features sometimes direct the viewers attention inwards. The enframement may control the quality and scale of the view.



UNITY: A recognizable similarity or an unbroken continuousness for all parts of the whole.



ORDER: A recognizable pattern of organization for all parts of the whole.



Distance zones:

FOREGROUND: Lots of distinctive detail, form and line can be overbearing in this zone due to the closeness.

MIDDLEGROUND: Mainly dominated by texture. Patterns emerge and small movements are not seen.

BACKGROUND: This area is mainly dominated by line and form. Colors, textures, and details seem to fade. Objects in this area are strongly affected by atmospheric conditions.

