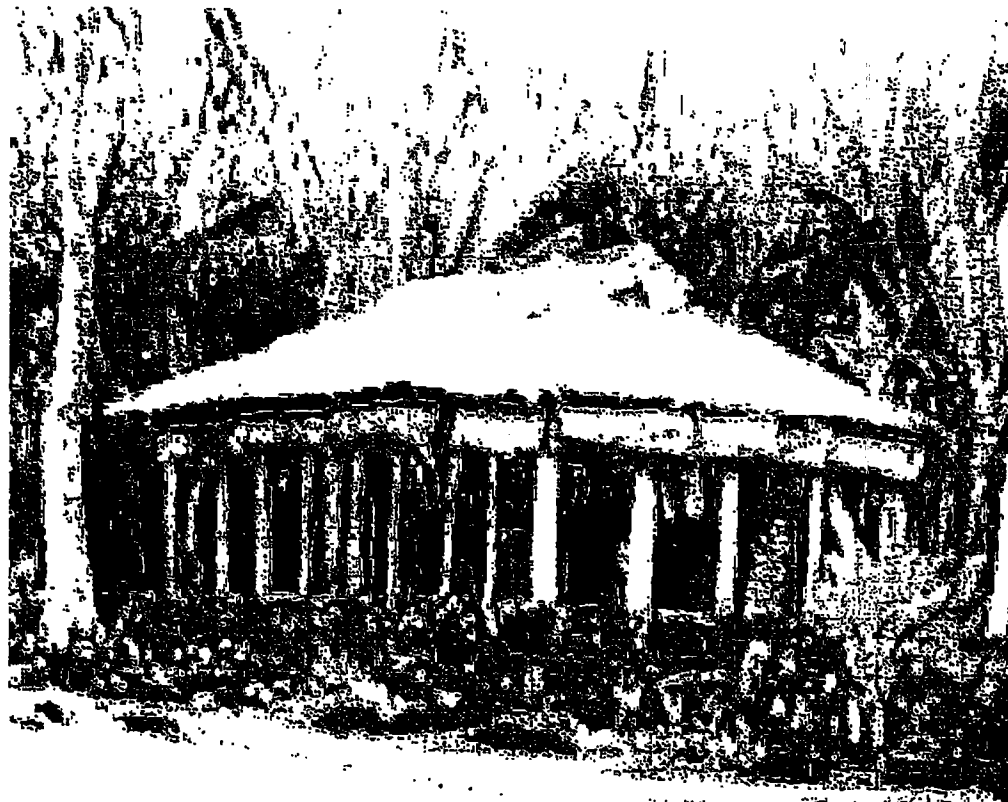


# AMERICAN SAMOA VILLAGE PLANNING WORKBOOK

Department of Urban and Regional Planning  
Spring 1997 Planning Practicum



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**DURP American Samoa Village Planning Workbook**

**Plan 751: Planning Practicum**

**Department of Urban and Regional Planning  
University of Hawai'i at Manoa  
Honolulu, Hawaii  
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### **DISCLAIMER**

The opinions expressed in this study are those of the authors only and do not necessarily reflect the views of resource persons, the University of Hawai'i, the Department of Urban and Regional Planning, the American Samoa Government, the American Samoa Economic Development and Planning Office, or any other agency, village council, or organization mentioned in this report. Errors and omissions are the sole responsibility of the authors and editors.



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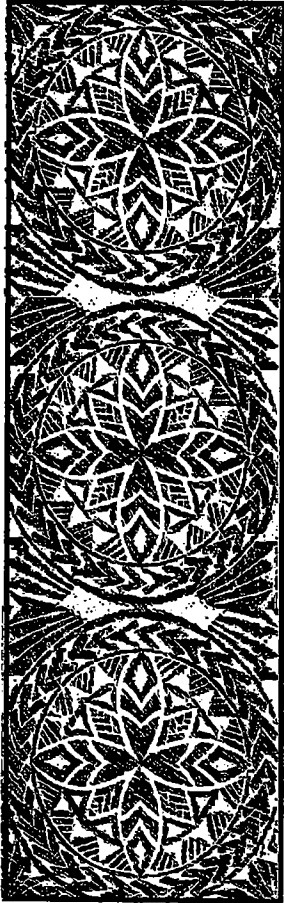
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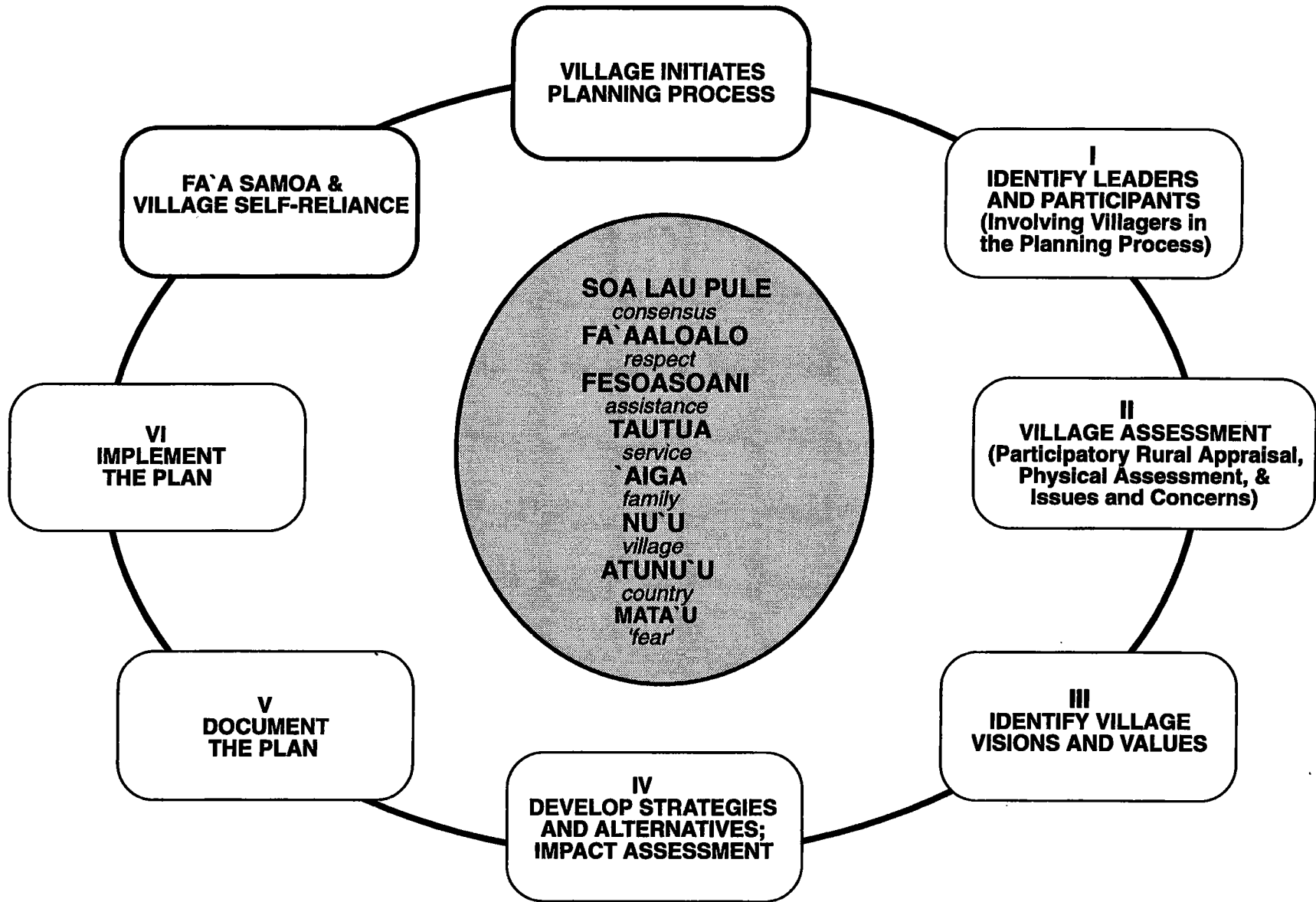


**STEP I  
INVOLVING COMMUNITY  
MEMBERS IN THE PLANNING  
PROCESS**

***Tofu mamanu pei o le upu i eleiga siapo.***

*(Let each person come up with a design as the saying goes in tapa making. The involvement of everyone is required to succeed in any endeavor. A word of encouragement.)*

**Figure 1**  
**A VILLAGE PLANNING PROCESS FOR AMERICAN SAMOA**



## STEP I

# INTRODUCTION: INVOLVING COMMUNITY MEMBERS IN THE PLANNING PROCESS

There is a story told in Sava'i about the village of A`opo that illustrates traditional Samoan methods of planning, and which can illuminate some of the issues facing modern Samoa. The village, lying on a dry lava field, has no freshwater springs or streams and relies only on rain for water, which is said to fall whenever needed. The chief To`imoana of Fagaloa came to the village and was amused that the villagers had no water to prepare the ceremonial `ava. But the villagers set their *tanoa* ['ava bowls] on the plain – and the rain came and filled the bowls. *Tali i lagi vai o A`opo*, they said: A`opo waits for rain.

In *fa`a Samoa* tradition it is assumed that the land and the ocean will provide for the people in the end, and planning has revolved around this assumption. Modern American Samoa, however, faces changes that challenge the people's reliance on tradition. A new saying has entered the language: *Ua sui le olaga*. Life has changed. Population growth, migrations between villages and islands, the transition to a capitalist economy, the introduction of an American style government, and environmental changes have all created issues that must be tackled.

These changes are most evident in the developed areas of Tutuila, particularly in Pago Pago and Tualauta County. Planning offers a way for Samoan communities to begin to address these problems. The challenge now is to not simply overlay Western methods of planning on top of Samoan tradition; rather, it is to seek in *fa`a Samoa* the processes that can be used as a base for a more formal indigenous planning procedure.

The planning process proposed here grew out of a workshop held by EDPO and the University of Hawai'i Department of Urban and Regional Planning [DURP] in the spring of 1997 in Pago Pago. Villagers from Vaitogi and Tafunafou met with government representatives and UH students with the goal of developing village-based plans for Tualauta County. A method of village planning was sought that could integrate the traditional with the modern by combining indigenous knowledge with *poto mai fafo*, Western knowledge.

In traditional, Western-style planning the government [or planning agency] presents a community with a number of alternative futures to choose from. An indigenous, village based method would probably have a quite different approach. A process revolving around Samoan values such as *fa`aaloalo* [respect], *fesoasoani* [assistance] and *soa lau pule* [consensus] requires the slow building of one common set of values and visions for the community. Village members need to agree on the issues they face and the future they wish to achieve – and then build a plan around it. This workbook – designed to be used by either village members or a government sponsored planning team – offers a step-by step process that can be used to develop community-based village development plans.

The circular flowchart on page 1 - 2, *A Village Planning Process for American Samoa*, presents the method which this workbook follows. The process needs to begin with the basic building block of *fa`a Samoa*, the `aiga. The decision to plan will first be

made in the *fale* of the extended family. The government can encourage the villages to plan, and they can offer support, education, and assistance. But an *`aiga's* desire to plan will be the necessary backbone of any project.

There are many benefits to planning, and EDPO can publicize these to encourage villagers to initiate the process. Among them are:

- **Accessibility to services:** Village based plans can provide for a better road and driveway system, which will in turn allow for better access to emergency vehicles, bus services, garbage collection, and basic services such as sewer, power, and water.
- **Village Facilities:** A plan will also make it easier to develop recreation and community buildings.
- **Increased Land Values:** Land divisions will be more clear and functional, and incompatible uses could be discouraged to raise lot values.
- **Reduced Flood Hazards:** Wetlands and natural drainage channels could be protected under a plan, and a better drainage system could be developed.
- **Increased Access to Expert Advice:** The cooperation between villages and government agencies in developing a plan will lead to better communication between the two. This will reduce misunderstanding, help bring technical and professional advisors into the villages, and help villages secure federal funding for needed projects through community block grant programs.

Once the decision has been made to plan the leaders and participants in the process need to be identified [**Step 1 – Identify Leaders and Participants**]. A plan will ideally be drawn for an entire *nu`u*. However, it is possible for smaller subsections of a village to develop a plan. An *`aiga* might develop one just for their family lands. *Fuaiala* [small residential parcels], *pitonu`u* [autonomous family compounds], and neighborhoods of private owners and renters could also engage in the process. At some point, however, smaller plans will need to be consolidated into a village plan that can be presented to the American Samoa Government in order for them to be eligible for federal funding.

Any plan, on any level, will need the blessing and support of the local *matai* and village council. While all villagers should be encouraged to add input to the plan, it would be best to have a planning team that facilitates the process. EDPO can work with the *ali'i* and *tulafale* [the chief and talking chief] of a village to organize a team that represents all levels of Samoan society. Men's groups [such as the *matai* and *`aumaga*], women's groups [such as the *faletua ma tausí*, *aualuma*, and *mafutaga a tina*], and youth groups [*autalavou*] can and should all play a role in the planning process. EDPO can also provide organizers and planners to train and assist the team.

It is necessary to include all *residents* of a village in the planning process, and so participating groups might include those not traditionally tied to that particular *nu`u*. Neighborhood associations of private owners and renters can be created to include them in the process. Other groups that could be included are immigrants from Western Samoa and other Pacific Island states, foreign contract workers, and Asian immigrants.

Once the scope of the plan and the participants have been identified it is the responsibility of the Village Planning Team to educate the various village and private groups on what role they will be playing in the process. The Village Planning Team

should engage these groups in conducting a thorough assessment of the village or subsection [**Step 2 – Village Assessment**]. The workbook provides techniques for assessing the physical, cultural, and political landscape of an area. The subsection on Participatory Rural Appraisal shows how a village can conduct this analysis at the grassroots level, and the subsection on Technical Resources details what services and material that government agencies can provide. The final subsection, Identifying Village Issues and Concerns, will help clarify the problems confronting the village.

Village members will now have a clear picture both of their community's assets and their future needs. The next step is to identify those values that the village identifies with, and to use those values to develop an image of where the village wants to be in the future [**Step 3 – Identifying Village Visions and Values**]. The products of this step are a vision statement that incorporates current conditions, the agreement on the values that give the community its identity, and the goals that community members have for their village.

At this point the village should have a collective image of where they want to be, and the process moves from assessment and visioning to active plan development [**Step 4 – Developing Strategies and Alternatives; Impact Assessment**]. This section of the workbook presents numerous planning strategies that the Village Planning Team can choose from in developing the plan. The strategies are broken up according to the issues that they address. The goals of this step are to:

- select strategies that address village issues,
- modify them to the unique situation of each village,
- compile the chosen strategies into one document,
- conduct a thorough analysis of the economic, environmental, and cultural impact of the strategies, and
- create a base map that portrays the new plan.

When this is completed the village should have all the material needed to compile a formal plan. The next step is to document it [**Step 5 – Documenting the Plan**]. The workbook will guide the Village Planning Team in developing two documents: an abbreviated version of the plan for general distribution, and a comprehensive version that fits the needs of the territorial and federal governments.

Many plans have made it this far only to perish in limbo. The final section of the workbook [**Step 6 – Implementing the Plan**] provides a framework for the Village Planning Team to work through the implementation process. Time frames, responsibility matrices, and hints on overcoming obstacles and constraints are all provided here.

As the village moves into the final circle of the flowchart the benefits of early involvement of community members in the planning process should be clear. The goal of self-reliance is achieved within a system firmly rooted in *fa`a Samoa*. As villagers begin to develop plans for their communities this process can be further modified in order to meet this goal.







## **STEP II**

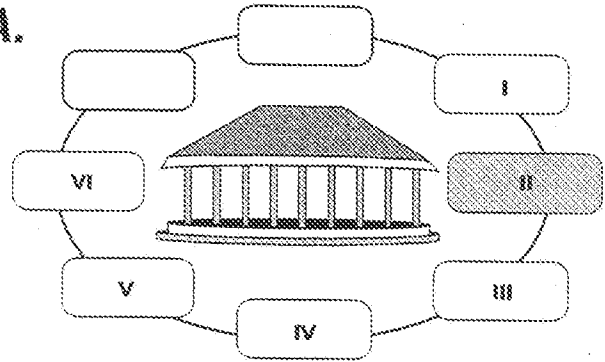
# **VILLAGE ASSESSMENT**

- A. Participatory Rural Appraisal**
- B. Obtaining Assistance From Government Resource Agencies**
- C. Identifying Village Issues and Concerns**

**IA FILI E LE TAI SE AGAVA`A.**

**Let the ocean determine  
the most qualified.**

**Leadership should be based  
on knowledge and skills.**



## STEP II

# A. PARTICIPATORY RURAL APPRAISAL

## INTRODUCTION

*"The process of development is a process of transforming the quality of life of individuals." Center for International Development*

Participatory Rural Appraisal or PRA, is a proven method of "ground-up" planning used around the world (Participatory Handbook, 1991). PRA methods have helped communities world wide to mobilize their human and natural resources to define problems, consider previous success, evaluate local resources, prioritize opportunities and prepare systematic and site specific plans. While there are a variety of techniques involved in PRA, this section of your workbook will introduce two types of field data gathering techniques – spatial data gathering and social data gathering. Each technique utilizes a series of tools that are applicable for use at the 'aiga and broader village levels. The use of mapping, research surveys and social diagramming tools have the potential to support 'aiga and villages as they move through a village development planning process. This section of your workbook will review spatial and social data gathering tools, show examples, and provide exercises that will assist you in the recognition of problems, opportunities, relationships and potential solutions.

## SPATIAL DATA GATHERING TOOLS

Spatial data provides us a sense of location and differential relationships. Using the mapping tools we can identify resources, activities, problems and opportunities to solve those problems. PRA tools in general are applicable at regional as well as sub-planning levels. In our case, these spatial data gathering tools are useful at 'aiga and village levels. It is important to note, however, that some issues, problems or opportunities may need to be investigated between villages (intravillage) or between 'aiga who reside within the same village. Also these data gathering tools are applicable to private landholders who may need to produce development plans through private landholding organizations or associations. These tools have the potential to identify when issues or opportunities reach beyond one 'aiga or one village.

The following section will review the three spatial mapping tools, provide examples and exercises.

1. 'Aiga Landholding Maps
2. Asset/Problems Map
3. Transect Maps

## 1. 'AIGA LANDHOLDING MAP

### *What is a 'aiga land map?*

- This kind of map records the individual 'aiga landholding areas of a village. Most decisions regarding resource management are made and implemented at the household level. Furthermore, activities that occur on 'aiga landholdings affect the decisions and options of the whole village.

### *What should be included in this kind of map?*

- These kinds of maps show a sample of the total 'aiga population that resides in a village. One way to select the 'aiga for the sample population is to choose those families whose landholdings appear to represent different zones of the community or different land uses. Another approach is to sketch the 'aiga landholdings of those 'aiga that are willing to participate in a detailed household interview.
- Family maps layout the 'aiga landholding, plantations (noting kinds of crops), fale (including number of structures, position, location and proximity to other structures or land uses) outhouse, kitchens and umu, fallow land, and animal pens etc.

### *Who should participate in making this map?*

- This information can be completed by one or two of the members on the village planning team with the assistance of the matai of the family whose land is being sketched. Village planning teams may want to conduct the household interviews when doing the 'aiga land mapping exercise.

### *How do we draw these maps?*

- Define the family landholding boundaries, divide the landholding into blocks according to land use, including fale, plantations, animal pens, etc. The quality of these items should be noted so that comparisons can be made between the sample of 'aiga maps.

### *Samples*

- A sample legend of keys has been provided for you on page II - 5. Refer to the legend to complete the other mapping exercises provided in the workbook. Add keys as necessary.
- An example 'aiga landholding map located in Lumana'i village has been provided on page II - 6.

# FIGURE 1 - LEGEND OF KEY EXAMPLE















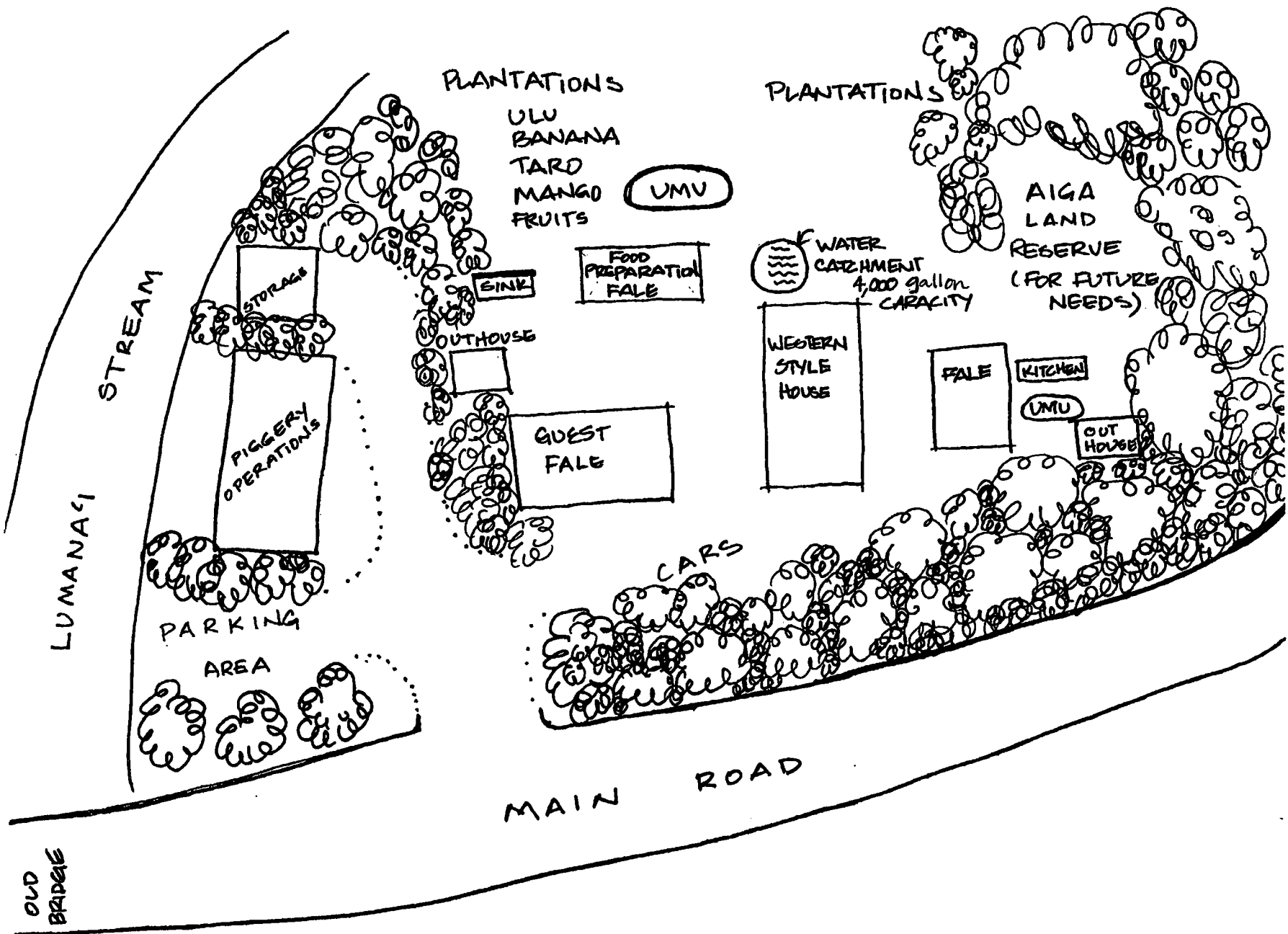
	STREAM
	HEALTH CENTER / DOCTOR
	CHURCH
	AUTO SHOP / GAS STATION
	STORE & HOUSE ATTACHED
	BUSINESS / MARKET
	POLICE / FIRE
	MAIN ROAD.
	DIRT ROAD / FOOT PATH
	VILLAGE BOUNDARY
	PLANTATIONS
	AIGA LAND HOLDING
	PRIVATE PROPERTY
	WATER CATCHMENT OR TANK

FIGURE 2 - 'AIGA LANDHOLDING MAP EXAMPLE

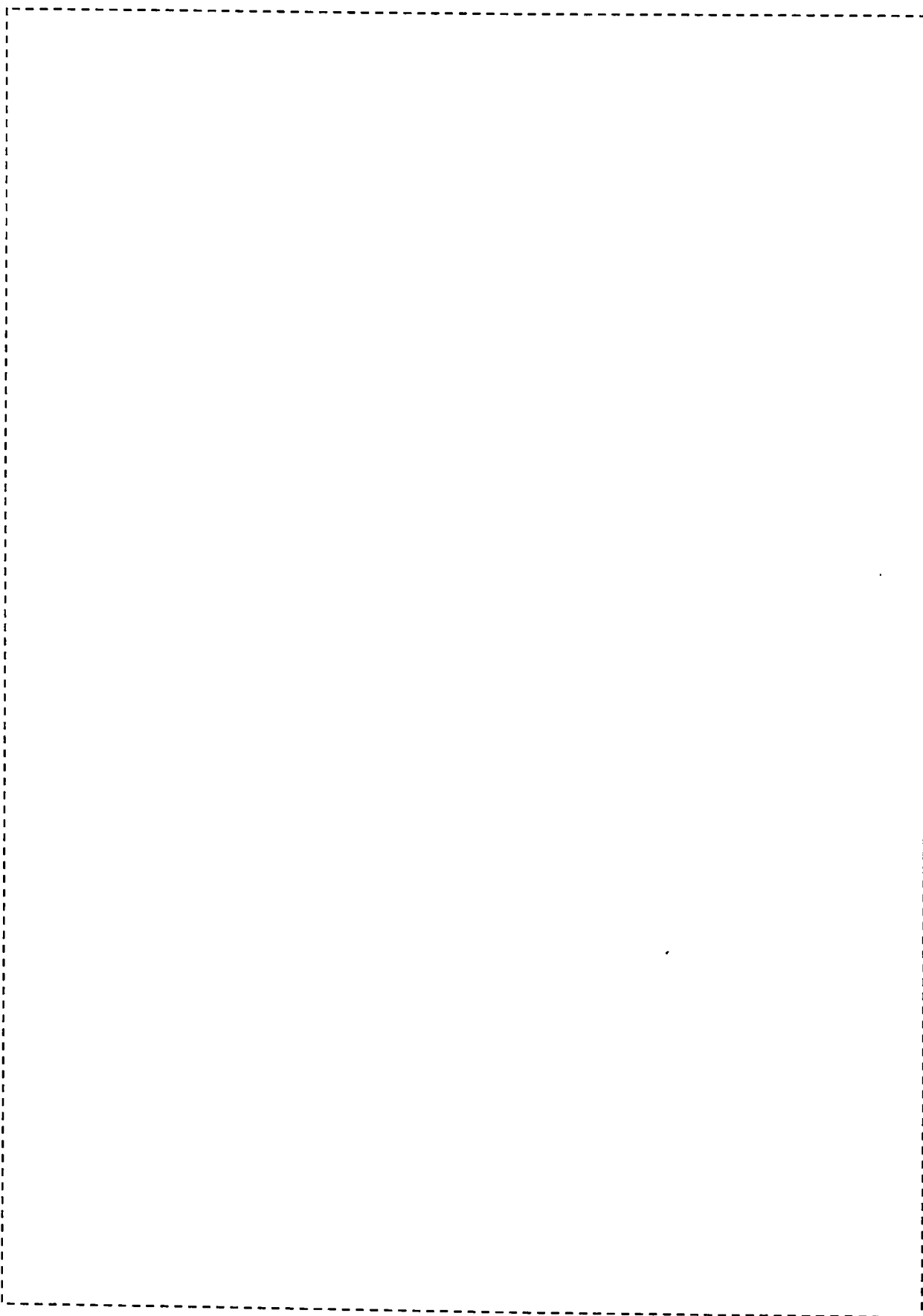


## **'AIGA LANDHOLDING MAP EXERCISE #1**

1. The participants mapping the *'aiga* landholding should familiarize themselves with the legend of keys and its symbols on page II - 5.
2. The planning team should also provide the participants with a survey map of their land area. This will ensure that all *'aiga* maps will be the same scale.
3. A blank *'aiga* landholding map has been provided on page II - 8. Based upon the *'aiga* landholding, the participants should map out the various locations of *fale*, *umu*, kitchen, etc. onto page II - 8. Accurately locate and site the *'aiga* landholding features that are present on their property.
4. After each *'aiga* has identified the locations of all features on their *'aiga* landholding map, these maps should be consolidated into a single map which will later be used in formulating the Village Development Plan.

Note: This mapping technique is also applicable to private landholder associations that may need to depict their property features spatially.

**FIGURE 3 - 'A/GA LANDHOLDING MAP EXERCISE # 1**





## 2. VILLAGE ASSET/PROBLEMS MAP

*What is an asset/problems map?*

- A map that shows where village resources, activities, problems and opportunities are located.

*What should be located in an assets map?*

- In general this kind of map should note the village layout, infrastructure, populations, and natural resources. To be more specific a asset/problem map may denote: land area, water, tree resources, types of land uses, land and soil types, plantation patterns, watersheds, degraded land, treatment plants, factories, businesses, markets, roads, etc.
- Asset maps also locate problem areas of a village for example: places where flooding occurs, places where roads are too narrow, places where traffic congestion occurs.
- These maps should also show areas for opportunities, for example: a banana patch that can be used for cash crops; a *malae* that serves as an area for village functions, places that may utilize sewage lines, or utility lines.

*Who might participate in making this map?*

- Village planning team members, village councils, family *matai*, *'aiga*, *pulenu'u*, *'aumaga*, women's groups, youth groups, churches, prominent organizations of the village.

*How do you make an assets map?*

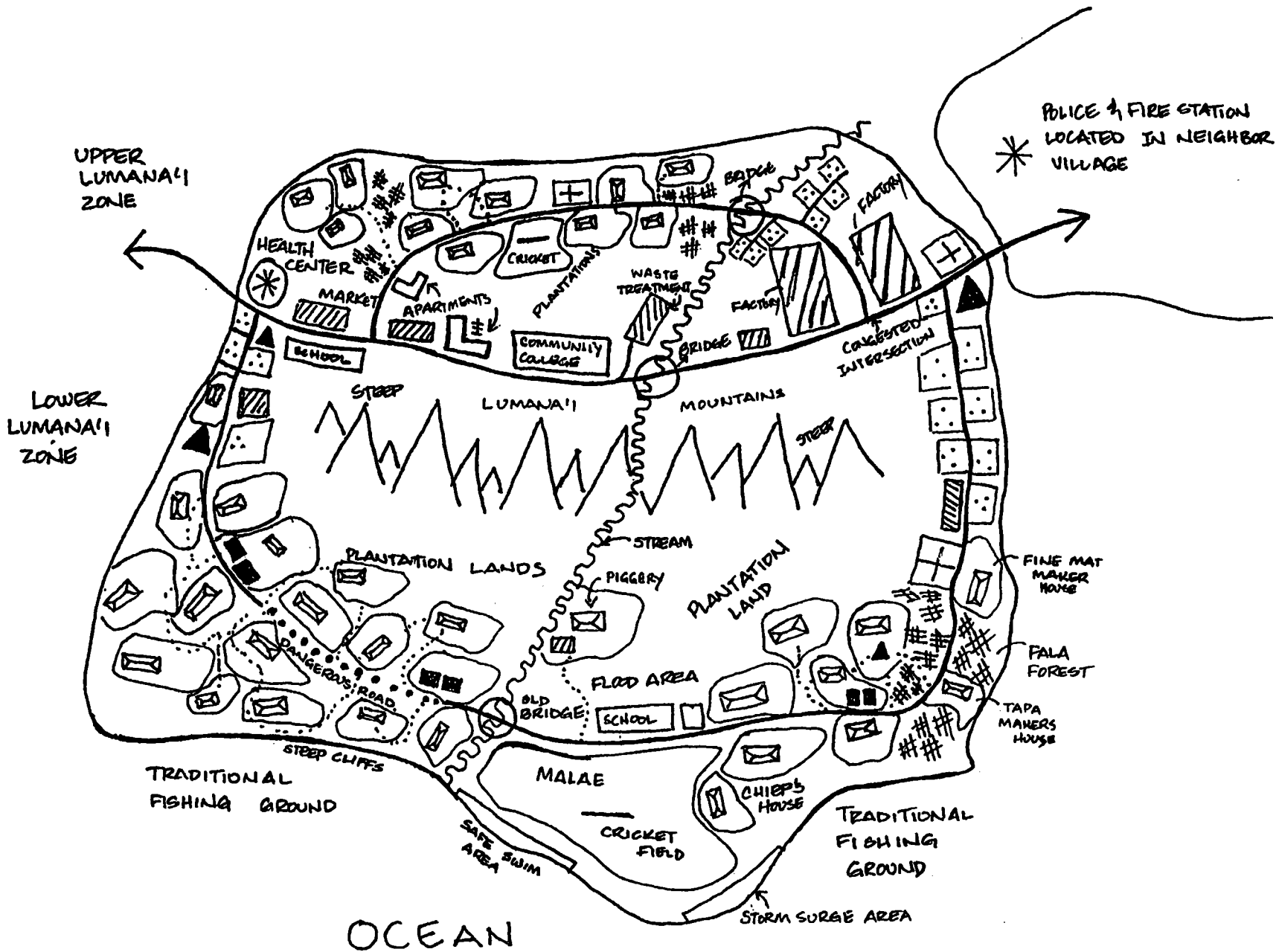
- Use another large scale map of the area to define the area boundaries.
- When no other maps are available, walk or drive, along the outer edge of the area with local residents who can help to define boundaries and record the information on paper.
- Once general boundaries are drawn, do another walk or ride through the area to fill-in more specific information on your village map. You may use another forum, like a meeting, to fill-in specific information once the base map has been completed.

*Sample*

A sample "Asset / Problem Map of Lumana'i Village" is on page II - 10.

*Note:* More than one map can be made by different teams for the same area, in this way a village can highlight different problems or opportunity areas. Furthermore, an extension of this exercise is a "mobility map" where the origin and destination of trips according to trip purpose is depicted spatially on a map (going to work, school, plantations etc.). Mobility map not shown.

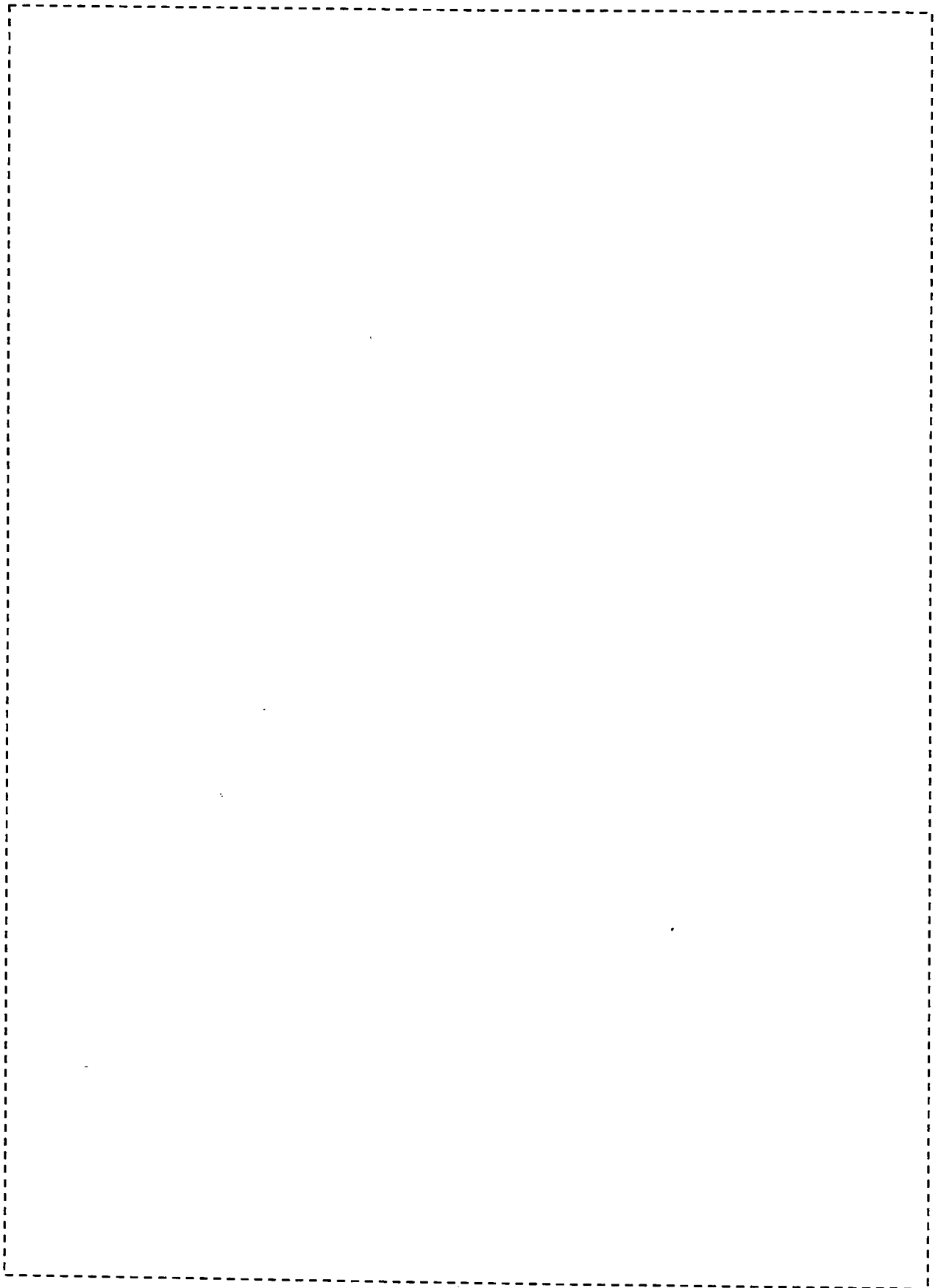
FIGURE 4- ASSET/PROBLEM MAP OF LUMANA'I VILLAGE EXAMPLE



## **VILLAGE ASSET/PROBLEM MAPPING EXERCISE #2**

1. A blank village asset/problem map has been provided on page II - 12.
2. The village planning team should provide participants with a copy of a survey map of the village to ensure that there are no discrepancies in scale.
3. Based on the resources, activities, problems and opportunities that are present in their own village, the participants should map the village assets and problems to create a village asset/problem map.
4. The participants should also locate roads(s), streams and other physical features as a part of the exercise.
5. Use the key provided on page II - 5 for marking village resources on the map; add keys as needed.

**FIGURE 5 - VILLAGE ASSET/PROBLEM MAPPING EXERCISE #2**



### 3. TRANSECT MAP

*What is a transect map?*

- A transect map shows the resources and infrastructure along a chosen path, a trail, a road or a stream.

*What is included in a transect map?*

- Transect maps are systematic walks with key informants through an area located along a path within the village, observing, asking, listening, looking, identifying the different zones, seeking problems and potential solutions.

*Who should make a transect map?*

- Village planning team members and selected villagers, and other resource people.

*How do I make a transect map?*

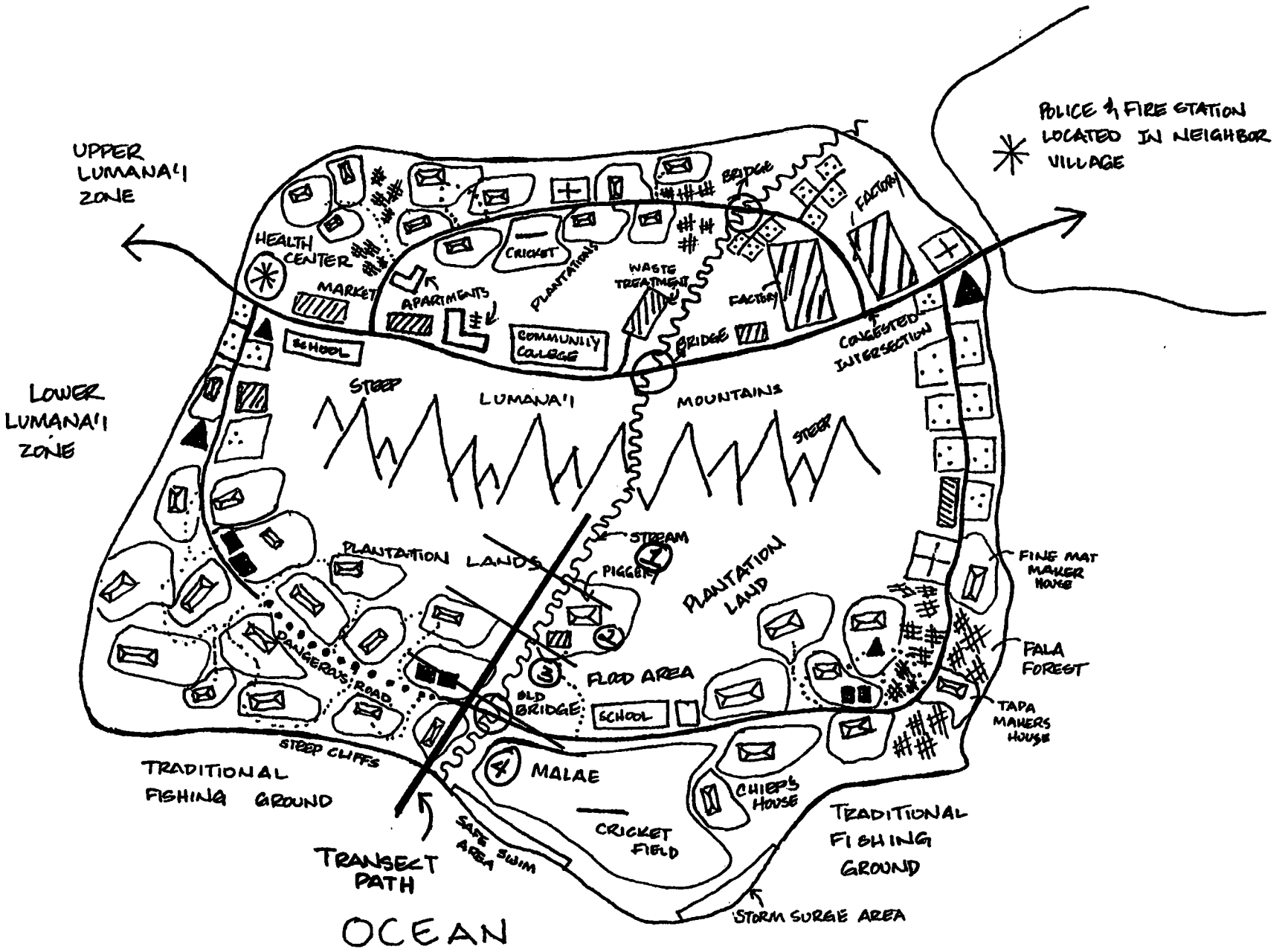
This mapping exercise utilizes information gathered from our asset map as well as village participants. Here is a possible procedure to follow:

1. Through discussions with village leadership, planning team members and other resource people, choose a logical starting point for walking the transect path.
2. There is no minimal or maximum length for the transect line. Transect lines may be selected by choosing a boundary line of the village, or by using a natural concourse within the village, like a stream or using a man made path like a road. Thus the length of the transect is dependent upon the criteria used to establish the path.
3. Assign responsibilities to members of the team walking the path, each one being responsible for noting specific observations. For example, one person may be noticing the kinds of soils, farm-sizes, and plantation patterns. Another may be in charge of observing water points, patterns, and drainage.
4. Proceed along the transect line, taking time for brief and informal interviews with people along the way.
5. It may take a full day to complete a transect walk, so allow for sufficient time.
6. At the end of the exercise, compile the notes and construct your transect map.

*Sample*

Sample transect maps have been provided on pages II - 14 and II - 15. Note that page II - 14 defines where the transect line is, and page II - 15 is an example of the transect itself.

FIGURE 6 - LUMANA'I TRANSECT KEY MAP EXAMPLE



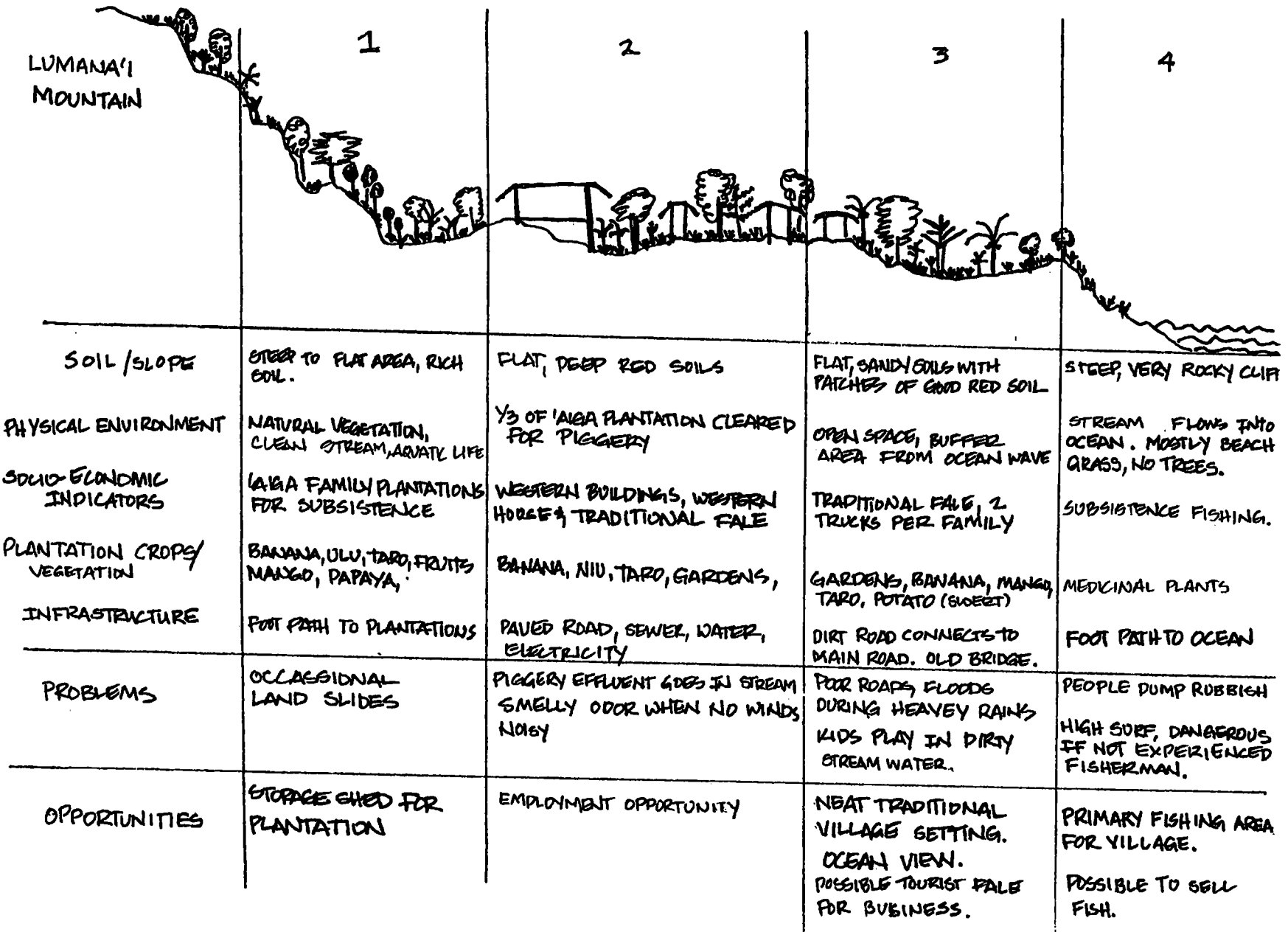


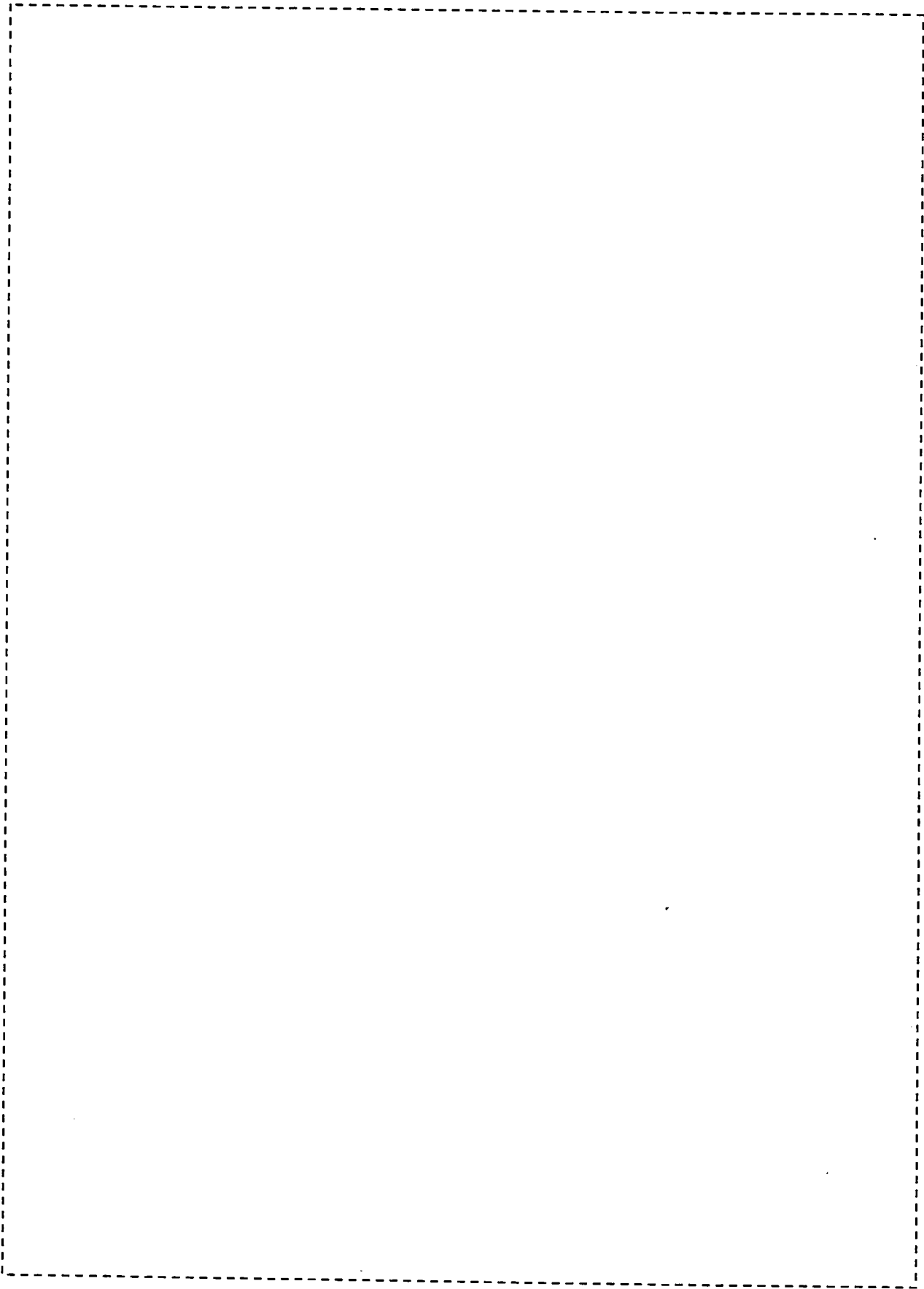
FIGURE 7 - LUMANAI'I TRANSECT MAP EXAMPLE

### **TRANSECT MAP EXERCISE #3**

1. A blank map is provided on page II - 17 so that participants can draw where the transect intersects the villages features.
2. Next, the participants should use the blank transect sheet provided on page II - 18 to both draw and label village features. The village planning team should provide participants with a survey map of the village so all transects will be of the same scale.
3. Refer to example #3 if you need assistance completing the exercise.



**FIGURE 8 - VILLAGE TRANSECT KEY MAP FOR EXERCISE #3**



**FIGURE 9 - VILLAGE TRANSECT SHEET FOR EXERCISE #3**

SOIL/SLOPE	
PHYSICAL ENVIRONMENT	
SOCIO-ECONOMIC INDICATOR	
PLANTATIONS/CROPS	
INFRASTRUCTURE	
PROBLEMS	
OPPORTUNITIES	

## SOCIAL DATA GATHERING TOOLS

Social data provides socioeconomic information from a cross-section of households in order that we form an understanding of the wide range of differences or variations between families. We will be reviewing two techniques: institutional diagrams and research surveys.

### 1. ACTORS AND INSTITUTIONS DIAGRAMS

*What's the purpose of this type of diagram?*

There are many important actors and institutions in every community. An institutional analysis helps us to:

- Learn about the activities of the various groups and organizations within the community.
- Understand how the community views these institution and actors and how they view the relationships between them.
- Assess the relationships among these institutions by creating a diagram of the institutional importance and intentions.

*What's the goal of this exercise?*

- The goal of this analysis is to understand the roles of local organizations and the perceptions people have about them, and for the participants to become more aware of the roles that local institution/organizations play in their community.
- This exercise may be useful in determining who may contribute to solutions, who may need to be involved in order to complete a successful village development plan, who holds the power in a village.

*How do we do this exercise?*

- The village planning team may have a meeting with about 10 to 15 persons present from the community who represent the full range of institutions active in the community. If the village is large organize two or three identical meetings. Select a members from the village planning team to lead the meeting.
- Identify and list all the institutions/organizations of the village. Invite the organization representatives to briefly describe the activities they perform. Take the time to clarify roles, activities and resource base. Record the information so that everyone may see it.
- Ask the group to collectively rank the institutions for their contribution to the community. You might begin with a question: "which institution is the more important for this community?" Allow members to define what community and important means. Have a village planning team member record the discussion noting the reasons given for the rankings.

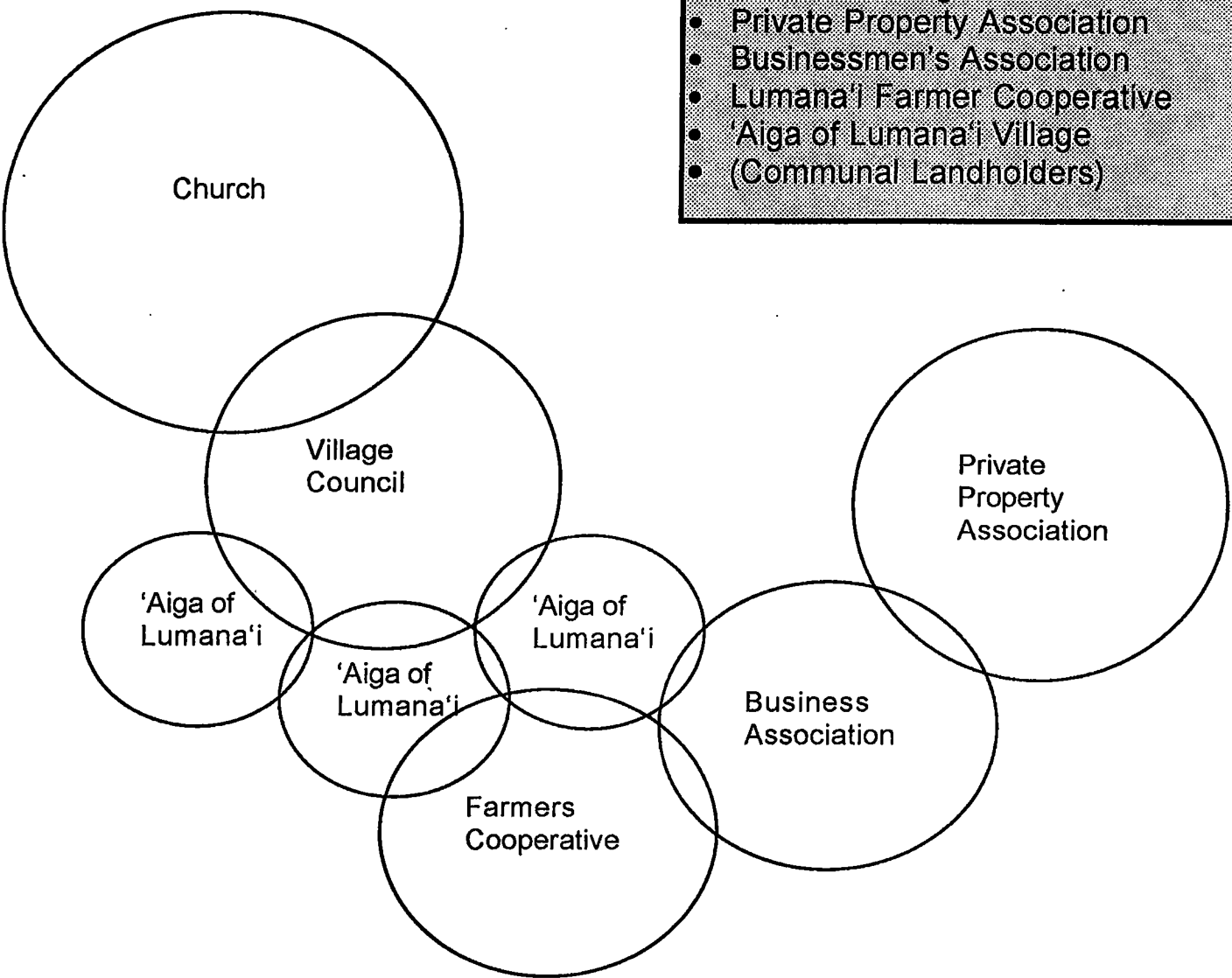
- Create an institutional diagram. Cut-out (ahead of time) circles of paper of differing sizes and lay them on a table or floor. The size of the circles indicate rank of the institution in the village.
- Ask the group to link the most important institutions/organizations to the largest circle, less important to medium sized circles and least important to the smallest circles.
- Ask which institutions work together and how closely. For those organizations that work closely together, place the circles partly over each other. The strength of the relationship may be noted by the distance from the center of each circle. Discuss as many groups as possible and position them in relation to each other.
- At the end of the session (3-4 hours) you will have a diagram of institutional relationships within the community. Two or three different discussion groups can do the same exercise, since variations often times occur.

*Sample*

A sample institutional diagram for Lumana'i village has been provided on page II - 21.

**FIGURE 10 - LUMANA'I INSTITUTIONAL DIAGRAM EXAMPLE**

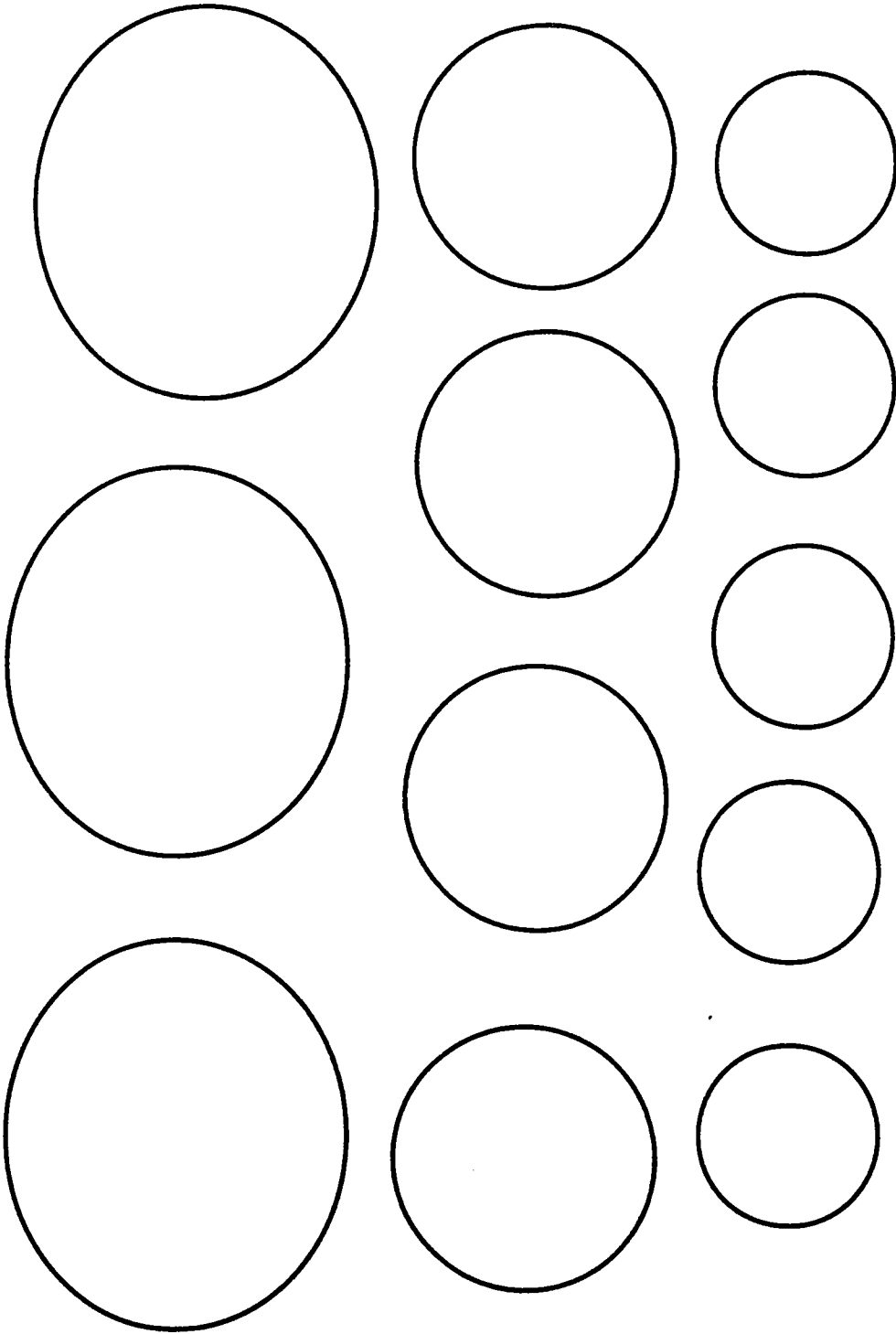
- Organizations & Institutions List**
- Church
  - Lumana'i Village Council
  - Private Property Association
  - Businessmen's Association
  - Lumana'i Farmer Cooperative
  - 'Aiga of Lumana'i Village
  - (Communal Landholders)



## INSTITUTIONAL DIAGRAM EXERCISE #4

1. First select a facilitator for this exercise.
2. The facilitator should guide a discussion with the participants with the end goal being the creation of a list of the institutions and organizations that exist in the village. The facilitator should then guide the participants through discussion to rank the organizations and institutions according to importance. If need be, allow participants to determine what important means.
3. Prior to the meeting cut out the circles on page II - 23. Next, assign the most important institutions to the largest circles, less important to the medium and the least important to the smallest circles.
4. Lastly, the participants should determine which institutions work together and how closely. For those organizations that work closely together, place the circles partly over each other. The strength of the relationship may be noted by the distance from the center of each circle. Discuss as many groups present in the village as possible and position them in relation to each other.

**FIGURE 11 - INSTITUTIONAL DIAGRAM EXERCISE #4**



## 2. VILLAGE SURVEYS

*What's is the purpose of a village survey?*

The purpose of a village survey is to collect first-hand information about what is needed by the public, and what should be avoided in the future. The village survey will include five social and economic aspects such as Village Living, Land Use, Village Facilities and Services, Economic/Commercial Conditions and Recreation. The result of the survey may serve as a needs assessment which can then help formalize the village vision in Step II of the workbook.

*How is a village survey administered?*

All survey questions should be directly related to family life at the village level. The answers to survey questions usually include several options. In order to guarantee reliable survey results for village planning, each *matai* should survey all the head of households under him/her to encourage a high response rate to the questionnaire. The administration of the survey could be carried out in the following two ways:

1. Ideally the survey is administered by a member of the planning team to each head of household or the survey is self-administered by the head of household.
2. The *matai* calls together in a meeting all of the heads of households and encourages the discussion on the items of the survey, and only one form is compiled by the *matai* for each 'aiga.

*Sample*

A sample survey is provided for your use beginning on page II - 25.



# VILLAGE SURVEY

Date \_\_\_\_\_ Village \_\_\_\_\_ Survey Team \_\_\_\_\_

## Part I: Village Living

We would like to know some of your concerns and ideas about the life in your village.

1. What kind of problems will arise in the village if the population grows to over 9,500 (Tafuna) or 2,500 (Vaitogi) people as anticipated? (check as many as you want)

- There will not be any problems
- My family may run out of land
- There won't be enough housing
- There won't be enough land for plantations
- There won't be enough jobs
- There will be too much pollution, including the drinking water
- Roads will be too crowded including traffic congestion and parking problems
- Government services (medical, educational, recreational, and utilities) will be inadequate
- Others (please specify) \_\_\_\_\_

2. How important are each of the following concerns, if any, to your family? (Circle one answer for each question.)

	<u>very important</u>	<u>somewhat important</u>	<u>not important</u>
1) Establishment of zoning codes	1	2	3
2) Establishment of building codes	1	2	3
3) Economic development (job opportunity)	1	2	3
4) Environmental protection	1	2	3
5) Establishment of animal control codes	1	2	3
6) Village facilities and services	1	2	3
7) Recreation programs	1	2	3
8) Villager participation in village planing	1	2	3
9) Others (specify) _____	1	2	3

3. What traditional physical features in your village are important to maintaining the quality your family life? (check as many as you want)

	<u>very important</u>	<u>somewhat important</u>	<u>not important</u>
1) Village <i>malae</i>	1	2	3
2) <i>Fale</i>	1	2	3
3) Plantations	1	2	3
4) Detached housing	1	2	3
5) Low density housing	1	2	3
6) Family run stores	1	2	3
7) Access to paved roads	1	2	3
8) Others (please specify) _____			

## Part II: Land use

Following are questions concerning your opinion about the future planning and development of your village.

1. The land use controls such as zoning, easements, and other regulations will influence the development and use of communal land and privately owned land. Please circle the category which best reflects how you feel about each of the following statements.

	<u>Strongly Agree</u>	<u>Agree</u>	<u>Disagree</u>	<u>Strongly Disagree</u>
1) No one has the right to tell land-owners what they can and cannot do with their own land	1	2	3	4
2) Land use controls are very useful in achieving orderly growth of a village	1	2	3	4
3) Land use controls are good means of protecting natural resources	1	2	3	4
4) Land use controls would reduce conflict between land owners and the public	1	2	3	4
5) Most people will be harmed by land use controls	1	2	3	4

2. What of the following do you expect will be built on your family land? (check as many as you want)

\_\_\_ Dwelling Units If yes, how many will be built:

\_\_\_ in the next 5 years?

\_\_\_ in the next 10 years?

\_\_\_ Commercial units (please specify)

\_\_\_ Stores

\_\_\_ Motels, Bed & Breakfast

\_\_\_ Business Offices

\_\_\_ Restaurants

\_\_\_ Industrial uses

\_\_\_ Church uses

\_\_\_ Government uses

\_\_\_ Others (please specify) \_\_\_\_\_

3. What strategies should be followed to provide housing for the increasing population?

	<u>Strongly Agree</u>	<u>Agree</u>	<u>Disagree</u>	<u>Strongly Disagree</u>
1) Keep present density [2 houses / acre]	1	2	3	4
2) Increase density	1	2	3	4
3) Build apartments	1	2	3	4
4) Develop new areas	1	2	3	4

4. Do you plan to increase or decrease the amount of land that your family now farms?

- My family does not currently farm
- My family plans to increase the amount of land we farm
- My family plans to decrease the amount of land we farm
- My family plans to continue farming the same amount of land

### Part III: Village facilities and services

We are also interested in how you view the facilities and services available to your family.

1. Rate the adequacy of the following services and facilities in your village: (Circle one answer for each category)

	<u>Excellent</u>	<u>Adequate</u>	<u>In need of Improvement</u>	<u>Non-Existent</u>	<u>Don't Know</u>
1) Street maintenance	1	2	3	4	5
2) Sidewalks	1	2	3	4	5
3) Street lights	1	2	3	4	5
4) Traffic control	1	2	3	4	5
5) Public transportation	1	2	3	4	5
6) Parking	1	2	3	4	5
7) Drainage	1	2	3	4	5
8) Water service	1	2	3	4	5
9) Gas/electric service	1	2	3	4	5
10) Health service	1	2	3	4	5
11) Phone service	1	2	3	4	5
12) Rubbish collection	1	2	3	4	5
13) Flood control	1	2	3	4	5
14) Recreation facilities	1	2	3	4	5
15) Other (specify)	1	2	3	4	5

2. Do roads in the village lead to where your family want to go or are new roads needed? (check one)

- I don't think new roads are needed now or will be needed in the future
- I think we have enough roads now but will need more in the future
- I think new roads are needed now and even more will be needed in the future
- New roads in the village are or will be needed from \_\_\_\_\_ to \_\_\_\_\_  
and from \_\_\_\_\_ to \_\_\_\_\_  
and from \_\_\_\_\_ to \_\_\_\_\_

3. How would you rate the following aspects of the school system?

	<u>Very Satisfied</u>	<u>Satisfied</u>	<u>Unsure</u>	<u>Dissatisfied</u>	<u>Very Dissatisfied</u>
1) Early childhood education	1	2	3	4	5
2) Elementary school facilities	1	2	3	4	5
3) High school facilities	1	2	3	4	5
4) Administration	1	2	3	4	5

### Part IV: Economic/commercial conditions

We are interested in how you view the existing and future economic prospects of your village.

1. Are you satisfied with your current job? If not, what would you change and why?

I do not have a job

Yes

No. If no, why? \_\_\_\_\_

2. Are you satisfied with existing shopping opportunities?

Yes

No. If no, do you like to have a shopping center in your village?

Yes

No. If no, why? \_\_\_\_\_

3. Where do you and your family most frequently obtain the following goods and services?

*Services*

	<u>Village</u>	<u>County</u>	<u>Pago Area</u>	<u>Other</u>
beauty shop	1	2	3	4
barber shop	1	2	3	4
dry-cleaning	1	2	3	4
laundry	1	2	3	4
medical and dental	1	2	3	4
auto repair	1	2	3	4
banking	1	2	3	4
restaurant (eating out)	1	2	3	4
entertainment	1	2	3	4
other (specify) _____	1	2	3	4

*Goods*

	<u>Village</u>	<u>County</u>	<u>Pago Area</u>	<u>Other</u>
grocery	1	2	3	4
drugs/medicine	1	2	3	4
clothing	1	2	3	4
hardware	1	2	3	4
alcoholic beverages	1	2	3	4
gasoline	1	2	3	4
furniture	1	2	3	4
farm and fishing supplies	1	2	3	4
auto parts	1	2	3	4
other (specify) _____	1	2	3	4

4. From the above list or other, what three types of retail shops or services do you think are most needed in your village?

1) \_\_\_\_\_; 2) \_\_\_\_\_; 3) \_\_\_\_\_.

**Part V: Recreation**

1. What recreation programs or facilities do you and your family regularly use in your village?

1) \_\_\_\_\_; 2) \_\_\_\_\_; 3) \_\_\_\_\_.

2. Do you think that the following groups have sufficient recreational opportunities in your village?

<u>Group</u>	<u>Yes</u>	<u>No</u>	<u>No opinion</u>
1) Children	1	2	3
2) Teens	1	2	3
3) Adults	1	2	3
4) Seniors	1	2	3
5) Women	1	2	3

3. What one major recreation improvement would you like to see made in your village in the future?

## STEP II

## B. OBTAINING ASSISTANCE FROM GOVERNMENTAL AGENCIES

### INTRODUCTION

Now that the community members have done a thorough village assessment using PRA techniques, the Village Planning Team needs to contact the various governmental agencies in American Samoa to fill in any gaps concerning the village's existing conditions. These government agencies can be useful in not only providing additional data on the baseline characteristics of the village, but they may even have already planned for certain social and physical infrastructural improvements that the community is not aware of. To make sure that there is on-going communication on these matters, it is important that the Planning Team contacts the agencies at this point in the planning process. Input from various governmental agencies will also be very important when the Team begins to implement the Development Plan because the agencies will be ultimately responsible for guiding the village through the necessary bureaucratic procedures. Most of the supporting data will come from the list of resource agencies provided below. For easy clarification, information under each governmental agency is categorized by "role in formulation of development plan" and "role in implementation of development plan."

### LIST OF RESOURCE AGENCIES

#### A. Economic Development and Planning Office / American Samoa Coastal Management Program (EDPO / ASCMP)

##### *Role in Formulation of Development Plan*

- Will Check For Consistency with Federal Plans
- Has Flood Insurance Rate Maps (FIRM)
- Has Topography Maps
- Keeps Zoning Board Administration Records

##### *Role in Implementation of Development Plan*

- Processes Land Use Permit Applications
- Processes Business Licenses Applications
- Processes Zoning Variance Applications
- Provides National Flood Insurance Program Assistance

## B. American Samoa Environmental Protection Agency (ASEPA)

### *Role in Formulation of Development Plan*

- Erosion Control Standards
- Storm-water Management / Drainage Plan Assistance
- Solid Waste Disposal Standards
- Hazardous Waste Storage and Disposal Standards
- Piggery Waste Disposal Standards / Assistance

### *Role in Implementation of Development Plan*

- Water Quality Certification
- Processes Army Corp of Engineer Applications

## C. Department of Public Works (DPW)

### *Role in Formulation of Development Plan*

- Grading / Excavation / Retaining Wall Standards
- Land Survey Maps
- Traffic Circulation / Parking Lot Standards

### *Role in Implementation of Development Plan*

- Processes Building Permit Applications
- Does Building Inspections
- Does Road Plan Reviews

## D. American Samoan Power Authority (ASPA)

### *Role in Formulation of Development Plan*

- Site Plan Preparation
- Vicinity, Topography, and Infrastructure Maps
- Septic Tank Specifications / Requirements
- Solid Waste Disposal Standards
- Waste-water Disposal Standards
- Village Population, Residential, Commercial, and Industrial Projections

### *Role in Implementation of Development Plan*

- Electrical, Water, and Sewer Hookups

## E. Public Health Division

### *Role in Formulation of Development Plan*

- Solid Waste Disposal Standards
- Piggery / Poultry Waste Disposal Standards
- Public Health / Hygiene Regulations

## F. Department of Marine and Wildlife (DMWR)

### *Role in Formulation of Development Plan*

- Marine Protection Regulations
- Wildlife Preservation Regulations

## G. Department of Parks and Recreation / American Samoa Historical Preservation Office (DPR / ASHPO)

### *Role in Formulation of Development Plan*

- Maps of Protected Sites
- Information on Historical Sites

### *Role in Implementation of Development Plan*

- Archaeological and Historical Sites Protection

## H. Office of Samoan Affairs

### *Role in Implementation of Development Plan*

- Verification of Communal Land Ownership Rights
- Mediation of Land Ownership Disputes
- Oversees the *Pulenu'u*

## I. Attorney General's Office (AG)

### *Role in Implementation of Development Plan*

- Real Property Management Board
- Oversees Leases and Use of Government Lands / Property
- Prosecute Land Use and Government Land Lease Policy Violations

## J. National Resource Conservation Service (NRCS)

### *Role in Implementation of Development Plan*

- Assists with Soil Erosion Problems
- Assists the Soil and Water Conservation District
- Assists Preservation NGOs

## K. Land Grant / American Samoa Community College

### *Role in Implementation of Development Plan*

- Assists with Erosion Protection Plans by providing appropriate seeds and plants for the landscape
- Assists with community tree planting projects in villages
- Assists with technical information on best farming practices and agricultural and natural occurring plants and trees



## STEP II

# C. IDENTIFYING VILLAGE ISSUES AND CONCERNS

## INTRODUCTION

Once the Village-Based Assessment and the Physical Assessment Sections have been completed, the Village Planning Team can begin to determine if these physical, cultural, economic, and environmental aspects of the village are regarded as assets or problems of the community. This section uses a process of community evaluation that is a modified version of the Neighborhood Research Corporation worksheet. It begins by asking the question "what's working in the village" so that residents can identify community assets that should be safeguarded from future development. This section also identifies "what's not working", so the community can assemble a list of problems that will be addressed in the Village Development Plan. The purpose of this exercise is to identify village-wide issues and concerns in order to bridge the gap between different 'aiga. Identification of common interests will ultimately assist the community to formulate a common vision of how they would like their village to be like in the future.

Village assets and problems represent unique issues and concerns which can only be articulated by village residents themselves. In order to ensure that all views are represented, all of the village social groups and associations must be contacted by the Village Planning Team. The facilitator of this exercise can ensure that all social and gender classes have a meaningful contribution only if a participatory format is established. Therefore the best procedure for this exercise would be to meet separately with the Village Council, Women's Group, Men's Groups, Youth's Group, Private Neighborhood Associations, and Church Groups for the identification of what's working and what's not working in the village. After all viewpoints have been recorded, the Village Planning Team can then work with the Village Council to synthesize this information into a master list of issues and concerns. Later, when this information is presented at the next public meeting or by each *matai* to their extended family, village residents can cross examine how different groups view both assets and vulnerabilities in their community. This will ultimately have the effect of sensitizing individuals to other's viewpoints and help them identify which issues and concerns the community should focus on in the Village Development Plan.

## IDENTIFYING WHAT'S WORKING AND WHAT'S NOT WORKING IN THE VILLAGE

The Village Planning Team should begin by identifying all of the village groups and associations which will participate in this exercise. Each identified group should complete a duplicate copy of the **Issues and Concerns Worksheet** on pages II - 36 and II - 37. An example using the hypothetical village of Lumana'i is also provided to show how a completed Worksheet could look like after going through the following steps:

- 1) At the top of the Worksheet, the facilitator should write in the village name, date of meeting, the village group name, and the recorder's name.
- 2) The facilitator should be familiar with what items were identified in Section B and C of the Village Assessment Step of the Village Planning Workbook. Identified items should be categorized as either Cultural / Physical, Economic or Environmental aspects of the village. Any missing items should be added to the preliminary questions under these three headings in the Worksheet.
- 3) Once the facilitator has made these preparations, he/she can meet with one of the groups. This identification of Issues and Concerns should begin by explaining the importance of documenting their viewpoints on both what is working and what is not working in their village (their input will ensure that assets in the village are protected and problem areas will be addressed in the Village Development Plan).
- 4) The facilitator would then choose one of the four categories and ask the group to evaluate inventoried village items on their positive qualities. For example, if the Cultural/Physical Aspects of the Village were looked at first, respondents would be asked, "When you think about the roads in the village, in what ways do they work well?"
- 5) After all the inventoried items in one category have been evaluated for merit, then the group should determine what's not working in the village. The reverse question would then be posed, "When you think of roads in the village, what aspects do you see as not working well?"
- 6) When all four categories have been evaluated, the facilitator should then go through the same exercise with the other groups in the village.
- 7) The final step the Identifying Issues and Concerns exercise is to synthesize all the information generated into a master list which references specific issues and concerns to the village's various community groups.

## **FINDINGS AND APPLICATIONS**

In identifying the village Issues and Concerns, an important step in the planning process has been completed. Findings from this exercise will be applied in three other steps of the Village Planning Workbook. The first application will occur in the next step of the Workbook when the various village groups go through a visioning process. Since items in the village inventory have already been evaluated, community members can better visualize how they would like their village to be in the future. Although the residents' vision may include unique community assets and additional amenities they may want in their village, they may overlook the source of existing problems in the community. This exercise is useful because it identifies these important issues and

concerns. The exercise will also ensure that village residents can formulate goals and objectives which are structured to both protect the village assets and correct the identified problems of the community.

The second application of the Issues and Concerns Worksheet will be in the Strategies and Alternatives Analysis Step of the Workbook. With the unified list of what's working and what's not working, the Village Planning Team should have a complete checklist of both problems to address and community assets to protect while formulating the development plan alternatives. This worksheet will be an important tool when these alternatives are cross-compared on how they impact the cultural, economic, and environmental aspects of the existing village.

Once the identified issues and concerns from each group have been synthesized as described in the instructions above, the third application of this exercise will be the integration of "what's working" and "what's not working" into the Village Development Plan. Information generated in this step of the Workbook will be used in Step IV of the document to detail both the negative and positive aspects of the village. This will ensure that these issues and concerns become part of the document which conveys the village's needs and desires to the American Samoan Government.

VILLAGE: *Lumana'i*

GROUP: *Women's Group* DATE: *5/15/97*

RECORDER: *Lisa*

Village Inventory Items	What's Working	What's Not Working
<p><b>Cultural/Physical Aspects Of The Village:</b>                      Housing Configuration?                      Architectural Design?                      Roads?                      Utilities?                      Compatibility of Land Uses?                      Traditional Political System?  <i>Malae</i>?                      Historic Places and Artifacts?                      Social Activities?  <i>Fale</i>?                      Extended Family Compounds?                      Traditional Craft Activities?                      Sports?                      Schools?</p>	<p><i>Like traditional homes around malae; enjoy social activities in housing compounds and at church; like sports activities for children; like newly paved portion of main road; want to keep fa'a Samoa.</i></p>	<p><i>Some of homes too close to each other; noisy; shouldn't have manufacturing near children's play area; would like children to be taught traditional craft activities; need daycare in village for working mothers; no consistent garbage pick-up; too much traffic on main road; problems with parking and random bus stops.</i></p>
<p><b>Economic Aspects Of The Village:</b>                      Businesses?                      Employment?                      Tourism?                      Subsistence Economy?                      Commercial Agriculture?                      Industrial Areas?                      Commercial Areas?</p>	<p><i>Good to have shopping in village; Like being able to gather subsistence needs from plantations.</i></p>	<p><i>Not enough employment opportunities in village; difficult to bring commercial agriculture products into market in town.</i></p>
<p><b>Environmental Aspects Of The Village:</b>                      Flooding?                      Native Forests?                      Water?                      Fishing?                      Air Quality?                      Aesthetics?</p>	<p><i>Forest and plantations provide good open space for children and families.</i></p>	<p><i>Flooding a problem in northwest part of village and on western part of main road; water quality a problem during floods.</i></p>

EXAMPLE 1 - ISSUES AND CONCERNS

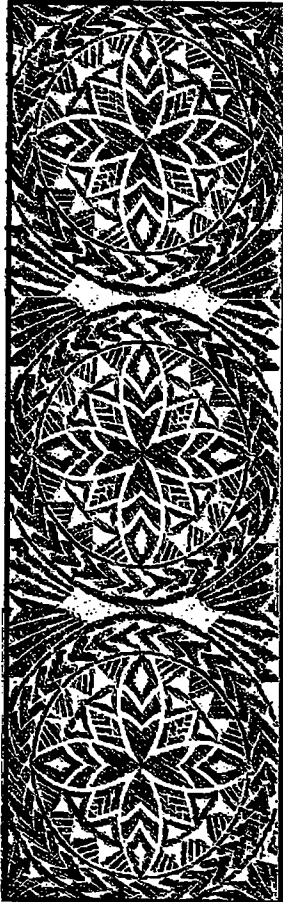
VILLAGE:

GROUP:

RECORDER:

Village Inventory Items	What's Working	What's Not Working
<b>Cultural/Physical Aspects Of The Village:</b> Housing Configuration? Architectural Design? Roads? Utilities? Compatibility of Land Uses? Traditional Political System? <i>Malae?</i> Historic Places and Artifacts? Social Activities? <i>Fale?</i> Extended Family Compounds? Traditional Craft Activities? Sports? Schools?		
<b>Economic Aspects Of The Village:</b> Businesses? Employment? Tourism? Subsistence Economy? Commercial Agriculture? Industrial Areas? Commercial Areas?		
<b>Environmental Aspects Of The Village:</b> Flooding? Native Forests? Water? Fishing? Air Quality? Aesthetics?		





### **STEP III**

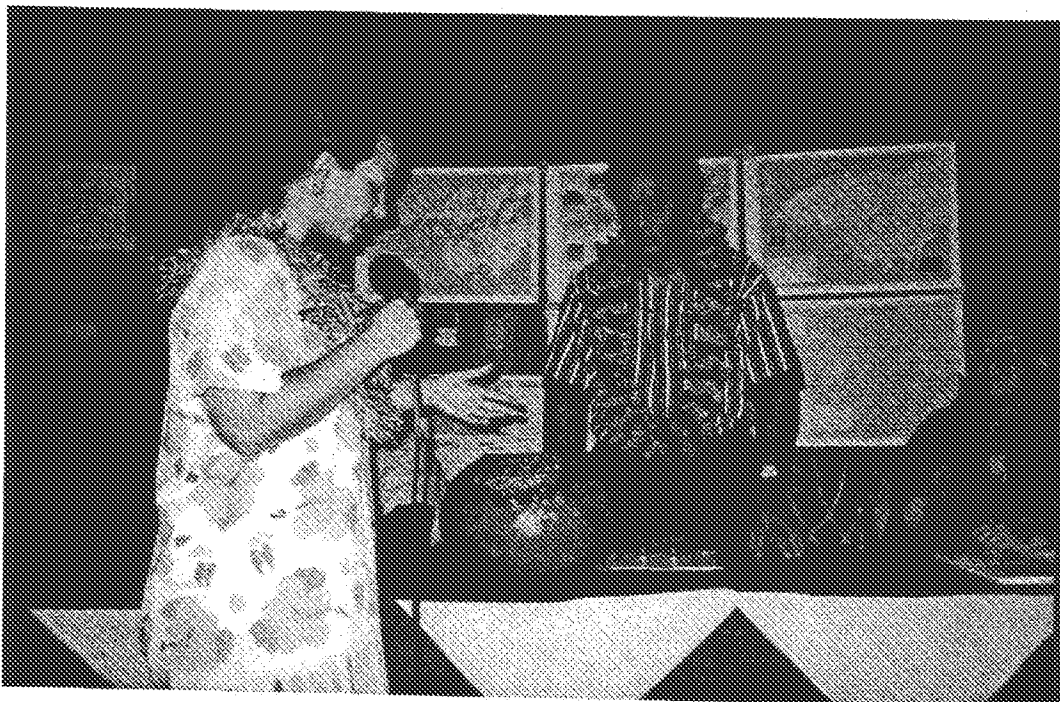
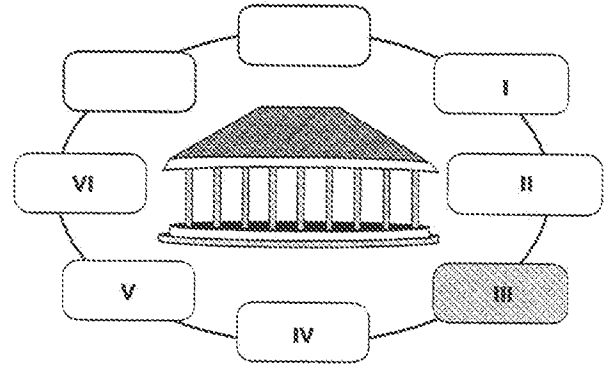
## **IDENTIFYING A VILLAGE'S VISION FOR THE FUTURE**

- A. Where Were We?**
- B. Where Are We Now?**
- C. Where Are We Going?**
- D. Where Do We Want To Be?**
- E. How Do We Get There?**

**SE'I MUAMUA  
SE FA`ASAO A MANU VAO.**

*Before catching birds  
an offering must be made.*

When we undertake a project,  
we must first pay our respect.





## STEP III

# VISIONING – A PROCESS FOR LOOKING INTO THE FUTURE

*"If you don't know where you are going,  
you might end up some place else."*

By Casey Stengel

## INTRODUCTION

Visioning is a main component of village based planning. The vision is the ultimate goal of a village and addresses the needs, wants, and desires of those who reside in the village. The visioning process centers on the village, which includes the physical, social and environmental surroundings. The village is the place where human development, diversity, balance, sustainability, conservation and restoration take on meaning. The village is a representation of the Samoan people and should be visioned in a way that best suits them. Therefore, the village vision should be a representation of those aspects that make the village unique. This can be represented culturally, socially, environmentally as well as economically.

To formulate a vision and a set of goals and objectives, the village should make sure its needs and aspirations are the driving force. By definition, a strategic vision is the result of a process that reflects the values, needs and aspirations of those participating in it and provides a mechanism for determining priorities and steps to achieve the village vision. A strategic vision can empower a village, allowing it to maintain its identity and establish priorities for responding to change. Everyone in the village should be encouraged to participate in village visioning since it will shape everyone's future. By providing a clear picture of what people want in the long term, they can begin to work on how they must complete the village vision. This process creates the foundation upon which the implementation of the village development plan will take place.

A vision is the overall image of what the village wants to become and how it wants to look at some point in the future. The visioning process can be a simple method in which a village envisions the (usually, short-term) future it wants and the strategies how to achieve that vision. Once the people have envisioned what they want their village to become in the future, the villagers can begin to develop goals and objectives and work consciously toward them. By doing this a village can:

- 1) Better understand the values of the villagers
- 2) Identify the trends and forces that are affecting the village
- 3) Articulate a big picture view to guide short-term decisions and long term initiatives
- 4) Develop tools to achieve its vision

The visioning process can be structured in many forms but should address specific questions that pertain to the village. The questions in brief are: Where were we? Where are we? Where are we going? Where do we want to be? & How do we get there? In order to successfully answer these questions with substance, tools and activities are provided in this workbook. These tools and activities will guide the villagers through first a historical phase and then an assessment phase of their village.

These first two phases lay the foundation for a powerful and solid village vision. The next step is to form a *village vision statement* of what the community would like their village to be in the future. When the vision statement is complete, strategies can be developed that targets village goals and objectives which fulfill their vision.

A **commitment** to collaboration is essential for village based planning. There are a variety of facilitation and multi-disciplinary problem solving tools and techniques that a village can use to achieve consensus on a strategic vision that assess needs and priorities for implementation strategies. The village planning team should include all community members when developing a vision for an entire village. This includes groups such as the village council, men's group, women's group, private neighborhood associations, etc. Each group should contribute in the development of a single vision. Extended family units could also go through a similar visioning process when planning for their own land but a community wide visioning process will be necessary for the completion of the village development plan.

The village vision planning process should encourage villages to consolidate their planning efforts to accomplish the following goals.

- 1) Strengthening the village to commit to planning as a problem solving method
- 2) Nurturing human development
- 3) Achieve diversity

The challenge for a community involved in a visioning process is to focus its attention on those aspects of the future that it has the most control over. Establishing a framework for the visioning process ensures that it will be a manageable focused dialogue rather than a random, wandering discussion. There are three items that need to be decided before the visioning process can be conducted. They are:

1) **Timeframe-** Means to select a target year for the vision that will be created. The target year also defines the period of time for which the community is planning for into the future. Most of the villages should try for 25 years in advance. Other target time periods can be between 10 and 25 years.

2) **Focus -** A vision focus is the central theme around which a visioning process is built. A village vision may have a very broad focus or a narrower one depending on the current issues and trends affecting the village. Some visioning activities might focus around an issue totally.

3) **Target Areas -** Once the focus has been established, the village can identify more specific visioning target areas. This involves major areas of concern the village seeks to address as part of its visioning process. Target Areas help the village organize the many concerns and issues it faces, providing a framework for analysis, planning and action.

## A. WHERE WERE WE?



Essentially this portion of the visioning process is an historical analysis that revisits past events that have impacted the village's contemporary lifestyle. This will help explain the existing physical and social conditions of the village. This first phase is an important step that should not be taken lightly. *You need to know where you came from in order to know where you are going.*

### Tools and Activities:

#### Timeline

A timeline can address the question of where were we and why. This is not a difficult task. First, everyone who participates in the formulation of their plan should gather in one place. To start, use a sheet of paper to record all the past events that have made an impact on the village's existing condition. This information should be listed by events and be displayed so all those who participate can view it. The paper should be structured so that the dates are listed across the top of the paper and the historical events are listed under the appropriate time frames. The following is an example timeline.

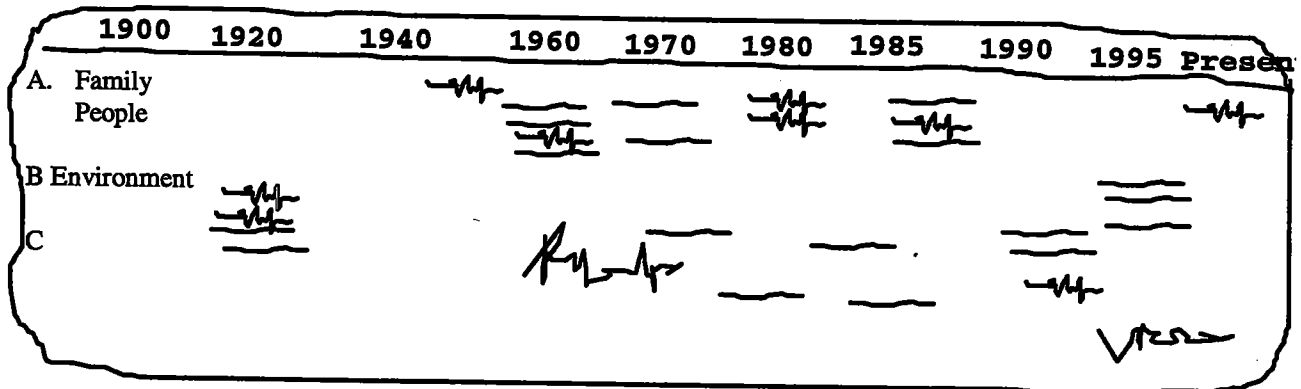


Figure 1. - Timeline

Through this process the villagers will construct their perspectives of history. This valuable information can then determine why the villages' economic, environmental and social conditions exist as they do presently.

The next step of this process will be to filter through the issues and events that contributed to the problems and pick the ones that have the most impact on current conditions. The most consequential events should then be analyzed to see if there is any short term solutions to the problems that were created. Group discussion should

be focused to discover if any policies could be proposed to address these village concerns. By analyzing historical events villagers may discover solutions to present problems and prepare an outline of goals and objectives that address those problems.

### Mapping Activity

An assessment of the past and present conditions of the village can be best accomplished by reviewing a series of aerial photos. The aerial photos need to show progressive land uses and development patterns that have existed over time. These maps need to be sequential and easily readable. From here the villagers should be able to mark significant differences and map trends of development. Spatial trends should also help identify problems and issues, which can then be listed in chart form to be viewed by the entire participating group. This tool is the best possible way to visually represent the development changes that have occurred over time. Maps could look like the following and in series:

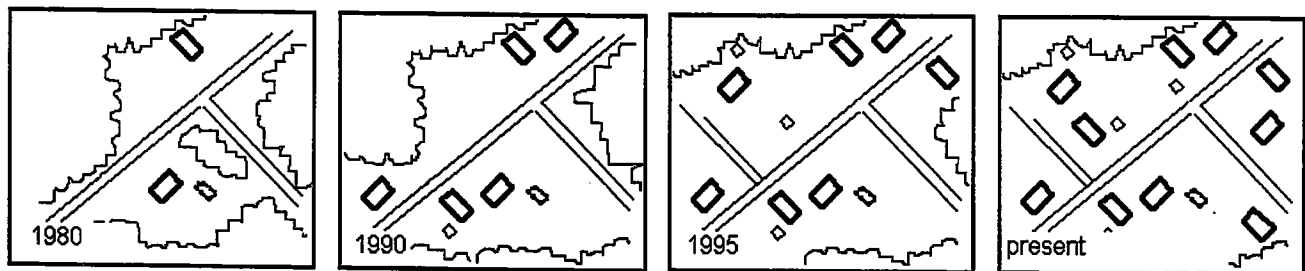
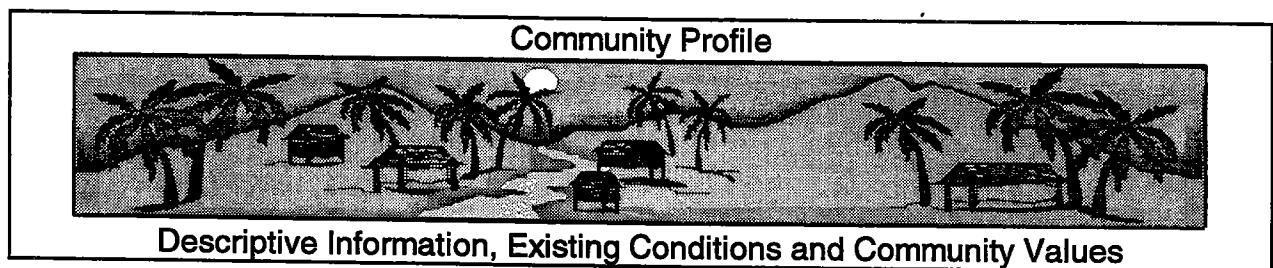


Figure 2. - Mapping changes over time.

These photos can be a powerful tool to portray historical information and help villagers' plan for the future. This step in the visioning process will help villagers understand how development occurred and inform them of the consequences if current developmental trends persist. Both the Timeline and the Maps are crucial to setting the stage for "Where are we now and *why*."

## B. WHERE ARE WE NOW?



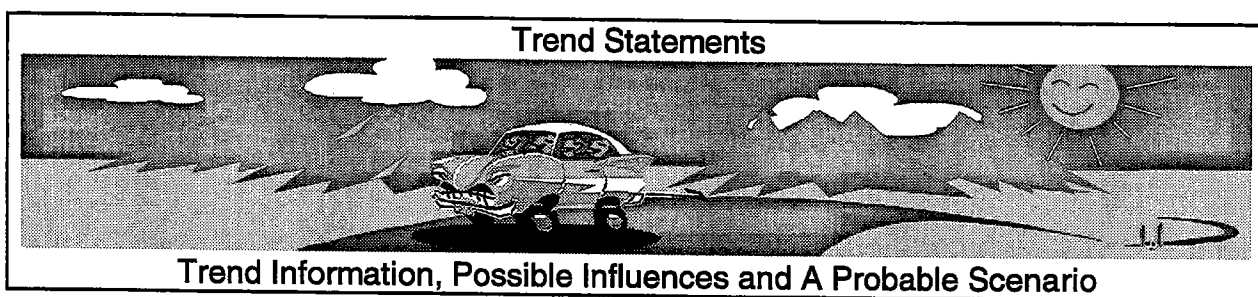
This step of the visioning process is to profile the existing conditions of the community. It entails identifying the characteristics of the local area, such as geography, natural resource base, population demographics, major employers, labor force, political and community institutions, housing, transportation, education and cultural resources. This step allows villagers to identify what kind of future development they desire. In order to accomplish this phase it is important to have descriptive information and a clear

knowledge of the village's values. This step will answer: *What are the existing values shared by villagers?*

### **Tools and Activities:**

The base information for this step of the visioning process will come from the data generated in other steps of the workbook. The existing conditions should have already been documented in the Village Assessment section and they will have been already been analyzed in the issues and concerns step of the workbook. What must be done is to translate these existing conditions into a community profile that pinpoints common values. This will latter be developed into a Vision Statement which is most important and explained later in the visioning process.

## **C. WHERE ARE WE GOING?**



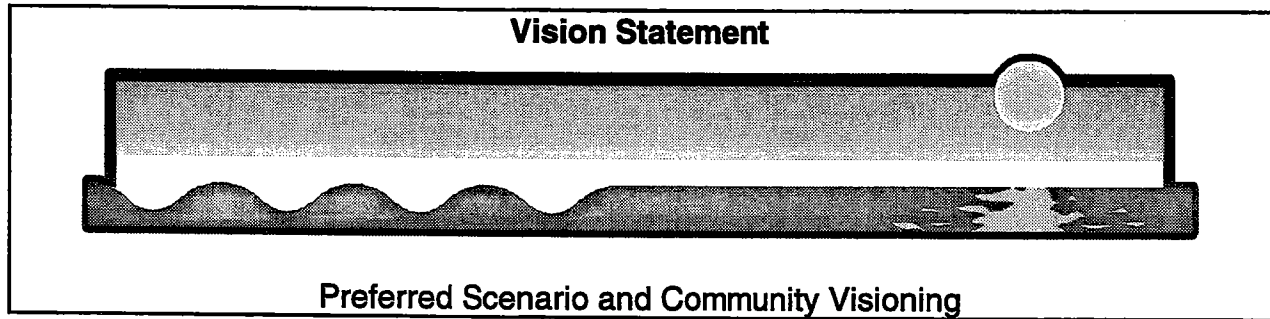
This step is to determine where the community is headed if current trends and activities continue. It involves researching current conditions and projected trends to determine their potential impact on the village. A most probable scenario should be hypothesized in the future if a current trend stays on the present course.

### **Tools and Activities:**

The village community should try to envision what would happen if nothing is done to address current development trends. This envisioned scenario should be displayed visually so the entire group can review.

Other visioning activities in this step should be focused around determining other possible scenarios created by current and projected trends to assess their future impact. This array of possible trends should be developed to address all possible problem areas in the village. The creation of these scenarios should allow villagers to focus on refining their village vision statement.

## D. WHERE DO WE WANT TO BE?



**The Vision Statement!** This step is the most important since it involves the development of a vision statement as the final product. The villagers must be asked a series of questions: What do they want their village to become in the future? What do they want out of it? What do the villagers want the village to look like? What idealistically and realistically do you see your village becoming? Based on the following questions and the historical analysis of the village, a preferred scenario should be developed to describe what the village should look like if new responses to identified trends are set into action. Ultimately, the village vision is consensus driven and based on a preferred idealistic, but attainable scenario that addresses the villages' history, current conditions and trends. While the village vision is based on imagination, the process is firmly grounded in reality. By basing the vision statement on facts and trends that address problems and issues affecting the village, a vision can be realistic and within reach.

### **Tools and Activities:**

In order to successfully develop a comprehensive village vision statement that addresses the wants and needs of the villagers, an in-depth analysis should be conducted by the village planning team to concentrate on past events, current conditions and probable disastrous scenarios if there are no solutions provided.

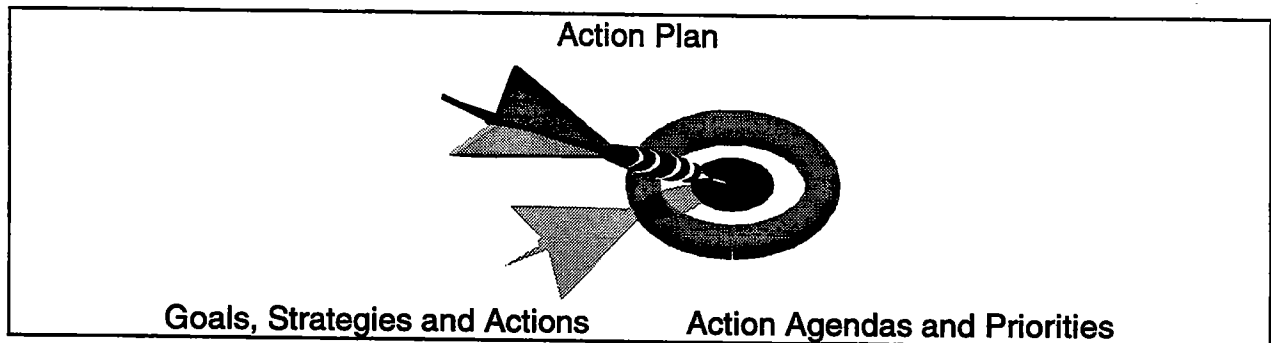
This step will begin by asking the groups in the village the above questions; from here a discussion among all villagers should begin and center on visioning the "Ideal Village" of the future. The villagers should be told to vision their village as the perfect place to live. Then all of the participant's views should be translated onto sheets of paper that can be viewed by the entire group. From this list, common themes should be identified and further refined into a vision statement. This process may become long and tiring so in order to reach quick results the planning team may need to refine and adjust the vision statement to meet the needs of the majority of the villagers. The main point to remember is that the village statement must be consensus driven among those who reside in the village. Several attempts at writing a statement should be made before rewording rewording of the statement will result. There can be more than one visioning statement generated, but too many vision statements will ultimately defeat the purpose since some of the intended goals within each statement may conflict with the other.

This step of the visioning planning process approaches the development of a vision statement in a manner that is participatory in nature. With the vision statement in place, alternative plans, goals and strategies can be devised which are within the framework of the planned vision.

### **Products:**

- The creation of a ***Vision Statement*** that presents a preferred future scenario should be developed by the village residents. This statement should reflect both the villages past and existing conditions if current trends persist.
- Once a vision statement is complete, a village will be able to develop a plan that is based on formulated goals and objectives.

## **E. HOW DO WE GET THERE?**



Once a vision has been developed, one that reflects community values, an action plan can be created to achieve it. The action plan should be as specific as possible, including steps to be taken, assignments of responsibility and time frames where objectives should be complete. If the villagers can see the vision and commit to it, the right actions will follow. The next step of the workbook presents strategies that can be incorporated into a plan. The development of an action plan will be completed in step six of the workbook.

A visioning process gives villages a unique opportunity to move toward plans that are more comprehensive and based on a detailed understanding of local needs, context and history. Through visions and planning process, new and better ideas will emerge from village members who actively participate. From this analysis, the village planning team should put together a list of goals and objectives that are based on the village's wishes for its future.

The following is a list of recommendations that should not be over looked when building a consensus village vision. These include:

- Building public awareness about the visioning process before it begins. Explain the visioning process before it begins, expended out-comes and the anticipated benefits to the community. Use people involvement that is consistent with the overall design

and scale of the visioning process. Schedule and publicize meeting and events early in advance. Make sure they are carefully planned and well facilitated.

- Promote village ownership in the process. Make sure all major interest groups are represented on any citizen task forces, steering committees or work groups.
- Don't tie the process or its outcomes to one particular elected official or village leader. If that person leaves the vision may lose support.
- Use village planning team members who understand and strongly support the visioning process. These team members should be able to do a good job of directing and facilitating meetings.
- Develop a name and logo for the visioning process that communicates an overall theme. Use it throughout the visioning process to reinforce image, identity and purpose.
- Don't take public awareness for granted. Use every available method to explain and promote the process, including free publicity. Use special events to promote the process, such as public forums, guest speakers, cultural arts and school activities.
- Celebrate the completion of the visioning process. Use it as an opportunity to promote the rest of the planning process and prime the community for the implementation.
- When visioning is complete, develop an implementation strategy that prioritizes key actions. Encourage political officials, councilors and staff to refer to the vision in their daily activities and use it as an overlay for their planning and budgeting
- Don't assume that just because the vision is finished, the process is complete. In some ways, the work has just begun.



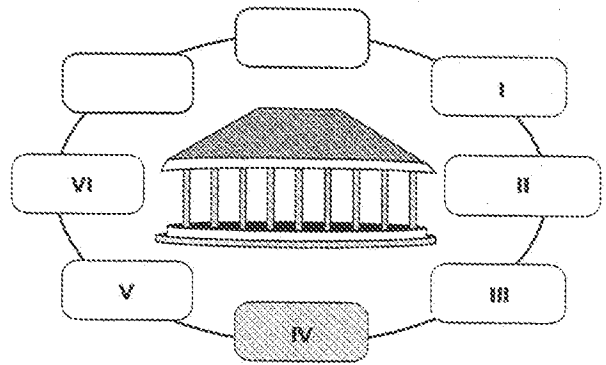


## **STEP IV STRATEGY SELECTION AND PLAN ANALYSIS**

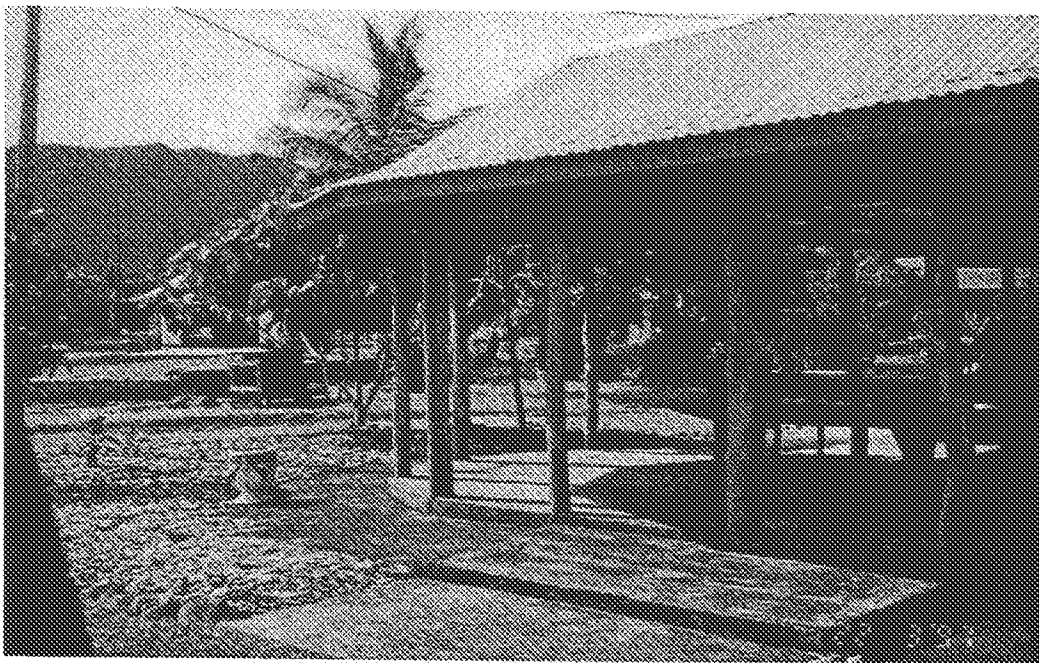
- A. Process**
- B. Strategy Selection Worksheets**
- C. Presentation of Strategies**
- D. Impact Assessment/Ecological Analysis of Strategies**

**UA LE SAU I LE AFU  
LE SAU I LE TATUPU,  
A UA SAU I LE LALAU.**

*Do not eat the yam  
when it has dried up,  
nor when it has sprouted,  
but when the leaves appear.*



It is important to act when the time is right.



## STEP IV

# STRATEGY SELECTION AND PLAN ANALYSIS

## A. PROCESS

In this section possible planning strategies are presented for the Planning team to work with. The list is by no means inclusive – villagers should feel free to add any they wish, and to modify any others as they see fit. There are three goals for this section:

- The first is to collect strategies to incorporate into a final plan.
- The second is to conduct an impact assessment of the chosen strategies and to modify them accordingly.
- The third is to prepare a map [or series of maps] showing how the village would develop under the plan.

**Section B** contains *worksheets* [pages IV-3 to IV-4] that can be used in documenting the chosen strategies, **Section C** presents *possible strategies* [pages IV-5 to IV-56; Master List on page IV-6], and **Section D** presents a format for *impact assessment* [pages IV-57 to IV-60].

## B. STRATEGY SELECTION WORKSHEETS

The worksheet on the following page is an aid for the selection and analysis of strategies. They will help the Planning Team clarify the purpose of their chosen strategies, and can be used later in **Step VI – Implementation**.

An example of the worksheet is provided below. It asks the Planning Team to define:

- **The Strategy:** State the strategy in simple terms for easy reference.
- **The Purpose:** A quick explanation of why the strategy was chosen.
- **The Area of Implementation:** Whether it is a specific place, a neighborhood, a village subsection, or the entire village. Be as specific as possible here.
- **The Level of Implementation:** State who is responsible for implementation.
- **Who Needs to be Involved:** State the participants the strategy will affect.

### EXAMPLE 1 – STRATEGY SELECTION WORKSHEET

<b>STRATEGY</b>	<i>Ban rock walls; Tear down existing rock walls</i>
<b>PURPOSE OF STRATEGY</b>	<i>To stop the road from acting like a riverbed channel; To reduce flooding</i>
<b>AREA OF IMPLEMENTATION</b>	<i>Neighborhood based; Along Palusami Road from the church to the airport turnoff</i>
<b>LEVEL OF IMPLEMENTATION</b>	<i>Families will be responsible for clearing the walls off their own land</i>
<b>WHO NEEDS TO BE INVOLVED?</b>	<i>Residents along road; matai</i>

# WORKSHEET 1 - STRATEGY SELECTION

<b>STRATEGY</b>
<b>PURPOSE OF STRATEGY</b>
<b>AREA OF IMPLEMENTATION</b>
<b>LEVEL OF IMPLEMENTATION</b>
<b>WHO NEEDS TO BE INVOLVED?</b>

<b>STRATEGY</b>
<b>PURPOSE OF STRATEGY</b>
<b>AREA OF IMPLEMENTATION</b>
<b>LEVEL OF IMPLEMENTATION</b>
<b>WHO NEEDS TO BE INVOLVED?</b>

<b>STRATEGY</b>
<b>PURPOSE OF STRATEGY</b>
<b>AREA OF IMPLEMENTATION</b>
<b>LEVEL OF IMPLEMENTATION</b>
<b>WHO NEEDS TO BE INVOLVED?</b>

## C. PRESENTATION OF STRATEGIES

The next fifty pages present an assortment of strategies that the Village Planning Team can sort through. It would be worthwhile for the Team to familiarize themselves with the options here before beginning to select from them.

There are possible ways that the strategies can be adapted. The Planning Team can:

- Select the strategy as is [for instance, they might take Strategy 3.1, *Malae Preservation*, and make it a village ordinance].
- Select part of a strategy [for instance, take *Ban Rock Walls in Floodways* from Flooding Management].
- Reject a strategy.
- Adapt a strategy to fit their needs [for instance, they might modify Strategy 5.1, *Commercial Hubs*, to make it fit their specific village].
- Insert their own strategies.

The worksheets on the previous pages will help the Team keep track of their chosen strategies. [Copies should be made of the worksheets].

The following page presents a master list of all the strategies included in this section. The sections are divided up by issue for ease of use. The team should keep in mind the material gathered in **Step II, Village Assessment** and **Step III, Identifying Village Visions and Values**, when they review this section to insure that the needs and desires of the villagers are being addressed.

## MASTER LIST OF POTENTIAL STRATEGIES

1. HOUSING	2. FLOOD MANAGEMENT	3. PRESERVING TRADITIONAL AREAS
<ol style="list-style-type: none"> <li>1. Land replotting</li> <li>2. 'Aiga compounds</li> <li>3. High density multi-family alternatives</li> <li>4. Self-Help Housing</li> </ol>	<ol style="list-style-type: none"> <li>1. Floodways</li> <li>2. Prevention and reforestation</li> <li>3. Culverts, swales, and raised buildings</li> <li>4. Dry vaults and retention basins</li> </ol>	<ol style="list-style-type: none"> <li>1. Historic village structure</li> <li>2. Agricultural lands</li> <li>3. Permissible land use</li> <li>4. The <i>malae</i></li> <li>5. Samoan theme design and materials</li> <li>6. Archaeological areas and structures</li> </ol>

4. PLANNING FOR NEW DEVELOPMENT	5. ECONOMIC PLANNING	6. ROADS AND CIRCULATION
<ol style="list-style-type: none"> <li>1. Conservation design</li> <li>2. Village impact assessment</li> <li>3. Establish carrying capacity of 'aiga and village lands</li> </ol>	<ol style="list-style-type: none"> <li>1. Commercial hubs</li> <li>2. Elements of a main street</li> <li>3. Commercial enterprises</li> <li>4. Village-scaled commercial hubs</li> </ol>	<ol style="list-style-type: none"> <li>1. Parking</li> <li>2. Roadways</li> <li>3. 'Aiga bus</li> <li>4. Pedestrian Systems</li> </ol>

7. VILLAGE AMENITIES	8. LAND RIGHTS	
<ol style="list-style-type: none"> <li>1. Village signage</li> <li>2. Septic systems</li> <li>3. Sewer connections</li> <li>4. Other infrastructure</li> <li>5. Utility easement</li> <li>6. Trash collection</li> <li>7. Recycling</li> <li>8. Alternative energy sources</li> <li>9. School and church layout</li> <li>10. Views and scenic areas</li> <li>11. Landscaping</li> <li>12. Fire preparedness</li> <li>13. Dog control</li> <li>14. Graves and burials</li> </ol>	<ol style="list-style-type: none"> <li>1. Land court</li> <li>2. Other options</li> </ol>	

## 1. LAND REPLOTTING

**Discussion**

**Land Replotting** [a.k.a. Land Readjustment] involves the pooling and redistribution of land in a given area. It is used in Asian and some European countries to provide better infrastructure and more public space in neighborhoods. Land owners are willing to participate in this as they receive the benefits of improved facilities, increased access to services, and higher land values.

The *relative* sizes and percentage values of lots remain the same, and lots remain close to their original location after reconfiguration. In most countries each lot owner will contribute a certain percentage of land to be used to create public space, municipal buildings, or more infrastructure [such as roads and schools]. Some can also be sold to pay for the redevelopment [this land is known as **cost-equivalent land**].

Figure 1 - Existing Conditions

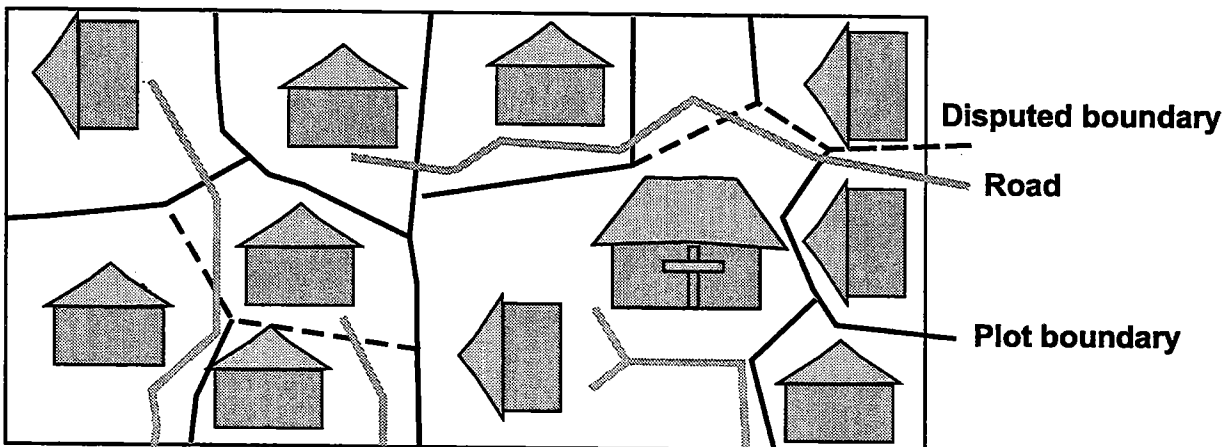
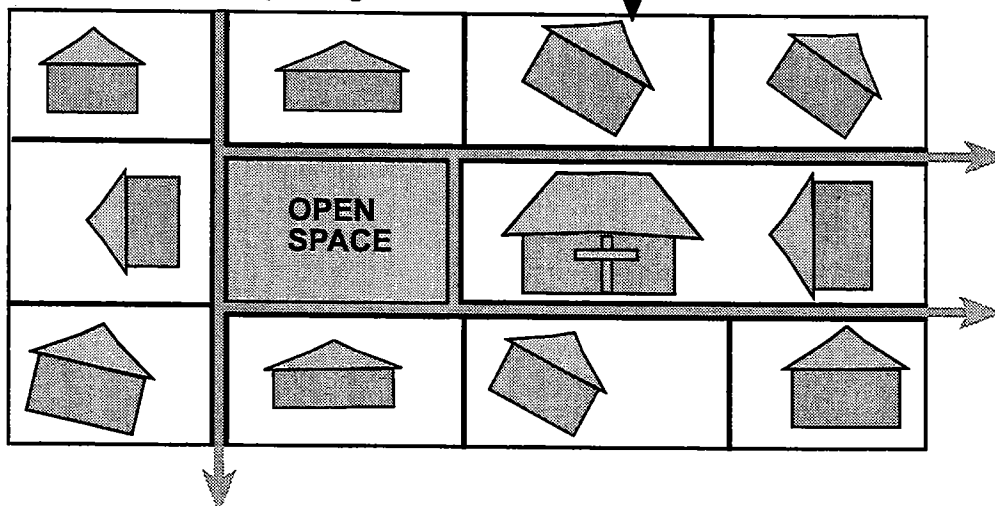


Figure 2 - Post Replotting Conditions

**PRE-REPLOTTING**

- Properties are scattered and boundaries are unclear.
- Infrastructure is inadequate, inefficient, and poorly maintained.
- There is little common space.
- Property values are low.

**POST-REPLOTTING**

- Public space is created [this can be for *malae, fale, falesa*, schools, natural areas, municipal buildings, et al.].
- Infrastructure is efficient and accessible.
- Property boundaries are clear.
- Property values increase.

## Replotting Process

### 1. FORMATION OF A LAND-OWNER ASSOCIATION

Replotting will be most appropriate in areas where the majority of residents own or lease the land. Unlike *`aiga* lands, which are managed by matai, private and leased lands are often unmanaged. The first step is to have owners and renters in an area come together in one body. This association can give residents a more effective voice when dealing with government agencies. It will make it easier to secure loans from the banks, government, and NGO's. Finally, the association can be the driving force behind the planning process and future development.

### 2. OBTAIN AGREEMENT FROM PROJECT AREA RESIDENTS

*Soa lau pule* and *fesoasoani* should be the driving forces behind any project.

### 3. IDENTIFY AND APPRAISE CURRENT LAND HOLDINGS

The association needs to know what percentage of the land each participant owns or leases. Minor boundary disputes need to be mediated; major disputed areas should be excluded.

### 4. IDENTIFY INFRASTRUCTURAL, CULTURAL, AND ENVIRONMENTAL NEEDS

Determine how much acreage is needed for public improvements.

### 5. DETERMINE AMOUNT OF COST-EQUIVALENT LAND

Decide how much of the land to sell to recoup costs of the development. Residents must balance the desire to keep as much land as possible with the need for cash.

### 6. DEVELOP A PLAN AND REPLOT

The planning process detailed earlier will help the community develop an appropriate plan. Technical support might come from EDPO, ASPA, CZM, and NGO's. A time frame should be set [Asian projects usually take five to ten years from start to finish]. The association will need to get a commitment from the government to provide infrastructure to the new development.

### 7. SECURE FUNDING

Loans (for either the association or for home owners) can come from private banks or NGO's. Belonging to a land-owner association should make it easier for people to get housing loans. The ASG should encourage banks to give priority to people engaged in replotting. Additional subsidies for the project might be available from the territorial and federal government.

### 8. CONSTRUCTION

Temporary housing might need to be found for some during the construction period.

### 9. SELL COST-EQUIVALENT LAND

Land can be sold to people already living in the project area or to the government to build schools, clinics, or municipal buildings. Excess funds should be redistributed among land owners.



### Replotting Details

The details of replotting vary from country to country, and will need to be modified to be effective in American Samoa. Common to all is the redistribution of land in three ways:

1. The largest part of the land is redistributed among the original owners .
2. Roughly 20% of the land is set aside for public improvements [infrastructure, public space, and culturally and environmentally important areas].
3. Roughly 10% of the land is reserved as cost-equivalent land and sold to help fund the project. The land can be sold to individuals or the government.

Each land owner contributes to cost-equivalent and new public lands. This process, known as **land reduction**, is diagrammed below:

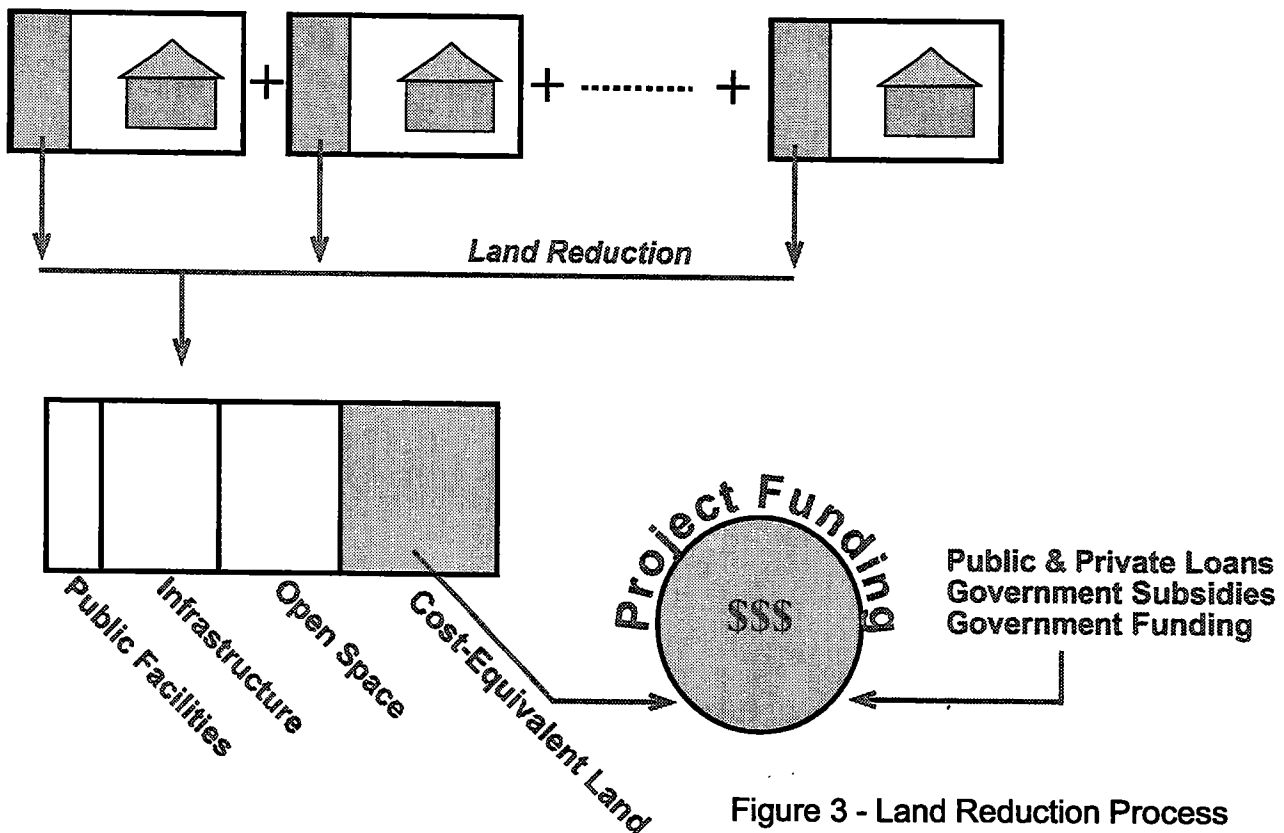


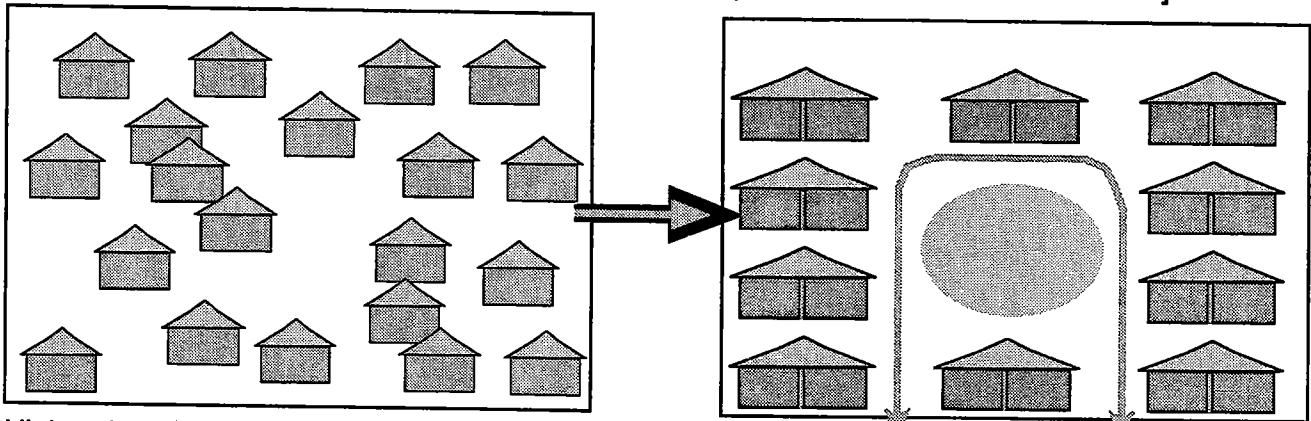
Figure 3 - Land Reduction Process

Replotting can be initiated and managed by private land-owner associations, local municipalities, or territorial and federal governments. Surplus funds from the sale of land are distributed among the original owners in some projects, and given to the land-owner association in others.

Japan uses replotting for large development projects involving suburban and inner-city areas. South Korea uses it for public projects and to fund roads, sewers, farmers' markets, fire and police stations, and low-income housing. Taiwan used it to rapidly modernize Kaohsiung, its second largest city. In Germany it is used to develop peripheral areas and for urban renewal. In Australia it is used to subdivide private and marginal lands into new neighborhoods. It is not yet legal in the United States.

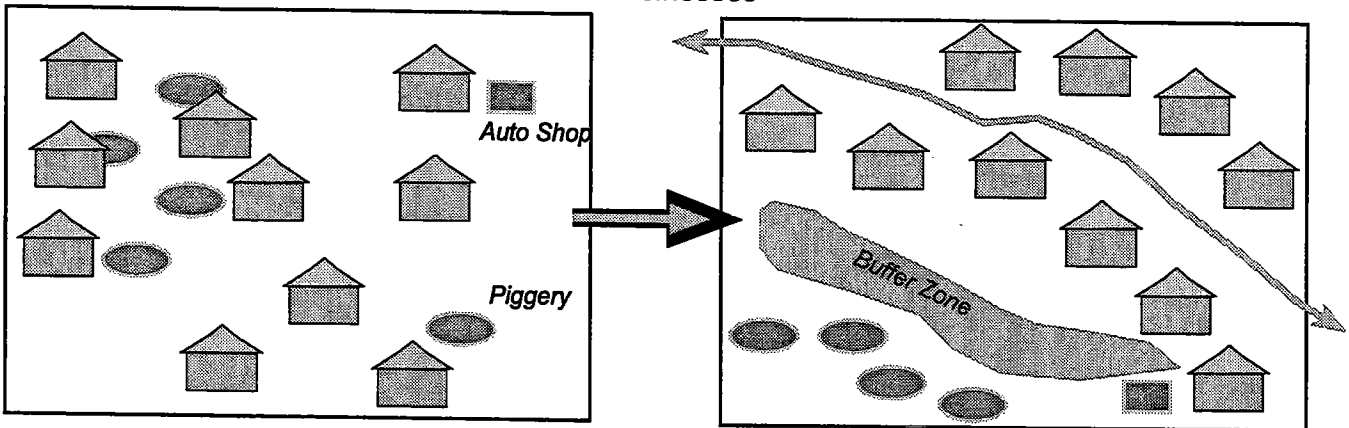
Replotting Scenarios

Figure 4 - Carrying Capacity Exceeded [too many people & houses for the land to hold]



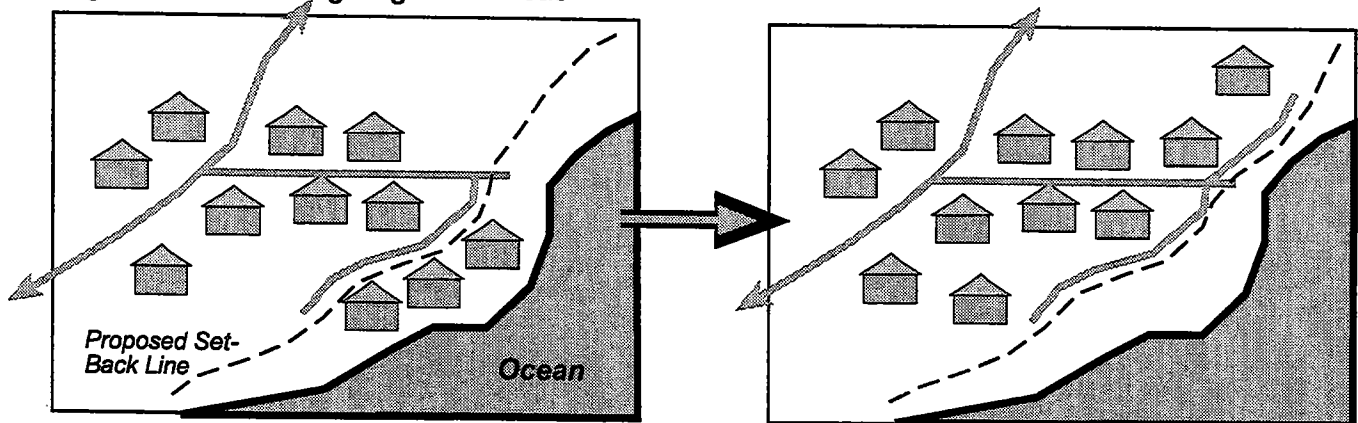
Higher density units can be built [apartments, duplexes] that allow the same number of people to live in an area with less infrastructure. This frees up land for agriculture, *malae*, cost-equity land, etc.

Figure 5 - Conflict Between Residences and Businesses



In this case a community might use replotting to set aside an area *downwind* and *downstream* for piggeries and certain small industries such as auto shops and gas stations. A **buffer zone** [ideally forest or thick scrub] could also be established to separate residences from the area.

Figure 6 - Reclaiming Degraded Areas



A community can use replotting to reclaim culturally or environmentally important areas that have already been developed on. In this case, a village wishes to establish a setback from the coast. The houses that are in the sensitive area will be removed, and relocated to a more acceptable area.

## 2. 'AIGA COMPOUNDS

### Discussion

The 'aiga compound for the extended family supported not only the social interaction of the family, but was also an efficient production unit. Chores and responsibilities were shared between family members and the 'aiga compound was organized to support the communal lifestyle with large, often outdoors, grouped food preparation spaces (*umu*, kitchen *fale*, and clean-up area) and dining space, namely the large, open air guest *fale*. In back of the buildings were plantation lands for the family's cultivation of crops. Although there were individual sleeping quarters, the entire 'aiga had use of the guest *fale* for visitors. The family graves were often on-site.

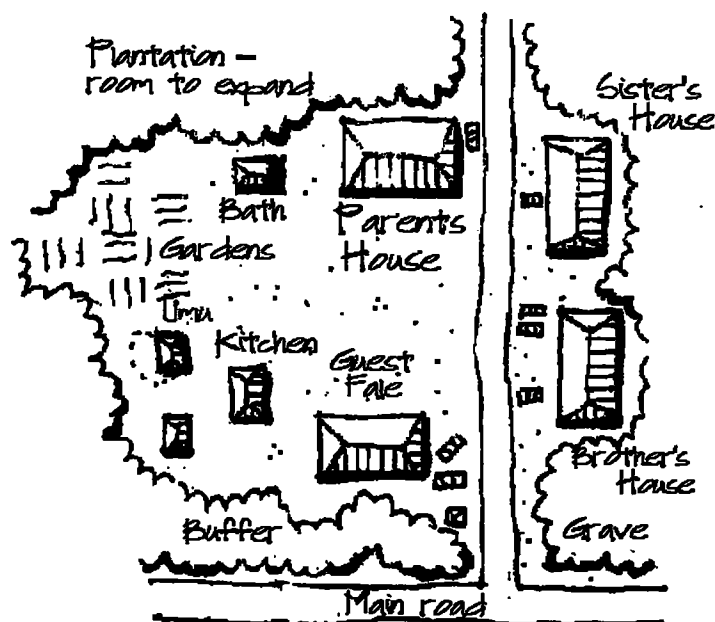


Figure 7. – Example 'Aiga compound

The extended family is still a vital part of Samoan culture. Although the entire extended family does not still live together, they still gather for Sunday lunches and parties at a centralized home.

### Alternatives Examples

To support the extended family, 'aiga landholdings need to be big enough to accommodate a guest *fale*, *umu* cooking pit, kitchen *fale*, clean-up area, plantation land for cultivation, and at least one house with room for children who wish to move home. A minimum of an acre is desirable to accommodate the family.

A more modern interpretation of the extended family home is a western-style home that has large outdoor entertainment areas, comparable to a typical guest *fale*, would be a

## HOUSING

covered patio of at least 1000-square feet. Comparable to the *umu* pit, kitchen *fale* and clean-up area would be a large western kitchen with multiple ovens, and refrigerators and extensive counter space

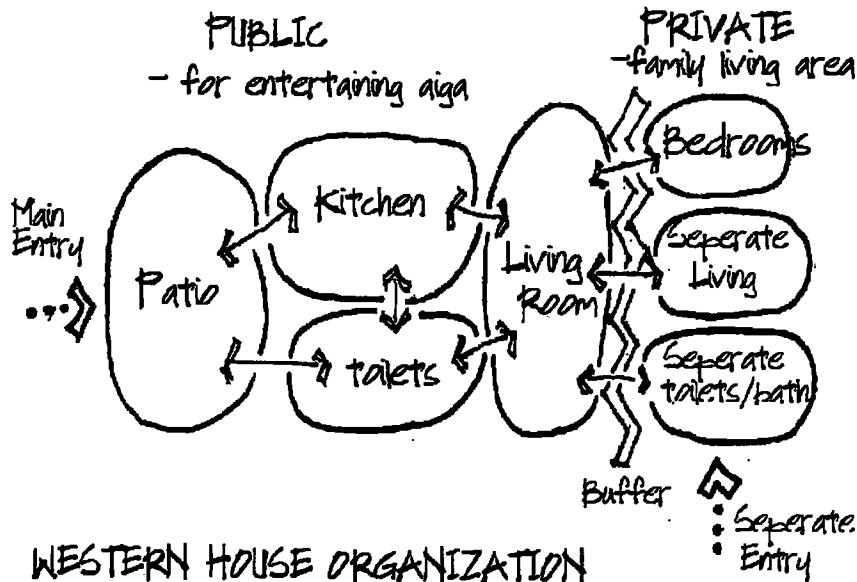


Figure 8. – Diagram of typical western house.

### 3. HIGHER DENSITY MULTI-FAMILY ALTERNATIVES

#### Discussion

Within the village, the chief designated what lands each *`aiga* would be responsible for. The *`aiga matai* would then decide what crops would be planted, where homes would be built, and who would be responsible for stewardship of the parcels. When the population was smaller, planning for the *`aiga*'s lands was less complex. The individual homes guest *fales* were arranged loosely on the land creating an attractive rural character. Good quality agricultural land was readily available and open space preservation and strategic crop management was less critical.

With modernization, the single-family homes replaced the more efficient and compact *`aiga* compounds creating crowded, unsafe neighborhoods. As the population increases, alternatives to the single-family western style house are needed to accommodate more people on less land in a comfortable, efficient and appropriate manner.

**Alternative Examples**

Clustering is the arranging of homes or buildings so they can benefit from the activity of the others. The entrances and outdoor spaces are oriented so they face each other. There is also the benefit of more efficient infrastructure.

The historic Samoan *'aiga* compound was an efficient model, because it allowed for sharing of facilities and use of the outdoor space. The extended family shared cooking, dining and sanitary facilities, and the individual nuclear family had only separate sleeping quarters. This arrangement strengthened the extended family as household chores were shared and there was much interaction between generations.

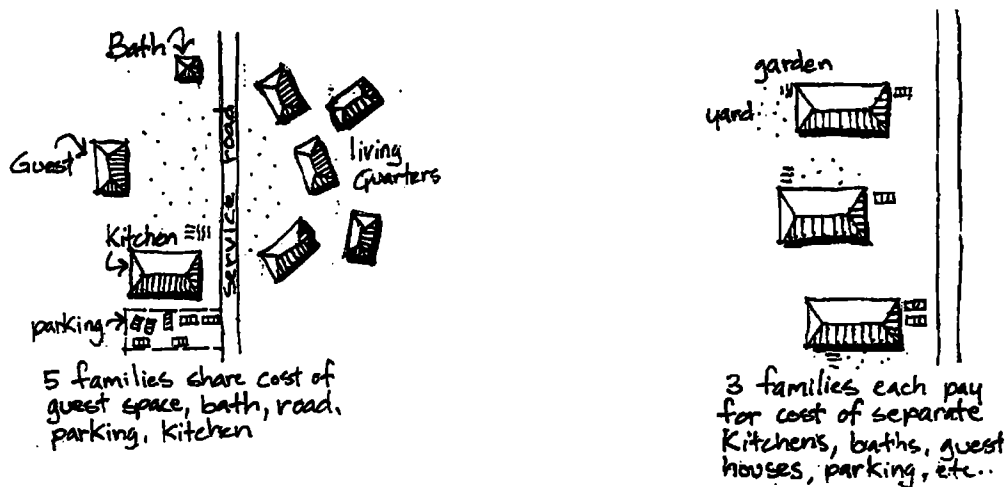


Figure 9. Shared housing arrangements versus separate.

Higher density is defined as siting a greater number of homes within the same area. When homes are carefully positioned, each home has enough privacy and are as pleasant to live in as lower density ones. Like clustering, higher density homes are less expensive to service with utilities.

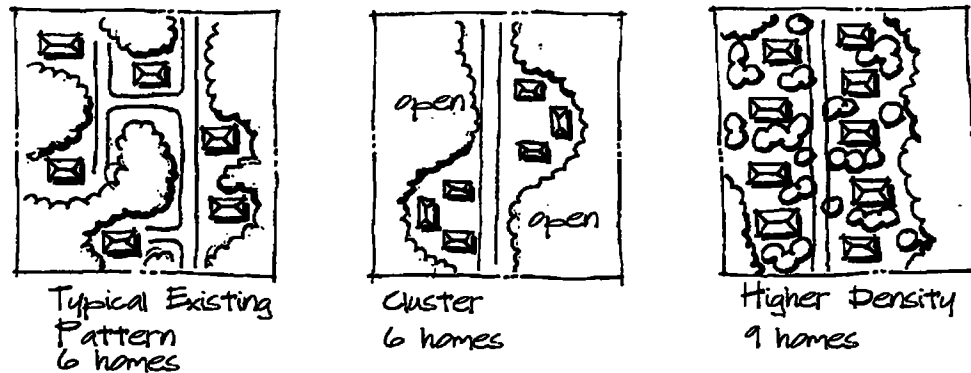


Figure 10. – Clustering for higher density.

When the entire parcel is planned early, sensitive areas can be set aside for preservation and locations for open space in the form of gardens or 'aiga malae.

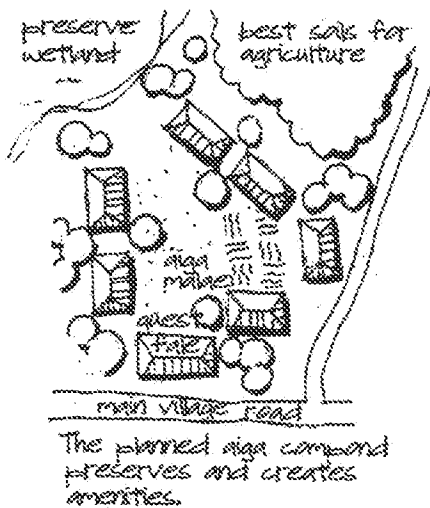


Figure 11. – A planned 'aiga compound

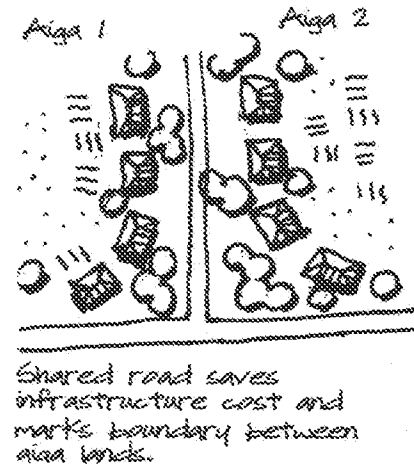


Figure 12. – Shared infrastructure.

When the entire parcel is planned early, arrangements can be made so that roads and utility easements can be used to separate two 'aiga lands. In this way, utilities and infrastructure is most efficient.

### Building Types

**The garden apartment-** The garden apartment building incorporates some of the savings of the 'aiga compound with some of the privacy of single family units. This building type houses several units in one building. The main benefit would be that more people could be housed in a smaller amount of land. Amenities of open space and parking are shared. The Samoan prototype may be like individual apartments with each unit having kitchen and bathroom facilities, or more communal and dormitory like, with shared facilities elsewhere. There are variations of building layout. When there are several structures, the buildings can be clustered to preserve open space and encourage social contact. Single structures can be designed to form courtyards, which serve a similar purpose.

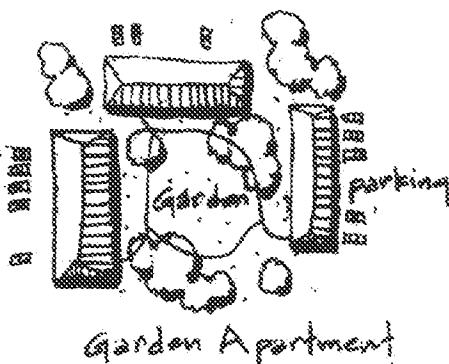


Figure 13. – Garden Apartments



Figure 14. – Example Garden Apartment

**Duplexes, multi-plex and townhouse structures-** This housing pattern is similar to western-style self-contained housing, but has shared open space. Infrastructure, and parking is independent, but more economical because it is concentrated.



Figure 15. - Multiplex development.

Figure 16. – Two story apartment

## 4. SELF HELP HOUSING

### Discussion

Because of the dramatic population increase, the housing situation in Samoa, especially for lower-income residents, is critical. More people could be housed quicker if families were allowed to build their own homes by their own means. If minimum health and safety standards can be met, it may be appropriate to allow residents more flexibility in building standards. These recommendations apply for small, single-story residences. The Project Notification System is a valuable tool in overseeing building codes, but could be more flexible.

### Recommendations

- Inexpensive, readily available building materials should be allowed for single-story residential buildings. For example, untreated lumber, corrugated iron and palm products if used correctly can be structurally sound.
- Minimum room and structure sizes and restrictions on number of occupants per building should be left to the individual's discretion.
- Stormwater catchments and appropriate wells can be an approved water source if standard water lines are not available.
- The local village council and *matai* should be allowed to veto development granted by the central government if the village feels the development is inappropriate.

## HOUSING

- For simple, single story structures, competent draftsman instead of professionals could provide documentation.
- Freestanding toilet and kitchen structures should be allowed.

### *Minimum Standards*

Hurricane straps should connect the roof and the foundation to the structure. Cross bracing should be provided. This would provide protection during a storm and protect neighboring structures.

In aquifer recharge areas, cesspools and septic tanks should be avoided. In non-aquifer recharged areas, sufficient area, suitable terrain and soil types standards need to be met if cesspools and septic tanks are to be allowed. Standard sewer specifications should be met in these areas and connections should be approved by the utility company to assure that there is adequate backflow and leakage protection.

In flood prone areas, the structure should be on stilts and the floor above the flood level.

To reduce fire risk and to allow vehicular access, there should be a clearance of 20-feet between structures.

As developing countries often use outdoor space for socialization, cooking, and eating, it is recommended that approximately sixty percent of the site should be left unbuilt.

Standard storm drainage systems are not needed, but surface water should be drained away from structures, following the natural drainage pattern.

Every room in the building should have external openings for ventilation of at least one twentieth of the total floor area. For example a room ten feet square should have a window of at least one foot by two feet.



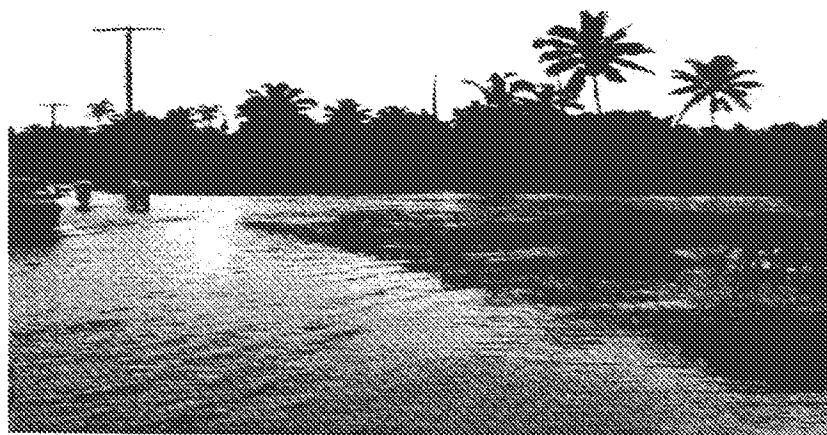


Figure 1. - Typical flooding problem.

## Discussion

Flooding is a natural phenomenon that has aided in the creation of the Tafuna Plain. Sheet flooding helps to distribute sediment across the plain (enriching the soil) and helps with the percolation of water into the underground aquifer. Unfortunately however, flooding is incompatible with modern human activities and can represent a threat to public health and safety.

Flooding on the Tafuna Plain tends to be nuisance type sheet flooding (as apposed to deep flooding, or flash flooding), caused by the relatively flat terrain, poorly defined stream channels, and thick vegetation. Contributing to the flooding of roadways and developed areas are the presence of undersized bridges and culverts, and encroachments of residential dwellings into the flood plain and stream channels.

Encroachment onto the flood plain by thick ground vegetation, or by placement of structures and fill, reduces flood-carrying capacity, increases flood heights and increases flood hazards in areas above and below the actual encroachment site.

Appropriate management of flooding in villages is essential to the health and comfort of village life. Besides being a nuisance, uncontrolled flooding can cause the spread of disease through the contamination of food crops and water supplies (particularly with the proximity of pig styes). Flooding also hinders the access of emergency vehicles. The appropriate management of flooding is important in helping to preserve the health of the Island's reefs and bays by reducing excessive soil erosion and sedimentation.

Much can be done by the village to mitigate the negative impacts of flooding. The following flood management tools are not exclusive and can be used in combination, as different approaches may be suitable for different parts of the village.

## 1. FLOODWAYS

In 1994, the Army Corps of Engineers conducted a drainage study of the Tafuna Plain. This important document identifies the major drainageways and flood zones of the Tafuna area. One of the primary recommendations of the study was to incorporate floodways within the 100-year flood plain. Floodways are areas protected from development within the center of critical flood drainageways.

The study recommendations recognized the importance of involving the villages in the decision making process for the successful implementation of flood management by the government.

### *Advantages:*

- It takes positive and direct management action to control flooding by establishing floodway zones.
- Creates clear guidelines and limits on development within the 100-year flood plain.
- It is compatible with federal insurance programs and federal funding.

### *Disadvantages:*

- Does not address the problem of excessive vegetation growth.
- Does not allow for changes in drainage and stream course configurations that naturally would occur over time that would have acted as an automatic mechanism to reduce channeling and water velocity.
- By controlling and directing the flow of water to specific drainageways, and indirectly channeling the drainageway by allowing development adjacent and within the flood plain, the potential for dangerous flooding within the floodway can increase. This could also lead to an increase in sedimentation of coastal waterways and reefs.
- Does not take into account the effects of population increase, development increase, and land use changes.
- To be fully effective, this tool needs the approval and implementation of all villages in the watershed area.

## 2. PRESERVATION AND REFORESTATION

The 1994 Army Corps of Engineers drainage study of the Tafuna Plain identified heavy ground vegetation as one of the primary contributors to flooding problems. The shade of forest trees reduces the growth of grass and other ground level vegetation, while still slowing the rate of water accumulation in a drainage channel during a storm event. This allows for a less impeded flow of water to stream channels and drainage ways during large storms, while still maintaining enough vegetation and soil stabilization to control erosion and excessive water velocity. The extensive clearing of the native forest has increased nuisance flooding by greatly increasing the ground vegetation in the natural drainage ways. This thick ground vegetation slows the water down, helping with recharge into the soil, but at the same time it also blocks the natural flow of water and relocates the flow to cleared areas, such as roads and open lawn areas. In addition, the clearing of forested areas in flood zones allows development to occur that can negatively redirect drainage

patterns, and increases the proximity of people to floods. Areas cleared of forest and maintained as mowed grass are more subject to soil compaction, which can increase water runoff and reduces water recharge.

### *Advantages:*

- By preserving the existing native forests, a village can allow natural flooding to safely occur and reduce the likelihood of flooding in already inhabited areas.
- Besides flood control, this option also helps to preserve native forest plants and animals for current and future generations. Clearing native forests allows aggressive non-native plants to dominate.
- Helps to reduce flooding by reducing thick ground vegetation.
- Enhances the natural beauty and setting of the village, and has positive microclimate effects (air-cooling).
- Provides harvestable lumber for crafts.
- Provides a positive village activity that can include children.

### *Disadvantages:*

- Not allowing development in existing forests could reduce the availability of land for needed housing and desired commercial development.
- By not directly utilizing village land, a village could increase the likelihood of the contestment of land boundaries.
- May be already too late to save native forests in most villages.
- Reforestation requires careful management in early phases to reach a stable forest condition.
- Is not compatible with the need for open areas, such as the malae or cricket fields.
- May not be compatible for use in a designated "Floodway" within the 100 year flood plain.

### **3. CULVERTS, SWALES, RAISED BUILDINGS**

Conventional measures to physically manage flooding, such as the use of ditches and culverts, can be indispensable flood control tools. Roadways to villages must be kept clear of flooding to allow for the access of emergency vehicles; such as fire trucks and ambulances. Bridges should be constructed to allow for ample flood water flow. Buildings can be raised on posts to allow for flood water passage.

### *Advantages:*

- Can reduce or eliminate site specific or small scale problems.
- Can restore drainage flows to original paths while accommodating development.
- Grass swales allow for infiltration of water into the soil, filter sediment, and reduce water velocity.

### *Disadvantages:*

- Can require special equipment and materials that may be unpractical at the village level.
- Aggressive flood control measures in one area can sometimes increase water velocity and peak flows in down stream channels.

## FLOOD MANAGEMENT

- Paved, concreted, piped, or other impervious methods of water management can reduce water percolation into the aquifer, and can increase the transportation of sediment down stream.

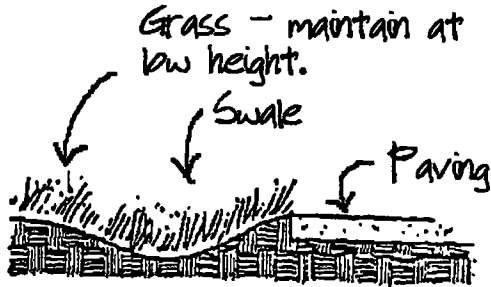


Figure 2. - Grass Swale

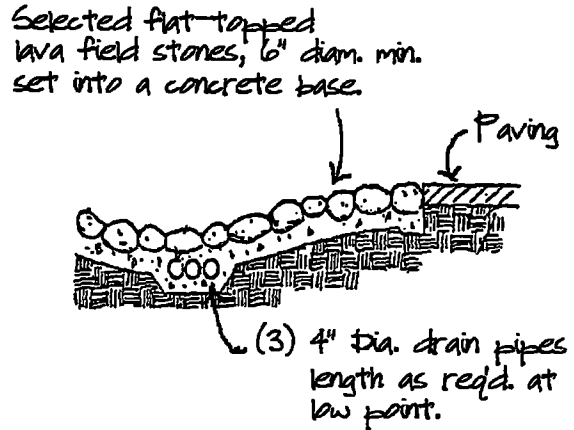


Figure 3. -Rock Swale

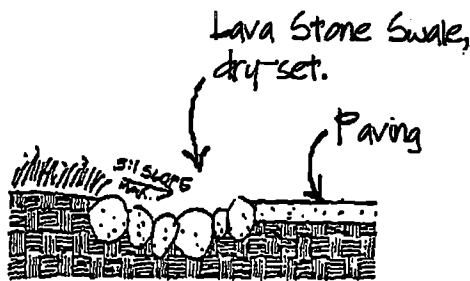


Figure 4. -Drainageway w/ Pipes

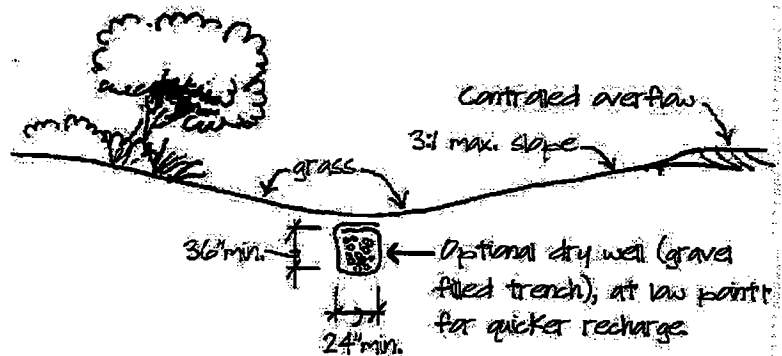


Figure 5. – Retention Basins

## 4. DRY VAULTS AND RETENTION BASINS

The use of retention basins is highly recommended. A retention basin is a wide depression in the ground created to capture water during storms. The creation of a retention basin can be a useful flood management tool that reduces the problems of flooding, while increasing the benefits of water percolation into the ground water aquifer. Where possible, retention basins should be established in areas with the best soil percolation rates.

### Advantages:

- Settles out sediment that might otherwise create problems downstream.
- Helps to replenish the aquifer.
- Allows some flooding to occur safely, reducing water volume in existing drainage systems.

### Disadvantages:

- Can make land unavailable for other uses, such as parking, play fields, farming, etc.

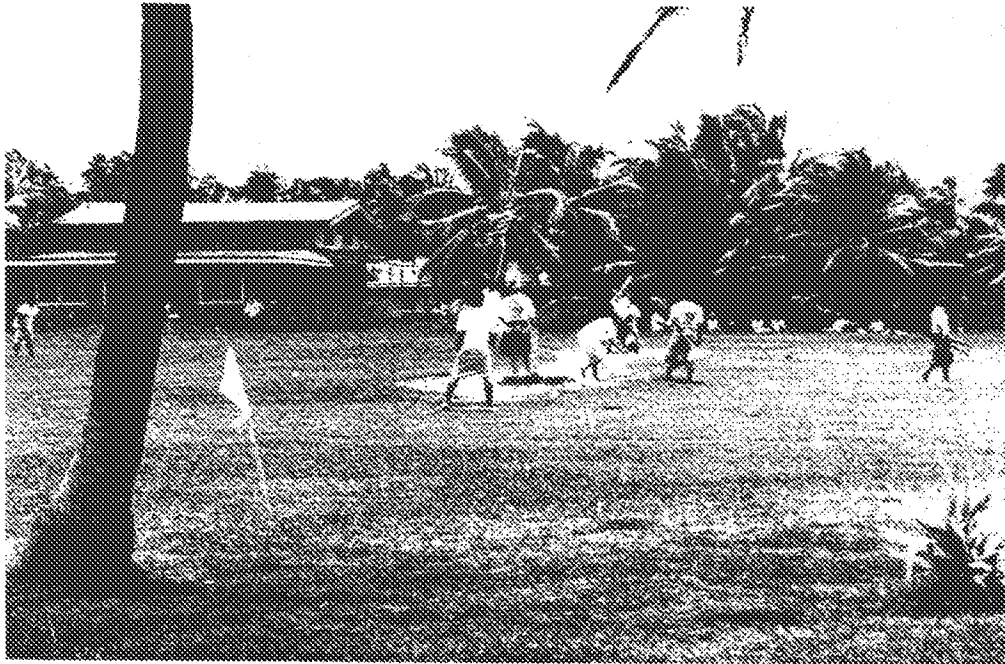


Figure 1. – Village *malae*.

## 1. HISTORIC VILLAGE STRUCTURE

The lifestyle known as *Fa'a Samoa* is centered around family and village.

One major method of maintaining cultural continuity is to preserve the unique sense of place represented by the village *malae*. The traditional village *malae* is designed to make an individual feel that he or she is in the community's space and thus must behave accordingly. The *malae* acts as the focus of village life, providing space for marriages, funerals, sports events and other social occasions. The *malae* often protects the village children and others by providing a pedestrian environment safe from moving vehicles. As the populations of the villages continues to grow, new development should continue the historical pattern of clustering around newly created smaller open spaces modeled after the traditional central *malae*.

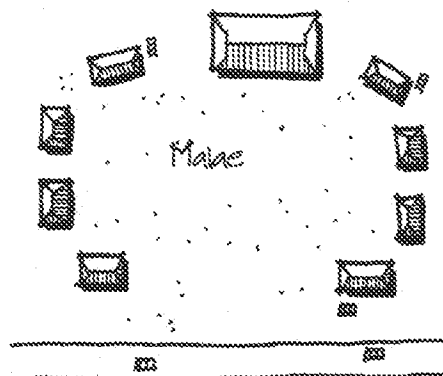


Figure 2. – Traditional central *malae*.

## 2. AGRICULTURAL LANDS

The many small volcanic islands of the Pacific are known for rich soils and year round growing conditions. Unfortunately the amount of land suitable for agriculture is very limited, and must be protected in order to provide for the resident population and to limit dependency on oversea sources. Classification and identification of different grades of soils would be an important step in determining what lands could be available for new development and which lands should be left undisturbed. The ASG could do several things to promote the preservation of prime agricultural lands, including providing infrastructure only on marginal agricultural areas in the path of development and developing a loan program and technical help for areas deemed as prime agriculture.

## 3. PERMISSABLE LAND USES

Villages could encourage small-scale retail and manufacturing that could provide employment for their populations. The villages could decide if such activities should occur within or just outside the village, in any *fale* or in some designated area.

Toxic activities (medium or heavy industry) should occur on government land rather than inside the villages.

## 4. THE MALAE

### Discussion

The *malae* is the traditional social center and a key component in the rural tropical beauty of the village. In this large centralized grass field, the villagers gathered for formal ceremonies as well as informal sporting events. The *malae* surrounded with guest *fales* signified hospitality and that visiting *'aiga* were always welcomed home. The village council house on the *malae* represented order and village authority.

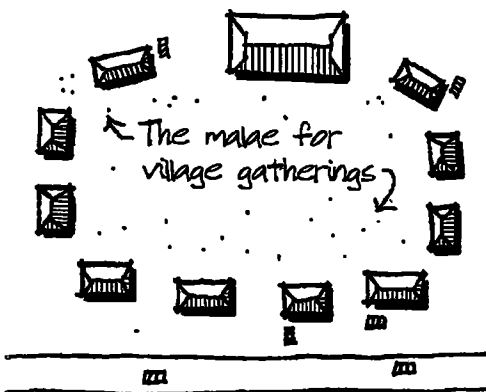


Figure 3. – *Malae* preserved

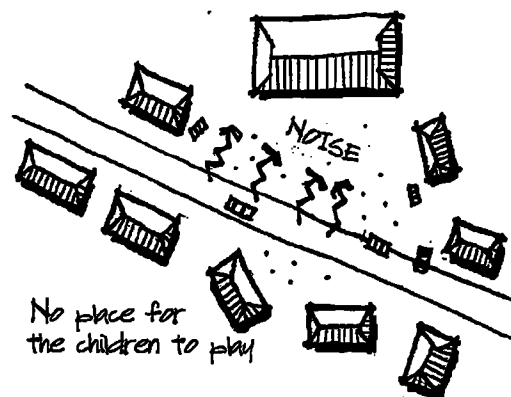


Figure 4. – *Malae* encroached by road

Recently, due to development pressures, road, and homes have encroached into the

## PRESERVING TRADITIONAL AREAS

*malae*, lessening the usefulness of the *malae* and the attractiveness of the village. If this pattern continues, villages that were once communities of friends and families will become like western suburbs, a collection of houses with residents who don't know or care about each other.

### Alternative Examples:

No more houses should be sited within the *malae*. If alternative housing can be found, existing houses within the *malae* should be removed.

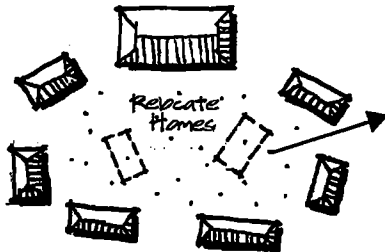


Figure 5. – Restore *malae*

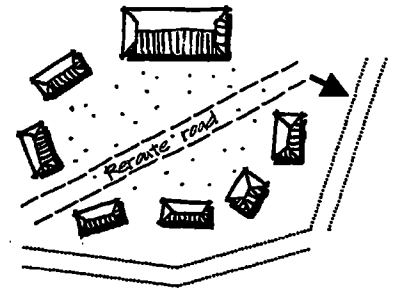


Figure 6. – Relocate road

No more roads should be allowed to bisect the *malae*. If alternative routing can be found, the road should be rerouted.

No more roads should be allowed adjacent to the *malae*. Existing roads adjacent to *malae*s should be buffered with a hedged landscaped area. Dependent on the level of traffic and the amount of space, between five and thirty feet is appropriate.



Figure 7. – Section through *malae*

Traditional buildings, such as the village council house or guest *fales*, are preferred land uses adjacent to the *malae*. Community buildings, such as churches or schools, are also appropriate. The design character of the building should be traditional, and the scales should be low, under two stories.

Buildings adjacent to the *malae* should "face" onto the *malae* by orienting main entrances, porches, patios, and windows toward the open space.

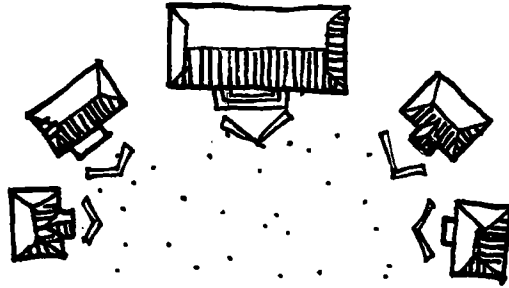


Figure 8. – *Malae* orientation.

The *malae* is an appropriate land use within a 100-year flood zone as it will not be damaged by occasional flooding. It is not advisable to site the *malae* in an area that is consistently wet or to fill in a wetland or stream to build the *malae*.

If there is sufficient space, landscape improvements on the edges of the *malae*, such as shade trees, palms, colorful plantings, rock edging, and benches, could add to the beauty and enjoyment of the *malae*, and help to enhance a sense of identity to the village.

An appropriate size for the *malae* is approximately one acre, large enough for a cricket game or a gathering of the entire village. The *malae* needs to be relatively flat to accommodate field sports, but should be well-drained.

## 5. SAMOAN THEME DESIGN AND MATERIALS

### Discussion

Engineering and design skills developed over thousands of years enabled Samoans to create housing stock that withstood a demanding environment of heavy rains, heat and proximity to salt water. The traditional structure family house, or *fale* was open on all sides. Functions such as cooking were done outdoors.

Recently introduced design and construction methods have become increasingly popular. The effects of this include a need for increased government inspection of building methods (i.e. two story masonry structures), the use of enclosed structures with all functions inside, and a change in the visible landscape as urbanizing areas look more like subdivisions elsewhere.

The concern is to find those features of the new design and construction methods that deal best with the climate and culture of Samoa. Introduced methods, for example, might provide for more protection from frequent hurricanes than that provided before. Structures can be built of lumber that remain open much like traditional *fales*. A sense of architectural consensus needs to be maintained.

### Historic Example

The traditional Samoan *fale* is well suited to the islands' hot and humid climate. The structure is often raised several steps off the ground to capture cooling breezes and the



roof is steeply peaked. Instead of walls, closely spaced (typically from two to four feet on center) posts define the interior. The *fale* is circular or ellipse shaped in plan and was made of readily available thatch and wood. Skilled craftsmen, the Samoans built the *fales* in a wide range of sizes, from large village council houses and guest houses able to accommodate four to five dozen people, to small rest pavilions for four to five individuals.

While modern construction techniques have made building less labor intensive, there are many aspects of Samoan architecture that can and have been retained.

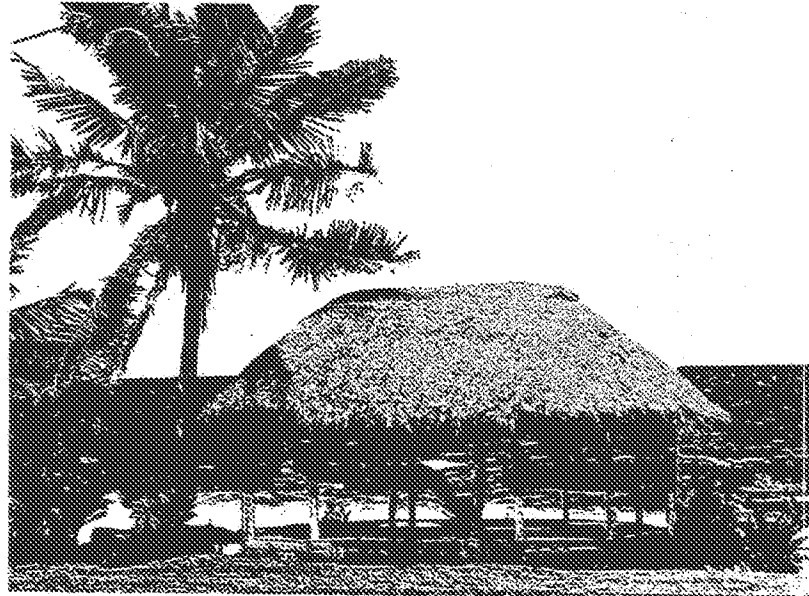


Figure 9. - *Fale*

### Design Features

The circular or ellipse plan has been retained in many buildings in Samoa, most notably the school buildings. This supports an interior arrangement of the group of structures in a circle or semi-circle, instead of the more western rows and columns. This arrangement is more egalitarian and familiar as the village council and other traditional groups meet in this fashion. As a purely aesthetic feature, the curved walls appear more organic, and appropriate in an island context. Several well pump stations have been skillfully camouflaged within curved walls.

The high peaked roofs are another distinctive architectural feature which had been retained in many new structures, notable the guest *fales*. When thatched, the hot air was able to dissipate through the roof. A modern adaptation has been the use of cupolas to vent the air and keep the interior cool.

The raised, open air, multi-post *fale* design topology is also still popular, though often built of concrete or timber for hurricane resistance. Though most are now rectangular in plan the *fale* still provides a comfortable outdoor gathering place for the village and individual families.

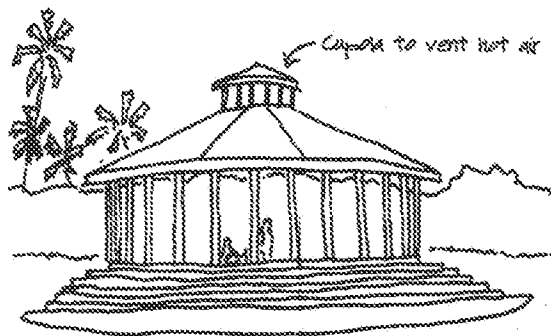


Figure 10. –Fale with cupola.



Figure 11. – Samoan theme design.

Modifications that are reminiscent of the traditional *fale* include Western-style homes that incorporate floor to ceiling windows, either jalousies or screens. This allows cooling breezes and views into the home. Examples of this include the government housing area near Pala Lagoon.

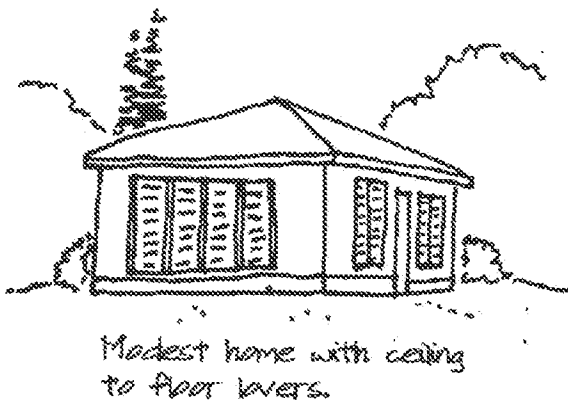


Figure 12. – Western style "tropical" home.

### Historic Example

American and Western Samoa had a shared history for centuries. Even after western contact, the imported architecture was very similar. While Apia in Western Samoa is a more intact example of turn-of-the-century architecture, Pago Pago also has several buildings and areas of merit.

### Design Features

Many of the commercial buildings fronting the street have wide arcades running the length of the street. These provide a shaded, protected area for pedestrians and allows merchants to have additional area for outdoor displays. Often there is a railing, especially when the building is above street grade. The second and third floors often mirror this feature with widow walks along the length of the buildings street face.

Historically, buildings tended to be closer together and closer to the street for the

convenience of pedestrians. Parking was later accommodated in the rear of buildings and in grouped parking lots.

Residential buildings often incorporated large verandahs and patios. Verandahs are rooms with ceiling to waist high windows on two to three sides of the room. Patios are even more open with windows from floor to ceiling windows or are even entirely open air. Both spaces are used as weather protected areas for entertaining and relaxing.

### Historic Example

The traditional village and *'aiga* compound was clustered informally around open spaces, and oriented toward views. Because of the tropical climate, vegetation was lush, visually breaking up the mass of large structures.

### Design Features

Even large buildings can blend into the landscape when the profile is handled with sensitivity. The Rainmaker Hotel uses a series of roofs in the lobby area, and wide windows face on to the view of Pago Pago Harbor. The large wings of hotel rooms are broken into smaller buildings and camouflaged with large trees and palms.

## 6. ARCHAEOLOGICAL AREA AND STRUCTURES

### Discussion

Samoa has a long, proud history. For over 2000 years the Samoan people have practiced a sophisticated subsistence lifestyle, living off the land, in harmony with the natural environment. They built unique star mounds for bird trapping and building foundations for their *fales* and immense walls for defense. The land was cultivated with *'aiga* plantations and the ocean's bounty harvested. Even after Western contact, many of the fishing and farming practices have been maintained in some form.

Sadly, the archaeological remnants of the Ancient Samoan lifestyle are deteriorating or being destroyed. Lost will be not only the opportunity to study and document the priceless works of the Ancient Samoans, but more tragically, any physical connection between Modern Samoans and their noble birthright and history.

### Recommendations and Alternatives

Open space is critical in a village and the region because it can provide flooding basins for aquifer recharge and areas for play and relaxation. In environmentally or culturally sensitive areas, an archaeological feature could provide a unique focus for a park.

Special sacred archaeological sites may need protection from use. In these case it may be appropriate for buffer zones to be established with planting or fencing.

Archaeological sites can also provide the village with a valuable educational and economic resource if "Heritage Tours" for school groups and tourist can be developed. Care would need to be taken to assure that these tours do not disrupt village life.

## PRESERVING TRADITIONAL AREAS

Ideally, there would be a database of surveyed archaeological sites and unsurveyed

areas of probable sites, so infrastructure planners could design systems to avoid sensitive areas. This database, however, does not exist and instead sites are discovered only after the design development and construction had begun. This leads to expensive changes or loss of artifacts. Whenever possible, infrastructure planners should give archaeologist advance notice of capital improvements plans allowing them to identify sensitive areas and to plan mitigation measures. Villagers should share the responsibility for preserving artifacts by keeping in touch with Historic Preservation Officers.

When villagers uncover an archeological resource such as a building foundation of burial or habitation site, they should contact the American Samoa Historic Preservation Office (HPO). HPO does not intend to halt or delay construction. They will only come out to the construction site and carefully document the site. They may also suggest ways to minimize the disruption of the archaeological site, allowing the homeowner to preserve a unique cultural feature on the property.

American Samoa Historic Preservation Office  
Department of Parks and Recreation  
American Samoa Government  
Phone (684) 833-2384  
Fax (684) 633-2367  
State Historic Preservation Officer  
Senior Archaeologist

# 1. CONSERVATION DESIGN

[aka: Planned Unit Development; Cluster Development]

This is an example of land that is to be developed. It abuts a paved road, has a small, intermittent stream, two groves of mixed hardwoods [including cacao, coconut, and breadfruit], and views of the surrounding mountains.

The owner would like to build 30 houses on the land.

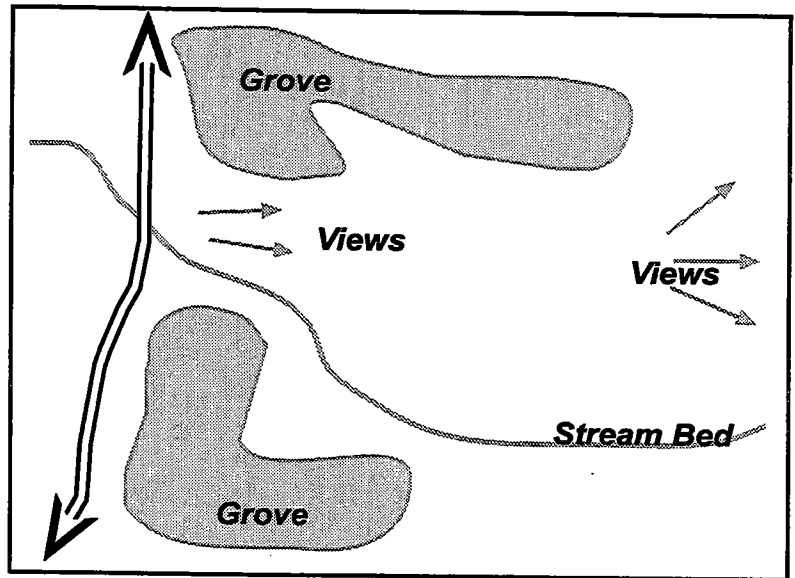


Figure 1 - Parcel to be developed

American-style **grid development** is very efficient, but ignores the physical beauty of the land and destroys its resources.

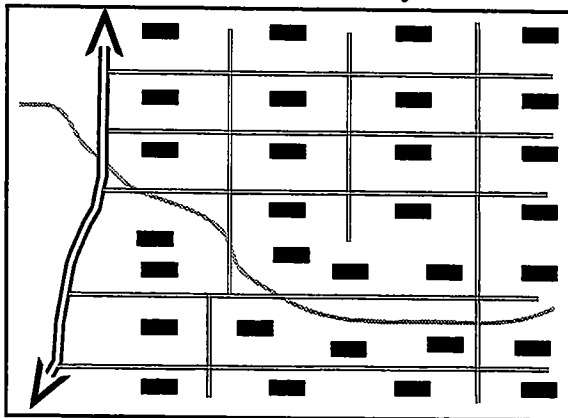


Figure 2 - American grid development

The current Samoan style of **laissez-faire development** preserves some aspects of the land, overruns others, and is inefficient.

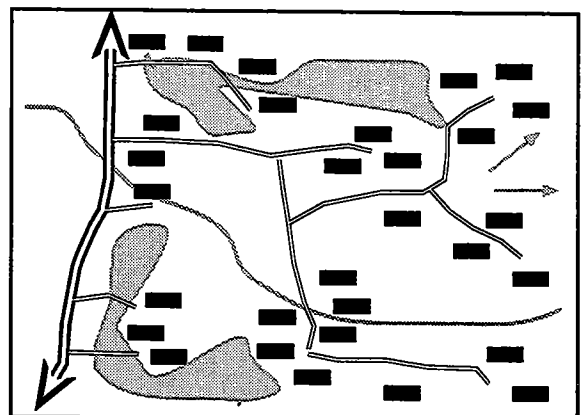


Figure 3 - Laissez-faire development

**Conservation Design** is a method of placing development in a culturally and ecologically sound manner.

Lot sizes are smaller than average, and houses are clustered closer together. This is done to preserve the resources of an area.

Much of the land remains communal, and public space is created.

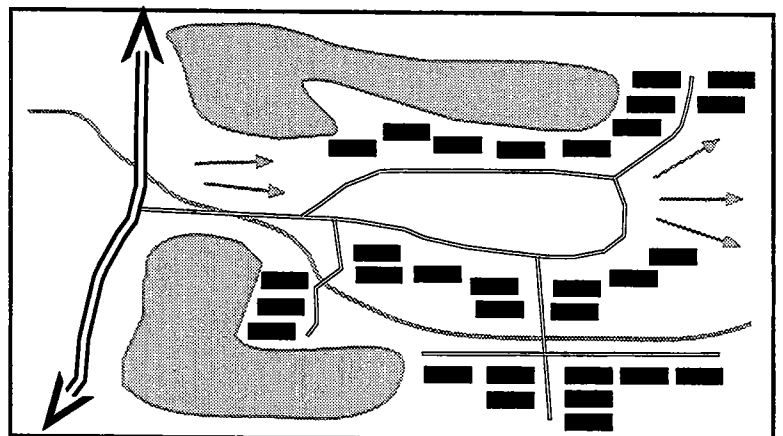


Figure 4 - Conservation Design

### Four Steps for Conservation Design

**STEP 1:** Identify potential conservation areas. In this example they are the stream bed, the views of the mountain, and the groves. Other potential areas include:

**CULTURAL:** *malae*, *fale*, *falesa*, historic buildings, archaeological sites, agricultural lands, et al.

**ENVIRONMENTAL:** wetlands, coasts, native forests and meadows, mountain slopes, watersheds, depressions, et al.

**AESTHETIC:** open spaces, scenic views.

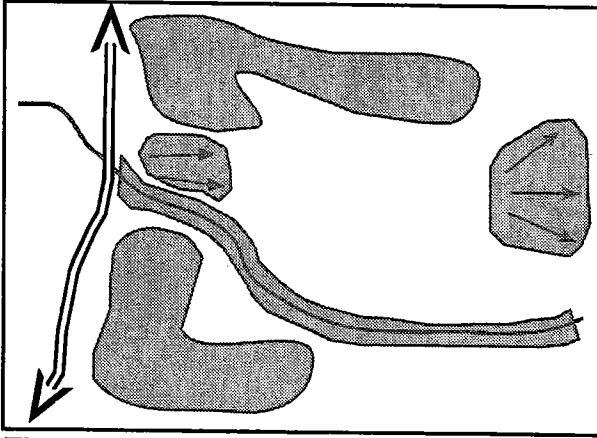


Figure 5 - Identify amenities

**STEP 2:** Identify the areas of potential development.

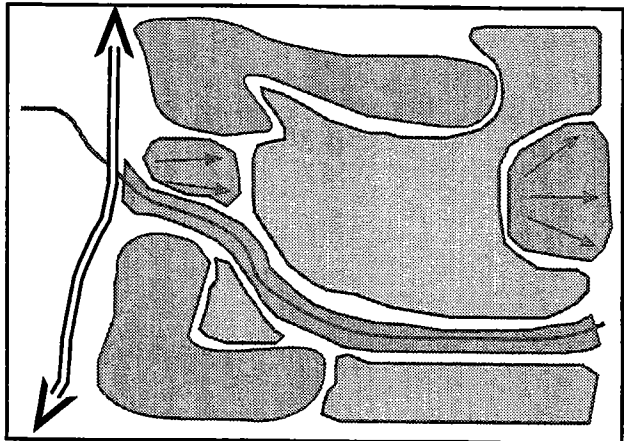


Figure 6 - Identify developable areas

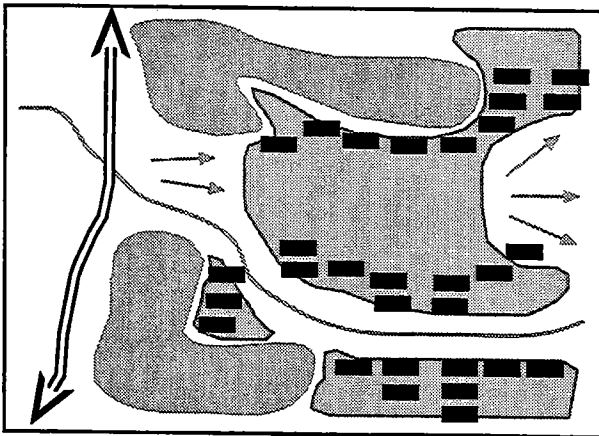


Figure 7 - Site houses

**STEP 3:** Place the houses and lots in the designated areas. With **Cluster Development** the same number of units as originally planned are placed, but they are clustered closer together. **Planned Unit Development** allows for an increased overall density in the area as well.

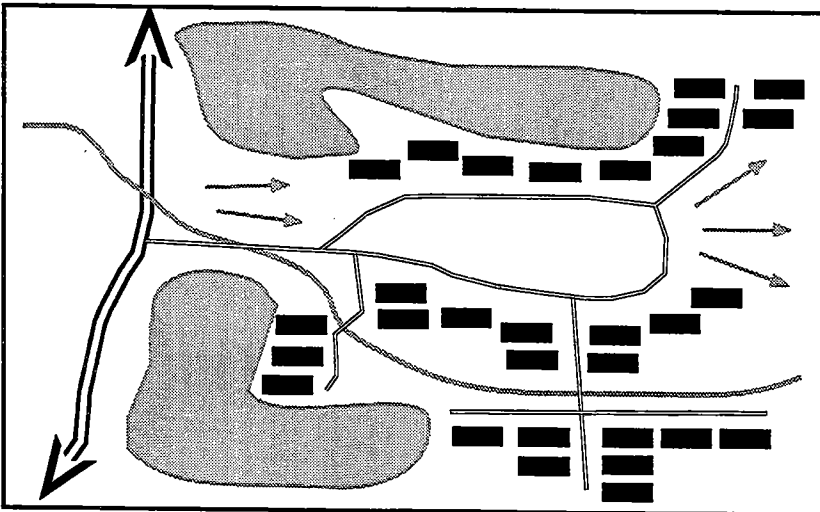


Figure 8 - Create circulation routes

**STEP 4:** The final step is the placing of roads. This should result in a neighborhood that is suited to the cultural and environmental character of the area.

## 2. VILLAGE IMPACT ASSESSMENTS

Any new development will have both beneficial and negative impacts on the surrounding area. A new shopping center will offer convenient shopping to area residents, but will also increase traffic in its neighborhood. A resort will create jobs, but it might block access to public areas. High rises increase land values, but they also block scenic views and interfere with the cohesiveness of a community.

Such impacts are known as *externalities*. They can be both positive and negative. Unfortunately, many developers do not take negative externalities into consideration when building their projects. One way around this is to require any new development to conduct an impact statement that quantifies the effect that a development will have on its surroundings.

The federal government already requires certain projects to conduct Environmental Impact Statements [EIS]. These are rather complex and elaborate documents that usually require the services of outside consultants. Less widely used, and not required by federal law, are Social Impact Statements and Cultural Impact Statements. These detail the effect that a development will have on the surrounding community.

Villages in American Samoa can require that new developments in their area conduct an assessment similar to these. For example, **Step IV – D, Impact Assessment**, shows a simplified version of an analysis that integrates this plan's effect on a village's cultural, economic, and environmental landscape. Village councils can use this as a basis for developing their own criteria for a village impact assessment.

## 3. ESTABLISH CARRYING CAPACITY OF 'AIGA AND VILLAGE LANDS

Carrying capacity refers to the number of people that an area can support. There is no set number for this that can be used worldwide, as each type of microclimate can support different amounts of people. The carrying capacity is based on soil type, soil fertility, rainfall, seasonal temperatures, availability of game and fish, the cultural practices of the people, and the available technology of an area.

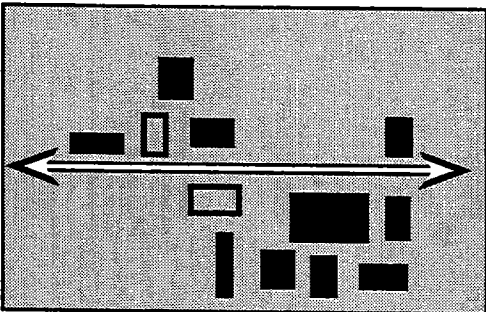
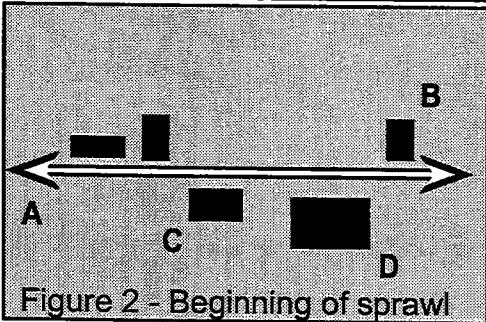
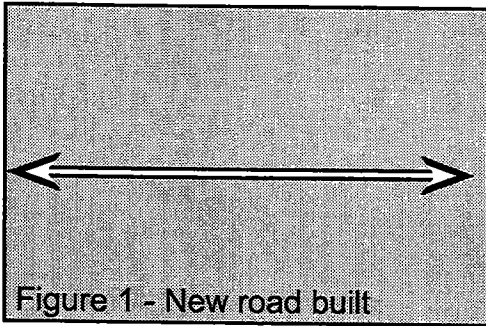
Preliminary work has been done by the United Nations in establishing the carrying capacity of Pacific atolls. They began their work by asking how many coconut palms, banana plants, breadfruit trees, and taro patches were needed to support one family. From this they determined both how much land was needed to support one family, and how many family members could exist on one plot. Village members could begin now to develop a similar set of criteria based on the Samoan diet.

By establishing the carrying capacity of 'aiga and village lands planners will be able to determine ideal maximum population levels and plan from that. If 'aiga lands are overcrowded, they can encourage the building of new neighborhoods. If villages are approaching their carrying capacity, they can take the opposite approach and discourage new developments.



## 1. COMMERCIAL HUBS

### The Causes of Sprawl



**Urban sprawl** presents a serious threat to a region's environment and a community's well-being. It leads to an inefficient use of scarce resources, creates traffic congestion, isolates community members who are forced to commute needless distances for services, and does nothing to contribute to a town's cohesion.

It begins innocently enough when a road is built through an undeveloped area.

Businesses move in, building randomly along the new road. A person attempting to shop might start at **A**, have to head to **B** to get gas, then to **C** for some shopping, then to **D** to grab lunch before heading back home to **A**.

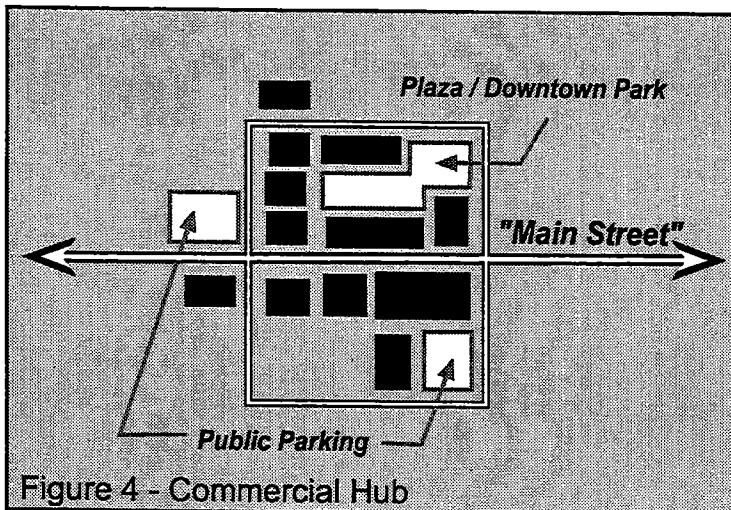
This is a waste of time and of gas. The person's car is on the road more than necessary, contributing to congestion. The roads degrade faster due to increased traffic.

Additionally, it is expensive to provide utilities to places that are spread far apart.

Businesses that fail are often abandoned rather than rebuilt, as there is always more empty space to build. Development creeps outward from the main road, using side roads not meant for heavy traffic. In the end, a sprawling mess engulfs the countryside.

Figure 3 - Auto dependent sprawl

### Planned Commercial Areas



An alternative to strip development is to plan for **commercial hubs**. Concentrating activity in one area allows outlying areas to remain rural, provides a focal point for a community, lessens congestion by offering 'one-stop shopping,' and is less expensive to maintain.

Business are helped by their closeness to others [thus sharing customers] and by their accessibility.

It also gives a community more control over development in its area.

Elements of a planned commercial area include sufficient parking, a recognizable focus [here, "Main Street"], and public space.



## 2. ELEMENTS OF A MAIN STREET

Main Streets and central commercial areas provide a focal point for a community, create a place for people to gather, allow an arena for public events, facilitate commercial activities by concentrating them in one area, and can bring in business and visitors from outside the community.

While traditional development focuses on the placement of buildings, the key to creating a viable main street involves the organization of public space. Buildings are used to define the space rather than allowing public space to be defined as 'where the buildings aren't.'

Elements of a successful Main Street include:

- Establishing a **Build-To Line**. This is a line that buildings must front, the goal being to create a *solid and continuous line of shops and offices* that define the street. Successful retailing requires this continuity - otherwise stores would exist in scattered isolation.
- Establishing a **Setback Line**. This is a line that separates the building from the street. It provides enough room for pedestrians to gather without being pushed out onto the street.
- **Parking** is communal, easily available and close to shops. Parking lots in front of stores breaks the continuity of the main street and creates an unfriendly pedestrian atmosphere. Rather, there should be either on-street parking or lots located *behind* the stores.
- There is a **pedestrian-friendly environment**. This is accomplished through setbacks and build-to lines, putting in shade trees or canopies to protect walkers from the sun and rain, and putting in places where people can sit and rest. [See page IV-43 for details on sidewalk design].
- The community can also include **design guidelines** if they wish, establishing standards for the color, material, facades, and design of the main street buildings.
- The community can also provide certain **amenities** such as an outdoor plaza, attractive lighting, and encouraging sidewalk cafés.

### 3. COMMERCIAL ENTERPRISES

#### Commercial enterprises guidelines

Within a "light" industry category, the villages should be free to determine what activities should be allowed. These could include traditional manufacturing activities such as the making of mats and bowls, "mom and pop" style stores, and bakeries.

#### Craftsmen's House

The "Craftsmen's House" is a designated area where local experts produce the prized manufactured items that are recognized as symbols of that culture. Such facilities help maintain cultural identity, preserve skills and provide financial support to the area. A well-known example is located at Jamestown, Virginia, where such a site produces pewterware and other household items used in the 1600-century tidewater. In a Samoan village today such items could include mats, bowls, and other artist's wares.

#### Tourist *fales*

A system of small-scale tourist *fales* is a way for individual villages to earn income without interfering with *Fa'a Samoa*. Such facilities would ideally be located away from the village, but close enough that villagers could produce traditional crafts of interest to the tourists.

#### Rental Housing

Changing lifestyles and increasing numbers of outsiders are creating a demand for rental housing. Most renters either cannot afford fee simple purchase or do not have connections to traditional communal housing patterns. Such individuals might rent *fales* within or near the village complex, thus providing both needed housing and rental income for the village.

#### Peoples banks and microenterprises

Peoples banks or other forms of financial cooperatives could be a vehicle for raising needed capital to develop small-scale industry. Informal financial associations, for example, formed the basis of economic success for Japanese in Hawaii. Perhaps families within the villages could pool resources to provide necessary financial backing.

The success of microbanking on the Indian subcontinent has provided important seed money for microenterprises within the poorest populations there. This system requires a local bank to provide small loans to individual entrepreneurs (often women). The recipients use the funds to start small-scale economic activities, which the recipients themselves already know how to do -- activities such as laundries, etc. Such small-scale investment could be utilized to invest in activities such as chicken farms that have proved successful in Western Samoa.

**Community Based Economic Development Cooperatives**

Community Based Economic Development is a method of organizing local populations to finance and develop culturally sensitive economic activities that create jobs and improve self-reliance.

One such project is the Hydro-Farms Network, Inc., organized by Mr. Ava Hunkin, a chief of Nu'uuli Village, in cooperation with *matai* of other villages. The Network provides new hydroponics technology in the form of equipment, supplies, training and other assistance to help farmer/members erect greenhouses and produce tomatoes and cucumbers for sale to local restaurants and grocery stores. The Network hopes to produce 100,000 pounds of vegetables per year, and has plans for expanding to lettuce and cabbage production. The Hydro-Farms Network is also looking into exporting exotic flowers overseas.

**Satellite City Hall (bringing government services to the countryside)**

As the population of the Tafuna Plains continues to grow, it will be necessary to bring additional government services closer to the bulk of the population. Additional government services could, depending upon the size of such services, be delivered through a central Tafuna Plain location, through locations in each of the villages, or perhaps as a mobile service as is done in Hawaii.

The villages should be involved in the selection of these services and should work with the ASG to have the services located within their region.

Government services that could be offered might include building permit issuance, public health activities, public education, etc.

**4. VILLAGE SCALED COMMERCIAL HUBS**

**Discussion**

While there grouping is beneficial for commercial enterprises because businesses can share the cost of services and infrastructure and gain a greater customer base than they could individually, in a traditional setting it may not be appropriate because only the *aiga*

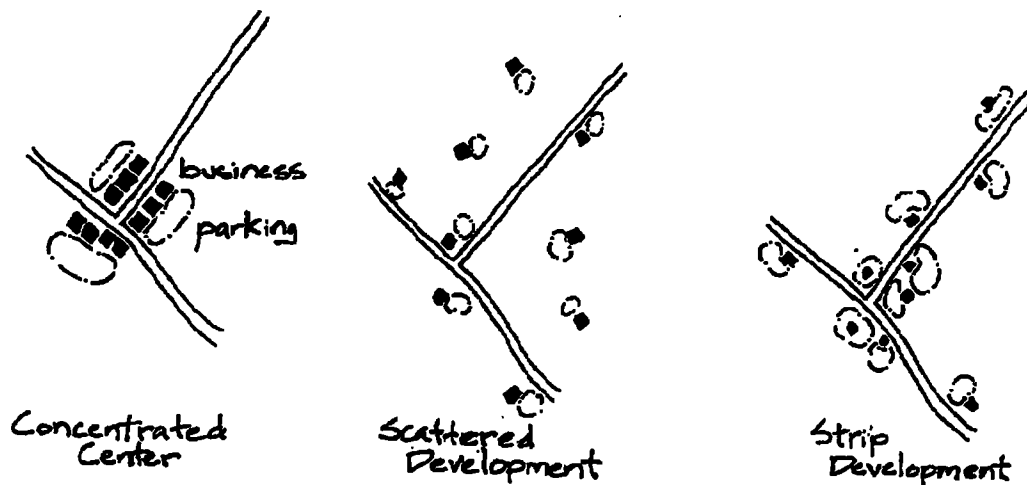


Figure 5 – Patterns of commercial development.

with the commercial land will benefit. Other *aiga* will be at a disadvantage because they are restricted from developing their own commercial enterprises.

However, allowing *aiga* to develop commercial enterprises without any guidance is inefficient because businesses can be built in inappropriate locations where there are not sufficient parking, infrastructure, or poor road access.

To allow the market to control land use often results in “strip development”, commercial activities strung out the road. Catering to motorists, this type of development is often inappropriate because it creates traffic congestion with cars pulling out into the road. It is also unattractive and land intensive because of the parking and auto demands.

### Recommendations

To concentrate commercial activities while assuring several *aiga* could benefit would be to designate commercial hubs at the intersection of several parcels. This would allow equal opportunity for commercial activity and to allow *aiga* to share the costs of improving infrastructure and providing additional parking.

Commercial hubs should be located at a main intersection or at least off a main road. A location on a main road is likely to get more business and be more successful than one that is inconspicuously located within a residential area. Commercial hubs off a main road would also have less negative impact on adjacent uses than ones within an exclusively residential area.

Commercial hubs should have sufficient parking. A recommendation would be one off-street parking space for each 400 square feet of commercial space.

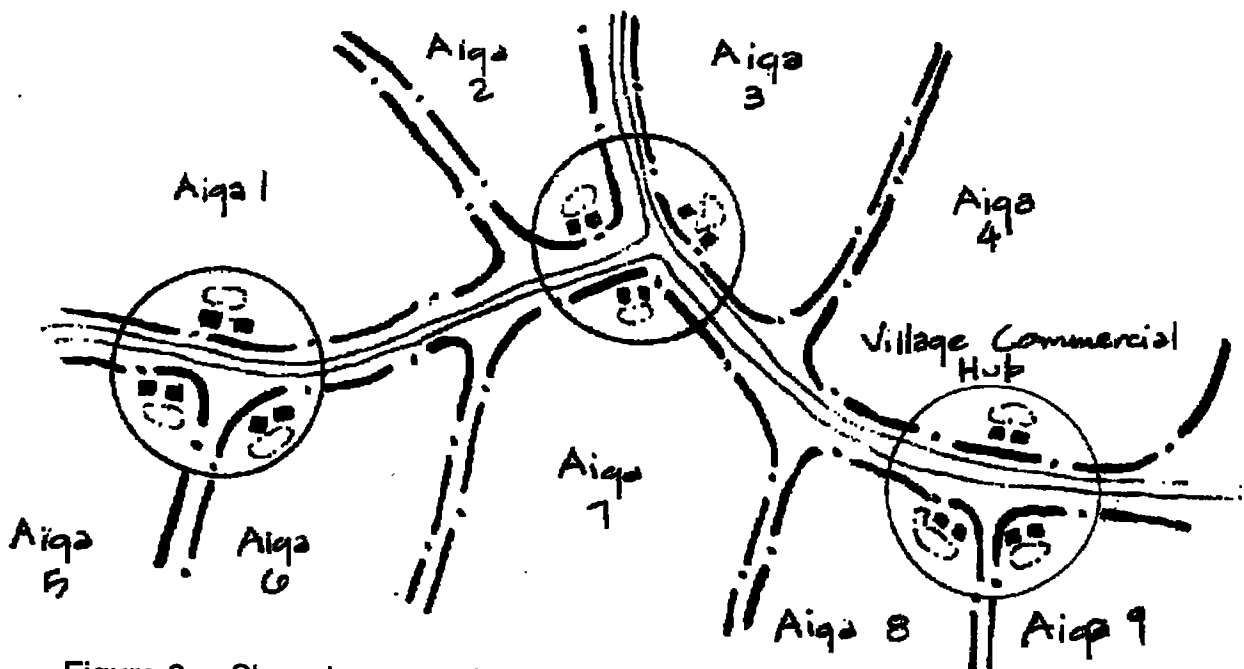


Figure 6. – Shared commercial activities.

## 1. PARKING

### Discussion

Samoan villages were traditionally fairly autonomous political, social, and economic entities, with employment and commercial activities within the village. There was much less dependency on automobiles and consequently much less need to formalize parking requirements as the few cars could be easily fitted in.

Employment opportunities outside the village have made automobiles a necessity for more and more villagers. Additionally, consumer demand has increased as Western conveniences, such as the car, become more attractive to modern Samoans. The increased use of automobiles has resulted in unsafe parking as cars are parked haphazardly around buildings and in the road.

The regulations regarding parking and driveways is in the ASAC 4-89 (American Samoa Annotated Code). For further specifications regarding the approval process contact:

Department of Public Works  
Highway Division  
phone: 633-4141

### Minimum Requirements

“Commercial” enterprises or any non-residential use that receives guests or customers on a regular basis should make provisions for “guest parking” and should clearly mark the space or spaces. preferably in off street lots. Guideline recommendations by use are:

<b>USE</b>	<b>RECOMMENDED NUMBER OF SPACES</b>
Restaurants	1 per 100 s.f.
Banks	1 per 300 s.f.
Stores (groceries, household)	1 per 300 s.f.
Personal services, offices	1 per 400 s.f.
Church	1 per 500 s.f.
Other public buildings	1 per 500 s.f.
Stores (appliances)	1 per 800 s.f.
Automotive/boat services, repair	1 per 1000 s.f.
Warehousing	1 per 1000 s.f.
Manufacturing	1 per 1000 s.f.
Barber/beauty shops	1 per chair
Gas station/ Automotive repair	1 per service bay
Laundromat	1 per 3 washers
Elementary & High Schools	1 per 2 classroom
College	1 per classroom
Public assembly area	1 per 10 seats
Hotel/Motel	1 per 3 units

New residential homes should provide at least one off-street parking space per small home. Multi-family residences should also have one parking space per unit. Home occupations should have an additional space.

**Parking Standards**

- Standard-sized parking spaces are at least 9-feet wide and 18-feet long
- Compact automobile parking spaces are at least 8-feet wide and 17-feet long.
- Loading spaces are at least 9-1/2-feet wide, 40-feet long and have a vertical clearance of 10-feet.
- Handicap parking spaces are 9-feet wide, 18-feet long and have a 4-foot wide passenger loading clearance.

Although 90-degree parking is the most efficient, parking lots can be laid-out in various angles, depending on the area allowed for parking.

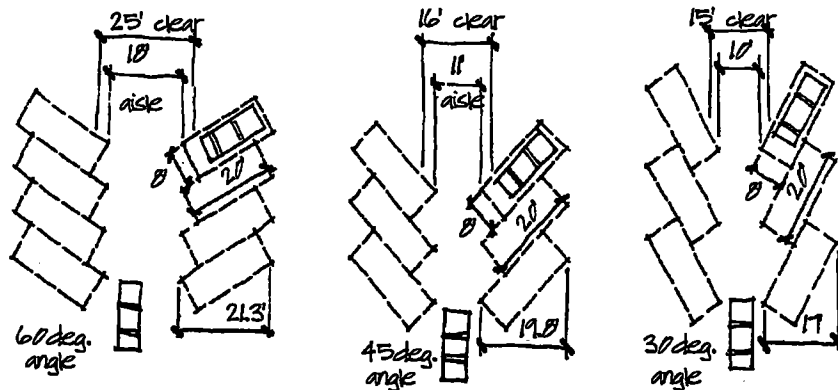


Figure 1. – Typical parking lot dimensions for angled parking

Angle	Double bay 100'	Area required	Back up Distance
30 degrees	12 cars	425 s.f. per car	
45 degrees	16 cars	388 s.f. per car	15 feet
60 degrees	20 cars	320 s.f. per car	18 feet
90 degrees	25 cars	268 s.f. per car	24 feet

Parking that requires the driver to back out into roads should be avoided. The Highway Division will not permit backing-out on to a main highway.

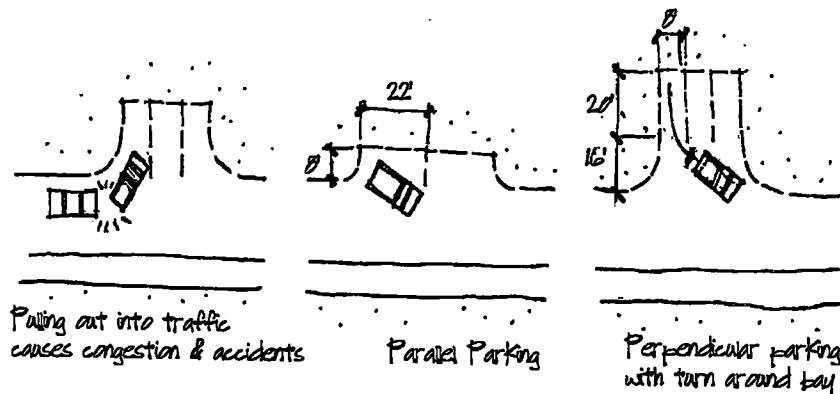


Figure 2. – Avoid backing into traffic lanes.

On secondary roadways, backing out may be permitted with approval of the Highway Division. On-street parking should be parallel or if perpendicular, so the car can enter the traffic lane in one forward motion.

Appropriate turning radius is fifteen feet at driveways and parking lots, and 5-feet for parking spaces to assure that the parking will be easily usable for drivers.

Paved surface lots are preferable to gravel or cinder lot because of the maintenance problems of dust and flooding created. When paved, parking lots of over 5 spaces should be striped.

Parking lots should be screened from the street and residential uses. A colorful hedge and possibly shade trees would be appropriate. Shade trees make the lot more comfortable by adding shade.

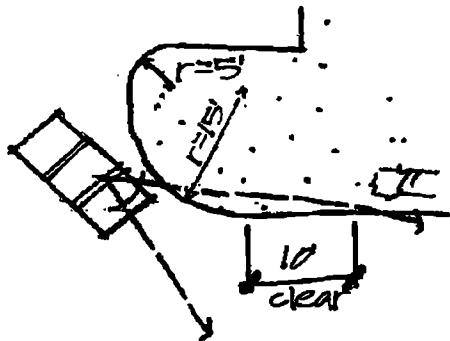


Figure 3. Typical turning radius

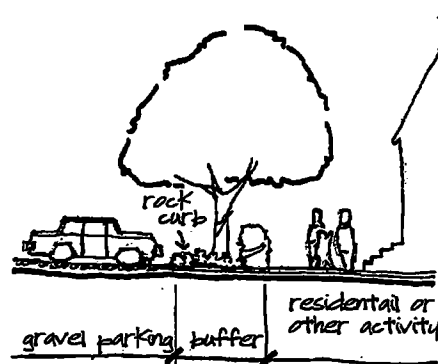


Figure 4. – Landscape Buffers between parking and special uses.

When appropriate, consider handicap parking needs, and other parking requirement, for boats, larger trucks, etc.

Driveways should be at right angles to the road and have a clear ten feet (free from parking spaces, planting or other visual obstructions) from the driveway allows drivers a clear view of oncoming traffic.

Residential driveways should have a minimum throat (entry portion) width of 10-feet and a maximum throat of 20-feet.

One-way commercial driveways should have a minimum throat width of 10-feet and a maximum throat width of 35-feet. Two-way driveways should have a minimum throat width of 22-feet.

2. ROADWAYS

Discussion

Although some main roads between Pago Pago, the airport and the villages are paved and engineered to Western standards, most roads within the village are unpaved. As the speed limit is 30 miles per hour on the entire island and even slower in the villages it probably would not be cost effective or necessary to pave all streets with asphalt. The black asphalt is less attractive and the packed dirt roads are more in character with the rural character of most villages.

The dirt roads are, however, a maintenance problem. Often built in low-lying areas they become muddy after rains and traffic slows. Many cannot accommodate auto traffic in two directions, and bike or pedestrian traffic simultaneously in two directions because the narrow roads are often previous footpaths turned over to automobile use. Utilities, which typically follow the road system are cluttered and repetitive. As a result, fewer households can be serviced because the system is inefficient.

The unpaved roads are often the private property of the landowner whose property they cross. The paved roads are typically owned by the American Samoa Government, in right-of-ways (ROWs). Although the American Samoa Power Authority (ASPA) had the previous task of acquiring ROWs paving roads, currently road construction is under the jurisdiction of the Department of Public Works Highway division. For more information on standards and criteria contact:

Department of Public Works  
 Highway Division  
 phone: 633-4141

Alternative examples

Main roads should not be built in flood-prone areas. When minor roads are built in flood-prone areas, alternative routes should be provided for use during time of flooding.

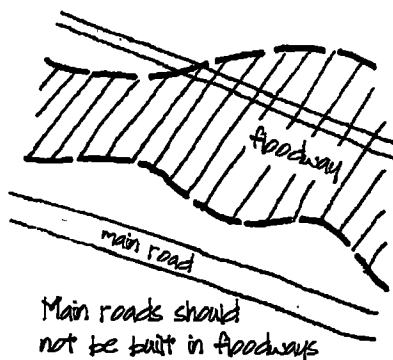


Figure 5. – Roads through Floodways have limited use.

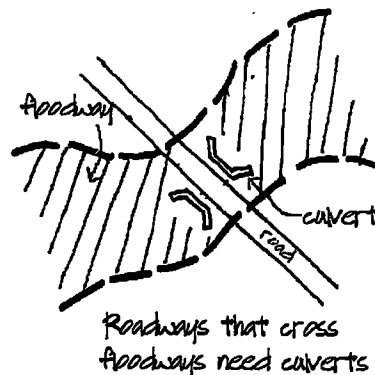


Figure 6. – Roads perpendicular to floodways must not restrict water flow.

Roads built perpendicular to naturally floodways must have appropriate culverts and bridges as so not to disturb the normal water flow.



## ROADS AND CIRCULATION

Buildings, walls, graves and other permanent should be set back a minimum of 35-feet from the centerline of the road or 10 feet from the edge of the road, whichever is greater.

Roads should be wide enough to accommodate auto traffic in two directions (20-foot min. to 24-feet) and bicycle or pedestrian traffic (3-feet min. to 8-feet). Automobile traffic should be separated from bikes and pedestrians. If Western style sidewalks are too expensive, rocks placed along the road would be sufficient.

After road construction, the area alongside the roads should be replanted with the pre-existing vegetation, or street trees. Overhead vegetation reduces glare to motorists and makes the road a more cool and comfortable environment for pedestrians and bicyclists.

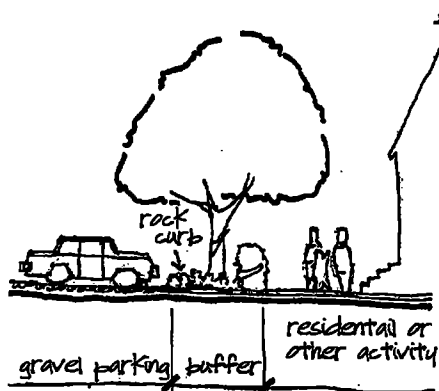


Figure7. – Parking lots should be buffered from view

When street parking is allowed, sufficient space for parallel parking (9-foot min. width) or perpendicular parking off bays (22-foot parking 18-foot aisle bay) must be provided. Parking that requires cars to back out into traffic should not be allowed because of safety and congestion concerns.

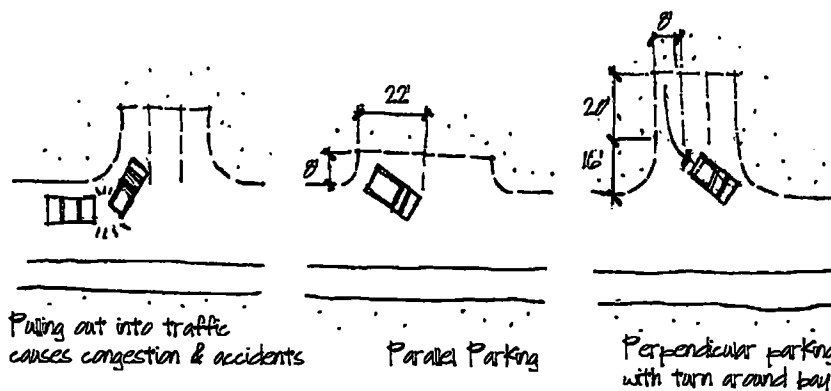


Figure 8. – Avoid parking that backs out into the lane of traffic.

The American Samoa Government should carefully consider major road alignments and only consider acquisition of road right-of-ways that are critical to improving regional traffic. The long-term cost of maintenance should also be considered.

Congestion is eased when there is a network of roads to provide motorists several different route options. The network could either be a grid with all streets designed to similar road standards, or they can be a hierarchy with roads designed to handle different levels of traffic. These include: Collectors, which are designed for heavier volumes of traffic such as between villages; sub-collectors, the heavily used streets within the village that connect important facilities; and access streets (including alleys, private streets), which are not for through traffic and primarily provide access for adjacent uses.

When roads have proper drainage, even unpaved roads can be usable during rainy weather. For unpaved roads, the normal crown or the cross slope is used in conjunction with swales to keep the roads free of standing water. When roads are paved and there is sufficient slope in the profile of the road (slope over the length of a road) the inverted crown can be used.

The slope of the road is the change in vertical elevation (rise) over the horizontal length (run). For example if the road has a change in elevation of 1 foot over the length of 100-feet, the slope of the road is 1%. Recommended standards for street grade or profile are a minimum of .2 percent and a maximum of 15 percent.

For safety and maneuverability, roads should intersect at a 90-degree angle. An intersection less than 60-degrees is very dangerous. Additionally, there should be sufficient distance between intersections, a minimum of 125-feet is recommended.

For safety, fire hydrants, light poles, mailboxes and other fixtures should be located at least 2-feet back from the face of the curb.

### 3. `AIGA BUS

#### Discussion

Many `aiga have modified pick-up trucks or vans for ferrying of passenger between villages. The `aiga busses provide a charming, informal, type of public transportation that works well for villagers who know the routes. Visiting `aiga and other guests would be able to make use of the service if routes and stops were better publicized.

#### Alternative Examples

The `aiga busses currently do not have designated stops. When a passenger wants to get off he taps on the roof of the cab and the driver stops the bus in the middle of traffic to allow the passenger off. This is both dangerous to the off-loading passenger who may be stepping into traffic, and a cause of traffic congestion as all vehicles behind the bus must slow or stop. Where there is a concentration of potential passengers and a sufficient shoulder to the road, `aiga bus stops with signage and possibly a bench, with an overhead shelter, should be designated. These stops would be both more comfortable for passengers and easier for drivers to find and load.

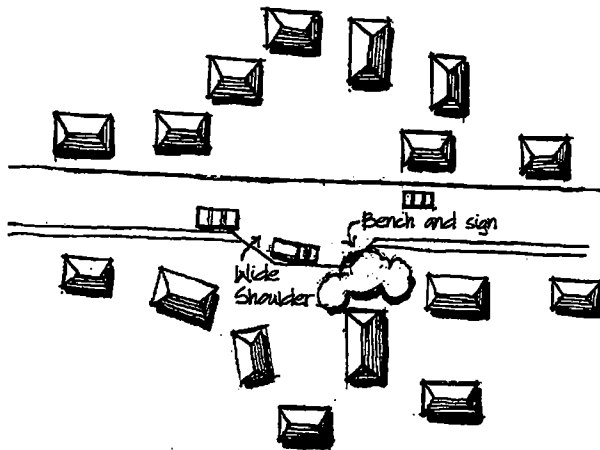


Figure 1. - Bus stop with space to pull off road



Figure 2. - "Samoan-theme" bus shelter

Within the village where there are more passengers, it may be possible to construct a more elaborate *`aiga* bus shelter. This shelter could feature the village's name and possible distinctive "theme" motif and would serve as village landmark.

#### 4. PEDESTRIAN SYSTEMS Sidewalks, Paths, Trails

##### Discussion

Within the village, walking is a great alternative to driving. Distances are often short, the weather is mild and tropical, and there is the opportunity for much face to face contact with neighbors. Fast automobile traffic, narrow road shoulders, and unfriendly dogs or fenced off areas have, however, contributed to a deteriorated pedestrian environment and taken away this pleasure from villagers. Planning and coordination between *`aigas* and the village council can rebuild this important circulation system.

##### Recommendations

More than just sidewalks, the village needs a pedestrian circulation system. This is a network of public sidewalks, pathways, and trails that connects the important village features. It may also include special scenic amenities to add to the walkers enjoyment. There could be a variety of routes between destinations

The first step in planning the pedestrian system is to identify destination points. These could include: the school, the coastline, parks, churches, stores, offices and health clinics. One may also want to identify special scenic or historic features that would add to the

pleasure of walking including: scenic areas, star mounds, special graves etc.

The next step is to inventory existing sidewalks, paths and trails and decide what needs to be added or improved to connect the destination points. For example, some parts of the system may run through private property and permission for villagers to cross through the property may be needed. Some stretches of road may need wider shoulders, or curbs to separate walkers from cars. Other trails may be overgrown, and need to be cleared and maintained. Some paths may need canopy trees overhead to make them more shady and comfortable.

Most importantly, pedestrian systems need to be safe. If traffic is too heavy or too fast, it should be separated from pedestrians. The routes should be easily visible to prevent criminal activity and loitering. The pedestrian system should avoid areas where dogs, flooding, unprotected cliffs or other potentially dangerous situations exist. The system also must be maintained in good condition, meaning potholes which can cause tripping should be filled and overgrown bush should be trimmed.

Pedestrian systems should be convenient. Villagers should be able to conduct daily business by foot, easily. Continuous routes and looped trails add variety and flexibility, and are preferable over channeled ones.

Pedestrian systems need to be comfortable. As Samoa has a tropical climate, it is important that shade be provided along the walks and tradewinds and cooling breezes be maximized.

In addition to utilitarian purposes, pedestrian systems must add pleasure to the village. The pathways should include attractive scenic areas (such as passing scenic coastline or mountain views), special historic amenities (such as star mounds or village council *fales*), and important cultural features (such as the *malae*, or graves of important villagers).

Although parts of the pedestrian system could be more narrow, most of the system should be sized to allow for two or three persons walking together. A typical width of 6-feet to 8-feet is recommended.

Although bicycles are not a popular form of transportation, the pedestrian system should be flexible enough to accommodate bicycles when they become more widely used.

A long range plan might be to expand the pedestrian system beyond the village by improving the pedestrian and bicycle system between villages.

## 1. VILLAGE SIGNAGE

### Discussion

Outdoor signage and graphics is useful in a village for visitors to both find their way and to know the rules. In emergency situations, when seconds can count, emergency vehicles need street name and address signage to facilitate direct travel to their destinations. Signage can also reduce traffic accidents or pedestrian mishaps, and can explain village rules, such as designated parking areas or areas off-limits to visitors. It is important for signage to be coordinated, with a consistent style. Refer to American Samoa Annotated code (ASAC), Chapter 5, page 26-13, sign regulations for specific requirements and standards.

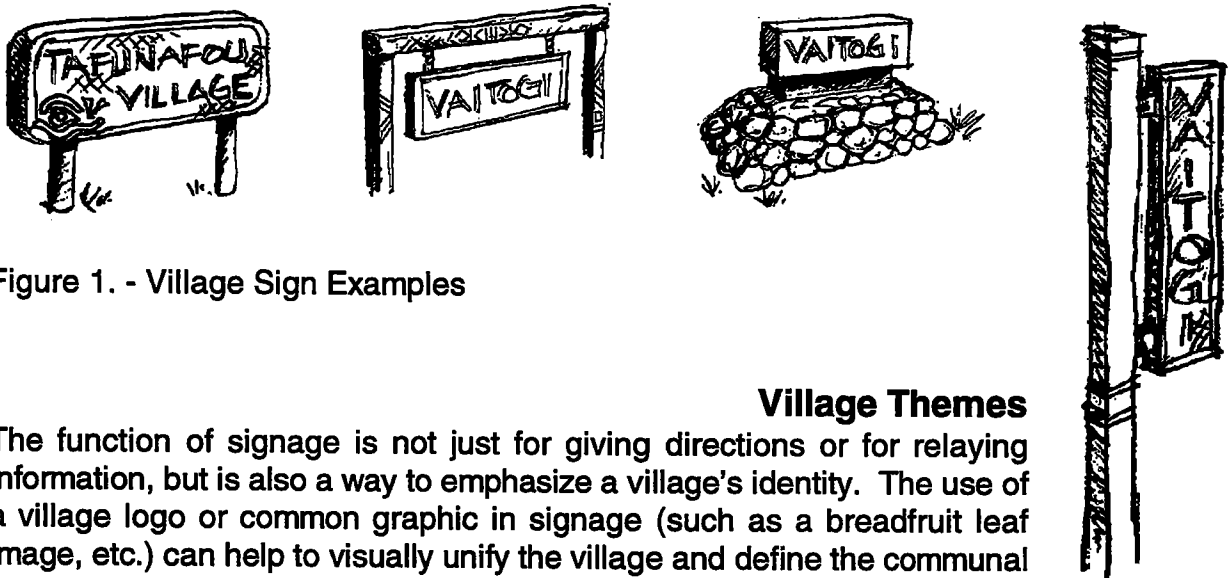


Figure 1. - Village Sign Examples

### Village Themes

The function of signage is not just for giving directions or for relaying information, but is also a way to emphasize a village's identity. The use of a village logo or common graphic in signage (such as a breadfruit leaf image, etc.) can help to visually unify the village and define the communal area. Signage style could be unique to a village, thus helping to differentiate between villages. Street names of a common theme (such as plant names, or names in legends) can emphasize a village identity and can also make it easier to remember and locate streets.

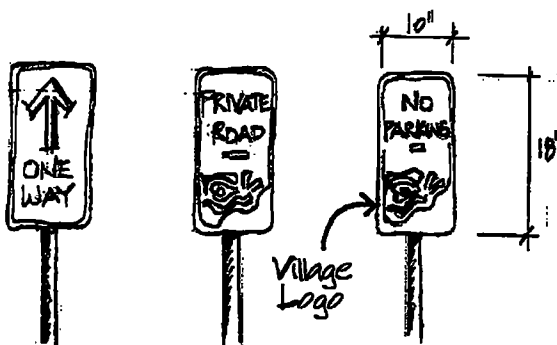


Figure 2. - Traffic signage

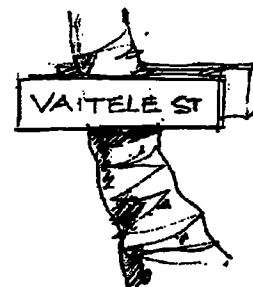


Figure 3. - Street name sign on coconut trunk

### Types of Signs

1. Identification Signs: These are naming signs that identify the village, areas within the village, buildings, and organizational or functional components. They tell the viewer where he is, and since they always appear at entrances, they greet the motorist or

## VILLAGE AMENITIES

pedestrian and visually set the mood for other graphics on the site. They must be compatible in scale and character with the architecture surrounding them, or on which they are placed.

2. **Directional Signs:** These signs serve to guide the motorist or pedestrian in, around, and out of the village. Signs intended for pedestrian guidance should be of a smaller scale and located so as not to conflict with signs intended for motorists. The legibility and positioning of directional signs as well as the ordering of information on them is critical to their effectiveness. Each installation requires careful analysis of pedestrian and vehicular traffic patterns to determine that the sign is properly located and will provide the appropriate information and directions.

3. **Regulatory Signs:** These signs set the rules for travel and parking on the site. Included in this category are speed limit signs, signs controlling turning and lane usage, warning signs, signs controlling parking, etc. Refer to the *Manual on Uniform Traffic Control Devices (MUTCD)* by the Federal Highway Administration for standards on design, shapes, colors, dimensions, symbols, etc. of regulatory signs.



Figure 4. - Bus Stop w/ Village Sign

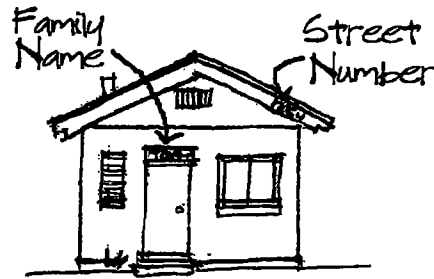


Figure 5. - House address

### Signage Guidelines

1. Provide signs only where a need exists. Eliminate unnecessary or conflicting signs.
2. Ensure that the placement of signs relates to their function.
3. Provide signs that are visible and designed to attract viewer's attention.
4. Provide signs that are harmonious with their architectural and natural setting, and contribute to the villages overall image and identity.
5. Ensure that all signs are legible. The wording should be understandable and concise.
6. Provide a hierarchy of information that conveys information in the sequence most beneficial to the viewer.
7. Provide an economical system in terms of implementation and maintenance.

**Figure/Ground Relationship:** The background of a sign helps to isolate the message from the visual complexity of the sign's surroundings. The more visually complex the surroundings, the more background is needed to facilitate communication. In residential areas and in other areas of relatively low-intensity development, it is recommended that

the graphics and lettering constitute approximately 60 percent of the total sign area and the background 40 percent. In areas of high-intensity development, such as the core areas of the village, the graphics and lettering should occupy 40 percent and the background 60 percent.

**Sign Placement:** A sign must be positioned so that there is a clear line-of-site from the point of desired reading. A reasonable guideline for the placement of vehicular-oriented signing is to establish the height of the sign so that the center line of the main panel is at the optimum viewing height for a person seated in an automobile (approximately 52" above the pavement surface). If visual obstructions prevent sign placement at this height; however, avoid exceeding a 10-degree angle from the natural line of vision.

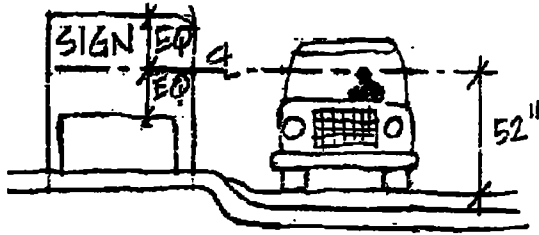


Figure 6. - Positioning

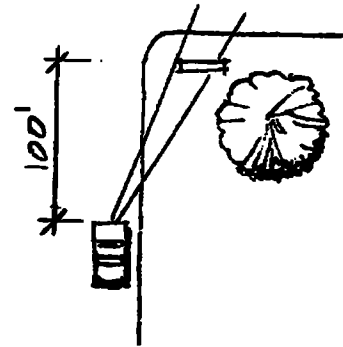


Figure 7. - Line of sight

**Reading Distance:** The distance that signs are located from the point of desired reading varies with the speed of the approaching driver. As a general rule, a 1" letter height for every 50' of viewing distance could be used.

Viewing distance at 30 mph = 250', signage lettering should be 5" min.

Viewing distance at 25 mph = 175', signage lettering should be 3 1/2" min.

Viewing distance at 20 mph = 100', signage lettering should be 2" min.

## 2. SEPTIC SYSTEM

### Discussion

The Tafuna plain is an important aquifer recharge area for the entire island of Tutuila and thus the American Samoa Power Authority (ASPA) has prioritized the County of Tualauta for sewer service. All homes within 300 feet of a sewer line connection are required by law to hook-up to the system. Failure to comply may result in stoppage of electric or water service, or in the case of a new structure, denial of an occupancy permit. ASPA also has authority over the installation of septic tanks and fields where there is no sewer and is responsible for the inspection of new tanks.

The decision to develop a sewage system rather than use of improved septic tanks is based upon population density, soils, groundwater contamination potential, cost and location. The present development pattern of sprawl encourages the septic tank option, but if development were more clustered, residents and businesses would have the

greatest potential for savings in sewer line connections because of the higher density.

### **Recommendations and Alternatives**

If a new home cannot connect to the sewer system it is still necessary to get ASPA's approval of a proper wastewater (septic system) before electric power or water will be provided. The system will be thereafter be subject to inspection regularly by inspectors from the Wastewater Division of ASPA to assure that the septic tank and the leaching system is in compliance with the American Samoa Government Rules and Regulations as adopted by ASPA.

The septic tank must be inspected at least three times during construction. The homeowner is responsible for contacting ASPA Wastewater Office at the Utelei Wastewater Treatment Plant at least 24 hours in advance to arrange an inspection.

ASPA Wastewater Office at the Utelei Wastewater Treatment Plant  
Phone 633-5200, 633-5753

#### **First visit to inspect:**

- Concrete pouring to check for proper steel reinforcing and proper sizing of the floor (length to width).
- Compliance with ASPA guidelines, any modifications need to be approved by inspector.
- Proposed layout of absorption trenches or bed.
- If necessary need for seepage pit if soil conditions, water table, proximity, bays, streams, wetland, and available land conditions warrant.

#### **Second visit to inspect:**

- Depth and interior dimensions- Do not place cover prior to inspection.
- Watertightness of seams and joints- Tank fill to flow line, joints exposed.
- Effluent disposal- flow test will be done.

#### **Final inspection to inspect:**

- Accordance to approved plans and ASPA requirements.

Development of septic tanks should be discouraged near any active or planned water well sites and in sensitive aquifer recharge areas.

Improved septic tanks and drain fields must be constructed to avoid any seepage into ground water supplies or streams.

Any waste treatment system (septic or sewage) requires a minimum distance from underground tap water lines for health reasons. Waste facilities should also to be distanced from other underground lines such as electrical power to avoid potential electrocution of service personnel.

High-density development should be discouraged from low-lying watercourse areas for several reasons. Higher ground protects a sewage system from inundation by storm water runoff, which if allowed to occur, creates an area wide health hazard. Higher ground also provides the slope for sewage waste to move by gravity towards treatment plants



elsewhere. Sewage lines at lower elevations than sewage plants necessitate the use of "force mains" to pump sewage toward the treatment plants, resulting in added electricity and higher maintenance costs.

Minimization of sewer development costs is also dictated by length. If the soils will support it, the least expensive route for installation is usually in as straight a line as possible.

### 3. SEWER CONNECTIONS

#### Discussion

The Tafuna plain is an important aquifer recharge area for the entire island of Tutuila and thus the American Samoa Power Authority (ASPA) has prioritized the County of Tualauta for sewer service. All homes within 300 feet of a sewer line connection are required by law to hook-up to the system. Failure to comply may result in stoppage of electric or water service, or in the case of a new structure, denial of an occupancy permit. ASPA also has authority over installation of septic tanks and fields where there is no sewer and are responsible for inspection of new tanks. Sewer connections must conform to the "Regulations governing the use for Public Sewers in American Samoa" and the "Pala Lagoon Sewer Collection System Extension and Service Lines." Applications for connections, and design guidelines are available from ASPA. For assistance homeowners should contact:

American Samoa Power Authority  
Wastewater Office at the Utelei Wastewater Treatment Plant  
Phone 633-5200, 633-5753

Planning is the only method to ensure that adequate wastewater, potable water and electricity connections are available where growth occurs. Aside from actual highway construction, this will be the most expensive infrastructure that the government provides to an area. There are often long lead times before such services can be made available.

#### Recommendation

In most cases the homeowner is responsible for the costs of application, design and construction of the sewer hook-up. Illegal hook-ups are subject to fines, and denial of other utility services.

The slope of the building sewer line should not be less than 2% (1/4-inch per foot.) and slope should be continuous from the house to the main (no reverse slope allowed.)

The minimum cover of the sewer line is 18 inches. When this is not possible, concrete encasement of a dry mix of cement and gravel should be used. Pipes should not be laid in soft soil. When necessary, soft soil should be excavated and replaced with cinder fill.

A two way clean-out must be installed on any line that leads from toilet facilities. This is installed a maximum of eight feet from the exterior of the house. A one-way clean-out must be installed at a bends. Maximum distance between clean-outs is 200 feet.

## VILLAGE AMENITIES

The typical PVC pipe size used for these sewer connections is 4-inches (metric sized pipe should not be used).

Cluster development provides the highest densities available to justify these investments. High density also better protects electrical equipment from extreme weather as has occurred with recent hurricanes. It is much easier for relief agencies to restore services to a larger number of people if those people are located in one place.

Developers (the villages, private individuals and the ASG) must agree to the location and type of developments that will be allowed. Otherwise residents of an area may find themselves experiencing problems such as inadequate power ("brownouts"), limited water supplies (low water pressure), poor telephone service (system crash) and health risks (overflowing latrines)

All infrastructure connections must be approved by the ASPA to assure that there is sufficient backflow protection, and other health and safety considerations,

### 4. OTHER INFRASTRUCTURE

Planning is the only method to ensure that adequate wastewater, potable water and electricity connections are available where growth occurs. Aside from actual highway construction, such infrastructure is the most expensive that government can provide to an area. This results in long lead times before such services are available.

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### 5. UTILITY EASEMENTS

Crucial to the development of services is utility easements. Utility easements carry water, sewer, electricity and telephone lines. These are usually located on a government road to allow ease of access for development and maintenance. The utility/road route is traditionally chosen on the basis to two cost factors: the shortest route possible between source and use area, and the ability of subsurface soils to carry the weight to lines and the roadway itself.

It should be stressed to all landowners and potential populations served that lessening the cost of utility infrastructure development and maintenance costs allows the ASG and

## VILLAGE AMENITIES

utilities to do more for their customers. MORE PEOPLE can be served WITH THE SAME AMOUNT OF MONEY if all developers, the utilities and the ASG agree on how utility development should occur.

### 6. TRASH COLLECTION

The term "Throw Away Society" is illustrated by the increasing amount of garbage is generated by citizens. Highways and wetlands often become dumping grounds for different types of refuse, including toxic substances. This is intolerable.

Methods to reduce the amount of loose waste in public areas includes providing more public trash receptacles, and to have an "adopt a highway" strategy where individual villages would accept responsibility of the maintenance of roadway appearance within their lands.

Fortunately the traditional autonomous village system can facilitate centralized trash pickup. Additional new cluster development can also develop their own system. Village and private landowners must help ensure that each household maintains minimum health standards for waste. The ASG can provide health professionals who can help educate local communities about safe methods of collection and storage. Perhaps the ASG with the cooperation of developing groups can ultimately provide more urban services such as individual trash collection.

### 7. RECYCLING

An analysis by the Pacific Basin Development Council and Ross & Associates (1992) concluded that recycling of municipal solid waste is feasible in American Samoa. Planners must realize that the recycling decision making process is an interactive one. The choice about what to recycle and the amount of effort invested will affect the economics and political acceptability of the project. Certain items such as aluminum cans have a higher value and ease of reuse than mixed paper. Innovative methods that could be explored might include examining the operation of a small Maui, Hawaii private firm that is reworking plastic bottles and bags into furniture and other products.

### 8. ALTERNATIVE ENERGY SOURCES

The developing "Throw Away Economy" offers a potential fuel source in the burning of non-hazardous waste. Honolulu, Hawaii for example, has such a facility. Sources for federal assistance could be explored.

Small-scale hydroelectric facilities utilizing the high annual rainfall, could also be alternative power sources to imported oil.

Solar power is also an alternative for remote locations.

## 9. SCHOOL AND CHURCH LOCATIONS

The Tafuna Plain contains a local community college and the Tafuna High School. There is increasing pressure to upgrade the high school and add branches of services usually available in Pago Pago. This plan recommends that development and expansion of such

facilities be coordinated with the development of new village clusters, perhaps on

the perimeter of one of the new smaller *malae*. This would provide better access by users, create stronger potential transportation "nodes", more active proponents of the needs of the facilities, etc. Location of such public facilities and other activities such as churches near the *malae* will reinforce a feeling of community.

## 10. VIEWS AND SCENIC AREAS

The people of Samoa take great pride in their community and islands. The Samoan people have developed mechanisms over time to protect their communities and the land in order to sustain themselves. This involved understanding the overall *context* of an action in order to allow a community to make the most of its resources.

Planning today involves both intensity and scale. New obnoxious industries must be separated from residents. Traffic must be separated from schools. This involves buffers and setbacks to provide quiet and safety.

Increased population means that leaders must be very careful when deciding to build in new areas. Proper siting of development can prevent erosion of soil into streams and fishing areas while still maintaining important natural landmarks that create a sense of community identity and attract tourists to the area. Maintenance of designated coastline setbacks can prevent erosion of beaches and other coastline, thus preventing the loss of both the homes and lives of people in this time of potential rising ocean levels. Preservation of wetlands can help provide a safe drinking water supply for our people and safeguard the unique plant life and wildlife that exemplifies Samoa.

## 11. LANDSCAPING

Street trees are an inexpensive means to provide a multitude of benefits to an area. Trees provide shade for structures and pedestrians, thus offering an alternative to air-conditioning and an opportunity for outside activities. Trees create a sense of less density within urban areas and may represent an effort to maintain part of the native ecosystem of lowland forest that once existed on the Tafuna Plain. The base of each tree is an

opportunity for rainfall to enter and regenerate the local ground water supply. Street trees also provide a sense of unity within a district, creating a "theme" that local citizens immediately recognize and identify with. "Significant" trees, usually very large or perhaps part of local tradition, also provide a focal point for the area's reference. The ASG should

work with the village *matai*, private landowners, the women's and untitled men's groups, and the church youth organizations to adopt areas within the community to plant and maintain trees.

### 12. FIRE PREPARATION PLAN

The increasing development of the Tafuna Plain also increases the need for adequate preparation for major fire crises in order to protect the investments of citizens. This involves several major steps.

Adequate water pressure is essential wherever development is allowed to occur. This means that village *matai* and private landowners must work with the ASPA to determine where such growth can occur and how most inexpensively provide adequate water pressure to the most structures possible.

Adequate access, including roadway with for emergency vehicles (including ambulances) must be required of developers so that trained personnel and their important equipment can quickly reach the scene of any potential fire or any other emergency.

Developers need to provide the ASG with up-to-date maps of projects and provide those projects with a systematic numbering scheme so that emergency personnel and vehicles can locate the scene of an emergency in the least possible time. Development has occurred so haphazardly that emergency personnel have been unable to locate unidentified structures to help those needing assistance.

### 13. DOG CONTROL POLICIES

An increasing number of wild dogs have plagued the Tafuna Plains in recent years. Such conditions become less tolerable as the area becomes more crowded. The animals can be a risk to small children and the elderly, especially if alone. The animals also pose a risk to sanitation because they disturb garbage and spread viruses between themselves. The risk of a future plague of rabies must also be considered. Thus the ASG must initiate a program with the aid of the village *matai* to license all dogs in order to differentiate those animals as wild and in need of rehabilitation or removal. A dog control program could include the designation of a village dog catcher, and coordination with local veterinarians or the human society.

## 14. GRAVES AND BURIALS

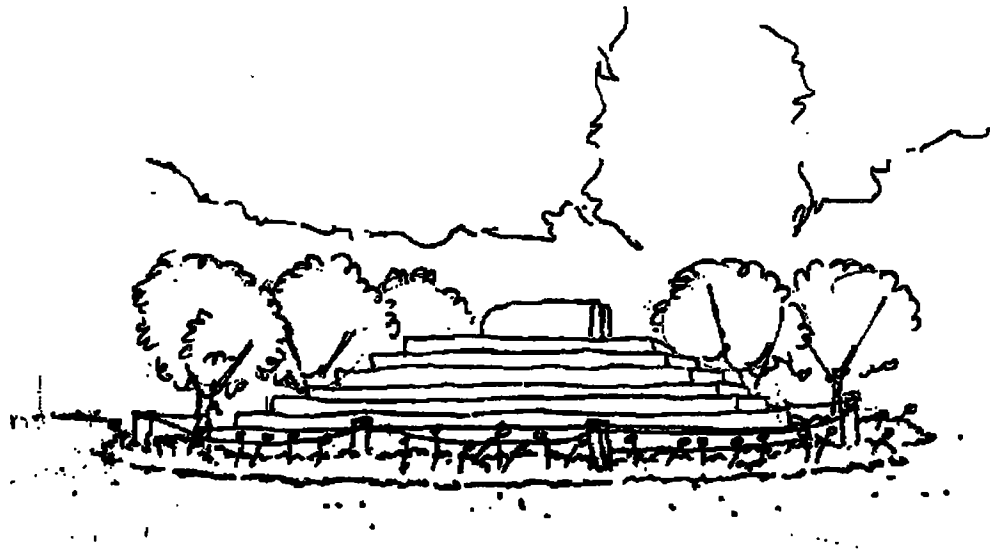


Figure 8. - A park-like setting for an important grave site

### Discussion

Every culture has its own customs and protocol for interment of ancestral remains. This place is considered a sacred, and is a special link to ones personal history. In the past, Samoan families had a central *`aiga* family cemetery. More recently however, graves have been located inappropriately close to roads and other public lands, making it difficult for the government to expand infrastructure to the family and provide for the village in general. Within the *`aiga* lands, individual families have located graves in a scattered manner, leaving few intact parcels of land for future family members to build homes on. In time, as the memory of the individual fades, these haphazardly located graves may fall into disrepair and may not be given the respect they deserves because the space has no sacred meaning to any of the living *`aiga* members.

### Recommendation

When the family feels strongly that family graves be located on the house lot, minimum clearances must be respected.

There must be at least 10-feet clear from the edge of the road, or 35-feet clear from the centerline of the road, whichever is more. This allows for future expansion of the roads, construction of sidewalks, improvement of infrastructure services such as electricity, water, and sewer.

Graves should be located at least 10-feet from any underground utility lines, including private lines that run to the home, and from public right-of-ways. In addition to protecting the gravesite as "sacred space" this will allow the utility company to make repairs with as little disruption as possible. It will also make any compensation issues less complicated for both the family and the utility company.

## VILLAGE AMENITIES

The *'aiga* could dedicate a special part of their land to a family cemetery for use by all the clan members. If one already exists, it could be restored and expanded. The cemetery should be at least an acre in size to meet future needs. The best quality agricultural (gently sloping with deep rich soil) and construction (access to roads and utilities) sites should be avoided. The *'aiga* should choose a location to suit their particular situation and tastes. A centrally located cemetery would be most easily accessible, serve as an attractive park space, and provide the family a close link to the past. A more remotely located cemetery would be more private, and could be more scenic.

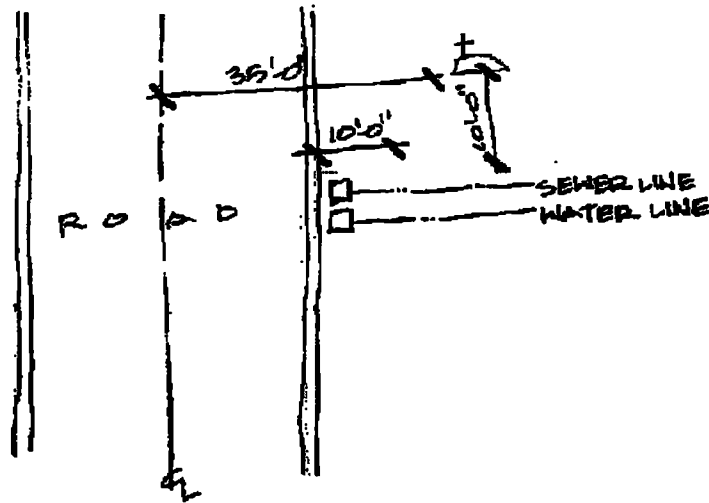


Figure 9. – Grave site location setbacks.

Important historical personalities are often memorialized within the village with large, elaborate multi-tiered structures. More recently, these have fallen into disrepair and are sometimes surrounded with dirt parking areas or overgrown with weeds. Like star mounds, these are opportunities to create parks and landmarks and give the village a unique, attractive open space feature. When these are landscaped and well-maintained these features could add to the character and beauty of the village, as well as provide an attractive place to sit or play.

Although uncommon in Samoa, commercial memorial parks are an alternative, especially if the government were to become more restrictive about zoning, land use, and human burials. As many American Samoans have served the United States in the armed forces, a veteran's memorial cemetery would be a good pilot project. Arlington National Cemetery near Washington D.C. and Punchbowl Memorial in Honolulu are examples of military cemeteries that are very beautiful "sacred places". It is, in fact, a great privilege to be buried at either Arlington or Punchbowl. Also as military cemeteries are often funded and maintained by the federal government as a military benefit to their service personnel, the cost to the family may be less than burial on family lands.

## **1. LAND COURT**

Land titles were not explicitly defined in traditional Samoan society as they were in the Western world. There were no rigid "boundary lines" between areas of village influence. Instead, land disputes between villages were either handled by chiefs of the villages involved or by intervention of the county council of chiefs.

Currently, when a land dispute arises, the Office of Samoan Affairs tries to resolve the matter among the parties involved. When a land dispute cannot be mediated, the Office of Samoan Affairs provides the parties involved with a Certificate of Irreconcilable Differences. This certifies that action is required by the Land and Title Division of the High Court of American Samoa ("Land Court"). Final action on matters relating to alienation of land, granting of leases, and other uses of communal land rests with the Governor. The Territorial Office is responsible for day-to-day recordation. The Territorial Land Commission (TLC) reviews instruments affecting title to land and recommends actions to the Governor.

Such a court is useful because a clouded title restricts the ability to develop and protect property. An individual whose title is contested finds it difficult to get a loan to construct a home. A government agency besieged by conflicting title claimants might also find it expensive and time consuming to settle an agreement before building a critical sewer treatment plant to protect the underground water aquifer or an important fish habitat.

All participants must recognize that in a Land Court, they are entitled to "argue their case to the best of their ability," however, they must abide by the court's decision.

## **2. OTHER OPTIONS**

A number of possible strategies to alleviate land disputes were raised by the DURP American Samoa Village Planning Workshop on March 25, 1997. They include:

Begin registering private lands so the title of land is clearer.

Require all planning agencies, including EDPO, DPW, and ASPA to publicize current plans.

Incorporate land rights into highway projects, as mandated by federal law.

Allow governmental agencies to offer infrastructure improvements, such as access roads, as compensation for land in lieu of cash.



## STEP IV

# D. IMPACT ASSESSMENT / ECOLOGICAL ANALYSIS OF STRATEGIES

At this point the Planning Team should have a list of strategies that they wish to incorporate into a plan. The next step is to conduct an impact assessment of the chosen strategies. An ecological approach to assessment, which views an area's cultural, environmental, and economic landscapes as one interactive system, is offered here. This section will provide both a framework for an ecological analysis of the new plan and instructions on how to begin mapping out the plan in preparation for its final documentation.

The first step is to draw [or acquire] a base map of the village. This should not be a freehand sketch, but rather a technically accurate representation of the *nu'u* [Section II – C, Government Resource Agencies, shows where detailed maps can be found]. The planning team should then edit the map to reflect their chosen strategies [Appendix B gives some assistance on mapping; additional help is available from EDPO]. This first map doesn't need to be highly polished, as its main purpose is to give a rough idea of the plan's effects.

The second step is to begin the analysis using the worksheets on the following pages. The Planning Team should list the strategies they have chosen in the left-hand column. The top row list various indices of concern. There are empty columns for the team to add their own, such as material from Step III, Village Visions and Values.

The task is for the team to move across the columns, measuring the impact of the strategy on the given category. We recommend that a simple system such as the following be used:

- ++ strong positive impact
- + positive impact
- o no impact
- negative impact
- strong negative impact

The team now needs to conduct a dual analysis. Going down, the team will look at the accumulated impacts of the plan on each category of concern. Going across, the team will look at how each strategy impacts the various categories. They should then total the number of positive and negative impacts.

The team will need to make some choices at this stage. A strategy might have too much of a negative impact – or not enough of a positive one. The planners might choose to *adjust* the strategy, *replace* it, or *accept* the negative impact. The impact assessment should be updated as the strategies are modified until the team has a package that they feel the village can consense on.

The final step is to prepare three products to present to the village for approval. The first is the recompiled list of strategies, the second is a more polished map showing the effects of the plan, and the third is a statement summarizing the impacts.

## EXAMPLE 1 - IMPACT ASSESSMENT

The following chart gives an example of what part of a completed worksheet might look like. In this example, the first three strategies are acceptable, the fourth is questionable, and the fifth clearly unacceptable. In addition, there are concerns about the plan's overall impact on the village social system and authority of the matai. The Team will need to modify their chosen strategies.

<b>POTENTIAL STRATEGIES</b>	<b>CULTURAL INDICES</b>					<b>TOTAL +</b>		<b>TOTAL -</b>		<b>IS IMPACT ACCEPTABLE?</b>
	Village Layout	Village Social System	Fa'a Samoa Values	Use of Communal Lands	Matai Authority					
<i>No building in flood plain</i>	+	-	o	+	-	2	2			yes
<i>Build sheltered bus stops</i>	++	++	+	o	o	5	0			yes
<i>Consolidate access roads</i>	++	++	+	+	o	6	0			yes
<i>Rent fale to tourists</i>	o	-	++	-	o	2	3			?
<i>Ban dogs in village</i>	o	-	-	o	o	0	4			no
<b>TOTAL +</b>	5	4	4	2	0					
<b>TOTAL -</b>	0	5	2	1	1					
<b>IS IMPACT ACCEPTABLE?</b>	yes	no	yes	yes	?					

There are two sample worksheets provided. The first lists general categories of concern; the second is for concerns that village residents and the Planning Team wish to add. Following is a brief explanation of the given categories:

### **Cultural Indices**

**Village Layout:** Concerns the layout of malae, fale, and housing that is unique to the village.

**Village Social System:** Concerns the formal and informal interactions of the villagers.

**Fa'a Samoa Values:** Concerns the traditional values of village residents.

**Use of Communal Lands:** Concerns whether communal lands remain accessible to all.

**Matai Authority:** Concerns whether traditional leadership is respected in the plan.

### **Economic Indices**

**Small Businesses:** Concerns the health of small businesses in the community.

**Jobs in Community:** Concerns whether the strategy will bring employment in

**Independent Farmers:** Concerns those living a subsistence lifestyle.

**Implementation Cost:** Concerns whether the cost of the strategy is reasonable.

### **Environmental Indices**

**Riparian Zone Health:** Concerns the quality of rivers and streams.

**Coastal Zone Health:** Concerns the quality of beaches, shoreline, and mangrove swamps.

**Coral Reef Health:** Concerns the impact on the fringing reef and associated fisheries.

**Native Forest Health:** Concerns the viability of the last tracts of indigenous forest.

**Archaeological Sites:** Concerns the protection and preservation of historical sites.

**Reservoir Health:** Concerns the impact on groundwater quality and replenishment.

**CATEGORIES OF CONCERN**

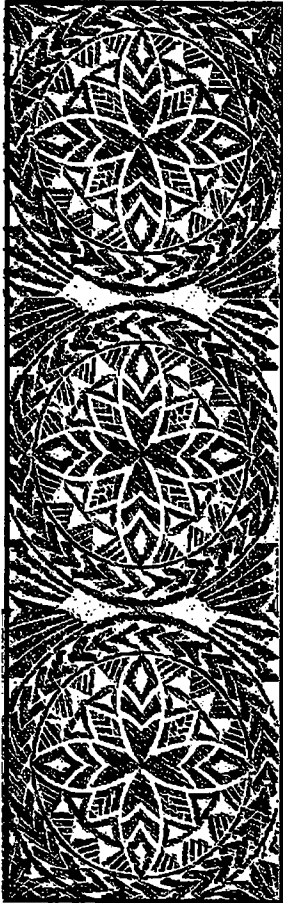
POTENTIAL STRATEGIES	CULTURAL				ECONOMIC				ENVIRONMENTAL				TOTAL + TOTAL -	IS IMPACT ACCEPTABLE?		
	Village Layout	Village Social System	Fa'a Samoa Values	Use of Communal Lands	Matal Authority	Small Businesses	Jobs in Community	Independent Farmers	Implementation Cost	Riparian Zone Health	Coastal Zone Health	Coral Reef Health			Native Forest Health	Archaeological Sites
1																
2																
3																
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10																
11																
12																
13																
14																
15																
16																
17																
18																
<b>TOTAL +</b>																
<b>TOTAL -</b>																
<b>IS IMPACT ACCEPTABLE?</b>																

- ++ Strong Positive Impact
- + Positive Impact
- o No Impact
- Negative Impact
- Strong Negative Impact

### ADDITIONAL CATEGORIES OF CONCERN

POTENTIAL STRATEGIES	ADDITIONAL CATEGORIES OF CONCERN												TOTAL + TOTAL -	IS IMPACT ACCEPTABLE?	
	1	2	3	4	5	6	7	8	9	10	11	12			
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
<b>TOTAL +</b>															
<b>TOTAL -</b>															
<b>IS IMPACT ACCEPTABLE?</b>															

- ++ Strong Positive Impact
- + Positive Impact
- o No Impact
- Negative Impact
- Strong Negative Impact



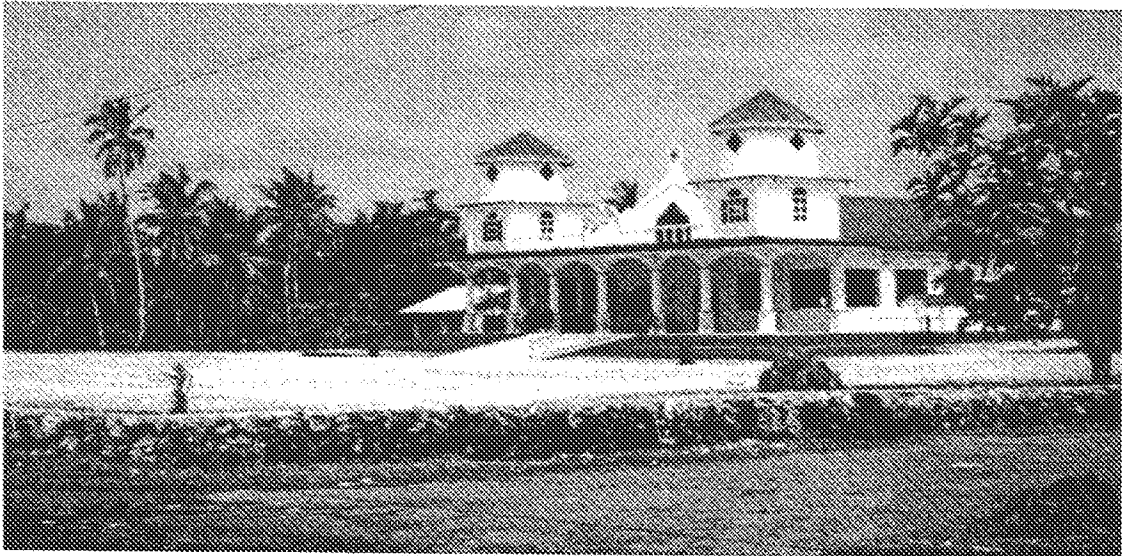
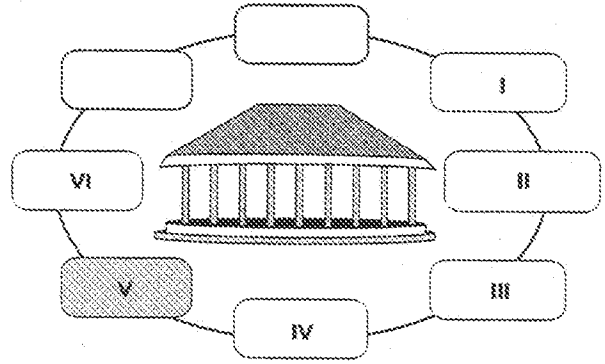
**STEP V**  
**DOCUMENTING THE VILLAGE**  
**DEVELOPMENT PLAN**

- A. Abbreviated Village Development Plan**
- B. Comprehensive Village Development Plan**

**O LE ALA I LE PULE,  
O LE TAUTUA.**

**The path to authority  
is service.**

The true leaders are the ones  
who work for the people.



## STEP V

# DOCUMENTING THE VILLAGE DEVELOPMENT PLAN

## A. INTRODUCTION

Once the Village Development Plan is presented publicly and adapted to meet the community's concern, the plan needs to be documented by the Village Planning Team. This is an important step in the planning process because in order for the development plan to be a legally binding document, it needs to follow a conventional format which is acceptable to the American Samoan Government.

A well documented development plan will also more effectively communicate a village's needs and desires to both the County and Territorial Governments. This step of the Village Planning Workbook will list all the required sections and subsections of a Village Development Plan in outline form.

Since it may not be possible to reproduce this entire document for each 'aiga and private property owner in the village, an **Abbreviated Development Plan** outline is also included in this step of the Workbook. This is a shorter version of the document that is more suited for mass distribution. The outline for longer version, the **Comprehensive Village Development Plan**, begins on page V - 5.

The sections and subsections in both documents are divided into two parts: *Information Needed* and *Sources of Information*. Workbook users should find that most of this information has already been generated in the first four steps of the planning process. What this step does is to synthesize all of this information into a coherent development plan for the future.

Step 5 in Part II of the Village Planning Workbook will also assist the Village Planning Team by providing them with a detailed example of how a Comprehensive Village Development Plan and Abbreviated Plan could look like.

### ABBREVIATED PLAN

Goals and Objectives  
Policies  
Action Plan  
Maps

### COMPREHENSIVE PLAN

Summary  
Introduction  
Description of the Planning Process  
Issues and Concerns  
Recommendations  
Implementation

## **B. ABBREVIATED VILLAGE DEVELOPMENT PLAN**

### **GOALS AND OBJECTIVES**

#### **Information Needed**

- This section lists the vision statement, goals, and objectives of the village in bullet form for easy reference of community members.

#### **Sources of Information:**

- Information for this section will come from Step 3 of the Workbook.
- An example of how to condense this and other sections of the Abbreviated Village Development Plan is provided in Appendix E of the Workbook.

### **POLICIES**

#### **Information Needed:**

- This section is a summary of the guidelines and policies that the village has adopted for future development.

#### **Sources of Information:**

- The policies and guidelines in this section will come from the Strategies and Analysis Step of the Village Planning Workbook.

### **ACTION PLAN**

#### **Information Needed:**

- This section will have a matrix which shows who will be responsible for monitoring and implementing the sequence and phasing of the future development.

#### **Sources of Information:**

- Information for this section will come from the Implementation Step of the Workbook.
- An example of the matrix is provided in Part II of the Workbook.

### **MAPS**

#### **Information Needed:**

- Maps showing proposed development, redevelopment, and the protection areas will be included in this section.

#### **Sources of Information:**

- These maps should reflect what was generated during the analysis in Step 4 of the Village Planning Workbook.



## **C. COMPREHENSIVE VILLAGE DEVELOPMENT PLAN**

### **SUMMARY**

#### **Information Needed:**

- The purpose of this section is to describe the effects of the Village Development Plan on the physical, social, political, economic and natural environments.
- This serves as the justification for the plan and illustrates that it is the best alternative for addressing the local issues and concerns of the community.

#### **Sources of Information:**

- This information should be obtained from the Alternative Analysis Section in Step 4 of the Village Planning Workbook.
- An example of how this could be written is provided in Step 5 in Part II of the Workbook.

### **INTRODUCTION**

#### **1. Physical Description of the Village**

##### **Information Needed:**

- A description of the physical location of the village.
- A description of any regional pressures and influences which are expected to impact residents of that village.

##### **Sources of Information:**

- Some of this background information should come from the ASPA Utilities Master Plan village descriptions.
- Other information on regional pressures and concerns should be generated by village residents in Step 2 of the Village Planning Workbook.

#### **2. Social Description of the Village**

##### **Information Needed:**

- A background description of the village's history, demographics, institutions, economic conditions, and political organization.
- A description of future residential, commercial, and industrial projections.
- This section should also document what community facilities will be required in the future as well as any anticipated changes in current social trends.

#### **Sources of Information:**

- Although much of this information can be based on the ASPA projections for utility requirements of the future, it is important to remember that these projections are based on a continuation of current development trends.
- A village may choose to adopt a policy of slower growth or it may choose to intensify certain activities within its boundaries.
- These visions for the future need to be incorporated into this section, therefore the Village Planning Team should also refer to the information generated in Step 3.

## **DESCRIPTION OF THE PLANNING PROCESS**

#### **Information Needed:**

- This section should give a background of how the village planning process was initiated, who the key decision makers were, and what methodology was used in obtaining community input for the Village Development Plan.
- This section should also include a copy of the official Village Planning Process diagram so that the development plan is shown to have validity and is in agreement with the developmental policies of American Samoan Government.

#### **Sources of Information:**

- It may help to follow the wording of the example in Part II for this section's organization.
- However, information such as how the process was initiated should come from members of the Village Planning Team as they recall how they involved community members in Step 1 of the Village Planning Workbook.

## **ISSUES AND CONCERNS**

### **1. What's Working in the Village**

#### **Information Needed:**

- This subsection has both a written description and map(s) which detail the positive social, environmental, economic, and cultural aspects of the existing village.
- These are amenities in the village that residents would like to preserve in their development plan.
- This information should be structured in a way that describes the reasoning behind the future development plan.

#### **Sources of Information:**

- Information for this subsection should be generated from the village residents input in Step 2, Section D: Identifying Issues and Concerns of the Village Planning Workbook.

- Information for this section should be a summary of all data generated in Step 2 of the Village Planning Workbook.
- Refer to Step 5 in Part II of the Village Planning Workbook for an example of how to organize this material.

## **2. What's Not Working in the Village**

### **Information Needed:**

- Information for this subsection should consist of both text and map(s) which explain the negative aspects of the village.
- These concerns identify social, environmental, economic, cultural deficiencies in the community so that these problems can be mitigated in the Village Development Plan.

### **Sources of Information:**

- Information for this section should come from the village residents' input in Step 2, Section D: Identifying Issues and Concerns of the Village Planning Workbook.

## **3. Maps of Issues and Concerns**

### **Information Needed:**

- The second part of the Existing Conditions section is a summary of the maps that were generated during the Village Assessment Step of the planning process.
- These maps should include but not be limited to environmental hazards, private land ownership, 'Aiga lands, mobility, community assets, existing development and infrastructure, lands uses, social infrastructure, and activities maps.

### **Sources of Information:**

- These maps should have already been generated in the Village Assessment Step of the Workbook.

## **RECOMMENDATIONS**

### **1. Goals of the Village**

#### **Information Needed:**

- This subsection should begin with a well articulated vision statement summarizing the concerns of participants in the visioning process.
- The subsection will then present clear goals and objectives address the village's vision for the future.

- Objectives to meet these goals should also be included to serve as a checklist of the village's needs and desires for both residents and the American Samoa Government.

**Sources of Information:**

- The example provided in Step 5, Part II of the Village Planning Workbook can help with the wording of this subsection.
- However, actual goals and objectives should have already been formulated by the village in Step 3 of the Workbook.
- The vision statement will also come from Step 3 of the Workbook and should reflect how the community would like their village to be in the future.

## **2. Proposed Development**

**Information Needed:**

- This subsection of the document will detail the future development with text and maps to show the areas of development, redevelopment, and the guidelines and policies that the village has adopted for this future development.

**Sources of Information:**

- Information for this subsection will come from Step 4 of the Village Planning Workbook.
- In that section, village residents should have identified which strategies they wish to adopt as guidelines for future development and how those guidelines can be formulated into a comprehensive plan for future development of the village.

## **3. Designated Protection Areas**

**Information Needed:**

- The purpose of this subsection is to designate protection areas to safeguard community assets from future development.
- Both text and maps should be used to identify these locations.

**Sources of Information:**

- Information for this subsection will come mostly from the Assets Mapping activities done in the Village Assessment Step of the Workbook.
- It is also necessary to re-examine the village's vision, goals, and objectives that were laid out in Step 3 of the workbook to ensure that all Protection Areas are identified.

## **IMPLEMENTATION**

### **1. Sequencing and Phasing of Development**

#### **Information Needed:**

- Text and maps that show both the sequence and phasing of the development
- These items are important because they help to prioritize the goals of the development plan so that funding will target the most essential objectives first.

#### **Sources of Information:**

- Background information on population increase and physical developmental that will be needed can be located in the ASPA projections.
- Information on individual 'Aiga's needs will come from the Village Assessment step of the Workbook.
- The action plan for the sequence of this development will be completed by the Village Planning Team in Step 6 of the Workbook.

### **2. Division of Responsibility**

#### **Information Needed:**

- This subsection will document who will be responsible for implementing different objectives of the development plan and how the proposed development will be funded.
- These responsibilities will fall either on the government, the community, the Village Council, the 'Aiga or on certain individuals and those responsibilities should be agreed upon by all parties.
- The Matrix of Responsibilities Chart in Step 5 in Part II of the Workbook can serve as an example.

#### **Sources of Information:**

- This information will be developed by the Village Planning Team in Step 6 of the Workbook.
- The Implementation section of this Village Development Plan should be completed only after a matrix has been developed and agreed upon by all parties.

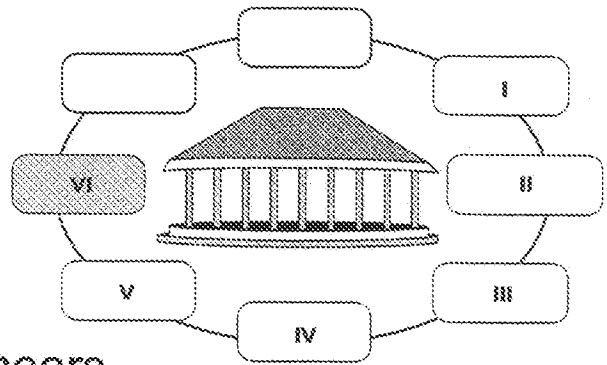




## **STEP VI IMPLEMENTING THE PLAN**

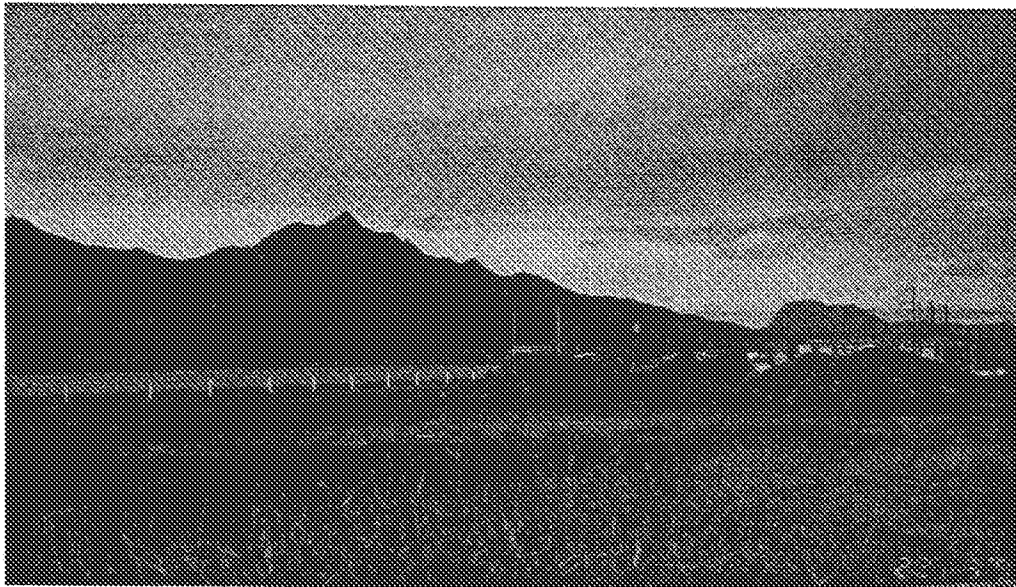
- A. Steps to Implement a Village Development Plan**
- B. Overcoming Implementation Constraints**

**E GASE TOA  
`AE OLA PULE.  
E MANATUA PULE  
`AE LE MANATUA  
FA`ALAEO.**



*The courage of warriors disappears.  
But when the destruction is forgotten,  
the justness of leaders will still be remembered.*

We will not be remembered for our fights,  
but for our accomplishments.





## STEP VI

# IMPLEMENTING THE DEVELOPMENT PLAN

The implementation of a village plan will require that government agencies, *matai*, the village council, and private sector participants all work together in a cooperative manner.

This section provides steps on implementing a village development plan and gives general guidelines on how to overcome implementing constraints. Aspects of the action plan including setting priorities, detailing implementing actions, determining the level of implementation, and setting a time frame. The charts accompanying this section will assist in this. This section will also show how to evaluate and monitor the plan's progress.

### A. STEPS TO IMPLEMENTING A VILLAGE PLAN

#### **Step I. Set Priorities and Determine Implementation Needs**

Once a village plan is agreed, the village council and planning team should prioritize the various strategies. The estimated cost of the strategy, the people needed to be involved, and the physical, material and land needs should also be determined at this step. *Worksheet I, Implementation Requirements*, will assist with this. Identifying and justifying specific projects within the plan also help when applying for outside funds.

#### **Step II. Establish Responsibilities and Set a Time Frame**

For each action the planning team and village council need to decide on the level of implementation [i.e. the area the strategy is designed to cover], the agencies responsible for implementing the action, and an appropriate time frame to complete the action. *Worksheet II, Responsibilities and Time Frame*, will assist with this.

#### **Step III. Assess The Distribution of Benefits Among Villagers**

There needs to be an assessment of who will benefit from the various aspects of the plan. This is to ensure that benefits are equitably distributed among village residents in accordance with Samoan values.

#### **Step IV. Apply For Funds**

EDPO can assist the village council in identifying sources of federal funding for the plan. Seeking the support of the governor will help lend the plan legitimacy. Additionally, a well documented plan with widespread backing can increase the chances of participants taking out personal loans for property improvements. Section 3 gives information on federal funding sources.

#### **Step VI. Evaluate And Monitor Plan; Make Corresponding Adjustments**

Once the funds for implementing a project are available, the implementing team should develop a time schedule for the evaluation of the project or program *Worksheet III, Monitoring and Evaluating the Plan*, will assist with this. Modifications to the plan should be made if their are undesirable outcomes or significant delays.

## **B. OVERCOMING IMPLEMENTATION CONSTRAINTS**

The following recommendations show how to overcome six possible constraints to the successful implementation of a village development plan.

### **a) Organizational Issues**

A number of agencies can assist in the implementation phase by assigning staff as technical consultants to the Village Council. The roles of consultants, team members, and the village council should be specified to avoid organizational difficulties.

### **b) Monetary Resources**

Due to the decline of funding sources from the Federal Government, villages need to be more resourceful in obtaining financing. EDPO, for instance, funds the Business Revolving Loan for small businesses. It was begun to counteract the high cost and short supply of capital for small businesses. As all villages are within the Coastal Zone Area [ASCMP] they could also apply for funds that address shoreline protection, coastal hazards, and all types of infrastructure improvements. Money could also come from revenue from commercial land rent properties or from foreign investment. Efforts to gather funds from outside resources require coordination among the American Samoa Government, the private sector and the village council.

### **c) Cultural Understanding**

Village members should be the natural leaders in determining culturally appropriate approaches for implementing the plan; government representatives should take care to respect this. Training outside consultants on cultural issues will also be an important part of the process.

### **d) Technology**

Projects must use technology that is appropriate and accessible to American Samoa villages. Access to trained planners and engineers is another potential problem. Education and training of villagers is a key task of EDPO and other agencies.

### **e) Village Participation**

Village groups such as the women's group, youth groups, church groups and private landholder groups must all be involved in the village planning process. This will insure widespread backing for the plan.

### **f) Political Environment**

Resource allocation and the sharing of decision making may be constrained by the political environment. The *matai* decision system will directly impact the process of deciding on strategies and choosing an implementation scheme.

## C. FUNDING SOURCES

Loans and grants from all federal programs can be applied to village projects if they meet federal guidelines and are agreed to by village and government officials. Guidelines and applications are available in Hawai'i - village planners will need to rely on outside contacts to bring the information to the village. Grants are available from Community Development Block Grants [CDBG], Community Service Block Grants [CSBG], Housing and Urban Development [HUD], Environmental Protection Agency [EPA], Department of Interior [DOI], and others. They can be used to develop roads, drainage systems, sidewalks, community centers, recreational facilities, senior citizen services, and so forth.

The EDPO, EDA, and Development Bank administer the Economic Development Revolving Loan Fund [EDRLF], which offers loans in small amounts with a minimum of \$1,000 and a maximum ceiling of \$20,000 for agricultural projects and \$100,000 for others. Most loans would be in the \$20,000 to \$30,000 range. They are geared towards village-based industries such as eco-tourism facilities, bed & breakfast inns, small hotels, handicraft shops, home-based industries, fishing and fish processing, and agriculture [Manufacturing and larger commercial industries would be more appropriate for the Industrial Park].

These loans have some restrictions. They can't be used for purchase of land, construction of buildings, relocation, refinancing, and acquisition of equity, nor can they be used for projects for which other funds are available.

The Small Business Fund is set up to assist small villages with development and improvement projects.

It is important in applying to any of these sources that one has a village plan that is strongly supported by local villagers, and one that shows how specific projects fit into the overall scheme of village development. The Village Planning Team should keep in mind the availability of funding when deciding on their strategies.

**EXAMPLE 1 - IMPLEMENTATION REQUIREMENTS**

Implementation Actions	Estimated Cost (\$)	People & Expertise	Physical Material & Land
Construct sidewalks needed by villagers	\$100,000	<i>Matai</i> , Village council, EDPO, DPW, ASPA	cement, construction machines

**EXAMPLE 2 - RESPONSIBILITIES AND TIME FRAME**

Implementing Actions	Level of Implementation					Agencies		Time Frame		
	'Aiga based	Neighbor-hood based	Village based	Sub-district based	County & Territory	Responsible Agencies	Assisting Agencies	Under 1 year	1-5 years	6-10-years
1) Identify the boundary of land ownership	√	√	√	√		OSA, <i>Matai</i> , Village Council	EDPO, AG, Private Sector	√		
2) Investigate and survey land development suitability	√	√	√			DPW, <i>Matai</i>	EDPO, OSA, Village Council, Private Sector	√	√	
3) Enforce land use permits and the registration of private lands			√	√	√	EDPO, Private Sector	DPW, OSA, Village Council	√	√	√

**EXAMPLE 3 - MONITORING AND EVALUATING THE PLAN**

Implementing Actions	Outcome Measure		Environmental Impact	Economic Impact	Cultural Impact
	Short-term	Long-term (Goal)			
1) Set setbacks along flood ways.	How many setback sections are established? How many flood-ways are cleared?	Is the flood disaster controlled or reduced?	How many wetlands are preserved? and how many natural landscapes are saved?	What has the cost been? How much property has been protected?	Is the cultural landscape preserved or enhanced?
2) Preserve existing <i>malae</i> ; restore degraded <i>malae</i> .	How many <i>malae</i> are in excellent shape? How many of them are damaged?	How many <i>malae</i> and associated <i>fale</i> have been restored?	Has <i>malae</i> preservation helped create a positive living environment?	Has the <i>malae</i> attracted business or tourists?	Are <i>malae</i> used as open space and for recreation?

**WORKSHEET 1 - IMPLEMENTATION REQUIREMENTS**

<b>Implementation Actions</b>	<b>Estimated Cost (\$)</b>	<b>People &amp; Expertise</b>	<b>Physical Material &amp; Land</b>



**WORKSHEET 3 - MONITORING THE PLAN**

Implementing Actions	Outcome Measure		Environmental Impact	Economic Impact	Cultural Impact
	Short-term	Long-term (Goal)			







## VII GLOSSARY

- A. Acronyms
- B. Samoan Terms

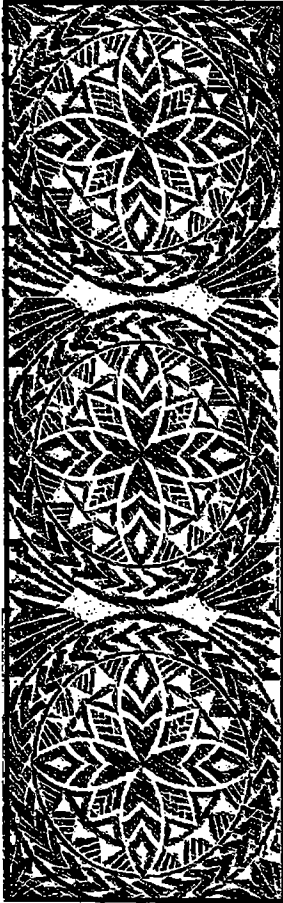
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## A. ACRONYMS

ACE	US Army Corps of Engineers
ASAC	American Samoa Annotated Code
ASCMP	American Samoa Coastal Management Program
ASCC	American Samoa Community College
ASEPA	American Samoa Environmental Protection Agency
ASG	American Samoa Government
ASHPO	American Samoa Historic Preservation Office
ASPA	American Samoa Power Authority
CDBG	Community Development Block Grant
CSBG	Community Service Block Grant
CZM	Coastal Zone Management
DMWR	Department of Marine and Water Resources
DOA	Department of Agriculture
DOC	Department of Commerce
DOE	Department of Education
DOI	Department of the Interior
DOH	Department of Health
DPR	Department of Parks and Recreation
DPS	Department of Public Safety
DPW	Department of Public Works
DURP	Department of Urban and Regional Planning (UH)
EDA	Economic Development Administration
EDPO	Economic Development and Planning Office (The American Samoa Government's Economic Development and Planning Office became the Department of Commerce on April 25 <sup>th</sup> , 1997.)
EDRLF	Economic Development Revolving Loan Fund
NOAA	National Oceanic and Atmospheric Administration
OCRM	Office of Coastal Resource Management
OCZM	Office of Coastal Zone Management
OSA	Office of Samoan Affairs
PBDC	Pacific Basin Development Council
PNRS	Project Notification Review System
PUD	Planned Unit Development
TLC	Territorial Land Court
TPC	Territorial Planning Commission
UH	University of Hawai'i
USEPA	United States Environmental Protection Agency

## B. SAMOAN TERMS

<b>`aiga</b>	elementary or extended family.
<b>ali`i</b>	chief.
<b>alofa</b>	aloha; love; kindness.
<b>atunu`u</b>	country.
<b>`aumaga</b>	young (or untitled) men.
<b>`autalavou</b>	church youth groups.
<b>aualuma</b>	women's group
<b>`ava</b>	shrub; kava, a beverage made with the dried and pulverized root of that shrub mixed with water.
<b>fa`aaloalo</b>	respect.
<b>fa`alupega</b>	ceremonial style and address of a person or social group; traditionally associated with a certain area.
<b>fa`a Samoa</b>	custom; way of life.
<b>fale</b>	house.
<b>falesa</b>	church.
<b>faletalimalo</b>	guest houses surrounding the <i>malae</i> .
<b>faletua ma tausi</b>	women's church group.
<b>feagaiga</b>	social contract to support one's family; covenant.
<b>fesoasoani</b>	assistance.
<b>fono</b>	council; congress; meeting.
<b>fuaiala</b>	small parcels of residential land separated by unpaved roads or footpaths.
<b>mafutaga a tina</b>	church group for wives and elders.
<b>malae</b>	village green; open area at the center of most villages where community activities are conducted.
<b>matai</b>	titled head of a Samoan extended family; chief.
<b>mata`u</b>	respect; fear [as in <i>the fear of God is the beginning of wisdom</i> ].
<b>nu`u</b>	village.
<b>pitonu`u</b>	an autonomous cluster of families with its own council.
<b>poto mai fafo</b>	outside knowledge; Western knowledge.
<b>pulenu`u</b>	official representing the OSA in a village; mayor.
<b>sa`o</b>	chief; senior title holder.
<b>soa lau pule</b>	consensus; wise decision.
<b>tulafale</b>	talking chief.
<b>tautua</b>	service.



## VIII REFERENCES

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## SECTION VIII

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## **IX APPENDICES**

- A. On Reading Maps**
- B. Village Planning Example**



## SECTION IX

## APPENDIX A: ON READING MAPS

Maps are a graphic representation of the physical world. Maps fall into two basic types: cartographic maps and diagrammatic maps. Which type of map one uses depends on what information the map maker wants to convey, and what resources the map maker has access to.

The most common type of map is the view from above, the plan view. Another type of map is a transect section, which shows changes in height and elevation. This map shows what the area looks like if a slice were cut through the area and is usually accompanied by a plan map which notes where the transect section occurs.

### CARTOGRAPHIC MAPS

Road maps and atlas maps are examples of cartographic maps. Typically drafted by specially trained cartographers, these maps are a true representation of a geographic area and follow these conventions:

Cartographic maps will have a SCALE, meaning a proportional unit relative to its real size. A map that has a scale of 1"=100'-0" would mean that on the map, features that are one inch apart on the map would be 100'-0" apart on the land. Maps typically will have a graphic scale that the reader can measure and use to compare distances against.

The NORTH ARROW is also an important map reading tool. This common reference point helps the reader orient himself. When reading the map in the field, one uses identifiable features shown on the map and the directional areas to identify locations.

The land-use maps that the Village Planning Team was asked to draw are drawn over a cartographic base map. The base map includes all other streets and the distances are "true," meaning that a distance that is 1-inch on the map is twice as far as something that is 1/2-inch.

### DIAGRAMMATIC MAPS

The PRA maps are examples of diagrammatic maps. These maps require little formal training to draw and are based on how the map maker perceives the environment, not on specific surveyed data. Using notations, and symbols, they identify landmarks and features relative to each other. They do not need to be scaled but they should be neatly drawn. Based on what the map is intended to show, an important consideration for the map maker is how much information should be included.

For example, in the planning maps from Section IV, the maps should show the main road, the major landmarks along the way, and the coastline for orientation. It is not necessary to include extraneous information that is already implied by the map reader, or too specific for the intent of the map. Unnecessary information would be, for example, Tutuila relative to all of American Samoa on a utility map, or where one's home utility lines were. Such information as Tutuila's place in the Samoan Island group would be important, however, if one was planning transportation corridors for all of American Samoa. Likewise the location of the utility lines are important if one is drawing an existing conditions 'aiga farm map for planning a future residence.

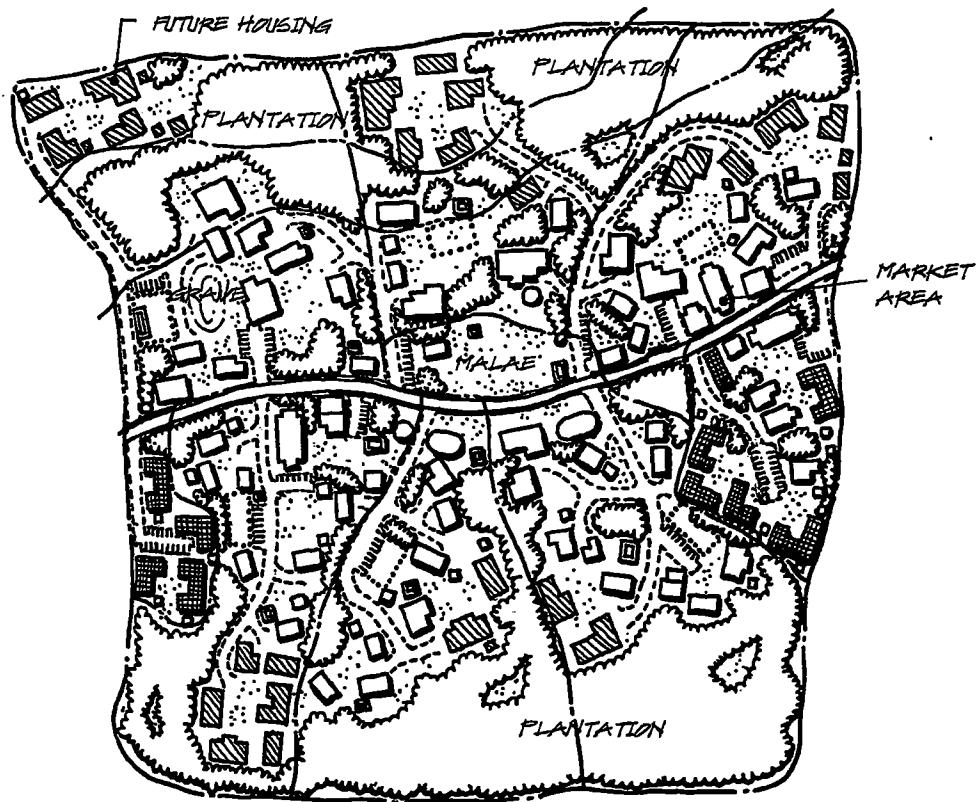


# IX APPENDIX B

## COMPREHENSIVE DEVELOPMENT PLAN

for the hypothetical village of

## LUMANA'I, AMERICAN SAMOA



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## INTRODUCTION

This detailed example of the village planning process uses the hypothetical village of Lumana'i, but the design of this community is based on the actual characteristics of American Samoan villages.

Because of the rapid rate of development, Lumana'i Village is facing many of the same problems real villages face in American Samoa. Lumana'i has a rapidly growing population, depleted resource stock, deteriorating social amenities, and faces the threat of the loss of *Fa'a Samoa*. This village also is faced with the newly introduced challenges brought about by modernization. Portions of the village communal land have been sold to private landholders, automobile traffic has created hazardous situations, and the local subsistence economy is transitioning to a market economy.

The solutions offered here are by no means conclusive. Every village has its own political, social, environmental, and economic conditions and must plan for them accordingly. Not all steps of this planning process may be appropriate for every village. This example illustrates the alternative planning *process* presented in the Village Planning Workbook. It is hoped that this methodology can bring together the best techniques of both the traditional and Western societies to plan for the needs of the future while still allowing American Samoan Villages to retain *Fa'a Samoa*.





## **STEP I**

# **INVOLVING COMMUNITY MEMBERS IN THE PLANNING PROCESS (EXAMPLE)**

### **DISCUSSION**

Lumana'i is faced with a rapidly growing population, developmental pressures, and the threat of the loss of *Fa'a Samoa*. The Territorial Government provided the Lumana'i's Village Council with a new planning aid, the "American Samoan Village Planning Workbook." This community-based Workbook was designed to assist villages in coping with developmental pressures. It would help them produce a Village Development Plan useful to the Federal Government for funding of certain types of projects. The Village Development Plan may also provides a useful roadmap for the future of Lumana`i.

The Village Council appointed a Village Planning Team consisting of individuals from both Lumana'i Village and government agencies. The Village Planning Team's first task was to identify who would be involved in the use of the Workbook. In Lumana'i, they identified several groups which they would be working with in completing some or all of the steps in the Workbook. For the communal landholding areas of Lumana'i, the Planning Team identified the Village Council, Men's Group, Women's Groups, and Youth Group. The Team identified three church groups that would be participating in the process. Lumana'i also had a considerable amount of private property owners in the village. Since it was necessary for all parities in Lumana'i to work together on community issues, the property owners formed two separate private neighborhood associations that could participate in the planning process.

Next, the Village Planning Team met with each of the groups to explain their specific roles in the planning process. The participants were assured that each group would give input and the Village Developmental Plan would be representative of every group's views. The groups were also informed that the village council and private neighborhood associations are representative of both the communal and private interests in the village and therefore, would work together to make any final adjustments to the Village Development Plan before it would be submitted to the Territorial Government.

### **RESULTS**

Lumana'i's planning process has been well organized by the Planning Team in order to ensure its success. Each group in the village has been clearly defined, introduced to the Village Planning Workbook, and assured that they will have a voice in the planning process throughout their scheduled meetings with the Planning Team. Private land owners have also been grouped together in organizations so that they may more easily participate in the planning of their community. Through good planning the traditional decision making structure of the village council is reinforced – the Village Council and the Private Landholder Associations will have the final say on the consensus-driven Development Plan.

**FIGURE 1: GOVERNMENT MAP LUMANA'I VILLAGE**

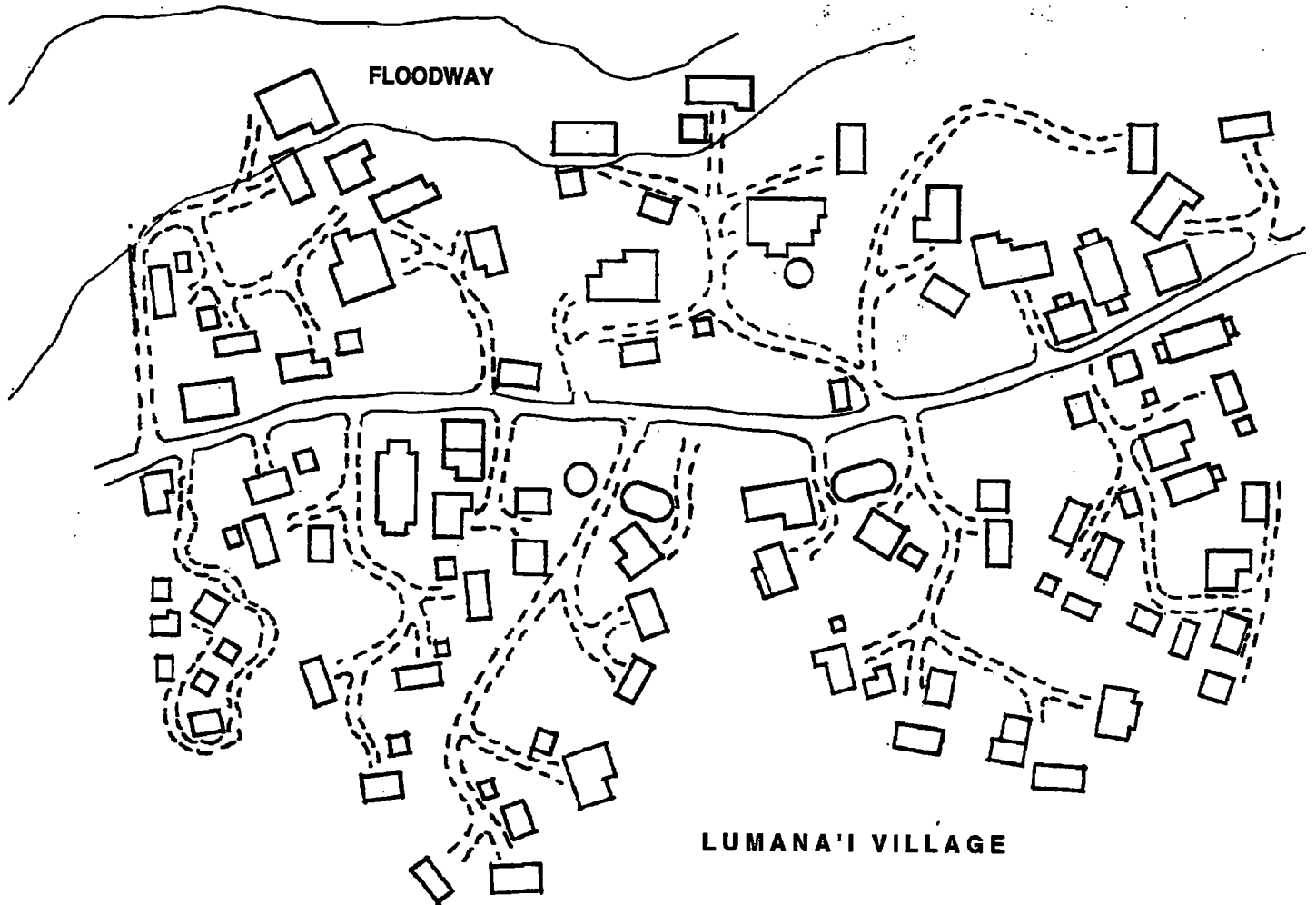


Figure 1 – Government Map of Lumana`i village.

## STEP II

## VILLAGE ASSESSMENT (EXAMPLE)

### DISCUSSION

After identifying the leaders and participants in the village planning process, the next step for Lumana'i was to document the existing conditions in the village. By using the Workbook, community members began this process by first identifying and locating all of the features of each landholding. As there are six 'aiga families and two newly-formed private neighborhood associations, a total of eight land holding maps were consolidated into a detailed reference for the community. Each participant used the "Government Map Lumana'i Village" (*Figure 1, page IX-10*) as a base so that the planning team could easily assemble all the information into one "Consolidated 'Aiga and Private Landholdings Map Lumana'i Village" (*Figure 2, page IX-12*). The planning team also created an "Assets and Problems Map Lumana'i Village" (*Figure 3, page IX-13*) for the entire community based on the input from the various landholders. Once these maps were complete, the Village Planning Team also located an environmentally sensitive area in the floodway on the Assets and Problems Map and completed a "Lumana'i Village Transect" (*Figure 4, page IX-14*) and finished the Participatory Rural Appraisal (PRA) section of the Workbook by creating an "Institutional Diagram Lumana'i Village" (*Figure 5, page IX-15*), which measured the relative power of the stakeholders in the community.

The Planning Team's next step was to contact the various governmental agencies for additional background information on Lumana'i Village. From ASPA and EDPO, the Planning Team learned where existing utilities and infrastructure was located and what were the additional needs to meet the anticipated population growth of Lumana'i. Government agencies also provided the Planning Team with hazard mitigation techniques, sanitation and sewer requirements, parking standards, and building guidelines.

Having inventoried all the items in the village with the PRA methods and with governmental resources, the Village Planning Team then approached all of the various village groups (village council, men's group, women's group, youth group) and community groups (church groups, private neighborhood associations) in Lumana'i to categorize the items in terms of what was, and what wasn't working. By completing the Issues and Concerns Worksheet with each group, the Planning Team was able to consolidate the community's evaluations into a master list identifying what needed improvement and what they wanted to preserve (*Example 1, pages 16-17*).

FIGURE 2: CONSOLIDATED AIGA AND PRIVATE LANDHOLDING  
MAP LUMANA'I VILLAGE

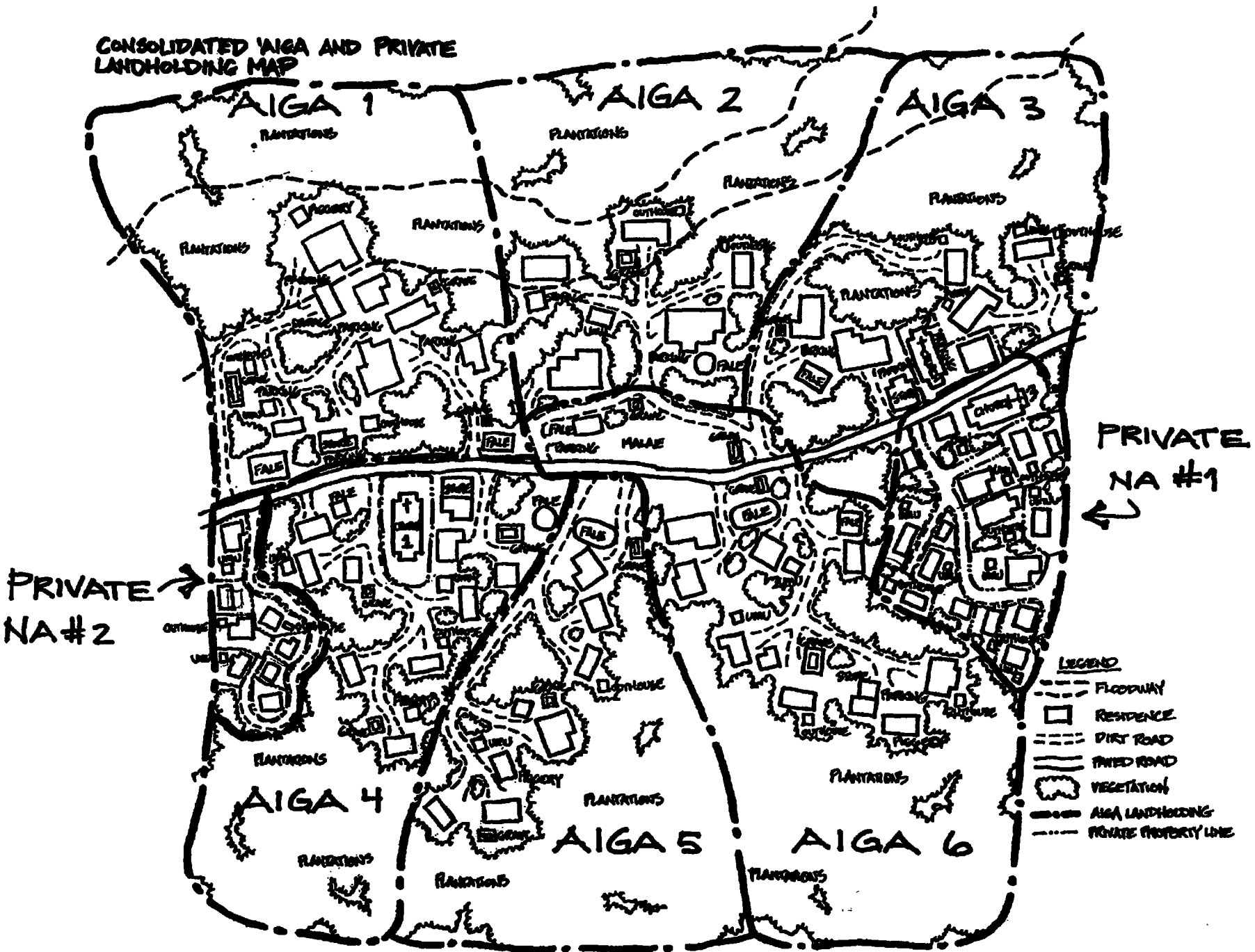
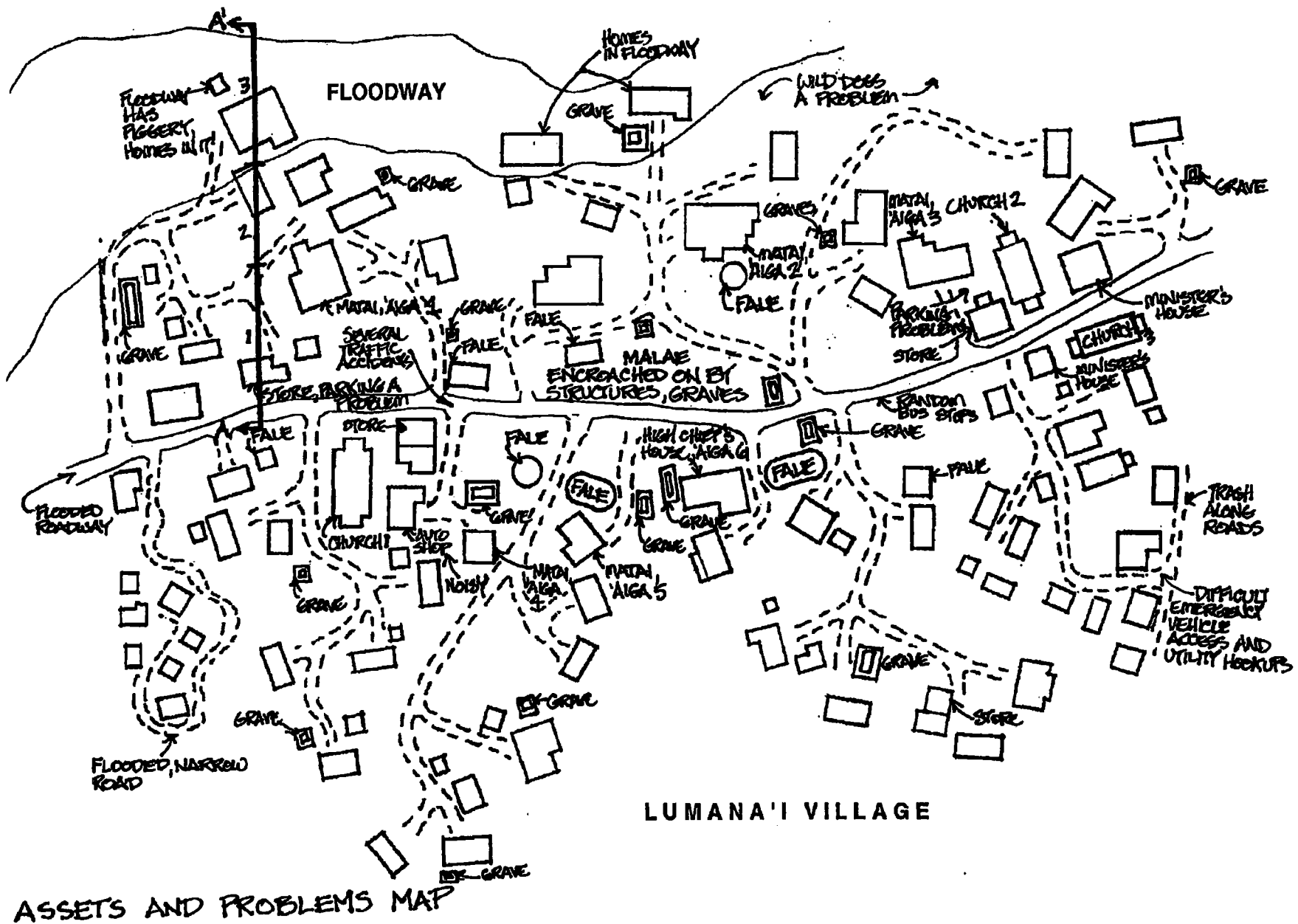


FIGURE 3: ASSETS AND PROBLEMS MAP LUMANA'I VILLAGE



# LUMANA'I TRANSECT

	1	2	3
SOIL / SLOPE	GENTLY SLOPING, RICH SOIL	FLAT AREA	FLOODWAY W/ ALLUVIAL SOIL
PHYSICAL ENVIRONMENT	STORE AND OPEN SPACE, CLEARED AREAS FOR ROADS	HEAVILY CLEARED AREA	INTERMITTENT STREAM, THICK VEGETATION
SOCIO-ECONOMIC INDICATORS	SMALL 'AIGA STORE	SOME SUBSISTENCE AGRICULTURE	SUBSISTENCE AGRICULTURE, PIGGERY
PLANTATION CROPS / VEGETATION	BREADFRUIT	COCONUT, TARO	MANGO, COCONUT, BANANA
INFRASTRUCTURE	PAVED ROAD, SEWER, WATER, ELECTRICITY, DIRT ROADS	SEWER, WATER, ELECTRICITY	SEWER, WATER, ELECTRICITY
PROBLEMS	FLOODING ON PAVED ROAD, POOR DIRT ROADS	GARBAGE PILED UP NEAR ROAD	FLOODING, PIGGERY EFFLUENT, SMELLY WATER QUALITY PROBLEMS
OPPORTUNITIES	GOOD INCOME GENERATOR FOR 'AIGA, MORE OPEN SPACE COULD BE FREED UP IF THERE WERE LESS DRIVEWAYS	COULD SELL SOME AGRICULTURE PRODUCTS	COULD INTENSIFY SUBSISTENCE AGRICULTURE PRODUCTION

FIGURE 4: LUMANA'I VILLAGE TRANSECT

# INSTITUTIONAL DIAGRAM

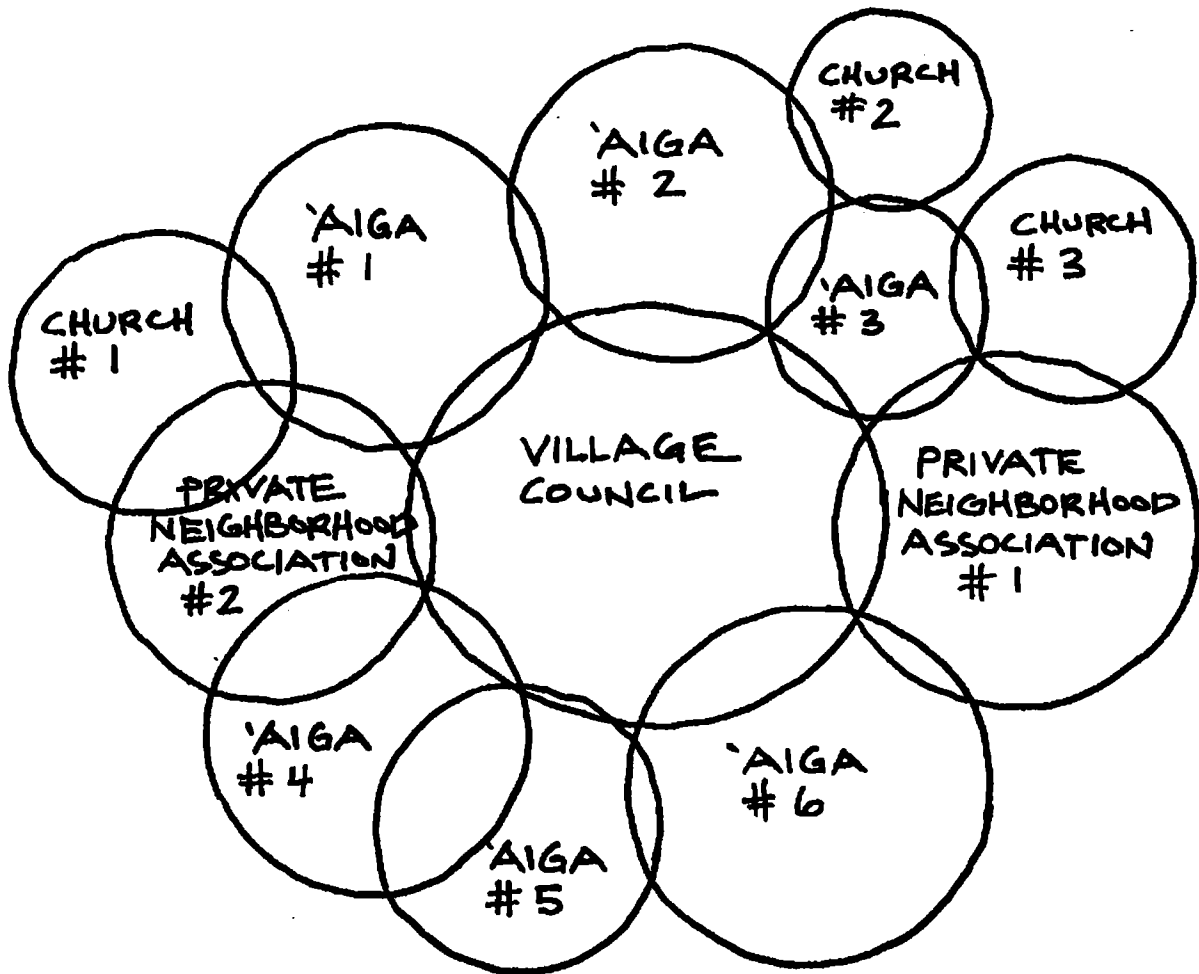


FIGURE 5: INSTITUTIONAL DIAGRAM - LUMANA'I VILLAGE

VILLAGE: *Lumana'i*GROUP: *CONSOLIDATED*Date: *5/25/97* Recorder: *Lisa*

Village Inventory Items	What's Working	What's Not Working
Cultural/Physical Aspects Of The Village: Housing Configuration?		Homes too close (WG, VC, CG2,3, PNA1)
Architectural Design?	Traditional home design (WG, VC, CG1)	Hard to get utilities (PNA1, 2, VC)
Roads?	Housing compounds for social activities (WG, YG, CG1, CG2)	No teaching of traditional crafts (WG, MG, VC, YG)
Utilities?	Sport activities (WG, CG1-3M YG, MG, VC)	No daycare facilities (WG)
Compatibility of Land Uses?	Paved roads (WG, CG1)	No consistent garbage pickup (WG, MG, PNA2, CG1, VC)
Traditional Political System?	Traditional political system (WG, VC, MG)	Parking problems (WG, MG, PNA1,2, CG3, VC)
Malae?	Curfew (MG, VC)	Random bus stops (WG, MG, PNA1, 2)
Historic Places and Artifacts?		Incompatible land uses because of manufacturing (VC, WG)
Social Activities?		Malae encroachment (MG, VC, CG1,2)
Fale?	Fale meetings (MG, VC)	
Extended Family Compounds?	Church activities (PNA1, PNA2, YG, WG, CG3, MG)	
Traditional Craft Activities?		
Sports?		
Schools?		

WG - Women's group

MG - Men's groups

PNA1 - Private Neighborhood Association 1

PNA2 - Private neighborhood Association 2

PNA3 - Private Neighborhood Association 2

VC - Village Council

YG - Youth Group

CG1 - Church Group 1

CG2 - Church Group 2

CG3 - Church Group 3

EXAMPLE 1: ISSUES AND CONCERNS WORKSHEET  
LUMANA'I VILLAGE



Village Inventory Items	What's Working	What's Not Working
<b>Economic Aspects Of The Village:</b> Businesses? Employment? Tourism? Subsistence Economy? Commercial Agriculture? Industrial Areas? Commercial Areas?	Local shopping (MG, WG, PNA1,2, CG3) Good business opportunities (PG 1) Subsistence plantations (WG, MG, VC)	Not enough employment opportunities (PNA1,2, WG, MG) Difficult to bring ag products to market (WG, MG)
<b>Environmental Aspects Of The Village:</b> Flooding? Native Forests? Water? Fishing? Air Quality? Aesthetics?	Forest and plantation good open space (YG, VC, MG, CG1, 2) Main area well kept. (VC, MG)	Flooding a problem in northwest (WG, YG, MG, VC); flooding on main road (VC, WG); flooding in private neighborhoods (PNA1, 2, CG3), water quality problems during floods (MG, WG, VC, PNA1, 2); garbage along back roads (MG, VC, CG1, CG2).

- WG – Women's group
- MG – Men's groups
- PNA1 – Private Neighborhood Association 1
- PNA2 – Private neighborhood Association 2
- PNA3 – Private Neighborhood Association 2
- VC – Village Council
- YG – Youth Group
- CG1 – Church Group 1
- CG2 – Church Group 2
- CG3 – Church Group 3

## **RESULTS**

The Village Assessment Step of the Workbook is an essential element of the planning process. It is in this step that the community members of Lumana'i have thoroughly inventoried all the cultural, economic, and environmental aspects of their village. They also now have some idea of what the future population pressures may be and what kinds of infrastructural improvements are associated with this growth. More importantly, they have evaluated each of the inventoried items to determine which are assets and which pose problems for the future. Having done a comprehensive village assessment, community members of Lumana'i are ready to begin identifying a common village vision for the future.

### **Physical Description of Lumana'i Village**

Lumana'i village is located in Nu'ufou County on the island of Tutuila in American Samoa. Nu'ufou County maintains the Island's only international airport, a seafood industrial sector and the University of Tutuila. Nu'ufou supports more than 86% of the Island's employment base and is the most populated county on Tutuila Island. Nu'ufou county also contains the islands main harbor.

Lumana'i Village is located in the southeast region of Nu'ufou and represents one of six villages situated in that county. Ground elevation ranges 200 to 300 feet above the mean sea level. Surface drainage generally flows from northwest to southeast.

Lumana'i village occupies approximately 106 acres of the county and comprises 12% of Tutuila Island's land mass. Of these 106 acres, 1% are held by the government, 8.33% are held by private land owners, 1.5% are held by churches and the remaining 89.17% of the acreage is communal family land.

### **Social Description of Lumana'i Village**

#### **Residential**

The basic social unit in American Samoa is the *'aiga* or extended family. In 1990, the government census estimated the village population at 308 persons. Of this, a total population of 193 persons living in a total of 54 Samoan and Western style homes. A 1990 government census also indicated a total of 115 persons with a total of 32 houses living within Lumana'i Village on privately held land. Approximately 86% of the homes were owner-occupied; 14% were rental units. A county sponsored survey in 1989 documented a total of six *'aiga* land boundaries.

Population trends suggest that considerable in-migration has gradually occurred in this village. The village population grew approximately 9.6% per year between 1980 and 1990. Future residential expansion in the village is expected to increase due to a combination of factors:

- The general suitability of accessible, vacant land for residential development.
- The apparent in-migration of new residents.
- The location of main employment sector.

The cumulative effect of prospective population growth is that the housing stock will increase roughly to 109 with an accompanying increase of 423 persons living in Lumana'i village by 2015.

### **Village Political Organization**

The chief *matai* and lesser *matai* administer 'aiga property and are significant voices allocating 'aiga land to family members for houses and cultivation; assigning labor, goods and money for 'aiga sponsored projects; ceremonial redistribution; acting as custodians of other 'aiga assets; mediating and arbitrating intra- and inter- 'aiga disputes; and representing the 'aiga in district and local councils.

The *matai* system is undergoing significant change caused in part by changing economic and political systems.

### **Commercial**

There are approximately four commercial enterprises located and operating in Lumana'i village. These commercial services include a laundromat, village grocery store, grocery store attached to a residence, and gas station. It is believed that all of these commercial operations are all home-based occupations.

During the next 20 years, it is expected that three new retail stores and two gas stations will emerge to serve the villages growing residential population. It is further expected that more professional and technical services will also emerge with the influx of residents and as the larger Nu'ufou county expands.

### **Industrial**

There is one auto shop operating in Lumana'i village.

### **Public Facilities**

There is no public education facility located in Lumana'i village. Population characteristics for the village are as follows:

- Ages three and four represented 6.5%
- Ages five through 13 represented 22%
- Ages 14 through 18 represented 11%

The planning team also calculated school enrollment.

## **EXISTING CONDITIONS**

Lumana'i Village has retained much of its traditional Samoan character. In the center of the village is the *malae*, ringed with traditional *fale*. The *malae* is, however, somewhat small for cricket games. Also, the main road, several structures, and graves have encroached onto the field.

The village is currently surrounded by a greenbelt of plantation lands, that is still cultivated by families, both for their personal consumption and for sale in the Pago Pago Farmers' Market. Increasingly, However, the `aiga have been clearing these lands to make room for additional family homes or subdividing the land for sale to private landowners. Many of these newer homes have tapped into existing electricity, phone, sewer, and water connections and the demand is overloading the infrastructure system. Because homes have been built too close to together and without addresses, emergency vehicles cannot reach these homes.

Three churches and two stores are located along the main road. All are village land marks and popular gathering places for villagers. However, because of the conditions of the back roads, many villagers drive instead of walk and there is a shortage of parking. Many cars park directly on the road and thus need to back out into the flow of traffic, generating congestion on the main street. The random, frequent stops of the `aiga buses also contribute to the traffic slow down.

Flooding is a problem for the entire village. Because of dumping and construction within the floodway, quickly moving floodwater often inundate the village, damaging the homes and eroding the topsoil. Walls, especially along the road, have exacerbated the problem by channeling and speeding the water.

## **ISSUES AND CONCERNS**

### **What's Currently Working in Lumana'i Village**

#### **Cultural and Physical Aspects**

There are certain physical design elements that are present in Lumana'i's landscape which are beneficial to the *Fa'a Samoa* way of life. One reason that the Samoan culture continues to thrive in Lumana'i is because of the traditional physical layout of the Village. Traditional homes and *fale* ring the Village *malae*, and many extended family compounds with open space still exist in the Village. Both children and adults use these spaces for sports and other social activities. Lumana'i also has a strong belief in the traditional Samoan political structure and social activities which bind the Village tightly together. Curfews are followed, church functions are anticipated, and the *matai* are respected (*Figure 6, page IX-22*).

#### **Economic Aspects**

Lumana'i has both good local business and employment opportunities. The four small family businesses make local shopping convenient for residents while at the same time provide a source of income and jobs for extended families. Lumana'i's families also have ample plantation lands for growing subsistence crops, decreasing their dependence on outside sources. Additionally, surplus food is often sold at the markets in Pago Pago by families seeking to supplement their income.

### **Environmental Aspects**

Lumana'i is generally recognized as a healthy environment for Village residents. The plantation areas of Lumana'i provide ample open space for children to play and provide opportunities for residents to connect with nature. Native birds and other species are abundant. Other environmental assets are the village proper and the *malae*, which are well kept and aesthetically pleasing to the community of Lumana'i.

## **What's Currently Not Working in Lumana'i Village**

### **Cultural and Physical Aspects**

While there are many amenities in Lumana'i, there are also deficiencies which have negative impacts on Village life. Many of the existing homes have been built haphazardly and are too close to each other, invading personal privacy and making utility access difficult. In recent years this development has encroached on long-time community assets such as the churches and the Village *malae*. As a result, parking problems are rampant along the main road and buses stop in a random fashion. This creates hazards for both drivers and pedestrians. There is also the concern that the children of Lumana'i are becoming too Westernized. Fewer children are now active in traditional Samoan craft making and cultural ceremonies (*Figure 7, page IX-23*).

The main road is paved, but unlit and without sidewalks. The back roads of the village are narrow and often difficult to pass because of parked cars and trash. Many intersections are at awkward angles or have poor visibility, making them dangerous for both autos and pedestrians.

### **Economic Aspects**

Although there are many good employment and business opportunities, few of them are actually capitalized on. As of yet, the Village has been unable to supplement their income by tapping into the growing tourist industry. Therefore, Lumana'i is still without a market which could be used for selling locally produced goods such as crafts and plantation products. Local entrepreneurs now must resort to driving into Pago Pago to sell their products.

### **Environmental Aspects**

Flooding remains the greatest environmental threat to Lumana'i. There are sections of the main road and private neighborhood roads that often flood during storms. Much of this problem is actually due to the rock walls which line the roads and in effect, turn them into culverts. Some homes and other uses have also been placed in the floodway north of the main road. Some of these residents have filled the floodway to make foundations for their homes, exacerbating the flooding problem. Other residents have polluting uses in the floodway, such as piggeries, which threaten the water quality of the entire region. (*Text continued on page IX-24*)

FIGURE 6: WHAT'S CURRENTLY WORKING IN LUMANA'I VILLAGE

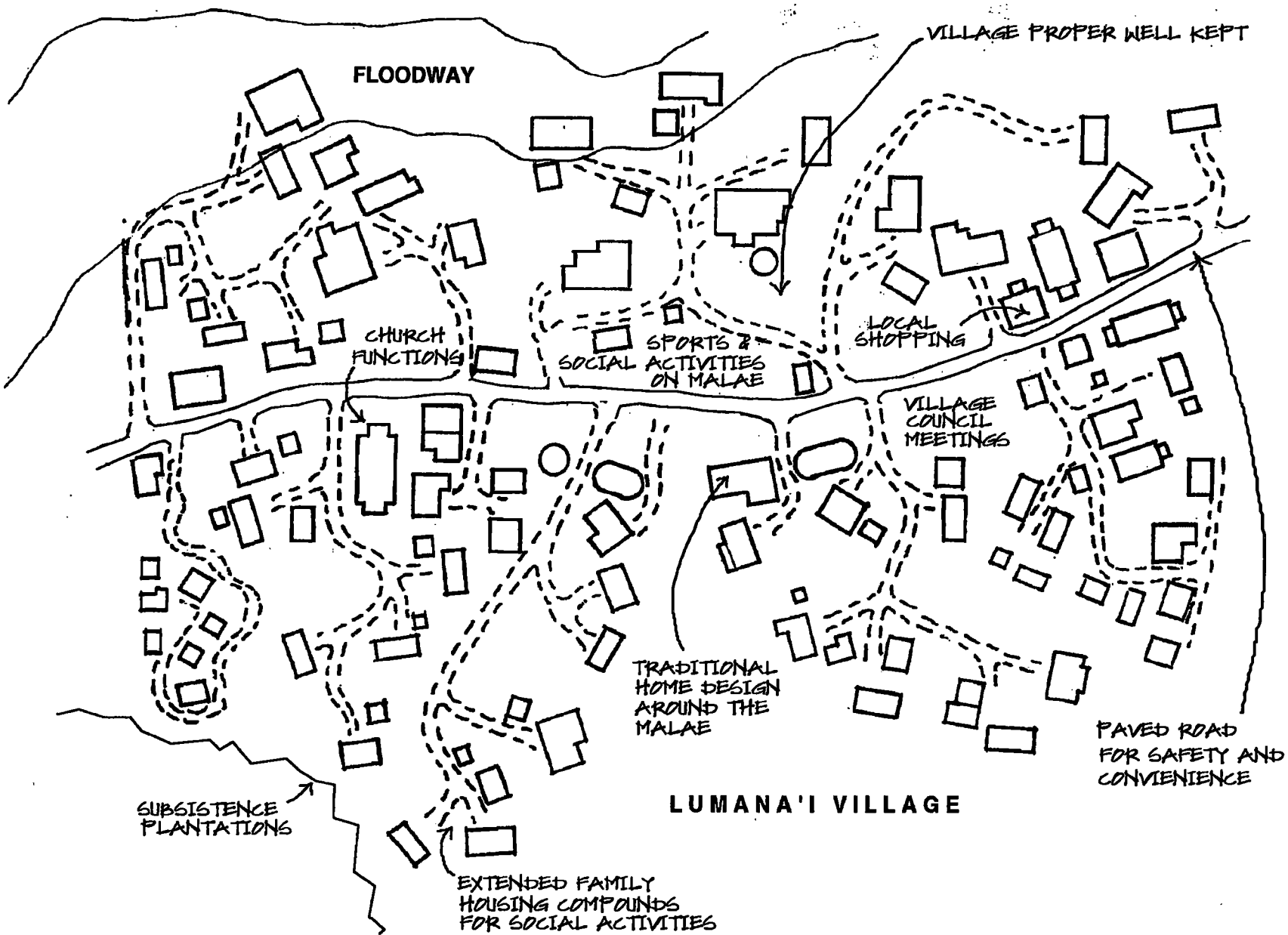
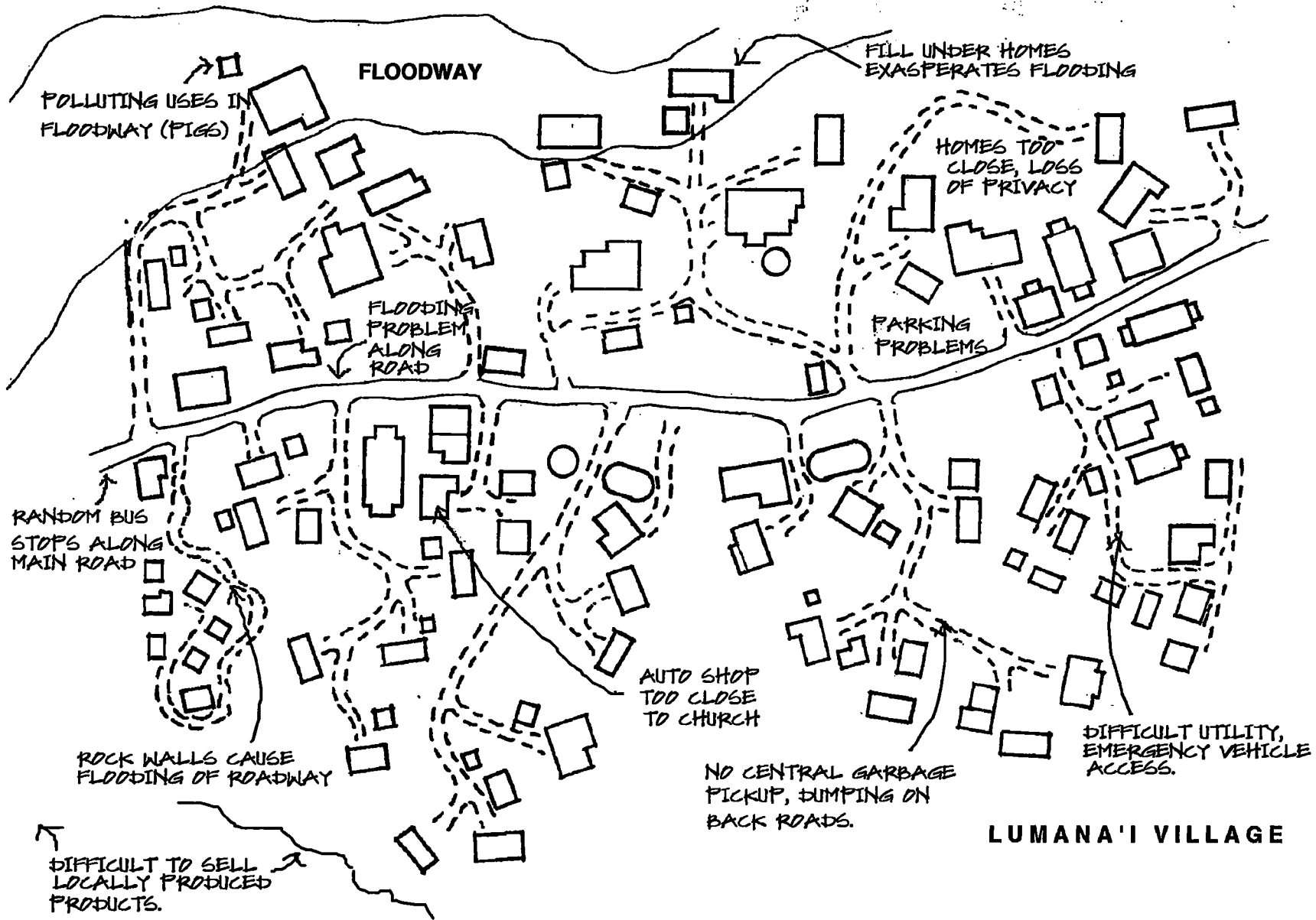


FIGURE 7: WHAT'S CURRENTLY NOT WORKING IN LUMANA'A VILLAGE



In recent years, trash disposal has also been a problem in Lumana'i. Without centralized trash collection points, some families have resorted to use the back roads of the Village as dumping grounds.

Lumana'i is in an aquifer recharge area and while it is necessary to prevent flood damage, there is also an equally important need to hold the water on site, allowing it to percolate down and recharge the underlying aquifer. In flood events waste from piggeries, outhouses, and industrial uses, such as auto shops, threaten to contaminate the water supply for the entire County.



## **STEP III**

# **IDENTIFYING A VILLAGE'S VISIONS FOR THE FUTURE (EXAMPLE)**

### **DISCUSSION**

The visioning process for Lumana'i was undertaken by the same village groups that participated in the Identification of Issues and Concerns section of the Workbook. The first step was to do a quick timeline of major events that occurred in the village. This step was useful not only to demonstrate how fast change occurred, but also identifying what impact specific events in the past have on village life today. This process of community enlightenment was also coupled with an exercise where the groups were shown a series of aerial photos that illustrated the changes in Lumana'i's landscape over time.

The groups were then asked to review their list of issues and concerns so that they could better understand how the problems of today were linked to the developmental patterns of the past. They were asked to review these concerns in light of the projected population levels for their village. They were also reminded of what they identified as still working well in the village, and that these could be in danger of disappearing if haphazard development was allowed to continue.

The next step of the visioning process was to ask the groups how they want their village to be like in the future. Key words and phrases were solicited from the participants and were written down on a large easel pad until they could be assembled into the group's single vision statement. Each of these group's vision statement was intended to illustrate a social consensus of what feeling they would like their village to evoke.

Once each group completed the visioning process, the Planning Team then consolidated the participants input into a single vision statement. The Planning Team then carefully put together a list of goals and objectives which were geared to both the community's vision statement, and also to the other concerns that the participants had raised during the planning process thus far. Next, the vision statement, goals, and objectives were presented publicly to Lumana'i Village to see if any changes were needed before they were finalized. The revised vision, goals, and objectives were used by the Planning Team in the next step of the Workbook, Strategies and Plan Alternatives Analysis.

### **RESULTS**

Having completed the visioning process outlined in Step III of the Workbook, the community members of Lumana'i have come away with a clear picture of what they would like for their village. Since this vision was consensus-driven, it will serve as guide for all future development of both 'aiga and private land holdings. Completing this step also ensures that all community members understand the common goals and objectives of Lumana'i, and future development should be consistent with the village's vision statement. The vision statement, goals, and objectives are provided below.

## **Vision Statement:**

"In keeping with *Fa'a Samoa*, Lumana'i Village will pursue a future which maintains our traditional social structure, preserves our village proper, and enhances the safety and well-being of our children's environment. Our village must maintain its unique cultural connections to the past by fostering intimate relationships between our community members. We also realize that a certain measure of change is inevitable. We will adjust for the anticipated population, economic, and environmental pressures of tomorrow by planning for them today."

## **Goals and Objectives:**

**Goal 1 - Create a new Planning Assembly for the Village of Lumana'i**

### **Objectives**

- \* Form political ties between the newly formed Private Neighborhood Associations and the Village Council
- \* Designate a *fale* to be used for community-wide meetings

**Goal 2 - Effectively Manage Growth**

### **Objectives**

- \* Determine proper densities and location for future development
- \* Stop the encroachment on to and instead enhance the village *malae*
- \* Designate *'aiga* plantation preservation areas to support the subsistence economy and to maintain open space
- \* Designate *'aiga* extended family graveyards to conserve areas for open space

**Goal 3 - Reduce Hazardous Conditions in the Village**

### **Objectives**

- \* Adopt new floodway guidelines
- \* Enact a dog control policy
- \* Improve road surface, alignments and intersections of roads
- \* Designate parking areas for community facilities and stores
- \* Designate bus stop areas

**Goal 4 - Enhance the Community and Cultural Identity of Lumana'i**

### **Objectives**

- \* Create a village logo and entry signs for Lumana'i
- \* Create a road and building signage system
- \* Create a traditional craft-making area/institution
- \* Create architectural design standards for the village proper

**Goal 5 - Encourage Economic Development**

### **Objectives**

- \* Designate a location for a local food and craft market
- \* Designate suitable locations for light industries
- \* Encourage the aggregation of economic activities

### **Guidelines and Policies:**

1. Rock walls shall be prohibited in the village to alleviate the flooding of roadways
2. The existing private landholdings shall be replotted and existing structures will be replaced with duplexes and triplexes to free up more open space in those neighborhoods
3. Future development will be encouraged to form 'aiga compounds for extended family social interactions
4. Retention basins will be constructed to mitigate flooding effects
5. Polluting uses, such as piggeries, are prohibited in the floodway
6. A cultural preservation area around the *malae* shall be enforced to preserve and enhance traditional Samoan values
7. A craft and produce marketplace will be constructed to support local plantations and traditional craft making
8. All future development shall follow the principles of Conservation Design to make efficient use of land and resources
9. All future commercial enterprises shall be consolidated into designated locations
10. Dangerous roads and intersections shall be improved
11. Sidewalks and lighting will be added to both sides of the main road
12. The main road will curve to the south around the *malae* to give more space for social activities
13. An entry sign and street signs with a Lumana'i logo shall be constructed
14. A single 'aiga grave site shall be constructed for each extended family in the Village to make more efficient use of space
15. Centralized trash collection points will be located for each 'aiga and private neighborhood
16. One bus stop on each side of the main road shall be constructed



## STEP IV

# STRATEGIES SELECTION AND PLAN ANALYSIS (EXAMPLE)

### DISCUSSION

At this point in the planning process, the Village Planning Team had completed the village-based assessment of existing conditions and also had documented the Village's vision, goals, and objectives for the future. Their next step was to incorporate all of this information into a coherent development plan for the future. Lumana'i's Planning Team began this process by using the Strategy Selection Worksheets Lumana'i Village (*Example 2, pages IX-29 to 35*) provided in Step IV in the Workbook. The strategies they choose directly correlated with the issues, concerns, and the Village's vision for the future. By using the worksheets they were able to record where and how these strategies would be applied.

Next, the Village Planning Team drew a rough map that showed a spatial description of the application of the selected strategies. The "Future Land Use Bubble Diagram for Lumana'i Village" (*Figure 8, page IX-36*) is map was drawn over a copy of the government and designates appropriate land use for different areas.

Both the rough map and the strategies selection worksheets were then used to complete the Categories of Concern Worksheet (*Example 3, page IX-37*). The selected strategies were identified and keyed on the map for easy reference. Since this analysis showed both the benefits and costs of each strategy, some strategies were abandoned in favor of others that had less negative impacts on the Village. After completing the analysis of the projected cultural, economic, and environmental impacts of the proposed strategies, the Planning Team then made adjustments to what would become the Village Development Plan. This Plan was drawn up as a "Illustrative Map Lumana'i Village" (*Figure 9, page IX-38*) and then was presented to the Village Council and Neighborhood Associations in order to get their approval. After a few more changes were made and agreed upon, the Planning Team could then move on to the next step of Documenting the Plan.

### RESULTS

This step of the planning process required that the Planning Team revisit all the data gathered in the previous three steps of the Workbook. By ensuring that all Village concerns are incorporated into the future development plan, the community of Lumana'i will feel more ownership over the plan and it will have the necessary backing during the implementation phase of the process. Lumana'i's Planning Team also was careful not to cut corners by completing a thorough analysis of the projected impacts of the strategies. This analysis was helpful in not only getting approval from the Village Council and Neighborhood Associations, but it will also serve as justification for the Plan once it is submitted to the American Samoan Government.

## EXAMPLE 2: STRATEGY SELECTION WORKSHEETS LUMANA'I VILLAGE

<b>STRATEGY</b> <i>Bar rock walls, tear down existing rock walls along roads</i>
<b>PURPOSE OF STRATEGY</b> <i>To stop the roads from flooding.</i>
<b>AREA OF IMPLEMENTATION</b> <i>In private neighborhood association #1 &amp; #2.</i>
<b>LEVEL OF IMPLEMENTATION</b> <i>Families will be responsible for clearing own walls.</i>
<b>WHO NEEDS TO BE INVOLVED?</b> <i>Residents along roads</i>

<b>STRATEGY</b> <i>Land replotting of private owned areas and replacement of single family structures with duplexes and triplexes</i>
<b>PURPOSE OF STRATEGY</b> <i>To free up more room for infrastructure, parking, and open space to raise land values.</i>
<b>AREA OF IMPLEMENTATION</b> <i>Private neighborhood association #1 and #2.</i>
<b>LEVEL OF IMPLEMENTATION</b> <i>Private land owners will work together and sell extra dwelling units to allow costs.</i>
<b>WHO NEEDS TO BE INVOLVED?</b> <i>All residents in two private neighborhood associations.</i>

<b>STRATEGY</b> <i>'Aiga compounds</i>
<b>PURPOSE OF STRATEGY</b> <i>To create locations for social interaction between extended families.</i>
<b>AREA OF IMPLEMENTATION</b> <i>All new residential in 'aiga lands, also will enhance some existing compounds by moving driveways to rear of buildings.</i>
<b>LEVEL OF IMPLEMENTATION</b> <i>'Aiga level.</i>
<b>WHO NEEDS TO BE INVOLVED?</b> <i>All matai of each 'aiga to carefully plan future residential areas.</i>

**EXAMPLE 2 (CONTINUED): STRATEGY SELECTION WORKSHEETS  
LUMANA'I VILLAGE**

<b>STRATEGY</b> <i>Create a retention basin.</i>
<b>PURPOSE OF STRATEGY</b> <i>To avert flooding on western portion of main road.</i>
<b>AREA OF IMPLEMENTATION</b> <i>Will create it behind the store on 'aiga 1</i>
<b>LEVEL OF IMPLEMENTATION</b> <i>Village men's groups will construct retention basin.</i>
<b>WHO NEEDS TO BE INVOLVED?</b> <i>Village council.</i>

<b>STRATEGY</b> <i>Improve ground water supply, move existing piggeries out of roadway, prohibit future polluting uses in roadway.</i>
<b>PURPOSE OF STRATEGY</b> <i>To improve health conditions in village.</i>
<b>AREA OF IMPLEMENTATION</b> <i>'Aiga #1, 2, and 3 (piggery moved from 'aiga #1)</i>
<b>LEVEL OF IMPLEMENTATION</b> <i>Family matai in 'Aiga #1, 2, and 3.</i>
<b>WHO NEEDS TO BE INVOLVED?</b> <i>Village council.</i>

<b>STRATEGY</b> <i>Create cultural preservation area around make → new construction must promote Samoan theme.</i>
<b>PURPOSE OF STRATEGY</b> <i>To preserve historic village structure in the village proper.</i>
<b>AREA OF IMPLEMENTATION</b> <i>In designated zone around the make.</i>
<b>LEVEL OF IMPLEMENTATION</b> <i>All 'aiga matai will enforce this guideline.</i>
<b>WHO NEEDS TO BE INVOLVED?</b> <i>Village council.</i>

**EXAMPLE 2 (CONTINUED): STRATEGY SELECTION WORKSHEETS  
LUMANA'I VILLAGE**

<b>STRATEGY</b> <i>Create a central market place for the selling of crafts and plantation products.</i>
<b>PURPOSE OF STRATEGY</b> <i>To promote traditional artistry and create local economic opportunities.</i>
<b>AREA OF IMPLEMENTATION</b> <i>Market will be adjacent to the matae on 'aiga #3 land.</i>
<b>LEVEL OF IMPLEMENTATION</b> <i>All 'aiga will construct and maintain market, will apply for government grants.</i>
<b>WHO NEEDS TO BE INVOLVED?</b> <i>Village council, men's group, and women's group.</i>

<b>STRATEGY</b> <i>Conservation design for each 'aiga land identifying access, future residential areas, graves, open space, and plantation preservation areas.</i>
<b>PURPOSE OF STRATEGY</b> <i>To avoid haphazard development and better plan for new development.</i>
<b>AREA OF IMPLEMENTATION</b> <i>Each matai will plan all of his/her landholdings.</i>
<b>LEVEL OF IMPLEMENTATION</b> <i>After 'aiga maps are complete, village council will combine all maps into single village map.</i>
<b>WHO NEEDS TO BE INVOLVED?</b> <i>All matai, village council.</i>

<b>STRATEGY</b> <i>Consolidation of commercial enterprises → move inappropriate enterprise such as auto shops away from church in 'aiga #4.</i>
<b>PURPOSE OF STRATEGY</b> <i>To eliminate haphazard situations along main road, to provide enough parking.</i>
<b>AREA OF IMPLEMENTATION</b> <i>'Aiga #1 and 4 and #3 and 6, and private neighborhood association #1.</i>
<b>LEVEL OF IMPLEMENTATION</b> <i>Regulated at village council level and by village of Lumana'I planning assembly (PNA #1 and #2).</i>
<b>WHO NEEDS TO BE INVOLVED?</b> <i>Village council, matai, and leaders of private neighborhood association #1 and #2.</i>



## EXAMPLE 2 (CONTINUED): STRATEGY SELECTION WORKSHEETS LUMANA'I VILLAGE

<b>STRATEGY</b> <i>Improve road surfaces and intersections.</i>
<b>PURPOSE OF STRATEGY</b> <i>To improve safety for drivers and pedestrians.</i>
<b>AREA OF IMPLEMENTATION</b> <i>Will improve road surfaces, straighten and align roads into T-intersections between dirt and main road.</i>
<b>LEVEL OF IMPLEMENTATION</b> <i>Will be a village-wide guideline.</i>
<b>WHO NEEDS TO BE INVOLVED?</b> <i>Matai, village council, private neighborhood associations.</i>

<b>STRATEGY</b> <i>Add sidewalks and lighting.</i>
<b>PURPOSE OF STRATEGY</b> <i>To create a safer, more pedestrian-oriented environment.</i>
<b>AREA OF IMPLEMENTATION</b> <i>On both sides of main road.</i>
<b>LEVEL OF IMPLEMENTATION</b> <i>Will apply to federal sources for funds → implemented by village council.</i>
<b>WHO NEEDS TO BE INVOLVED?</b> <i>Village council, matai, private neighborhood associations.</i>

<b>STRATEGY</b> <i>Enhance ma'ae by moving main road over a bit to the south.</i>
<b>PURPOSE OF STRATEGY</b> <i>To create more open space for village activities.</i>
<b>AREA OF IMPLEMENTATION</b> <i>Central village.</i>
<b>LEVEL OF IMPLEMENTATION</b> <i>Will apply for federal funds, implemented by village council.</i>
<b>WHO NEEDS TO BE INVOLVED?</b> <i>Village council, matai.</i>

**EXAMPLE 2 (CONTINUED): STRATEGY SELECTION  
WORKSHEETS LUMANA'I VILLAGE**

<b>STRATEGY</b> <i>Create village logo and construct village entry sign and street signs at all road intersection with main road.</i>
<b>PURPOSE OF STRATEGY</b> <i>To enhance Lumana'I's identity and provide street identification for emergency vehicles.</i>
<b>AREA OF IMPLEMENTATION</b> <i>Along main road.</i>
<b>LEVEL OF IMPLEMENTATION</b> <i>All matai and neighborhoods.</i>
<b>WHO NEEDS TO BE INVOLVED?</b> <i>Village council, men's group, private neighborhood associations.</i>

<b>STRATEGY</b> <i>Create 'aiga grave sites.</i>
<b>PURPOSE OF STRATEGY</b> <i>To conserve open space, prevent haphazard placement of gravesites.</i>
<b>AREA OF IMPLEMENTATION</b> <i>In each 'aiga landholdings.</i>
<b>LEVEL OF IMPLEMENTATION</b> <i>Village council will work with each matai.</i>
<b>WHO NEEDS TO BE INVOLVED?</b> <i>Village council and matai.</i>

<b>STRATEGY</b> <i>Centralized trash collection points for all 'aiga and neighborhoods, clean up trash along back roads.</i>
<b>PURPOSE OF STRATEGY</b> <i>To stop dumping along back roads.</i>
<b>AREA OF IMPLEMENTATION</b> <i>Collection point near main road, clean up back roads of all 'aiga.</i>
<b>LEVEL OF IMPLEMENTATION</b> <i>Village council.</i>
<b>WHO NEEDS TO BE INVOLVED?</b> <i>Matai, neighborhood associations.</i>

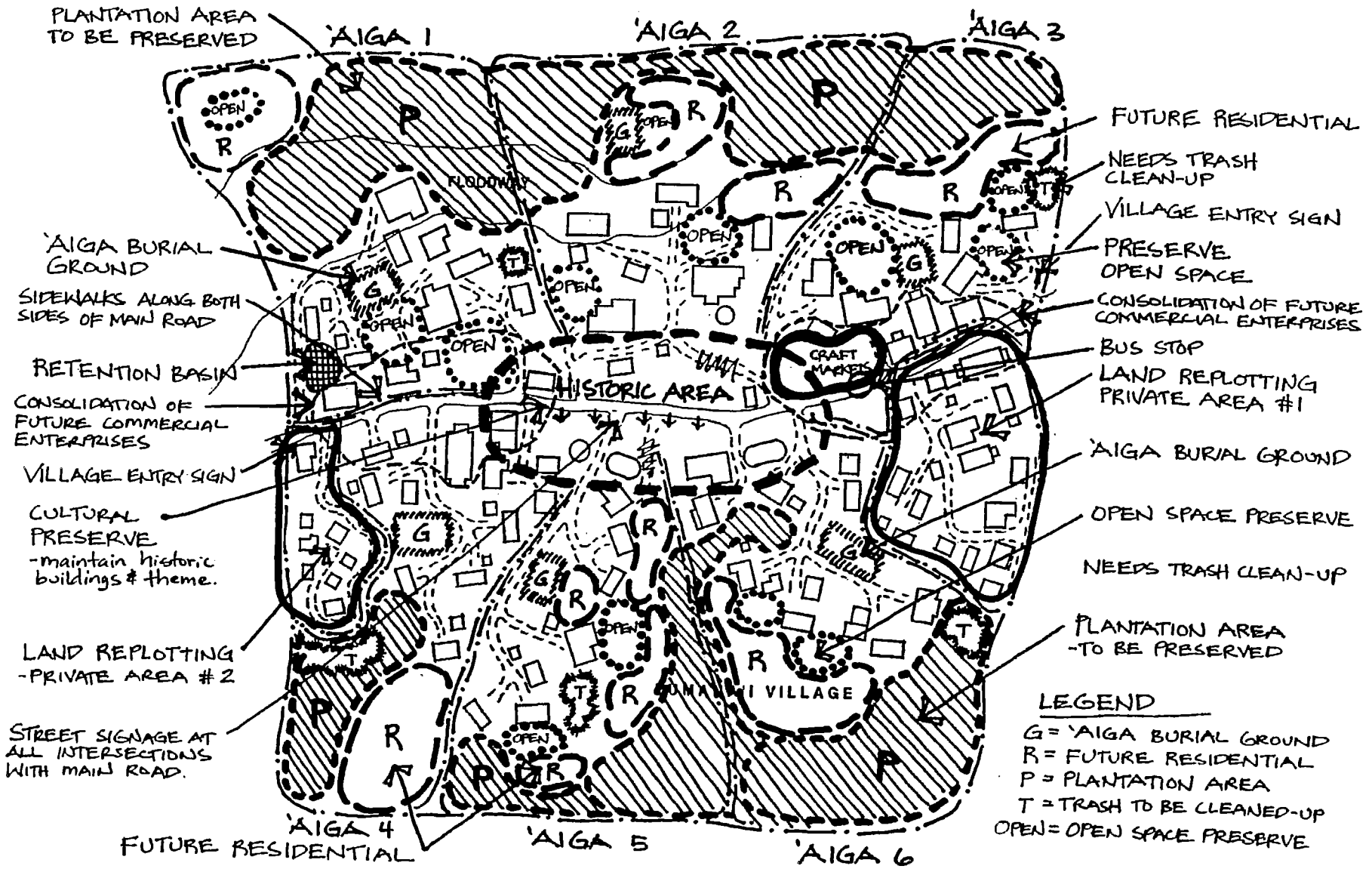
**EXAMPLE 2 (CONTINUED): STRATEGY SELECTION WORKSHEETS  
LUMANA'I VILLAGE**

<b>STRATEGY</b> <i>Designate an area for a village bus stop.</i>
<b>PURPOSE OF STRATEGY</b> <i>To prevent random stops along main road, causing haphazard traffic situations.</i>
<b>AREA OF IMPLEMENTATION</b> <i>In 'aiga #3 along main road.</i>
<b>LEVEL OF IMPLEMENTATION</b> <i>Village council will apply for federal funding.</i>
<b>WHO NEEDS TO BE INVOLVED?</b> <i>'Aiga #3, men's group.</i>

<b>STRATEGY</b>
<b>PURPOSE OF STRATEGY</b>
<b>AREA OF IMPLEMENTATION</b>
<b>LEVEL OF IMPLEMENTATION</b>
<b>WHO NEEDS TO BE INVOLVED?</b>

<b>STRATEGY</b>
<b>PURPOSE OF STRATEGY</b>
<b>AREA OF IMPLEMENTATION</b>
<b>LEVEL OF IMPLEMENTATION</b>
<b>WHO NEEDS TO BE INVOLVED?</b>

FIGURE 8: FUTURE LAND USE BUBBLE DIAGRAM FOR LUMANA'I VILLAGE



**LEGEND**  
 G = 'AIGA BURIAL GROUND  
 R = FUTURE RESIDENTIAL  
 P = PLANTATION AREA  
 T = TRASH TO BE CLEANED-UP  
 OPEN = OPEN SPACE PRESERVE

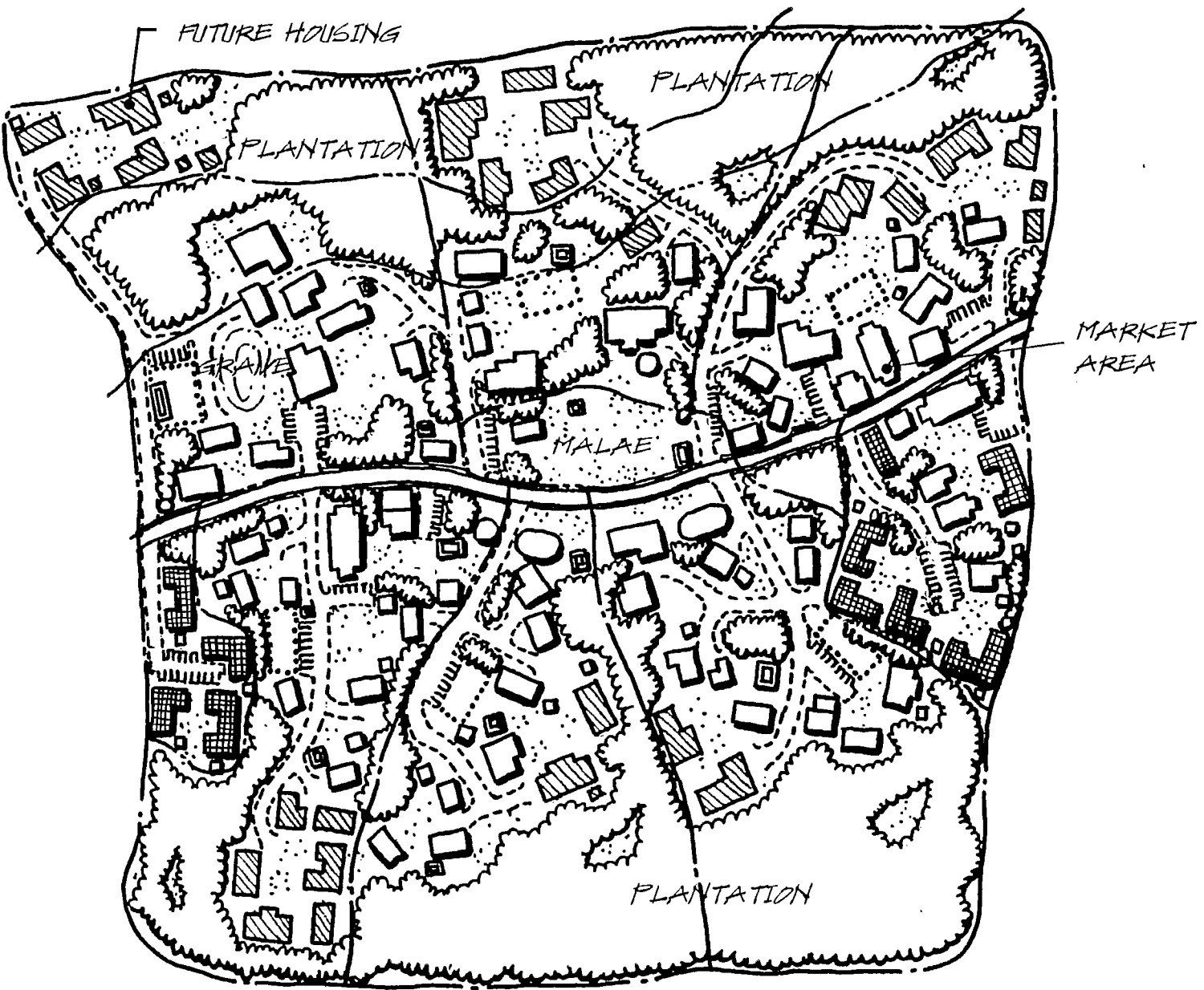
CATEGORIES OF CONCERN

EXAMPLE 3: CATEGORY OF CONCERN LUMANA' I VILLAGE

POTENTIAL STRATEGIES	CULTURAL					ECONOMIC				ENVIRONMENTAL						TOTAL +	TOTAL -	IS IMPACT ACCEPTABLE?
	Village Layout	Village Social System	Fa'a Samoa Values	Use of Communal Lands	Mat'ai Authority	Small Businesses	Jobs in Community	Independent Farmers	Implementation Cost	Riparian Zone Health	Coastal Zone Health	Coral Reef Health	Native Forest Health	Archaeological Sites	Reservoir Health			
1 PAN ROCK WALLS	+	+	+	0	0	0	0	0	-	0	0	0	0	+	++	6	1	Yes
2 REPT PRIVATE LAND	+	+	++	0	0	+	+	0	--	0	0	0	0	0	++	8	2	Yes
3 ENHANCE AIGA COMPOUND	++	++	++	++	+	0	0	+	0	+	0	0	+	+	0	13	0	Yes
4 RETENTION BASIN	-	-	0	+	0	0	0	+	-	+	0	0	+	0	++	6	3	?
5 DEVELOP OUT OF FLOODWAY	-	0	0	+	0	0	0	+	-	+	0	0	-	0	++	5	3	Yes
6 CENTRAL MARKET PLACE	+	+	++	+	+	++	++	++	--	0	0	0	-	0	0	12	3	Yes
7 AIGA CONSERVATION PARK	+	0	+	++	++	+	0	++	0	+	0	0	+	+	+	13	0	Yes
8 CONSOLIDATE COMMERCIAL	+	0	0	++	-	++	++	0	-	0	0	0	0	0	0	7	2	Yes
9 IMPROVE ROAD/INTERSECT.	++	0	0	++	0	0	0	+	--	+	0	0	+	0	0	7	2	Yes
10 ENTRY/STREET SIGNS	+	+	+	0	++	+	+	0	--	0	0	0	0	0	0	7	2	Yes
11 AIGA CRANE SITE	++	-	-	++	++	0	0	+	-	+	0	0	+	+	0	10	3	Yes
12 CENTRAL TRASH PICKUP	0	+	+	+	++	0	0	+	-	+	0	0	+	0	+	9	1	Yes
13 EYE STOP	+	+	+	+	+	++	+	0	--	0	0	0	0	0	0	8	2	Yes
14 CULTURE PRESERVE AREA	++	++	++	++	++	0	0	0	-	0	0	0	0	0	0	10	1	Yes
15 SIDEWALK LIGHTING																		
16 ENHANCE MALAE																		
17																		
18																		
TOTAL +	15	10	13	17	13	9	7	10	0	7	0	0	6	4	10			
TOTAL -	2	2	1	0	1	0	0	0	++	0	0	0	2	0	0			
IS IMPACT ACCEPTABLE?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	Yes			

++ Strong Positive Impact  
 + Positive Impact  
 0 No Impact  
 - Negative Impact  
 -- Strong Negative Impact

FIGURE 9: ILLUSTRATIVE MAP OF LUMANAI' I VILLAGE



## **STEP V**

# **DOCUMENTING THE VILLAGE DEVELOPMENT PLAN (EXAMPLE)**

### **DISCUSSION**

Having completed the Strategies and Plan Alternatives Analysis Section, the Village Planning Team began documenting Lumana'i's Plan. They started with the Development Plan outline to analyze what information was needed and where were sources for that information. What they found was that much of the data to be included in the Plan was already generated and that the main task was to format the information into a coherent document. After completing the Village Development Plan and gaining both the Village Council and Private Neighborhood Associations' approval, the Planning Team submitted the document to the America Samoan Government.

### **RESULTS**

The main purpose of this step is for the village to have a document to communicate the Village Planning Team's findings and recommendations to both the residents of Lumana'i and to the America Samoan Government. The Development Plan describes the existing conditions, areas of concern, preservation areas, and where future development growth will be directed. By including the participatory input from Villagers themselves in the Plan, the community feels some kind of ownership over the Plan. The Development Plan will serve as a mechanism which can effectively bridge any communication barriers between the traditional village-based political system and the America Samoa Government.





## STEP VI

## IMPLEMENTING THE PLAN (EXAMPLE)

### DISCUSSION

The final and most important step of the planning process is to formulate an action plan for realizing the Village Development Plan. This Action Plan identifies implementing actions, responsible parties to carry them out, and the time frame for each action (*Example 4, page IX-42*). Knowing that many great plans are abandoned during the implementation phase of the planning process, the Lumana'i Planning Team did what they could to anticipate any obstacles. The Planning Team first completed the "Responsibilities and Time Frame Worksheet for Lumana'i Village" (*Example 5, pages IX-43 to 44*), with the help of the Village Council and the Private Neighborhood Associations, to determine who would actually be implementing the selected strategies. Some of the implementation actions are 'aiga-based or Village-based while other actions are the responsibility of the Private Neighborhood Associations. Agencies that would be assisting or regulating the implementation of these strategies were noted in the Worksheet.

The "Responsibilities and Time Frame Worksheet for Lumana'i Village" is useful in determining the time frames that each strategy would be implemented within. While some strategies could be implemented within the next five years, others would be enacted much later or on a continual basis. By categorizing the strategies by time frames, the Planning Team began to sequence of the Development Plan. Those selected as needing to be implemented in the next five years were shown to have the highest priority, while later time frames were found to have a relatively lower priority.

The Planning Team then filled out the "Implementation Requirements Worksheet for Lumana'i Village" (*Example 6, pages IX-45 to 46*) to gain a better understanding of what were the necessary resources needed for each strategy. This worksheet helped to clarify not only what the estimated costs were for each strategy, but what sorts of physical materials would be required for the Village improvements. The Planning Team also recorded who would actually be completing certain actions and who could give expert advice on the specific projects.

Although it was agreed upon by the Village Council and Private Neighborhood Associations that the Comprehensive Development Plan would not be reviewed and updated for another five years, the Planning Team decided to evaluate the Development Plan at scheduled intervals of every six months. By using the "Monitoring and Evaluation Worksheet for Lumana'i Village" (*Example 7, page IX-47*), each implementation action could be measured on how well it has served its intended purpose. The Worksheet also allowed the Team to measure what sorts of environmental, economic, and cultural impacts the strategy was having on the Village. By carefully monitoring these effects, Lumana'i could then abandon strategies which were found to be detrimental to the Village, or adopt additional strategies with positive effects.

## EXAMPLE 4: ACTION PLAN FOR LUMANA'I VILLAGE

### *Action Plan*

Implementation Action	Responsible Parties	Time Frame		
		1-5 yrs	6-10 yrs	11-15 yrs
Consolidation of Future Commercial Enterprises/ Move Auto Shop Away From Church	Village Council, 'aiga 4, Private Neighborhoods	X		
Add Sidewalks and Lighting along Main Road	Village Council, Private Neighborhoods	X		
Move Main Road to Enlarge Malae	Village Council		X	
Add Village Entry Signs and Street Signs at Intersections With Main Road	Village Council, Men's Group	X		
Each 'aiga to Designate Single Family Grave Site	Family <i>Matai</i>	X		
Establish Trash Collection Points for Each 'aiga and Private Neighborhood	Family <i>Matai</i> , Private Neighborhoods	X		
Construct a Pair of Bus Stops along Main Road	Village Council, Men's Group	X		
Ban/Tear Down Rock Walls in Private Neighborhoods	Private Neighborhoods	X		
Replot and Replace Single Family Homes With Duplexes in Private Neighborhoods	Private Neighborhoods	X		
Construct a Retention Basin in 'aiga 1 Land	Village Council, Men's Group	X		
Prohibit Polluting Uses in Floodway	Village Council, Family <i>Matai</i>	X	X	X
Maintain Cultural Preserve Around Malae	Village Council, Family <i>Matai</i>	X	X	X
Construct Village Craft and Produce Market Place	Village Council, Men and Women's Group	X		
Require Each 'aiga to do Own Conservation Design	Family <i>Matai</i>	X		

**EXAMPLE 5: RESPONSIBILITIES AND TIME FRAME WORKSHEET  
FOR LUMANA'I VILLAGE**

Implementing Actions	Level of Implementation					Agencies		Time Frame		
	'Aiga based	Neighbor-hood based	Village based	Sub-district based	County & Territory	Responsible Agencies	Assisting Agencies	Under 1 year	1 - 5 years	6 - 10 years
Tear down/lean rock walls in neighborhoods		✓				Private neighborhood associations		✓		
Land replotting of private owned areas and replace single family structures w/duplexes and triplexes.		✓				Private neighborhood associations	DPW, ASPA	✓		
Create and enhance 'aiga compounds 12	✓					Matai	DPW, ASPA	✓	✓	✓
Create retention basin in 'aiga #1 land to mitigate flooding			✓			Village council, Men's group	ASEPA	✓		
Prohibit polluting uses in Aradway	✓		✓			Village council, Matai	EDPO, ASEPA, Public Health	✓	✓	✓
Create cultural preserve area around main	✓		✓			Village council, Matai	DPW, ASPA, DPR, ASHP	✓	✓	✓
Create craft and produce marketplace			✓			Village council, Matai, Men's and Women's groups	DPR, ASHP	✓		
Conservation design for each 'aiga land	✓					Matai	EDPO, ASEPA, DPW, ASPA, Public Health, ASHP	✓		

**EXAMPLE 5 (CONTINUED): RESPONSIBILITIES AND TIME FRAME  
WORKSHEET FOR LUMANA'I VILLAGE**

Implementing Actions	Level of Implementation						Agencies		Time Frame		
	Alga based	Neighborhood based	Village based	Sub-district based	County & Territory	Responsible Agencies	Assisting Agencies	Under 1 year	1 - 5 year	6 - 10 years	
consolidation of future commercial enterprises; Move auto shop away from church.	✓	✓	✓			Village council, Private neighborhood associations	EDPO, ASEPA, DFW, ASPA, Public Health	✓	✓		
Improve road surfaces and intersections.	✓	✓	✓			Village council, Neighborhood Associations, Matai	DFW, ASPA	✓	✓		
Add sidewalks and lighting to both sides of main road		✓	✓			Village council, Private neighborhood associations	DFW, ASPA	✓			
Move main road to enhance ma'ae.			✓			Village council	DFW, ASPA		✓		
Construct village entry and street signs			✓			Village council, Men's group	DFW	✓			
Establish 'aiga grave sites	✓					Matai	EDPO, ASEPA, DFW, Public Health Division	✓	✓	✓	
Establish centralized trash collection points for each 'aiga and neighborhood.	✓	✓				Matai, Neighborhood associations	ASEPA, Public Health Division	✓			
Construct village bus stop			✓			Village council, Men's groups	DFW	✓			

## EXAMPLE 6: IMPLEMENTATION REQUIREMENTS WORKSHEET FOR LUMANA'I VILLAGE

Implementation Actions	Estimated Cost (\$)	People & Expertise	Physical Material & Land
Tear down / tan rock walls in private neighborhoods	\$200	Neighborhood families	Wheelbarrows, trucks, land for clearing mound
Land replotting and construction of duplexes and triplexes in private neighborhoods	\$100,000 for PNA 1 - \$80,000 (3 DU) = \$240,000 \$80,000 for PNA 2 - \$50,000 (2 DU) = \$30,000	Neighborhood families, DPW, ASFA	Contractor for electrical, plumbing work will purchase other needed materials
Create and enhance 'aiga compounds		Matai, DPW, ASFA	Construction materials
Create retention basin in 'aiga #1 and	\$60	Village council, Men's group, ASEFA	Shovels, lawn seed
Add sidewalks and lighting to both sides of main road	\$40,000	Village council, private neighborhoods, DPW, ASFA	Cement, grading materials, light fixtures
Move main road to enhance make	\$3,000	Village council, DPW, ASFA	Grading machinery, fill, asphalt, demolition machinery
Construct village entry / street signs	\$400	Village council, Men's group, DPW	Lumber, stone, paint, metal poles
Create 'aiga grave sites	\$100 each	Matai	Lumber, stone, paint
Move piggery in 'aiga #1 from Apathway	\$40	Matai, 'Aiga #1 family, ASEFA, Public Health Division	Lumber

## EXAMPLE 6 (CONTINUED): IMPLEMENTATION REQUIREMENTS WORKSHEET FOR LUMANA'I VILLAGE

Implementation Actions	Estimated Cost (\$)	People & Expertise	Physical Material & Land
Create craft and produce marketplace	\$1800	Village council, Matai, men's and women's groups	Lumber, cement, construction tools
Move auto shop away from church	\$500	Aiga #4, EDPD, ASEPA, DPW, ASPA, Public Health	Lumber, cement, construction tools
Improve road surface and intersections	\$2000	Matai, village council, private neighborhood associations	Grading machinery, fill
Create centralized trash collection points	\$40 each aiga and neighborhood	Matai, neighborhood associations, ASEPA	Lumber
Construct village bus stop	\$300 x 2 bus stops	Village council, men's group, DPW	Lumber, cement, grading machinery

## EXAMPLE 7: MONITORING AND EVALUATION WORKSHEET FOR LUMANA'I VILLAGE

Implementing Actions	Outcome Measure		Environmental Impact	Economic Impact	Cultural Impact
	Short-term	Long-term (Goal)			
Tear down/ban rock walls in private neighborhoods	All rock walls are removed	Flooding incidents less severe	Less severe flooding	\$40 investment by each neighborhood	More open spaces easier pedestrian movement along roads
Move piggery in 'viga #1 out of roadway	Piggery has been moved to north end of 'viga land	No polluting uses in roadway any more	No smell or polluting effluents; new trail through plantations	Cost about \$60 to move	No impact
Create craft and produce marketplace	Two of the proposed sites have been built	Marketplace used by community	Some plantation land cleared	Invested about \$1000 so far; market used a lot	More interest in traditional craft manufacturing
Move auto shop in 'viga #4 away from church	Auto shop has been moved to southern end of 'viga land	No noisy activities near church	Plantation cleared; some debris remains	Spent \$4500 on new shop; by 1 week of work	More room for social activities near church
Construct village entry / street signs	1 of 2 entry signs complete; govt in stalled street signs along main road		No impact	Village spent \$300 on entry signs	All of village came together to name streets
Establish 'viga grave sites	2 of the 'viga have completed their grave sites		Some plantations cleared	Each 'viga spent about \$200	The 2 'viga feel deep pride for new sites and are now interaction sites
Construct village bus stop	1 bus stop on each side of the road are complete	Fewer traffic problems along road	No impact	Spent about \$600 for bus stops	Seems to be becoming a social area for youth

## **RESULTS**

Undoubtedly the most essential step of the planning process is to formulate a well thought out action plan so that each of the Village's selected strategies could be implemented. Worksheets were used by the Planning Team to assign responsibility, prioritize, and identify the requirements of each implementation action. By identifying the characteristics of each strategy, the residents of Lumana'i now know exactly what obstacles they must clear before their future vision of the Village can become a reality. They also know that their developmental needs may take some time to realize and that it will be through careful monitoring and evaluation that they can ensure that their Development Plan will produce its desired effects on the Village.





