

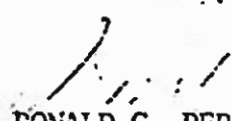
MANUAL OF INSTRUCTIONS FOR THE  
SURVEY OF LANDS AND PREPARATION OF PLANS IN  
THE TERRITORY OF GUAM

Prepared by: Charles A. Brister Jr.  
1966

MANUAL OF INSTRUCTIONS  
for the  
SURVEY OF LANDS AND PREPARATION OF PLANS  
in the  
TERRITORY OF GUAM

This Manual is issued for the information and guidance of Division of Survey Personnel. Surveys and plans done by others for acceptance by the Department of Land Management should conform with these instructions. The instructions are intended as minimum requirements for land surveys and are not intended as a standard manual, per se.

This Manual has been prepared in compliance with Executive Order 66-15 and will be known as the "Manual of 1966." It will supersede all previous instructions and may be amended from time to time.

  
RONALD G. PERRY, R.L.S.  
Territorial Surveyor

By  
Charles A. Brister, Jr., P.E., R.L.S., Mo.

## PREFACE

This manual has been in preparation for the past year. Preliminary copies were issued in March 1967 and every attempt has been made to eliminate errors since then. Users of this manual are requested to inform the Territorial Surveyor of errors encountered in the current issue and are also encouraged to submit additional material for incorporation in later revisions or in new editions.

Special thanks are extended to Mrs. F.J. Guerrero for the extensive typing and for the patience extended when new material was added to the preliminary copies. Thanks are also extended to Vicente C. Sian, Jr. for a conscientious review of the material.

CHARLES A. BRISTER, JR., P.E.  
November 1967

## **SECTION I**

### **Outline of Surveys on Guam**

## **SECTION II**

### **Laws, Regulations, Rules and Specifications**

#### **Pertinent**

#### **To The**

### **Practice of Land Surveying**

## **SECTION III**

### **Field Work**

## **SECTION IV**

### **Office Work**

## **SECTION V**

### **Use of Guam Plane Co-Ordinate System (Guam Geodetic Triangulation Network - GGTN)**

## **SECTION VI**

### **Private Surveys**

## **SECTION VII**

### **Professionalism-Ethics**

## APP ENIXES

- A. Drafting Standards, Symbols and Abbreviations.
- B. Useful Tables and Conversion Factors.
- C. Sketch of Guam Land Square System.
- D. Sample Field Notes.
- E. Territorial Surveyors.
- F. Report on 1945 Land and Claims Commission Triangulation Network.
- G. Monument Identification.
- H. Glossary of Guamanian Place Names.
- I. Definitions.

APPENDIXES (Cont'd)

- J            Miscellaneous Reports of the Territorial Surveyor
- K            Data on United States Coast and Geodetic Survey of  
              Guam - 1963
- L            History of the Island of Guam Grid Systems and Vertical  
              Control Networks

# ADDITIONS

| NO. | DESCRIPTION                                               |
|-----|-----------------------------------------------------------|
| 1   | Page iii - 1 ----- Additional Appendices Index (J, K & L) |
| 1   | Page iv ----- This page (Additions)                       |
| 1   | Page v ----- Errata                                       |
| 1   | Page I - 1 ----- Title page (Appendix I)                  |
| 1   | Page L - 1 to L - 14 ----- Appendix L                     |
| 1   | Page A - B ----- Sample Title Block - E. Size Drawing     |
| 1   | Page K - 1 to K - 19 ----- Appendix K                     |

# ERRATA

| NO. | PAGE    | DESCRIPTION                                                                                               |
|-----|---------|-----------------------------------------------------------------------------------------------------------|
| 1   | IV - 19 | Line 3 should read "The following <u>are</u> the bearings for Lot A."                                     |
| 1   | V - 7   | The formula "Line HG = $\sqrt{(335.368) - (10)}$ " should read "Line HG = $\sqrt{(335.368)^2 - (10)^2}$ " |
| 1   | III - 4 | Last paragraph ..... Delete phrase "and correction factors be applied"                                    |
| 1   | IV - 2  | Third Definition "R = Padius = P/2" should read "R = Padius = D/2."                                       |

SECTION I

OUTLINE OF SURVEYS

AND

HISTORICAL NOTES

## MILESTONES

- 1898 Island of Guam ceded from Spain to United States. Spanish land records are to be found at the Department of Land Management. Most of these have been translated.
- 1900 General Order No. 15 of the Naval Government required all land claimed by right of possession or a direct grant to be registered or such land would become the property of the government. This was not strictly adhered to and possession was and still is given much consideration.
- 1901 General Order No. 37 of the Naval Government orders penalties for destruction of survey points and authorization for surveyors to enter upon private property.
- 1902 - 1903 First survey controls established by United States Navy to control land boundaries.
- 1913 - 1914 Island-wide triangulation system established by William Butler of the United States Engineers. This system is known as the Butler Survey and surveys were based on it until 1941. Butler also established some property lines by stadia method.
- (Author's Note - It is the opinion of the author that the Butler Survey system should still be in effect today. Although many errors were found in property lines I doubt that they could be directly traced to his network, but rather to the intermediate surveys performed by others and, because of surveying practices, surveys did not extend far enough to correct such errors as were found eventually in the Butler Survey. As a result error on error created such large discrepancies that no property line was certain. - See Footnote).
- 1941 Japanese invaders take over island. Some of the maps are destroyed by this action and some of the people destroy their copies of surveys to keep them out of Japanese hands. Apparently little, if any, survey work was done by Japanese occupation forces. Some monuments were destroyed and used in revetments.
- 1944 American forces re-take island and establish a land and Claims Commission. The Commission establishes a new island-wide triangulation system. Butler monuments are used when found and discrepancies noted between those established by Butler

and those of the Commission. This system is known as the 1945 Land and Claims Triangulation Network.

(Author's Note - The Officer in Charge of the surveys notes that compared to the Butler survey, an error of approximately two and one-half meters exists between Agana Monument and the north end of the island. In the author's opinion this was not such a large error as could not have been adjusted to land surveys and that the Butler co-ordinates should have been retained. - See Footnote).

- 1949 New triangulation network established by Pacific Island Engineer for U.S. Navy. This system was mostly used for military acquisitions because of discrepancies found in other systems. This system utilized such existing monuments as could be found. In many cases the existing monuments were replaced with new monuments designated P.I.E. This work was started in 1946; however, leveling was not completed until 1950.
- 1959 First Territorial Surveyor appointed.
- 1961 Territorial Board for Registration of Architects, Professional Engineers and Land Surveyors established.
- 1962 Laws governing subdivision, lot parcelling and agricultural subdivisions enacted.
- 1962 Laws governing control monuments (Guam Geodetic Triangulation Net) enacted.
- 1963 Triangulation system established by United States Coast and Geodetic Survey. Government of Guam sets intermediate control monuments between United States Coast and Geodetic Survey controls.
- 1966 Regulations governing property surveys and maps established. (This had been authorized for some time, but an acceptable set had never been formulated).
- 1966 Manual of Surveying Practice compiled. (Designed primarily as an aid to the Survey Division, it also resolves many private survey questions).
- 1966 English system of measurement supplants metric system.

FOOTNOTE: A co-ordinate system is worthwhile, but there are certain basics which should be pointed out.

(a) It is ideal for the compilation of maps.

- (b) If a survey has been connected to points in the system accurately it may be re-located.
- (c) The accuracy of a land survey has no relationship (except the connection) to a co-ordinate system.
- (d) A land survey should be located, adjusted and pro-rated in accordance with acceptable surveying practice before a connection is made to the co-ordinate system.
- (e) There are certain inaccuracies in a co-ordinate system due to the precision of the survey. For this reason, the connection of a land survey is primarily a reference tie.

It is essential that the connection be as accurate as possible. For example, if the triangulation point (to which the connection was made) is lost, it becomes necessary to re-locate it. Preferably this should be done from the triangulation point references. If this cannot be done it is necessary to re-locate it from other triangulation points. Any errors which were originally between the two triangulation points must now be considered.

Suppose the lost point has been re-located from both directions of the loop it was in and an error still exists. There is no way of telling which direction the error was originally in. The triangulation point must then be judiciously relocated and the connection to the land survey can be made. The land survey may now have the following errors:

- (1) Errors from the original survey, if any.
- (2) Errors from the original connection, if any.
- (3) Errors from the triangulation point re-location, if any.
- (4) Errors in the new connection from the re-located triangulation point to the survey, if any.
- (5) Errors in the new land survey, if any.

(Author's Note - Land surveys should be based on pro-rated methods from preferably a monumented land square system or monumented blocks in subdivisions. A monumented land square system may be initially established from the co-ordinate system and co-ordinate values assigned. Land surveys should then be referenced to these corners as they would then form a part of the Guam Geodetic Triangulation Net. Surveys, including restoration of lost corners and subdivision of land squares, could then be based on "Instructions for the Survey of Public Lands in the United States").

## HISTORICAL NOTES

In 1913 William Butler established a land square system for the island, but actual land square corners were never marked. Although this system is used extensively, it is only a paper survey. Co-ordinate values, based on his survey, may be assigned to the corners.

Many property corners were marked by an ifil wood stake. This was especially true of Butler property surveys. The use of ifil wood for monuments was discontinued about 1927. Concrete was substituted for monument material. Ifil wood stakes may last twenty, thirty or even fifty years, but are not as sturdy as concrete. Prior to 1941, the United States Navy set or reset many property corners with concrete monuments. These are termed "Pre-War Concrete Monuments." In 1945 the Land and Claims Commission set concrete bounds on property corners of a different type. The 1945 bounds are termed "Post War Concrete Monuments." "Pre-War Monuments" are cross marked with a copper tack at the corner. "Post War Monuments" also are cross marked, but have an imbedded metal corner, and are marked LCC. Many of the "Pre-War Monuments" were destroyed by Japanese invaders and again by American Forces leveling off shelled areas after re-taking the island. Military construction accounted for the destruction of many more "Pre-War Monuments." Currently, concrete monuments are flat topped with a re-bar marking the corner.

American Seebies dozed out an island-wide network of roads. Later the Land and Claims Commission ran as-built surveys along the roads and computed theoretical centerlines, right-of-ways and acquired the right-of-way on this basis. Unfortunately, none, or little, of this work was monumented and subsequently these road delineations have remained more or less fluid.

In general practice, consideration should be given monuments as follows:

- 1 st. Old ifil wood monuments
- 2 nd. Pre-War monuments
- 3 rd. Post-War monuments
- 4 th. Current monuments

Although it is not historical, it should be noted that the above is only a general guide and it is the duty of the surveyor to decide which monuments are most nearly correct. In addition he must note in his field notes and show on his drawings all monuments and discrepancies found by him.

There were no private surveys, as such, prior to the surveyor's Registration Act in 1952, although retracement work was performed by "moonlighters." The official surveys were performed by Military or Territorial Government Departments.

It is interesting to note that the Officer in Charge of the 1945 Land and Claims Commission surveyors, according to his report\*\*, did not believe a more precise survey than that obtained by stadia survey was necessary, since the land was of very low value. Land values have; however, greatly increased and it is difficult to make a proper survey since all deeds are tied to the 1913 Triangulation Network or the 1945 Land and Claims Commission surveys where many discrepancies exist. In addition to these discrepancies, surveyors attempted to lay out property by deed description rather than by the pro-ration method. This has only served to compound such errors as already existed.

### Random Notes

The Coast and Geodetic Survey vessel Bowditch assisted with triangulation surveys in 1913 and again in 1945. In 1945, aid was also given by the United States Coast and Geodetic Survey vessel Hydrographer.

It should also be noted that the Board of Appraisers set some property lines by getting the owners to agree on a common line. The Board also established common lines between individuals and the government since the Land Judge of the Board had the power to set the line if government land was involved.

Way-back-when: two neighbors would agree on a common property line. Coconut trees were then planted by each neighbor, generally five to six feet back from the property line. This formed an aisle which was, more or less, a neutral zone. By common agreement travel was permitted through these aisles. These aisles later on became bull cart trails. With the advent of land surveys, and by agreement of the various neighbors, definite right-of-way lines for the bull cart trails were established. Sometimes this only ran to an interior lot line; hence, dead-ends on some trails. If an interior owner was refused ingress-egress to his land it became necessary for the government to order temporary routes until final agreement could be reached by the neighbors. Agreements were made by neighbors about which falling coconuts belonged to each, especially if the aisle ran along a slope(1).

After World War II many of the villages were relocated or laid out differently. For example, Dededo was originally located within the Harmon Airfield Area. The following tabulation represents the status of the various villages and communities.

|       |             |
|-------|-------------|
| Agana | Re-laid out |
| Mann* | Re-laid out |
| Pili* | Re-laid out |

\*\* Included as Appendix "F"

(1) Information as told the author by Jesus P. Sablan

|                           |                                    |
|---------------------------|------------------------------------|
| Santa Rita*               | New                                |
| New Agat                  | New                                |
| Agat*                     | No Change                          |
| Umatac*                   | No Change                          |
| Merizo*                   | No Change                          |
| Inarajan*                 | No Change                          |
| Talofofo (Includes Mata)* | Extension of original Mata Village |
| Yona*                     | Re-laid out                        |
| Chalan Pago               | New                                |
| Ordot                     | New                                |
| Sinajana*                 | Re-laid out                        |
| Mongmong                  | New                                |
| Agana Heights             | New                                |
| Tamuning                  | New                                |
| Tumon                     | New                                |
| Barrigada                 | New                                |
| Mangilao                  | New                                |
| Dededo*                   | Re-located                         |
| Yigo                      | No Change                          |
| Maina                     | New                                |

Re-located indicates that the town was moved.

Re-laid out indicates that a new lot and street layout was superimposed over the original layout.

New indicates a Post-War settlement.

No Change indicates that the original town layout still holds true.

Some block controls were placed in Agana and New Agat. These were monuments set at the block corners. In addition, nails were placed in the curbs for offset controls.

\* Indicates village status; however, Agana is classed as a City.

## SUMMARY

Guam, in general, does not lend itself easily to surveying, being heavily covered with vegetation and of relatively rough terrain for the most part. A goodly amount of line clearing is usually involved with each survey.

Then, too, one triangulation system after another has been superimposed over each other with land ties required to each new system. This has necessitated a variety of co-ordinates for points because of deed and land acquisition descriptions.

Superimposed triangulation systems with varying degrees of accuracy are not readily adjustable to discrepancies or errors found in land lines and it can quickly be seen that a solid base, such as established road centerlines or a monumented land square system, is necessary in order to eliminate the discrepancies or errors as they are found.

Moreover, the metric system is used as a root for measurements. From a surveyor's point of view, this is detrimental. If he measures to centimeters it is too large a division - if he measures to millimeters it is too small a division (a plumb bob cord is wider). Although a good deal of work would be necessary to change to the English system, in time it should prove its worth, since achieved accuracies would be more reasonable. In the United States the chain, rod and link system was used extensively. This was later abandoned (over a much larger area) in favor of the English system. In lieu of this, the surveyor may measure to one-quarter centimeter (this approximates the same length as measuring to hundredths of a foot).

## 1966 - PROJECTION

The historical notes briefly describe problems of surveying on Guam. The problems are many and varied and it becomes essential that steps be taken to solve them. As some of the solutions are long involved processes, an outline has been established as a guide. In broad generalities it is as follows:

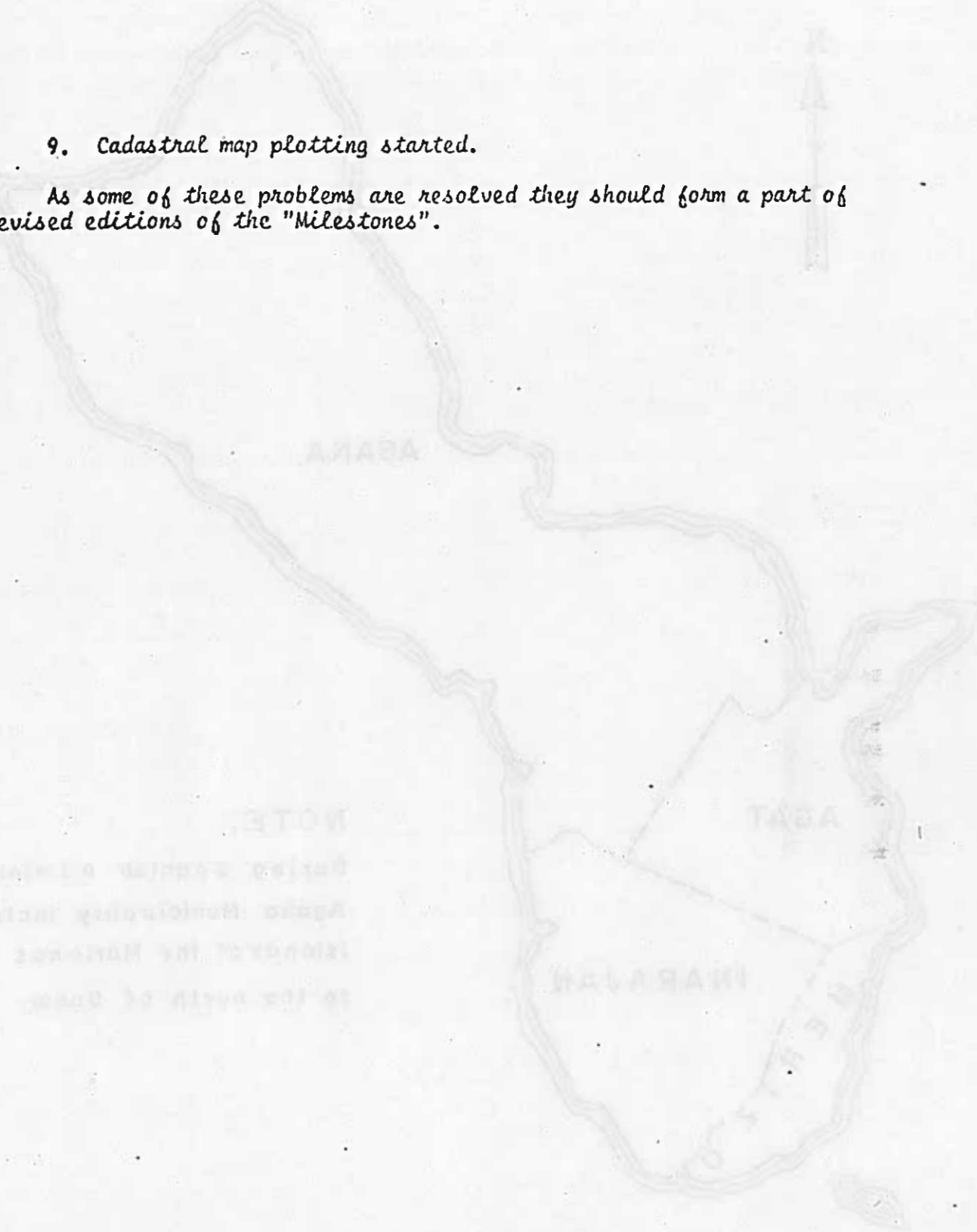
- a. Completion of calculations for co-ordinate values of intermediate control points in the Guam Geodetic Triangulation Net and a tabulation of these values.
- b. Conversion of previous triangulations system co-ordinates to the Guam Geodetic Triangulation Net.
- c. Establishment of definite control points along all roads.
- d. Determination of definite lines of government owned lands.
- e. Upgrade surveying standards.
- f. Compile Island Cadastral Map.

With an outline of the solutions the next step has been implementation. Some of the steps being performed for this accomplishment are:

1. Institution of rules and regulations for land surveying.
2. Standardization of measuring devices.
3. Re-running field work not meeting established requirements.
4. Compilation of this "Manual".
5. In-service training supplemented with classroom work and lectures.
6. Streamlining Division duties and functions.
7. Increased co-operation with private firms (equipment made available to them, etc.).
8. Investigations:
  - (a) Surveyor schooling (long term).
  - (b) Short term surveyor courses.
  - (c) Computers.
  - (d) More suitable equipment.
  - (e) More suitable standards (forms, etc.).

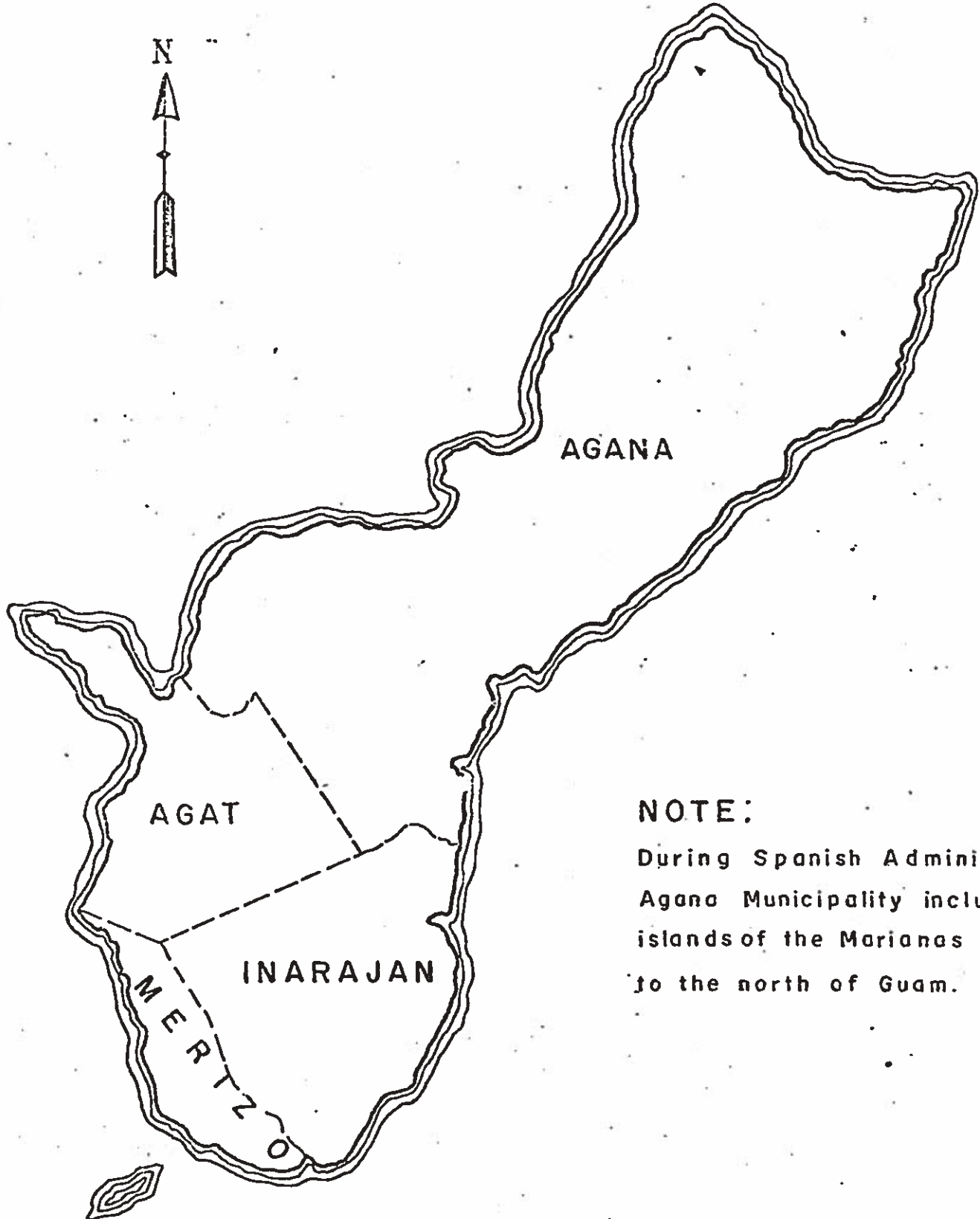
9. Cadastral map plotting started.

As some of these problems are resolved they should form a part of revised editions of the "Milestones".



MUNICIPALITY EVOLUTION

From July 1, 1913

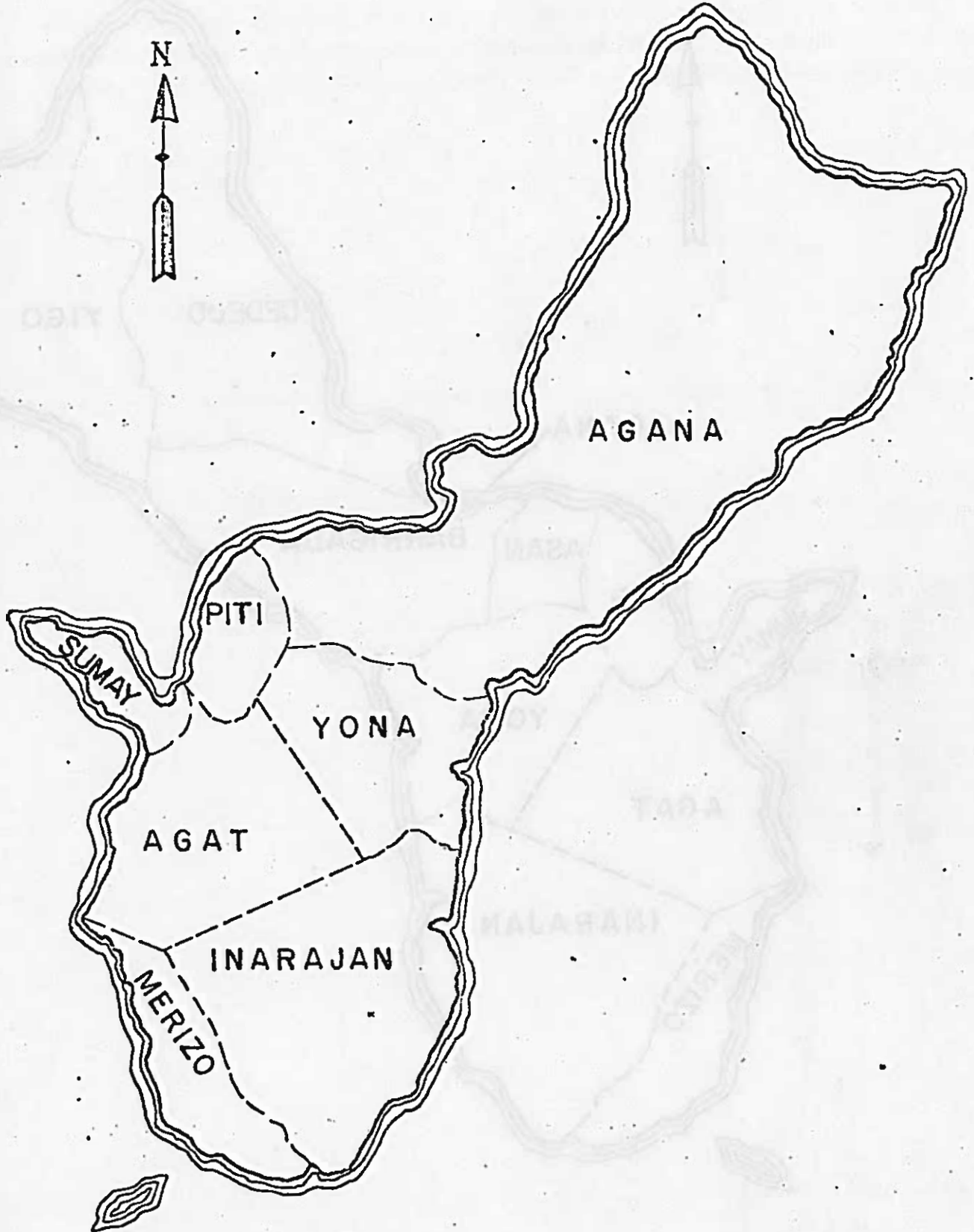


**NOTE:**

During Spanish Administration  
Agaña Municipality included all  
islands of the Marianas lying  
to the north of Guam.

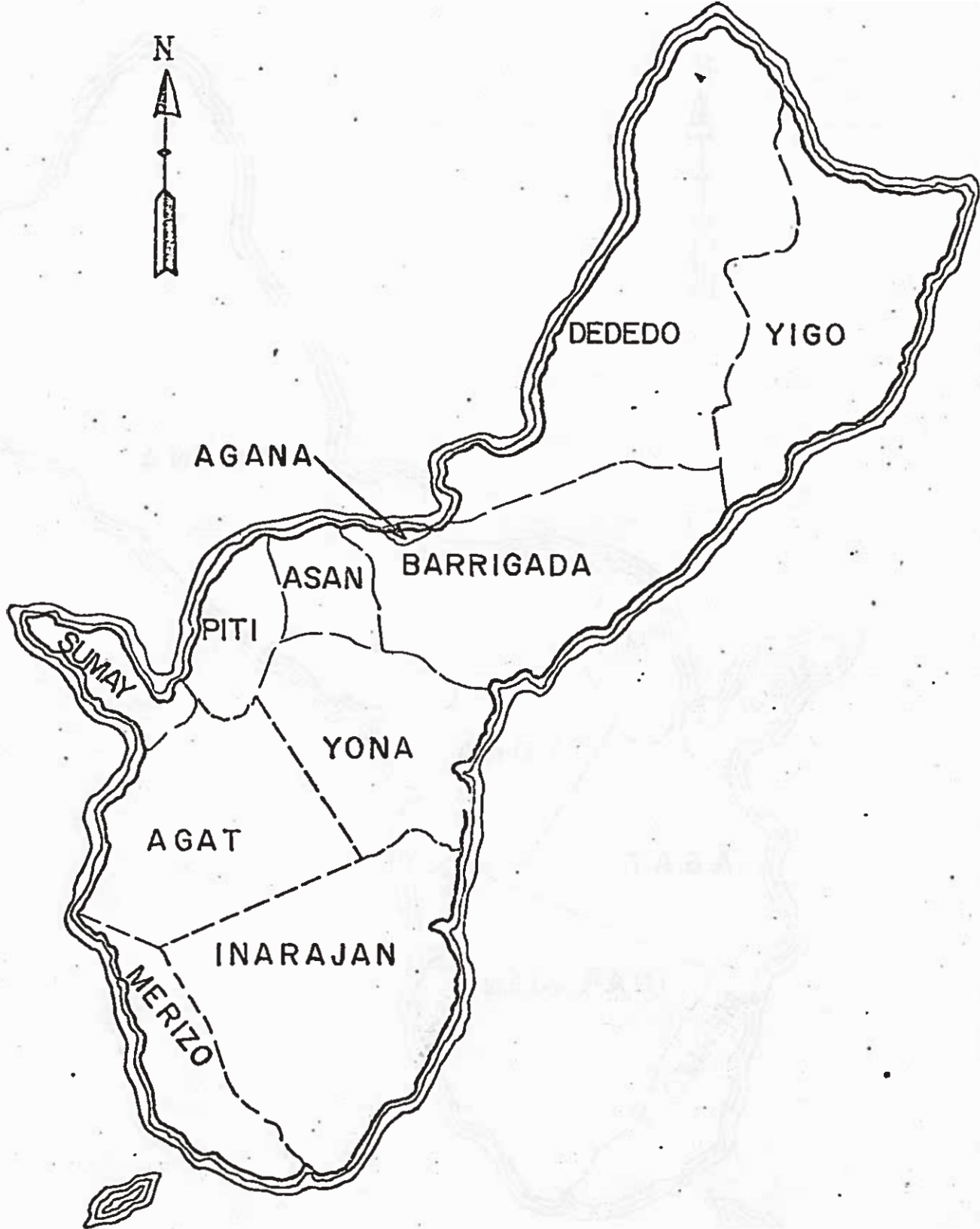
**MUNICIPALITY EVOLUTION**

Prior to July 23, 1913



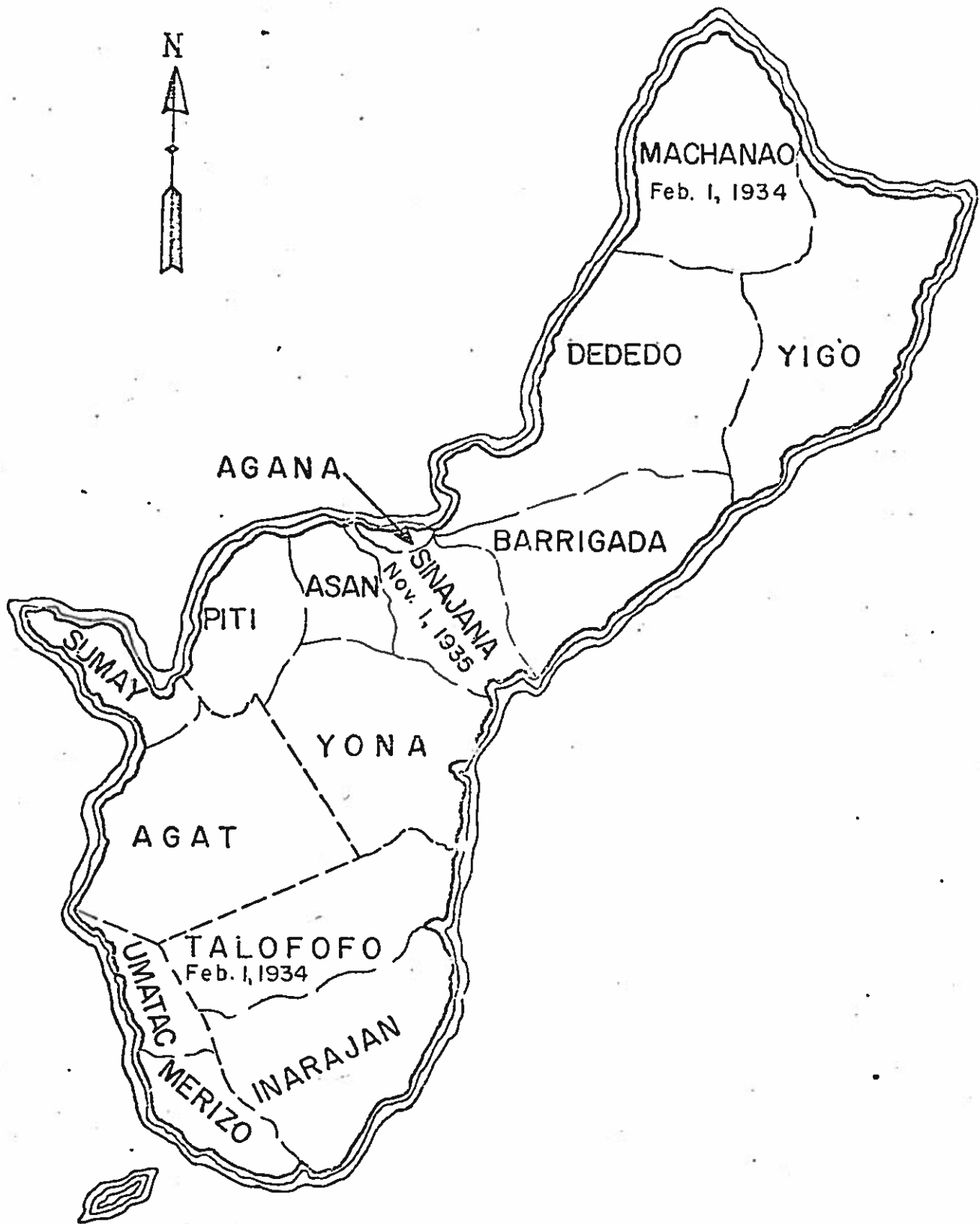
## MUNICIPALITY EVOLUTION

July 23, 1913 to November 14, 1928



## MUNICIPALITY EVOLUTION

November 14, 1928 to April, 1934



## MUNICIPALITY EVOLUTION

As of February 1, 1934  
Nov. 1, 1935

**SECTION II**

**LAWS, REGULATIONS, RULES & SPECIFICATIONS**

**PERTINENT**

**TO THE**

**PRACTICE OF LAND SURVEYING**

## CONTENTS

|                                                                                       |             |
|---------------------------------------------------------------------------------------|-------------|
| Spanish Law                                                                           | II - 3 - 1  |
| Some Executive Orders of the U.S.<br>Naval Government of Guam                         | II - 4 - 1  |
| Civil Code of Guam (References)                                                       | II - 5 - 1  |
| Government Code of Guam (References)                                                  | II - 6 - 1  |
| Regulations Governing Land Surveys in Guam                                            | II - 7 - 1  |
| Organization of Land Management                                                       | II - 8 - 1  |
| Subdivision Requirements                                                              | II - 9 - 1  |
| Supplements to Volume 1 of the<br>Government of Guam Code of the<br>Territory of Guam | II - 10 - 1 |

## Spanish Laws

Spanish laws have little meaning to the Surveyor today and are only included here as a matter of information.

The surveyor who becomes involved in surveys where Spanish laws apply should ask for clarification from either his attorney or from the client's attorney before proceeding with the work.

MINISTRY OF GRACE AND JUSTICE

Law of the 8th of February, 1861. Commanding the Publication of the Project De Loi on Hypothec, to be forthwith made as the Law in the Peninsula and adjacent Islands.

Dona Isabel the Second, by the grace of God and the Constitution Queen of Spain: To all to whom these presents shall come, know ye, that the Cortes have decreed, and we have sanctioned, the following:

ART. 1st. - The Project de Loi on hypothecations, presented by the Government of her Majesty to the Cortes, shall be published forthwith as Law in the Peninsula and adjacent Islands.

ART. 2nd. - This Law shall commence to take effect within a year following the promulgation thereof, on a day that the Government of her Majesty may fix.

Therefore, we command all tribunals, justices, chiefs, governors and other authorities, as well civil as military and ecclesiastical, of every class and dignity, to keep and cause to be kept, fulfilled and executed, the present Law in all its parts. The Palace, the 8th of February, 1861.

I, THE QUEEN

The Minister of Grace and Justice,

SANTIAGO FERNANDEZ NEGRETE.

(Garcia de Mafud, 2th February, 1861)

## THE LAW OF HYPOTHEC

### CHAPTER I

#### Of Titles Subject to Inscription

ART. 1. - In all places, heads of a judicial district, there shall be established a register in charge of functionaries, who shall be called Registrars.

ART. 2. - In the register mentioned in the foregoing article there shall be inscribed:

1st. Titles relating to the transfer of the ownership of immoveable property, or of real rights imposed on the same.

2ndly. Titles, wherein are constituted, acknowledged, modified or extinguished the rights of usufruct, use, habitation, enfiteusis, hypothecation, annuity, servidumbre, or any other real rights.

3rdly. The acts or contracts, in virtue whereof immoveable property or real rights are assigned to any one, although it be with the obligation of transmitting them to another, or of applying them to certain specified objects.

4thly. Executory decrees, wherein are declared the legal incapacity to manage property or the presumption of death of absent persons the passing of the sentence of interdiction or other whatsoever, whereby the civil capacity of persons may be modified as regards the free disposal of their property.

5thly. Contracts of lease of immoveable property for a period exceeding six years.

6thly. Contracts of lease of immoveable property wherein the rents of three or more years may have been anticipated.

ART. 3. - In order that the titles mentioned in the preceding article may be inscribed, they must be evidenced by a public instrument, by executory decrees, or authentic documents granted by the Government or its agents, in the form which the ordinances prescribe.

## CHAPTER II

### *Of The Form and Consequences of Inscription.*

ART. 6. - The inscription of titles in the register may be sought indifferently -

*By him who transmits the right.*

*By him who acquires it.*

*By him who may have the lawful representation of either of them.*

*By one having interest in securing the right which ought to be inscribed.*

ART. 8. - Every one of the properties which may be inscribed for the first time in the new registers shall be indicated by a different and correlative number. The inscriptions corresponding with each property shall be marked with another special and correlative numbering.

ART. 9. - Every inscription that may be made in the register shall express the following particulars:

1st. The nature, situation, superficial measure, boundaries, name and number, if they should appear, of the immoveables forming the subject of the inscription, or which the claim that has to be inscribed may affect.

2ndly. The nature, value, extent, conditions and charges of every species, of the right that may be inscribed.

3rdly. The nature, extent, conditions and charges of the right upon which the right that is the object of the inscription is constituted.

4thly. The nature of the title which has to be inscribed, and the date thereof.

5thly. The christian and surname of the person in whose favour the inscription may be made.

6thly. The christian and surname of the person from whom the property or rights which have to be inscribed immediately proceed.

7thly. The name and residence of the judge, notary or functionary who may give authority to the instrument of title which may have to be inscribed.

8thly. The date of the presentation of the instrument of title in the registry, mentioning the hour.

9thly. The conformity of the inscription with the copy of the instrument of title from whence it may have been taken, and if such instrument of title be of those which have to be preserved in the office of the registry, a reference to the bundle where it is to be found.

ART. 17. - Any title, transferring the ownership of immoveable property being inscribed in the register, no other title of an earlier date whereby the ownership of the same immoveable property may be transferred or burthened can be inscribed.

ART. 18. - The Registrars shall certify upon their own responsibility the legality of the extrinsic forms of the deeds in virtue whereof inscription is solicited, and the capacity of the parties executing insofar as is shown by the same deeds.

ART. 19. - When the Registrar shall observe a defect in the extrinsic forms of deeds, or in the capacity of the parties executing, he shall point it out to those who may claim inscription; and if they do not set it right to his satisfaction he shall return to them the same deeds, in order that they may, if they desire it, have recourse to the tribunals, without prejudice to the making the preventive annotation which Article 42 in clause 8 directs.

ART. 20. - It shall also be a sufficient cause for suspending or refusing the inscription, the not finding previously inscribed the ownership or rights in question in favor of the person who may transfer or burthen them.

In order to cure this deficiency the inscription omitted must previously, and at any time, be made by means of the presentation of the corresponding title, and in default thereof in conformity with what is prescribed in Articles 397 to 410 of this law.

ART. 25. - Titles inscribed shall produce no effect against a third party save from the date of their inscription.

ART. 26. - In order to determine the preference between two or more inscriptions, of one and the same date, relating to one and the same property, regard shall be had to the hour of the presentation in the registry of the respective instruments of title.

ART. 27. - For the purposes of this law he who has not intervened in the act or contract inscribed shall be considered a third party.

ART. 33. - The inscription does not give validity to acts or contracts inscribed, which may be void in conformity with the laws.

### CHAPTER III

#### Of Preventive Annotations

ART. 42. - The following parties shall be able to require a preventive annotation of their respective rights in the corresponding public register:

- 1st. He who shall claim at law the ownership of immoveable property, or the constitution, declaration, modification, or extinction of any real right.
- 2ndly. He who by executive judgment should obtain in his favor an order of seizure which may have been put in effect on landed or real property of the debtor.
- 3rdly. He who by any judgment whatsoever should obtain an executory sentence condemning the defendant, the which has to be carried into effect by the steps appointed in Chap. 18, part 1, of the Law of Civil Procedure.
- 4thly. He who on proceeding in the ordinary tribunal for the fulfilment of any obligation, may obtain in conformity with law, a decree ordering the sequestration or prohibiting the alienation of immoveable property.
- 5thly. He who shall institute a suit with the object of obtaining any one of the decrees mentioned in clause 4 of Article 2 of this.
- 6thly. The legatee who may not have the right, according to law, to institute a testamentary suit.
- 7thly. The refectionary creditor while the works which are the object of the refection are in existence.
- 8thly. He who shall present in the office of the Registry any title, the inscription whereof cannot be definitively made for want of some requisite capable of being supplied, or by reason of any impossibility of the Registrar to make inscription.
- 9thly. He who in any other case whatsoever may have the right of requiring a preventive annotation in conformity with what is laid down in this law (b).

(b) Appendix, Note (B)

ART. 65. - Those defects which occur in titles presented for inscription preventively, and which affect the validity of the said title without necessarily producing the nullity of the obligation raised therein, shall be held capable of rectification.

Those faults which necessarily produce such nullity shall be incurable faults, preventing annotation.

#### CHAPTER IV

##### Of The Extinction of Inscriptions and Preventive Annotations.

ART. 82. - Inscriptions or preventive annotations, made in virtue of a public instrument in writing, shall not be cancelled save by means of another instrument, wherein there shall be shown the consent of the person in whose favor the first was executed, of the parties having interest therein, or of their lawful representatives, or in virtue of an executory decree against which no appeal is pending in cassation.

Inscriptions or annotations made in virtue of judicial decrees shall not be cancelled, save by executory decree having the condition prescribed in the foregoing paragraph.

#### CHAPTER VI.

##### Of The Mode of Conducting The Registers.

ART. 222. - The register, which according to Article 1 of this Law must be kept in every town, the head of a judicial district, shall be so kept in paged books and rubricated by the Judge of First Instance of the same district, or the President where there may be more than one.

ART. 223. - The books mentioned in the foregoing article shall be uniform for all the registers, and shall be formed under the direction of the Ministry of Grace and Justice, with all the precautions fitting in order to prevent any frauds or falsifications which might be committed therein.

ART. 224. - The books which the registrars may keep, formed in conformity with what is laid down in the preceding article, shall alone be evidence.

ART. 225. - The registers shall not be taken on any account from the office of the Registrar. All the judicial and extrajudicial proceedings that may require the production of the said books shall of necessity be taken in the same office.

## CHAPTER IX.

### Of The Publicity Of The Registers

- ART. 280. - The Registrars shall open the registers in the part necessary to persons who in their judgment have an interest in consulting them, without withdrawing the books from the office and with the fitting precautions for securing their preservation.
- ART. 301. - In every registry there shall be the officials and assistants whom the Registrar may have need of, may name and pay, who shall discharge the duties which he may entrust to them, but upon his sole and exclusive responsibility.
- ART. 304. - Those who may be appointed Registrars shall not be capable of being put in possession of their office unless they previously give security, the amount whereof the regulations will fix.

## CHAPTER XI.

### Of The Responsibility Of The Registrars.

- ART. 313. - The Registrars shall be civilly responsible in the first place by their securities, and, secondly, by their other property, for all the losses and damages they may occasion.
- 1st. By not entering in the Diary, not inscribing or not making a preventive annotation in the term specified in the law, of the titles which may be presented in the registry.
- 2ndly. By error or inaccuracy committed in inscriptions, cancellations, preventive annotations or marginal notes.
- 3rdly. By not cancelling, unless for sufficient cause, any inscription or annotation, or omitting the entry of any marginal note within the corresponding term.
- 4thly. By cancelling any inscription, preventive annotation or marginal note without the title and requisites which this law requires.
- 5thly. By error or omission in the certificates of inscription or of freedom of immoveable property or real rights, or by not issuing the said certificates in the term fixed by this law.

## CHAPTER XIV.

Of The Inscription Of Obligations Entered Into, But Not Inscribed Before The Publication Of The Present Law.

ART. 389. - Those who, at the time of publication of this law, may have acquired and not inscribed property or rights which under it have to be inscribed, may inscribe them within the term of one year, computed from the date on which the same law begins to come into operation.

ART. 393. - He who at the publication of this law may have acquired any right of those which may be annotated preventively according to what is disposed in Nos. 1, 3, 4, 5 and 7 of the Article 42, shall be able to solicit the annotation thereof within the term of the year specified in Article 389, and that which he may obtain shall take effect from the date whereon the act annotated ought to have effect in conformity with the earlier legislation.

The annotation may also be made after the said term, but in no case shall it take effect except from its date.

ART. 396. - After the publication of this law there shall not be admitted in the ordinary and special courts and tribunals, in the councils and in the offices of the government, any document or deed of which note has not been taken in the registry, if thereby there be constituted, transmitted, acknowledged, modified or extinguished rights subject to inscription according to the same law.

ART. 397. - The owner who may be wanting in a title of ownership in writing must inscribe his right, previously proving his possession before the Judge of First Instance of the place wherein the property is situate, with audience of the fiscal attorney if it be proposed to inscribe the full ownership of any property, and also with hearing of the owner and that of the other participators in the ownership if it be proposed to inscribe a real right.

Should the property be situate in a town or district where no Judge of the First Instance is resident, the said information may be made before the respective Justice of the Peace with audience of the syndic of the corporation in all cases where the fiscal attorney ought to be heard.

The intervention of the fiscal attorney or of the syndic shall be confined to taking care that the forms of law be observed in the act.

ART. 398. - The petition, wherein the admission of the information whereof the foregoing article treats is solicited, shall express --

1st. The nature, situation, superficial measure, boundaries, name, number and real charges of the property the possession whereof it is proposed to prove.

2ndly. The legal nature, value, conditions and charges of the real right the possession whereof is being treated of, and the nature, situation, boundaries, name and number of the property on which that charge may be imposed.

3rdly. The christian and surname of the person from whom the immoveable property or right may have been acquired.

4thly. The time he may have had possession.

5thly. The circumstance of no written title being in existence, or of its not being easy to find it in case of its being in existence.

ART. 399. - The information contemplated in Article 397 shall be proved by two or more witnesses, persons of property, of the town, or land-owners where the property may be situate.

ART. 400. - The witnesses of whom the foregoing article treats shall shew that they have the qualities therein referred to, presenting the documents which prove them; they shall limit their declarations to the fact of the party moving in the matter possessing the property in his own name and the time that the possession has continued, and shall be answerable for the undue losses which they may give rise to by inaccuracy in their depositions.

ART. 401. - He who proposes to inscribe his possession shall present also the receipt for the last quarter's territorial tax that he may have paid.

Should he not have paid any by reason of his acquisition being recent, notice of the proceeding shall be given to the person from whom the immoveable property comes or to his heirs, in order that they may shew if they have anything to oppose to the inscription.

If he who solicits it be the heir of the previous possessor, he shall present the last receipt for the tax which the latter may have paid

ART. 402. - If the part-owner in the property or in the rights in a property who has to be cited should be absent, the Judge shall appoint him to appear personally or by his attorney within the term that he may deem necessary, according to distance.

Should his place of abode be unknown, or the said term having expired the party cited should not appear, the act shall be approved and the inscription of the right ordered to be made, without prejudice to what may belong to the said part-owner, it being mentioned that the latter has not been heard in the information.

The inscription shall in such case also express the said circumstances.

ART. 403. - Whoever believes that he has a right to the property, the inscription whereof is solicited by means of an information of possession, shall be able to allege it before the competent Judge in the ordinary court.

The interposition of this demand and its inscription in the register shall suspend the course of the proceeding of information, or the

inscription of the same, if it should be already concluded and approved.

ART. 404. - The information taken in the form provided in the foregoing articles being sufficient, and there not being opposition by a legitimate party, or that which may have been made being disallowed the Judge shall approve the act, and shall direct the inscription solicited to be made in the register, without prejudice to a third party having a better right.

ART. 405. - The possessor who may have obtained the decree mentioned in the preceding article shall present in the registry the original proceedings which had to be delivered to him for this purpose, and shall solicit in virtue thereof the corresponding inscription.

ART. 406. - The inscription that may be made shall express all the circumstances referred to in Article 398, and also the names of the witnesses who may have made declaration, what resulted from their declarations, what from the other proceedings taken in the matter, the opinion of the fiscal attorney and the special circumstances of the inscription according to their character in so far as they may be shewn by the said proceedings.

ART. 407. - The Registrars before inscribing any property or right in virtue of informations, shall carefully examine the register in order to discover whether there be therein any entry relating to the same immoveable property which may be wholly or partially cancelled in consequence of the new inscription. Should they find any entry of acquisition of ownership not cancelled, which may be in contradiction of the fact of the possession proved, they shall suspend the inscription, make a preventive annotation and remit a copy of the said entry to the Judge who may have approved the information. The Judge on view thereof shall communicate the proceedings to the person who by the said entry may have any right over the said immoveable property, and on hearing he shall confirm or revoke the decree of approbation, giving knowledge in any case of the decision which he may come to the Registrar, in order that on view whereof he may carry into effect the inscription or cancel the preventive annotation.

Should the Registrar find any uncanceled entry of a life annuity, hypothecation or any real right imposed on the property which has to be inscribed, he shall mention it in the inscription which he shall draw up.

ART. 408. - The inscription made in virtue of proof of possession shall prejudice or favor a third party from its date, and only so far as the effects which the laws ascribe to mere possession.

ART. 409. - The inscription of possession shall not prejudice in any case him who has a better right to the ownership of the immoveable property, although his title may not have been inscribed.

As between the parties the possession shall produce effect when it ought to produce it in conformity with the common law.

ART. 410. - What is disposed in the foregoing articles on inscriptions of possession shall not be applicable to the hypothecatory right which shall not be inscribed, save by means of the presentation of the title inscribed.

Some Executive Orders of the U.S.

Naval Government of Guam

The following data has been included in the Manual for informative purposes only.

The surveyor is advised that current laws, rules and regulations govern all surveys.

EXECUTIVE ORDERS OF THE U.S. NAVAL GOVERNMENT OF GUAM

No. 3 August 21, 1899 For the protection of Government interests and as a safeguard for the residents of Guam against the machinations, devices and schemes of speculators and adventurers, it is hereby ordered that all persons who claim ownership of land in this island or its dependencies are prohibited from selling or transferring any portion of such property without first obtaining the consent of the Government. Violation of this order may be punished by fine or imprisonment, or both.

No. 10 January 5, 1900 - 1. The Spanish system of taxation on Real Estate is hereby abolished, and in lieu thereof a land tax shall be levied, collected and paid to the Government in accordance with the following classification:

CLASS I: - Lands within the limits of the towns and villages, comprising the yards surrounding the dwelling houses, or land suitable for erecting dwellings within the said limits shall be taxed at the annual rate of Four Pesos (Mexican) per hectare.

CLASS II: - Stretches of low land along the coast suitable for raising coconuts; low fertile land suitable for raising cacao or coffee; low marshy land susceptible to irrigation and suitable for raising rice or sugar, and island lying near the coast shall be taxed at the annual rate of 50 cents (Mexican) per hectare.

CLASS III: - Virgin forest land, with rice soil, requiring clearing, and suitable for agricultural purposes or for pasture, shall be taxed at the annual rate of 30 cents (Mexican) per hectare.

CLASS IV: - Land on the Mesa or uplands, not susceptible to irrigation nor within easy reach of water for stock, and is suitable for tobacco and sweet potatoes or corn, shall be taxed at the annual rate of 15 cents (Mexican) per hectare.

CLASS V: - Marsh lands not suitable for the cultivation of rice or sugar, shall be taxed at the annual rate of 10 cents (Mexican) per hectare.

CLASS VI: - Sabana land with soil so thin as to permit nothing but sword grass and iron-wood to grow upon it, shall be taxed at the annual rate of 5 cents (Mexican) per hectare.

2. The lack of facilities for transportation of cattle and produce making it difficult to reach the market, until otherwise ordered a reduction of twenty per centum (20 p.c.) will be allowed on the foregoing rate for the following named districts, viz: Umatac, Merizo, Ynaranjan, Talofofo, Illic, Pago and the

districts of land lying to the northward and eastward of a straight line connecting Pt. Aguy and Pt. Lujana.

3. Upon the payment of a land tax a certificate of payment will be issued and before registering title to or transferring any portion of land the certificate of tax payment therefore must be presented for inspection as a proof of ownership.

4. The provisions of this order go into effect immediately, and the tax will be paid semi-annually, on the thirtieth day of June and the thirty-first day of December of each year.

No. 15 March 13, 1900 - 1. All owners or claimants of land are hereby warned that in order that their ownership be recognized they must acquire legal titles to the said land and have it registered according to law in the office of the Registrar of Lands in Agana before May 15, 1900.

2. All owners of land are hereby ordered to send to the Registrar without delay a statement of the extent and nature of their land, so that they may be assessed accordingly for the tax which is to be paid the 1st of July, 1900. After the 1st of July no titles will be recognized as valid unless the claimant of land wishing to prove ownership presents tax receipts for the land in question.

3. All those who wish to pay the taxes for the current half-year beginning January 1st and ending June 30th, 1900, may do so before July 1st if they please, but any mistake in specifying the nature of the land or its extent will be subject to correction when discovered.

No. 23 August 10, 1900 - 1. It appears that the payment of the land tax semi-annually works a hardship to those who live at a distance from Agana, compelling them to make the journey twice in the year, frequently for the purpose of paying a very small sum. Therefore, for this and other reasons, General Order No. 10, relating to the payment of land taxes, is so far modified that the entire land tax for each year shall hereafter be paid at one time instead of in two semi-annual instalments.

2. The year for which taxes are due shall comprise the period from the 1st day of July to the 30th day of June following; and payment shall be made before the 1st day of January intervening. Land taxes not paid before the said 1st day of January shall be increased ten per cent if paid before the 1st day of March, 25 per cent if paid before the 1st day of May, and 50 per cent if paid before the 1st day of July. The land tax now due for the half year ending June 30th, 1900 shall be subject to the penalty of 50 per cent increase if not paid on or before January 1st, 1901.

3. The laws governing the occupation of unclaimed land or land reserved to the Government, are so far modified that no such

public or unclaimed land shall be occupied without written permission signed by the Governor. This is not intended in any way to hamper or discourage the occupation or improvement of wild land, but, on the contrary, to encourage such enterprise by better defining the proper mode of procedure, and ensuring a more perfect tenure.

No. 31 May 23, 1901 - 1 for the purpose of securing uniformity and equal justice to all applicants for grants of unclaimed land in the Island of Guam, the following concrete conditions and rules have been formulated, and they shall be observed in the cession of public land by the Government to private persons.

2. The land which is the object of the application, if not a building lot, must be susceptible to cultivation, or of cattle raising. Land upon which there is a large amount of hard wood suitable for building purposes shall not under any circumstances be ceded, it being important that so valuable a resource should remain under the protection of the Government.

3. Land granted to a private person shall remain in the sole occupation of that person, but the ownership shall remain in the Government, during a certain period of time, the duration of which with the governing conditions shall depend upon the nature of the land and shall be precisely stated in the document conferring the temporary grant. If the land be arable and acquired for purposes of cultivation, it shall be obligatory on the beneficiary to keep all or such part of it as may be specified under cultivation during a period of from two to five years as may be specified, depending upon the location and nature of the land. If the land be adapted to the raising of cattle and acquired for that purpose, it shall be obligatory on the beneficiary to maintain thereon during a period of two years, beginning within four years after the temporary grant, a number of head of cattle depending upon the size and quality of the pasture. Upon establishing, before a competent court, the fulfillment of the conditions imposed, the beneficiary shall be entitled to register the land acquired in accordance with the land laws in force at the time of the temporary grant. Should the conditions imposed not be fulfilled at the expiration of the period of time specified, the concession shall be annulled and the property shall revert wholly into the possession of the Government.

4. Every application for a grant of land shall be in writing and shall be certified by the signature of two reputable neighboring property owners, and shall contain a statement of the following:

(a) The full name, age, sex, condition (Married or single), nationality, residence, occupation, and family of the applicant.

(b) Property in Guam, urban or country, owned by the applicant the nature and size of each piece; the amount of each that has been cleared, what fields are under cultivation; and a description of houses, if urban property.

(c) The estimated value of all immovable estate in Guam owned by the applicant.

(d) The location, size, nature and detailed description of the land applied for, and its classification for taxation.

(e) The use to which it is intended to put the land, and the length of time required to clear it or to accomplish the object for which it is desired.

(f) The amount and kind of wood of the land applied for.

(g) In case of desiring the land for a pasture, a statement as to whether it would be suitable for agriculture, and if not the reasons why it would not.

5. The government will reject all applications which may appear to be prejudicial to the best interests of the Island.

No. 37 November 29, 1901 - Notice is hereby given that the Government has commenced a survey of the Island; and it is being of the first importance that the persons in charge of said survey shall have due authority for prosecuting the work, and that their signals, stations, and other means which they may have to employ shall remain undisturbed, it is hereby decreed:

1. That the officials employed by the Insular or the Federal Government shall have the right and are authorized to enter private grounds when necessary, and, in case of necessity, to cut down trees and shrubs, erect signals, establish stations of any kind, and do other things necessary to the efficient prosecution of the work referred to, without prejudice to the right of injured parties to present claims for damages in the manner provided by law.

2. That it is prohibited to destroy, remove, displace or in any way disturb, the signals of whatever form or nature they may be, under the penalties established in Article 601 of the Penal Code, namely imprisonment for one to five days, or a fine of 15 to 70 pesetas, unless the infraction shall constitute a crime, in which case the lawful penalty shall be imposed; all of which may have been incurred.

3. That the Justices of the Peace shall be competent to try cases arising under paragraph 2 of this Order, except the offense be such as to be cognizable by the Court of First Instance.

No. 42 April 9, 1901 - 1. That General Order No. 15, having reference to the acquirement of title of urban and other real estate by private individuals and to the time within which the owners should acquire it, shall be construed not conflicting with the provisions of the existing Land Law (Ley Hipotecaria) which provide for the admission and form of procedure in the Courts of Justice of

petitions for grant of title of possession, or in fee simple of, or by equity in, all classes of real property subject to registration in accordance with the said Law; wherefore, the provisions of the said General Order shall not be interpreted as impugning the validity, or legality of titles recorded in the Registry of Lands, Deeds and Titles or approved by judicial authority.

2. That in accordance with the preceding paragraph, it is proper and lawful for owners and possessors of real estate or of equity therein to petition before competent authorities; or functionaries for grant of title for real estate or equity therein by the means in the manner established in the said Land Law.

3. That in the fulfillment of the requirements of Rule 2, Article 395 of the aforesaid Land Law, in petition for title, it is sufficient publication of the notices to post them in the public places which custom has established for such purposes; and it is not necessary to post them beyond the limits of the Island of Guam; or to publish them in official journals until such means of publication shall be established for the Island of Guam.

No. 44 August 6, 1902 - 1. That the civil courts shall have jurisdiction over all proceedings held in real estate surveys and the establishment of land marks; and that when the Insular Government is interested therein, the Office of the Public Prosecutor (Ministerio Fiscal), as its legal representative, shall be made a party thereto.

No. 48 January 17, 1903 - 3. That on petition of the interested party it shall be the duty of the Clerk of the Court of First Instance to issue a plain copy, without seal or signature, of the record of any judicial proceedings held on petition for possessory title to real property: the fee therefor shall be one and one-half dollars (Mexican.)

No. 52 March 6, 1903 - 1. That General Order No. 31, of May 23, 1901, which concerns the concession of public lands to private persons, is hereby annulled: no further concession will be made until the Federal Congress shall make provision therefor.

No. 55 May 7, 1903 - 1. That all existing taxes on real estate are abolished, and in lieu thereof there shall hereafter be levied, annually, a uniform one per cent tax on the appraised value of all real estate, including improvements.

2. That this real estate tax shall be payable at Agana on the first day of July of each year, or earlier if due notice is given, and that it shall become delinquent on the first day of the following August. That, on account of the delay in getting all properties appraised, the tax for the present year shall not become delinquent until the first day of October, 1903.

3. That to each year's tax as it becomes delinquent shall be added a penalty of one peso plus ten per centum of the whole tax

for that year on that piece of property; and until the property becomes liable to sale for unpaid taxes there shall also be added for each succeeding month a penalty of one half peso plus five per centum on the amount of unpaid taxes exclusive of penalties and from the time that the property becomes liable to sale until it is sold for delinquent taxes or until all claims for taxes and penalties are satisfied, simple interest on all taxes and penalties due, at the rate of twelve per centum per annum, shall be added.

4. That if all taxes, penalties, and interest are not paid within one month from the time that the third year's tax becomes delinquent, the property shall at any time thereafter, be subject to sale by the Island Government.

5. That after the claims of the Government have been satisfied the proceeds of such delinquent tax sales shall be deposited in the Treasury of the Island, to be held, without interest, for a period of three years, to the credit of such person or persons as may have legal and registered claims against the property sold, and of the original owners; but that, at the end of three years all such credit for which no legal claim has been made shall become the property of the Island Government.

6. That any person or persons holding a registered mortgage or lien, against any piece of real estate on which delinquent taxes are due, shall be allowed to pay all such delinquent taxes with penalties involved, and that the amount thus paid shall be considered as added to the face value of the mortgage or lien, except that it will draw interest at a rate not to exceed six per centum per annum, and that the principal of this will not be payable until the last payment on the mortgage or lien is collectable.

7. That any payment made on a delinquent tax shall be first applied on the interest, and next on the penalties due.

8. That if there is reason to believe that on account of extreme poverty, misfortune, or for any other good reason, a case deserves special consideration and that the ends of justice or the best interests of the Island will not be served by strictly enforcing the provisions of this decree, the Judge of the Court of First Instance, on the request of the Auditor for the Island of Guam, or of the Governor, shall make such inquiry into the case as can be conveniently carried on, reporting the facts ascertained, without testimony or details of procedure, but with his recommendation and reasons therefor, to the Governor: that the Governor shall then have power to make any further inquiries, and to order such relief as in his opinion the case deserves, by remitting taxes or penalties, or both, in all cases giving his reasons for the action taken. But the Governor shall not make special exemption of future taxes and penalties in such cases, nor shall he remit any taxes or penalties of a delinquent who is worth, altogether, more than six hundred pesos, or who holds title to real estate appraised

at more than four hundred pesos, except upon the concurrence of the Judge of First Instance. The report of the Judge of First Instance, with the Governor's action endorsed thereon, shall be deposited with the Tax Collector.

9. That after real estate becomes liable for sale on account of delinquent taxes, a brief, certified statement of the facts will be made by the Tax Collector to the Auditor for the Island of Guam who will submit the same to the Judge of the Court of First Instance, requesting an order for the sale of the property involved. Should no good reason to the contrary be advanced, the Court of First Instance will issue the order requested, but, to become effective, the order for sale must be first submitted to the Governor, who, if approving same, will also designate the time and place of sale. At least one month's public notice will be given of any contemplated sale, and, if convenient, a personal notice shall be sent to the delinquent by the Auditor.

10. That tax sales shall be to the highest responsible bidder: but, should it be deemed advisable, the Government shall have the option of taking any property thus sold at the figure of the highest bid; and that, in either case, there shall be no right of redemption. Moreover, the Government shall have the right to take the property at its appraised value without offering it for sale.

11. That the following name properties shall be exempt from taxation: All public property, all buildings, together with the land on which they stand, used exclusively for the purpose of education, religion, or approved charities; but this exception shall not include residences or other property belonging to, or occupied by, persons or societies thus engaged, except the buildings and grounds that are actually and exclusively used for the purposes aforementioned. A reasonable amount of land set aside and exclusively used for cemetery purposes shall be exempt from taxation, provided that such lands have been approved by the Government and have been duly registered for such purpose.

12. That this order in no way remits the land taxes already due and unpaid, and that the collection of such unpaid taxes, and the proceedings in case such taxes are not paid shall be according to the laws existing before the publication of this law.

13. That all laws and parts of laws conflicting with this order are hereby annulled.

No. 56

May 11, 1903 - 1. That in order to carry out the provisions of General Order No. 55 relating to the tax on real estate, a Board of Appraisement shall be appointed to carefully appraise the value of all the taxable real estate in this Island.

2. That the Board of Appraisement shall consist of three members; each member being sworn to faithfully perform the duty without prejudice or partiality, and that he will not act as a

member in appraising property in which he is interested, or which belongs to a relative within the fourth degree of relationship. The required oath may be administered by the Auditor for the Island of Guam, by the Auditor's clerk or by a Justice of the Peace.

3. That there shall be supernumerary members of the Board of Appraisement, any one of whom can act in the absence or disqualification of a regular member, after being sworn in the same manner as a regular member before acting on the first call.

4. That there shall be a Committee on Appeals composed of three members who will hear, inquire into, and finally decide, all appeals from the action of the Board of Appraisement. The members of this committee shall be sworn in the same manner as members of the Board. One member of the Committee on Appeals shall be chosen by the Board of Appraisement, one by the appellant and the third member shall be named by the first two.

5. That any appeal from the action of the Board of Appraisement shall be made within one month from the time that action is published and in case the valuation is not reduced more than five per cent there shall be added to the tax, as a penalty, four pesos when the final valuation is less than 1,500 pesos, and eight pesos when it is 1,500 pesos or greater.

6. That the Auditor or the Governor shall have power to appeal against the action of the Board of Appraisement of under-valuation: but unless it is increased on appeal by more than five per centum of the original valuation, that valuation shall stand; but in all instances, as far as is consistent with a quick despatch of business, the owner will be given a chance to present his case.

7. That the compensation for each member of Board of Appraisement and Committee on Appeals who is not a monthly paid employee of the Island Government shall be one and one-half pesos for each day that he is actually engaged on the duty.

8. That the work of appraisement shall begin as soon as practicable after the first day of January of each year.

9. That the action of Board of Appraisement, with the tax corresponding, shall be published in each district as soon as the list for that district is completed: and notice will also be given as to the time at which the tax will be receivable, as well as notice of the action of the Committee on Appeals.

10. That all expenses connected with the valuation of real estate and with the collection of taxes and penalties will come under the Treasury Department of the Island: and the calling together of the Board and Committee shall be by the Auditor for

the island of Guam, who shall have general charge over all matters relating thereto.

11. That the composition of the Board and of the Committee as well as the amount of tax to be levied, may, from time to time, be changed by executive order.

12. That the valuation of real estate, as determined by the provisions of this order, will be accepted and held as the official valuation hereafter.

13. That for the present year the Board of Appraisement shall be composed as follows: Board of Appraisement, Regular Members: Justo de Leon Guerrero Sanchez, Joaquin Perez Cruz, Francisco Pangelinan Blas, Supernumerary Members: Eulogio Cruz, Jose de Salas Santos, Jose Aflague.

No. 59 August 5, 1903 - 1. That the officer of "Examiner of Titles" be created in the Island of Guam.

2. That it shall be the duty of the Examiner of Titles to examine and report upon all titles to real property, and all other questions relating thereto, in which the National or Insular Governments may be interested, whenever so ordered by the Governor of the Island.

3. That said Examiner shall have authority to compel the attendance of witnesses, administer oaths, take testimony, and to do all other acts necessary to the proper discharge of his duties.

4. That it shall be the duty of the Gobernadorescillos, Tenientes de Barrio and Cabezas de Barangai to serve the summons issued by the Examiner of Titles, which summons shall have the legal effects as if served by the Examiner in person.

No. 153 February 28, 1910 - 1. Article 391 of the "Mortgage Law" is hereby amended so as to read as follows: In the preparation of the papers to which the preceding article refers, the following rules shall be observed:

First: The document in which the admission of the proceedings is requested shall contain:

(a) The nature, location, area, boundaries, name, and incumbrances on the estate, the possession of which it is desired to prove.

(b) The legal nature, value, conditions, and incumbrances on the property right, the possession of which is in question, and the nature, location, boundaries, and name, should it have any, of the estate on which such right exists.

Sixth - Any person who believes that he has a right to the estate or part thereof, the record of which is requested through information as to possession, may institute suit to enforce it before the Court of competent jurisdiction. The interposition of this claim and its entry in the Registry shall suspend the course of the proceedings with regard to the information, or the entry thereof, should they already have been concluded and approved.

Seventh - The petition of the interested person, or persons, asking for possession by information, shall be published in brief and clear form, and in the usual way in the Island; giving a period of one month to the persons who believe that they have any claim or right to the estate, or a part thereof, for presenting their suits before the Court of competent jurisdiction; and if at the end of that period nobody appears, the Court should approve the proceedings.

Eighth - To the petition shall be attached a croquis, or map, of the estate whose record is requested, and an explanatory description, in writing, shall be signed by the Commissioner of the district and the person appointed to make the survey, and by the owners of the contiguous estates. When the estate or estates are contiguous to Government lands, the Island Attorney shall be notified. If the person in charge of the survey is a surveyor appointed by the Government, the explanatory description above referred to shall fix the bearings of the boundaries, their angles and the area within the approximation fixed by the law. If, at the time, of the survey, any contiguous owner or any person objects to the direction of the boundary line, the surveyor shall enter on his map the bearing of the line and the bearing of the boundary as claimed by the person who presents the objection.

2. The petitions for possession by information now in progress pending approbation or record, shall be subjected to the provisions of the preceding section.

3. After the publication of this E.G.O. no deed of sale, transfer, mortgage, or any other transaction affecting real property in this Island shall be recorded in the Registry of Land, unless the first record of the property in question has been made in accordance with the provisions of this E.G.O., or unless a certificate of survey covering the requisites specified in paragraph eighth, section first, of this E.G.O. is attached to the deed or document presented for record, if the property in question has been recorded before the publication of this order.

(c) The name and surnames of the person from whom the realty or interest was acquired.

4. Every owner or possessor of agricultural property may inclose or fence in his estates by means of walls, ditches,

growing or dead helter, or in any other manner whatsoever without injury or interference to the easements existing thereon, according to the right vested on soil owners by Article 388 of the Civil Code in force; but those who have not their estates enclosed or fenced as established by this section, cannot claim damages, for injuries caused to their property, before the Courts of this Island.

5. The phrase "possession by information", when used in this Executive General Order, is to be considered as the equivalent of the term "informacion posesoria" used in the Spanish Mortgage Law.

No. 155

June 30, 1910 - 1. That all existing taxes on real estate are abolished and in lieu thereof there shall hereafter be levied annually, on all suburban properties, known as ranch properties (fincas rusticas), a tax of one-half of one percent of the value of said property as appraised by the Board of Appraisers; and upon all town properties (fincas urbanas) a tax of one and one-half per centum of three quarters of the value of the said properties as appraised by the Board of Appraisers.

2. That the tax on real estate shall be receivable in two installments on the option of the payer; namely, the first half on or before the thirty-first day of July, and the second half on or before the thirty-first day of January, yearly.

3. That, after the last named date, this tax shall be deemed delinquent and a penalty of one dollar (\$1.00) plus ten per centum of the whole tax for each year on that piece of property, shall be added to the delinquent tax, and until the property becomes liable for sale for unpaid taxes, there shall also be added for each succeeding month a penalty of one half dollar plus five per centum of the amount of unpaid taxes, exclusive of penalties; and from the time that the property becomes liable to sale until it is sold for delinquent taxes, or until claims for taxes and penalties are satisfied, simple interest on all taxes and penalties due, at the rate of twelve per centum per annum shall be added.

4. That as soon after March 1st, of each year as practicable, the Treasurer shall publish, by public poster, the names of all delinquent taxpayers, and the amount of assessed taxes and penalties remaining delinquent, by each taxpayer.

5. That all taxes, penalties and interest are not paid by May 1st, of each year, the property shall at any time thereafter, be subject to sale by the Island Government.

6. That on account of the delay in preparing the tax list under the new assessment, the tax for the present year shall be due on July 16, 1910 and the first installment shall be receivable from this date to August 15, 1910.

7. That all provisions of E.G.O. Nos. 55 and 115 conflicting with this Order and are hereby repealed.

June 30, 1910 - 1. That from and after July 1, 1910 the following additional taxes and fees shall be collected by the Civil Registrar of this Island.

- (a) Tax on water from the water-supply system.
- (b) Tax on transfer of properties, lease, and so forth.
- (c) Fee for the sealing of scales, weights and measures.

2. Tax on transfer of properties, leases, and so forth. A tax hereby established on all conveyances, deeds, or other realty shall be sold, granted, transferred, or otherwise conveyed to the purchaser or purchasers, or to any other person or persons designated by such purchaser or purchasers as follows: When the true consideration or value received for such realty is more than ten dollars but not more than one hundred dollars, fifty cents; and for each additional one hundred dollars or fractional part thereof of such consideration, fifty cents, PROVIDED, that in sales of encumbered property the tax shall be collected on the net amount of the consideration after deducting the amount of the encumbrance. When there is good reason to believe that a fraud has been perpetrated or attempted on the revenues through the declaration of fictitious consideration in any such conveyance, deed, instrument, or writing, the Registrar of Lands shall from the real-estate rolls or from any other realty at their true market value and the tax on such conveyance deed or instrument shall be assessed and collected on such true market value, of the realty conveyed; and any person who with the intent to defraud the revenues, places a fictitious valuation on any realty conveyed and subject to the tax imposed in this paragraph, or any valuation which shall be less than the actual amount of money or other valuable thing received or delivered in payment for such realty, shall, in addition to the payment of the tax assessed on the actual consideration received or true market value of the realty conveyed, forfeit and pay as an Executive fine a sum equal to twice the amount of such tax.

(d) The length of time the possession has been had. The circumstance of demanding a written title, or the difficulty of finding it, should it exist.

Second - The proceedings shall be held in the presence of two or more witnesses, landowners of the town or village in which the estates are located.

Third - The witnesses shall prove that they have the qualifications mentioned in the preceding rule, presenting the documents necessary for this purpose. They shall limit their testimony to the statement that the person who instituted the proceedings possesses the estate in his own name, and to the time of said possession, and they shall be responsible for any damage they may cause by the inaccuracy of their depositions.

Fourth - The person who desires to have his possession recorded shall present a certificate of the official entrusted with the collection of land taxes. This certificate shall clearly set forth

in accordance with the assessment roll, sworn statements or documents presented by the taxpayers or other official data, that the person interested pays the taxes as the owner of the property in question. When the payment of taxes has been made because the acquisition has been recent, the person from whom the realty was acquired shall be notified of the proceedings or his heirs so that they may declare whether they have any objection to make against its record. If the person requesting it is an heir of the previous possessor, he shall present the last receipt for the taxes which may have been paid, or any other document showing that the payment was made.

Fifth - If the owners of the contiguous estates, or the part owner of the property or interests in an estate, who must be cited, are absent, and their whereabouts are known, the Court shall cite them by means of a communication, requesting them to appear in person or by proxy within the period deemed convenient according to the distance and the facility of communications. If their whereabouts are unknown they shall be cited by means of official edicts published in the usual way in the Island; and if at the end of the period fixed the person cited should not appear the Court shall approve the proceedings, and order that the record of the interest be made without prejudice to the interest of said contiguous owner - or part owners, and stating that the latter have not been heard in the proceedings. The record shall in such case also contain said statement.

On each lease, agreement, memorandum, or contract for the hire, use, or rent of any land or tenements, or portion thereof, shall be paid for the following tax: (a) if executed for a period of time of not more than one year, twenty-five cents; (b) if executed for a period of time of more than one year and not more than three years, fifty cents; (c) if executed for a period of time of more than three years, one dollar.

On every mortgage, or pledge of lands, estate, or personal, heritable or movable, whatsoever, where the same shall be made as a security for the repayment of any definite and certain sum of money lent at the time of previously due and owing, or forborne to be paid, being payable; and on any conveyance of land, estate, or property whatsoever, in trust, or to be sold or otherwise converted into money, which shall be and is intended only as security, either by expense stipulation or otherwise, when the amount for which the mortgage or deed of trust is given is not less than one hundred dollars or fractional part thereof, in excess of three hundred dollars, fifty cents additional: PROVIDED, that upon each and every assignment or transfer of any mortgage, lease or the renewal or continuance of any agreement contract by altering or otherwise, a tax shall be collected and paid at the same rate as that imposed on the original document.

After the taking effect of this Order no instrument, paper or document of those referred to in this section, nor any copy thereof, shall be recorded nor shall it or any record of transfer thereof be admitted or used as evidence in any court of the Island, until

the payment of said taxes has been noted at the bottom of each instrument, paper, or document.

No. 159 August 5, 1910 - 1. The fees to which the Surveyors, authorized by the Governor, shall be entitled for their services in surveying private lands or properties, are as follows: - For each piece of lot of land not exceeding one (1) hectare ..... One dollar and fifty cents (\$1.50).

For each piece of lot of land of over one (1) hectare and not exceeding ten (10) hectares ----- One dollar (\$1.00) per hectare.

For each piece of lot of land of over ten (10) hectares and not exceeding fifty (50) hectares, ... Seventy five cents (\$0.75) per hectare.

For each piece of lot of land exceeding fifty (50) hectares ..... Fifty cents (\$0.50) per hectare.

The travelling expenses and decent lodging of the Surveyor shall be furnished by the person or party interested in the survey, when the property to be surveyed is located outside the limits of the town of Agaña.

The regular, established, wages of the person employed as assistant to the Surveyor must be paid by the person requesting the survey.

2. The attention of all who have not yet recorded their titles or rights of possession or ownership, or applied for the survey required previous to recording, is called to the fact, in accordance with the existing laws, they are in danger of losing said rights. It is therefore, recommended that those interested, record their titles or their legal rights to real estate as soon as possible.

3. All laws or parts of laws inconsistent with this Order are hereby repealed.

No. 181 May 16, 1914 - 1. All persons at present occupying lands to which they cannot show title either in fee simple or by lease are hereby called to take the necessary steps to establish their right to own or occupy such lands.

2. Authority to occupy public lands must hereafter be obtained from the Government.

3. All persons at present occupying public lands without proved title who make improvements on such lands after the date of this Order will do so without right to claim reimbursement.

4. This Order shall take effect from May 20, 1914.

No. 293      October 19, 1913 - 1. The Schedule of the fees to be charged by the Registrar of Lands, Deeds and Titles, attached to the Mortgage Law in force in Guan, is hereby amended by substituting the word, "United States Currency" for "Pesos" whenever and wherever it may occur.

All laws and parts of laws inconsistent with this Order are hereby repealed.

EXTRACTS  
FROM THE CODE OF CIVIL PROCEDURE  
OF THE  
TERRITORY OF GUAM (1953)  
AND  
EXTRACTS FROM CIVIL CODE OF GUAM  
(1953, AS MODIFIED)

EXTRACTS FROM THE CODE OF CIVIL PROCEDURE  
OF THE TERRITORY OF GUAM (1953).

5. Provisions similar to existing laws, how construed. The provisions of this code, so far as they are substantially the same as existing laws, must be construed as continuations thereof, and not as new enactments.
9. Limitations. When a limitation or period of time prescribed in any existing law for acquiring a right or barring a remedy, or for any other purpose, has begun to run before this code goes into effect, and the same or any limitation is prescribed in this code, the time which has already run shall be deemed part of the time prescribed as such limitation by this code.
18. Laws, etc., inconsistent with code repeal. No law, or rule is continued in force because it is consistent with the provisions of this code on the same subject; but in all cases provided for by this code, all laws, and rules heretofore in force in this territory, whether consistent or not with the provisions of this code, unless expressly continued in force by it, are repealed and abrogated. This repeal or abrogation does not revive any former law heretofore repealed, nor does it affect any right already existing or accrued, or any action or proceeding already taken, except as in this code provided; nor does it affect any private law not expressly repealed.
28. Injuries to property. An injury to property consists in depriving its owner of the benefit of it, which is done by taking, withholding, deteriorating, or destroying it.
309. Special issues not made by pleadings, how tried. A question of fact not put in issue by the pleadings may be tried by a judge, upon an order for the trial, stating distinctly and plainly the question of fact to be tried, and such order is the only authority necessary for a trial.
312. Time of commencing actions. Civil actions, without exception, can only be commenced within the periods prescribed in this Title, after the cause of action shall have accrued, unless where, in special cases, a different limitation is prescribed by law.
315. When the government of Guam will not sue. The government of Guam will not sue any person for or in respect to any real property, or the issues or profits thereof, by reason of the right or title of the government of Guam to the same, unless:
  1. Such right or title or cause of action shall have accrued within 10 years before any action or other proceeding for

the same is commenced; or,

2. The government of Guam, or those from whom they claim, shall have received the rents and profits of such real property, or of some part thereof, within the space of 10 years; or,
  3. The Governor of Guam by special order shall direct an action to be brought.
316. When action cannot be brought by grantee from the government. No action can be brought for or in respect to real property by any person claiming under letters patent or grants from any government of this territory, unless the same might have been commenced by the government of Guam as herein specified, in case such patent had not been issued or grant made.
317. When actions to be brought within 5 years. When letters patent or grants of real property issued or made by the government of Guam or any previous government of Guam, are declared void by the determination of a competent court, and action for the recovery of the property so conveyed may be brought, either by the Government of Guam, or by any subsequent patentee or grantee of the property, his heirs, or assigns, within 5 years after such determination, but not after that period.
318. Seizing within 5 years, when necessary in action for real property. No action for the recovery of real property, or for the recovery of the possession thereof, can be maintained, unless it appears that the plaintiff, his ancestor, predecessor, or grantor, was seized or possessed of the property in question, within 5 years before the commencement of the action.
319. Such seizing, when necessary in action or defense arising out of title to or rents of real property. No cause of action, or defense to an action, arising out of the title to real property or to rents or profits out of the same, can be effectual, unless it appears that the person prosecuting the action, or making the defense, or, under whose title the action is prosecuted, or the defense is made, or the ancestor, predecessor, or grantor of such person was seized or possessed of the premises in question within 5 years before the commencement of the act in respect to which such action is prosecuted or defense made.
320. Entry on real estate. No entry upon real estate is deemed sufficient or valid as a claim, unless an action be commenced thereupon within 1 year after making such entry, and within 5 years from the time when the right to make it descended or accrued.
321. Possession, when presumed. Occupation deemed under legal title, unless adverse. In every action for the recovery of real property or the possession thereof the person establishing a legal title

to the property is presumed to have been possessed thereof within the time required by law, and the occupation of the property by any other person is deemed to have been under and in subordination to the legal title, unless it appears that the property has been held and possessed adversely to such legal title for 5 years before the commencement of the action.

322. Occupation under written instrument or judgment, when deemed adverse. When it appears that the occupant, or those under whom he claims, entered into the possession of the property under claim of title, exclusive of other right, founding such claim upon a written instrument, as being a conveyance of the property in question, or upon the decree or judgment of a competent court, and that there has been a continued occupation and possession of the property included in such instrument, decree, or judgment, or of some part of the property, under such claim, for 5 years, the property so included is deemed to have been held adversely, except that when it consists of a tract divided into lots, the possession of one lot is not deemed a possession of any other lot of the same tract.

323. What constitutes adverse possession under written instrument or judgment. For the purpose of constituting an adverse possession by any person claiming a title founded upon a written instrument, or a judgment or decree, land is deemed to have been possessed and occupied in the following cases:

1. Where it has been usually cultivated or improved;
2. Where it has been protected by a substantial enclosure
3. Where, although not enclosed, it has been used for the supply of fuel, or of fencing timber for the purposes of husbandry, or for pasturage, or for the ordinary use of the occupant;
4. Where a known farm or single lot has been partly improved, the portion of such farm or lot that may have been left not cleared, or not enclosed according to the usual course and custom of the adjoining country, shall be deemed to have been occupied for the same length of time as the part improved and cultivated.

324. Premises actually occupied under claim of title deemed to be held adversely. Where it appears that there has been an actual continued occupation of land, under a claim of title, exclusive of any other right, but not founded upon a written instrument, judgment, or decree, the land so actually occupied, and no other, is deemed to have been held adversely.

325. What constitutes adverse possession under claim of title not written. For the purpose of constituting an adverse possession by a person claiming title, not founded upon a written instrument, judgment, or decree, land is deemed to have been possessed and occupied in

the following cases only:

1. Where it has been protected by a substantial enclosure;
  2. Where it has been usually cultivated or improved;  
Provided, however, that in no case shall adverse possession be considered established under the provision of any section or sections of this code, unless it shall be shown that the land has been occupied and claimed for the period of 10 years continuously, and the party or persons, their predecessors and grantors, have paid all the taxes, which have been levied and assessed upon such land.
326. Relation of landlord and tenant as affecting adverse possession. When the relation of landlord and tenant has existed between any persons, the possession of the tenant is deemed the possession of the landlord untill the expiration of 5 years from the termination of the tenancy, or, where there has been no written lease, until the expiration of 5 years from the time of the last payment of rent, notwithstanding that such tenant may have acquired another title, or may have claimed to hold adversely to his landlord. But such presumptions cannot be made after the periods herein limited.
327. Right of possession not affected by descent cast. The right of a person to the possession of real property is not impaired or affected by a descent cast in consequence of the death of a person in possession of such property.
350. When an action is commenced. An action is commenced within the meaning of this title, when the complaint is filed.
379. Who may be joined as defendants. Any person may be made a defendant who has or claims an interest in the controversy adverse to the plaintiff, or who is a necessary party to a complete determination or settlement of the question involved therein. And in an action to determine the title or right of possession to real property which, at the time of the commencement of the action, is in the possession of a tenant, the landlord may be joined as a party defendant.
- 379a. Same. All persons may be joined as defendants against whom the right to any relief is alleged to exist, whether jointly, severally, or in the alternative; and judgment may be given against such one or more of the defendants as may be found to be liable, according to their respective liabilities.
- 379b. Order preventing embarrassment. It shall not be necessary that each defendant shall be interested as to all relief prayed for, or as to every cause of action included in any proceeding against him; but the court may make such order as may appear just to prevent any defendant from being embarrassed or out to expense by being required to attend any proceedings in which he may have no interest.

- 379c. Doubt as to defendant liable. Where the plaintiff is in doubt as to the person from whom he is entitled to redress, he may join two or more defendants, with the intent that the question as to which, if any of the defendants is liable, and to what extent, may be determined between the parties.
380. Defendants, actions for real property. In an action brought by a person out of possession of real property, to determine an adverse claim of an interest or estate therein, the person making such adverse claim and persons in possession may be joined as defendants, and if the judgment be for the plaintiff, he may have a writ for the possession of the premises, as against the defendants in the action, against whom the judgment has passed.
381. Parties holding under common title. Any two or more persons claiming any estate or interest in lands under a common source of title, whether holding as tenants in common, joint tenants, coparceners, or in severalty, may unite in an action against any person claiming an adverse estate or interest therein, for the purpose of determining such adverse claim, or of establishing such common source of title, or of declaring the same to be held in trust or of removing a cloud upon the same.
409. Notice of lis pendens. In an action affecting the title or the right of possession of real property, the plaintiff, at the time of filing the complaint, and the defendant, at the time of filing his answer, when affirmative relief is claimed in such answer, or at any time afterwards, may record in the Department of Land Management, a notice of the pendency of the action, containing the names of the parties, and the object of the action or defense, and a description of the property affected thereby. From the time of filing such notice for record only, shall a purchaser or encumbrancer of the property affected thereby be deemed to have constructive notice of the pendency of the action, and only of its pendency against parties designated by their real names.
455. Description of real property in a pleading. In an action for the recovery of real property it must be described in the complaint with such certainty as to enable an officer, upon execution, to identify it.
738. Action to quiet title to real and personal property. An action may be brought by any person against another who claims an estate or interest in real or personal property, adverse to him, for the purpose of determining such adverse claim; Provided, however, that whenever in an action to quiet title to, or to determine adverse claims to, real or personal property, the validity or interpretation of any gift, devise, bequest, or trust, under any will, or instrument purporting to be a will, whether admitted to probate or not, shall be involved, such will, or instrument purporting to be a will, whether admitted to probate or not, shall be involved, such will, or instrument purporting to be a will, is admissible in evidence: and all questions concerning the validity of any gift, devise,

bequest, or trust therein contained, save such as belong exclusively to the probate jurisdiction, shall be finally determined in such action: Provided, that if the said will shall have been admitted to probate and interpreted by a decree of the Island Court sitting in probate which decree has become final, such interpretation shall be conclusive as to the proper construction of said will, or any part thereof, so construed, in any action under this section.

741. When value of improvements can be allowed as a set-off. When damages are claimed for withholding the property recovered, upon which permanent improvements have been made by a defendant, or those under whom he claims, holding under color of title adversely to the claim of the plaintiff, in good faith, the value of such improvements must be allowed as a set-off against such damages.
742. An order may be made to allow a party survey and measure the land in dispute. The court in which an action is pending for the recovery of real property, or for damages for an injury thereto, or a judge thereof may, on motion, upon notice by either party for good cause shown, grant an order allowing to such party the right to enter upon the property and make survey and measurement thereof, for the purpose of the action, even though entry for such purpose has to be made through other lands belonging to parties to the action.
743. Order, what to contain, and how served. If unnecessary injury done, the party surveying to be liable therefor. The order must describe the property, and a copy thereof must be served on the owner or occupant; and thereupon such party may enter upon the property with necessary surveyors and assistants, and make such survey and measurements; but if any unnecessary injury be done to the property he is liable therefor.
744. A mortgage must not be deemed a conveyance, whatever its terms. A mortgage of real property shall not be deemed a conveyance, whatever its terms, so as to enable the owner of the mortgage to recover possession of the real property without a foreclosure and sale.
749. Determination of adverse claims to real property. Unknown defendants. Lis Pendens. An action may be brought to determine the adverse claims to and clouds upon title to real property by a person who, by himself or by himself and his predecessors in interest, has been in the actual, exclusive and adverse possession of such property continuously for 20 years prior to the filing of the complaint, claiming to own the same in fee against the whole world, and who has paid all taxes of every kind levied or assessed against the property during the period of 5 years continuously next preceding the filing of the complaint. Said action shall be commenced by the filing of a verified complaint averring the matters above enumerated. The said complaint may include as defendants in

such action, in addition to such persons as appear of record to have, all other persons who are known to the plaintiff to have, some claim or cloud on the lands described in the complaint adverse to plaintiff's ownership, or other persons unknown claiming any right, interest or lien in such lands or cloud upon the title of plaintiff thereto, and the plaintiff may describe such unknown defendants in the complaint as follows: "Also all other other persons unknown claiming any right, title, estate, lien or interest in the real property described in the complaint adverse to plaintiff's ownership, or any cloud upon plaintiff's title thereto." Within 10 days after the filing of the complaint, plaintiff shall file, or cause to be filed, in the Department of Land Management, a notice of the pendency of the action, containing the matters required by section 409 of this code.

751a. Receiving or conveying title to real property under different names.

Whenever any person who by any conveyance, judgment, or decree has received or taken, or who hereafter receives or takes, the title to, or any interest in, or lien upon real property in a certain name and thereafter has conveyed, or conveys, or has reconveyed, or reconveys, the same or any part thereof, or has satisfied, or satisfies, such lien in a name other than, or different from, the name under which title was received, or any interest or lien thereon was taken, the identity of such person, or persons, may be adjudicated and determined on petition of any subsequent owner or the successor in interest, of said property, or any part thereof, or any interest therein.

As many such persons as appear of record in the chain of title to the land described in the petition may be joined in one petition or proceeding.

The petition must be filed in the District Court and shall be verified as provided in this code for verification of a complaint.

The petition may be substantially entitled, "In the matter of determination of the identity of \_\_\_\_\_" (naming all the persons sought to be identified), and may set forth:

1. A statement of petitioner's interest in the property as owner, part owner, or otherwise.

2. A particular description of the petitioner's property.

3. The name or names of the person or persons sought to be identified, setting out the name and the reference to the record of the conveyance under which title was received, and the name and a reference to the record of the conveyance whereby the title was conveyed, and that such names were and are the names of the same person, and that such conveyances affect the title to petitioner's property.

4. A prayer that the identity of such persons be established. The clerk must thereupon set the petition for hearing by the

court and the petitioner must give notice thereof by causing notices of the time and place of hearing to be posted on at least three public bulletin boards, one of which must be at the place where the court is held, and one in a conspicuous place on the property described, at least 10 days before the hearing.

The said notice shall be substantially in the following form:

(Title of court and cause)

Notice is hereby given that \_\_\_\_\_ has filed a petition herein claiming to be the owner of the following described lands \_\_\_\_\_ (description);

And praying that the identity of the following-named persons, in former conveyances to said lands, be determined, to wit: \_\_\_\_\_ (names as J. Doe and John Doe);

And that the time and place of hearing of said petition has been set for \_\_\_\_\_ the \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_ at the hour of \_\_\_\_\_ M. of said day at the court room of said court in the City of Agaña, Guam.

\_\_\_\_\_  
(Clerk)

At any time before the date fixed for such hearing, any person interested in said property may answer said petition and deny any of the matters contained therein.

At the time fixed for the hearing, or such time thereafter, as may be fixed by the court, the court must hear the proofs offered by the petitioner, and by any person answering the same, and must make and enter a decree determining the identity of the person, or persons, set out in the petition in accordance with the proofs.

An appeal may be taken by any party aggrieved as set forth in this code.

After the said decree has become final it shall have the force and effect of a judgment in rem. A certified copy of said decree shall be recorded in the Department of Land Management.

1060. Declaratory relief. Any person interested under a deed, will or other written instrument, or under contract, or who desires a declaration of his rights or duties with respect to another, or in respect to, in, over, or upon property, or with respect to the location of the natural channel of water course, may, in cases of actual controversy relating to the legal rights and duties of the respective parties, bring an action in the court having jurisdiction for a declaration of his rights and duties in the premises, including a determination of any question of construction or validity arising under such instrument or contract. He may ask for a declaration of

rights or duties, either alone or with other relief; and the court may make a binding declaration of such rights or duties, whether or not further relief is or could be claimed at the time. The declaration may be either affirmative or negative in form and effect, and such declaration shall have the force of a final judgment. Such declaration may be had before there has been any breach of the obligation in respect to which said declaration is sought.

1237. Eminent domain defined. "Eminent domain" is the right of government to condemn private property for public use, and to appropriate the ownership and possession of such property for such public use upon paying the owner a due compensation to be ascertained according to law. No private corporation shall have the right of eminent domain in Guam.
1238. Public use defined. As used in this title the words "public use" shall be construed to cover any use affecting the public generally, or any number thereof, as distinguished from particular individuals.
1244. Complaint in eminent-domain proceedings. The complaint must be brought in the name of and on behalf of the government of Guam as plaintiff by either the Island Attorney or Attorney General and must contain:
1. The names of all owners and claimants of the property, if known, or a statement that they are unknown, who must be styled defendants.
  2. A statement of the right of the plaintiff.
  3. If a right-of-way be sought, the complaint must show the location, general route, and termini, and must be accompanied with a map thereof, so far as the same is involved in the action or proceeding.
  4. A description of each piece of land, or other property or interest in or to property, sought to be taken, and whether the same includes the whole or only a part of an entire parcel or tract or piece of property, or interest in or to property. All parcels of land, or other property or interest in or to property, and required for the same public use, may be included in the same or separate proceedings, at the option of the plaintiff, but the court may consolidate them to suit the convenience of the parties.
1245. Summons in condemnation proceedings. How issued and served. The clerk must issue a summons, which must contain the names of the parties, a general description of the whole property, a statement of the public use for which it is sought, and a reference to the petition for the descriptions of the respective parcels, and a notice to the defendants to appear in the cause. When the defendant or claimant of land sought to be condemned is known the summons shall be served by delivering to him a true copy thereof. In case the defendant or claimant, whether known or unknown, cannot be found, then the service of summons shall be made by publication thereof. In case defendants, known or unknown, have been joined in a petition by describing them as a class then the service of the summons upon such defendants may be made by publication. Proof of service and form of the summons shall be in accordance with the

Code of Civil procedure as provided for in civil actions. The service of summons as provided for in this section shall be sufficient to give the court jurisdiction to proceed with and finally determine the case.

1247. Damages to be determined. Appointment of referees. Upon the showing by the Island Attorney or Attorney General that the property sought to be condemned is for public use, the court must either itself hear the parties, view the premises and assess damages to be paid for the condemnation, or it may appoint not more than three referees to hear the parties, view the premises and assess damages to be paid for the condemnation, and to report their proceedings to the court. The judge of the District Court shall issue a commission under the seal of the court to the referees authorizing the duties herein prescribed.
1248. Duties of referees. Before entering upon the performance of their duties the referees shall take and subscribe an oath before the judge, or clerk, that they will faithfully perform their duties as referees, which oath shall be filed in court with the other proceedings in the case. Evidence under oath may be introduced by either party before the referees, who are hereby authorized to administer oaths on hearings before them, and the commissioners shall, unless the parties consent to the contrary, go to the premises together and view the property sought to be condemned and its surroundings, and may examine and measure the same, after which either party may, by himself or counsel, or both, argue the cause. The referees shall assess the value of the property taken and used, and shall also assess the consequential damages to the property not taken and deduct from such consequential damages the consequential benefits to be derived by the owners from the public use of the land taken: Provided, that consequential benefits assessed shall in no case exceed the consequential damage assessed: Provided further, that nothing in this section shall be so construed as to deprive the owner of the actual value of his property so taken or used.
1249. Report of referees. The referees shall make full and accurate report to the court of all their proceedings under their commission; but none of their proceedings shall be effectual to bind the property or the parties until the court shall have accepted their report and rendered judgment in accordance with its recommendations.
1250. Action of court upon report of referees. Upon the filing of such report in court, the court shall, upon hearing accept the same and render judgment in accordance therewith, or for cause shown it may recommit the report to the referees for further report of facts; or it may set aside the report and appoint new referees; or it may accept the report in part and reject it in part, and may make such final order and judgment as shall secure to the plaintiff the property essential to the exercise of his rights under the law, and to the defendant just compensation for the property so taken; and the judgment shall require payment of the sum awarded as provided in the next section, before the plaintiff can enter upon the ground and appropriate it to the public use.
1251. Rights of plaintiff after judgment. Upon payment by the plaintiff to the defendant of compensation as fixed by the judgment, or after tender

to him of the amount so fixed and payment of the costs, the plaintiff shall have the right to enter in and upon the land so condemned, to appropriate the same to the public use defined in the judgment. In case the defendant and his attorney absent themselves from the court or decline to receive the same it shall be deposited with the clerk of the court having jurisdiction and, if not claimed within 5 years thereafter, it shall escheat to the government of Guam.

1252. Effect of an appeal. The allowance of a bill of exceptions in condemnation proceedings shall not operate as stay of execution, nor shall the right of the plaintiff to enter upon the land of the defendant and appropriate the same to public use be delayed by appeal to the District Court.
1253. Costs. The costs in all cases under this chapter relating to eminent domain shall be paid by the plaintiff; but in case the action is carried to the District Court by the owner, the costs in the District Court shall be paid by the owner if the judgment is affirmed.
1254. Fees of referees. The referees appointed to condemn land for public uses in accordance with the preceding sections, shall receive a compensation of two dollars per day each for the time actually and necessarily employed in the performance of their duties and in making their report to the court, which fees shall be taxed as a part of the costs of the proceedings and paid as provided in the preceding section. No fees shall be paid to a referee who is an employee or official of either the government of Guam or of the United States Government.
1255. Final judgment, its record and effect. The record of the final judgment in such action shall state definitely, by metes and bounds and adequate description, the particular land or interest in land condemned to the public use, and the nature of the public use. A certified copy of the record of the judgment shall be recorded in the Department of Land Management, and its effect shall be to vest in the plaintiff for the public use stated the land and estate so described.
1256. Power of a guardian not affected by such proceedings. The guardian or guardian of ~~item~~ of a minor or person of unsound mind may, on behalf of his ward, by approval of the court, do and perform any act, matter, or thing respecting the condemnation for public uses of the land belonging to such minor or person of unsound mind, which such minor or person of unsound mind, could do in such proceedings if he were of age or of sound mind.
1257. Persons not notified, not affected by such proceedings. Nothing herein contained shall be construed so as to injure, prejudice, defeat, or destroy the estate right, or title of any person claiming land or any part thereof, or any interest therein, who was not made a party defendant to the condemnation proceedings and did not have actual or constructive notice of the proceedings in such manner as the law requires.

Provided, nevertheless, that when it shall be made to appear to the court that the interest of each of the several defendants in the land, or any interest therein, cannot be clearly ascertained in the proceedings, or when it shall appear that the names of the several owners are not all known and cannot be ascertained, the court may order the payment of the amount of damages awarded into court.

1258. Declaration of taking. 1. In any condemnation action which has been or may be instituted by authority of the government of Guam for the acquisition of any land or interest therein for the public use, the judgment, a declaration of taking signed by the authority empowered by law to acquire the lands described in the complaint, declaring that said lands are taken for the public use by the government of Guam. As used in this section, the term "public use" shall include, but shall not be limited to such use as in the judgment of the Governor shall be necessary and proper to promote the civilian economy of Guam.

2. Said declaration of taking shall contain or have annexed thereto -----

(1) A statement of the public use for which said lands are taken;

(2) A description of the lands taken sufficient for the identification thereof;

(3) A statement of the estate or interest in said lands are taken;

(4) A plan showing the lands taken;

(5) A statement of the sum of money estimated by the acquiring authority to be just compensation for the lands taken.

3. Upon the filing of said declaration of taking and of the deposit into court, for the use of the persons entitled thereto, of the amount of the estimated compensation stated in said declaration of taking, title to the said lands in fee simple absolute, or such less estate or interest therein as is specified in said declaration shall vest in the government of Guam, and said lands shall be deemed to be condemned and taken for the use of the government of Guam, and the right to just compensation for the same shall vest in the persons entitled thereto; and said compensation shall be ascertained and awarded in said proceeding and established by judgment therein, and the said judgment shall include, as a part of the just compensation awarded, interest at the rate of six (6%) per centum of the amount finally awarded as the value of the property as of the date the title to said lands, or interest, or estate therein, is taken hereunder, from said date to the date of payment, but interest shall not be allowed on so much thereof as shall have been paid into court.

4. Upon the application of the parties in interest and proof of ownership of such interest, the court may order that the money deposited into court, or any part thereof, be paid forthwith for or on account of just compensation to be awarded in said proceeding. If the compensation finally awarded in respect of said lands, or

in accordance with the assessment roll, sworn statements or documents presented by the taxpayers or other official data, that the person interested pays the taxes as the owner of the property in question. When the payment of taxes has been made because the acquisition has been recent, the person from whom the realty was acquired shall be notified of the proceedings or his heirs so that they may declare whether they have any objection to make against its record. If the person requesting it is an heir of the previous possessor, he shall present the last receipt for the taxes which may have been paid, or any other document showing that the payment was made.

Fifth - If the owners of the contiguous estates, or the part owner of the property or interests in an estate, who must be cited, are absent, and their whereabouts are known, the Court shall cite them by means of a communication, requesting them to appear in person or by proxy within the period deemed convenient according to the distance and the facility of communications. If their whereabouts are unknown they shall be cited by means of official edicts published in the usual way in the Island; and if at the end of the period fixed the person cited should not appear the Court shall approve the proceedings, and order that the record of the interest be made without prejudice to the interest of said contiguous owner - or part owners, and stating that the latter have not been heard in the proceedings. The record shall in such case also contain said statement.

On each lease, agreement, memorandum, or contract for the hire, use, or rent of any land or tenements, or portion thereof, shall be paid for the following tax: (a) if executed for a period of time of not more than one year, twenty-five cents; (b) if executed for a period of time of more than one year and not more than three years, fifty cents; (c) if executed for a period of time of more than three years, one dollar.

On every mortgage, or pledge of lands, estate, or personal, heritable or movable, whatsoever, where the same shall be made as a security for the repayment of any definite and certain sum of money lent at the time of previously due and owing, or forborne to be paid, being payable; and on any conveyance of land, estate, or property whatsoever, in trust, or to be sold or otherwise converted into money, which shall be and is intended only as security, either by expense stipulation or otherwise, when the amount for which the mortgage or deed of trust is given is not less than one hundred dollars or fractional part thereof, in excess of three hundred dollars, fifty cents additional: PROVIDED, that upon each and every assignment or transfer of any mortgage, lease or the renewal or continuance of any agreement contract by altering or otherwise, a tax shall be collected and paid at the same rate as that imposed on the original document.

After the taking effect of this Order no instrument, paper or document of those referred to in this section, nor any copy thereof, shall be recorded nor shall it or any record of transfer thereof be admitted or used as evidence in any court of the Island, until

actions or proceedings such compensation shall, in the first instance, be apportioned and charged to the several parties in such proportion as the court or judge may determine and may thereafter be taxed and allowed in like manner as other costs. Nothing contained in this section shall be deemed or construed so as to prevent any party to any action or proceeding from producing other expert evidence as to such matter or matters, but where other expert witnesses are called by a party to an action or proceeding they shall be entitled to the ordinary witness fees only and such witness fees shall be taxed and allowed in like manner as other witness fees. Any expert so appointed by the court may be called and examined as a witness by any party to such action or proceeding or by the court itself; but, when called, shall be subject to examination and objection as to his competency and qualifications as an expert witness and as to his bias. Such expert though called and examined by the court, may be cross-examined by the several parties to an action or proceeding in such order as the court may direct. When such witness is called and examined by the court, the several parties shall have the same right to object to the questions asked and the evidence adduced as though such witness were called and examined by an adverse party.

1925. Certificates of purchase primary evidence of ownership. A certificate of title or purchase or of location of any lands in Guam, issued or made in pursuance of any law of the United States, or on Guam, is primary evidence that the holder or assignee of such certificate is the owner of the lands described therein.

2047. When witness may refresh memory from notes. A witness is allowed to refresh his memory respecting a fact, by anything written by himself, or under his direction, at the time when the fact occurred, or immediately thereafter, or at any other time when the fact was fresh in his memory, and he knew that the same was correctly stated in the writing. But in case the writing must be produced, and may be seen by the adverse party, who may, if he choose, cross-examine the witness upon it, and may read it to the judge. So, also, a witness may testify from such a writing, though he retain no recollection of the particular facts, but such evidence must be received with caution.

2077. Rules for construing land descriptions. The following are the rules for construing the descriptive part of a conveyance of real property, when the construction is doubtful and there are no other sufficient circumstances to determine it.

1. Where there are certain definite and ascertained particulars in the description, the addition of others which are indefinite, unknown, or false, does not frustrate the conveyance, but it is to be construed by the first mentioned particulars.

2. When permanent and visible or ascertained boundaries or monuments are inconsistent with the measurement, either of lines, angles, or surfaces, the boundaries or monuments are paramount.

3. Between different measurements which are inconsistent with each other, that of angles is paramount to that of surfaces, and that of lines paramount to both.

4. When a road, or stream of water not navigable, is the boundary, the right of the grantor to the middle of the road or the thread of the stream are included in the conveyance, except where the road or thread of the stream is held under another title.

5. When tide water is the boundary, the rights of the grantor to ordinary high-water mark are included in the conveyance.

6. When the description refers to a map, and that reference is inconsistent with other particulars, it controls them if it appears that the parties acted with reference to the map; otherwise the map is subordinate to other definite and ascertained particulars.

EXTRACTS FROM CIVIL CODE OF GUAN, (1953, AS MODIFIED)

14. *Definitions.* Words used in this code in the present tense include the future as well as the present; words used in the masculine gender include the feminine and neuter; the singular number includes the plural, and the plural the singular; the word "person" includes a corporation as well as a natural person; writing includes printing and typewriting; oath includes affirmation or declaration; and every mode of oral statement, under oath or affirmation, is embraced by the term "testify," and every written one in the term "depose"; signature or subscription include mark, when the person cannot write, his name being written near it, by a person who writes his own name as a witness: Provided, that when a signature is by mark it must, in order that the same may be acknowledged or may serve as the signature to any sworn names as witnesses thereto. The following words have in this code the signification attached to them in this section, unless otherwise apparent from the context:
- (1) The word "property" includes property, real and personal;
  - (2) The words "real property" are coextensive with lands, tenements, and hereditaments.
19. *Constructive notice, presumed.* Every person who has actual notice of circumstances sufficient to put a prudent man upon inquiry as to a particular fact, has constructive notice of the fact itself in all cases in which, by prosecuting such inquiry, he might have learned such fact.
657. *Real and personal property.* Property is either:
- 1. Real or immovable; or
  - 2. Personal or movable.
658. *Real property.* Real or immovable property consists of:
- 1. Land;
  - 2. That which is affixed to land;
  - 3. That which is incidental or appurtenant to land;
  - 4. That which is immovable by law.
659. *Land.* Land is the solid material of the earth, whatever may be the ingredients of which it is composed, whether soil, rock, or other substance.
660. *Fixtures.* A thing is deemed to be affixed to land when it is attached to it by roots, as in the case of trees, vines, or shrubs; or imbedded in it, as in the case of walls; or permanently resting upon it, as in the case of buildings; or permanently attached to what is thus permanent,

as by means of cement, plaster, nails, bolts, or screws.

662. *Appurtenances.* A thing is deemed to be incidental or appurtenant to land when it is by right used with the land for its benefit, as in the case of a way, or watercourse, or of a passage for light, air, or heat from or across the land of another.
669. *Owner.* All property has an owner whether that owner is the government of Guam, and the property public, or the owner an individual, and the property private. The United States Government may also hold property as a private proprietor.
670. *Government property.* The government of Guam is the owner of all land below tidewater, and below ordinary high-water mark, bordering upon tidewater within Guam; of all land below the water of a navigable lake or stream; of all property lawfully appropriated by it to its own use; of all property dedicated to the government; and of all property of which there is no other owner.
671. *Who may own property.* Any person, except an alien, may take, hold, and dispose of real property within Guam, and any person, whether an alien or not, may take, hold, and dispose of personal property within Guam.
687. *Community property.* Community property is property acquired by husband and wife, or either, during marriage, when not acquired as the separate property of either.
755. *Real property, governed.* Real property within Guam is governed by the law of Guam, except where the title is in the United States.
801. *Servitudes attached to land.* The following land burdens, or servitudes upon land, may be attached to other land as incidents or appurtenances, and are then called easements:
1. The right of pasture;
  2. The right of fishing;
  3. The right of taking game;
  4. The right of way;
  5. The right of taking water, wood, minerals, and other things;
  6. The right of transacting business upon land;
  7. The right of conducting lawful sports upon land;
  8. The right of receiving air, light, or heat from or over, or discharging the same upon or over land;
  9. The right of receiving water from or discharging the same upon land;
  10. The right of flooding land;
  11. The right of having water flow without diminution or disturbance of any kind;
  12. The right of using a wall as a party-wall;
  13. The right of receiving more than natural support from adjacent land or things affixed thereto;
  14. The right of having the whole of a division fence maintained by a coterminous owner;

15. The right of having public conveyances stopping the same on land
16. The right of a seat in church;
17. The right of burial.

802. *Servitudes not attached to land.* The following land burdens, or servitudes upon land, may be granted and held, though not attached to land:

- (1) The right to pasture, and of fishing and taking game.
- (2) The right of a seat in church.
- (3) The right of burial.
- (4) The right of taking rents and tolls.
- (5) The right of way.
- (6) The right of taking water, wood, minerals, or other things.

803. *Designation of estates.* The land to which an easement is attached is called the dominant tenement; the land upon which a burden or servitude is laid is called the servient tenement.

804. *By whom grantable.* A servitude can be created only by one who has a vested estate in the servient tenement.

805. *By whom held.* A servitude thereon cannot be held by the owner of the tenement.

806. *Extent of servitudes.* The extent of a servitude is determined by the terms of the grant, or the nature of the enjoyment by which it was acquired.

809. *Action owner, dominant tenement.* The owner of any estate in a dominant tenement, or the occupant of such tenement, may maintain an action for the enforcement of an easement attached thereto.

810. *Actions owner, servient tenement.* The owner in fee of a servient tenement may maintain an action for the possession of the land, against any one unlawfully possessed thereof, though a servitude exists thereon in favor of the public.

811. *How extinguished.* A servitude is extinguished:

1. By the vesting of the right to the servitude and the right to the servient tenement in the same person;
2. By the destruction of the servient tenement;
3. By the performance of any act upon either tenement, by the owner of the servitude, or with his assent, which is incompatible with its nature or exercise; or,
4. When the servitude was acquired by enjoyment, by disuse thereof by the owner of the servitude for the period prescribed for acquiring title by enjoyment.

818. *Rights of tenants for life.* The owner of a life estate may use the land in the same manner as the owner of a fee simple, except that he must do no act to the injury of the inheritance.

819. Rights of tenants for years. A tenant for years or a will, unless he is a wrong doer by holding over, may occupy the buildings, take the annual products of the soil, and work mines and quarries open at the commencement of his tenancy.
820. Same. A tenant for years or at will has no other rights to the property than such as are given to him by the agreement or instrument by which his tenancy is acquired, or by the last section.
829. Rights of owner. The owner of land in fee has the right to the surface and to everything permanently situated beneath or above it, subject to such restrictions as are provided by law.
830. Boundaries by water. Except where the grant under which the land is held indicates a different intent, the owner of the upland, when it borders on tidewater, takes to ordinary high-water mark; when it borders upon a navigable stream, where there is no tide, the owner takes to the edge of the stream, at low-water mark; when it borders upon any other water, the owner takes to the middle of the stream.
831. Boundaries by ways. An owner of land bounded by a road or street is presumed to own to the center of the way, but the contrary may be shown.
841. Monuments and fences. Coterminous owners are mutually bound equally to maintain:
1. The boundaries and monuments between them;
  2. The fences between them, unless one of them chooses to let his land lie without fencing; in which case, if he afterwards encloses it, he must refund to the other a just proportion of the value, at that time, of any division fence made by the latter.
994. Title deeds. Instruments essential to the title of real property, and which are not kept in a public office as a record, pursuant to law, belong to the person in whom, for the time being, such title may be vested, and pass with the title.
1000. Property acquired generally. Property is acquired by:
1. Occupancy;
  2. Accession;
  3. Transfer;
  4. Will; or,
  5. Succession.
1006. Occupation confers certain title. Occupancy for any period confers a title sufficient against all except the government of Guam or the United States and those who have title by prescription, accession, transfer, will, or succession: Provided, however, that the title conferred by such occupancy shall not be a sufficient interest in real property to enable the occupant or his privies to commence or maintain an action

to quiet title under the provisions of Section 738 of the Code of Civil Procedure of Guam, unless such occupancy shall have ripened into title by prescription.

1007. *Prescription.* Occupancy for the period prescribed by the Code of Civil Procedure as sufficient to bar an action for the recovery of the property, confers a title thereto, denominated a title by prescription, which is sufficient against all.
1013. *Fixtures.* When a person affixes his property to the land of another, without an agreement permitting him to remove it, the thing affixed, except as provided in Section 1019, belongs to the owner of the land, unless he chooses to require the former to remove it.
1014. *Alluvion.* Where, from natural causes, land forms by imperceptible degrees upon the bank of a river or stream, navigable or not navigable, either by accumulation of material or by the recession of the stream, such land belongs to the owner of the bank, subject to any existing right-of-way over the bank.
1015. *Sudden Removal of Bank.* If a river or stream, navigable or not navigable, carries away, by sudden violence, a considerable and distinguishable part of a bank, and bears it to the opposite bank, or to another part of the same bank, the owner of the part carried away may reclaim it within a year after the owner of the land to which it has been united takes possession thereof.
1017. *In Streams.* An island, or an accumulation of land, formed in a stream which is not navigable, belongs to the owner of the shore on that side where the island or accumulation is formed; or, if not formed on one side only, to the owners of the shore on the two sides, divided by an imaginary line drawn through the middle of the river.
1018. *Islands Formed, Division of Stream.* If a stream, in forming itself a new arm, divides itself and surrounds land belonging to the owner of the shore, and thereby forms an island, the island belongs to such owner.
1104. *Easements, Appurtenant.* A transfer of real property passes all easements attached thereto, and creates in favor thereof an easement to use other real property of the person whose estate is transferred in the same manner and to the same extent as such property was obviously and permanently used by the person whose estate is transferred, for the benefit thereof, at the time when the transfer was agreed upon or completed.
1112. *Boundaries of Highway, Generally.* A transfer of land, bounded by a highway, passes the title of the person whose estate is transferred to the soil of the highway in front to the center thereof, unless a different intent appears from the grant.
1115. *Lineal and Collateral Warranties.* Lineal and collateral warranties, with all their incidents, are abolished; but the heirs and devisees of every person who has made any covenant or agreement in reference to the title of, in, or to any real property, are answerable upon such covenant, or agreement to the extent of the land descended or devised to them, in the

cases and in the manner prescribed by law.

1146. *Gift, Defined.* A "gift" is a transfer of personal property, made voluntarily, and without consideration.
- 1157.1. *Registrar of Titles.* The Director of Land Management shall be ex-officio Registrar of Titles and shall have and exercise all of the duties, powers and functions of said office. He is authorized to designate one or more employees of the Department of Land Management as deputy registrars of titles.
- 1157.2. *Deputies may Perform Duties of Registrar.* Deputies of the Registrar of Titles may perform any and all duties of the registrar, in the name of the registrar, and the acts of such deputies shall be held to be the acts of the registrar.
- 1157.3. *Deputies Prohibited From Practicing Law.* Deputy registrars are prohibited from practicing law, or acting as attorneys or counselors at law, or having as a partner a lawyer or anyone who acts as such, or from acting as searchers of title under this act.
- 1157.4. *Land brought under the act by filing petition: Contents, etc.* All land may be brought under the operation of this act by the owner or owners of any estate or interest therein, whether legal or equitable (other than an individual share or an easement) by filing with the clerk of the court his or her or their verified petition to the Island Court of Guam, which petition shall set forth the following facts, to wit:

*Contents of petition.* The full name, occupation, residence and post-office address of the applicant or applicants, and where any applicant appears by any representative because of any disability, also the full name, occupation, residence, and post-office address of the person so representing the applicant and the reason for his so acting; if the application is by a corporation, its name, when and where incorporated, its principal place of business, and the names and post-office addresses as its president and secretary, and if a foreign corporation, the name and address of the resident agent shall be included in addition to the other requirements; whether or not the applicant is married and if married, the full name and residence of the husband or wife; and if unmarried, whether he or she has been married, and if so, how the marriage relation terminated, and if the marriage relation terminated by annulment or divorce, where and by what court; that each of the applicants is of the full age of 21 years and free from any disability, or if a minor or under disability his age and nature of such disability, and if a guardian has been appointed the name and address of the guardian and when and by what court appointed; a description of the land; the value at which the land and permanent improvements, if any, were assessed on the last assessment for taxation.

If the application is by more than one person, any one of whom claims titles in severalty to any part of the land described in the petition, the particular part of the land to which each petitioner severally claims

title; a statement of the estate or interest which each applicant has or claims and whether or not the same is community property or is subject to a homestead or to any easement, lien, or encumbrances and if so the name and the post office address, if known, of each holder thereof, the nature and the amount of the same, and if recorded, the book and page of the record; a statement of whether or not the land is occupied and if so, the full name and post office address of each occupant, and what interest he has or claims; a statement describing the claim of any other person who has any estate or claims any interest in the land or any part of the land, in law or equity, in possession, remainder, reversion, or expectancy, with the names and post office addresses, if known, of every such person, together with the names and post office addresses of all the owners to the adjoining lands, so far as the same can be ascertained upon diligent inquiry. If the application is by a husband or wife and the property is community property or is subject to a homestead, both spouses must join in the application; persons who collectively claim to own the entire legal estate in fee simple to the whole or any part of the land may join in the petition; a corporation may petition by its duly authorized agent; the estate of a deceased person by the administrator or executor and a minor or other person under disability by his legal appointed guardian, but the person in whose behalf the application is made shall be named as applicant.

- 1157.5. Reference to map or plat, etc. If said land is a part of a city, village, town, or subdivision of which an official map is on file in the Department of Land Management and upon such map the land appears in such a manner that it can be identified thereon by reference, the application may refer to such map. In all cases where said land cannot be identified by reference to such map or where no such map is on file in the Department of Land Management a plat or plan or survey of the land made by a surveyor must accompany the application. Such survey must show the boundaries of the land and its relation to adjoining lands and streets and any encroachments, if any. The court may, in any case, before decree, require a survey to be made for purpose of determining exact boundaries. If the application describes the land as bounded by a public or private way, it shall state whether or not the applicant claims any and what land within the limits of the way and whether the applicant desires to have the line of the way determined.

Where applicant has been in possession more than 5 years. If it appears by the petition that the applicant, either by himself or by himself and his predecessors in interest, has been in the actual, exclusive, and adverse possession of the or any part of the land described, continuously for more than 5 years next preceding the filing of the petition claiming to own the same in fee against the world, and that he has or that he and his predecessors in interest have paid all taxes of every kind legally levied or assessed against such property during said period, the petition must then also state the character of such possession and the applicant must prove the same to the satisfaction of the court on the hearing.

Each application must be accompanied by an abstract of title to all land which does not appear by said petition to have been adversely held as hereinabove provided; except that when the title to the land or any part of the land described has been previously determined by a final decree of a court of competent jurisdiction no abstract regarding the same need antedate such decree. When actual, exclusive, and adverse possession and payment of taxes is alleged but not proved to the satisfaction of the court on the hearing, the court may require an abstract of title to be furnished which shall then be used in the same manner as if it had been filed with the application. All abstracts herein referred to must be verified by the searcher making the same.

Upon any petition hereunder being filed, the clerk of courts shall immediately indorse thereon the exact time of its presentation and shall enter the same in a book kept for that purpose known as the land register docket.

- 1157.6. Registering of estates less than fee simple: Estate subject to lien or charge. No mortgage, lien, charge, or lesser estate than fee simple shall be registered unless the fee simple to the same land is first registered. It shall not be an objection to bringing land under this act, that the estate or interest of the applicant is subject to any outstanding lesser estate, mortgage, lien, or charge; but every such lesser estate, mortgage, lien, or charge shall be noted upon the certificate of title and the duplicate thereof, and the title or interest certified shall be subject only to such estates, mortgages, liens, and charges as are so noted, except as herein provided.
- 1157.7. Registering of title through sale for tax or assessment. No title derived through sale for any tax or assessment shall be entitled to be first registered unless it appears to the satisfaction of the court upon the hearing of the application that the period of redemption as provided by Section 1132(a) of the Civil Code of Guam has expired.
- 1157.8. Amendment of application. The application may be amended only by petition verified as in the case of the original. Such amendment may be ordered by the court on its own motion or upon the motion of any person interested in the proceedings.
- 1157.9. Notice of lis pendens. The filing of the application in the office of the clerk of the court, together with the recording of a certified copy thereof in the Department of Land Management shall constitute notice to all subsequent purchasers or encumbrancers of the land described in the application.
- 1157.10. Examination of abstract by examiner of titles. The court shall, in its discretion, where one or more abstracts are presented with the petition, itself examine them, or refer the same as provided in Section 17 of this act. If it shall appear to the court from an examination of the abstract or abstracts or from the report of the examiner of titles or from the petition where no abstracts are required, that the title to the land described in the application appears to be substantially as alleged, the court shall order notice to be given as provided in this act.

1157.11 Notice of petition: Service; Objection or assent to application. When the court shall order notice given, a notice must be issued, under the seal of the court, which shall contain the name of the court, the name of names of the applicant, or applicants and a particular description of the land involved, which notice shall be directed to all parties appearing by the petition or the petition and abstract or by the report of the examiner of titles if any, to have any interest in the land or any part thereof and which notice shall contain a statement that the petition has been filed by the applicant or applicants for the registration of the title to the land described therein as provided by this act and praying for a decree declaring the applicant or applicants to be the owner or owners in fee of such land in accordance with the prayer of said petition and which notice shall direct all whom it may concern to appear and answer said petition within ten days after personal service, and that otherwise the court will grant said petition and direct registration of the title to said land in accordance with the terms of this act, and that said person or persons so served will be forever barred from disputing the same.

Service of petition. When the notice is issued, service thereof shall be made as follows: In all cases said notice shall be published in a newspaper published in Guam, said newspaper to be designated by the court, for four successive weeks; if the notice is published in a daily newspaper, publication therein once a week for four successive weeks shall be sufficient. In all cases said notice shall be posted in Agana and posted in at least three places in the district in which the land is located, for such length of time and at such places as may be designated by the court. All parties who have not joined in the petition or assented thereto in writing, and who appear by the petition, or petition and abstract, or report of the examiner of titles to be interested in the fee, all occupants named in the petition and the husband and wife of the applicant, if married, shall be personally served with a copy of the notice, attached to a copy of the petition if they reside in Guam and can, with reasonable diligence, be found and served therein. All owners of adjoining lands who have not given their written consent to the hearing of the petition and who reside in Guam and can, with reasonable diligence be found and served therein, shall be served with a copy of said notice, without a copy of said petition, personally; provided, that for all applications filed on and after May 1, 1950, the notice as hereinbefore described need not be published in full but it shall be sufficient publication if there is published the following information: The name of the Court in which the application is filed, the name or names of the applicant or applicants, the lot number and municipality of the property to be registered, the civil case number assigned to the application, and a statement referring interested persons to the clerk of the court for further particulars and for an examination of the notice in full.

Service of notice by mail. As to all persons who have not joined in the petition or who have not in writing assented to the hearing thereof, who do not reside in Guam or who cannot, with reasonable diligence, be found and served therein, a copy of such notice, without a copy of the

petition shall, within 30 days after the first publication of such notice, be sent to such party at his last known place of residence, by mail, postage prepaid and if his last known place of residence cannot be, with reasonable diligence, ascertained, then such notice shall be mailed to him in care of the clerk of the District Court of Guam: provided, however, that as to all such persons so to be served by mail who appear by the petition, or petition and abstract, or report of the examiner of titles to be interested in the fee, a copy of the petition shall be attached to the copy of the notice mailed to them as herein provided: Provided, further, that no copy of abstract, order, or map need be served with any notice.

All persons who claim an interest may appear and object to the granting of the application and if such objection is sustained the cost of the same shall be paid by the applicant; if not, by the person so objecting. The time for appearance shall be 10 days after personal service within Guam, 30 days after personal service out of Guam; all persons not required by this section to be served personally shall have 60 days after the first publication of such notice within which to appear.

All persons having or claiming any interest in the land or any part thereof may assent in writing to the registration thereof, and the person thus assenting need not be named as a defendant in the registration proceeding, or, if already named as a defendant need not be served with notice therein. Such assent shall be executed and acknowledged in the manner now required by law for the execution and acknowledgment of a deed and shall be filed with the clerk of the court.

- 1157.12. Appointment of guardian. Upon the petition of the applicant or any person interested in the proceedings, the court shall appoint a disinterested person to act as guardian ad litem for minors and other persons under disability and for all persons not in being who may appear to have any interest in or lien upon the land.
- 1157.12a. Lines of Public Ways: Lands bordering navigable streams. If the petition prays to have the line of any public way determined, notice shall be given to the Attorney General of Guam by service of a copy of such notice personally. If the land borders on a navigable stream or on an arm of the sea, or if it otherwise appears from the application or the proceedings that the United States of America or the government of Guam may have a claim adverse to that of the applicant, notice shall be given in the same manner to the Attorney General of Guam. The Court may also cause such other or further notice of the application to be given as it may deem necessary and proper.
- 1157.13. Hearing of petition. After the notice required to be given by this act has been given and the time for all persons to appear has expired, the court shall set the petition down for hearing upon notice to all persons who have appeared as is required in other civil actions and shall proceed to determine the title to all the land described in the petition and of all persons who may have any interest therein or in

any part thereof and whether or not the title to the or any part of the land is held in any special capacity and after due hearing shall make, give and enter a decree confirming the title of the person found to be the owner whether he be the applicant or any other person who may, in the proceeding, ask to have his title registered and shall order the registration of all such land.

- 1157.14. *Recitals in decree: Filing of decree: Appeals.* Every decree shall state whether or not the owner of the land directed to be registered is married or unmarried and, if married, the full name of the spouse; if the owner is under a disability, it shall state the nature of the disability and the person acting for him and the source of his authority, and if a minor, it shall state his age and in whose custody his estate then is; it shall also contain an accurate description of the land to which the court shall determine title and shall set forth the estate of the owner and also, in such a manner as to show their relative priority, all particular estates, mortgages, easements, liens, attachments, and other encumbrances, including the rights of a husband or wife, if any, to which the land or the owner's estate therein is subject and may contain any other facts properly to be determined by the court. The decree shall be stated in a form convenient for transcription upon the certificate of title and any lien or other charge against the property, if recorded, shall be referred to by book and page of the record.

*Filing of decree.* The decree shall be filed with the clerk and a certified copy thereof filed with the registrar, who shall thereupon issue a certificate of title to each person declared by said decree to be the owner of any parcel of land in severalty and said registrar's act in filing said decree and issuing said certificates shall have the effect of bringing said land under the operation of this act as herein provided as of the date of filing of the petition. Said certificate shall contain a description of the property registered and shall also show the character of ownership and whether or not the land is separate or community property, and if community property the names of both husband and wife, the nature, amount, and order of the liens and encumbrances and other charges against the same and any other interest or condition which shall be found to exist by the decree.

*Appeals.* Any party aggrieved by such decree may appeal therefrom in the manner now or hereafter provided by law for appeals in civil actions.

- 1157.15. *Decree in rem: Effect.* A decree of the court ordering registration shall be in the nature of a decree in rem, shall forever quiet the title to the land therein ordered registered and shall be final and conclusive as against the rights of all persons, known and unknown, to assert any estate, interest, claim, lien, or demand of any kind or nature whatsoever, against the land so ordered registered or any part thereof, except only as in this act provided.
- 1157.16. *Decree in proceedings to establish title, partition land, or administer upon estate.* Whenever any proceedings are hereafter commenced in the

District Court by any person or persons either for themselves or in a representative capacity, wherein it is sought to quiet, establish title to, partition land, or to administer upon any estate of a deceased person where the estate consists in whole or in part of land, any decree rendered in any such proceeding quieting or establishing the title to any land or partitioning or distribution land may order such land registered under this act and when, in the application for notice, in such proceeding, the facts required to be set forth by Section 1157.4 and 1157.5 of this code are alleged.

- 1157.17. Examiner of Titles: Appointment: Qualifications: Compensation. Upon the filing of the petition or thereafter the court may, in its discretion, appoint an Examiner of Titles to whom any abstract or abstracts may be referred for examination. Such Examiner of Titles shall be an attorney in good standing, skilled in the examination of titles. The compensation of such examiner shall be agreed upon between the applicant or other parties and the examiner or if not agreed upon shall be fixed by the court and such compensation shall be paid by the person or persons in whose favor registration is granted as a part of the cost of the proceedings. More than one examiner may be appointed if desired.
- 1157.18. Duties of Examiner of Titles: Opinion: Report. Whenever an examiner of Titles is appointed and any abstract is referred to him for examination, he shall proceed to examine into the title of land described in the application and shall investigate all facts pertaining to the title which shall be brought to his notice and shall file a written report with the court, together with a certificate of his opinion upon the title. The court shall not be bound by any report of such examiner, but may require other or further proof.
- 1157.19. Withdrawal of application. Any applicant may upon such terms as the court may impose so as to save the opposing party harmless from loss and upon payment of all fees due, withdraw his application at any time prior to the final decree and upon the written request of such applicant and the order of the court, the clerk shall return to the applicant all abstracts of titles, deeds, and other instruments, except depositions or affidavits deposited by him for the purpose of supporting his application.
- 1157.20. Death or disability of applicant: Transfer of interest. In case of death or any disability of the applicant, or any party to the action, the court, on motion may allow the proceeding to be continued by or against his representative or successor in interest. In case of any other transfer of interest the proceeding may be continued in the name of the original applicant, or the court may allow the person to whom the transfer is made to be substituted in the proceeding.
- 1157.21. Duties of registrar upon filing decree. Immediately upon the filing with the registrar of the certified copy of the decree ordering registration, he shall proceed to register the title in accordance with the directions of the decree and issue a certificate or certificates of title in the manner therein directed and the registrar

shall also immediately make an entry in a book kept for that purpose showing the name of the person to whom the certificate was issued, its number, the day, hour, and minute of its issuance, the name of those persons to whom the duplicate certificate was delivered and the book and page where the original certificate is entered or recorded.

- 1157.22. Certificate of title. Every first and subsequent certificate of title shall be in duplicate and numbered consecutively and bear date the year, month, day, hour, and minute of its issue, and shall be under the hand and official seal of the registrar. One copy of said certificate shall be retained by the registrar and be known as the original, and the other shall be delivered to the owner, or the person acting for him and be known as the duplicate. The certificate shall state whether the owner, except in case of corporation, executor, administrator, assignee, or other trustee, is married or not married, and, if married, the name of the husband or wife. If the owner is a minor, it shall state his age; if under any other disability, the nature of the disability. If issued to an executor or administrator, the certificate shall show the name of the deceased testator, testatrix, or intestate; if to an assignee in insolvency, the name of the insolvent. The registrar shall note at the end of the certificate, original and duplicate, in such a manner as to show and preserve their priorities, the particulars of all estates, mortgages, liens, encumbrances, and charges to which the owner's title is subject.

- 1157.23. Form of certificate. No particular form of certificate of title is required, but the same may be subject to such changes as the case may require, substantially in the following form:

Territory of Guam, ss:

A.B. (State occupation and residence, giving street and lot number), Territory of Guam (if administrator, give the name of the deceased; if a minor give his age; if under other disability, state its nature), married to (name of husband or wife, or if not married so state), is the owner of an estate in fee simple (or as the case may be) in the following land (insert description contained in the decree). Subject, however, to the estates, easements, liens, encumbrances and charges hereunder noted (in case of trust, condition, or limitation, say "in trust," or "upon condition," or "with limitation," as the case may be).

1. Mortgage to \_\_\_\_\_ for the sum of \$ \_\_\_\_\_ dated \_\_\_\_\_ payable \_\_\_\_\_ after date, with interest at \_\_\_\_\_ percent per \_\_\_\_\_, interest payable \_\_\_\_\_.
2. Mechanics' lien in favor of X. Y. for \$ \_\_\_\_\_ filed \_\_\_\_\_.
3. Assessment for improvement of \_\_\_\_\_ street, amount \$ \_\_\_\_\_ due \_\_\_\_\_. (Any other encumbrances or charges.)

In witness whereof, I have hereunto set my hand and cause my official seal to be affixed, this \_\_\_\_\_ day of \_\_\_\_\_.

(SEAL)

Registrar of Titles in and for the territory of Guam.

- 1157.24. Certificate where tenants in common. In all cases where two or more persons are entitled as tenants in common to an estate in registered land, such persons may receive one certificate for the entirety, or each may receive a separate certificate for his undivided share.
- 1157.25. Issuance of single certificates or several certificates. Upon the application of any registered owner of land held under separate certificates of title, or under one certificate, and delivering up of such certificate or certificates of title the registrar may issue to such owner a single certificate of title for the whole of such land, or several certificates each containing a portion of such land, in accordance with such application, and as far as the same may be done consistently with any regulations at the time being in force, respecting the certificates of land that may be included in one certificate title; upon issuing of any such certificate of title said registrar shall endorse of the last previous certificate of title of such lands so delivered up a memorial, setting forth the occasion of such cancellation, and referring to the volume and folium of the new certificates of title so issued.
- 1157.26. Duplicate certificates on loss or destruction of original. In the event of a duplicate certificate of title being lost, mislaid, or destroyed, the owner may apply to the court for an order upon the registrar to issue a certified copy of the original certificate of registration. Upon the hearing of such application the court may order such notice to be given to such persons and for such time as it may deem proper. If the court is satisfied that the applicant is the person named in the original certificate on file in the registrar's office, and that the duplicate certificate has been lost, mislaid, or destroyed, the court shall make an order directing the registrar to issue a certified copy of the original certificate to the applicant. A certified copy of such order shall be filed in the registrar's office, who shall thereupon issue to such applicant a certified copy of the original certificate with the memorials and notations appearing upon the register, and shall rote upon the certified copy: "Owner's certified copy, issued in place of lost (mislaid or destroyed, as the case may be) certificate," and such certified copy shall stand in the place of, and have like effect as, the missing duplicate certificate. In case of a lost certificate, no transfer of land shall be made until such certified copy is issued by the registrar. A certified copy of the certificate of title may be issued by the registrar for use as evidence, upon the receipt by him of an order therefor made by the court: Provided, that such certified copy shall have written or stamped across the face thereof the words "for use as evidence only." The issuance of such certified copy and the purpose thereof shall also be noted upon the original certificate by the registrar.
- 1157.27. Mistake: Correction. If an owner's name or description is incorrectly registered, or becomes changed (e.g., by marriage, adoption, divorce, etc.), the court upon the filing of an application and proof of facts in the manner set forth in Section 1157.26 of this Code, and the

production by the owner of the duplicate certificate, shall order the registrar to issue a new certificate, with such changes as the case may require.

- 1157.28. "Register of Titles": Entries. The registrar shall keep a book, to be known as the "Register of Titles," wherein he shall enter all original certificates of title, in the order of their numbers, with appropriate blanks for the entry of memorials and notations allowed by this act. Each certificate with such blanks, shall constitute a separate folium of such book. All memorials and notations that may be entered upon the register under the terms of this act shall be entered upon the folium constituted by the last certificate of title of the land to which they relate. Each certificate or certificate of title shall be numbered the same as the folium of the register on which the registration of the title of which is a duplicate is entered.
- 1157.29. Receipt for duplicate certificate. Before the delivery of any duplicate certificate of title, a receipt for it shall be required to be signed by the owner. Where such receipt is signed in the presence of the registrar or a deputy, it shall be witnessed by such officer. If signed elsewhere, it shall be acknowledged before any officer authorized to take acknowledgments of deeds.
- 1157.30. First registration. In every case of first registration of land or an estate or interest therein the same shall be deemed to be registered under this act when the registrar shall have marked upon the certificate of title in duplicate, the volume and folio of the register in which the original may be found.
- 1157.31. Registration when land transferred. Every transfer of registered land shall be deemed to be registered under this act when the new certificate to the transferee shall have been marked as in the case of the first registration; and all other dealings shall be considered as registered when the memorial or notation shall have been entered in the register upon the folio constituted by the existing certificate of title of the land but, for the protection of the transferee or person claiming through any transfer or dealing, the registration shall relate back and be effective as of the time of filing the deed, instrument, or notice in the registrar's office pursuant to which the transfer, memorial, or notation is made.
- 1157.32. Action against registration by person aggrieved. Any person feeling himself aggrieved by the action of the registrar, or by his refusal to act in any manner pertaining to the first registration of land, or any subsequent transfer, or charge upon the same, or in failing or neglecting, or refusing to file any instrument, or to enter or cancel any memorial or notation, or to do any other things required of him by this act, may file a complaint in the Island Court making the registrar and other persons, whose interest may be affected, parties defendant, and the court may proceed therein as in other cases, and make such order or decree as shall be according to equity

and the purport of this act. A certified copy of such order or decree shall be presented to the registrar, who shall file the same and make such entry thereof as is by this act required.

1157.33. Title of registered owner subject to what estates only. The registered owner of any estate or interest in land obtaining a registered decree under this act shall, except in case of fraud to which he is a party, or fraud of the person through whom he claims without valuable consideration paid in good faith, hold the same subject only to such estates, mortgages, liens, charges, and interests as may be noted in the last certificate of title in the registrar's office and free from all others, except:

1. Any subsisting lease or agreement for a lease for a period not exceeding 1 year, where there is actual occupation of the land under lease. The term "lease" shall include a verbal letting.

2. All land embraced in the description contained in the certificate which has theretofore been legally dedicated as or declared by competent court to be a public highway.

3. Any subsisting right-of-way or other easement, created within 1 year before issue of the certificate, upon, over, or in respect of the land.

4. Any tax or special assessment for which a sale of the land has not been had at the date of the certificate of title.

5. Such right of action or claim as is allowed by this act.

6. Liens, claims or rights arising under the law of the United States, which the law of Guam cannot require to appear of record upon the register.

1157.34. Title not acquirable by adverse possession. After land has been registered, no title thereto adverse or in derogation to the title of the registered owner shall be acquired by any length of possession.

1157.35. Transferee of registered land not required to inquire or affected with notice. Except in case of fraud, and except as herein otherwise provided, no person taking a transfer of registered land, or any estate or interest therein, or any charge upon the same, from the registered owner, shall be held to inquire into the circumstances under which, or the consideration for which, such land or any previous registered owner was registered, or be affected with notice, actual or constructive, of any unregistered trust, lien, claim, demand, or interest; and the knowledge that any unregistered trust, lien, claim, demand, or interest is in existence shall not of itself be imputed as fraud.

- 1157.36. Remedies of defrauded party. In case of fraud, any person defrauded shall have all rights and remedies that he would have had if the land were not under the provisions of this act: Provided, that nothing contained in this section shall affect the title of a registered owner who has taken bona fide for a valuable consideration or of any person bona fide claiming through or under him.
- 1157.37. Effect of registration where deed void or executed by person under disability. If a deed or other instrument is registered, which is forged, or executed by a person under legal disability, such registration shall be void: Provided, that the title of a registered owner, who has taken bona fide for a valuable consideration, shall not be affected by reason of his claiming title through someone, the registration of whose right or interest was void, as provided in this section.
- 1157.38. Unregistered title does not prevail against title of registered owner. No unregistered estate, interest, power, right, claim, contract, or trust shall prevail against the title of a registered owner taking bona fide for a valuable consideration or of any person bona fide claiming through or under him.
- 1157.39. Certificate of title of registered owner conclusive. In any suit for specific performance by a registered owner, against a person who may have contracted to purchase such land, and there having been no fraud or other circumstance which, according to the provisions of this act, would affect the title of the vendor, the certificate of title to such registered owner shall be held in every court to be conclusive evidence that such registered owner has a good and valid title to the land, and for the estate or interest therein mentioned or described.
- 1157.40. Conclusiveness of certificate in actions of ejectment or partitions or possession. In any action or proceeding brought for ejectment, partitions, or possession of land, the certificate of title of a registered owner shall be held in every court to be conclusive evidence, except as herein otherwise provided, that such registered owner has a good and valid title to the land, and for the estate or interest therein mentioned or described, and that such registered owner is entitled to the possession of said land.
- 1157.41. Register of land conclusive as evidence. The register of any land, and duly certified copies thereof, shall, except as herein otherwise provided, be received in law and in equity as evidence of the facts therein stated, and as conclusive evidence that the person named therein as owner is entitled to the land for the estate or interest therein specified.
- 1157.42. Registrar to carry forward memorial until cancelled. Whenever a memorial has been entered, as permitted by this act, the registrar shall carry the same forward upon all certificates of title until the same is cancelled in some manner authorized by this act.
- 1157.43. Dealings with and charges upon land subsequent to registration subject to act. "All dealings with land, or any estate or interest therein,

after the same has been brought under this act, and all liens and encumbrances and charges upon the same subsequent to the first registration thereof, shall be deemed to be subject to the terms of this act, and to such amendments and alterations as may hereafter be made. The bringing of land under this act shall imply an agreement which shall run with the land and the same shall be subject to the terms and provisions of this act and of the amendments and alterations thereof."

1157.44. Limitation of action relating to land. No person shall commence any action at law or in equity for the recovery of land; or assert any interest or right in or lien or demand upon the same, or make entry thereon adversely to the title of interest certified in the certificate of title bringing the land under the operation of this act after 1 year following the first registration, providing said first registration is not void for any of the reasons set forth in Section 37 of this act. It shall not be an exception to this rule that the person entitled to bring the action or make the entry is deceased, an infant, lunatic, or is under any disability, but action may be brought by such person by his next friend or guardian or by the administrator or the executor of a deceased person. It shall be the duty of the guardian, if there is any, to bring action in the name of his ward whenever it is necessary to preserve or enforce the ward's rights in registered land; provided, however, before such action shall proceed, it must be made to appear to the court that the person bringing such action or those under whom he claims, had not actual notice of the proceedings to register such lands in time to appear and file his objections or assert his claim. The provisions of this section shall in no way affect or disturb the rights of any person in said land, acquired subsequent to the registration thereof, bona fide and without knowledge and for a valuable consideration.

1157.45. Petition by executor or administrator to register land belonging to estate. In all estates of deceased persons the administrator or executor may file a petition to the court in the probate proceedings, praying for the registration of all land belonging to the estate, setting forth the facts required to be set forth by Section 1157.4 and 1157.5 of this act together with a description of all the land of which the deceased died seized which is sought to be registered.

The court, by reason of its general jurisdiction in probate, shall have power and jurisdiction to do any and all things necessary to determine the title to the land and all adverse interests therein to the same extent as the Island Court has in independent proceedings under this act. Upon the filing of such petition the court must direct notice of the filing of such petition to issue as provided by this act and the administrator or executor shall publish and serve such notice upon all persons required by this act to be served and in the manner therein specified.

Every decree of final or partial distribution of land sought to be registered wherein, upon the hearing of such petition, after said notice has been given, the court shall find the title to such land to be registered in the name of the distributee or distributees in fee simple or as their interests may appear, which decree shall be

authority to the registrar to register the same and issue a certificate of registration to such distributee or distributees.

- 1157.46. Duty of registrar where instrument affecting registered land offered for filing. Any instrument offered for filing with the registrar which affects registered land must have noted thereon a statement of the fact that said land is registered land, with the name of the registered owner and with the number or numbers of the certificate or certificates of the last registration thereof; otherwise, none of such instruments shall be filed, nor shall the same affect the title for the whole or any part of said land, nor will the same impart any notice to the registered owner or to any person dealing with such land.
- 1157.47. Transfer by registered owner. "A registered owner of land desiring to transfer his whole estate or interest therein, or some part or parcel thereof, or some undivided interest therein, or to convey an estate for life or years, may execute an instrument of conveyance in any form authorized by law for that purpose. Upon filing such instrument in the registrar's office, and surrendering to the registrar the duplicate certificate of title, the transfer shall be complete and the title so transferred shall vest in the transferee; thereupon, the registrar shall issue in duplicate and register as hereinbefore provided, a new certificate, certifying the title to the estate or interest in the land desired to be conveyed to be in the transferee," and shall note upon the original and duplicate certificates the date of the transfer, the name of the transferee, and the volume and folio in which the new certificate is registered, and shall stamp across the original and duplicate the word "cancelled," in whole or in part, as the case may be.
- 1157.48. Issuance of new certificate where only part of land transferred. When only part of the land described in a certificate is transferred, a new certificate shall be issued to the grantee for the part transferred to him and another one shall be issued to the grantor for the part remaining in him.
- 1157.49. Instrument filed with registrar to be retained: Copies. All instruments, notices, and papers required or permitted by this act to be filed in the office of the registrar, shall be retained and kept in such office, and shall not be taken therefrom except by a subpoena duces tecum issued to and served upon the registrar by a court of record; the registrar, on demand, and proper fee being tendered therefor, shall deliver to any person a copy or copies of such an instrument, with all memoranda, memorials, and endorsements thereon, duly certified under his hand and seal of office. The registrar shall, however, upon all such copies, endorse thereon in writing across the face thereof, in red ink, "copy, no rights conveyed hereby."
- 1157.50. Certified copies of original instruments as evidence. Every copy of original instruments so certified as provided for in the last preceding section, shall be received in all cases in place of the original, and when offered in evidence shall have the same force and effect as

the original instrument.

1157.51. Forms of deeds, mortgages, leases, and other instruments. Such forms of deeds, mortgages, leases, and other instruments as are now or may hereafter be sufficient in law for the purpose intended, may be used in conveying registered land and any estate or interest therein.

1157.52. Name, residence, and address of grantee on instrument presented for registration: Service of notices and process on person interested. Every deed or other voluntary instrument which is presented for registration including the endorsement of a certificate of title, shall contain or have endorsed upon it, the full name, residence and post-office address of the grantee or other person who acquires or claims an interest under such instrument.

Any change in the residence or post-office address of such person shall be endorsed by the registrar upon the original instrument, upon receiving a written statement of such change, duly acknowledged. Notices and processes issued in relation to registered land after original registration may be served upon any person in interest by mailing them to the address so given, and shall be binding, whether he resides within or without Guam. The certificate of the clerk that he has served such notice shall be conclusive proof of such service; but the court may, in any case, order different or further service, by publication or otherwise.

1157.53. Instrument purporting to transfer, lease, or encumber registered land: Effect of filing. A deed, mortgage, lease, or other instrument purporting to convey, transfer, mortgage, lease, charge, or otherwise deal with the registered land, or any estate or interest therein, or charge upon the same, other than a will or a will or a lease not exceeding 1 year where the land is in the actual possession of the lessee or his assigns, shall take effect only by way of contract between the parties thereto, and as authority to register the transfer, mortgage, lease, charge, or other dealing upon compliance with the terms of this act. On the filing of such instrument, the land, estate, interest, or charge shall become transferred, mortgaged, leased, charged, or dealt with according to the purport and terms of the deed, mortgage, lease, or other instrument. The registrar shall immediately, upon the filing of such instrument, stamp or write upon the original and duplicate certificates of title the word "transferred," "mortgaged," "leased," or otherwise, as the case may require, with the date of filing such instrument and sign such endorsement.

1157.54. Registration of transfer where land sold for tax or assessment. No transfer of title to land or any estate or interest therein shall be registered if the last original certificate shows that the land in such certificate described, or any part thereof has been sold for any tax or assessment, unless such transfer is intended to be subject to such tax sale, in which case it shall be so stated in the certificate issued upon such transfer and no transfer of any homestead which has not been theretofore released or extinguished of record shall be made unless both spouses join therein.

- 1157.55. Consent of both spouses on transfer or encumbrance of registered community property. Community property registered under this act as such cannot be transferred, mortgaged, encumbered, or otherwise disposed of by the registered owner thereof without the written consent of both spouses, which written consent shall be recorded and filed with the registrar.
- 1157.56. Affidavit or certificate where transferee is a married person or an executor, administrator, assignee, or trustee. The transferee shall furnish the registrar with an affidavit stating whether the transferee (except when the latter is a corporation, executor, administrator, or assignee) is married, or not married, and if married, the name of the husband or wife, and whether or not the property is community property and the fact shall be recorded on the certificate of title by the registrar before the transfer is made on the register. If the transferee be an executor or administrator, the certificate shall give the name of the deceased testator or testatrix or intestate, and if the transferee be an assignee or trustee, the name of the insolvent or bankrupt.
- 1157.57. Instrument creating a lien or charge upon registered land: Effect. Every mortgage, lease, contract to sell, or other instrument intended to create a lien, encumbrance, or charge upon registered land, or any interest therein, shall be a charge thereon immediately upon registration thereof.
- 1157.58. Instruments intended to create charges upon land: New certificates. On the filing in the registrar's office of an instrument intended to create a charge on registered land and upon the production of the duplicate certificate of title, whenever it appears from the original certificate of title that the person intending to create the charge has the title and right to create such charge and the person in whose favor the same is sought to be created is entitled by the terms of this act to have the same registered, the registrar shall enter upon the original and duplicate certificates a memorial of the purport thereof, and the date of filing the instrument, with a reference thereto by its file number, which upon the instrument on file the number of the certificate of title where the memorial is entered. No new certificate of title shall be entered and no memorandum shall be made upon any certificate of title by the registrar in pursuance of any deed or other voluntary instrument, unless the owner's duplicate certificate of title is presented with such instrument, except in cases expressly provided for in this act, or upon the order of the court, for cause shown, and whenever such order is made, a memorial thereof shall be entered upon the new certificate of title and on the owner's duplicate. The production of the owner's duplicate certificate, whenever a voluntary instrument is presented for registration, shall constitute authority from the registered owner to the registrar to issue a new certificate or to make a memorial in accordance with such instrument and the new certificate or the memorial shall be binding upon the registered owner and upon all persons claiming under him in favor of every purchaser for value in good faith.

- 1157.59. Proceedings where instrument creating charge on land in duplicate, triplicate, or more parts. When any mortgage, lease or other instrument creating or dealing with a charge upon registered land, or any estate or interest therein, is in duplicate, triplicate, or more parts, only one of the parts need be filed and kept in the registrar's office; but the registrar shall note upon the register whether the same is in duplicate, triplicate, or as the case may be, and shall also mark upon the others "mortgagee's duplicate," "lessor's duplicate," "lessee's duplicate," or as the case may be, and note upon the same the date of filing and the volume and folio of the register where the memorial is entered, and deliver them to the parties entitled thereto.
- 1157.60. Authority of registrar where instrument not executed in sufficient number of parts. When an instrument is not executed in a sufficient number of parts for the convenience of the parties, the registrar may make and deliver to each of the parties entitled thereto certified copies of the instrument filed in his office, with the endorsements thereon, marking the same "mortgagee's certified copy," "lessor's certified copy," or as the case may be, and shall note upon the register the fact of issuing such copies. Such certified copies shall have the same force and effect and be treated as duplicates.
- 1157.61. Proceedings where holder of charge on land desires to transfer or assign same. The holder of any charge upon registered land, which is otherwise legally transferable, desiring to transfer the same or any part thereof, may execute an assignment of the whole or any part thereof. The assignment of a part only must state whether the part transferred is to be given priority, to be deferred or to rank equally, with the remaining part. Upon such assignment being filed in the office of the registrar and the production of the duplicate or certified copy of the instrument creating the charge held by the assignor, the registrar shall enter in the register opposite the charge a memorial of such transfer, and how it ranks with a reference to the assignment by its file number; he shall also note upon the instrument on file in his office intended to be transferred, and upon the duplicate or certified copy thereof produced, the volume and folio where the memorial is entered, with date of the entry. The transferee shall be entitled to have a certified copy of the instrument or transfer, with the endorsement thereon, and in case of the transfer of the entire charge, the duplicate or certified copy of the instrument creating the charge.
- 1157.62. Release; discharge, or surrender of charge on land or part thereof. A release, discharge, or surrender of a charge, or any part thereof, to all or any part of the land charged, may be effected in the same way as above provided in the case of a transfer. In case only a part of the charge of the land is intended to be released, discharged, or surrendered, the entry shall be made accordingly; but when the whole is released, discharged, or surrendered at the same or several times, the registrar shall stamp across the instrument on file, and the memorial thereof, and the duplicate or certified copy produced, the word "cancelled."

- 1157.63. Enforcement of charges upon land: Foreclosure, release or satisfaction of mortgages. All charges upon registered land, or any estate or interest in the same, may be enforced as now or hereafter allowed by law, and all laws with reference to the foreclosures and release or satisfaction of mortgages shall apply to mortgages upon registered land, or any estate or interest therein, except as herein otherwise provided, and except that until notice of the pendency of any suit to enforce or foreclose such charge is filed in the registrar's office, and a memorial thereof entered on the register, the pendency of such suit shall not be notice to the registrar, or any person dealing with the land.
- 1157.64. Conveying a charge, or dealing with land by attorney in fact. Before any person can convey, charge, or otherwise deal with registered land, or any estate or interest therein, as attorney in fact for another, the deed or instrument empowering him so to act shall be filed with the registrar, and a memorial thereof entered upon the original and duplicate copies. If the attorney shall so desire, the registrar shall deliver to him a certified copy of the power of attorney, with the endorsements thereon. Revocation of a power may be registered in like manner.
- 1157.65. Transfer or charge upon land in trust or upon any condition or limitation. Whenever a deed or other instrument is filed in the registrar's office for the purpose of effecting a transfer or charge upon registered lands, or any estate or interest therein, and it appears from such instrument that the transfer or charge is to be in trust, or upon any condition or limitation therein expressed, the registrar shall note in the certificate, and the duplicate thereof, the words "in trust," or "upon condition," or "with limitations," as the case may be, but no entry need be made of the particulars of any such trust, conditions, or limitations.
- 1157.66. Power of trustee in instrument containing words "with power of sale." The trustee or transferee in any such instrument named, if the instrument contains the words "with power of sale," shall have power to deal with the land as the owner thereof; and a bona fide purchaser, mortgagee, or lessee is not bound to inquire into or determine whether or not the acts of such trustee are in accordance with the terms and conditions of the trust. When such power is conferred, the registrar shall note upon the certificate and duplicate thereof the words "with power of sale."
- 1157.67. Power of trustee under instrument not containing words "with power of sale." If, however, such instrument does not contain the words "with power of sale," such trustee shall have no power to sell or otherwise deal with the land without an order of the court so to do, duly given and made, a certified copy of which order shall be filed with the registrar, and a memorial thereof entered upon the certificate of title, which shall be conclusive evidence as against all persons that the authority of such trustee was duly exercised in accordance with the true intent and meaning of the trust, condition, or limitation.

- 1157.68. Power of trustee under will admitted to probate. A trustee under any will admitted to probate, unless such power shall have been expressly withheld by the terms of such will, shall have power to deal with any registered land held by him in trust as fully in every respect as if such lands belonged to him individually.
- 1157.69. Change in status of registered land by reason of pendency of probate, insolvency, or equity proceedings. The distribution, transfer, leasing, mortgaging, or other change in the status of the title of registered land that is within the jurisdiction of the Island Court by reason of pendency of probate or insolvency proceedings shall be made under the same conditions and limitations as now or hereafter provided by the law of Guam.
- 1157.70. Order of court in making change in status of registered land. The court in its order or decree making such distribution, transfer, leasing, mortgaging, or other change in the status of the title of registered land, shall direct the registrar to issue a certificate of title, or to note a memorial of transaction, as the case may require, in accordance with such order or decree.
- 1157.71. Duty of executor, assignee, receiver, or other person acting under direction of court. The executor, administrator, assignee, receiver, or other person acting under the direction of said court, shall file with the registrar a certified copy of such order or decree, also the deed, lease, mortgage, or other instrument executed in accordance with such order or decree, and also a certified copy of the order or decree confirming such sale, lease, mortgage, or other transaction when such confirmation is required by law.
- 1157.72. Sales by executors, trustees in bankruptcy, or assignees in insolvency. Executors, trustees in bankruptcy, administrators, assignees in insolvency shall have no power of sale of lands registered in their names as such without an order of court obtained for that purpose. Before any certificate can be issued to the purchaser, such sales shall be reported for confirmation to the court under whose authority such executor, administrator, or assignee is acting, and if confirmed a duly certified copy of the order of confirmation shall be filed in the office of the registrar, and a memorial thereof entered upon the certificate of title. Upon the filing of the certified copy of confirmation and the entry of such memorial, the registrar shall issue a certificate to the purchaser at such sale, which certificate, in addition to the usual contents thereof, shall refer to the said order of confirmation. Such order of confirmation shall be conclusive evidence that the sale was in all respects conducted in accordance with the law, and the purchaser shall not be bound to inquire into the regularity of the proceedings, or power to make such sale.
- 1157.73. Proceeding where testator has by will provided that executor shall have power of sale. If a testator, by his will, has provided that the executor thereof shall have power of sale of real estate, the court shall direct the registrar to register the words "with power of sale," in respect to the land of the deceased, and such executor shall have power to sell such land without an order of the court so to do, but such sales must be confirmed by the court in the manner now or hereafter

provided by law and a duly certified copy of the order of such confirmation shall be filed with the registrar before any certificate of title can be issued to the purchaser of such land.

- 1157.74. Certificate of title or memorial conclusive. Upon the filing of such confirmation with the registrar the latter shall issue the certificate of title, or note the memorial, as the case may require; and such certificate of title or memorial noted shall be conclusive evidence in favor of all persons thereafter depending thereon in good faith.
- 1157.75. Proceedings on sale of registered land for taxes or assessments. A purchaser of registered land sold for any tax or assessment, shall, within five days after such purchase, file in the office of the registrar a written notice of such purchase, thereupon the registrar shall enter a memorial thereof upon the certificate of title, and shall mail to each person named in the certificate, and in the memorial thereon, a copy of said notice. Unless such notice is filed as herein provided, the land shall be forever released from the effect of such sale, and no deed shall be issued in pursuance thereof.
- 1157.76. Tax deed: Registration: Effect: Application for decree showing title. A tax deed of registered land, or of any estate or interest therein, issued in pursuance of any sale for a tax or assessment made after the taking effect of this act, may be presented by the holder thereof to the registrar, who shall thereupon enter upon the register a memorial of such deed; but such deed unless the same shall have been issued to the government, shall have only the effect of an agreement for the transfer of the title, and before any certificate of title shall be issued for the land described in such deed, the holder thereof must file with the clerk of court an application for a decree showing the title to said land to be vested in him.
- 1157.77. Same: Notification of persons interested on application for deed and proceedings on. All persons appearing upon the register to be interested in said land, and also the person who appears by the tax collector's books to have paid the tax or assessment last paid before the sale on which the deed is issued, shall be notified; and any person claiming an interest in the land may, upon the hearing of such application, show, as cause why a certificate of title should not issue to the holder of said deed, any fact that might be shown in law or in equity on his behalf to set aside such tax deed, and the applicant shall be required to show affirmatively that all the requirements of the statute to entitle him to a deed have been complied with.
- 1157.78. Hearing and decree showing condition of title: Issuance of certificate. Such application shall be heard by the court, which shall render a decree showing the condition of the title to such land, and who is the owner thereof, and upon presentation to him, of a duly certified copy of such decree, the registrar shall issue a certificate for said land in accordance with the terms and conditions of said decree.

- 1157.79. Service of notice required by Section 1157.77: Proof of service and publication. The notice required by Section 1157.77 shall be served upon persons interested in the manner provided in this act for the service of notice of applications for original registrations. Proof of such service and publication must be made in the manner now or hereafter required by the laws of Guam.
- 1157.80. Redemption from tax sale: Cancellation of memorial of sale. Upon presentation to him of a certificate of redemption from any sale, the registrar shall cancel the memorial of said sale upon the certificate of title.
- 1157.81. Proof in proceedings for partition of registered land. In proceedings for partition of registered land, proof must be made that all persons, shown by the register of title to be interested in the land, have been made parties to such proceedings.
- 1157.82. Proceedings on confirmation of report of referees setting off registered land in partition proceedings. On confirmation of the report of the referees setting off registered lands in proceedings for partition, it shall be the duty of the parties to whom the lands are allotted, to cause a certified copy of the judgment or decree to be filed with the registrar. Thereupon the registrar shall transfer the same upon the register, and issue certificates of title to the person entitled thereto, as shown by said decree.
- 1157.83. Proceedings where court orders sale of land in proceedings for partition. Whenever, in proceedings for partition of registered land, the court shall order a sale of such land, and the same is sold under such order, the purchaser shall file with the registrar a certified copy of the order confirming said sale, together with certificate of the officer making the sale, that the terms of the sale have been complied with. Thereupon, the registrar shall transfer said land upon the register and issue a certificate of title to the purchaser therefor.
- 1157.84. Mortgage or encumbrance by tenant in common where interest set off in severalty. When a tenant in common has given any mortgage, or granted any other lien or interest upon his undivided interest, and the same is set off in severalty in proceedings in partition, such mortgage, lien, or other interest shall attach only to the lands so set off, and the registrar shall note the same upon a new register of title, and a new certificate of title, and shall endorse a memorandum of the partition upon the instrument creating such lien, mortgage or other interest if the same be on file in his office, before a new certificate of title shall be issued therefor.
- 1157.85. Proceedings where registered land sold under execution or order. Whenever registered land shall be sold to satisfy any judgment, decree, or order of court, the purchaser shall file with the registrar a duly certified copy of the order of sale, or of the order confirming such sale, when the same needs to be confirmed by the court and also the certificate, if any, of the officer making

the sale that the terms of sale have been complied with, and thereupon the registrar shall transfer the land to the purchaser and issue a new certificate of title therefor to said purchaser.

- 1157.86. Action affecting registered land not notice until notice of pendency filed with registrar. No suit, bill, or proceeding at law or in equity for any purpose whatever, affecting registered land, or any estate, or interest therein, or any charge upon the same, shall be deemed to be lis pendens or notice to any person dealing with the same until notice of the pendency of such suit, bill, or proceeding shall be filed with the registrar and a memorial thereof entered by him upon the register of the last certificate of title to be affected; provided, however, this section shall not apply to attachment proceedings when the officer making the levy shall file his certificate as hereinafter provided.
- 1157.87. Proceedings where action affecting registered land dismissed or otherwise disposed of. When any suit, bill or proceeding affecting registered lands has been dismissed or otherwise disposed of, or any judgment, decree or order has been satisfied, released, reversed, or modified, or any levy of execution, attachment or other process has been released, discharged, or otherwise disposed of, it shall be the duty of the clerk of the court in which such proceedings were pending, or had, as the case may be, forthwith, under the seal of the court, to certify to and file with the registrar, an instrument showing such discharge on the register. The costs of such certificate and memorial shall be taxed as other costs in the case.
- 1157.88. Judgment not a lien upon registered land until certified copy filed with registrar. No judgment, or decree, or order of any court shall be a lien upon or in anywise affect registered land, or any estate or interest therein, until a certified copy of such judgment, decree or order, under the hand and official seal of the clerk of the court in which the same is of record, is filed in the office of the registrar, and a memorial of the same is entered upon the register of the last certificate of title to be affected.
- 1157.89. Certificate to be filed with registrar where land levied upon. Whenever registered land is levied upon by virtue of any writ of attachment, execution, or other process, it shall be the duty of the officer making such levy forthwith to file with the registrar a certificate of the fact of such levy, a memorial of which shall be entered upon the register; and no lien shall arise by reason of such levy until the filing of such certificate and the entry in the register of such memorial, any notice thereof, actual or constructive, to the contrary notwithstanding.
- 1157.90. Lien does not affect title to registered land until memorial entered. No statutory or other lien shall be deemed to affect the title to registered land until after a memorial thereof is entered upon the register, as herein provided.

- 1157.91. Certificate of dismissal or other disposition of action authorizes registrar to cancel memorial. The filing in the registrar's office of a certificate of the clerk of the court in which any suit, bill, or proceeding shall have been pending, or any judgment or decree is of record, that such suit, bill, or proceeding has been dismissed or otherwise disposed of, or the judgment, decree, or order has been satisfied, released, reversed, or overruled, or by any other officer that the levy of any execution, attachment, or other process certified by him has been released, discharged, or otherwise disposed of, shall be sufficient to authorize the registrar to cancel or otherwise treat the memorial of such suit, bill, proceeding, judgment, decree, or levy, according to the purport of such certificate.
- 1157.92. Corrections, alterations, or erasures: How only made. After a title has been registered and a certificate issued therefor, or after a memorandum, notation, or memorial has been made on the Register of Titles and has been attested, no correction, alteration, or erasure shall be made therein or thereof, except in the manner herein provided.
- 1157.93. Proceedings on termination of registered interests: Costs. A registered owner or other person in interest on the registrar, may at any time apply by petition to the court, upon the ground that registered interests of any description, whether vested, contingent, expectant, or inchoate, have terminated and ceased, or that new interests have arisen or been created which do not appear upon the certificates or that any certificate or memorial has been made, entered, endorsed, issued or cancelled by mistake, or that the name of any person on the certificate has been changed by divorce, adoption, or other than by marriage as provided for in Section 1157.27 of this code, or that an owner, registered as married, has ceased to be such, or that a corporation which owned registered land has been dissolved and has not legally conveyed the same after its dissolution, or upon any other reasonable ground, for an order summoning all persons registered as interested in the lands to which such certificate or memorial relates, to appear at an appointed time and place and produce their duplicate certificates and show cause why such omission or mistake or change or alteration shall not be corrected or made. The registrar shall, upon receiving notice of such petition, enter a memorial of such application under the certificate of title affected.

If at the time and place appointed all such persons appear and consent, the court may order the entry of a new certificate, the entry for cancellation of a memorandum upon a certificate, or grant any other relief upon such terms, requiring security if necessary, as it may consider proper.

If such persons, or any of them, fail to appear or do not consent, the court may proceed to hear testimony and if it appears to the satisfaction of the court that the relief as petitioned for should be granted, it shall order and direct the registrar to make such corrections or modifications on such certificates or memorials as may be necessary.

A certified copy of such order of the court shall be filed in the registrar's office before any such corrections or modifications shall be entered or made.

Costs. When such action has been caused by the fault or neglect of the registrar, the costs of such proceedings shall be paid by the registrar out of the fees collected by the registrar under the provisions of this act; if by the fault of the person registered as interested in such land, by such person.

The provisions of this section shall not give the court authority to open the original decree of registration and nothing shall be done or ordered by the court which shall impair the title or other interest of the purchaser who holds a certificate for value and in good faith, or his heirs or assigns without his or their written consent.

- 1157.94. Reference to court where registrar in doubt or parties fail to agree. When the registrar is in doubt or when the parties in interest fail to agree as to the proper memorial to be made in respect of any deed, mortgage, or other voluntary instrument presented for registration, the question shall be referred to the court for decision, either on the certificate of the registrar stating the question, or upon the suggestion in writing of any party or parties in interest; and the court, after due notice to all parties in interest and a hearing; if necessary or proper, shall issue an order prescribing the form of the memorial to be made by the registrar, who shall make the memorial accordingly.
- 1157.95. Fees for services. Fees for registration and services shall be established by the registrar and approved by the Governor of Guam and all fees collected by the registrar shall be paid by him, between the first and fifth days of the month following receipt thereof, to the Department of Finance of the Government of Guam.
- 1157.96. Exercise of right of eminent domain. Nothing in this act shall be construed to in anywise affect or modify the exercise of the right of eminent domain.

When any suit or proceeding shall have been brought in the exercise of such right for the taking of registered land, or any interest therein, or to test the validity of any such taking or to ascertain and establish the amount of damage by reason of any such taking, it shall be the duty of both parties to the proceeding to see that a certified copy of the judgment or decree therein is duly filed and a memorial thereof entered upon the register; but, in the case of an assessment of damages, no such memorial shall be entered by the registrar until such damages have been paid, in which event the register shall also show the payment of such damages: provided, however, that the deposit with the Clerk of the Island Court, of such damages, shall be deemed a payment thereof, and in such case the clerk shall forthwith file with the registrar a

certificate of such deposit, and thereupon a memorial thereof shall be entered upon the register. Upon the filing of the certified copy of the order or decree of the court and the payment of damages, the registrar shall note on the Register of Titles of the owners whose lands have been appropriated a description of the land so appropriated and shall register in the name of the person, corporation, or other body entitled thereto, the title of the land taken, and issue a certificate therefor.

- 1157.97. Action for partition by owner of undivided interest. An owner of an undivided interest in registered lands may bring an action for the partition thereof. A notice of such action shall, at the time for the commencement thereof, be filed with the registrar and a memorial entered by him upon the register. A certified copy of any judgment or decree rendered in pursuance of such action shall be filed with the registrar, who shall thereupon issue a new certificate in accordance therewith.
- 1157.98. Rights and remedies of defrauded person. In the case of fraud, any person defrauded shall have all rights and remedies that he would have had if the lands were not under the provisions of this act: Provided, that nothing contained in this section shall affect the title of a registered owner who has taken bona fide for a valuable consideration, or of any person bona fide claiming through or under him.
- 1157.99. Clerk to notify registrar in case of appeal. In the case of an appeal from any proceeding under this act, or from any judgment, order or decree affecting registered lands, the clerk of the court in which the notice of appeal is filed shall forthwith notify the registrar thereof, and thereupon the registrar shall enter upon the register a memorial of such appeal.
- 1157.100. How documents relating to registered lands to be prepared. It shall be the duty of the registrar to require that all documents offered for filing concerning registered land, shall be made out with a view to permanency. The registrar may refuse to accept any document for filing which in his judgment is wholly or partially written, made out, or filled in with inferior ink or faded typewriter ribbon and likely to fade quickly, and may require such documents to be redrawn in India or indelible ink to insure permanency. Registrars must in every instance in making out a new certificate of title, memorials, or entries of any kind in connection with registered land, use India ink for handwriting and indelible ink for typewriter or rubber stamps.
- 1157.101. Deputies: Appointment, number, duties, and compensation. Deputies may be appointed by the Director of Land Management. Deputies shall be in such number as may be necessary to carry out the work program involved at any particular time. Compensation shall be the subject of a separate agreement between the government of Guam and the individual deputy employed, and shall be based on the currently prevailing wage scales for the particular type of work done by an individual deputy.

- 1157.102. Offenses against statute: Punishment. Whoever fraudulently procures, assists in fraudulently procuring, or is privy to the fraudulent procurement of any certificates of title or other instrument, or any entry in the register or other books kept in the registrar's office, or of measure or alteration in any entry in any said book, or in any instrument authorized by this act, or knowingly defrauds or is privy to defrauding any person by means of a false or fraudulent instrument, certificate, statement, or affidavit affecting registered lands shall be guilty of a felony and fined not exceeding \$5,000, or be imprisoned not exceeding 5 years nor less than 1 year, or either or both such fine and imprisonment.
- 1157.103. Same. Whoever (1) forges, or procures to be forged, or assists in forging the seal of the registrar, or the name, signature, or handwriting of any officer of the registry office in cases where such officer is expressly or impliedly authorized to affix his signature; or (2) fraudulently stamps, or procures to be stamped, or assists in stamping any document with any forged seal of said registrar; or (3) forges, or procures to be forged, or assists in forging the name, signature, or handwriting of any person whomsoever to any instrument which is expressly or impliedly authorized to be signed by such person, firm, corporation, or association, or association whose name, mark, or impression of any seal of said registrar has been forged, knowing the same to have been forged; (4) swears falsely concerning any matter or procedure made and done in pursuance of this act, shall be guilty of a felony and fined not exceeding five thousand dollars or be imprisoned not exceeding 10 years nor less than 1 year, or either or both such fine and imprisonment.
- 1157.104. Criminal proceeding not to affect remedy of injured person. No proceeding or conviction for any act hereby declared to be a felony shall affect any remedy which any person aggrieved or injured by such act may be entitled to at law or in equity, against the person who has committed such acts or against his estate, or against the registrar, or upon his bond.
- 1157.105. Rules and regulations: Documents sent by mail. Registrars shall not make any rules or regulations that work a hardship or inconvenience upon owners or others desiring to avail themselves of the provisions of this act, who live at a distance from the office of the registrar and shall in writing consent to accept notice of all proceedings, of which notice is required by mail, and in such cases registrars shall assist those who desire to use the mails in connection with registered lands in every way possible. Such documents as are sent by mail shall be entirely at the risk of the owner expense of replacing same shall be borne by the owner.
- 1157.106. Act to be liberally construed. This act shall be construed liberally so far as may be necessary for the purpose of effecting its general intent.
1158. What may be recorded. Where: Any instrument or judgment affecting the title to or possession of real property may be recorded under this

chapter: Provided, however, that deeds or grants conveying to a governmental agency, real estate, or any interest therein, or easements thereon, for public purposes shall not be accepted for recordation without the consent of the grantee evidenced by its acceptance attached to such deed or grant. Instruments and judgment to be recorded pursuant to this section shall be recorded in the Department of Land Management.

1451. Nullity, alternative obligations. If one of the alternative acts required by an obligation is such as the law will not enforce, or becomes unlawful, or impossible of performance, the obligation is to be interpreted as though the other stood alone.
1460. Covenants running with land. Certain covenants, contained in grants of estates in real property, are appurtenant to such estates, and pass with them, so as to bind the assigns of the covenantor and to vest in the assigns of the covenantee, in the same manner as if they had personally entered into them. Such covenants are said to run with the land.
1461. What covenants run with land. The only covenants which run with the land are those specified in this Title, and those which are incidental thereto.
1462. Same. Every covenant contained in a grant of an estate in real property, which is made for the direct benefit of the property, or some part of it then in existence, runs with the land.
3479. Nuisance, what. Anything which is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property, or unlawfully obstructs the free passage or use, in the customary manner, of any river, bay, stream, canal, or basin, or any public park, square, street, or highway, is a nuisance.
3509. The maxims of jurisprudence hereinafter set forth are intended not to qualify any of the foregoing provisions of this code, but to aid in their just application.
3513. Anyone may waive the advantage of a law intended solely for his benefit. But law established for a public reason cannot be contravened by a private agreement.
3514. One must so use his own rights as not to infringe upon the rights of another.
3515. He who consents to an act is not wronged by it.
3516. Acquiescence in error takes away the right of objecting to it.
3517. No one can take advantage of his own wrong.
3519. He who can and does not forbid that which is done on his behalf is deemed to have bidden it.

3522. One who grants a thing is presumed to grant also whatever is essential to its use.

3525. Between rights otherwise equal, the earliest is preferred.

3527. The law helps the vigilant, before those who sleep on their rights.

3539. Time does not confirm a void act.

3543. When one of two innocent persons must suffer by the act of a third, he, by whose negligence it happened, must be the sufferer.

GOVERNMENT CODE OF GUAM

(References)

GOVERNMENT CODE OF GUAM (References)

Title XIV Land Management

Chapter I - General

Section 13005 - Classification of Land

Section 13007 - Promulgation of Rules and Regulations

Chapter 2 - Land Records

Chapter 3 - Planning

Chapter 6 - Leases and Sales

Chapter 8 - Homesteads

Chapter 9 - Uniform Triangulation System

Title XVI Commissioners of Guam

Chapter I

Section 15001.1 - Municipality Areas

Title XVIII - Zoning Law

Title XIX - Subdivision Law

Title XXVII - Recreation

Chapter 3

Section 26200 - Reserved Properties

Title XXXII - Building Law

Chapter 1 - Administrative Procedures

Chapter 2 - Definitions and Abbreviations

Title XXXVII - Savings & Loan Association Act

Chapter 9 - Investments, Loans and Borrowing

Section 41459 - Loans Upon Real Property

Title XLIII - Professional Engineers, Architects and Land Surveyors

REGULATIONS GOVERNING LAND SURVEYS IN GUAM

GOVERNMENT OF GUAM  
Office of the Governor  
Agana, Guam

EXECUTIVE ORDER NO. 66-15

WHEREAS, Section 13802, Government Code of Guam, requires that the Director of Land Management prescribe regulations to implement Chapter 9 of Title XIV, Government Code of Guam; and

WHEREAS, the said Section 13802 provides that such regulations are subject to approval by the Governor by Executive Order;

NOW, THEREFORE, by virtue of the foregoing, the attached regulations entitled "Regulations Governing Land Surveys in Guam" are hereby approved and promulgated, to be effective this date.

Date at Agana, Guam, this 7th day of August, 1966.

/s/ MANUEL F.L. GUERRERO  
Governor of Guam

COUNTERSIGNED:

/s/ DENVER DICKERSON  
Secretary of Guam

DEPARTMENT OF LAND MANAGEMENT  
Government of Guam  
Agana, Guam

REGULATIONS GOVERNING LAND SURVEYS IN GUAM

1. These regulations are prescribed in compliance with Section 13802, Chapter 9 of Title XIV, Government Code of Guam, and supplement the provisions of that Chapter.

2. Application: These regulations apply to all land surveys conducted in Guam; provided, however, that in cases of surveys made for military purposes by personnel of the Armed Forces or those conducting surveys pursuant to contract with the Armed Forces, they apply only to the extent that no map will be entitled to recordation unless it is based on a survey which complies with these regulations and the uniform specifications required by Sections 13800(b) and 13804(b) of the Government Code of Guam attached hereto.

3. Surveys, by whom conducted: Every land survey must be conducted by a land surveyor duly registered in accordance with Title XLIII, Government Code of Guam, or by persons exempt from registration as provided in said Title.

4. Surveys, basis of: Every land survey must be based upon and have a minimum of one corner of the land survey physically referenced to the Guam Geodetic Triangulation Net established pursuant to Chapter 9, Title XIV, Government Code of Guam.

5. Corners, marking: Every corner of a land survey must be marked by a permanent monument or marker bearing the registration number of the surveyor or an identifying mark approved by the Territorial Surveyor. Reference monuments may be set where it is physically impossible to set the true corner or in cases where the destruction of a corner is imminent due to construction. The true corner should be placed by the surveyor when practical.

6. ~~7~~ Preservation of Records: Every surveyor must preserve as permanent records all of his field notes and all computation made therefrom, so catalogued and filed as to be readily available.

7. Measurement: All surveying measuring devices shall be tested and calibrated at regular intervals of not less than six (6) months using the testing facilities established by the Director of Land Management in accordance with Section 13810, Government Code of Guam, or under the supervision or direction of the Territorial Surveyor. An appropriate certificate as to degree of accuracy, signed by the Territorial Surveyor, shall be issued for each item of equipment tested or calibrated.

The minimum accuracy of measurements shall be 1 part in 10,000 on all property lines of boundary or interior survey. Preliminary or reconnaissance surveys shall maintain an accuracy of not less than 1 part in 5,000, except in those cases where general information only is to be obtained and no precise monumented corners are to be created.

A circuit of levels between precise bench marks or a circuit closed upon the initial bench mark shall not differ more than 0.02 foot multiplied by the square root of the number of miles in the circuit, and in no case to exceed 0.05 foot, except in levels for preliminary or rough stadia control, in which case the allowable error of closure may be 0.10 foot.

Accuracy of measurement in triangulation dimensions shall conform with the standards set by the United States Coast and Geodetic Survey.

In the case of any survey required for purposes of registration under the Land Title Registration Act, the surveyor must comply with any additional requirements imposed by the Island Court.

The Department of Land Management will maintain a "Manual of Instructions for Survey of Lands and Preparation of Plans in the Territory of Guam" to supplement these regulations and to provide recommended methods to meet these regulations.

8. Information to be furnished: The surveyor must furnish to his client a correct technical description of the land surveyed, and/or clear and legible copies of a map or plot conforming to the "Uniform Specifications: Preparation of Maps from Surveys" prescribed by authority of Section 13804, of Chapter 9, Title XIV, Government Code of Guam, and attached hereto as Appendix A.

9. Complaints: Any person who believes himself to be aggrieved by the failure of a surveyor to comply with these regulations may submit his complaint to the Director of Land Management, or his delegate, and in all cases the Director of Land Management, or his delegate, shall forward such complaints to the Board of Engineering and Architectural Examiners for appropriate proceedings under Title XLIII, Government Code of Guam.

10. These regulations will become effective upon approval of the Governor and copies will be maintained and made available as provided by Section 13803, Government Code of Guam.

Dated at Agana, Guam, this 30th day of August, 1966.

/s/ PAUL B. SOUDER  
Director of Land Management

## APPENDIX A

### UNIFORM SPECIFICATIONS: PREPARATION OF MAPS FROM SURVEYS

1. Authority: These specifications are prescribed in compliance with Section 13804, Chapter 9, Title XIV, Government Code of Guam, and supplement the provisions of that Chapter.

2. Application: No map (the term includes plat, sketch, or other plane pictorial representation of land) will be accepted for recording unless it is prepared in accordance with these specifications and is based upon a survey which complies with all applicable laws and regulations.

3. Materials: All maps must be drawn on linen, film or other suitable material, which is durable and dimensionally stable and designed for drafting or drawing purposes. Only India Ink or equally permanent black drawing medium may be used.

4. Dimensions and scale:

(a) Maps shall be drawn on sheets measuring twenty-two by twenty-nine inches, including a one-inch margin at the top, bottom, and right side and a two-inch margin at the left side. If the land surveyed is so large that a map thereof conforming to these specifications cannot be drawn on one sheet measuring twenty-two by twenty-nine inches, the map shall be drawn in sections and additional sheets used. All sections shall be of the same scale and shall bear clearly identified match-lines so that the sections can be accurately connected. Each sheet shall show its number and the total number of sheets (for example: Sheet 1 of 3).

(b) In all cases, the map must be so drawn and placed upon the sheet or sheets so as to provide adequate room for the title block, legend, all required

certificates, and a form for entry of revisions.

(c) The scale of each map must be large enough to provide complete legibility and to permit reasonably accurate measurements to be scaled from the map. When practicable, the scale shall be one inch equals twenty meters or one inch equals forty feet. For large tracts, smaller scales may be used, such as one inch equals one hundred meters or one inch equals four hundred feet; provided that maps drawn for submission pursuant to the Subdivision Law shall be of the scale prescribed by the Territorial Planning Commission.

(d) Any variation from scale or plan dimensions as set forth herein must be approved by the Territorial Surveyor.

5. Use of abbreviations and symbols: Abbreviations and symbols must be clearly defined in the legend of the map. The Department of Land Management "Manual of Instructions for the Survey of Lands and Preparation of Plans in the Territory of Guam" contains standard surveying abbreviations and symbols that should be used.

6. Corrections: After the map has been completed, no change shall be made thereon except as a revision, properly noted, dated, and authenticated.

7. Information to be shown: In general, every line, point, object and structure actually surveyed must be clearly shown and accurately located on the map. Specifically included are:

(a) The identity and location of a Triangulation Station in the Guam Geodetic Triangulation Net and the survey to the corner point of beginning of the survey. Guam Geodetic Triangulation Net (1963) Coordinate Values are to be shown on at least one permanent monument on the boundary of the land surveyed.

(b) An arrow indicating north and the bearing system used noted.

(c) The Courses and distances of all lines, and in cases of curved lines all data necessary to identify, locate, or retrace each line.

(d) When record bearings or angles or distances differ from measured bearings or angles or distances, both the record and measured bearings, angles, and distances shall be clearly indicated in a manner to permit the ready distinction between record and measured data. The source of the record data must be indicated on the plan.

(e) Measured and record distances (if known) from corners of the premises being surveyed to the nearest right-of-way lines of dedicated public streets or roads, together with evidence of found lot corners, shall be noted on the map. Where conditions warrant, the distances to the nearest dedicated street or road right-of-way line in both directions from the surveyed premises and the bearing and name of such street or road shall be noted. Names and legal lines and widths of all dedicated street or roads shall be given. If the Surveyor is aware of any change in the lines of such streets or roads, he shall note the same on the map and cite the date of and authority under which such change was made.

(f) The identifying title of all record plats and/or subdivisions which the survey represents, either wholly or in part, must be shown with its filing date and document number and the lot, block and tract number (or letter) of the surveyed property. Names of adjoining owners and/or recorded lot or parcel numbers, with document numbers, and similar information, where known, shall be shown on the map. Interior parcel lines must clearly indicate contiguity, gores, and/or overlaps.

(g) The character and location of every monument and marker used or indicated in the survey and whether such monuments and markers were placed or found.

(h) The nature, location, and dimensions of every structure or other object included in the survey.

(i) All natural features that may have relation to real property interests.

(j) The scale of the map, shown both in figures and graphically as a bar scale.

(k) A completed title block and a site location map conforming to those shown on sample maps available at the Department of Land Management.

(1) The following certificate, signed and sealed by the surveyor:

"I, (insert name), hereby certify that this map was prepared by me or under my direct supervision, that it is based upon a field survey made (insert dates) in conformance with all applicable laws and regulations .

\_\_\_\_\_  
(Name)"

(m) The following form of certificate for dating and signature by the Territorial Surveyor:

"This map has been examined for conformance with the requirements of Chapter 9, Title XIV, Government Code of Guam, and regulations thereunder, on this the \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_\_.

\_\_\_\_\_  
Territorial Surveyor"

(n) In cases where it would apply, the following form of certificate for dating and signature by the Territorial Planner:

"Approval under the Subdivision Law not required.

Date: \_\_\_\_\_

\_\_\_\_\_  
Territorial Planner"

(o) In appropriate cases, forms for landowners' dedications of parks and streets, alleys, and other easements for public use, and for acceptance by the Governor of Guam of such dedications.

(p) Any additional data and notes necessary for explanation and understanding of the map.

8. All maps must be so drawn and lettered that clearly legible prints may

be made therefrom by standard reproductive processes.

9. The originals of all maps must be preserved by the surveyors as permanent records, so catalogued and filed as to be readily available.

10. Subdivision plans shall meet the requirements of Title XIX of the Government Code of Guam in addition to the requirements of these regulations, except that the requirements of Title XIX shall have precedence in the event of conflict.

11. The Department of Land Management will maintain a "Manual of Instructions for the Survey of Lands and Preparation of Plans in the Territory of Guam" as required by Section 13800(b), Chapter 9, Title XIV, Government Code of Guam, to supplement these regulations and to provide recommended methods to meet these regulations.

12. Copies of these specifications shall be kept on file in the Department of Land Management and made available to surveyors and interested governmental officials.

**ORGANIZATION  
OF  
LAND MANAGEMENT**

GOVERNMENT OF GUAM  
Office of the Governor  
Agana, Guam

59-15  
EXECUTIVE ORDER NO. ~~1559~~

WHEREAS, Section 9(c) of the Organic Act of Guam provides that the Governor shall, from time to time, examine the organization of the Executive Branch of the Government of Guam, and shall determine and carry out such changes as are necessary to promote effective management; and

WHEREAS, Section 5107 of the Government Code of Guam establishes a Department of Land Management within the Executive Branch of the Government of Guam; and

WHEREAS, a more efficient administration and control of the prescribed functions and responsibilities of the Department of Land Management necessitate a reorganization of such department;

NOW THEREFORE, in view of the foregoing, the organization and functions of the Department of Land Management shall be as follows:

1. The Department of Land Management shall consist of the Office of the Director, Division of Land Records, Division of Land Administration, Division of Planning, and Division of Survey.

2. FUNCTIONS:

The functions of each Division and the duties and responsibilities of each chief official thereof, are:

a. Office of the Director.

The Director of Land Management, as head of the Department of Land Management and Chief Official of the Office of the Director, is

responsible for formulation of all policies affecting the Department of Land Management. He shall be charged with the overall administration of the Department of Land Management and shall have general supervision of all the personnel and operations of the Department. He shall have general cognizance of all Government of Guam real property (land). In this connection, all departments or agencies of the Government of Guam desiring to make any use of Government real property must first obtain the approval of the Director of Land Management covering the use of such real property. Ex Officio, the Director is the Executive Secretary of the Territorial Planning Commission, and Registrar of Titles.

b. Division of Land Records.

The Division of Land Records shall be responsible for the recording of instruments affecting titles of all land in Guam. The Chief Official of the Division shall be the Deputy Registrar of Titles who shall be charged with the supervision of the personnel and functions of the Division. As Deputy Registrar of Titles he shall be charged with the duties and responsibilities of keeping and maintaining all official records relating to land titles, and of discharging the functions and duties of the Registrar of Titles. He shall also be responsible for such other related matters as shall be prescribed for him from time to time.

c. Division of Land Administration.

The Division of Land Administration shall be charged with the duties and responsibilities of keeping and maintaining a record of all government real property assigned or allocated to departments and agencies of the Government of Guam, as well as a record of all government real property leased to, or occupied under land use permits by, private individuals in accordance with the provisions of law. All investigations and appraisals of Government real property to be disposed of, by the government, and of private properties to be acquired by the Government, shall be the duties and responsibilities of the Division of Land Administration.

The Chief Official of the Division of Land Administration shall be the Chief of Land Administration who shall have supervision of the personnel and functions of the Division. The Chief of Land Administration shall be the Executive Secretary of the Land Transfer Board. As Executive Secretary of the Land Transfer Board, he is responsible for accepting, and processing all applications filed with the Land Transfer Board for purchase or lease of Government real property.

d. Division of Planning.

The Division of Planning shall be charged with the duties and responsibilities of providing the Territorial Planning Commission with such technical and clerical personnel and office

facilities as may be required or necessary to enable the Territorial Planning Commission to comply with its functions and duties in preparing and adopting a comprehensive, long term general plan for the physical and economic development of the territory of Guam.

The Chief Official of the Division of Planning shall be the Chief of Planning who shall have supervision of the personnel and functions of the Division. He shall also supervise the subdivision development of all Government of Guam real property. He shall also serve as the Executive Secretary of the Parks, Monuments and Museum Committee.

The Division of Planning is further charged with the duty and responsibility of developing, maintaining and controlling all public parks, park nurseries, and monuments in Guam, and shall have cognizance of the Guam Museum.

e. Division of Survey.

The Division of Survey shall be charged with the duties and responsibilities relating to the maintenance and supplementing of a land square-plane grid system, a triangulation network and an Island-wide vertical control. The Division is further charged with the duties and responsibilities of maintaining all files relating to land surveys, i.e., complete technical descriptions and other information on all property on Guam including Military, Government of Guam, Federal Government and private and the preparation and maintenance of a set of cadastral maps for the territory and other related survey matters such as reconnaissance information, as-built, topographic and contour maps of all scales, etcetera.

The Chief Official of the Division of Survey shall be the Territorial Surveyor who shall have supervision of the personnel and functions of the Division. In addition to the above duties and responsibilities the Territorial Surveyor must approve or disapprove for accuracy and form, maps plats or surveys of private lands which are filed for recording with the Registrar of Titles, and further he must recommend for approval or disapproval on the basis of accuracy and form all final subdivision maps filed with the Territorial Planning Commission.

3. The appended Organizational Chart of the Department of Land Management is incorporated as an integral part of this Executive Order.

Dated at Agana, Guam, this 6th day of October, 1959.

/s/ R.B. LOWE

RICHARD BARNETT LOWE  
Governor of Guam

COUNTERSIGNED:

(Seal)

/s/ Marc. Boss

MARCELLUS GRAEME BOSS

Secretary of Guam

## SUBDIVISION REQUIREMENTS

RULES & REGULATIONS GOVERNING DESIGN AND  
LAYOUT OF SUBDIVISIONS IN THE  
TERRITORY OF GUAM

Pursuant to Section 18003, Chapter 1, Title 19, Government Code of Guam,  
the Territorial Planning Commission hereby adopts the following rules  
and regulations:

Original signed by Paul B. Scuder, 9-12-66

Signed: PAUL B. SOUDER  
Executive Secretary  
Territorial Planning Commission

Date: 9/12/66

Approved as to legal form

Original signed by Harold W. Burnett.

Signed: HAROLD W. BURNETT  
Attorney General

Original signed by Manuel F.L. Guerrero.

Approved: MANUEL F.L. GUERRERO  
Governor of Guam

Date: September 15, 1966

The following design standards shall apply to all subdivisions submitted to the Territorial Planning Commission, or its legally authorized agent for approval under Title 19, Government Code of Guam.

The subdivider shall observe all design standards for land subdivision as hereinafter provided. These standards shall be considered minimum standards, and shall be varied from or waived only as provided in Section V.

## I. General

### A. Conformance with Master Plan

Any proposed subdivision shall conform, as far as practicable, to the proposals and intentions of the Master Plan for the Territory of Guam as formally adopted in whole or in part by the Territorial Planning Commission, unless substitute proposal may be shown to the Commission, or its agent, to better serve the general area of the subdivision and the island.

### B. Protection of Natural Features

Due regard shall be shown for all natural features such as trees, water courses, scenic points, historic locations, and similar community assets, which, if preserved, will add attractiveness and value to the subdivision.

### C. Reserve Strips

Reserve strips prohibiting access to streets or adjoining property shall not be permitted, except where, in the opinion of the Commission or its agent, such strips shall be in the public interest.

### D. Further Subdivision

In cases where a tract is subdivided into larger parcels than ordinary building lots, such parcels shall be arranged so as to allow the logical and economic extension of streets, utility easements, drainage ways and public areas into such parcels.

## II. STREETS

### A. Arrangement

The proposed streets shall be considered in their relation to existing and planned streets, to topographic and geologic conditions, and to public convenience and safety. They shall provide for:

1. appropriate continuation of existing feeder and collector streets.

2. extension of feeder and collector streets into adjoining land.
3. the discouragement of through traffic on residential streets.
4. the maximum attractiveness, livability and amenity of the subdivision.

B. Access to Primary Street

Intersections of collector and residential streets with primary streets will not normally be allowed at intervals of less than 400 feet. Subdivisions of fifty or more lots will normally be required to have more than one access to an existing feeder street or to a proposed feeder street which is to be built in conjunction with the proposed subdivision.

C. Street Jogs

Street jogs in feeder and collector streets of less than 250 feet shall not be allowed. Street jogs in residential streets of less than 125 feet shall not be allowed.

D. Right of Way Widths

Right of Way widths shall conform to the standards adopted by the Territorial Planning Commission on August 12, 1965, attached hereto, and made a part hereof.

E. Right of Way Alignment

| <u>Street Classification</u> | <u>*Minimum center line Curve Radius in feet</u> | <u>Minimum Sight Distance (in feet)</u> | <u>Maximum Gradient (%)</u> |
|------------------------------|--------------------------------------------------|-----------------------------------------|-----------------------------|
| Feeder                       | 500                                              | 800                                     | 4%                          |
| Collector                    | 300                                              | 500                                     | 7%                          |
| Residential                  | 150                                              | 200                                     | 10%                         |

F. Intersections

Rights of way shall be laid out so as to intersect as nearly as possible at right angles. No right of way shall intersect any other right of way at less than 75 degrees.

G. Dead-End Streets

Dead-end streets shall:

1. not exceed 500 feet in length
2. not provide access to more than 12 lots

#### H. Half Streets

(A half street is a portion of a proposed street running astride a common boundary line, said portion being within a subdivision under consideration) Half streets shall be prohibited.

### III. Blocks

In general, block lengths shall not be less than 300 feet, nor more than 2000 feet.

### IV. Easements

#### A. Layout

Wherever possible, easements shall be continuous from block to block, and their layout shall create as few irregularities as possible.

#### B. Water-Courses

Streams or natural water courses shall be provided with an easement conforming substantially with the line of its course, and not less than 20 feet in width. The placement of streams & water courses into open or covered culverts shall be kept to a minimum.

#### C. Utilities

Utility easements shall generally follow lot lines and shall not be less than 10 feet in width.

### V. Variation

#### A. Waiver of Compliance

Strict compliance with the requirements of these rules and regulations may be waived only when, in the judgement of the Commission, such action is in the public interest and not inconsistent with the Subdivision Law. In waiving strict compliance the Board may require such alternative conditions as will serve substantially the same objective as the standards or regulations waived.

#### B. Planned Unit Development

The Planning Board will give consideration to suggestions offered by the subdivider that will tend to provide for the most efficient use of land in harmony with its natural features.

GOVERNMENT OF GUAM  
AGANA

ROAD CLASSIFICATIONS AND STANDARDS

The streets and roads are classified on the basis of use and importance. In the classification of various routes, which have been established in order of relative importance, both the present and future uses have been considered.

1. Residential Street: A facility providing direct access, light and air to abutting property, not designed for through traffic. A Residential Street may be a Cul-de-sac or a dead-end street with a turn-around at the closed end. The following standards are required for this facility with distinctions made between Urban and Rural areas:

A. Urban Areas:

1. 40 foot right-of-way,
2. 26 feet of paving,
3. two-10 foot travel lanes,
4. one-6 foot parking lane,
5. two-2 foot curb and gutters, and
6. two-5 foot parkway strips for sidewalks and landscaping

B. Rural Areas:

1. 50 foot right-of-way,
2. 20 feet of paving,
3. two-10 foot travel lanes,
4. two-6 foot parking lanes, stabilized coral base, and
5. two-9 foot shoulders for drainage

2. Collector and Commercial Street: A facility providing access to adjacent lands. This is usually a low volume street of little general island importance, although used as a commercial street it has a high volume of traffic providing service to abutting property. Classified into two categories, Urban and Rural, this facility has the following standards:

A. Urban and Commercial Areas:

1. 50 foot right-of-way,
2. 36 feet of paving,
3. two-10 foot travel lanes,
4. two-8 foot parking lanes,

5. two-2 foot curb and gutters, and
6. two-5 foot parkway strips for sidewalks and landscaping

B. Rural Areas:

1. 60 foot right-of-way,
2. 24 foot paving,
3. two-12 foot travel lanes,
4. two-8 foot parking lanes, stabilized coral base and
5. two-10 foot shoulders for drainage

3. Feeder Street and Rural Highway: A facility connecting neighborhood collectors to major thoroughfares. This is used in place of major thoroughfares where such thoroughfares are not justified. Classified into two categories, Urban and Rural, this facility has the following standards:

A. Urban and Rural Highway Areas:

1. 60 to 80 foot right-of-way,
2. 40 feet of paving,
3. two-12 foot travel lanes,
4. two-8 foot stop and/or turn lanes,
5. two-2 foot curbs and gutters and
6. two-8 to 18 foot shoulders for drainage and landscaping on each side

B. Rural Areas:

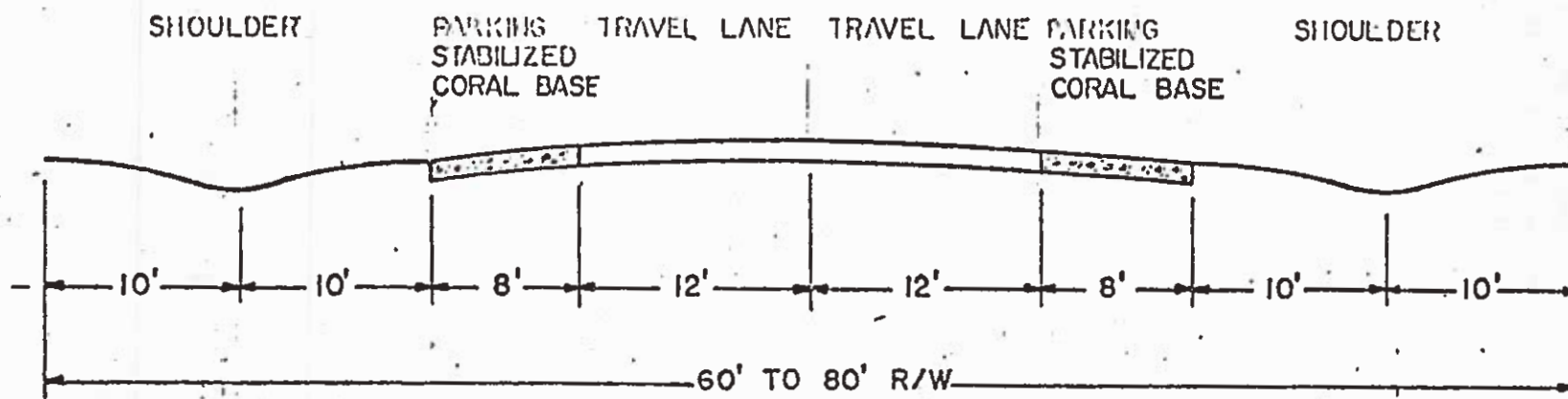
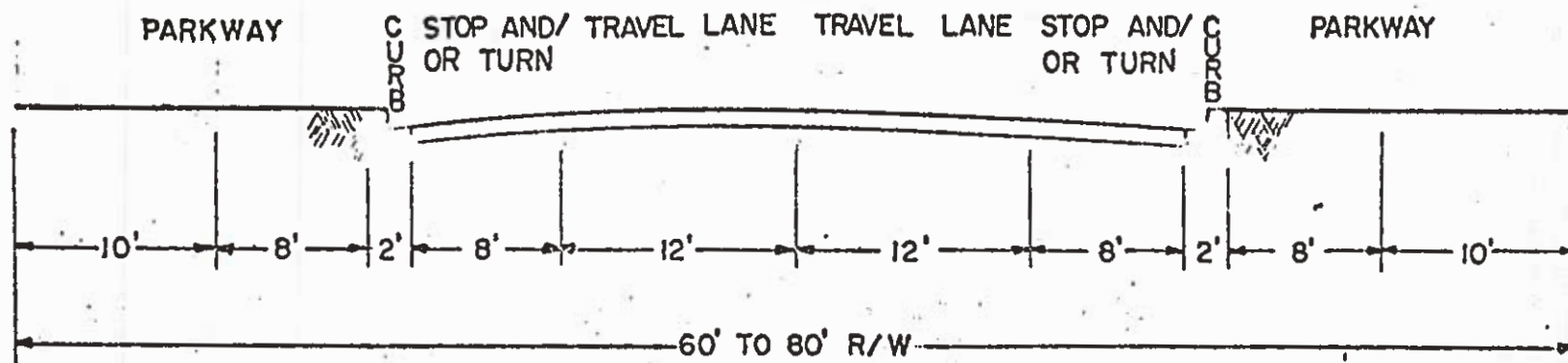
1. 60 to 80 foot right-of-way,
2. 24 feet of paving,
3. two-12 foot travel lanes,
4. two-8 foot parking lanes, stabilized coral base, and
5. two-10 to 20 foot shoulders for drainage and landscaping

4. Major Thoroughfare: A principle arterial highway, Marine Drive, Route 1, from Wettengel Junction to Route 2A having intersection access at grade and offering direct access to abutting property. Limited access reservations may be required in hazardous and heavily congested areas. This facility allows the movement of through-traffic from one local area to another. Classified into two categories, Urban and Rural, this facility has the following standards:

A. Urban and Rural Areas:

1. 100 foot right-of-way,
2. 48 to 64 feet of paving,
3. four-12 foot travel lanes,
4. two-8 feet emergency stop lanes,
5. one-20 foot medium strip used for 8 feet turning lanes where required otherwise to be landscaped,
6. four-2 foot curbs and gutters, and

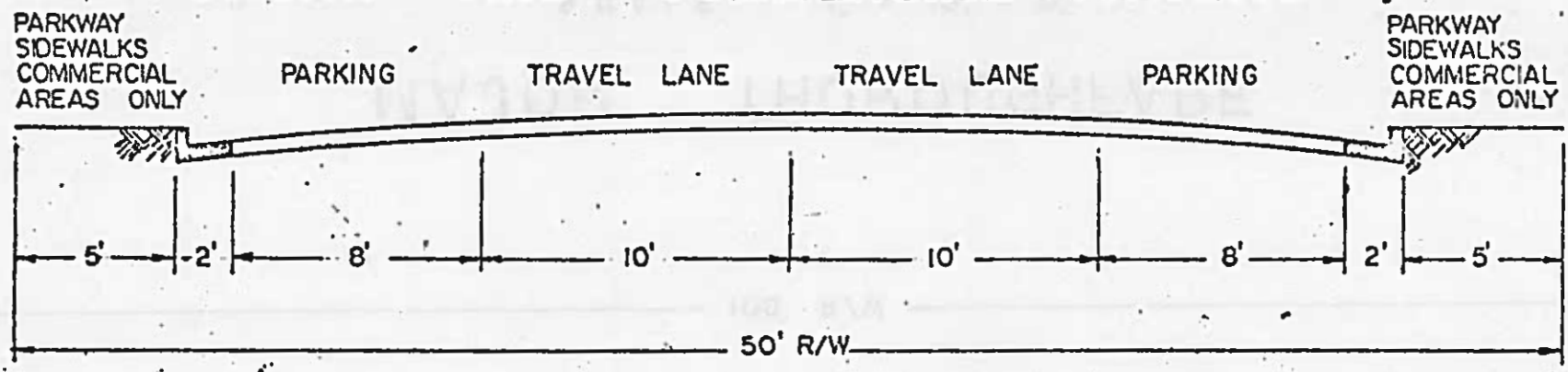
7. two-8 foot shoulders for drainage and landscaping
8. The standards of the "Major Thoroughfare" are subject to change by the Department of Land Management and Department of Public Works if the circumstances require.



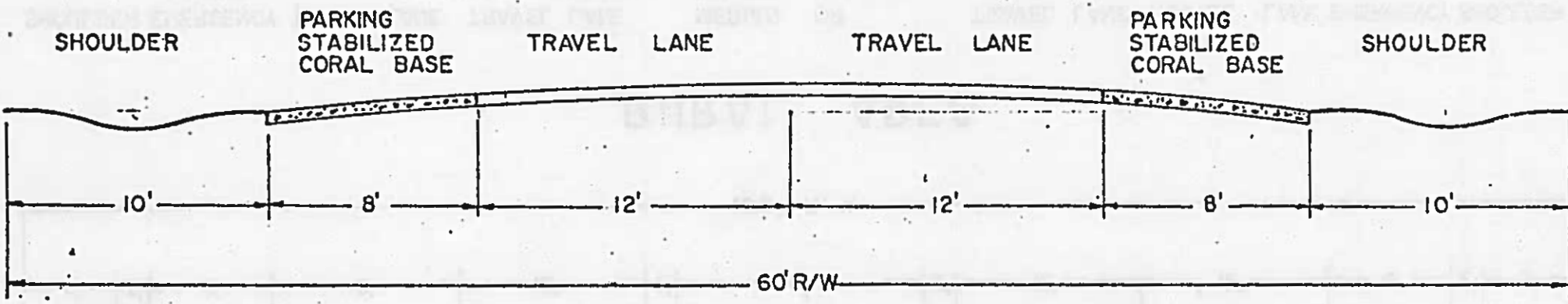
URBAN STREET AND RURAL HIGHWAY

SCALE 1" = 10' - 0"

# URBAN AND COMMERCIAL AREAS



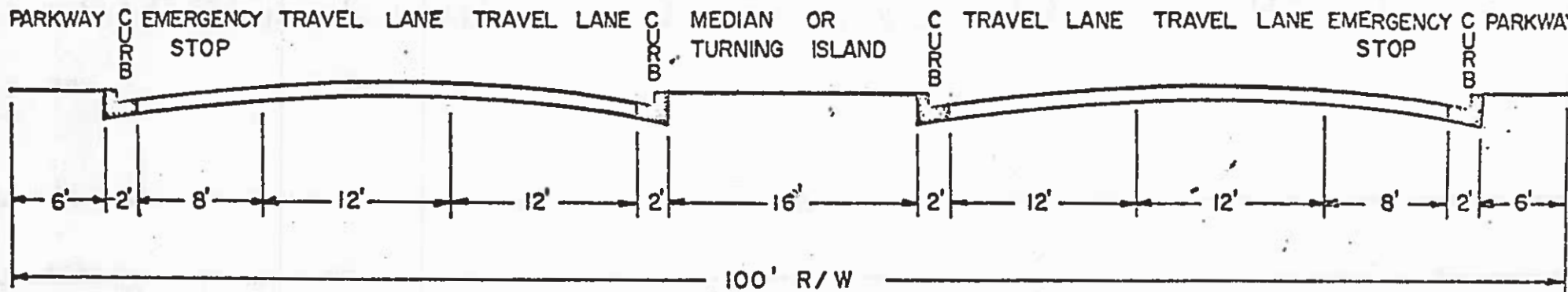
# RURAL AREAS



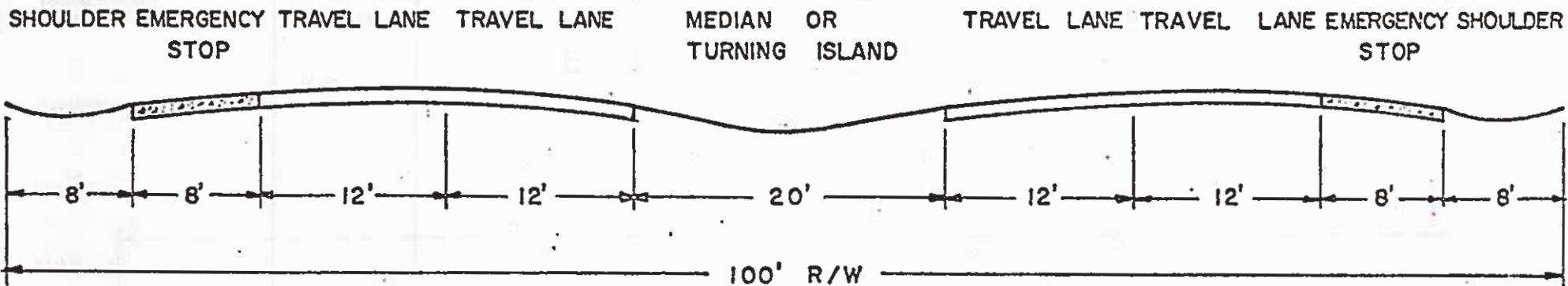
# COLLECTOR AND COMMERCIAL STREET

SCALE 1" = 6' - 0"

## URBAN AREA



## RURAL AREA

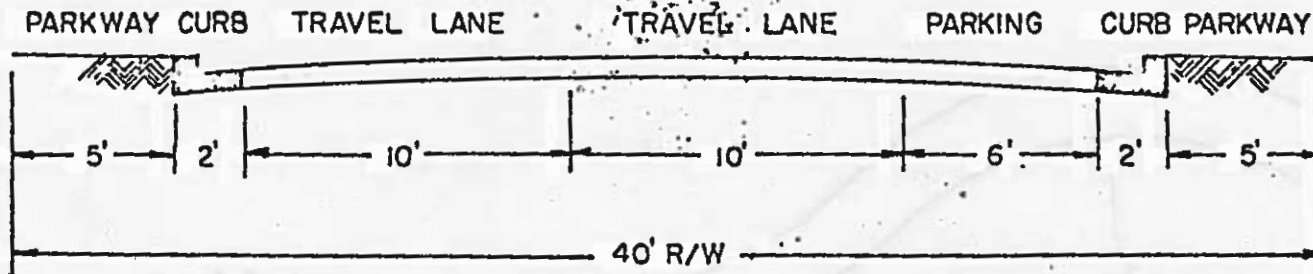


## MAJOR THOROUGHFARE

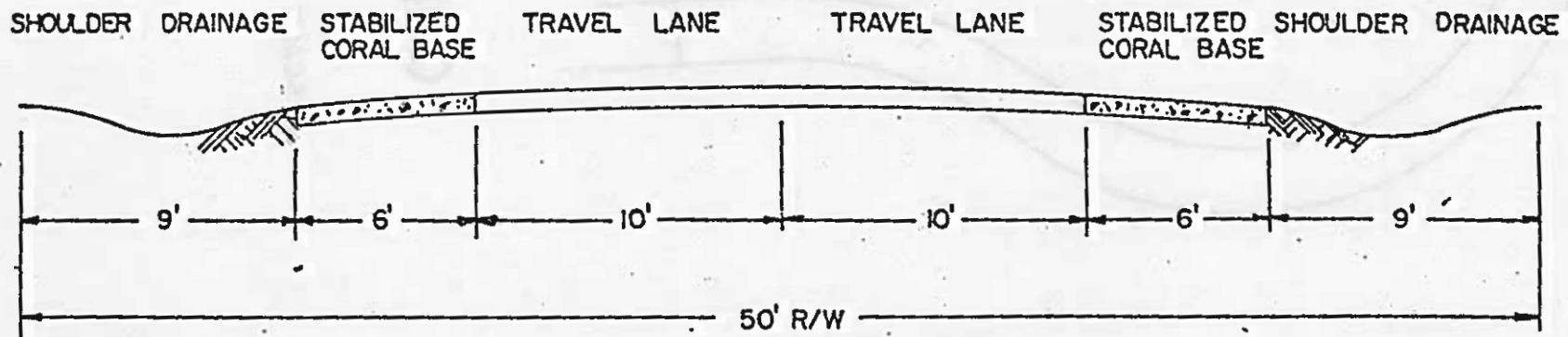
S C A L E

1" = 10' - 0"

# URBAN AREA



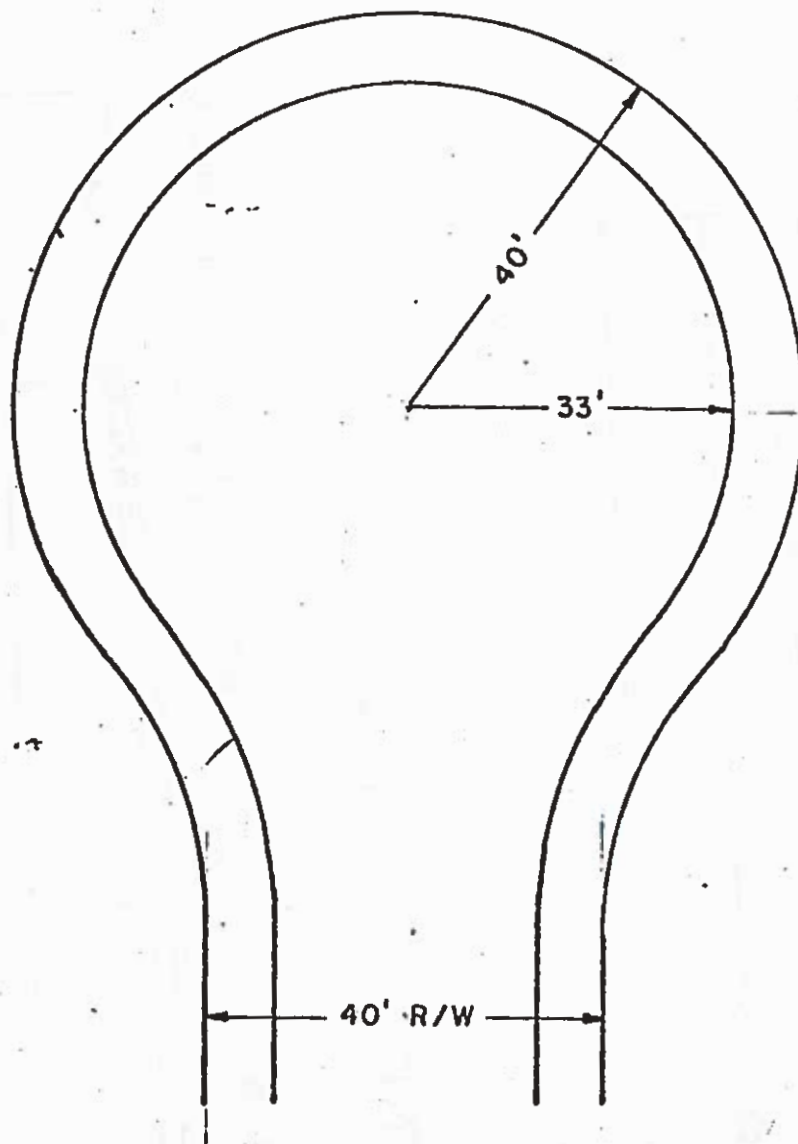
# RURAL AREA



RESIDENTIAL STREET

SCALE

1" = 6' - 0"



## CUL - DE - SAC

SCALE 1" = 20' - 0"

See Page IV - 14 for more details

SUPPLEMENTS  
TO  
VOLUME 1  
OF  
THE GOVERNMENT CODE  
OF THE  
TERRITORY OF GUAM

## CHAPTER 9

## Uniform Triangulation System

- § 13800. Authority.
- § 13801. Personnel.
- § 13802. Regulations.
- § 13803. Same: Publication.
- § 13804. Duties of Director.
- § 13805. Establishment of Triangulation Control Stations.
- § 13806. Designation of Coordinate Reference Point.
- § 13807. Identification of Land Markers.
- § 13808. Filing of Document for Records in the Department.
- § 13809. Admissibility of Evidence.
- § 13810. Instrument-Testing Facilities.
- § 13811. Penalty.

§ 13800. Authority. The Director of Land Management, hereinafter referred to as the Director, shall establish (a) a uniform system of geodetic triangulation controls through the establishment of primary and secondary triangulation control stations to be known as the "Guam Geodetic Triangulation Net," and (b) uniform procedures for the survey of public and private lands within the territory in conformity with the provisions of this Chapter.

§ 13801. Personnel. The Director shall be responsible for the carrying out of the provisions of this Chapter and may appoint a Territorial Surveyor and such additional personnel as is necessary for the administration thereof. In addition, he shall have the authority to contract with private professional land surveyors for surveying services under such terms and conditions as the Governor may approve; provided, however, any such surveyor shall be either (1) registered by the Guam Board of Engineering and Architectural Examiners under the Professional Engineers, Architects and Land Surveyors Law, Title XLIII, Government Code of Guam, and holds a current certificate of registration issued by the Board covering the contract period, or (2) a surveyor exempted from registration under the Professional Engineers, Architects and Land Surveyors Law.

§ 13802. Regulations. The Director shall prescribe such regulations as may be necessary, in his judgment, to implement the provisions of this Chapter. Such regulations shall be subject to approval by the Governor by Executive Order.

§ 13803. Same: Publication. Copies of regulations issued under this Chapter shall, after the effective date thereof, be published and made available for sale to the public. A current set of such regulations shall be maintained in the Department of Land Management for public use and inspection during normal government business hours.

§ 13804. Duties of Director. The duties of the Director or his delegate under this Chapter shall include: (a) The surveying, locating, marking and mapping of land boundaries, preparation of maps and bounds descriptions and all other work related thereto, of all land owned, controlled or in possession of the Government of Guam, or which may hereafter be acquired, controlled or in possession of the Government of Guam, or of private lands which are to be acquired by the Government of Guam through purchase or condemnation.

(b) The development of uniform specifications for the survey data to be included on maps, plats, sketches or other pictorial representation of land.

(c) The development of current records of surveys and maps of the territory in accordance with the provisions of this Chapter.

(d) The maintenance and preservation of triangulation control stations.

(e) The assigning of coordinate values to existing triangulation control stations pending verification of such coordinate values and designation by him of such stations as a part of the "Guam Geodetic Triangulation Net."

§ 13805. Establishment of Triangulation Control Station. Appropriate monuments shall be erected by the Director or may be designated by him at locations determined by him, based upon the polygon method of computation, as primary and secondary triangulation control stations, to be referred to as the "Guam Geodetic Triangulation Net," for use in locating and describing land within the territory, which shall conform to standards of accuracy in their placement as follows:

- (a) Primary triangulation control stations shall be established by the equivalent to, or better than, First order, Class III, work as specified in the "Manual of Geodetic Triangulation," United States Department of Commerce, Coast and Geodetic Survey, Special Publication No. 247, 1959 revised edition.
- (b) Secondary triangulation control stations shall be established by the equivalent to, or better than, Second Order, Class I work as specified in the "Manual of Geodetic Triangulation," United States Department of Commerce, Coast and Geodetic Survey, Special Publication No. 247, 1959 revised edition.

§ 13806. Designation of coordinate reference point. The principal reference point for the use of coordinates in connection with the "Guam Geodetic Triangulation Net" is the intersection of East Longitude 144° 44' 55.52" and North Latitude 13° 28' 20.87".

§ 13807. Identification of land markers. In addition to the other requirements established by regulations, a permanent land marker shall be set to identify any change of direction of the boundary of any lot, parcel or tract of land, stamped with the letters "L. S." and the certificate of registration number of the surveyor setting the marker or, set by a public officer, stamped with his official title.

*Time  
to satisfy  
ear  
limitation*

§ 13808. Filing of documents for records in the Department of Land Management. No document purporting to establish title to land as a result of proceedings under the "Land Title Registration Act," presented to the Department of Land Management for recording, shall be filed, unless accompanied by a map, plat, sketch or other plane pictorial representation of the lot, parcel or tract of land involved, made within a one year period preceding presentation for filing, or, with regard to land taken in condemnation proceedings, made within one year preceding the filing of the action for condemnation, and bearing a certification of the following facts:

- (a) That it was prepared as the basis of a field survey by either (1) a surveyor registered by the Guam Board of Engineering and Architectural Examiners under the Professional Engineers, Architects and Land Surveyors Law, Title XLIII, Government Code of Guam, holding a current certificate of registration issued by the Board covering the period that the map, plat, sketch or other pictorial representation of the land was made, or the field work incidental thereto was performed, or (2) a surveyor exempted from registration under the Professional Engineers, Architects and Land Surveyors Law.
- (b) That it was based upon data obtained from the use of the "Guam Geodetic Triangulation Net" and, where coordinate values were used, the relationship of such coordinates to the "Guam Geodetic Triangulation Net" was determined by the use of physically ascertained courses and distances.

(Amended by P.L. 7-13, effective February 16, 1963; further amended by P.L. 7-137, effective July 24, 1964.)

§ 13808.1. Same: reference to map. No document purporting to affect the transfer of the fee simple ownership of land, presented to the Department of Land Management for recording, shall be filed, unless said document bears on it a reference to a map, plat, sketch or other plane pictorial representation of the lot, parcel or tract of land involved, containing a legal metes and bounds description thereof, prepared by the government of Guam, the Naval Government of Guam, or an authorized surveyor, and previously recorded at the Department of Land Management. If no such map, plat, sketch, or other plane pictorial representation is on record at the Department of Land Management, then no such document shall be filed unless accompanied by a map, plat, sketch or other pictorial representation conforming to the requirements of Section 13808.

(Added by P.L. 7-138, effective July 24, 1964.)

§ 13809. Admissibility into evidence. Any map, sketch, plat or other pictorial representation of land conforming to the provisions of Section 13808 and certified by the Director as to such conformity, shall be entitled to admission into evidence in any court of record, as prima facie evidence of the facts represented thereon, without the need of proof.

§ 13810. Instrument testing facilities. For the purpose of insuring accuracy of surveying instruments, the Director is authorized to install, in appropriate locations, facilities for the testing and calibration of

surveying measurement devices in order to insure the attainment of the degree of accuracy in surveying required under this Chapter. The Director is authorized to use the facilities established for the purpose of testing and calibration of survey measurement devices used by other than the Government of Guam or its agencies, and the fee shall be ten dollars (\$10.00) for each measuring device tested and calibrated.

§ 13811. Penalty. It shall be a misdemeanor to wilfully or maliciously damage, destroy or otherwise impair the usefulness of any survey monument established under this Chapter, punishable by a fine of not more than five hundred dollars (\$500.00), or by imprisonment of not more than six (6) months, or both such fine and imprisonment.

(Added by P.L. 6-121, approved July 5, 1962, effective October 1, 1962, except as herein noted.)

## CHAPTER 10

### Urban Renewal and Low Rent Housing

- § 13900. Declaration of findings and policy
- § 13901. Definitions
- § 13902. Guam Housing and Urban Renewal Authority
- § 13904. Participation in Federal Programs
- § 13905. Housing for disaster victims and defense workers
- § 13906. Interest of Commissioners and others in projects; duty to disclose; violation
- § 13907. Limitation on rentals of Low Rent Public Housing: factors to be considered
- § 13908. Duties of Authority with respect to tenant selection
- § 13909. Declaration of urban renewal policy
- § 13910. Approval of urban renewal projects and urban renewal plans
- § 13911. Disposal of property for uses in accordance with plan
- § 13912. Disaster areas
- § 13913. Issuance of bonds, terms and conditions generally
- § 13914. Maturing of bonds; interest; sale; validity; actions involving bonds
- § 13915. Powers of Authority with respect to bonds or obligations
- § 13916. Rights of obligee
- § 13917. Conferment of additional rights upon obligee; receiver
- § 13918. Investment of public or private funds in bonds or other obligations
- § 13919. Provisions permitted in contracts with Federal Government
- § 13920. Cooperation by Government of Guam
- § 13921. Power to render assistance by taxes, appropriations, borrowings, bonds etc.
- § 13922. Workable program
- § 13923. Instruments of conveyance; recordation
- § 13924. Enforcement of agreements

Public Law 6-134  
Sixth Guam Legislature  
(Bill 408(2-S))  
December 18, 1962

## AN ACT

An Act to repeal Title XIX of the Government Code of Guam, and to enact a new Title XIX of the Government Code of Guam pertaining to subdivisions.

Be it enacted by the People of the Territory of Guam:

Section 1. Title XIX of the Government Code of Guam is hereby repealed in its entirety.

Section 2. There is hereby enacted the following Title XIX of the Government Code of Guam,

### "TITLE XIX SUBDIVISION LAW CHAPTER 1 GENERAL PROVISIONS

Section 18000 Title This Title shall be known as "The Subdivision Law".

Section 18001. Purpose and Intent. The purpose of this Title and of any rules, regulations, specifications and standards adopted pursuant thereto, is to control and regulate the subdivision of any land for any purpose whatsoever. Such control and regulation is determined to be necessary to provide for the orderly growth and harmonious development of the territory; to insure adequate traffic circulation through coordinated street, road and highway system; to achieve individual property lots of maximum utility and liv-

supply, sewage, sanitary sewerage and other health requirements; to permit the conveyance of land by accurate legal description; and to provide logical procedures for the achievement of this purpose.

Section 18002. Definitions. The following words and phrases, when used herein, shall have the meaning respectively hereto ascribed to them, except where a different meaning may be clearly indicated by the context:

(a) 'Agricultural Subdivision' shall mean a subdivision having no lots, parcels or site smaller than one acre and in which all lots, parcels or sites are used principally for agriculture, single family residence site or as an agriculture-homesite combination.

(b) 'Commission' shall mean the Territorial Planning Commission.

(c) 'Easement' shall mean a grant by the owner of land for a specified use or uses of said land to a person or persons, to the public generally, or to the Government of Guam.

(d) 'Engineer' shall mean a person, who is registered pursuant to Title XLIII, Government Code of Guam, as an Engineer, and holds a current certificate of registration issued by the Board of Engineering and Architectural Examiners or a person exempted under the provisions of said Title XLIII.

(e) 'Improvements' shall mean any beneficial or valuable site additions or alterations to a subdivision property including street grading and surfacing, water service, sanitary sewers, facilities provided for drainage and site grading.

adjacent land. (A non-access reservation shall be provided only when required by the Commission and the right of access to and from such land across the right-of-way boundary shall be dedicated to the Government of Guam.)

(g) 'Plan, General' shall mean the general plan or plans for guiding the physical development of the territory of Guam adopted by the Commission and approved by the Governor.

(h) 'Plan, Project' shall mean the detailed plan or plans for guiding and controlling the physical development of specific projects as adopted by the Commission and approved by the Governor.

(i) 'Planning Division' shall mean the Planning Division of the Department of Land Management.

(j) 'Record Map' shall mean the final subdivision map designed to be placed on record in the Land Records of the Department of Land Management.

(k) 'Reservation' shall mean an area of land which the subdivider reserves free and clear of all structures for a future specified purpose.

(l) 'Resubdivision' shall mean the resubdividing of land in a subdivision or lot parcelling subdivision or portions thereof so as to create a new or different subdivision of such land other than is presently of record, and shall include modifications to lot lines, the creation of one or more additional lots or any other action of land division which is not consistent with the recorded subdivision or lot parcelling subdivision map.

(m) 'Reversion to Acreage' shall mean the voiding of a previous subdivision in order to revert the platted lots contained therein back to the original parcel or parcels which existed prior to the subdivision.

(n) 'Right of Way' shall include the entire width between property lines of a highway, street or alley.

(o) 'Sanitation Division' shall mean the Sanitation Division of the Department of Medical Services.

(p) 'Subdivide' shall mean the act of creating a subdivision.

(q) 'Subdivider' shall mean any individual, firm, association, syndicate, corporation, trust or any other legal entity proceeding to effect a subdivision of land for himself or another.

(r) 'Subdivision' shall mean the division of any parcel of land into six or more lots. Subdivision shall include resubdivision and reversion to acreage and, where appropriate to the context, relates to the process of subdividing or to the land subdivided regardless of the method used to accomplish such action, whether by sale, design, rent, lease, deed of gift, grant in gift or any other method of transferring title whether for remuneration or not and whether immediate or future.

(s) 'Subdivision, Lot Parcelling' shall mean the division of a lot legally existing on the effective date of this Title into no more than five (5) parcels. Lot parcelling of a lot shall include all methods of such action whether by sale, design, rent, lease, deed of gift, grant in gift or any other method of transferring title whether for

remuneration or not and whether immediate or future.

(t) 'Surveyor' shall mean a person who is registered pursuant to Title XLIII, Government Code of Guam, as a land surveyor, and holds a current certificate of registration issued by the Board of Engineering and Architectural Examiners or a person exempted under the provisions of said Title XLIII.

(u) 'Tentative Map' shall mean a preliminary subdivision map for the purpose of showing the design of a proposed subdivision and the existing conditions in and around it.

(v) 'Territorial Planner' shall mean the Chief of Planning Division, Department of Land Management, Government of Guam.

(w) 'Territorial Surveyor' shall mean the person designated as the Territorial Surveyor by the Director of Land Management.

Section 18003. Authority of the Commission. The Commission shall have jurisdiction and cognizance of all matters relating to subdividing and subsequent development of land within the territory. The Commission shall prescribe and adopt such rules and regulations, which shall include, but not be limited to, specifications and standards for development of subdivisions, as are, in its judgment, necessary to effectuate the purposes and intent of this Title. Such rules and regulations may provide for delegation of functions of review and inspection of proposed, tentative and final plans and maps, and of subdivisions, to other agencies and departments of the government. Such rules and regulations shall become effective upon approval by the Governor.

subdivision map presented for filing as a record in the Department of Land Management shall be recorded without the prior approval of the Commission. The Commission shall not approve the record map of a subdivision unless such map conforms to all the requirements of this Title and any applicable rules, regulations, specifications or standards adopted by the Commission. No subdivider shall subdivide any land except in accordance with this Title, or sell, lease or assign, or offer for sale, any subdivision or a proposed subdivision or any part thereof, or any lot, parcel or site therein until the record map has been officially recorded.

Section 18005. General Requirements for subdivisions. In all subdivisions presented for recording under this Title, the subdivider shall:

(a) Not subdivide or develop land for any purpose contrary to the provisions of the Zoning Law, Title XVIII, Government Code of Guam.

(b) Cause every lot to abut a roadway right of way having a minimum width of forty (40) feet.

(c) Except as may be provided for pursuant to Section 21208.3, Title XXII, Government Code of Guam, provide for the installation of power, water and telephone lines, fire hydrants, roads, streets and highways within the subdivision in accord with any general or precise plan approved by the Commission.

(d) Where an established framework of local streets exists, provide for the uniformity of street widths and alignment thereto with the streets of the subdivision, and for the continuation of existing street names.

location of streets to prevent excessive grading and scarring of the landscape.

(f) Provide sufficient drainage of the land to provide reasonable protection against flooding.

(g) Provide that streets within residential areas shall not be planned for through traffic in order to insure privacy and safety.

## CHAPTER 2

### PROCEDURE FOR SUBDIVIDING LAND

Section 18100. Application to Establish Subdivision. A subdivider desiring to subdivide or develop land pursuant to this Title shall make a written application therefor on a form prescribed by the Commission. The application shall be filed with the Territorial Planner and shall be accompanied by tentative subdivision plans prepared in accordance with Section 18300 of this Title.

Section 18101. Fees. The subdivider shall at the time of filing tentative subdivision plans pay a uniform plan check fee of \$10.00 plus \$1.00 for each final lot shown on the subdivision. Such fees shall not be returned in the event the application is not approved.

Section 18102. Review of Tentative Plans. The Territorial Planner shall within three (3) days after receipt of such application transmit copies of the tentative plans to departments and agencies of the government to which has been delegated responsibility for technical review. Such agencies and departments shall review the plans and transmit their written findings and recommendations to the Territorial Planner within

fifteen (15) days after receipt of such plans.

Section 18103. Action by Commission. After review, the tentative subdivision plans shall be transmitted to the Commission at its next regularly scheduled meeting by the Territorial Planner, together with all findings and recommendations. The Commission shall thereafter approve, conditionally approve, or disapprove the plans. When a tentative plan is disapproved, it may not thereafter be reconsidered unless modified and a new application filed.

Section 18104. Submission of Final Plans. Within one (1) year after approval of tentative subdivision plans, the subdivider shall file with the Territorial Planner the final plans prepared in accordance with Section 18301 of this Title. The final plans shall be accompanied by a written application for approval thereof in a form prescribed by the Commission.

Section 18105. Final Plans Approval and Recordation. The Territorial Planner shall review final plan documents as submitted for conformity to the approved tentative plans. At the next regularly scheduled Commission meeting no less than two (2) days following receipt of final plans, the Territorial Planner shall present the plans to the Commission for its action. Final plans submitted in strict compliance with approved tentative plans shall be approved. Final plans which are not in strict compliance with approved tentative plans shall, within fifteen (15) days, be approved or a written determination made specifying work necessary for subdivision completion prior to final Commission approval. After approval by the Commission of the final plan map, the subdivider shall record said map in accordance with Article 4, Chapter 2, Title XIV, Government Code of Guam.

Section 18106. Reversion to Acreage, Maps and Plats. When a reversion to acreage is made, no tentative plans shall be required. The subdivider shall prepare a final map showing the existing subdivision and the original parcel or parcels which shall result from the reversion. No engineering plans shall be required. Upon approval of the final map the map may be completed and submitted as a record plat. No as-built surveys shall be required. The plat shall be clearly marked 'reversion to acreage' and any variance from the requirements of a subdivision record plat shall be as determined by the Commission. The fee or other interest in any subdivision improvements, easements or road rights of way within the perimeter of the subdivision which has been dedicated to the government may be quitclaimed to the subdivider at the discretion of the government.

Section 18107. Building Permits. The Director of Public Works or his designated building official shall issue no building or construction permits for any development within the subdivision or lot parcelling until the tentative plans have been approved, nor issue individual building permits until the record map has been recorded. The Territorial Planner shall notify the Director of Public Works in writing of the approval of the final plans and of the recordation of the record map immediately after such approval is given and after such recording is completed.

Section 18108. Revocation of Tentative Plans. The Commission shall not consider or approve final plans for a subdivision which are submitted after one (1) year, or after any extension of time granted by the Commission during such year, following approval of tentative plans.

## LOT PARCELLING AND AGRICULTURAL SUBDIVISIONS

Section 18200. General. The requirements of Chapter 2 and Chapter 5 of this Title shall not apply to lot parcelling subdivisions and agricultural subdivisions.

Section 18201. Application to Establish Lot Parcelling or Agricultural Subdivisions. A subdivider desiring to parcel lots or subdivide land for agricultural purposes shall make a written application therefor on a form prescribed by the Commission. The application shall be filed with the Territorial Planner and shall be accompanied by the original and two (2) copies of a survey map prepared in accordance with Section 18204 of this Title.

Section 18202. Lot Parcelling Approval. Within fifteen (15) days following receipt of an application to establish a lot parcelling or agricultural subdivision, the Territorial Planner shall approve, conditionally approve, or disapprove the application, or shall submit the application to the Commission for its action. The Territorial Planner or Commission may as conditions of approval require street and utility easement reservations and require modifications to the map to insure lot divisions consistent with the general plan and with provisions of Section 18400 of this Title. The Territorial Planner or Commission shall disapprove the subdivision if adopted standards of subdivision cannot be maintained. The applicant may appeal any decision of the Territorial Planner to the next regularly scheduled meeting of the Commission. There shall be no fees required for lot parcelling or agricultural subdivisions for the checking of plans or maps.

Upon final approval of a lot parcelling or agricultural subdivision map by the Territorial Planner or Commission, the subdivider shall record the map in conformity to Article 4, Chapter 2, Title XIV, Government Code of Guam, which map shall not be effective until recorded.

Section 18204. Survey Required for Parcelling Map. The lot parcelling map shall be prepared by a surveyor and shall show all survey and mathematical data necessary to locate and retrace all lines thereon, including bearings and distances of straight lines and radii, arc and tangent lengths for all curves. Any area reserved for utility easements, access easements, and future street areas, and other public improvements, shall be clearly delimited and designated. The survey map shall be endorsed as to its accuracy and for its conformity to standard surveying practice by the Territorial Surveyor.

Section 18205. Resubdivisions. Resubdivisions of regular or lot parcelling subdivision shall be initiated and acted upon subject to the procedures of this Chapter, provided, however, that resubdivisions involving six (6) or more lots or resubdivisions requiring subdivision improvements shall be initiated and acted upon as a new subdivision in accordance with the provisions of Chapter 2 of this Title.

## CHAPTER 4 REQUIREMENTS FOR PLANS AND MAPS

Section 18300. Form of Tentative Plans. Tentative plans will include six (6) copies of a subdivision map, two (2) copies of a statement of intent by subdivider, and two (2) copies of subdivision improvement plans.

(a) The subdivider shall cause the tentative subdivision map to be prepared by an engineer or surveyor. The map shall be clearly and legibly drawn on one or more sheets having dimensions of twenty-two inches (22") by twenty-nine inches (29"). The scale of the map shall be as prescribed by the Commission and the map shall generally include:

- (1) the tract number as issued by the Territorial Planner.
- (2) the name and address of the owner or owners of record, of the subdivider and of the person preparing the map.
- (3) date, north arrow and scale.
- (4) a key map locating the subdivision in relation to surrounding areas.
- (5) the exact length and bearing of the exterior boundaries of the subdivision which data shall be referenced to the "Guam Geodetic Triangulation Control Net" or such alternative system of triangulation control as the Territorial Surveyor may direct.
- (6) the accurate placement and outline of structures existing on the site.
- (7) the location, names, and existing widths of adjacent street rights of way.
- (8) the location and dimensions of all known existing easements and reservations.
- (9) the location of existing utilities, sewers, drainage ditches and other drainage facilities located in, or adjacent to, the proposed subdivision.

- (10) the lot numbers and lines of all adjacent parcels of land.
- (11) the location, width and direction of flow of all water courses within the subdivision area.
- (12) topography with contour intervals of two feet (2') where the ground slope is five per cent (5%) or less or contour intervals of five feet (5') where the ground slope is more than five per cent (5%).
- (13) the location and widths of all existing or proposed streets in the subdivision.
- (14) the approximate lot layout and approximate lot dimensions of each lot.
- (15) areas intended to be reserved for public use.

(b) The statement of the subdivider shall include a resume of the improvements proposed to be made in the subdivision the existing zoning, tract or districts applicable to the property, proposed use or uses of the subdivision lots and, in the absence of zoning, the proposed setback requirements for individual property development.

(c) Subdivision improvement plans shall include:

- (1) street construction plans including, but not limited to, planned grading, street centerline gradients and typical road cross-sections specifying material and depths.
- (2) water and sewer line plans showing pipe sizes, routing, gradients, pressure requi-

- (3) a drainage plan showing method and facilities for collection and disposal of storm waters. The storm drainage disposal area or channel must have a demonstrated ability to accept additional water in view of capacity of area or channel and of capacity of existing improvements confining the channel.

The tentative plan shall be prepared in sufficient detail for analysis by the Commission as to sufficiency and most suitable location. The Commission may require the submission of detailed construction drawings as subdivision work is initiated to permit detailed analysis of construction conformity to law and the rules and regulations of the Commission, and to facilitate improvement inspections.

Section 18301. Form of Final Plans. The final plan submitted for approval shall include a map of the subdivision and a final survey of improvements as installed.

(a) The map of the subdivision shall be prepared by an engineer or surveyor in accordance with the following:

- (1) The final map shall be clearly and legibly drawn in opaque black ink on good quality tracing paper or cloth acceptable to the Territorial Planner. Signatures shall be in opaque black ink. The size of each sheet shall be twenty-two by twenty-nine inches (22" x 29"). A marginal line shall be drawn completely around each sheet, leaving an entirely blank margin of one inch (1"). The scale of the map shall be as prescribed by the Commission and

nough sheets used to accomplish this purpose. The map shall be so made and shall be in such condition when filed that good, legible prints can be made therefrom.

- (2) The map shall contain the tract number in letters no less than one-half (1/2") in height, north directional point, map scale, and date of final survey.
- (3) The map shall show all survey and mathematical information and data necessary to locate all monuments, and to locate and retrace any and all interior and exterior boundary lines appearing thereon including bearings and distances of straight lines, radii, arc and tangent lengths for all curves. The final map shall particularly define, designate and delineate all road and alley rights of way and easements and other parcels offered for dedication for public use.
- (4) The following certificates shall be placed on the first sheet of the map in a form prescribed by the Commission:
- (a) Dedication of streets, easements and other parcels of land intended for public use by the owner.
- (b) Acknowledgment of dedication for certification by a notary public.
- (c) Acceptance of dedication to be signed by the Governor.
- (d) Certification by the surveyor making the map (record plat) that the map is correct

and accurate and that the monuments described thereon have been so located.

- (e) Limited access dedication where a non-access reservation is used to restrict access. The map shall be lettered 'vehicular access rights dedicated to the Government of Guam' along the thoroughfare adjacent to the lots affected.
- (f) Endorsement of Territorial Surveyor.
- (g) Approval by the Commission.
- (h) Certificate of recordation.

In addition, the map shall be accompanied by statements concerning any proposed deed restrictions or covenants.

(b) As part of the final plan, the subdivider shall submit a copy of an as-built drawing of all subdivision improvements. The details of the as-built drawing shall show, but not be limited to a showing of, the precise placement, sizing and characteristics of water lines, drainage measures, streets, street curbs and similar constructed utilities. The as-built drawing shall be to specifications satisfactory to the Commission.

## CHAPTER 5 IMPROVEMENTS

Section 18100. Required Improvements. The subdivider shall provide the following improvements and improvement areas within time limits specified by the Commission:

(a) Streets and Alleys - Planned Areas. Where general plans have been or are hereafter duly adopted and show an area as planned for develop-

ment into urban uses, the following street and alley improvements shall be required:

All streets and alleys within the subdivision shall be graded and drained the full width of the right of way. The roadbed portion of the right of way shall be improved with a stabilized coral base and surfaced with a light bituminous surface treatment having a minimum width of twenty-two feet (22'). The roadway centerline gradient and right-of-way cross-section including drainage ditches, travelled roadway design and paving and shoulders shall be in conformity to criteria established by the Commission.

(b) Streets and Alleys - Unplanned Areas. Where at the time of a subdivision a general plan has not been adopted or where the general plan designates the area as agricultural, the following street and alley improvements will be required:

All streets and alleys within the subdivision shall be graded and drained the full width of the right of way. The roadbed portion of the right of way shall be improved with a stabilized coral road. The roadway centerline gradient and right-of-way cross section including drainage ditches, travelled roadway and shoulders shall be in conformity to criteria established by the Commission.

(c) Storm Water Drainage. Storm drainage facilities shall be provided in all subdivisions in accordance with plans prepared by the subdivider conforming to criteria established by the Commission. These facilities shall be designed to dispose of normal storm waters falling on the subdivision without hazard of flooding, inconvenience of ponding and the erosion of public or private lands.

vision. Water pipe shall be new and so sized to supply normal household pressures.

(c) Sanitary Sewage Disposal. When sanitary sewers are provided in a subdivision, they shall be in conformity to plans prepared by the subdivider satisfactory to the Commission. When sewers are placed within a subdivision, the minimum permissible lot size shall be as determined by the applied zoning district, or in the absence of zoning shall be not less than seven thousand (7,000) square feet. In subdivisions where sanitary sewers are not provided, the minimum permissible lot size shall be determined by the slope and characteristics of the subdivision soil and subsoil but in no event shall be less than is established by the applied zoning district, or in the absence of zoning seven thousand (7,000) square feet. Determination of lot size shall be made on the basis of soil percolation tests made in conformity to standards adopted by the Commission. Lot sizes, including area and minimum widths and depths shall be related to the ability of the subdivision lands to accept the anticipated septic tank effluent whereby no sanitary problems will be created. The Commission shall establish criteria relating lot sizes and shapes to tested rates and seepage, and all lots created after the enactment of this Title shall conform thereto.

(f) Survey Monuments. Permanent concrete monuments shall be installed at all points of direction change in the subdivision perimeter and in the exterior lines of blocks.

Section 18401. Utilities Extensions - Planned Areas. Where general plans have been duly adopted and show an area as planned for develop-

area so delineated:

(a) Road Extensions. Where roads must be extended from existing roads in order to gain suitable access to a subdivision, the subdivider shall negotiate with the property owners involved and acquire rights of way to widths and alignment approved by the Commission. The subdivider shall improve such access road or roads the same as he improves the interior subdivision roads.

(b) Power, water mains, and fire hydrants may be installed by the Public Utility Agency in accordance with Section 21208.3, Government Code of Guam.

(c) The subdivider shall provide easements for all utility extensions to the satisfaction of the Commission, and acceptable to the Public Utility Agency.

Section 18402. Utilities Extensions - Unplanned Areas. In areas where general plans have not been adopted but where water, electrical facilities and roads exist within or adjacent to a planned subdivision area, the criteria of Section 18401 will be applicable. In unplanned areas where water service, electrical service or public roads are not immediately available, the government shall not supply any utility or road extension to make the site suitable for development.

Section 18403. Time Allowed for Completion of Improvements. Upon approval of the tentative subdivision plan by the Commission, the subdivider shall complete within one (1) year all of the improvements required, except that the Commission, for good cause shown, may authorize an

extension of time, not to exceed twelve (12) months, for such completion. Within such time, the subdivider must either:

(a) Complete the required improvements and upon acceptance thereof by the government, file his final plans; or

(b) Furnish bond acceptable to the Commission for the completion of improvements, the bond to be in penal sum of one hundred fifteen per cent (115%) of total work costs as verified by the Director of Public Works. On approval of the bond, the final plans may be filed.

## CHAPTER 6

### VARIANCES AND APPEALS

Section 18500. Petition for Variance. The Commission, on its own initiative, or upon the petition of any subdivider stating fully the grounds of the application and all the facts relied upon by the subdivider, may grant variances to the regulations of the Commission. Such petition shall be filed with the tentative plan of the subdivision. In the event the Commission shall find the following facts with respect to the petition for a variance, it may grant a variance under such terms and conditions as it may prescribe:

(a) That there are special circumstances or conditions affecting said property.

(b) That the variance is necessary for the preservation and enjoyment of a substantial property right of the subdivider.

(c) That the granting of the variance will not be materially detrimental to the public welfare or injurious to other property in the area in which said property is situated.

(d) That the variance, if granted, shall conform with the intent and purpose of the general or precise plans for the territory, and of this Title.

Section 18501. Variance Subdivisions. The Commission shall have the authority to review any prior division of parcels of land, whether for the purpose of lot parcelling or the establishment of a subdivision, presented to the Department of Land Management for recording as a subdivision under the provisions of this Title. The Commission may require the subdivider or owner to modify the arrangement, to improve access rights of way and easements, or to modify the size and shape of lots and other improvements as a condition precedent to record the presentation as a subdivision. The decision of the Commission shall be final.

Section 18502. Unit Development. The standards and requirements of this Title may be modified by the Commission in the case of a plan and program for a new town, a complete community, or a neighborhood unit, which in the judgment of the Commission provides adequate public spaces and improvements for the circulation, recreation, light, air, and service needs of the tract when fully developed and populated, and which also provide such deed restrictions or other legal provisions as will assure conformity to and achievement of the plan.

Section 18503. Judicial Review. (a) Any order of the Commission shall become effective when notice thereof is delivered to the party or parties affected and, unless proceeding for judicial review are instituted as provided for in Subsection (b) of this section, shall become final at the expiration of thirty (30) days thereafter.

(b) If the decision of the Commission is not

through and action instituted in the Island Court brought by the party affected thereby. The subdivider shall not subdivide any land, or sell, lease, or offer for sale, any subdivision or proposed subdivision or any part thereof, or any lot, parcel or site therein, or commence or continue construction of any improvement relating thereto during the pendency of such action.

(c) Review by the court shall be limited to the record procured before the Commission and, if the decision of the Commission is not according to law or supported by substantial evidence, the court shall return the matter to the Commission for further action in accordance with the evidence.

## CHAPTER 7

### PENALTIES, AMENDMENTS, INTERPRETATION AND SEPARABILITY

Section 18600. Violation Penalties. (a) Any individual, agent, partnership, firm, association, corporation or any other legal entity violating any of the provisions of this Title shall be guilty of a misdemeanor, and upon conviction thereof, shall be punished by a fine of not more than five hundred dollars (\$500.00) for each offense. Such individual, agent, partnership, firm, association, corporation or other legal entity shall be deemed guilty of an offense for each day or portion thereof in which any violation is committed, continued or permitted and shall be punishable as herein provided for each such day or portion thereof.

(b) The imposition of any sentence made under this section shall not exempt the offender from compliance with the requirements of this Title.

subsection, sentence, clause, phrase or portion of this Title is for any reason held to be invalid by a court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this Title. The Legislature hereby declares that it would have passed and does hereby pass this Title and each section, subsection, sentence, clause, phrase, or portion thereof, irrespective of the fact that one or more sections, subsections, sentences, clauses, phrases, or portions thereof, be declared invalid.

Section 18602. Repeal. All Acts or parts of acts which are inconsistent with the provisions of this Title are hereby repealed to the extent of such inconsistency."

Section 3. This Act is an urgency measure.

Approved December 18, 1962.

EIGHTH GUAM LEGISLATURE  
1966 (SECOND) REGULAR SESSION

Bill No. 469

AN ACT REPEALING SECTION 47027 OF AND ADDING A NEW SECTION 47027 TO CHAPTER 1 OF TITLE XLIII OF THE GOVERNMENT CODE OF GUAM RELATIVE TO THE RIGHT TO PRACTICE ENGINEERING, ARCHITECTURE, AND LAND SURVEYING.

*Be it enacted by the People of the territory of Guam. That Section 47027 of Chapter 1 of the Title XLIII of the Government Code of Guam hereby is repealed in its entirety and in lieu thereof a new Section 47027 is hereby enacted to Chapter 1 of Title XLIII of the Government Code of Guam to read as follows:*

*"Section 47027. Partnerships and Corporations. No firm, partnership, association, or corporation shall be eligible for registration under this Title or is authorized to practice professional engineering, architecture, or land surveying. However, nothing herein shall be construed to prohibit practitioners from practicing or offering to practice through the medium of a firm, partnership, association, or corporation, provided the majority of the voting ownership thereof shall be and remain vested in professional engineers, architects, or land surveyors registered under this Title and, provided further that the chief executive officer and a majority of the officers, directors, or persons having active management of any such firm, partnership, association, or corporation are registered under this Title."*

EIGHTH GUAM LEGISLATURE  
1966 (SECOND) Regular Session

Bill No. 472

AN ACT TO AMEND SECTION 47012 (a), CHAPTER 1, TITLE XLIII, GOVERNMENT CODE OF GUAM RELATIVE TO CITIZENSHIP OF APPLICANTS UNDER THE PROFESSIONAL ENGINEERS, ARCHITECTS AND LAND SURVEYORS LAW.

BE IT ENACTED BY THE PEOPLE OF THE TERRITORY OF GUAM:

Section 1. Section 47012 (a), Chapter 1, Title XLIII, Government Code of Guam is hereby amended to read as follows:

"Section 47012. Qualifications: General. No person shall be eligible for registration as a professional engineer, architect, or land surveyor, or for enrollment as an engineer-in-training, under this Title unless he is: (a) A citizen of the United States a permanent resident alien or immigrant alien eligible for United States citizenship; (b) More than twenty-one (21) years of age; (c) Of good character and repute; and (d) Meets the professional qualifications prescribed by this Title."

### SECTION III

#### FIELD WORK

## Field Notes

No specific form of note keeping is specified in order to permit the Party Chief or Recorder the greatest latitude to do the recording efficiently. Sample sheets are found in Appendix D.

Generally, it is not the notekeeper who must refer to the notes, but a computer or draftsman. It is therefore essential that notes are clear and legible and show a complete record of the field work.

A few definite rules may be applied. They are as follows:

1. Index of work in front of book.
2. Note inside front cover to "Please return this Book to Survey Division, Department of Land Management, Government of Guam, if found."
3. Title each project.
4. Date each project.
5. List names of field crew and functions of each.
6. List instruments and numbers.
7. List temperatures.
8. Number pages consecutively (with the field book open two sheets constitute one page and may be referred to as page (number), left or right, i.e., Page 1, Lt. or Page 5, Rt.).
9. List any references (such as drawing numbers) used for the project.
10. Show a North point.
11. Make no erasures. If an entry is incorrect, draw a single line through it so it is still legible. If an entire page is incorrect, write VOID across the page in large letters on a slant. Date and initial under VOID.
12. If a page has been left blank indicate it as such in the index.
13. Do not crowd the pages. Make sketches large enough to show details clearly or show an auxiliary sketch of the detail enlarged. (A small template with circles, squares, triangles, etc. is ideal for field note sketches. A scale is generally not needed although the sketch should be roughly to scale. Exaggerated drawings may be used to give a more clear picture of the work. A target or card may be used for sketching straight lines and coins may be used for circles). Sketches should be annotated in a manner that occludes misinterpretation.
14. Make all entries directly in the field notes. Never copy figures from "scratch paper". It should be stapled to a note book page and indexed as such.
15. Use standard abbreviations and symbols (See Appendix A).
16. Use a sharp pencil (preferably 3H or 4H).

17. Keep the pages clean.
18. Record statements made by persons concerned with the survey if they are relevant or pertinent to the project. Have statement signed if possible. Party Chief should also sign and date.
19. If a correction is made to an entry from prior work indicate it as such and date and initial correction.

#### Standard For Monument References

- (1) Draw sketch on standard form for GGTN or in field book for miscellaneous ties.
- (2) Use standard symbols and abbreviations.
- (3) Show date.
- (4) Index sheets.
- (5) Title sheets.
- (6) Use only horizontal measurements.
- (7) Make measurements to one hundredth of a foot.
- (8) Note on each sheet who is doing the work and the function of each.
- (9) Indicate North.
- (10) Show at least three hard ties (e.g., Nail in Power Pole No. \_\_\_\_\_) and additional ties (centerline of pavement, edge of pavement, etc as may be available. Additional ties need only be measured to the nearest half foot.
- (11) If nails or spikes are used drive them flush with the surface. Use only nails that are readily recognizable or use washer under the head.
- (12) List any remarks which may be helpful to future relocation.

#### Dip Needle

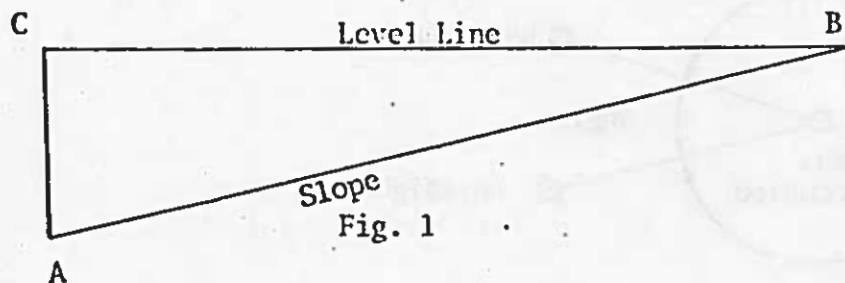
Upon special request manufacturers\* furnish dip needles counterbalanced for Guam. Even so, the instrument must be used with extreme care and the observer is advised that metal is generally indicated by a very small fluctuation of the needle. Monument castings exert a very strong "pull" and are easily observed. Ship spikes exert very little magnetic attraction.

Overhead power lines, fences and vehicles or other metal objects near the dip-needle affect the efficiency to varying degrees.

\* Aqua

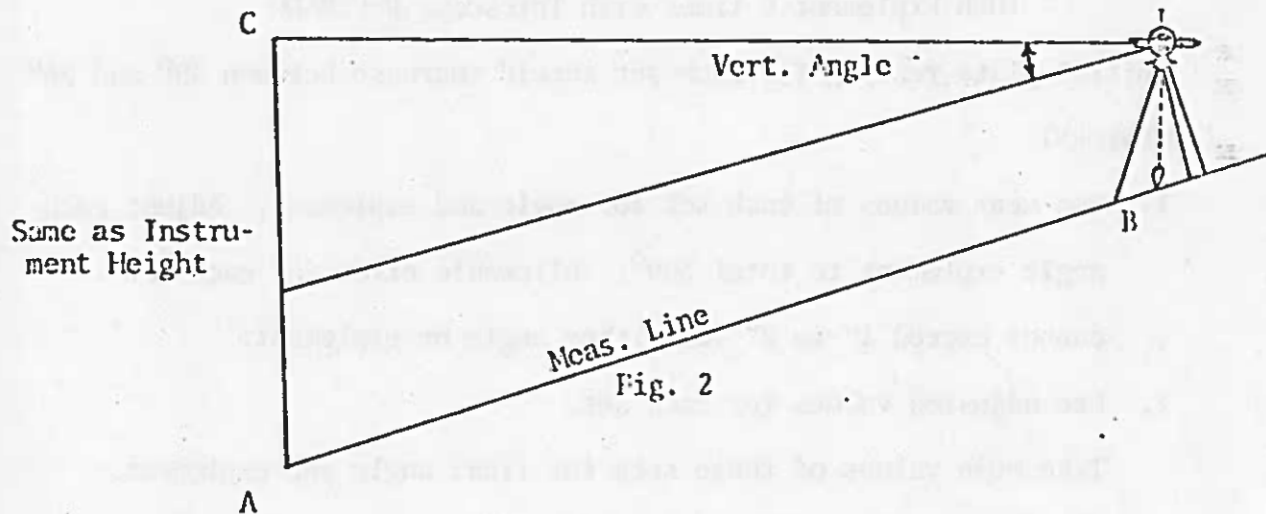
## Slope Measurements

Distances may be slope measured. This method is preferred over horizontal measurements except in weedy or brushy areas or on lines which are easily measured horizontally.



If line AB (Fig. 2) is 100' then line AC or the elevation difference between A and B cannot be over 1.4' unless slope corrections are made. This only applies to a 100 foot distance.

If the line AC exceeds this elevation difference it is then necessary to obtain a vertical angle at one point (Fig. 2).

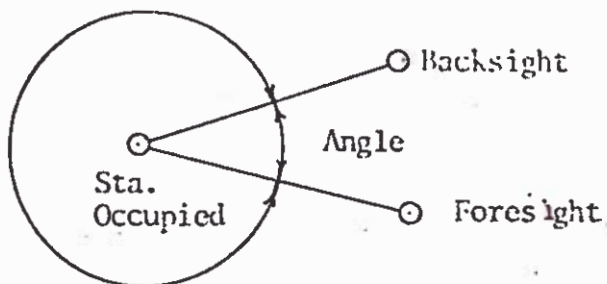


The horizontal distance is then equal to:

$$\cos \text{ Vert. Angle} \times \text{Slope distance.}$$

Slope chaining with vertical angles of over  $15^\circ$  should not be used since the sag characteristics of the tape change and correction factors be applied; however, there is no limit to the slope if the tape is placed on the surface for measurements.

## TRIANGULATION (First Order)



Explement

### 6 Sets of Repetitions Required

Each Set Consists of:

Turn Angle 6 times with Telescope DIRECT

Turn Explement 6 times with Telescope REVERSE

Initial plate reading for each set should increase between  $30^{\circ}$  and  $36^{\circ}$

### ADJUSTMENT

1. Use mean values of each set for angle and explement. Adjust each angle explement to total  $360^{\circ}$ . Allowable error for each set cannot exceed 1" to 2" for either angle or explement.

2. Use adjusted values for each set.

Take mean values of these sets for final angle and explement.

Adjust these as required to total  $360^{\circ}$ .

Definition

$r = \text{radius of circle}$

$d = \text{diameter}$

$C = \text{circumference}$



Consider a circle with a diameter of length  $d$ . The ratio of the circumference to the diameter is found to be  $\pi$ . This ratio is known as the constant of  $\pi$  (pi) or more commonly 3.1416.

#### SECTION IV

#### OFFICE WORK

1.  $\pi = 3.1416$

2.  $\pi = 3.1416$

3.  $\pi = 3.1416$  - Use as much of digits as you

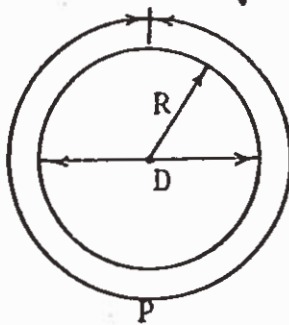
4.  $\pi = 3.1416$

5.  $\pi = 3.1416$  - Use as much of digits as you

6.  $\pi = 3.1416$

## THE CIRCLE

### Definitions



P = Perimeter or circumference

D = Diameter =  $2R$

R = Radius =  $P/2$

Assume a circle with a diameter of unity or 1; then the ratio of the perimeter to the diameter is termed pi or  $\pi$ . This ratio evolves to a constant of 3.1415927 or more commonly 3.1416.

$$\pi = 3.1416$$

$$2\pi = 6.2832$$

$$\pi/2 = 1.5708$$

$$\pi/4 = 0.7854$$

$$180^\circ/\pi = 57.295780 = \text{Degrees in arc of length equal to Radius}$$

$$\pi/180^\circ = 0.0174532925 = \text{Length of one degree arc, Radius of Unity}$$

### Formula

$$\text{Area} = \pi R^2 = \pi D^2/4 = P^2/4\pi = P^2/12.57$$

$$= 0.7854 D^2 = PR/2 = PD/4$$

$$P = \pi D$$

$$= \pi 2R$$

$$= 2 \sqrt{\pi A}$$

$$= 3.54 \sqrt{A}$$

$$= 2A/R$$

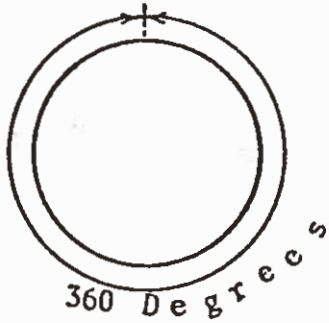
$$= 4A/D$$

$$D = P/\pi$$

$$= 2 \sqrt{A/\pi}$$

$$= 0.564 \sqrt{A}$$

# ANGLES-BEARINGS-AZIMUTHS

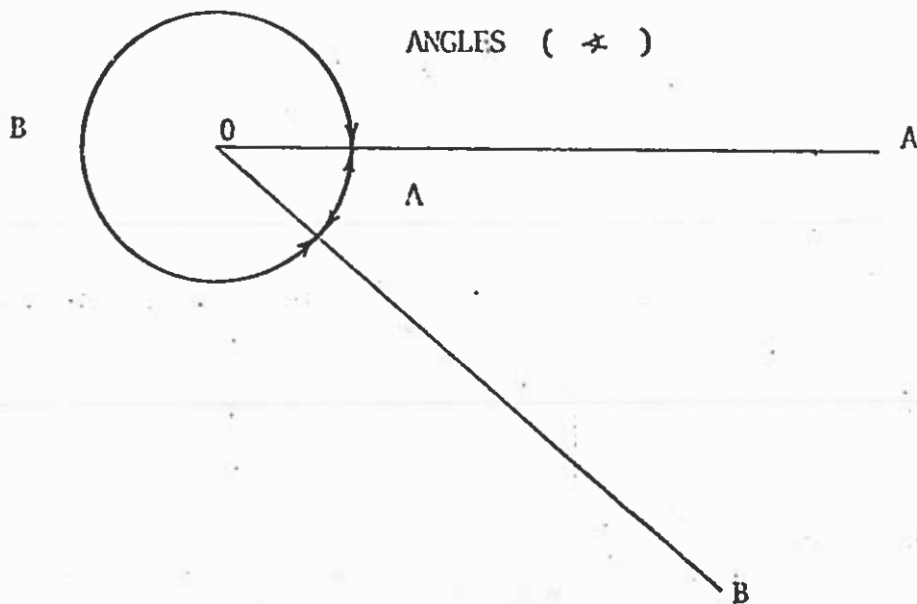


The circle in surveying is initially divided into 360 degrees. Each degree ( $^{\circ}$ ) is further divided into 60 minutes ( $'$ ). Each minute is further divided into 60 seconds ( $''$ ).

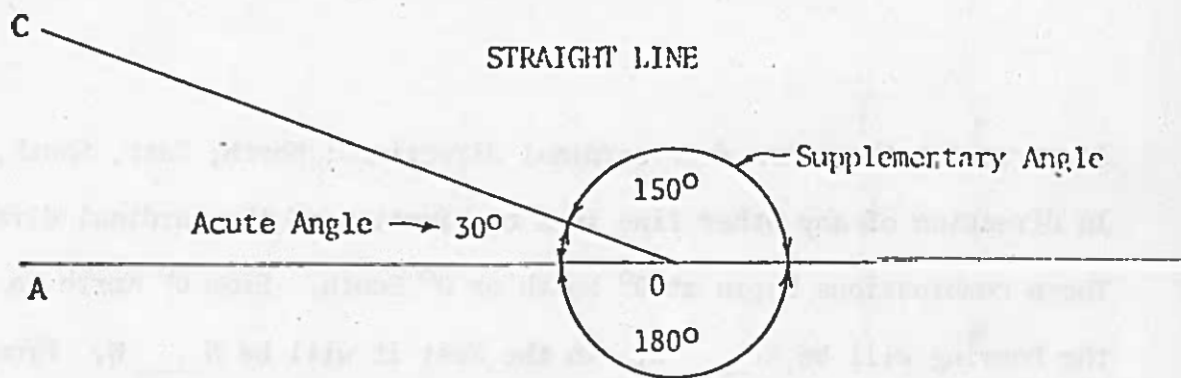
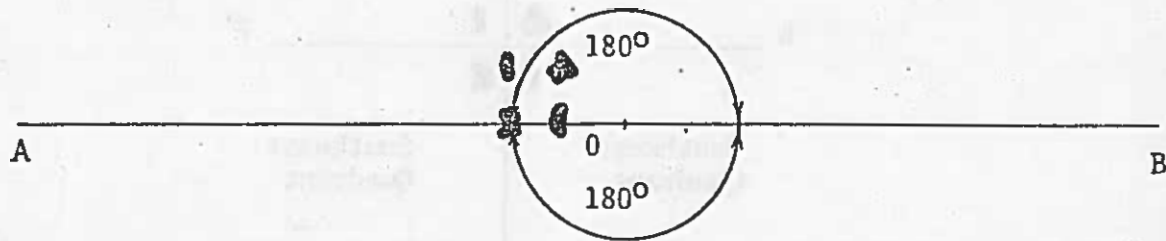
$$\begin{aligned} 1 \text{ Circle} &= 360^{\circ} \\ &= 21,600' \\ &= 1,296,000'' \end{aligned}$$

$$\begin{aligned} 1 \text{ Degree} &= 60' \\ &= 3600'' \end{aligned}$$

$$1 \text{ Minute} = 60''$$



With the point O as a starting point,  $\angle A$  will be so many degrees (say  $45^\circ$ ). Then  $\angle B$  will be  $360^\circ - 45^\circ = 315^\circ$ . In every case these two  $\angle$ 's (A & B) must equal  $360^\circ$ .



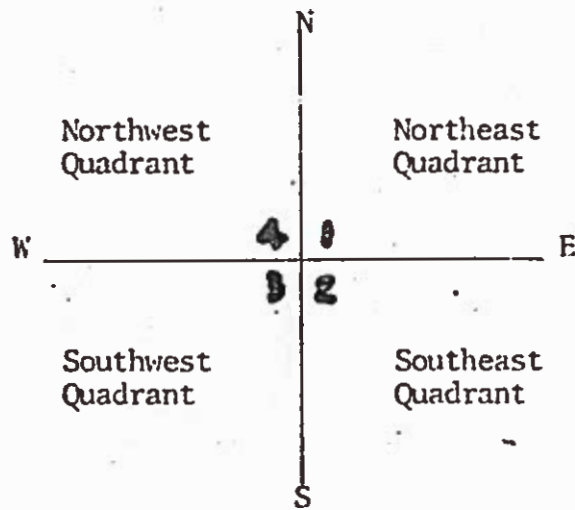
Acute Angle - Angle less than  $90^\circ$

Complementary Angle - Angle added to an acute angle to equal  $90^\circ$

Supplementary Angle - Angle added to an angle to equal  $180^\circ$

Right Angle - An angle of  $90^\circ$

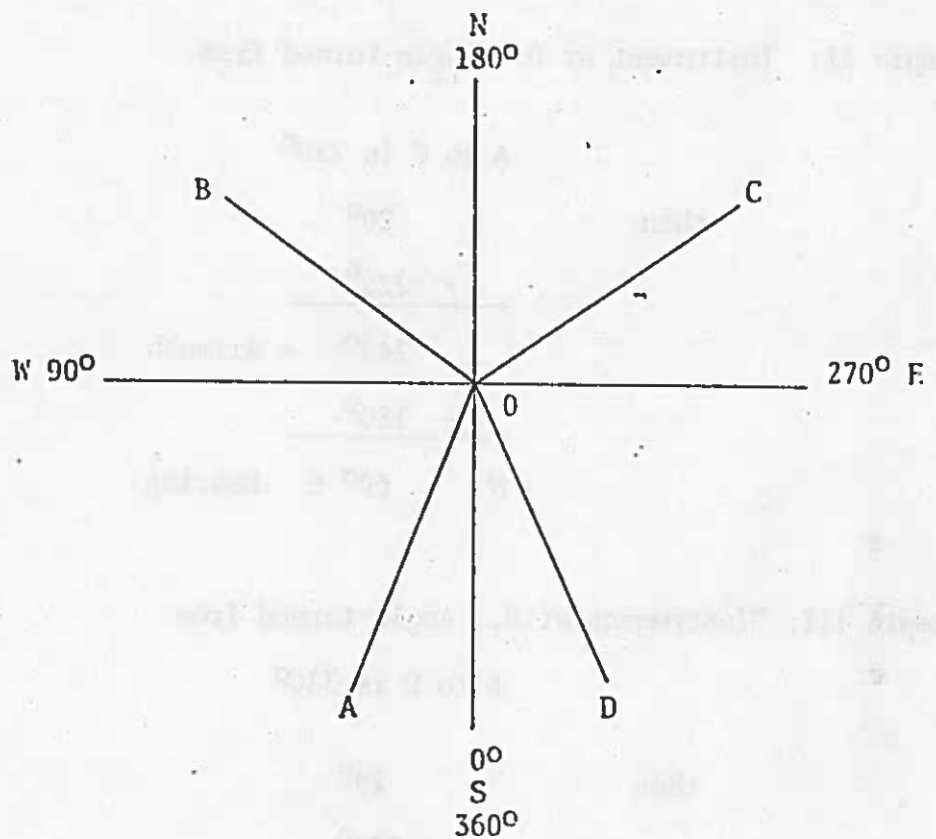
## BEARINGS



In surveying there are four cardinal directions; North, East, South, West. In direction of any other line is a combination of the cardinal directions. These combinations begin at  $0^\circ$  North or  $0^\circ$  South. From  $0^\circ$  North to the East the Bearing will be N \_\_\_\_ E. To the West it will be N \_\_\_\_ W. From  $0^\circ$  South to the East it will be S \_\_\_\_ E. To the West it will be S \_\_\_\_ W. If an angle of  $90^\circ$  is turned from either North or South, the Bearing will be either East or West. It is not essential to say Due East, Due West, Due North or Due South.

# DETERMINING

## BEARINGS BY AZIMUTHS



Assume South as  $0^{\circ}$ . It is essential to establish one azimuth, either known or assumed. In the figure line OA has a bearing of S  $20^{\circ}$  W. This converts to an azimuth of  $20^{\circ}$ .

Example I: Instrument at O. Angle turned from

A to B is  $110^{\circ}$ .

then

$20^{\circ}$

+  $110^{\circ}$

$130^{\circ} = \text{Azimuth}$

$$\begin{array}{r}
 180^{\circ} \\
 - 130^{\circ} \\
 \hline
 N \quad 50^{\circ} W = \text{Bearing}
 \end{array}$$

Example II: Instrument at O. Angle turned from

A to C is  $220^{\circ}$

then

$$\begin{array}{r}
 20^{\circ} \\
 + 220^{\circ} \\
 \hline
 240^{\circ} = \text{Azimuth} \\
 - 180^{\circ} \\
 \hline
 N \quad 60^{\circ} E \quad \text{Bearing}
 \end{array}$$

Example III: Instrument at O. Angle turned from

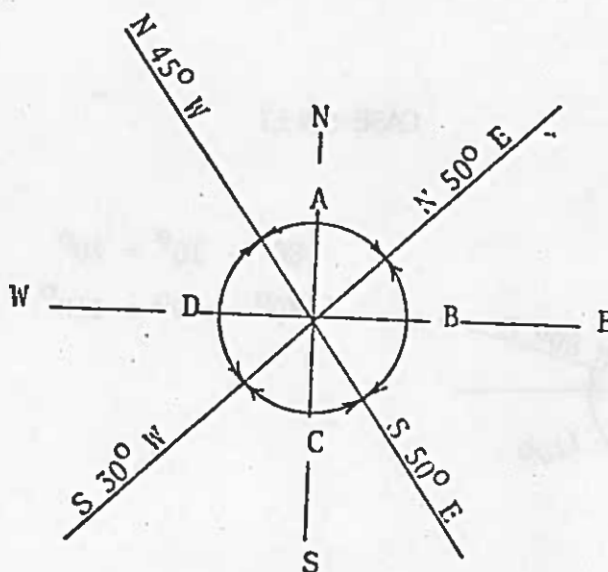
A to D is  $330^{\circ}$

then

$$\begin{array}{r}
 20^{\circ} \\
 + 330^{\circ} \\
 \hline
 350^{\circ} = \text{Azimuth}
 \end{array}$$

$$\begin{array}{r}
 360^{\circ} \\
 - 350^{\circ} \\
 \hline
 S \quad 10^{\circ} \quad E = \text{Bearing}
 \end{array}$$

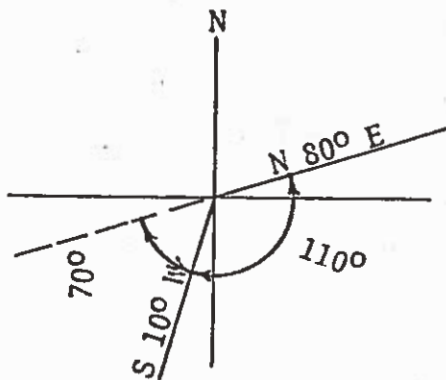
# DETERMINING ANGLES BETWEEN BEARINGS



1.        ✱ A        Add NE to NW Bearing
2.        ✱ B        Add NE to SE Bearing-Subtract from  $180^{\circ}$
3.        ✱ C        Add SE to SW Bearing
4.        ✱ D        Add SW to NW Bearing-Subtract from  $180^{\circ}$

5. If both bearings are in the same quadrant subtract the smaller from the larger.
6. If bearings are in opposite quadrants (such as the NE and the SW)  
Reverse direction of one bearing and subtract between the two bearings.  
Then subtract this difference from  $180^\circ$  or add  $180^\circ$ . See Case sheet.

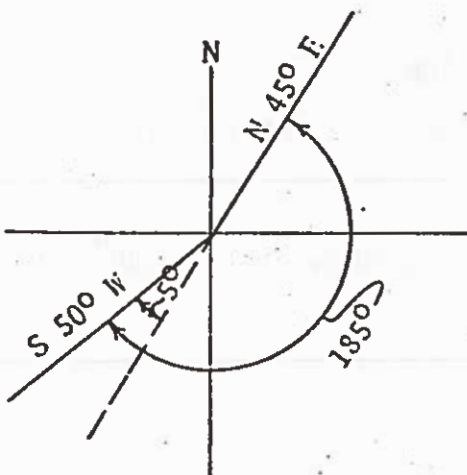
#### CASE SHEET



CASE I

$$80^\circ - 10^\circ = 70^\circ$$

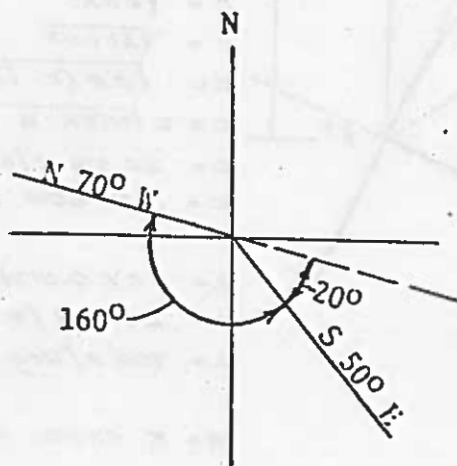
$$180^\circ - 70^\circ = 110^\circ$$



CASE II

$$50^\circ - 45^\circ = 5^\circ$$

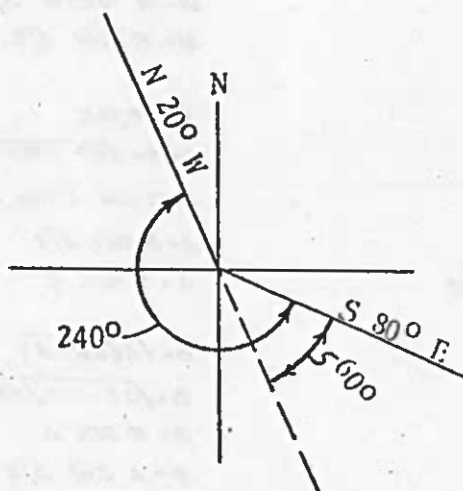
$$180^\circ + 5^\circ = 185^\circ$$



$$70^\circ - 50^\circ = 20^\circ$$

$$180^\circ - 20^\circ = 160^\circ$$

CASE III

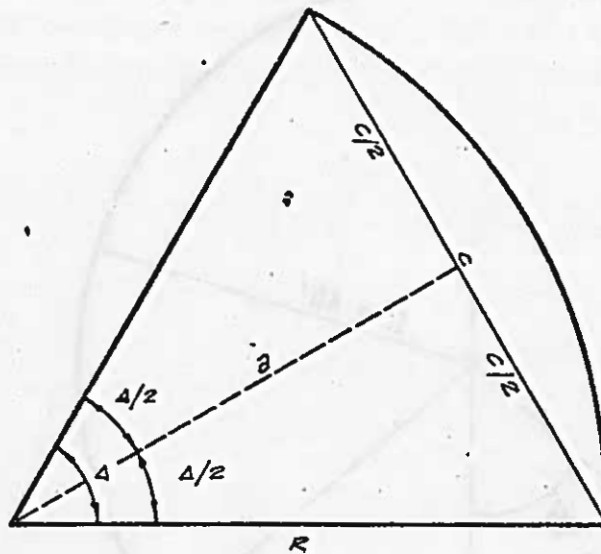


$$80^\circ - 20^\circ = 60^\circ$$

$$180^\circ + 60^\circ = 240^\circ$$

CASE IV

- $R$  = Radius
- $T$  = Tangent
- $C$  = Long Chord
- $L$  = Arc Length
- $\Delta$  = Central Angle - I
- $I$  = Intersection Angle =  $\Delta$
- $E$  = Distance - Mid Point of Arc to P.I.
- $M$  = Distance - Mid Point of Arc to Mid Point of Long Chord
- $P.C.$  = Point of Curvature
- $P.I.$  = Point of Tangents Intersection
- $P.T.$  = Point of Tangency
- $d'$  = Deflection angle in minutes per foot of curve
- $D$  = Degree of Curve



$$\frac{C}{2} = R \sin \Delta/2$$

$$C = 100$$

D = Diameter

### AREA OF SECTOR



$$A = 0.7854 D^2 \times \frac{\Delta}{360} \quad (\text{Convert } \Delta \text{ to decimals of a degree})$$

Example:  $R = 100'$   $\Delta = 60^\circ$

$$A = 0.7854 \times 200^2 \times \frac{60}{360}$$

$$= 0.7854 \times 40000 \times 0.16667$$

$$= 5236.10 \text{ SQ. FT.}$$



AREA  
SEGMENT

=



AREA  
= SECTOR

-



AREA  
TRIANGLE

### AREA OF TRIANGLE

Calculate for a

$$a = R \cos \Delta/2$$

$$a = 100 \times 0.86603$$

$$a = 86.60$$

then Area of triangle

$$= a C/2$$

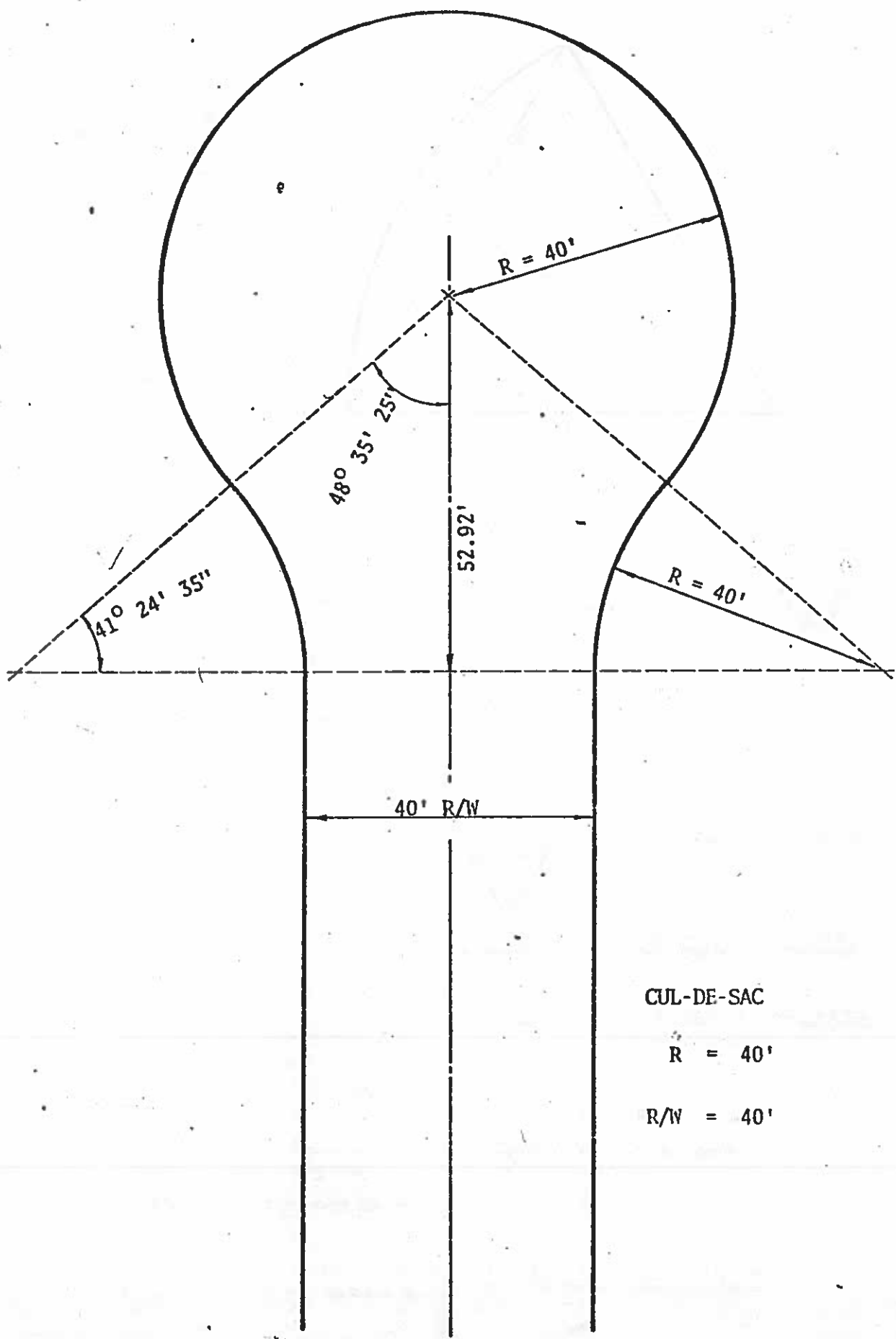
$$= 86.60 \times 50$$

$$= 4330 \text{ SQ. FT. } 4330.$$

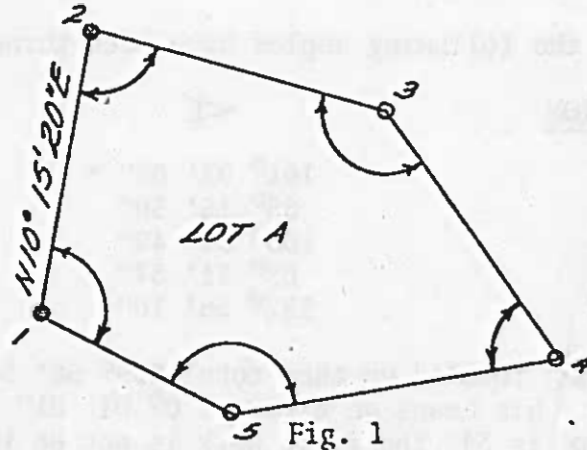
Area of segment equals

$$5236.10 - 4330$$

$$= 906.10$$



# FIELD TRAVERSE. ADJUSTMENT OF ANGLES



Fieldwork: All angles will be turned 6 times. See Fig. 2 for sample of notes.

| PROPERTY SURVEY - LOT A |      |      |                      |  | C.P. |
|-------------------------|------|------|----------------------|--|------|
| Job No. 100A            |      |      |                      |  | 00   |
| STA                     | B.S. | F.S. | 4                    |  | 00   |
| 1                       | 5    | 2    | (1) 101°             |  |      |
|                         |      |      | (6) 246° 18' 13"     |  |      |
|                         |      |      | (11) 101° 03' 02.17" |  |      |
|                         |      |      |                      |  |      |

Fig. 2

101  
+ 6  
606  
360  
+ 246  
606  
18-13  
18-13

Office: Allowable angular error is  $15''\sqrt{n}$  where  $n$  equals number of angles within the survey. In Fig. 1 there are five angles and the error permitted is  $15''\sqrt{5}$  or  $15'' \times 2.236 = 33.54''$  or round off to 34".

The formula for the total number of degrees in a closed polygon is  $180^\circ (n-2)$  where  $n$  equals number of sides of the polygon. In Fig. 1 there are five sides and the total number of degrees is equal to  $180^\circ (5-2)$  or  $180^\circ \times 3 = 540^\circ$ .

In Fig. 1 assume that the following angles have been turned in the field:

STATION



|   |                |
|---|----------------|
| 1 | 101° 03' 02" * |
| 2 | 85° 15' 30"    |
| 3 | 165° 32' 40"   |
| 4 | 65° 11' 37"    |
| 5 | 122° 56' 10"   |

If these five angles are totaled up they total  $539^\circ 58' 59''$  whereas the total should be  $540^\circ$ . This means an error of  $0^\circ 01' 01''$  and since the allowable angular error is  $34''$  the field work is not up to standard and will have to be re-run. Short sights are most apt to be in error and the angles on the ends of a short line should be checked first. Assume that all the angles have been re-turned and they are as follows:

STATION



|   |              |
|---|--------------|
| 1 | 101° 03' 02" |
| 2 | 85° 15' 30"  |
| 3 | 165° 32' 40" |
| 4 | 65° 11' 37"  |
| 5 | 122° 57' 30" |

The error was found at Station 5 and the total number of degrees is  $540^\circ 00' 19''$  or an error of  $19''$ . Since the allowable error is  $34''$  this can be accepted for adjustment. The adjustment will be evenly distributed among all of the angles as near as possible. The error is divided by the number of angles thus:  $19''/5 = 3.8''$ . Since the total was over  $540^\circ$  this adjustment must be subtracted as follows:

| <u>STATION</u> |              | <u>ADJUSTMENT</u> | <u>ADJUSTED ANGLE</u> |
|----------------|--------------|-------------------|-----------------------|
| 1              | 101° 03' 02" | - 03.8"           | 101° 02' 58.2"        |
| 2              | 85° 15' 30"  | - 03.8"           | 85° 15' 26.2"         |
| 3              | 165° 32' 40" | - 03.8"           | 165° 32' 36.2"        |
| 4              | 65° 11' 37"  | - 03.8"           | 65° 11' 33.2"         |
| 5              | 122° 57' 30" | - 03.8"           | 122° 57' 26.2"        |

\* Note that this angle has been rounded off to the nearest second from Fig. 2.

This then totals  $540^{\circ} 00' 00.0''$ . For normal survey work it is not necessary to use such refined angles so they are rounded off.

#### STATION

|   |                        |
|---|------------------------|
| 1 | $101^{\circ} 02' 58''$ |
| 2 | $85^{\circ} 15' 26''$  |
| 3 | $165^{\circ} 32' 36''$ |
| 4 | $65^{\circ} 11' 33''$  |
| 5 | $122^{\circ} 57' 27''$ |

TOTAL  $540^{\circ} 00' 00''$

This concludes the angular adjustment and the next phase is to convert these angles into bearings for the angles legs. Refer to Pages IV-7, IV-8 and IV-9 for methods.

#### DETERMINING THE BEARINGS

A previous survey used the Line 1-2 and a bearing of  $N 10^{\circ} 15' 20'' E$  was established on this line. This converts to an azimuth of  $190^{\circ} 15' 20''$  (See Page IV-7). The next step is to determine the deflection angle for each of the interior angles. The deflection angle is equal to  $180^{\circ}$  minus the angle if the angle is less than  $180^{\circ}$ . If the angle is over  $180^{\circ}$  then  $130^{\circ}$  is subtracted from the angle.

Since all of the interior angles for Lot A are less than  $180^{\circ}$  it is necessary to subtract each angle from  $180^{\circ}$  to determine the deflection angles as follows:

#### STATION

|   |                                                            |
|---|------------------------------------------------------------|
| 1 | $180^{\circ} - 101^{\circ} 02' 58'' = 78^{\circ} 57' 02''$ |
| 2 | $180^{\circ} - 85^{\circ} 15' 26'' = 94^{\circ} 44' 34''$  |
| 3 | $180^{\circ} - 165^{\circ} 32' 36'' = 14^{\circ} 27' 24''$ |
| 4 | $180^{\circ} - 65^{\circ} 11' 33'' = 114^{\circ} 48' 27''$ |
| 5 | $180^{\circ} - 122^{\circ} 57' 27'' = 57^{\circ} 02' 33''$ |

The azimuth for line 1-2 was determined to be  $190^{\circ} 15' 20''$ . If the observer stands on Station 1 and looks to Station 2 he is looking along this line. Any change of direction means a new azimuth. If the observer begins at Station 1 and walks around the lot all changes of direction to his right are plus and any changes to the left are minus and the deflection angles determine how much plus or minus. In Lot A all of the direction changes are to the right and therefore they will all be plus. The azimuths then are as follows:

LINE

|       |                |                                            |
|-------|----------------|--------------------------------------------|
| 1 - 2 | 190° 15' 20"   | N 10° 15' 20" E                            |
|       | + 94° 44' 34"  | (This is Deflection $\angle$ at Station 2) |
| 2 - 3 | 284° 59' 54"   |                                            |
|       | + 14° 27' 24"  | (This is Deflection $\angle$ at Station 3) |
| 3 - 4 | 299° 27' 18"   |                                            |
|       | + 114° 48' 27" | (This is Deflection $\angle$ at Station 4) |
| 4 - 5 | 414° 15' 45"   |                                            |
|       | + 57° 02' 33"  | (This is Deflection $\angle$ at Station 5) |
| 5 - 1 | 471° 18' 18"   |                                            |
|       | + 78° 57' 02"  | (This is Deflection $\angle$ at Station 1) |
| 1 - 2 | 550° 15' 20"   |                                            |

CONVERTING THE AZIMUTHS TO BEARINGS

For reference, see Page IV-7.

The following indicates which quadrant the bearing is in and the rule for finding the proper value:

| Rule | Azimuth between |                                                   |
|------|-----------------|---------------------------------------------------|
| 1    | 0° to 90°       | Subtract 0° from azimuth and<br>add letters S W   |
| 2    | 90° to 180°     | Subtract azimuth from 180° and<br>add letters N W |
| 3    | 180° to 270°    | Subtract 180° from azimuth and<br>add letters N E |
| 4    | 270° to 360°    | Subtract azimuth from 360° and<br>add letters S E |
| 5    | 360° to 450°    | Subtract 360° from azimuth and<br>add letters S W |
| 6    | 450° to 540°    | Subtract azimuth from 540° and<br>add letters N W |
| 7    | 540° to 630°    | Subtract 540° from azimuth and<br>add letters N E |
| 8    | 630° to 720°    | Subtract azimuth from 720° and<br>add letters S E |

This may be extended by 90° increments to cover any value of the azimuth, but generally 720° is sufficient.

The following is the bearings for Lot A.

| <u>LINE</u> | <u>AZIMUTH</u> | <u>RULE</u> | <u>BEARING</u>  |
|-------------|----------------|-------------|-----------------|
| 1 - 2       | 190° 15' 20"   | 3           | N 10° 15' 20" E |
| 2 - 3       | 284° 59' 54"   | 4           | S 75° 00' 06" E |
| 3 - 4       | 299° 27' 18"   | 4           | S 60° 32' 42" E |
| 4 - 5       | 414° 15' 45"   | 5           | S 54° 15' 45" W |
| 5 - 1       | 471° 18' 18"   | 6           | N 68° 41' 42" W |
| 1 - 2       | 550° 15' 20"   | 7           | N 10° 15' 20" E |

## SECTION V

### USE OF GUAM PLANE CO-ORDINATE SYSTEM

(Guam Geodetic Triangulation Network - GGTN)

## GENERAL

By legislative action the Department of Land Management was assigned the task of providing an island-wide Triangulation Network which would supersede all other systems.

The United States Coast and Geodetic Survey established a Primary and Secondary Network by 1963 in co-operation with the Survey Division, Government of Guam.

Random traverses were then run along island roads between the Primary and Secondary Triangulation Stations. Standard monuments were set along the random traverses at line of sight points.

Plane Co-ordinate values were then assigned these random traverse points. These values are listed in the tables.

## Adjustment of Traverses

After the field data was obtained a check for angular discrepancies was performed. The allowable error used was  $15''\sqrt{n}$ , where n equals the number of observed angles. If the angular error was allowable then the total error was evenly distributed to all of the angles under consideration. With tentatively adjusted angles, bearings were then assigned the various courses. The angles were adjusted to one tenth of a second.

The next step was to reduce all linear values\* to sea level. This reduction was based on the following formula:

$$C = RL/(E+R)$$

Where C = corrected sea level distance.

L = Length of measured distance.

E = Mean elevation of measured line above sea level

(barometric altitudes were used for elevation means).

R = Radius of the earth (in this instance a radius of 20,900,000 feet was used).

With the tentatively adjusted angles and the sea level distances, latitudes and departures were determined. Total allowable error permitted at this stage was one part in ten thousand (1:10,000). Allowable discrepancies were distributed to each course in proportion to the course length to the entire length under consideration.

After the linear adjustment was made, co-ordinate values were assigned the various stations.

\* Conversion factors used:

One Meter = 3.28083 feet.

One Foot = 0.304801 meters.

As a final adjustment new bearings and distances were calculated between all stations based on assigned co-ordinate values.

For ease of computations, azimuths have been determined for each course with zero based on grid south.

Values have been carefully checked and tabulated in a usable set of tables; however, the users of this system are requested to report any errors they may find to the Territorial Surveyor

For additional material on plane coordinates refer to manuals published by the U.S. Government Printing Office.

|                                                       |    |     |
|-------------------------------------------------------|----|-----|
| Manual of Plane-Coordinate Computation                | SP | 193 |
| Computation of Traverse by Plane Coordinates          | SN | 624 |
| The State Coordinate Systems (A Manual for Surveyors) | SP | 235 |

### Use of Network

In accordance with the Rules and Regulations adopted by the Territorial Surveyor it is necessary that all surveys be connected to the Network.

Reference measurements\* have been made to the various stations, but as an added protection it is suggested that independent references be made for any station used as a survey connection.

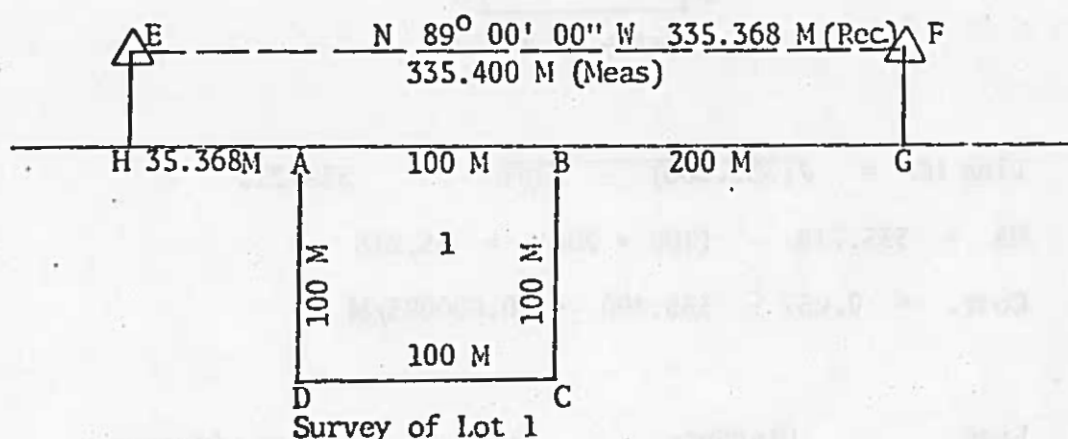
Co-ordinate values shall be established for the tie point of each survey. If a network station has no assigned values the plan should so stipulate.

\* May be obtained from Territorial Surveyor's Office.

Bearings or azimuths with distances have been determined between triangulation points. These are adjusted sea level measurements\* and it will be necessary to obtain individual measurements between these monuments and then to prorate any discrepancy found from the actual value to establish co-ordinates. These discrepancies should be very minor in nature (erroneous tape length, etc.); however, the measurements taken between GGTN monuments will serve to prevent major errors in the fieldwork.

Example 1:

With line EF parallel to line HG.



Perpendiculars should be established (EH and FG) and the discrepancies prorated as follows:

$$\text{Corr.} = 0.032 / 335.400 = 0.000095/\text{M}$$

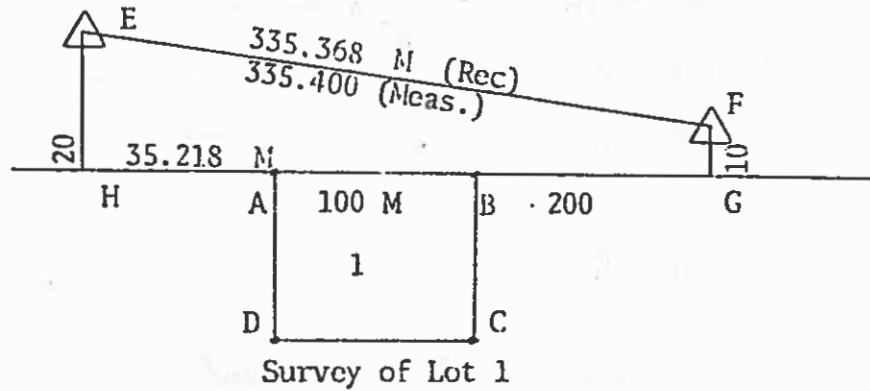
| Line  | Distance | Corr.   | Corr. Distance |
|-------|----------|---------|----------------|
| HA    | 35.368   | + 0.003 | 35.371         |
| AB    | 100      | + 0.010 | 100.010        |
| BG    | 200      | + 0.019 | 200.019        |
| TOTAL | 335.368  | 0.032   | 335.400        |

Note: M indicates meters

\* Conversion of distances to sea level distances are not important to land surveys because of the small differences encountered. (Guam does not have height enough over short distances to make large differences).

Example 2:

If line EF is not parallel to line HG this must be considered in the computations:



$$\text{Line HG} = \sqrt{(335.368)^2 - (10)^2} = 335.218$$

$$\text{HA} = 335.218 - (100 + 200) = 35.218$$

$$\text{Corr.} = 0.032 \div 335.400 = 0.000095/\text{M}$$

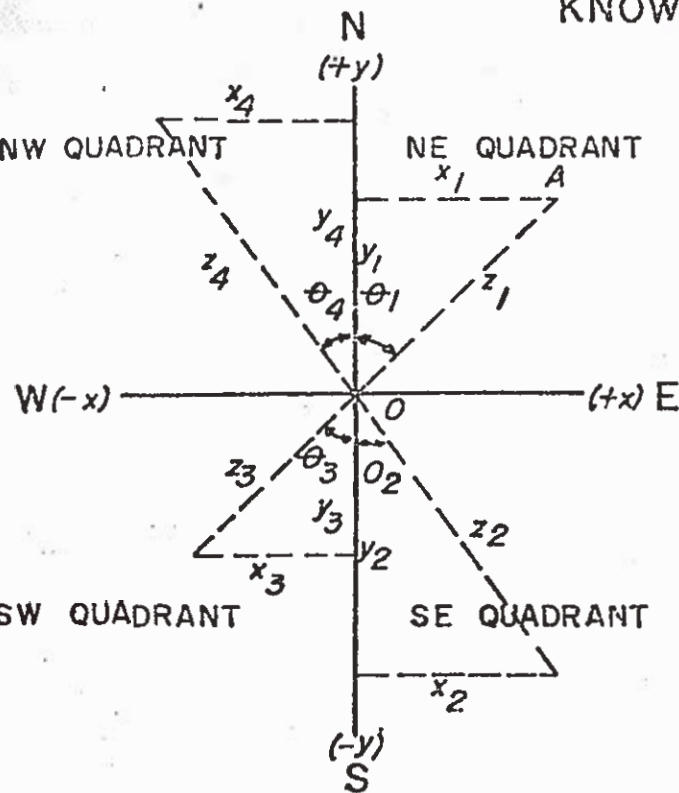
| <u>Line</u> | <u>Distance</u> | <u>Corr.</u> | <u>Corr. Distance</u> |
|-------------|-----------------|--------------|-----------------------|
| HA          | 35.218          | + 0.003      | 35.221                |
| AB          | 100             | + 0.010      | 100.010               |
| BG          | 200             | + 0.019      | 200.019               |
| TOTAL       | 335.218         | 0.032        | 335.250               |

Note: M indicates meters.

## PRIVATE SURVEYS

PRIVATE SURVEYS

# LENGTH & BEARINGS OF LINE BETWEEN POINTS WITH KNOWN CO-ORDINATES



Compute algebraic difference  
between point co-ordinates.

Then:

$$\tan \theta_1 = x / y_1$$

$$z_1 = x / \sin \theta_1 *$$

and

$$\tan \theta_2 = x_2 / y_2$$

$$z_2 = x_2 / \sin \theta_2 *$$

and

$$\tan \theta_3 = x_3 / y_3$$

$$z_3 = x_3 / \sin \theta_3 *$$

and

$$\tan \theta_4 = x_4 / y_4$$

$$z_4 = x_4 / \sin \theta_4 *$$

## EXAMPLE:

Pt. A Co-ordinates = 10,000 E and 10,000 N

Pt. O Co-ordinates = 8,000 E and 8,000 N

Algebraic difference between Pt. A and Pt. O

|                                                                                |                                                                                |
|--------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| $\begin{array}{r} + 10,000 \\ (-) + 8,000 \\ \hline x_1 = + 2,000 \end{array}$ | $\begin{array}{r} + 10,000 \\ (-) + 8,000 \\ \hline y_1 = + 2,000 \end{array}$ |
|--------------------------------------------------------------------------------|--------------------------------------------------------------------------------|

then

$$\tan \theta_1 = x / y$$

$$\tan \theta_1 = 2,000 / 2,000$$

$$\tan \theta_1 = 1.00000$$

$$\theta_1 = 45^\circ$$

and

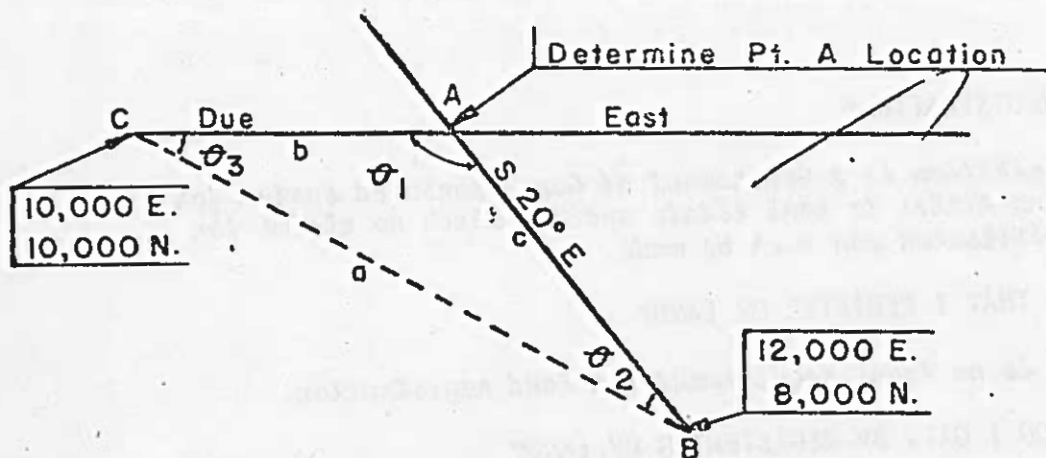
$$z_1 = x / \sin$$

$$z_1 = 2,000 / 0.70710678$$

$$z_1 = 2828.427$$

\* If the y value is larger than the x value the formula should be changed  
to  $y / \cos$

# POINT LOCATION BY INTERSECTION



First - Determine Length and Bearing of Line BC  
(See Page VI-2 for method)

$$(1) \quad + 12,000 \quad + 8,000 \quad (2) \quad \tan \theta_3 = 2000/2000$$

$$\frac{(-) + 10,000}{+ 2,000} \quad \frac{(-) + 10,000}{- 2,000}$$

$$\tan \theta_3 = 1 \quad \theta_3 = 45^\circ \text{ (Bearing CB = S. } 45^\circ \text{ E.)}$$

$$(3) \quad a = 2000/\sin 45^\circ \\ a = 2000/0.70710678 \\ a = 2828.427$$

$$(4) \quad \theta_1 = 90^\circ + 20^\circ \quad (5) \quad \theta_2 = 180^\circ - (110^\circ + 45^\circ) \\ \theta_1 = 110^\circ \quad \theta_2 = 25^\circ$$

$$(6) \quad b = \frac{a \sin B}{\sin A}$$

$$(7) \quad c = \frac{a \sin (A+B)}{\sin A}$$

$$b = \frac{a \sin B}{\cos (A-90)}$$

$$c = \frac{a \cos (A+B-90)}{\cos (A-90)}$$

$$b = \frac{2828.427 \times 0.422618}{0.93969262}$$

$$c = \frac{2828.427 \times 0.70710678}{0.93969262}$$

$$b = 1272.059$$

$$c = 2128.355$$

## LAND REGISTRATION

### (1) WHAT IS LAND REGISTRATION?

*Land Registration is a Government of Guam sponsored system for registering titles to real estate against which no claims for adverse possession can ever be made.*

### (2) IS IT REQUIRED THAT I REGISTER MY LAND?

*No, there is no legal requirement for land registration.*

### (3) WHAT BENEFITS DO I GAIN BY REGISTERING MY LAND?

*If your land is registered, mortgage and construction loans are easier to obtain, you can assure your beneficiaries an undisputed title if the land is part of your estate, you can give a clear title to any portion of your land you might transfer to others, and no one can ever claim adverse possession against your land.*

### (4) HOW MAY I GET MY LAND REGISTERED?

*Each applicant for initial land registration must submit an appropriate petition to the Island Court, which petition must conclusively prove certain required facts. The petition has a prescribed routine thru the Island Court during which every claimed fact is investigated*

### (5) WHERE MAY I GET THE PETITION FORM?

*Any practicing Attorney on Guam or the Clerk of the Island Court can advise you regarding the required petition.*

### (6) IS IT NECESSARY FOR ME TO RETAIN AN ATTORNEY?

*So many legal points are involved in Land Registration that it would be to your advantage to retain an attorney. However, there is no absolute requirement that an attorney be retained.*

### (7) WILL A SURVEY OF MY LAND BE REQUIRED?

*Normally, yes. An actual physical survey by a Registered Land Surveyor within no more than 90 days prior to the date of the petition will be required. If the land has been previously surveyed, a recertification of that previous survey within the required 90-day period will suffice. The registered surveyor of your choice will be conversant with the technical requirements of the survey.*

### (8) WHAT PROOF OF OWNERSHIP MUST I HAVE?

*Normally, a deed showing from whom and how you acquired the land is sufficient proof of your right to petition for registration.*

(9) I DO NOT HAVE ANY KIND OF A DEED. HOW MAY I PROVE MY OWNERSHIP?

*It is understandable that in isolated cases such deeds do not exist. Under those conditions you should submit such evidence of ownership as may be available to you and the Court will decide as to its sufficiency.*

(10) WHAT WILL IT COST ME TO HAVE MY LAND REGISTERED?

*There is no fixed cost. Attorney and surveyor fees are a matter for negotiation between you and them. Court costs can be reasonably estimated by checking with the Clerk of the Island Court. Recording fees, after the Court has given its title decree, are approximately \$10.00.*

(11) HOW LONG DOES IT TAKE TO HAVE MY LAND REGISTERED?

*There is no set time for such action. Sufficient time must be allowed for the prescribed advertising, notification of all adjacent owners, investigation of the facts alleged by the petition and for the usual routine of the Court. A minimum of 90 days should be allowed.*

(12) IF THE COURT AUTHORIZES THE REGISTRATION OF MY LAND, WHAT SHOULD I THEN DO?

*You should promptly take a certified copy of the Court order authorizing the registration of your land to the Department of Land Management for recording in the public records. At that time, on your payment of the required fees, you will be issued your certificate of title.*

(13) I OWN SEVERAL PARCELS OF LAND ON GUAM. MAY I REGISTER EACH OF THEM?

*Yes. There is no limit to the number of parcels or extent of area you may have registered in your name. Each parcel for which registration is sought will, however, have to be considered on its own merits and you must be able to prove your interest therein.*

(14) I RECENTLY PURCHASED A PIECE OF PROPERTY FROM A TRACT THAT IS REGISTERED. HOW MAY I GET MY PURCHASE REGISTERED IN MY NAME?

*The holder of the original registration will have to surrender his certificate of title to the Department of Land Management. A survey showing your purchase with relation to the basic tract will be required. A map of the survey, together with descriptions of your purchase and the remaining portion of the basic tract must be prepared and verified by the Department of Land Management. When these are in order, a new certificate for his reduced holdings will be furnished the owner of the basic tract and you will be furnished an original certificate for your purchase. Other than the cost of the survey, there are no other charges except recording fees of approximately \$10.00.*

(15) I OWN A LOT BOUGHT FROM A SUBDIVIDER. MAY I GET IT REGISTERED?

No consideration can be given to the registration of subdivision lots until the subdivider has first complied with the requirements of applicable subdivision laws. To do otherwise would be to permit an illegal act to be clothed with legality and the subdivision laws would become unenforceable. However, if the subdivider has complied with subdivision laws, registration of your lot may be accomplished as explained by either question 4 or question 14, whichever is applicable to your situation.

(16) I HAVE BEEN OCCUPYING MY LAND FOR A LONG PERIOD OF TIME AND IT HAS NEVER BEEN REGISTERED. IS IT TOO LATE FOR REGISTRATION?

It is never too late to have your land registered. However, with the passing of the years since you first acquired the land some complications as to your sole ownership may have arisen and these will have to be resolved before you can expect final registration in your name.

(17) I OWN A LOT IN A POST-WAR GOVERNMENT SPONSORED VILLAGE. HOW MAY I GET IT REGISTERED.

You should have received your certificate of registration when your deed to the lot was recorded. If that was not done, you should immediately contact the Department of Land Management regarding the matter. However, if you are still paying for the lot, you cannot get a deed until full payment has been made.

(18) I OWN LAND NOT IN A GOVERNMENT SPONSORED VILLAGE BUT WHICH WAS ACQUIRED FROM THE GOVERNMENT OF GUAM. HOW MAY I GET IT REGISTERED?

The answer to this question is the same as for the preceding question.

(19) I OWN A TRACT OF LAND THAT WAS PREVIOUSLY REGISTERED. HOW MAY I GET REGISTRATION IN MY NAMES?

If you purchased the land from the registered owner, the Government of Guam will issue a certificate of title in your name on the surrender of the previous certificate. If you acquired the land from other than the registered owner this provision will not apply and registration will have to be acquired thru the basic processes described herein.

(20) THERE ARE UNAUTHORIZED "SQUATTERS" ON MY LAND. WHAT HAPPENS TO THEM?

The fact of these "squatters", as well as authorized occupants of the land must be shown on your petition for registration. The Court will then decide what rights, if any, they have to being on the land and illegal occupants can be removed.

- (21) I AM MARRIED BUT NOT LIVING WITH MY SPOUSE. IF I PETITION FOR THE REGISTRATION OF MY LAND WILL MY SPOUSE ACQUIRE ANY INTEREST IN THE CERTIFICATE OF TITLE?

If the land is "community property" your spouse cannot be denied an equitable share in the land. If the land is not "community property" your spouse has no interest therein and registration can be made in your name alone.

- (22) MY BROTHER, AN AMERICAN CITIZEN BUT NOT RESIDENT ON GUAM, IS THE OWNER OF UNREGISTERED LAND. HOW MAY HE GET IT REGISTERED?

Non-resident ownership presents a little different problem. The best way for your brother to handle the problem is to consult an attorney on the purpose of appointing someone locally as your brother's attorney-in-fact and let that attorney-in-fact pursue the registration for him.

- (23) MY FATHER, WHO IS UNABLE TO LEAVE THE HOUSE BECAUSE OF A PHYSICAL DISABILITY, OWNS UNREGISTERED LAND. HOW MAY HE GET IT REGISTERED?

This case is approximately the same as non-resident ownership. Your father's best approach is to appoint an attorney-in-fact.

- (24) I REPRESENT A CORPORATION THAT OWNS UNREGISTERED LAND. MAY A CERTIFICATE OF TITLE BE ISSUED IN THE NAME OF THE CORPORATION?

Yes. There is no difference between corporations and individuals so far as land registration is concerned. The petition you must file will take this fact into account.

- (25) I AM A RESIDENT ALIEN ON GUAM. MAY I HAVE LAND REGISTERED IN MY NAME?

No. Section 671 of the Civil Code of Guam prohibits the ownership of land by aliens, therefore, you may not have land registered in your name.

- (26) MY FATHER LEFT A LARGE TRACT OF UNREGISTERED LAND AS PART OF HIS ESTATE WHEN HE DIED. MAY THE ESTATE OBTAIN REGISTRATION OF THAT LAND IN ITS NAME PRIOR TO DIVISION OF THE LAND AMONG THE HEIRS?

Yes, land may be registered in the name of an estate. However, you should definitely consult your attorney before initiating any action.

- (27) MY SON, A MINOR, ACQUIRED A SMALL TRACT OF LAND BY INHERITANCE FROM HIS GRANDFATHER. MAY HE HAVE THAT LAND REGISTERED IN HIS NAME?

Yes, a minor may be the registered owner of land. However, a guardian may be required to be appointed to represent his interests until he becomes of age. You should consult an attorney before initiating any action.

(28) THE DEED TO MY PROPERTY IS RECORDED IN THE RECORDS OF THE DEPARTMENT OF LAND MANAGEMENT. IS THAT NOT A CERTIFICATE OF TITLE?

No. The fact of the recording of the deed is merely one step toward land registration (see question 8). There are several other requirements which are explained in this folder and which must be met before you may have a Certificate of Title issued for your property.

(29) WHEN IS THE BEST TIME TO HAVE MY LAND REGISTERED?

The best time is concurrent with or immediately after your acquisition of the land. If that was not done, now, today, is the best time to start the action.

THE ABOVE INFORMATION REGARDING LAND REGISTRATION IS BASED ON SECTION 1157 OF THE CIVIL CODE OF GUAM.

## SECTION VII

### PROFESSIONALISM-ETHICS

The advancement of one's profession is a duty, second only to one's obligation to the public. It is a moral responsibility and must have personal acceptance. It is best accomplished through the cooperative action and close association with fellow practitioners.

The dignity of a profession is properly maintained by a rigid adherence to a code of ethics. True professional stature is acquired only through a continued and persistent application of the basic elements of that code of ethics.

Registration is really the beginning of your professional career. Your ability to accept its challenges will determine who and what you are in the professional world.

The above is extracted from "Syllabus for Written Examination in Land Surveying" by the Board of Engineering and Architectural Examiners, Government of Guam.

BOARD OF ENGINEERING AND ARCHITECTURAL EXAMINERS

GOVERNMENT OF GUAM

AGANA

Syllabus for Written Examination in Land Surveying

Parts I, II, III

INTRODUCTION

1. The attached Syllabus has been prepared as a reference guide for prospective Land Surveyors to assist them in preparing for the registration examination. The Guam Board has adopted this Syllabus as a basis for the preparation of examinations in Land Surveying. Guam law requires the following:
  - (1) Graduation from a school or college approved by the Board as of satisfactory standing, including the completion of an approved course in surveying; and a specific record of an additional two years or more of experience in land surveying of a character satisfactory to the Board, and indicating that the applicant is competent to practice land surveying and passing the prescribed written, or written and oral, examination; or
  - (2) A specific record of six years or more of experience in land surveying work of a character satisfactory to the Board and indicating that the applicant is competent to practice land surveying, and passing the prescribed written, or written and oral, examination; or
  - (3) A specific record of twelve years or more of lawful practice in land surveying work of a character satisfactory to the Board and provided the applicant is not less than forty (40) years of age.

Part I Guam Land Matters.

This is a four (4) hour written examination, covering the period prior to the Spanish Mortgage Law to the present time. This includes the Spanish Mortgage Law, laws issued by the Court of First Instance relating to land matters, Executive Orders of the U.S. Naval Government of Guam relating to land matters, and all other orders and regulations issued by the government relating to land matters.

Part II General Surveying.

This is a four (4) hour written examination, covering definitions of various land terms, conversion of magnetic to true azimuth; adjustment of angles, Land Court Surveys, adjustments of transits and levels.

### Part III Problems in Land Surveying.

This is a four (4) hour written examination covering problems involving curves and straight line courses. Determining azimuths, back azimuths, coordinates, distances of lines joining Triangulation Stations.

2. Anyone planning a course of study should develop a study plan. The attached Syllabus could be a study plan by following the capital letter headings for the broad subjects and the arabic numeral headings for the specific study areas.
3. For home study, a personal library is most essential, including books on basic and applied subjects and which should be kept current on all subjects pertaining to Land Surveying. It might contain several books on each subject, which, if studied simultaneously, would give greater depth to the knowledge learned.
4. Questions on Humanities and English are not given in the examination, but it is expected that the applicant will use good English. When answering essay type questions, the above consideration should be kept in mind. Since good description writing should be the forte of the Land Surveyor, answers to such questions will be carefully examined and graded on clarity, conciseness and accuracy. The proper use of the English language is a very important part of the examination and cannot be over-emphasized.
5. The purpose of the examination is to determine the knowledge the applicant has acquired from his experience working in the field of Land Surveying and in self-study of related books on Property Law, Surveying and Ethics. The examination will include numerical and factual data which can be graded quite precisely. Other questions on ethics, proper record keeping, descriptions, and judgment cannot be graded so precisely since there are several correct answers. However, if the applicant is well prepared in the basic subjects and has had good experience, any answer well thought out, clearly stated, and fundamentally correct will get a high grade from the examiner.
6. It is necessary that you meet a minimal requirement as to knowledge and competency for a legal right to practice Land Surveying. However, upon receiving that right you immediately take on professional responsibilities. The two most important are: (1) Responsibility to the public; (2) Responsibility to the profession.

## SYLLABUS

for

### LAND SURVEYOR EXAMINATIONS

#### SECTION I

#### BASIC DISCIPLINES

##### A. Mathematics

1. Geometry
2. Algebra
3. Trigonometry

##### B. English

1. Grammar
2. Spelling
3. Composition

##### C. Surveying

##### 1. Instrumentation

- (a) Adjustments
- (b) Care
- (c) Use
- (d) Limitations

##### 2. Orientation

- (a) Assumed
- (b) Magnetic
- (c) Astronomic

##### 3. Horizontal Measurements

- (a) Methods
- (b) Errors
- (c) Degrees of Precision

##### 4. Vertical Measurements

- (a) Methods
- (b) Errors
- (c) Degrees of Precision

##### 5. Angular Measurements

- (a) Methods

- (b) Errors
- (c) Degrees of Precision

## 6. Transit Traverse

### (a) Methods

- (1) Direct and deflection angles
- (2) Azimuths and bearings

### (b) Computations

- (1) Latitudes and departures
- (2) Closures and precision
- (3) Coordinates
- (4) Arcs
- (5) Line and curve intersections

## 7. Topographic Mapping

### (a) Methods

- (1) Grid
- (2) Transit-stadia
- (3) Plane-table
- (4) Profile and cross-section
- (5) Elementary photogrammetric principles

### (b) Errors

### (c) Degrees of Precision

## 8. Notekeeping, Records

### (a) Requirements and Importance

### (b) Principal Types of Field Notes

- (1) Transit traverse
- (2) Boundary survey
- (3) Bench levels
- (4) Topographic
- (5) Profile and cross-section
- (6) Slope staking
- (7) Construction and utility
- (8) As-built
- (9) Astronomic observation

### (c) Preparation of Records

- (1) Indexing
- (2) Filing

## D. Property Surveys and Descriptions

### 1. Public Land Surveys

- (a) History
  - (b) Methods
  - (c) Re-surveys
  - (d) Subdivision surveys
- 2. Metes and Bounds Surveys
- 3. Coordinates
- 4. Plats
- 5. Special State Conditions
  - (a) Torrens System
    - (1) Registered Land Surveys
  - (b) Riparian Rights
- E. Law (Land Surveying)
  - 1. Federal Statutes
  - 2. State Laws
  - 3. Court decisions
  - 4. County, Township and Municipal Ordinances
- F. Engineering
  - 1. Drainage
  - 2. Route Surveys
    - (a) Curvature
    - (b) Alignment
    - (c) Gradients

## SECTION II. APPLIED DISCIPLINES

- A. Principles of Professional
  - 1. Legal
    - (a) Areas of practice
    - (b) Requirements of practice
    - (c) Obligation to client
    - (d) Liability, etc.
  - 2. Technical
    - (a) Mathematics, Humanities, Science
    - (b) Surveys of all types
    - (c) Photogrammetry
    - (d) Other
  - 3. Ethical
    - (a) Areas of practice
    - (b) Methods of practice
    - (c) Obligations

B. Property Surveys

1. Written Instruments

- (a) Deeds
- (b) Abstracts
- (c) Certificates of title
- (d) Maps and field notes

2. Monumentation

- (a) Natural
- (b) Artificial
- (c) Recorded

3. Real Property

- (a) History
- (b) Laws
- (c) Reversion rights
- (d) Adverse Rights
- (e) Riparian rights

4. Field Survey Procedures

- (a) Measurements
- (b) Calculations
- (c) Excess and deficiency
- (d) Laws of evidence

C. Property Survey Description

1. Metes and Bounds

- (a) Courses and distances
- (b) Easements

2. Subdivision Plats

3. Federal, State and County Government Subdivisions

4. Special State Conditions

- (a) Torrens Title
  - (1) Registered Land Surveys
- (b) Riparian Rights

5. Coordinates

D. Sub-division Planning and Design

- 1. Ordinances and Regulations
- 2. Topographic Surveys
- 3. Preliminary Studies
- 4. Boundary Surveys
- 5. Preliminary Plats
- 6. Final Plat

## E. Special Surveys

1. Judicial
2. Special State Conditions
  - (a) Torrens Title
    - (1) Registered Land Surveys
  - (b) Riparian Rights
3. Court
  - (a) Accident
  - (b) Traffic
  - (c) Drainage
4. Remonumentation
5. Architectural Site
6. Drainage
7. Route
8. Construction
  - (a) Street; alignment, grade
  - (b) Buildings
  - (c) Utilities
  - (d) Transmission lines

# **TITLE XLIII**

## **GOVERNMENT OF GUAM CODE**

### **Professional Engineers, Architects and Land Surveyors**

---

**August 1965**

## TITLE XLIII

### Professional Engineers, Architects and Land Surveyors (CHAPTER I)

Section 47000. Name. This Title may be cited as the Professional Engineers, Architects and Land Surveyors Law.

Section 47001. Definitions. For the purposes of this Title, the following definitions shall apply:

- (a) 'Board' means the Board of Engineering and Architectural Examiners.
- (b) 'Professional Engineer' means a person who engages in the practice of professional engineering.
- (c) 'Practice of Professional Engineering' includes any professional service, such as consultation, investigation, evaluation, planning, design or responsibility, supervision of construction or operation, in connection with any public or privately owned structures, buildings, public utilities, machines, equipment, processes, works or projects.
- (d) 'Engineer-in-training' means a candidate for registration as a Professional Engineer, who has successfully passed the examination in fundamental engineering subjects and has been enrolled as an engineer-in-training.
- (e) 'Architect' means a person who engages in the practice of architecture.
- (f) 'Practice of Architecture' means any professional service, such as consultation, investigation, planning, design, delineation, in connection with structures or buildings, actual or proposed, or

responsible supervision or construction, erection, enlargement or alteration of any structures or buildings, or of any appurtenances thereto, to be constructed for persons other than himself.

- (g) 'Land Surveyor' means a person who engages in the practice of land surveying.
- (h) 'Practice of Land Surveying' means any professional work in connection with measuring areas of the earth, the lengths and directions of boundary lines, and the contour of the surface, for their correct determination and description, for conveyancing, the establishment or re-establishment of boundaries or the plotting of lands and subdivisions thereof.

Section 47002. Board of Engineering and Architectural Examiners. There is within the government of Guam a Board of Engineering and Architectural Examiners. The Board shall consist of the Director of Public Works, ex-officio, who shall be chairman, and three additional members appointed by the Governor. The appointed members shall serve for terms of three years; provided, however, that of the members first appointed, one shall be appointed for a term of one year, one shall be appointed for a term of two years, and one for a term of three years. Terms shall commence on the effective date of this Title. One of the appointed members shall be a professional architect, and two of the appointed members shall be professional engineers, one of whom shall be a land surveyor. Each appointed member shall have at least ten years active experience and be of recognized good standing in his profession, be at least thirty years of age, a United States citizen and a registered professional engineer or architect under this Title; provided, however, that each of the three members first appointed shall receive a certificate of registration as a professional architect or engineer, as the case may be, and without payment of fees of any kind; provided further, that the Governor may appoint to the Board, persons exempted under Item (d) of Section 47028 of this Title, and in

Section 47003. Same: Removal. The Governor may remove any member of the Board for misconduct, incompetency, neglect of duty, or for any other sufficient cause. Vacancies in the membership of the Board shall be filled for the unexpired term by appointment by the Governor as provided in Section 47002.

Section 47004. Same: Compensation. Members of the Board shall receive no compensation as such, but shall be reimbursed for their reasonable and necessary expenses incurred in the course of their official duties.

Section 47005. Same: Personnel. The Department of Public Works shall provide the Board with necessary clerical personnel, office facilities, and other logistic support.

Section 47006. Same: Rules. The Board is hereby authorized to make reasonable rules and regulations not inconsistent with law needed in performing its duties. Such rules and regulations shall be subject to approval by the Governor and be issued by Executive Order.

Section 47007. Same: Meetings: Quorum. The Board shall meet at such times and places as it may by rule prescribed, but shall hold at least one regular meeting in each year. The Chairman may call special meetings. At all meetings the presence of three members shall constitute a quorum, and the concurrence of three members shall be required in arriving at any decision.

Section 47008. Same: Records. The Board shall keep a complete record of all applications for registration and the Board's action thereon and shall annually, during the month of January, prepare for publication a roster showing the names, places of business and residence of all registered engineers, architects, and land surveyors, and of all enrolled engineers-in-training. A copy of the roster shall be filed with the Secretary of Guam and the Director of Land

Section 47009. Same: Annual Report. The Board shall prepare an annual report of its activities for the past fiscal year, which shall be submitted to the Governor not later than the first day of August.

Section 47010. Registration Required. No person shall practice or offer to practice the profession of engineering, architecture or land surveying, or use in connection with his name or otherwise, assume, use or advertise any title or description to convey the impression that he is an engineer, architect or land surveyor, unless such person has qualified as such by registration as a profession engineer, architect, or land surveyor respectively under this Title, or is otherwise exempt under this Title.

Section 47011. Acts Construed as Practicing. A person shall be construed to practice or offer to practice engineering, architecture, or land surveying within the meaning and intent of this Title who practices engineering (in any branch), architecture or land surveying; or who, by oral or written claim, or sign, advertising, letterhead, card or in any other way represents himself to be an engineer, architect or land surveyor, or through the use of some other title implies that he is such; or who holds himself out as able to perform, or who does perform, any engineering, architectural or land surveying service or work or any other professional service designated by him as engineering, architecture or land surveying, or generally recognized as such.

Section 47012. Qualifications: General. No person shall be eligible for registration as a professional engineer, architect, or land surveyor, or for enrollment as an engineer-in-training, under this Title unless he is

- S (a) A citizen of the United States, a permanent resident alien or immigrant alien eligible for United States citizenship;
- (b) More than twenty-one (21) years of age;
- S (c) Of good character and repute; and
- (d) Meets the professional qualifications prescribed by this Title.

Section 47013. Qualifications: Professional. The

following shall be considered as minimum evidence satisfactory to the Board that the applicant is qualified for registration as a professional engineer, architect, or land surveyor, or for enrollment as an engineer-in-training, respectively:

(a) As a professional engineer:

(1) Graduation in an approved engineering curriculum of four years or more from a school or college approved by the Board as of satisfactory standing; and a specific record of an additional four years or more of experience in engineering work of a character satisfactory to the Board, and indicating that an applicant is competent to practice engineering (in counting years of experience, the Board at its discretion may give credit, not in excess of one year, for satisfactory graduate study in engineering), and passing the prescribed written, or written and oral, examination; or

(2) A specific record of eight years or more of experience in engineering work of a character satisfactory to the Board and indicating that the applicant is competent to practice engineering, and passing the prescribed written, or written and oral, examination designed to show knowledge and skill approximating that attained through graduation in an approved four-year engineering curriculum; or

(a) (3) A specific record of fifteen years or more of lawful practice in engineering work of a character satisfactory to the Board and indicating that the applicant is competent to practice engineering and provided the applicant is not less than forty (40) years of age.

(b) As an engineer-in-training:

(1) Graduation in an approved engineering curriculum of four years or more from a school or college approved by the Board as of satisfactory standing, and passing a written examination in basic engineering subject; or

(2) A specific record of four years or more of experience in engineering work of a character satisfactory to the Board and passing a written examination in basic engineering subjects designed to show knowledge and skill approximating that attained through graduation in an approved four-year engineering curriculum.

(c) As an architect:

(1) Graduation in an approved architectural curriculum of four years or more from a school or college approved by the Board as of satisfactory standing; and a specific record of an additional four years or more of experience in architectural work of a character satisfactory to the Board, and indicating that the applicant is competent to practice architecture (in counting years of experience, the Board at its discretion may give credit, not in excess of one year, for satisfactory graduate study in architecture), and passing the prescribed written, or written and oral, examination; or

(2) A specific record of eight years or more of experience in architectural work of a character satisfactory to the Board and indicating that the applicant is competent to practice architecture, and passing the prescribed written, or written and oral, that attained through graduation in an approved four-year architectural curriculum; or

(3) A specific record of fifteen years or more of lawful practice in architectural work of a character satisfactory to the Board and indicating that

ture and provided the applicant is not less than forty (40) years of age.

(d) As a land surveyor:

(1) Graduation from a school or college approved by the Board as of satisfactory standing, including the completion of an approved course in surveying; and a specific record of an additional two years or more of experience in land surveying of a character satisfactory to the Board, and indicating that the applicant is competent to practice land surveying and passing the prescribed written, or written and oral, examination; or

(2) A specific record of six years or more of experience in land surveying work of a character satisfactory to the Board and indicating that the applicant is competent to practice land surveying, and passing the prescribed written, or written and oral, examination; or

(3) A specific record of twelve years or more of lawful practice in land surveying work of a character satisfactory to the Board and provided the applicant is not less than forty (40) years of age.

Section 47014. Same: Credits for Required Experience. In considering the qualifications of applicants as to experience under Section 47013:

(a) Teaching of engineering, architecture or land surveying in an approved curriculum in a school or college approved by the Board as of satisfactory standing may be credited as experience.

(b) Experience and training in the armed services of the United States in engineering, architecture or land surveying may be credited as experience.

proved curriculum in engineering, architecture or surveying in a school or college approved by the Board as of satisfactory standing, without graduation, shall be considered as equivalent to a year of experience under Subsections (a) (2) or (a) (3), (b) (2), (c) (2) or (c) (3), or (d) (2) or (d) (3) respectively of Section 47013. Graduation in a curriculum other than engineering, architecture or land surveying from a college or university of recognized standing may be considered as equivalent to two years of experience under any such subsections. Provided, however, that no applicant shall receive credit for more than four years of experience because of undergraduate educational qualifications.

Section 47015. Same: Same: Exclusion. The mere execution, as a contractor, of work designed by a professional engineer or architect, or the supervision of construction of such work as a foreman or superintendent, is not deemed to be experience in engineering or architectural work.

Section 47016. Same: Reciprocity. The Board may, upon application, and payment of the fee required by Section 47018, issue a certificate of registration as a professional engineer, architect, or land surveyor, without oral or written examination, to any person who holds a current valid certificate of registration (or the equivalent thereof) as such issued by any state, territory or possession of the United States, or of any country, provided that the applicant's qualifications meet the requirements of this Title.

Section 47017. Same: Practitioners Upon Effective Date. At any time within six months after this Title becomes effective, upon application, and payment of the fee required by Section 47018, the Board shall issue a certificate of registration, without oral or written examination, to any professional engineer, architect or land surveyor who

shall submit evidence satisfactory to the Board that he has been a resident of the territory of Guam for at least five years preceding the effective date of the Title, and during such time was practicing engineering if an engineer, or architecture if an architect, or land surveying if a land surveyor, the character of such work being satisfactory to the Board, and had a license as such under the Business License Law for the calendar year 1960, or prior to February 1, 1960.

**Section 47018. Application for Registration: Fee.** Application for registration shall be on forms prescribed and furnished by the Board, shall designate the registration applied for, and, if in engineering, the branch or branches thereof; shall show the applicant's education and a detailed summary of his technical work; shall furnish not less than five references, of whom at least three shall be with regard to his technical work; and shall set forth such other information as the Board may prescribe.

Every application shall be accompanied by an application fee which shall be twenty-five dollars (\$25.00) for professional engineers, architects and land surveyors, with the exception of applications for registration for the engineer-in-training examination for which the application fee shall be ten dollars (\$10.00). A credit of ten dollars (\$10.00) toward the professional engineering registration fee shall be given to applicant passing the Guam Board's engineer-in-training examination. No refund will be made after applications have been received and acted upon by the Board even though registration is denied.

#### **Section 47019. Examination.**

- (a) When oral or written examinations are required, they shall be held at such time and place as the Board shall determine.
- (b) Separate examinations shall be held for professional engineers, architects and land surveyors.
- (c) All examinations shall be prescribed by the Board, subject to the requirements of this Title, and shall have for their scope the determination of the applicant's ability to practice professional engineering,

architecture or land surveying. All examinations shall include the subjects of professional ethics and this Title.

- (d) As to engineers, the examination shall be in two parts. The first part shall be on fundamental engineering subjects, such as ordinarily given in college curricula. An applicant shall be entitled to take this part of the examination prior to completion of the requisite years of experience in engineering work and satisfactory passage of this portion of the examination by the applicant shall constitute a credit toward the complete qualifications for a period of ten years. The Board shall issue to each applicant when successfully passing the examination in fundamental engineering subjects a certificate stating that he has passed the examination, and that he has been enrolled as an engineer-in-training. The second part of the examination shall cover primarily the major branch or branches of engineering in which the applicant specializes and in which he has applied for registration. Applicants who specialize in a subbranch of engineering shall be examined in that major branch of which such subbranch forms a part.

- (e) As to land surveyors, the examination, in addition to other matters, shall cover the procedure and rules governing the survey of public lands as set forth in "Manual of Surveying Instructions," published by the Bureau of Land Management, United States Department of the Interior, Washington, D. C.

**Section 47020. Certificate of Registration.** The Board shall issue a certificate of registration to any applicant for registration as a professional engineer, architect, or land surveyor, who, having paid the application and registration fee, has satisfactorily met all the requirements of this Title. Certificates shall show the full name of the applicant, shall have a serial number, and shall be signed by the Chairman and the Secretary of the Board under seal of the Board.

In the case of a registered engineer, the certificate shall authorize the 'practice of professional engineering' in the branch or branches in which he is qualified.

In the case of a registered architect, the certificate shall authorize the 'practice of architecture.'

In the case of a registered land surveyor, the certificate shall authorize the 'practice of land surveying.'

The certificate of registration, as issued by the Board, shall be prima facie evidence that the person named therein is a registered professional engineer, registered architect, or registered land surveyor, as indicated and entitled to all the rights and privileges of such, while such certificate remains unrevoked or unexpired.

Section 47021. Certificate of Enrollment: Engineer-in-Training. The Board shall issue a certificate of enrollment to any applicant who, having paid the application fee, has successfully passed the examination in fundamental engineering and has been enrolled as an engineer-in-training.

Section 47022. Expiration and Renewal. Certificates of registration shall expire on the last day of the month of December following their issuance or renewal and become invalid at the end of such day unless renewed. It shall be the duty of the Board to notify every person registered under this Title of the date of expiration of his certificate of registration and the amount of the fee that shall be required for its renewal for one year. Such notice shall be mailed no later than December 1st. Renewal may be effected at any time during the month of December by the payment of a renewal fee of \$5.00. The failure on the part of any registrant to renew his certificate annually in the month of December shall not deprive such person of the right of renewal, but the renewal fee to be paid after the month of December shall be increased by one dollar for each month or fraction of a month that payment of renewal is delayed, provided, how-

ever, that the maximum fee for delayed renewal shall not exceed \$10.00. The failure of the Board to notify a registrant of the date of the expiration of his certificate, or the amount of the renewal fee, shall not extend the duration of a certificate of registration.

Section 47023. Seal. Every registrant may, upon being issued a certificate of registration, obtain a seal of design authorized by the Board, bearing the registrant's name and the legend 'Registered Professional Engineer', 'Registered Architect' or 'Registered Land Surveyor', as the case may be, and shall provide space for stating the serial number and date of expiration of the certificate of registration. Plans, specifications, plats and reports, prepared by a registrant shall be stamped with such seal when filed with the government of Guam during the term of the registrant's certificate of registration, and shall also show the serial number and date of expiration of such certificate of registration. It shall be illegal for anyone to stamp or seal any documents with such seal after the certificate of registration of the person named thereon has expired or has been revoked, unless such certificate shall have been renewed or reissued.

Section 47024. Suspension and revocation. The Board shall have the power, duty and authority to investigate violations of this Title and may suspend or revoke a certificate of registration on any of the following grounds:

- (a) That the registrant is practicing in violation of this Title.
- (b) That the certificate of registration has been obtained or that the registrant has obtained such certificate by fraud or misrepresentation.
- (c) That the certificate of registration was obtained by bribery or payment of any money except fees prescribed by this Title.

(a) A person not a resident of and having no established place of business in Guam, practicing or offering to practice in Guam the profession of engineering, architecture, or land surveying when such practice does not extend in the aggregate more than 30 days in any calendar year; provided such person is legally qualified by registration to practice such profession in the state or territory of his residence and in which the requirements and qualifications for obtaining a certificate of registration are not lower than those specified in this Title;

(b) A person not a resident of and having no established place of business in Guam, or who has recently become a resident thereof, practicing or offering to practice in Guam for more than 30 days in any calendar year the profession of engineering, architecture, or land surveying, if he has filed with the Board an application for a certificate of registration and has paid the required fee, such exemption to continue only for such time as the Board requires for the consideration of the application for registration; provided such person is legally qualified to practice such profession in the state or territory of his residence and in which the requirements or qualifications for obtaining a certificate of registration are not lower than those specified in this Title;

(c) An employee or subordinate of a person holding a certificate of registration under this Title or an employee of a person exempted from registration by classes (a) and (b) of this section; provided the work of such employee or subordinate does not include final designs or decisions and is under the direct responsibility and supervision of a person holding a certificate of registration under this Title or a person exempted from registration by classes (a) and (b) of this section;

(d) Officers or employees of the Government of the United States, including members of the Armed Forces, and officers and employees of the government of Guam in performing such services for such governments;

(e) The practice of engineering, architecture, or land surveying by an individual, firm or corporation on property owned or leased by such individual, firm or corporation unless the public safety or public health is involved;

(f) The performance of engineering, architecture, or land surveying relating solely to the design or fabrication of manufactured products,

(g) The practice of any legally recognized profession other than that of professional engineer, architect or land surveyor.

#### Section 47029. Penalties.

(a) It shall be a misdemeanor for any person to:

(1) Practice, or offer to practice, or hold himself out as entitled to practice, professional engineering, architecture, or land surveying except when authorized by this Title;

(2) Use or attempt to use a certificate of registration that has expired or has been suspended or revoked;

(3) Present or use as his own the certificate of registration of another;

(4) Stamp or seal any document with the seal of a registrant after the certificate of the registrant has expired or has been suspended or revoked; or

(5) Otherwise violate any provision of this Title.

Such misdemeanor shall be punishable by a fine of not less than \$25.00 nor more than \$1,000.00, or imprisonment for not more than one year, or both.

(b) It shall be a felony for any person to present any false or forged information or evidence applying for registration or in obtaining a certificate of registration under this Title and such felony shall be punishable by a fine of (not) more than \$5,000.00 or imprisonment for not more than three years, or both.

(c) In addition to any other remedy provided by law, upon request of the Board an action may be filed in the name of the government of Guam in Island Court of Guam to restrain or enjoin the commission or continuance of any acts in violation of this Title. In any such proceeding it shall be unnecessary to allege or prove that an adequate remedy at law does not exist or that irreparable damage would result if the relief requested were ~~not granted.~~

Section 47030. Disposition of Fees. All fees received pursuant to this Title shall be covered into the Treasury of Guam.

(Title XLIII added by P.L. 5-131, 5th G.L., effective August 29, 1960).

## APPENDIX A

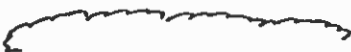
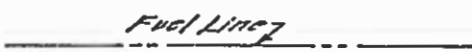
### Drafting

### Standards, Symbols and Abbreviations

Abbreviations should be kept to a minimum and used only in those instances where there can be no doubt of their meaning. The following list of symbols and abbreviations are suggested for standardization and clarity. Additional symbols and abbreviations may be used but should be clarified in the legend of the plan or on the notebook page.

| ITEM                       | SYMBOL            |   |                          |
|----------------------------|-------------------|---|--------------------------|
| Acre                       |                   |   | Ac.                      |
| Adjust                     |                   |   | Adj.                     |
| And                        | &                 |   |                          |
| Angle                      | ± or θ            |   | Ang.                     |
| Are                        |                   |   | Ar.                      |
| Asphaltic Concrete         |                   |   | A.C.                     |
| Avenue                     |                   |   | Ave.                     |
| Azimuth                    |                   |   | Az.                      |
| Backsight                  | +                 |   | B.S.                     |
| Back Face (As Curb)        |                   |   | B/F                      |
| Back to Back (As Curb)     |                   |   | B/B                      |
| Baseline                   |                   |   | B                        |
| Bench Mark                 |                   |   | B.M.                     |
| Break or Match Line        |                   | / |                          |
| Bridge                     |                   |   | Br.                      |
| Building                   | <br>Conc Bldg.    | / | Bldg.                    |
| Calculated                 |                   |   | Calc.                    |
| Catch Basin                |                   | / | C.B.                     |
| Centare                    |                   |   | Cent.                    |
| Center                     |                   |   | Ctr.                     |
| Centerline                 |                   | / | ☞                        |
| Centimeter                 |                   |   | Cm.                      |
| Certificate of Title       |                   |   | C.T.                     |
| Chairman                   | o-o (Field Notes) |   |                          |
| Check                      | ✓                 |   | Ck.                      |
| Chief of Party             |                   |   | C.P. (Field Notes)       |
| Chord                      |                   |   | C                        |
| Cliff                      |                   | / |                          |
| Company                    |                   |   | Co.                      |
| Concrete                   |                   |   | Conc.                    |
| * Concrete Monument Found  |                   |   | C.M. (Find)              |
| * Concrete Monument Set    |                   |   | C.M. (Set)               |
| Corner                     |                   |   | Cor.                     |
| Correction                 |                   |   | Corr.                    |
| Cosine                     |                   |   | Cos                      |
| Cotangent                  |                   |   | Cot                      |
| Cross Section              |                   |   | X-Sec.                   |
| Culvert                    |                   |   | Culv.                    |
| Dead Man (Guy Wire Anchor) | * a.m.            |   | D.M.                     |
| Deed Book                  |                   |   | D.B.                     |
| Deflection Angle           |                   |   | Defl. ± or<br>Defl. Ang. |

\* Specify Type and Size

| ITEM                     | SYMBOL                                                                               | WEIGHT | ATION   |
|--------------------------|--------------------------------------------------------------------------------------|--------|---------|
| Degree                   | °                                                                                    |        | Deg.    |
| Degree of Curve          |                                                                                      |        | D       |
| Delta                    | Δ                                                                                    |        |         |
| Departure                |                                                                                      |        | Dep.    |
| Dimension Line           |    | 1      |         |
| Distance                 |                                                                                      |        | Dist.   |
| Ditch                    |    | 1      | Dt.     |
| Ditto                    | "                                                                                    |        |         |
| Document                 |                                                                                      |        | Doc.    |
| Double Meridian Distance |                                                                                      |        | D.M.D.  |
| Drawing                  |                                                                                      |        | Dwg.    |
| Drill Hole               | • D.H.                                                                               |        | D.H.    |
| Drive                    |                                                                                      |        | Dr.     |
| Easement                 |    | 1      | Esmt.   |
| East                     |                                                                                      |        | E.      |
| Edge of Pavement         |    | 1      | E.P.    |
| Edge of Wooded Area      |     | 1      |         |
| Elevation                |                                                                                      |        | Elev.   |
| Entrance                 |                                                                                      |        | Ent.    |
| Error of Closure         |                                                                                      |        | Ec      |
| Existing                 |                                                                                      |        | Exist.  |
| External                 |                                                                                      |        | E.      |
| Feet                     | '                                                                                    |        | Ft.     |
| Fence (Board)            |  | 1      | Fc. (B) |
| Fence (Paling or Picket) |  | 1      | Fc. (P) |
| Fence (Wire)             |  | 1      | Fc. (W) |
| Field Book               |                                                                                      |        | F.B.    |
| Fire Hydrant             | • F.H.                                                                               |        | F.H.    |
| Foresight                | +                                                                                    |        | F.S.    |
| Found                    |                                                                                      |        | Find.   |
| Front Face (As Curb)     |                                                                                      |        | F/F     |
| Fuel Line                |  | 1      |         |
| Government               |                                                                                      |        | Gov't   |
| Gunn Geodetic            |   |        | GGTN    |
| Triangulation Network    |                                                                                      |        |         |
| Guard Rail               |  | 1      |         |
| Guy Wire                 |   | 1      |         |
| Guy Pole                 | • G.P.                                                                               |        |         |
| Hectare                  |                                                                                      |        | Ha.     |
| Height                   |                                                                                      |        | Ht.     |
| Height of Instrument     |                                                                                      |        | H.I.    |
| Horizontal               |                                                                                      |        | Hor.    |
| House                    |   |        | Ho.     |

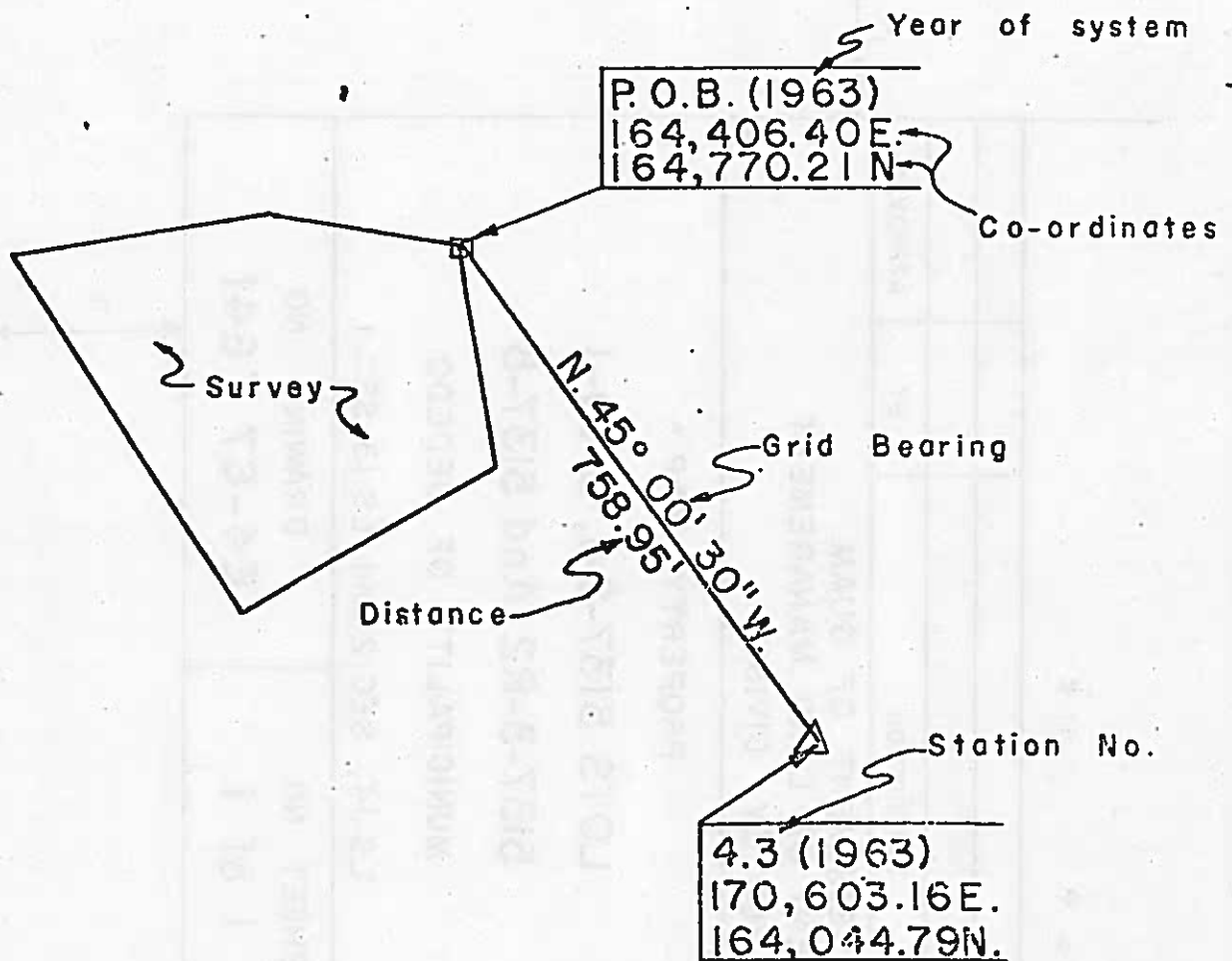
| ITEM                                        | SYMBOL                   | LINE WEIGHT | ABBREVIATION |
|---------------------------------------------|--------------------------|-------------|--------------|
| Inch                                        | "                        |             | In.          |
| * Iron Pin Found                            | ⊙                        |             | I.P. (Fnd)   |
| * Iron Pin Set                              | ○                        |             | I.P. (Set)   |
| Land and Claims Commission                  |                          |             | L & C.C.     |
| Land Management                             |                          |             | L.M.         |
| Land Square                                 |                          |             | L.S.         |
| Latitude                                    |                          |             | Lat.         |
| Left                                        |                          |             | Lt.          |
| Length                                      |                          |             | L            |
| Length of Curve (Arc)                       |                          |             | L            |
| Level                                       | ℳ (Field Notes)          |             |              |
| Light Pole                                  | • L.P.                   |             |              |
| Manhole                                     | ○ M.H.                   |             | M.H. or MH   |
| Measure                                     |                          |             | Meas.        |
| Meter                                       |                          |             | M.           |
| Mile                                        |                          |             | Mi.          |
| Military                                    |                          |             | Mil.         |
| Military Boundary                           | -----                    | 2           | Mil. Bndry.  |
| Millimeter                                  |                          |             | MM.          |
| Minute                                      | '                        |             | Min.         |
| Municipal Boundary                          | -----                    | 2           | Mun. Bndry.  |
| Municipality                                |                          |             | Mun.         |
| North                                       |                          |             | N.           |
| Notkeeper                                   | ℳ (Field Notes)          |             |              |
| Number                                      | #                        |             | No.          |
| Page                                        |                          |             | Pg.          |
| Pavement                                    |                          |             | Pav't        |
| Point                                       |                          |             | Pt.          |
| Point of Compound Curvature                 |                          |             | P.C.C.       |
| Point of Curvature                          |                          |             | P.C.         |
| Point of Reverse Curvature                  |                          |             | P.R.C.       |
| Point of Tangency                           |                          |             | P.T.         |
| Point on Curve                              |                          |             | P.O.C.       |
| Point on Line (Should use Point on Tangent) |                          |             | P.O.L.       |
| Point on Tangent                            |                          |             | P.O.T.       |
| Pounds                                      | #                        |             | Lbs.         |
| Power Pole                                  | ⊕ (Use ⦶ in field Notes) |             |              |
| Project                                     |                          |             | Proj.        |
| Property Line                               | =====                    | 1 & 3       | PL           |
| Proposed                                    |                          |             | Prop.        |
| Radius                                      |                          |             | R.           |
| Record                                      |                          |             | Rec.         |
| Reference                                   |                          |             | Ref.         |

\* Specify Type and Size

| ITEM                                  | SYMBOL                     | LINE | ABSTRACT-<br>WEIGHT | ABBREVIATION     |
|---------------------------------------|----------------------------|------|---------------------|------------------|
| Registered Land Surveyor              |                            |      |                     | R.L.S.           |
| Residence                             |                            |      |                     | Res.             |
| Right                                 |                            |      |                     | Rt.              |
| Right of Way                          | _____                      | 1    |                     | R/W              |
| Road                                  |                            |      |                     | Rd.              |
| Redman                                | φ (Field Notes)            |      |                     |                  |
| Sanitary Sewer                        | _____                      | 1    |                     |                  |
| Second                                | " 10" San.                 |      |                     | Sec.             |
| Section                               |                            |      |                     | Sec.             |
| Sheet                                 |                            |      |                     | Sh.              |
| Sign Post                             | • S.P.                     |      |                     |                  |
| Sine                                  |                            |      |                     | Sin              |
| South                                 |                            |      |                     | S                |
| * Spike Found                         | ○                          |      |                     | Spt. (Find)      |
| * Spike Set                           | ⊗                          |      |                     | Spt. (Set)       |
| Square Feet                           | sq'                        |      |                     | S.F.             |
| Square Meters                         | sqm                        |      |                     | Sq. M.           |
| Station                               |                            |      |                     | Sta.             |
| Stone Wall                            | _____                      | 1    |                     |                  |
| Storm Sewer                           | _____ 18" Storm 7          | 1    |                     |                  |
| Stream                                | _____                      | 1    |                     | Str.             |
| Street                                |                            |      |                     | St.              |
| Tangent                               |                            |      |                     | Tan or T         |
| Telephone Pole                        | ⊙ (Use φ in Field Notes)   |      |                     |                  |
| Temperature                           |                            |      |                     | Temp.            |
| Territorial Surveyor                  |                            |      |                     | T.S.             |
| Topography                            |                            |      |                     | Topo             |
| Transit                               | ⊕ (Field Notes)            |      |                     |                  |
| * Tree (Single)                       | ⊙                          |      |                     |                  |
| Triangulation Point                   | △                          |      |                     |                  |
| United States Coast & Geodetic Survey |                            |      |                     | USC&GS           |
| Vertical                              |                            |      |                     | Vert.            |
| Volume                                |                            |      |                     | Vol.             |
| Water Line                            | _____ 10" H <sub>2</sub> O | 1    |                     | H <sub>2</sub> O |
| Water Valve                           | ⊗ W.V.                     |      |                     | W.V.             |
| West                                  |                            |      |                     | W                |
| Yard                                  |                            |      |                     | Yd.              |
| Continued                             |                            |      |                     | Cont'd           |
| Book                                  |                            |      |                     | Bk.              |
| Mean Low Low Water                    |                            |      |                     | MLLW             |
| Turning Point                         | ○                          |      |                     | T.P.             |
| United States Geological Survey       |                            |      |                     | USGS             |

\* Specify Type and Size

# MAP DESIGNATION OF CO-ORDINATES & SYSTEMS



\* May be subdivision, Right-of-way, etc.

|                                                                                                                       |        |                                                                                                                                                                                                           |                                                  |          |
|-----------------------------------------------------------------------------------------------------------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|----------|
|                                                                                                                       |        |                                                                                                                                                                                                           |                                                  |          |
|                                                                                                                       |        |                                                                                                                                                                                                           |                                                  |          |
| REVISION:                                                                                                             | DATE   | DESCRIPTION                                                                                                                                                                                               | BY                                               | APPROVED |
| <p align="center"><b>GOVERNMENT OF GUAM</b><br/> <b>DEPARTMENT OF LAND MANAGEMENT</b><br/> <b>SURVEY DIVISION</b></p> |        |                                                                                                                                                                                                           |                                                  |          |
| JOB NO:                                                                                                               | 112    | <p align="center">PROPERTY MAP *</p> <p align="center"><b>LOTS 5137-2-1, 5140-1</b><br/> <b>5137-3-R2 And 5137-5</b><br/> <b>MUNICIPALITY OF DEDEDO</b><br/> <b>LS. 14, SEC. 2 And LS. 13, SEC. 1</b></p> |                                                  |          |
| FIELD:                                                                                                                | C.A.B. |                                                                                                                                                                                                           |                                                  |          |
| FIELD BOOK:                                                                                                           | P - 10 |                                                                                                                                                                                                           |                                                  |          |
| COMPUTED:                                                                                                             | C.A.B. |                                                                                                                                                                                                           |                                                  |          |
| DRAWN:                                                                                                                | C.A.B. |                                                                                                                                                                                                           |                                                  |          |
| CHECKED:                                                                                                              | C.A.B. |                                                                                                                                                                                                           |                                                  |          |
| <p align="center">DATE<br/> DECEMBER 6, 1967</p>                                                                      |        |                                                                                                                                                                                                           |                                                  |          |
| <p align="center">SCALE<br/> 1" = 100</p>                                                                             |        | <p align="center">SHEET NO<br/> 1 of 1</p>                                                                                                                                                                | <p align="center">DRAWING NO<br/> E4-67 T641</p> |          |

1"

SHEET TRIM LINE

SHEET TRIM LINE

TABLE 10

Length of 2-cycles in Jacobi iteration  
for  $n = 10$  and  $10^2$

| Iteration | Length of 2-cycle | Iteration | Length of 2-cycle |
|-----------|-------------------|-----------|-------------------|
| 1         | 10                | 10        | 10                |
| 2         | 11                | 11        | 11                |
| 3         | 12                | 12        | 12                |
| 4         | 13                | 13        | 13                |
| 5         | 14                | 14        | 14                |
| 6         | 15                | 15        | 15                |
| 7         | 16                | 16        | 16                |
| 8         | 17                | 17        | 17                |
| 9         | 18                | 18        | 18                |
| 10        | 19                | 19        | 19                |
| 11        | 20                | 20        | 20                |
| 12        | 21                | 21        | 21                |
| 13        | 22                | 22        | 22                |
| 14        | 23                | 23        | 23                |
| 15        | 24                | 24        | 24                |
| 16        | 25                | 25        | 25                |
| 17        | 26                | 26        | 26                |
| 18        | 27                | 27        | 27                |
| 19        | 28                | 28        | 28                |
| 20        | 29                | 29        | 29                |
| 21        | 30                | 30        | 30                |
| 22        | 31                | 31        | 31                |
| 23        | 32                | 32        | 32                |
| 24        | 33                | 33        | 33                |
| 25        | 34                | 34        | 34                |
| 26        | 35                | 35        | 35                |
| 27        | 36                | 36        | 36                |
| 28        | 37                | 37        | 37                |
| 29        | 38                | 38        | 38                |
| 30        | 39                | 39        | 39                |
| 31        | 40                | 40        | 40                |
| 32        | 41                | 41        | 41                |
| 33        | 42                | 42        | 42                |
| 34        | 43                | 43        | 43                |
| 35        | 44                | 44        | 44                |
| 36        | 45                | 45        | 45                |
| 37        | 46                | 46        | 46                |
| 38        | 47                | 47        | 47                |
| 39        | 48                | 48        | 48                |
| 40        | 49                | 49        | 49                |
| 41        | 50                | 50        | 50                |
| 42        | 51                | 51        | 51                |
| 43        | 52                | 52        | 52                |
| 44        | 53                | 53        | 53                |
| 45        | 54                | 54        | 54                |
| 46        | 55                | 55        | 55                |
| 47        | 56                | 56        | 56                |
| 48        | 57                | 57        | 57                |
| 49        | 58                | 58        | 58                |
| 50        | 59                | 59        | 59                |
| 51        | 60                | 60        | 60                |
| 52        | 61                | 61        | 61                |
| 53        | 62                | 62        | 62                |
| 54        | 63                | 63        | 63                |
| 55        | 64                | 64        | 64                |
| 56        | 65                | 65        | 65                |
| 57        | 66                | 66        | 66                |
| 58        | 67                | 67        | 67                |
| 59        | 68                | 68        | 68                |
| 60        | 69                | 69        | 69                |
| 61        | 70                | 70        | 70                |
| 62        | 71                | 71        | 71                |
| 63        | 72                | 72        | 72                |
| 64        | 73                | 73        | 73                |
| 65        | 74                | 74        | 74                |
| 66        | 75                | 75        | 75                |
| 67        | 76                | 76        | 76                |
| 68        | 77                | 77        | 77                |
| 69        | 78                | 78        | 78                |
| 70        | 79                | 79        | 79                |
| 71        | 80                | 80        | 80                |
| 72        | 81                | 81        | 81                |
| 73        | 82                | 82        | 82                |
| 74        | 83                | 83        | 83                |
| 75        | 84                | 84        | 84                |
| 76        | 85                | 85        | 85                |
| 77        | 86                | 86        | 86                |
| 78        | 87                | 87        | 87                |
| 79        | 88                | 88        | 88                |
| 80        | 89                | 89        | 89                |
| 81        | 90                | 90        | 90                |
| 82        | 91                | 91        | 91                |
| 83        | 92                | 92        | 92                |
| 84        | 93                | 93        | 93                |
| 85        | 94                | 94        | 94                |
| 86        | 95                | 95        | 95                |
| 87        | 96                | 96        | 96                |
| 88        | 97                | 97        | 97                |
| 89        | 98                | 98        | 98                |
| 90        | 99                | 99        | 99                |
| 91        | 100               | 100       | 100               |

## APPENDIX B

### Useful Tables

&

### Conversion Factors

TABLE B-1

Length of Seconds in Feet between  
Latitudes  $13^{\circ} 10'$  and  $13^{\circ} 40'$ 

| Degree Of<br>Latitude |    | Latitude | Longitude |
|-----------------------|----|----------|-----------|
| ° '                   |    | Feet     | Feet      |
| 13                    | 10 | 100.82   | 98.80     |
|                       | 11 | .82      | .80       |
|                       | 12 | .82      | .79       |
|                       | 13 | .82      | .78       |
|                       | 14 | .82      | .78       |
|                       | 15 | .82      | .77       |
|                       | 16 | .82      | .76       |
|                       | 17 | .82      | .76       |
|                       | 18 | .82      | .75       |
|                       | 19 | .82      | .74       |
|                       | 20 | .82      | .73       |
|                       | 21 | .82      | .73       |
|                       | 22 | .82      | .72       |
|                       | 23 | .82      | .71       |
|                       | 24 | .82      | .71       |
|                       | 25 | .82      | .70       |
|                       | 26 | .82      | .69       |
|                       | 27 | .82      | .69       |
|                       | 28 | .82      | .68       |
|                       | 29 | .82      | .67       |
|                       | 30 | .82      | .67       |
|                       | 31 | .82      | .66       |
|                       | 32 | .82      | .65       |
|                       | 33 | .82      | .64       |
|                       | 34 | .82      | .64       |
|                       | 35 | .82      | .63       |
|                       | 36 | .82      | .63       |
|                       | 37 | .82      | .62       |
|                       | 38 | .82      | .61       |
|                       | 39 | .82      | .61       |
| 13                    | 40 | 100.82   | 98.60     |

USE OF TABLE B-1

1. Check ANS or USC&GS map for degrees and minutes of latitude (Approximate) for point wanted.
2. Extract factors from Table at appropriate minutes.
3. Divide co-ordinates difference (in feet) between point wanted and Agana Monument by factor. Answer derived is seconds.
4. Add or subtract these seconds to Agana Monument.

AGANA MONUMENTNorth Latitude  $13^{\circ} 28' 21''$  \*East Longitude  $144^{\circ} 44' 56''$  \*

## EXAMPLE:

Point Co-ordinates at

 $13^{\circ} 30'$  (Approximate)

|                  |                  |
|------------------|------------------|
| 183,726.48 E     | 183,726.48 N     |
| 164,041.50 E*    | 164,041.50 N*    |
| <u>19,684.98</u> | <u>19,684.98</u> |

 $19,684.98 / 98.67 = 200'' (3' 20'')$  $19,684.98 / 100.82 = 195'' (3' 15'')$ North Lat.  $13^{\circ} 28' 21''$  (Agana)+  $3' 80''$ North Lat.  $13^{\circ} 31' 41''$  (Answer)East Long.  $144^{\circ} 44' 56''$  (Agana)+  $3' 15''$ East Long.  $144^{\circ} 48' 11''$  (Answer)

\* These values used for 1913, 1945, 1949 and 1963 nets. Evidence indicates that Agana Monument was not the same for all nets (Probably moved less than 4 feet).

# CONVERSION FACTORS

## Linear - Area

### L I N E A R

| UNITS      | CENTIMETERS | METERS    | KILOMETERS  | INCHES   | FEET     | MILES       |
|------------|-------------|-----------|-------------|----------|----------|-------------|
| Centimeter | 1           | 0.01      | 0.00001     | 0.39370  | 0.032808 | 0.5/062137  |
| Meter      | 100         | 1         | 0.001       | 39.37    | 3.28083  | 0.3/062137  |
| Kilometer  | 100000      | 1000      | 1           | 39370.00 | 3280.83  | 0.62137     |
| Inch       | 2.54        | 0.0254    | 0.4/0254    | 1        | 0.083333 | 0.4/0157828 |
| Foot       | 30.4801     | 0.304801  | 0.3/0304801 | 12       | 1        | 0.3/0189304 |
| Miles      | 160934.72   | 1609.3472 | 1.60935     | 63360    | 5280     | 1           |

### A R E A

| UNITS         | SQUARE INCHES | SQUARE FEET | ACRES       | SQUARE MILES | SQUARE METERS | HECTARES   |
|---------------|---------------|-------------|-------------|--------------|---------------|------------|
| Square Inches | 1             | 0.006944    | 0.6/0159423 | 0.9/02491    | 0.3/06451626  | 0.7/064516 |
| Square Feet   | 144           | 1           | 0.4/0229568 | 0.7/0358701  | 0.929034      | 0.5/02903  |
| Square Acres  | 6272640       | 43560       | 1           | 0.0015625    | 4046.873      | 0.441687   |
| Square Miles  | 4014489600    | 27878400    | 0.40        | 1            | 2589998       | 258.9998   |
| Square Meters | 1549.9969     | 10.76387    | 0.3/0247104 | 0.6/03861006 | 1             | 0.0001     |
| Hectares      | 15499969      | 1076387     | 2.47104     | 0.00386101   | 10000         | 1          |

Notations like 5/0, 6/0 etc. are to be replaced by ciphers, e.g., 0.0000062137

- 1 Land Square = 9.652525 Square Miles
- 1 Land Square Unit = 250,000 Square Meters = 61.776 Acres = 2,690,962.5 Square Feet
- 1 Land Square Unit = 25 Hectares
- 1 Land Section = 6,250,000 Square Meters = 625 Hectares = 1,544.4 Acres
- 1 Land Square = 25,000,000 Square Meters = 2500 Hectares = 6,177.6 Acres

### USE OF TABLE

1. Select appropriate unit in Column 1
2. Multiply factor found under appropriate column

X Number of units in Column 1

Example:

Convert 55 Acres to Square Meters  
55 (No. of Acres)

X 4046.873 (Column 6, Line 3, Area Table)

= 222,578.015 Square Meters

Example:

Convert 23,000 Square Meters to Acres

23,000 (No. of Square Meters)  
x .000247104 (Column 4, Line 5, Area Table)

= 5.685 Acres

Example:

Convert 1100 Meters to Feet

1100 (Meters)  
x 3.28083 (Column 6, Line 2, Linear Table)

= 3608.91 Feet

Example:

Convert 40,000 Feet to Meters

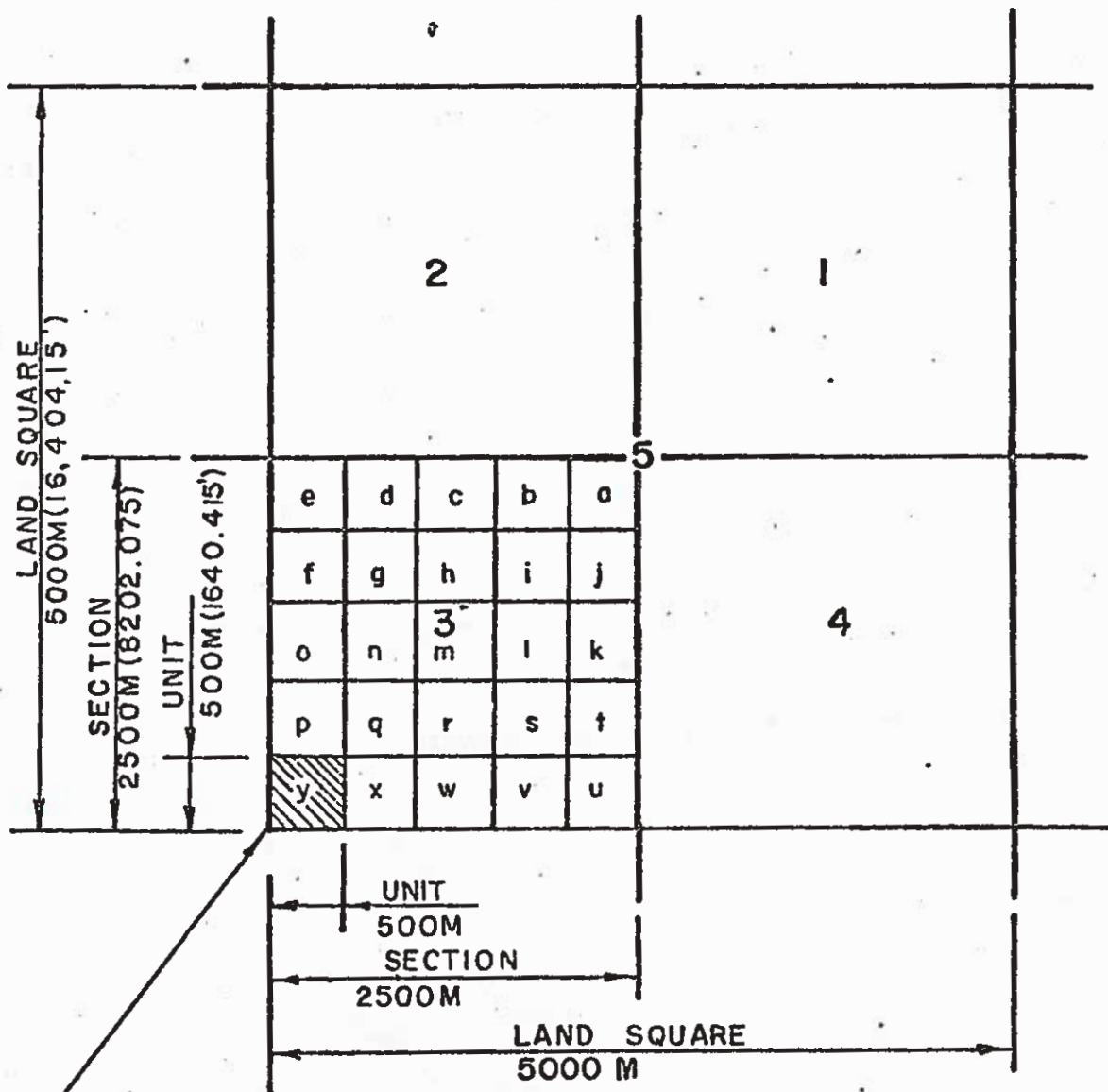
40,000 (Feet)  
x 0.304801 (Column 3, Line 5, Linear Table)

= 12,192.040 Meters

### Sketch of Guam Land Square System

C-1

# LAND SQUARE SUBDIVISION



Example: Shaded area described as follows-

Land square 5, Section 3, Unit y.

APPENDIX D  
SAMPLE FIELD NOTES

## GGTN - ROUTE 1E

Turner to Harmon (Cont'd) Job # 5

C.P. 00  
ID 20  
# 0July 8, 1966  
KIE Tape #1294  
KIE # 56783

17

| STA.   | BS    | FS     | DEFL.<br>+    | ALTIMETER<br>ELEV. | LINE  | DIST.   | TEMP | Note: Type Tension = 20 lb |
|--------|-------|--------|---------------|--------------------|-------|---------|------|----------------------------|
| HARMON | 1E.20 | 5000   |               |                    |       |         |      |                            |
| 1E.20  | 1E.19 | HARMON |               |                    |       |         |      |                            |
| 1E.19  | 1E.18 | 1E.20  |               |                    |       |         |      |                            |
| 1E.18  | 1E.17 | 1E.19  |               |                    |       |         |      |                            |
| 1E.17  | 1E.16 | 1E.18  | 10"11' (12L)  | 120                | 17-18 | 233.10  | 92°  |                            |
|        |       |        | 122°24' (12L) |                    | 18-17 | 233.20  | 90°  |                            |
|        |       |        | 10"11' (12L)  |                    | 17    | 233.15  | 91°  |                            |
| 1E.16  | 1E.15 | 1E.17  | 5"13' (11R)   | 110                | 16-17 | 639.38  | 86°  |                            |
|        |       |        | 62°36' (12R)  |                    | 17-16 | 639.39  | 88°  |                            |
|        |       |        | 5"13' (11R)   |                    | 16    | 639.355 | 87°  |                            |





11

|       |      |        |      |        |
|-------|------|--------|------|--------|
| 1E.16 | 4.00 | 235.56 | 2.08 | 231.56 |
|-------|------|--------|------|--------|

|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|

on work

**D-4**

APPENDIX E

Territorial Surveyors

Territorial Surveyors

\* Denotes Acting Territorial Surveyor

|                     |             |
|---------------------|-------------|
| Gordon P. Daniels   | 1959 - 1961 |
| James W. Darling    | 1961 - 1964 |
| Frederick J. Spoor* | 1964 - 1965 |
| Vicente F. Terlaje* | 1965 - 1966 |
| Ronald G. Perry     | 1966 -      |

APPENDIX F  
REPORT ON 1945  
LAND AND CLAIMS COMMISSION  
TRIANGULATION NETWORK

LAND AND CLAIMS COMMISSION

DATE \_\_\_\_\_

To: The Officer-in-Charge, Land and Claims Commission for Guam  
From: The Field Engineer, Survey Section, Land and Claims Commission for Guam.  
Via: Officer-in-Charge, Survey Section.  
Subject: Report on Cadastral Survey of the Island of Guam, Marianas Group, Pacific Ocean.

1. Authority:

A. The basic authority for the work described herein is precept contained in Chief of Naval Operation's letter, serial 177213, dated 3 March 1945, to Commander L. J. Watson, CEC, USNR.

B. The authority for this report is by verbal command on 27 August 1945 of the Officer-in-Charge of the Land and Claims Commission for Guam.

2. Location:

The survey described is located on the Island of Guam, Marianas Group, Pacific Ocean.

3. Purpose:

A. The survey was conducted to establish and preserve boundary lines and markers and to assist the Land and Claims Commission for Guam in making recommendations in regard to the following:

- (1) Action to be taken to determine the ownership of land;
- (2) Restoration of boundaries and a land record system;
- (3) Compensation of owners in money or in kind for land used, acquired, or to be acquired by the United States;
- (4) Procedure for the settlement, when authorized, of claims of inhabitants of Guam for damages to real and personal property and for personal injury or death incident to military operations.

B. The purpose of this report is to record a clear and complete description of the survey as accomplished to date and of the methods employed, to be used for future reference by any who may be delegated to conduct cadastral surveys in this location or to carry on the work that has been initiated.

4. Scope: The survey consists of the establishment of the following:

A. A triangulation system for primary control from which a plane rectangular coordinate system was devised based on the polyconic method of grid projection from geographic positions.

B. Transit and chain traverses, tied to the triangulation system, along certain primary roads for secondary control.

C. Either transit and chain or transit and stadia traverses tied directly to the triangulation system or to the secondary control traverses, to establish the individual boundaries required.

5. Organization:

A. The Survey Section arrived at Guam on 23 April 1945 and consisted of a Lieutenant, CEC, USNR, as Officer-in-Charge; Eighteen (18) Chief Carpenter's Mates, CB, USNR; Four (4) Carpenter's Mates, First Class, CB, USNR; One Shipfitter, First Class, CB, USNR, and Seven (7) Carpenter's Mates, Second Class, CB, USNR. Three (3) of the Chief Carpenter's Mates were loaned to other sections of the Land and Claims Commission or to another department of Military Government. Four Chief Carpenter's Mates and one Carpenter's Mate, Third Class, were loaned to the Survey Section by Naval Construction Battalions situated on the Island.

B. In addition to the above, one native citizen rendered valuable assistance as a guide and boundary dispute arbitrator on tracts of land that had never been surveyed or the records of which had been lost; a native draftsman was loaned by the Public Works Department; and about twenty (20) natives were employed at varying rates and used as rodmen, chainmen, axemen, and interpreters by the field survey parties.

C. The Officer-in-Charge of the Survey Section appointed a Chief Carpenter's Mate as Office Engineer; four (4) Chief Carpenter's Mates as Chief of Parties on Triangulation, Secondary Control Traverses Allocation Surveys, and Town and City Lot Surveys, respectively; and designated the men to work in the various departments. The Office Engineer mentioned above became eligible for discharge and was replaced by one of the First Class Carpenter's Mates on 14 June 1945. On 28 June 1945, the Officer-in-Charge abolished the Chief of Party organizations cited above and appointed a Chief Carpenter's Mate as Field Engineer to assume charge of all field activities and incidentals thereto.

D. At this time a computing section consisting of three (3) Chief Carpenter's Mates and a Carpenter's Mate, Second Class, was formed by reducing the field forces and adding part of the triangulation department. This section functioned directly under the supervision of the Field Engineer and reduced all field notes; computed all triangulation data; established the plane rectangular coordinate system and

isted coordinates for all of the principal stations and markers; and computed closed traverses on all secondary control and boundary surveys. Though previously inexperienced in some of the above computations, these men have done an excellent job.

E. The drafting department was originally composed of a Chief Carpenter's Mate as Office Engineer and four (4) Carpenter's Mates, First Class and two (2) Carpenter's Mates, Second Class, as draftsmen. Later a Chief Carpenter's Mate and a Carpenter's Mate, Third Class, borrowed from other Construction Battalions, were added. As it became evident that this force was not sufficient to expedite all the drafting required, two (2) Chief Carpenter's Mates, a Carpenter's Mate, First Class, and a Carpenter's Mate Second Class, were removed from field forces and assigned to the drafting department.

F. The organization described above was extremely flexible being composed of men with experience in considerably variable types of engineering and construction, but was short-handed for the special type and amount of work required for the survey. It is the belief of the undersigned that the organization would have functioned more expeditiously and more efficiently had it been less flexible and composed of more specialized land surveyors and more experienced rodmen and chainmen, so that native labor could have been utilized entirely as axemen and interpreters.

#### 6. Existing Land Survey Records:

A. Four survey note books were found in existence in the possession of a native employed at the Fifth Brigade Headquarters. All of the books contained data which appeared to have been transcribed from other sources. The books were invaluable for use in identifying and locating existing triangulation stations and land survey control markers. It is reported that some survey notes were destroyed by the natives to keep them from falling into the hands of the Japanese occupation forces.

B. The record books of the Department of Records and Accounts were found practically intact. The surveys recorded in these books were transcribed by members of the field survey parties and plotted as tract maps by the draftsmen.

C. All maps of the survey division of the Naval Government Public Works Department were lost, but as the surveys were completed the individual property owner was given a blueprint of the plat which contained his lands. A considerable number of these were turned into the drafting room and were invaluable when coordinated with the transcribed survey descriptions for use in compiling the tract maps.

D. Members of the triangulation department contacted personnel from the U. S. Coast and Geodetic Survey Ship, the U.S.S. Bowditch, while said was in harbor at Guam and obtained valuable triangulation data that had been compiled by both the U.S.S. Bowditch and the U.S.S. Hydrographer.

## 7. Difficulties Encountered:

A. It was necessary to utilize native help who had no previous surveying experience as key rodmen and chainmen. It was physically impossible to train these men to accomplish the work in the limits of accuracy required in the short time they were employed. A considerable amount of surveys had to be checked to locate errors in chaining. No criticism of the intelligence of these people is implied or intended. It is the undersigned's observation that they compare quite favorably with inexperienced men he has been associated with at various times in the United States.

B. The scarcity of prior filed notes seriously hampered the survey parties in using and conforming to existing data. Had the basic triangulation data been available a few spot checks would have made the whole existing triangulation system available for use in so far as it existed. Since the Military Survey of 1913-1914 it appears that all subsequent surveys were based on stations of that survey accepted as correct but no ties covering the entire triangulation system could be located. It was necessary to retriangulate the Island to ascertain that the system was all based on the same datum with no gaps.

C. The instruments furnished the Survey Section were excellent for ordinary land surveying, but were not accurate enough to be used even for third order triangulation. The chains were hard to read after being in use only a short time and had a high coefficient of expansion. In this climate the average temperature corrections would equal the allowable error of closure that was required. No tension scales for chaining were available.

D. After preliminary surveys were completed on about 95% of the allocations that were regarded as necessary to purchase by the United States, it was discovered that higher authority would not approve a permanent boundary, possibly due to the rapidly changing picture of the war. Permanent markers were not set and it is quite possible that the survey stations will soon be destroyed due to the highly diversified construction activities of the Seabees and Marines stationed in this locality.

## 8. Survey Methods:

### A. Primary Control

(1) The Triangulation Department spent the first two months trying to reconcile the existing land coordinate system established in 1914 with a polyconic grid projection of plane rectangular coordinates. Extensive study and analysis of the few existing records available still left uncertainties as to the exact method employed in establishing the land coordinate system.

(2) A "Table for determining coordinates of Triangulation Stations" headed "Headquarters Military Survey of Guam" typed on linen was found in one of the old survey note books. This table shows the

value of one (1) minute in meters and in feet for meridional arcs and arcs of parallel for latitudes ranging from thirteen degrees and twelve minutes ( $13^{\circ} - 12'$ ) to thirteen degrees and forty minutes ( $13^{\circ} - 40'$ ). The table was checked by comparison with a modern table and was found to be reasonably correct.

(3) It appears that the surveyor had at his disposal the basic triangulation data complete with geographic positions of the stations. He established a large concrete monument, known as Agana Monument, in the City of Agana, and tied this marker to the triangulation system by traverse. The geographic position of the monument was computed and it was assigned a coordinate value of 50,000 meters North and 50,000 meters East, these values being high enough so that there would be no negative coordinate values on the Island. It is believed that the difference in seconds between the latitudes of Agana Monument and the nearby triangulation station for which coordinates were desired was converted into meters and added (or subtracted) to the 50,000 meters North value assigned to Agana Monument. The result was listed as the North land coordinate value for this station. The same process substituting longitude difference in seconds and converting to meters, was used to determine the East land coordinate value of the same station. The land coordinate values of each succeeding station in the triangulation system were computed from the station preceding and possibly checked by one or more adjoining stations.

(4) The previous method of coordinating the land may not have been exactly as described above but the description appears to be a very close approximation from checks made on random stations. The table described in Paragraph 8A (2) above listed the value of one minute ( $1'$ ) in meters for arcs of parallel only to the nearest one-tenth (0.1) of a meter so some divergence in interpolation was encountered.

(5) True azimuth was used in the original surveys and corrections for convergence of the meridian were made at each triangulation station. Since corrections for convergence are not considered necessary for the purpose of this survey and have been eliminated.

(6) It was decided to abolish the old land coordinates and establish a plane rectangular coordinate system with a plane azimuth based on East Longitude meridian  $144^{\circ} - 44' - 55.52''$  and assigning a value of 50,000 meters North and 50,000 meters East for the intersection of that meridian with North Latitude  $13^{\circ} - 28' - 20.87''$  for computation purposes, these values being the same as assigned to that geographic position by the Military Land Survey of 1914. The Island is regarded as being too small in extent to warrant the use of geographic coordinates and the necessary computations for land surveys are considerably simplified by the establishment of plane rectangular coordinates.

(7) At first it was not regarded as necessary to retriangulate the Island and coordinates were computed for all stations from the listed geographic positions. Several errors were made in these computations and since the triangulation department was using a three point problem location for new triangulation stations, the stations could not be proved wrong until tied in by a closed survey from another triangulation station or by another three point problem.

(8) This method proved very unsatisfactory and by the last of June the land surveys were far ahead of both the primary and secondary control. At that time the Officer-in-Charge of the Survey Section appointed the Field Engineer with orders to correct methods and errors in all departments in order to provide a more accurate survey and more efficient organization.

(9) Field checks made on the existing triangulation stations of "Tenjo", "Lee # 7," "Alifan," "Butler # 4," and "McCaro # 4" indicated that the relative geographic positions of these stations as listed were correct. Since the majority of the land surveys in progress at that time were in the vicinity of these stations it was decided to commence a triangulation system there and close the gaps on which data were not available.

(10) To chain an accurate base line with the equipment available was entirely impracticable. Accordingly, the stations of "Tenjo" and "Lee # 7," being on opposite sides of the theoretical meridian and since the computed distance between them did not require immediate extension and appeared to more closely coincide with the checked stations, were selected as a base line to commence the triangulation system. Plane rectangular coordinates were computed for these stations by the polyconic method of grid projection from their given geographic positions, and after noting how closely the coordinates on the stations of "Alifan," "McCaro # 4," and "Butler # 4" computed by direct triangulation checked the coordinates computed from listed geographic positions on the same stations it was decided to hold the computed coordinates of "Tenjo" and "Lee # 7" as correct and to make the plane azimuth and distance governed by these coordinates a basis for the entire plane coordinate system.

(11) The best instruments available to the Survey Section for triangulation were a twenty (20) second Gurley transit and a thirty (30) second K. and E. transit. With these instruments angles were repeated 6D and 6R and the expliment of each angle measured 6R and 6D. Prior to 28 June some angles had been turned using a 6D and 6R repeating method based on initial settings of zero degrees and one hundred (100) degrees and closing the horizon. Some slight variations in these methods may be detected in the field books due to an individuality complex on the part of the instrumentmen.

(12) The average triangle closure before adjustment was about 7 seconds. The maximum triangle closure was 20 seconds, which occurred in only one case and contained an angle turned from a previously constructed platform which was not steady and required reconstruction rather than repair. The platform was used only for this one angle so was not reconstructed. The other two angles of this triangle were checked and then the adjustment for the triangle all placed in the angle necessarily turned from the platform. From this point on, angles were re-checked on all triangles closing out as much as twelve seconds until they closed within this limit.

(13) Angles in the quadrilaterals were weighed, adjusted geometrically, and finally adjusted by trigonometric functions. The method utilized followed Form 7, "Quadrilateral Adjustment," of the Corps of Engineers, U. S. Army.

(14) As the triangulation progressed North and East from its assumed base line, a steadily increasing difference was noted between the "Y" axis of the plane coordinates computed by direct triangulation and the "Y" axis of plane coordinates as computed from previously established geographic positions. At the extreme North and Northeast ends of the Island on the stations of "Machanao" and "Pati Point" this difference amounted to about two and one-half (2 1/2) meters, although the turned azimuth checked the computed azimuth between these stations within five (5) seconds. These two stations were both included in the Military Survey of 1914, and it is noted that the Latitudes for these stations as listed by that survey differ in approximately the same amount and in the same direction from the Latitudes established by the U.S.S. Bowditch (mentioned in paragraph 6D above) as the difference in the "Y" axes of the coordinates as cited.

(15) During the process of triangulation a traverse was run from two existing markers in the city of Agana to re-establish the old "Agana Monument." The hole from which the marker had been removed was located and found sufficiently intact to justify setting a new monument by centering the hole. As an additional check on this position azimuths were turned to visible points and checked the previous azimuths within a few seconds. The new monument was included in the triangulation system but its new computed coordinates do not check the old assigned coordinates. The old monument was established by traverse and it is not known if any other check was made on its computed geographic position. The new monument is of value since the City of Agana survey data can still be relocated from relative positions, although it has ceased to be of value as designating the meridian of the rectangular coordinate system.

(16) Since the difference in coordinates mentioned above was quite apparent and since the triangulation system as a whole was based on the assumption that the computed base line was correct, it was decided to chain a base line at the North end of the Island by the best methods available and check the triangulation into the measured base. The two triangulation stations comprising this base line are recorded as "East Base" and "West Base."

(17) The U.S.S. Bowditch loaned the triangulation party a standardized tape to establish a comparative standardization on the tape to be used in measuring the base line. A thermometer was procured from some unknown source and members of the triangulation party designed a metal back for the thermometer, chaining bucks and a tape stretcher. These items were constructed by the Public Works Department of Military Government. Tension scales could not be procured so a weight and pulley arrangement was devised to produce the proper tension on the chain. The thermometer was attached to

the chain and was read and recorded for each distance measured.

Two chaining bucks were used for each measurement and their difference in elevation were determined by a hand level. The base line was measured twice commencing at opposite ends and the measurements corrected for inclination and temperature separately. The two measurements checked better than one part in ninety thousand (90,000).

(18) After the base line had been measured and computed, another standardized tape was discovered in the possession of the 103rd Naval Construction Battalion and the base line tape was checked against this tape for another comparative standardization value. This value checked out from the first value obtained, by thirty-seven thousandths (0.037) of a foot in 100 feet. The standard tape obtained for the first evaluation was not available for a re-check and no other standard tape could be located.

(19) Neither of the three tapes mentioned above was an "Invar" tape. Neither of the two standard tapes had been used since being standardized and the base line tape was used only for that one measurement. The computed distance from triangulation; the measured distance obtained by the first standardization value on the base line tape; and the measured distance recomputed from the second standardization value on the base line tape are shown in the following table:

| East Base to West Base<br>From Direct Triangulation | East Base to West<br>Base (Measured)<br>Using Tape Standard<br>from U.S.S. Bowditch | East Base to West Base<br>Computed Measurement<br>Using Tape Standard<br>From 103rd N.C.B. |
|-----------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| 10,116.15 feet                                      | 10,118.64 feet                                                                      | 10,114.95 feet                                                                             |
|                                                     |                                                                                     |                                                                                            |
|                                                     |                                                                                     |                                                                                            |
|                                                     |                                                                                     |                                                                                            |

(20) It will be noted in the above table that the distance computed from direct triangulation will check within less than one foot of an average between the two distance computed from actual measurement. The undersigned is not in a position to state which standard tape, if either, is correct.

(21) The triangulation system described in the preceding paragraphs was established solely for use in cadastral surveys. The distance from Tenjo to Machanao and from Tenjo to Pati Point by triangulation are thirty-three thousand six hundred (33,600) meters and thirty-four thousand, six hundred (34,600) meters respectively. An error of two and one-half (2 1/2) meters in either of these distances will give an error of closure far better than that normally expected in cadastral surveys. It is believed that the system is entirely adequate for the purpose for which it is intended, although it is not recommended for use in geodetic surveying due to the type of instruments with which it was established.

#### B. Secondary Control

(1) Chain traverses were commenced at certain

triangulation stations and continued along some of the primary roads for secondary control. These traverses were tied to triangulation stations passed enroute and also to a triangulation station at or near the end of the line.

(2) The minimum error of closure required for these traverses was one part in five thousand (1:5,000). The traverses were all closed within these limits and then adjusted.

(3) After the traverses were completed reference monuments were set at accessible points opposite certain stations along the traverses. Coordinates are being computed for these monuments. Some of the monuments were tied to the traverses by stub lines. The undersigned does not approve of this method and at this writing has delegated a survey party to double check all stub lines and if practicable to tie the monuments in with a closed traverse. This will be completed before any final coordinates are listed for these markers.

### C. Boundary Surveys

(1) Preliminary boundaries on the individual tracts were established by transit and stadia traverses for the most part, tied to the triangulation system or to the secondary control traverses, although a few have been located by transit and chain traverses.

(2) No minimum error of closure for these traverses has been definitely established. To date these stadia traverses have closed anywhere from one part in eighteen thousand (1:18,000) down to one part in eight hundred (1:800) on work that could be regarded as being in the neighborhood of a final boundary. These stadia closures compare more than favorably with the results accomplished by chain traverses in their initial running.

(3) The longer stadia traverses closed considerably better than the shorter traverses, probably due to minor errors balancing out. None of these boundary traverses were adjusted and the errors of closure are clearly indicated on the computed traverse sheets.

(4) The undersigned is of the firm opinion that the value of the far greater majority of the land on Guam does not warrant anything more than a reasonably accurate stadia survey. In the cadastral survey under discussion, the extra time and labor involved in chaining has not been justified by the results obtained.

### 9. Permanent Markers

A. The standard permanent marker adopted for this survey is a forty millimeter (40mm) shell case set in a six inch or eight inch square concrete monument. These shell cases are stamped "L. & C." and the designation of that particular station, such as "Triangulation Station" (and the name of the station) or with the plus on the centerline of the road as established by the traverse.

B. The following old triangulation stations were re-marked as described below:

(1) McCaro # 4. The iron pipe filled with concrete was removed and a standard Land and Claims monument stamped "L & C Triangulation Station McCaro # 4" set in the exact location of the pipe.

(2) Lee # 3. A forty millimeter (40mm) shell case stamped "L & C Triangulation Station Lee 3" was driven inside of the existing pipe.

(3) Iates. A forty millimeter (40mm) shell case stamped "L & C Triangulation Station Iates" was driven inside of the existing iron pipe.

(4) Pago. The drill hole in the concrete observation post was enlarged and a forty millimeter (40mm) shell case stamped "L & C Triangulation Station Pago" was granted in the concrete slab.

#### 10. Maps and Records.

A. A complete file of tracings and prints depicting the work as accomplished will be completed by the draftsmen and turned over along with the field books, traverse sheets, descriptions of stations and lists of coordinate values on all permanent markers to an authorized representative of those delegated to carry on the work.

#### 11. Recommendations.

A. It is recommended that the cadastral survey described in this report be accepted as correct for the purpose for which it is intended.

B. It is further recommended that copies of this report or of a similar report prepared by some other competent authority be made a part of the land record system for Guam.

C. It is further recommended that the United States Coast and Geodetic Survey in Washington, D.C., be notified of the existence of this cadastral survey and of the changes made in the description of the markers described in paragraph 9B above.

#### 12. Conclusion.

The Field Engineer concludes that the survey is correct for the primary purpose for which it was intended; that the methods and equipment utilized are suitable only for cadastral surveys or for work where an even lesser degree of accuracy is required; that the low value of the major portion of the land concerned does not justify the additional time and labor involved to produce more accurate results; and recommends that the survey be accepted on the condition that the proper authorities be notified as to the salient features of the work.

APPENDIX G  
MONUMENT IDENTIFICATION

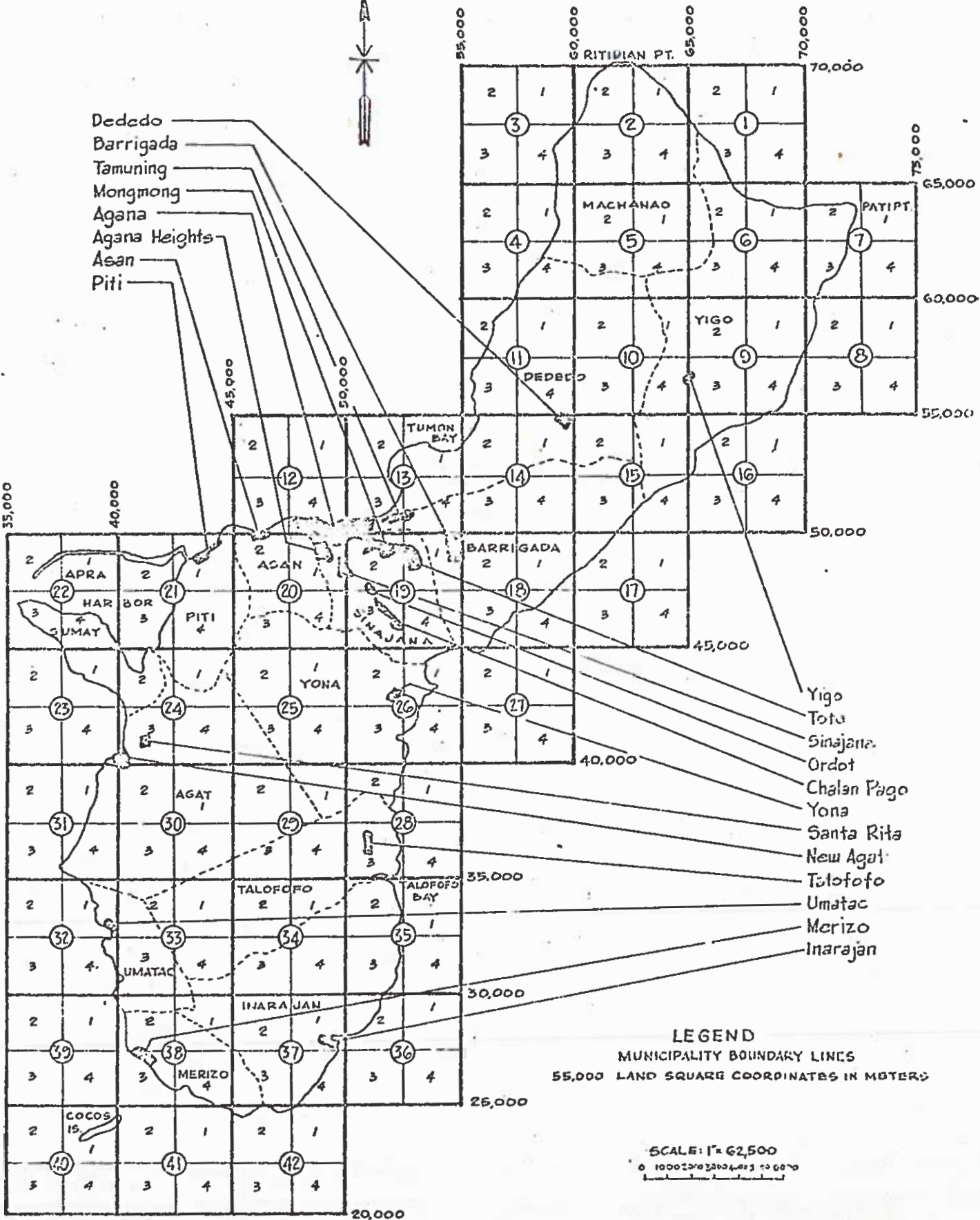


APPENDIX II  
A GLOSSARY OF  
GUAMANIAN PLACE NAMES

(Located by Land Square, Section and Unit)



Dededo  
Barrigada  
Tamuning  
Mongmong  
Agana  
Agana Heights  
Asan  
Piti



| <u>Place Name</u>             | <u>Land<br/>Square</u> | <u>Section</u> | <u>Unit</u> |
|-------------------------------|------------------------|----------------|-------------|
| Abo                           | 24                     | 2              | L,S         |
| Abong Beach                   | 32                     | 1              | V           |
| Achae Point                   | 2                      | 2              | N           |
| Achegchong                    | 24                     | 2              | H,I         |
| Achugao                       | 32                     | 1              | C           |
| Achugao Point                 | 32                     | 1              | D           |
| Adacao                        | 15                     | 3              | D,E         |
| Adelup Point (Missionary Pt.) | 12                     | 4              | P           |
| Adotgan Point                 | 22                     | 3              | B           |
| Adotgan Point                 | 23                     | 1              | R           |
| Afami                         | 19                     | 2              | R,W         |
| Agafan                        | 21                     | 4              | P,Q         |
| Agaga                         | 32                     | 1              | H,I         |
| Agana                         | 12                     | 4              |             |
|                               | 13                     | 3              |             |
|                               | 19                     | 2              |             |
|                               | 20                     | 1              |             |
| Agat                          | 24                     | 3              | F,G,N,O     |
| Aguada                        | 21                     | 3              | K           |
|                               | 21                     | 4              | O,P         |
| Ague                          | 4                      | 4              | N,P,Q,X,Y   |
| Alacunao (NW Field Runway)    | 2                      | 3              | K,L,M,N     |
| Alasi                         | 23                     | 4              | U           |
| Alifan Mt.                    | 30                     | 2              | C           |
| Almagosa Mt.                  | 30                     | 3              | R,S         |
| Alupang Is. (Alupat)          | 13                     | 3              | A           |

| <u>Place Name</u>        | <u>Land<br/>Square</u> | <u>Section</u> | <u>Unit</u> |
|--------------------------|------------------------|----------------|-------------|
| Alupat Is. (Alupang)     | 13                     | 3              | A           |
| Alutom Is.               | 31                     | 1              | C           |
| Alutom Mt.               | 20                     | 3              | X           |
| Amanglago                | 24                     | 1              | N,O         |
| Amantes Pt.              | 11                     | 3              | G           |
| Anaga                    | 20                     | 1              | D,E         |
| Anaguan                  | 30                     | 2              | X,U         |
|                          | 30                     | 3              | D,E         |
| Anao                     | 9                      | 1              | U,V         |
| Anao Pt.                 | 8                      | 2              | O           |
| Anigua                   | 12                     | 4              | Q,R,W,X     |
| Apaca Pt. (Rocky Point)  | 24                     | 2&3            |             |
| Apra                     | 24                     | 2              | O           |
| Apugan                   | 20                     | 1              | I           |
| Apurguan Beach (Dungcos) | 13                     | 3              | K,S,T       |
|                          | 13                     | 4              | F,N,O,R     |
| Asan                     | 20                     | 2              | C           |
| Asan Pt.                 | 12                     | 3              | Y           |
| As Don Lucas             | 15                     | 1              | A,B,I,G     |
| Asinan                   | 26                     | 2              | A,J         |
| Aslempo                  | 28                     | 2              | B,C         |
| Asniyao                  | 18                     | 3              | A,B         |
| Aspengao                 | 18                     | 2              | P,Q         |
| Asquidachay              | 29                     | 1              | H,I         |
| Asu                      | 22                     | 4              | O           |
| Atantano                 | 24                     | 2              | B,I,J,K     |

| <u>Place Name</u>  | <u>Total<br/>Square</u> | <u>Section</u> | <u>Unit</u>                     |
|--------------------|-------------------------|----------------|---------------------------------|
| Atotdian           | 23                      | 1              | A                               |
| Ayuja              | 24                      | 3              | G                               |
| Babe Is.           | 41                      | 2              | I                               |
| Balang Pt.         | 38                      | 4              | W                               |
| Bangi Pt.          | 31                      | 1              | L                               |
| Barrigada Mt.      | 14                      | 4              | G, H                            |
| Belb (Ibebo)       | 21                      | 4              | F                               |
| Bijia              | 11                      | 3              | Q                               |
| Bile               | 38                      | 2              | P, Q                            |
| Bile Bay           | 38                      | 2              | P                               |
| Bingot             | 38                      | 2              | X                               |
| Boaga Hill         | 37                      | 3              | T                               |
| Bolanos Mt.        | 33                      | 4              | M, Q, X, Y                      |
| Bona               | 30                      | 1              | D, I                            |
| Baya River         | 29                      | 2              |                                 |
| Bubula             | 34                      | 1              | C, D, I, J, K, L, M, N, O, P, Q |
|                    | 34                      | 2              | A thru ?                        |
|                    | 34                      | 3              | A thru J, O, P                  |
|                    | 33                      | 1              | K, T, U                         |
|                    | 33                      | 4              | A, B, I, J, K, L                |
| Cabeyon            | 23                      | 1              | I                               |
| Calra Island       | 21                      | 2              | K, L, M, N                      |
| Calsan (Cayon San) | 22                      | 3              | T                               |
|                    | 22                      | 4              | P                               |
| Caiguat (Caiquat)  | 5                       | 1              | I, O, P                         |
|                    | 5                       | 2              | J, K, P                         |
| Chochogo           | 19                      | 1              | N                               |
| Chinitaya          | 30                      | 2              | R, S, T                         |
| Cos Island         | 40                      | 1              | A, I, J, L, M, N                |
|                    | 41                      | 2              | E                               |

| <u>Place Name</u>         | <u>Land<br/>Square</u> | <u>Section</u> | <u>Unit</u> |
|---------------------------|------------------------|----------------|-------------|
| Conga                     | 19                     | 1              | N,O,P       |
| Cotal                     | 25                     | 2              | Y           |
|                           | 25                     | 3              | D,E         |
| Dadi Beach                | 23                     | 1              | S,T         |
| Dagua                     | 28                     | 2              | I,L         |
| Dandan                    | 34                     | 4              | A thru Z    |
| Dededo (Post War)         | 14                     | 1              | A,B         |
| Dededo (Pre War)          | 14                     | 2              | J,K         |
| Didigue                   | 19                     | 2              | F,G,N       |
| Dobo                      | 30                     | 3              | T           |
| Dungcos Beach (Aldurguan) | 13                     | 3              | K,S,T       |
|                           | 13                     | 4              | F,N,O,R     |
| Etton                     | 20                     | 1              | U,V         |
| Facpi Island              | 31                     | 3              | U           |
| Facpi Point               | 31                     | 3              | U           |
| Fadian Point              | 18                     | 4              | G,N         |
| Fafai Be                  | 11                     | 3              | N           |
| Fafalog                   | 2                      | 3              | U           |
|                           | 2                      | 4              | Y           |
|                           | 5                      | 1              | D,E,F,O     |
|                           | 5                      | 2              | A,B,C,H,I,L |
| Fafalog                   | 35                     | 2              | R           |
| Falcona Beach             | 3                      | 4              | L,S,V       |
| Famentuan                 | 24                     | 3              | Q,R         |
| Famja                     | 19                     | 3              | R           |
| Fane                      | 38                     | 1              | E           |
| Fena                      | 30                     | 4              | A,B,I,J     |
| Finaguayac                | 5                      | 2              | U,V         |
|                           | 5                      | 3              | A,B,C       |

| <u>Place Name</u> | <u>Square</u> | <u>Section</u> | <u>List</u> |
|-------------------|---------------|----------------|-------------|
| Finalo            | 33            | 3              | T           |
|                   | 33            | 4              | P           |
| Finansanta Ml.    | 38            | 1              | R,W,X       |
| Finegayan         | 14            | 2              | K,L,N,S     |
| Finengna          | 19            | 2              | S,T         |
| Finile            | 31            | 1              | I,J         |
| Finile River      | 31            | 1              | I,J         |
| Fofos Island      | 42            | 2              | F           |
| Fonha Bay         | 32            | 4              | J,K         |
| Fonte             | 20            | 1              | N,O,P       |
| Fonte River       | 20            | 1              | C,D,H,M,P,Q |
| Fort Santa Cruz   | 21            | 3              | N           |
| Fouha Point       | 32            | 4              | B           |
| Fresh Water Cave  | 23            | 1              | D           |
| Gaan Point        | 23            | 4              | U           |
| Gaan River        | 24            | 3              | Y           |
| Gagas             | 37            | 3              | R,S         |
| Gaja Point        | 21            | 3              | V           |
| Gautali           | 24            | 2              | J           |
| Gautali River     | 24            | 1              | D,F,G       |
|                   | 24            | 2              | J           |
| Gayinero          | 9             | 3              | K           |
| Geus              | 38            | 3              | A,B,I,J     |
| Gnae              | 15            | 3              | S,V         |
| Gogga Beach       | 11            | 3              | Q,X         |
| Gojo              | 29            | 4              | N,O         |

| <u>Place Name</u>      | <u>Land<br/>Square</u> | <u>Section</u> | <u>Unit</u>    |
|------------------------|------------------------|----------------|----------------|
| Guaifan Point          | 36                     | 2              | P              |
| Guatata                | 37                     | 1              | A,B            |
| Guegmon                | 37                     | 1              | O              |
| Guegua                 | 38                     | 4              | L,M            |
| Guenyon                | 37                     | 4              | N,O            |
| Gugagon                | 4<br>5                 | 4<br>3         | K<br>O         |
| Guijen Point           | 37                     | 4              | X,Y            |
| Gumoje                 | 37                     | 3              | M,N            |
| Haputo Beach           | 4                      | 4              | H,M            |
| Haputo Point           | 23                     | 1              | F              |
| Hilaan                 | 11                     | 2              | I,J,L          |
| Hilaan Point           | 11                     | 2              | A              |
| Hole-in-the-Wall Light | 21                     | 2              | P,Q            |
| Iates Point            | 18                     | 3              | X              |
| Ibaba                  | 29                     | 2              | X,Y            |
| I-Bebo (Bebo)          | 21                     | 4              | F              |
| Ija                    | 37                     | 3              | H,I,J          |
| Ilichu Peak            | 33                     | 4              | X              |
| Ylipog                 | 14                     | 2              | Y              |
| Imong                  | 33                     | 2              | A,B,H,I,J      |
| Inalas                 | 24                     | 2              | J              |
| Inarajan               | 37                     | 1              | T,U            |
| Inarajan River         | 37                     | 1              | L,M,N,S,T      |
| Inaso                  | 38                     | 2              | B              |
| Ipagao                 | 10<br>15               | 3<br>2         | R,S,W,V<br>B,C |

| <u>Place Name</u>    | <u>Land<br/>Square</u> | <u>Section</u> | <u>Unit</u>     |
|----------------------|------------------------|----------------|-----------------|
| Ipiga                | 5                      | 3              | J,K,P           |
|                      | 5                      | 4              | E,F,O,P         |
| Isensong             | 10                     | 2              | R               |
| Itadudong            | 29                     | 2              | M,N             |
|                      | 30                     | 4              | B,C,H,I,L,M,Q,R |
|                      | 21                     | 2              | Y               |
| Jalaguag             | 13                     | 4              | P,Q             |
| Jalaihahi Point      | 35                     | 3              | U               |
| Jalomna              | 24                     | 2              | F               |
| Jalomtanon Maagas    | 20                     | 4              | B,C,D,E,F,G,H   |
| Jalaojan             | 38                     | 1              | P               |
|                      | 38                     | 2              | T               |
| Jangga               | 20                     | 4              | Q,R,V,W,X       |
| Janum Point          | 9                      | 4              | W               |
| Jaotan               | 38                     | 3              | S,T             |
| Jaotan Point         | 38                     | 3              | S               |
| Jati Bay (Cetti Bay) | 32                     | 1              | U,V             |
|                      | 32                     | 4              | A,B             |
| Jensa                | 26                     | 1              | N               |
| Jinago               | 38                     | 2              | J               |
| Jinapsan Beach       | 2                      | 1              | S,T,U           |
| Joa                  | 38                     | 4              | D               |
| Julog                | 38                     | 4              | N               |
| Jumullong Manglo Mt. | 33                     | 2              | H               |
| Lada                 | 37                     | 4              | H,I             |
| Laelae               | 33                     | 3              | S               |
| Lafoc Point          | 7                      | 3              | L               |
| Lago                 | 30                     | 3              | K,T             |
| Lagos                | 23                     | 1              | C,D             |
| Laguas               | 21                     | 4              | F               |

| <u>Place Name</u>         | <u>Land<br/>Square</u> | <u>Section</u> | <u>Unit</u>     |
|---------------------------|------------------------|----------------|-----------------|
| Laguas River              | 21                     | 4              | F,G,H           |
| Laguet                    | 30                     | 2              | V               |
| Laguina                   | 29                     | 1              | U,W             |
|                           | 29                     | 4              | B,C             |
| Lalas Rock                | 32                     | 4              | K               |
| Lalo                      | 18                     | 2              | Q,R,S,V,W       |
| Lamlam Mt.                | 30                     | 3              | X               |
| Laolao                    | 37                     | 1              | G,H             |
| Lasodian Rock             | 37                     | 4              | I               |
| Lattw                     | 26                     | 3              | Q               |
| Layon                     | 34                     | 3              | S,T,U           |
|                           | 34                     | 4              | Y               |
| Lengga                    | 30                     | 2              | E               |
|                           | 31                     | 1              | A               |
| Liguan                    | 14                     | 1              | C,D,E,F,G,H,N,O |
| Liguan Point              | 42                     | 2              | E               |
| Lingae                    | 38                     | 4              | O,P             |
| Litegyan Point (Ritidion) | 2                      | 2              | A,B             |
| Liyog                     | 37                     | 3              | P,Y             |
|                           | 38                     | 4              | T,U             |
| Liyog River               | 37                     | 3              | P,Y             |
|                           | 42                     | 2              | E               |
| Lofon                     | 33                     | 2              | P               |
| Lojlo                     | 24                     | 3              | L               |
| Lompoc                    | 24                     | 4              | P               |
| Lonfit                    | 20                     | 4              | S,T             |
| Lonfit River              | 20                     | 4              | G,N,R,S,T       |
| Lotnon                    | 38                     | 3              | I,J             |

| <u>Place Name</u>              | <u>Land<br/>Square</u> | <u>Section</u> | <u>Unit</u> |
|--------------------------------|------------------------|----------------|-------------|
| Kyatai                         | k8                     | k              | C,D         |
| Lubog                          | 9                      | 1              | X           |
| Lulog                          | 38                     | 1              | Y           |
|                                | 38                     | 2              | U           |
| Lulua                          | 33                     | 1              | A           |
| Luminao Reef                   | 22                     | 1              | F thru O    |
| Lumura                         | 16                     | 2              | A,B         |
| Lumura Point                   | 16                     | 2              | I           |
| Macajna Mt.                    | 20                     | 1              | W,X,Y       |
| Machadgan Point                | 32                     | 4              | U           |
| Machanaonao                    | 2                      | 2              | K,L         |
| Machaute                       | 13                     | 4              | U,V         |
| Macheche                       | 14                     | 1              | O,P         |
|                                | 14                     | 2              | T           |
| Madao                          | 23                     | 1              | M,L         |
| Madofan River                  | 31                     | 4              | U,V,W       |
| Maemong River                  | 30                     | 1              | K,L,M,P,Q   |
| Magajna-Mt.- See above Macajna | 20                     | 1              | W,X,Y       |
| Magpo                          | 31                     | 1              | V           |
| Magpogugae                     | 37                     | 3              | E,F         |
|                                | 38                     | 4              | A,J         |
| Maguagua                       | 25                     | 2              | N,O         |
| Magua                          | 5                      | 3              | D,E         |
| Maguan                         | 38                     | 1              | Y           |
|                                | 38                     | 2              | U           |
| Magugon                        | 33                     | 3              | Q,R         |
| Maimai                         | 19                     | 4              | G           |
| Maina                          | 20                     | 1              | D,F,G,H     |

| <u>Place Name</u>       | <u>Land<br/>Square</u> | <u>Section</u> | <u>Unit</u>         |
|-------------------------|------------------------|----------------|---------------------|
| Maite                   | 13                     | 3              | W                   |
| Maite                   | 36                     | 2              | Y                   |
|                         | 37                     | 1              | U                   |
| Majaga                  | 35                     | 2              | S                   |
| Majagmag                | 38                     | 2              | E                   |
| Majulosna               | 25                     | 2              | J,K,L               |
| Malaa                   | 21                     | 4              | Q,R                 |
| Malaja River            | 34                     | 1              | E                   |
| Malala                  | 24                     | 4              | H                   |
| Maleyog Point (Maligog) | 42                     | 2              | A,B                 |
| Maligog Point (Maleyog) | 42                     | 2              | A,B                 |
| Malolo                  | 35                     | 3              | H,I,L               |
| Mamajanao               | 13                     | 1              | W,X                 |
| Mamaon Channel          | 38                     | 3              | E,G,H,M             |
| Mamatgun Point          | 39                     | 1              | J                   |
| Mana Bay                | 28                     | 3              | A,J                 |
| Managam                 | 33                     | 2              | F                   |
| Manahu Hill             | 26                     | 1              | F                   |
| Manell Point (Maneno)   | 38                     | 4              | X                   |
| Manengon                | 25                     | 4              | A,B,I,J,L,M,S,<br>V |
| Manengon River          | 25                     | 4              | A,B,I,J,K,E,U,      |
| Maneno Point (Manell)   | 38                     | 4              | X                   |
| Mangia                  | 19                     | 2              | X,Y                 |
| Manguilao               | 18                     | 3              | C,D,E,F,G           |
| Manja                   | 25                     | 4              | F                   |
| Manunu                  | 33                     | 3              | D,E                 |

| <u>Place Name</u>         | <u>Square</u> | <u>Section</u> | <u>Unit</u>                 |
|---------------------------|---------------|----------------|-----------------------------|
| Mapao                     | 29            | 1              | R                           |
| Mapas                     | 19            | 1              | E                           |
|                           | 19            | 2              | A                           |
| Mapupong                  | 29            | 1              | M                           |
| Masalog                   | 18            | 3              | Y                           |
|                           | 19            | 4              | U                           |
| Masso River               | 21            | 1              | M,R                         |
| Mata                      | 28            | 3              | M,N,Q,R                     |
| Mataguac                  | 10            | 1              | U,V                         |
| Mataitaotao               | 34            | 1              | N,O                         |
| Matala                    | 35            | 2              | I,J,K,L                     |
| Matdang                   | 33            | 3              | V,W                         |
| Matgue                    | 20            | 3              | E,R                         |
| Matgue River (Nidual)     | 20            | 2              | E,F,O                       |
| Mati Point                | 9             | 4              | I,J                         |
| Mayangjulo                | 24            | 3              | C,D,E                       |
| Mepo                      | 29            | 2              | P,Y                         |
| Mergagan Point            | 1             | 3              | F                           |
| Merizo                    | 38            | 3              | D,G,H,M                     |
| Merozo Port               | 38            | 3              | M                           |
| Middle Ground             | 22            | 1              | Q,X                         |
| Missionary Point (Adelup) | 12            | 4              | P                           |
| Mochom                    | 18            | 1              | S,T                         |
| Mogfot                    | 15            | 2              | F,G,H,I,L,M,N,<br>O,P,Q,R,S |
| Mungmung                  | 13            | 3              | X                           |
|                           | 19            | 2              | B,C,D                       |
| Nagan                     | 37            | 2              | S,T                         |

| <u>Place</u>          | <u>Land<br/>Square</u> | <u>Section</u> | <u>Unit</u> |
|-----------------------|------------------------|----------------|-------------|
| Nagas                 | 12                     | 3              | U,V         |
| Namo                  | 37                     | 2              | Y           |
| Naton Beach           | 11                     | 3              | W,X         |
|                       | 14                     | 2              | D           |
| Neye Island           | 23                     | 1              | R           |
| Neyog                 | 32                     | 4              | K           |
| Ngachang              | 19                     | 1              | X,Y         |
| Nidual River (Matgue) | 20                     | 2              | E,F,O       |
| Nomna                 | 35                     | 2              | S,T         |
| Nomna Bay             | 35                     | 3              | T           |
| Oca                   | 13                     | 1,2,3 & 4      |             |
| Ogasan                | 31                     | 4              | U           |
| Olunao                | 30                     | 2              | D,E         |
| Ono                   | 37                     | 1              | L,M         |
| Opop                  | 20                     | 2              | G,H         |
| Ordot                 | 19                     | 3              | D,C         |
| Orote Island          | 22                     | 3              | D           |
| Orote Point           | 22                     | 3              | G           |
| Paasan                | 20                     | 1              | R,S         |
| Pado                  | 19                     | 1              | E           |
| Pagachao              | 31                     | 4              | B,C         |
| Pagat                 | 15                     | 4              | A,H,I       |
| Pagat Point           | 16                     | 2              | Y           |
| Pago Point            | 26                     | 1              | Q,R         |
| Pago River            | 26                     | 1              | G,F         |
|                       | 26                     | 2              | A,B,J       |
| Pagpag                | 30                     | 4              | T           |

| <u>Place Name</u>         | <u>Square</u> | <u>Section</u> | <u>Unit</u> |
|---------------------------|---------------|----------------|-------------|
| Pagunon                   | 28            | 3              | P, Q, X, Y  |
| Pahatguan                 | 38            | 3              | K, L        |
| Pagon Point (Patgon)      | 2             | 1              | M           |
| Palalo                    | 38            | 4              | G           |
| Palasao                   | 20            | 2              | J           |
| Patgon Point (Pajon)      | 2             | 1              | M           |
| Pati Point                | 7             | 2              | S           |
| Patsud Mt. (Ypachot)      | 35            | 3              | X, Y        |
| Paulana                   | 24            | 1              | P, Q        |
| Paulana River             | 24            | 1, 2 & 4       |             |
| Pauliluc Bay              | 36            | 2              | M           |
| Pauliluc River            | 36            | 2              | E, F, G, N  |
| Pelagi Islets             | 24            | 3              | E           |
| Pigo                      | 12            | 4              | Y           |
| Pinate                    | 18            | 1              | P           |
| Pinay Point               | 32            | 1              | S           |
| Pugua                     | 4             | 1              | U, V        |
| Pulan                     | 19            | 2              | A, J        |
| Pulantat                  | 26            | 2              | F, G        |
| Ritidion Beach            | 2             | 2              | A thru M    |
| Ritidion Light            | 2             | 2              | B, I        |
| Ritidion Point (Litegyan) | 2             | 2              | A, B        |
| Rocky Point (Apaca)       | 24            | 3              | E           |
| Sabana Batea              | 26            | 2              | D, E        |
| Sabana Maagas             | 19            | 4              | G           |
| Sabanon Fadang            | 5             | 2              | P, Q        |
| Sabanon Pagat             | 15            | 1              | X, Y        |
|                           | 15            | 4              | E, D        |

| <u>Place Name</u> | <u>Land<br/>Square</u> | <u>Section</u> | <u>Unit</u>    |
|-------------------|------------------------|----------------|----------------|
| Sabanon Palie     | 10                     | 1              | X,Y            |
| Sagua Anite       | 28                     | 3              | T              |
| Sagua Bay         | 31                     | 4              | P              |
| Sagua Beach       | 31                     | 4              | P,Q            |
| Sagualao          | 38                     | 4              | Q              |
| Sague             | 30<br>30               | 1<br>4         | A,B<br>U,V     |
| Saint Louis, Fort | 22                     | 4              | M              |
| Salamadae         | 24                     | 2              | K,L            |
| Salinas Beach     | 24                     | 3              | P              |
| Salisbury         | 6                      | 3              | W,X            |
| Salopna           | 33                     | 3              | K,L,R,S        |
| San Antonio       | 18<br>19               | 2<br>1         | E<br>A         |
| Santa Rita (New)  | 24                     | 3              | R,S,V,W        |
| Santa Rita (Old)  | 24                     | 3              | N,Q            |
| Santa Rosa        | 24                     | 3              | H,I            |
| Santa Rosa Mt.    | 9                      | 4              | F              |
| Sarasa            | 34                     | 1              | I,J            |
| Sasa /            | 21<br>21               | 1<br>4         | X,Y<br>C,D,E   |
| Sasalaguan Mt.    | 38                     | 1              | L,M,R,S        |
| Sassayan Point    | 15                     | 4              | F              |
| Saucio            | 13                     | 4              | B,C,D,G,H,I,M, |
| Saupon Point      | 13                     | 1              | P              |
| Savana Grande     | 7                      | 2              | X,Y            |
| Schroeder Mt.     | 38                     | 2              | J,K            |
| Sejya (Sella)     | 32                     | 1              | I,J,K,L        |

| <u>Place Name</u> | <u>Land<br/>Square</u> | <u>Section</u> | <u>Unit</u> |
|-------------------|------------------------|----------------|-------------|
| Sella (Sejya)     | 32                     | 1              | I,J,K,L     |
| Sella Bay         | 32                     | 1              | L           |
| Sese              | 37                     | 1              | K           |
| Sigua             | 19                     | 3              | P,Y         |
|                   | 25                     | 1              | B,C,G       |
| Sigua River       | 25                     | 1              | B,C,D,G     |
| Sinagoso          | 37                     | 2              | A,B         |
| Sinajana          | 19                     | 2              | O           |
| Sinaje            | 30                     | 2              | F           |
|                   | 31                     | 1              | J           |
| Sinengsong        | 21                     | 1              | Q,R,W,X     |
| Siput             | 34                     | 4              | U           |
| Socogna           | 37                     | 1              | N,O         |
| Songiaya          | 19                     | 4              | R,S         |
| Songlago          | 19                     | 4              | K,L         |
| Spanish Rocks     | 22                     | 2              | W           |
| Sumay             | 38                     | 4              | U,V,W       |
| Sumay (Old)       | 22                     | 4              | L,M,S,T     |
| Sumay Bay         | 41                     | 1              | A,B         |
| Sumay River       | 38                     | 4              | S,V         |
| Suyafe            | 38                     | 4              | S,T         |
| Taccalom          | 31                     | 1              | S,T         |
| Tachonga          | 20                     | 4              | I,J         |
| Tae               | 26                     | 1              | C           |
| Telayag Beach     | 31                     | 4              | G,H,N       |
| Taene             | 30                     | 2              | Q           |
| Taeope            | 6                      | 2              | T           |

| <u>Place Name</u>          | <u>Square</u> | <u>Section</u> | <u>Unit</u>  |
|----------------------------|---------------|----------------|--------------|
| Tagachan Point             | 26            | 4              | G            |
| Tagua                      | 6             | 1              | I,J          |
| Taguac                     | 4             | 4              | T,U          |
| Taguag                     | 21            | 1              | R,S          |
| Taguan Point               | 17            | 2              | G,H          |
| Taijagan                   | 25<br>26      | 1<br>2         |              |
| Tailalo                    | 2             | 4              | D,G,H,I      |
| Taipilan Point (Tantapalo) | 23            | 1              | N            |
| Taleyfac                   | 31<br>31      | 1<br>4         | U,V<br>A,B,C |
| Taleyfac River             | 31<br>31      | 1<br>4         | B,U<br>A,I,J |
| Talisay                    | 24            | 1 & 4          |              |
| Talofofo                   | 28            | 3              | G,N          |
| Talofofo Bay               | 35            | 2              | A,B,C        |
| Talofofo River             | 29<br>35      | 4<br>2         | W,Y<br>D,E   |
| Talona                     | 38            | 3              | K,L          |
| Tamuning (Timoneng)        | 13            | 4              | F,G,K,N,O    |
| Tangan                     | 41            | 1              | B            |
| Tangan Rock                | 41            | 1              | B            |
| Tanguisson Point           | 11            | 2              | L            |
| Tantapalo Point (Taipilan) | 23            | 1              | N            |
| Taogom Point               | 27            | 2              | C,E,E        |
| Tarague                    | From<br>to    | 3<br>1         | F<br>I       |
| Tartugan Point             | 28            | 2              | U            |

| <u>Place Name</u>   | <u>Land<br/>Square</u> | <u>Section</u> | <u>Unit</u>   |
|---------------------|------------------------|----------------|---------------|
| Tatatmon            | 30                     | 2              | LM,R,S        |
| Tatgua River        | 21                     | 1              | S,T           |
| Tenjo Mt.           | 24                     | 1              | I,J,K,L       |
| Tepungan            | 21                     | 1              | I,J           |
| Timoneng (Tamuning) | 13                     | 4              | F,G,K,N,O     |
| Tinechong           | 29                     | 4              | P,Q,R         |
| Tinechong River     | 29                     | 4              | M,N,O,P,R     |
| Tipalao Beach       | 23                     | 1              | M             |
| Tipalao Point       | 23                     | 1              | N             |
| Tipoco              | 37                     | 1              | V,W           |
| Tiyan               | 13                     | 4              | J,K,L,R,S,T   |
| Toa                 | 38                     | 3              | S             |
| Togcha /            | 28                     | 2              | A,I,J,K,L,S,T |
| Togcha Bay          | 28                     | 1              | P,Y           |
| Togcha Beach        | 24                     | 3              | O             |
| Togcha Point        | 28                     | 2              | K             |
| Togcha River        | 28                     | 2              | M,N,O,P,S,T   |
| Toguan              | 38                     | 2              | F,G           |
| Tolaeyuus           | 25                     | 3              | Y             |
| Talaeyuus River     | 25                     | 3              | P,Y           |
| Toto /              | 13                     | 4              | X             |
|                     | 19                     | 1              | C,D,E,H       |
| Trinchera           | 13                     | 3              | R,S           |
| Tumag               | 31                     | 4              | A,B           |
| Tumon               | 14                     | 2              | C,F,E,H,O,N,P |
| Tumon Bay           | 13                     | 4              |               |
|                     | 14                     | 2              |               |

| <u>Place Name</u>            | <u>Land<br/>Square</u> | <u>Section</u> | <u>Unit</u>     |   |
|------------------------------|------------------------|----------------|-----------------|---|
| Tumon Ruins                  | 14                     | 2              | C,H             | — |
| Tuno                         | 30                     | 2              | U,V             | — |
|                              | 30                     | 3              | B,C             | — |
| Tutujan                      | 20                     | 1              | I,J,K,L         | — |
| Ukudu                        | 11                     | 4              | N,O             | — |
| Ulonnia Beach                | 36                     | 2              | M               | — |
| Unafit                       | 37                     | 2              | U,T             | — |
| Unatac                       | 33                     | 3              | P               | — |
| Unatac Bay                   | 33                     | 3              | P,Y             | — |
| Una                          | 38                     | 3              | A               | — |
| Ungaguan                     | 14                     | 3              | U,V             | — |
| Upi (Anderson Airfield Rnwy) | 6                      | 4              | A,B,C           | — |
| Urano Beach                  | From 2                 | 2              | Q               | — |
|                              | to 3                   | 4              | L               | — |
| Urano Point                  | 3                      | 4              | I               | — |
| Usua Channel                 | 41                     | 1              | D               | — |
| Utang                        | 19                     | 2              | A,B             | — |
| Ututo                        | 38                     | 3              | D               | — |
| Western Shoal                | 22                     | 1              | U               | — |
| Vigo                         | 9                      | 3              | F,G             | — |
|                              | 10                     | 4              | J               | — |
| Ylig Bay                     | 26                     | 4              | N,O,P,Q         | — |
| Ylig Point                   | 26                     | 4              | X,Y             | — |
| Ylig River                   | 26                     | 3              | F,G,K,L,M,N,R   | — |
| Yona                         | 26                     | 1              | P,Y             | — |
|                              | 26                     | 2              | T,U             | — |
| Yona Island                  | 31                     | 1              | B,C             | — |
| Ypachot Mt. (Patsud)         | 35                     | 3              | X,Y             | — |
| Ypan                         | 28                     | 3              | A,B,I,J,K,L,U,V | — |

| <u>Place Name</u> | <u>Land<br/>Square</u> | <u>Section</u> | <u>Unit</u> |
|-------------------|------------------------|----------------|-------------|
| Ypan Point        | 28                     | 3              | U           |
| Ypao Beach        | 13                     | 1              | S           |
| Ypao Point        | 13                     | 1              | M           |
| Zaduc Maagas      | 29                     | 4              | F,G,H,M     |

APPENDIX K  
UNITED STATES COAST AND GEODETIC SURVEY  
DATA FOR CONTROL SURVEYS

C  
O  
P  
Y

June 21, 1962

Honolulu District Officer  
Coast and Geodetic Survey  
Post Office Box 3887  
Honolulu 12, Hawaii

SUPPLEMENTAL INSTRUCTIONS - Reconnaissance for Horizontal Control, Guam Island, Mariana Islands, Western Pacific Ocean, Job G-149R.

1. As a result of preliminary reconnaissance on Guam Island conducted in accordance with instructions issued April 30, 1962, you will direct Mr. Richard F. Hanson to proceed with the reconnaissance for triangulation surveys required to strengthen the Pacific Island Engineers Guam survey of 1949. The purpose of the reconnaissance is to provide a first-order geodetic triangulation net covering the entire island or those portions considered desirable at this time. Reconnaissance for an area coverage by supplemental second-order stations connected to the main first-order net will also be completed by Mr. Hanson in areas along coastal highways, etc. to be indicated by representatives of the Guam Government. The densities of supplemental stations will conform to the desires of the Guam Government with a minimum spacing of approximately two miles between supplemental stations. Existing marks of previously established surveys will be used wherever possible. The supplemental stations may be located by single triangles or systems of single triangles in loops with suitable connections to the main first-order net or by electronic distance measured traverses with suitable ties to the first-order net. No specific plans for base lines need be made since length control will probably be provided by geodimeter measurements.
2. The first-order net will be planned to conform to specifications for first-order, class II triangulation. Area or supplemental stations will conform to specifications for second-order, class II and traverse stations will conform to specifications for second-order traverses.
3. You will maintain close contact with Mr. Hanson to assure his return to Hawaii in sufficient time to continue control surveys on Lanai Island without delay to the Ship PATHFINDER'S schedule.
4. You will also determine the Guam Government's intentions regarding the (1) completion of the actual surveys after Mr. Hanson's reconnaissance, and (2) the funds to be provided for the costs involved.
5. You will please acknowledge receipt of these supplemental instructions.

(Signed) JAMES C. TISON, JR.

For H. ARNOLD KARO  
Director

cc:  
Mr. F. I. San Nicolas

GOVERNMENT OF GUAM

AGANA

June 26, 1962

Memorandum

To: Mr. R. F. Hanson, Coast and Geodetic  
Survey Representative

From: Territorial Surveyor

Thru: Director of Land Management

Subject: Proposed Survey Control Program, Guam

1. During the past three (3) weeks you have been familiarizing yourself with survey control conditions on Guam and have been checking out the "strength of figures" for primary control stations. At the same time you have been ascertaining possible locations for secondary control stations that can be integrated with the primary system.
2. The writer presumes you will on completion of your work here make a full report of your activities, such a report to be addressed to the Governor of Guam. It is also presumed you have been authorized by your superiors to make such a report.
3. The writer feels that his position with respect to the work you are doing should be reduced to writing so that the desires of the Government of Guam may be understood by all concerned, thus giving your report more meaning. It is for just such a purpose that this memo is being furnished you.
4. As has been explained to you, there are at present four (4) separate systems for primary triangulation control on Guam, as follows:
  - a. The Putler (1913) system, accomplished in the first part of this century by the Corps of Engineers. No records are available to determine how the system was established. It was added to and expanded by the Naval Government of Guam almost up to the outbreak of World War II and there is evidence available that errors of varying proportion were being detected from time to time by the Naval Government. It formed the basis for all land descriptions prior to World War II.
  - b. The Land and Claims Commission (1945) system accomplished by the Land and Claims Commission under the jurisdiction of the U.S. Navy immediately following World War II. The records of the

survey indicate it to be no better than third order work. By comparison with the Butler system there are variances as high as forty (40) feet, a situation that is almost intolerable for survey control. You have been furnished a sketch of a certain portion of the Piti area along Route #1 where the effect of this variance can be demonstrated. Despite its shortcomings this system was adopted by the U.S. Navy and at the present time a substantial portion of post-war land descriptions are tied to it. The variances between it and the Butler system are such that surveys of private property are almost impossible. The Navy continues to use the system for its work regardless of the fact that, by the admission of certain Navy employees, the results obtained from it are of very limited value, especially where those results form the basis for the payment of private land taken by the Naval Government for military and public purposes.

- c. The P.I.E. (1949) system accomplished by the Pacific Island Engineers under a contract with the U.S. Navy. Apparently, the U.S. Navy recognized the many shortcomings of the Land and Claims Commission system and attempted its refinement with this one.

The results, however, failed to gain U.S. Navy recognition and while it is still an operable system per se very few land descriptions are tied to it. Basically, it is more accurate than the Land and Claims Commission system but, regardless of that, there are many inherent defects in it to make it of no value. It is composed of three (3) separate nets (south, central and north) and it is not possible to go from one net to the other without error, such error being known to approximate 30 feet under some conditions. Certain defects in it have been discovered by U.S. Navy personnel which no doubt explains why the separate nets cannot be integrated. The methods and equipment used for this system were not conducive to a high quality of work.

- d. The Land Management (1960) system, such being a composite of the three (3) previously described system, prepared on the basis of a computer analysis of the other three by the United States Coast and Geodetic Survey. Manifestly, it cannot be any better than the worst of the data used in the computer analysis.
5. As of now, not one of the foregoing systems has ever formed the basis for a secondary control system available for the day to day practitioner of the surveying profession. Consequently, land surveys are all based on theoretical values and no way exists at the present time for the correlation of theory and fact. Thus, land (or property) surveys on Guam are in a deplorable condition and that condition worsens with the recording of every deed affecting land ownership.
6. It is the position of the writer that, regardless of the systems available, descriptions of land should continue to be based on the system which gave the first description of any basic tract of land. For this reason, the Territorial Surveyor prefers the Butler system for it was thereunder that the major portion of land descriptions now in use came into being. Further, there is no actual basis for equating these systems to each other, which prevents any cross-referencing possibilities.

7. It is the opinion of the writer that two actions must be taken, and be taken just as soon as conditions will permit, to restore order to the present chaos existing in survey matters.

- a. A primary system must be established that will be accurate and dependable for land survey uses. Many stations of the existing systems can be used for this corrected system merely by reoccupying them as needed. However, such stations as are reoccupied should be marked to indicate their incorporation in the new system and all old stations that are not used should be first referenced in and then destroyed.

To explain further about referencing in the non-occupied old stations, there are many instances where like-named stations of the previous systems exist within a few feet of each other. These stations should be referenced to the station chosen as a result of your work as being the most suitable so that a basis for equating one system to another can be established. After being so referenced they should be destroyed so that no future use can be made of them.

- b. A secondary system based on the primary system and made an integral part thereof that follows the primary and secondary road net of the island. The distance between such stations should be within the normal working sight range of a good make of transit, i.e., no more than 1/2 mile. Since there are approximately 150 miles of primary and secondary roads it is estimated that a minimum of 300 such secondary stations should be installed. However, due to actual ground conditions a figure of approximately 500 will be more realistic.

8. It will not be possible to triangulate in every secondary control. It is more likely that such triangulation can be accomplished every 2 to 3 miles, with the necessary intervening stations established by traverse. Thus, it is estimated that approximately 75 triangulated secondary controls should be established concurrent with the reoccupation of the primary stations. In some few instances tellurometer stub shots will have to suffice in lieu of triangulated secondary control. Towers will be required more often for the secondary control than for the primary and their height and location will have to be ascertained by reconnaissance, which you are now doing.

9. The 6th Guam Legislature recently passed a survey control bill sponsored by the Department of Land Management, a copy of which has been furnished you. As of this writing it has not been signed by the Governor. The bill is not the answer to the entire survey problem but it does provide the entry by which the type and extent of additional legislation can be determined.

10. As soon as the bill is signed the materials necessary for all secondary stations will be secured and installed. The order of installation will be in keeping with the need, i.e., developed (urban) areas ahead of undeveloped (suburban) areas. Surveys to connect them in a net can then follow.

11. Referring to paragraph 2, above, it is hoped your report will touch on the following subjects sufficient to permit conclusive opinions to be formed of the existing survey conditions on Guam and of the methods needed for a one-time correction of them:
- a. The relative worth of all survey control systems now on Guam, as explained in Paragraph 4 of this memo.
  - b. Your recommendations for the locations of a new system of primary controls to provide the maximum figure strength; providing, of course, you concur with the writer that the existing systems are of no material value.
  - c. Your recommendations for the location of secondary triangulated control stations that meet with the requirements of Paragraph 7 and 8 of this memo. (Secondary controls lying between triangulated stations will be established by the Territorial Surveyor based on actual ground conditions.)
  - d. Your recommendations for the use of towers and the type and height of towers necessary for each station where they are indicated as being required.
  - e. Your comments re: the triangulation surveys presently being accomplished by the U.S. Navy, which surveys were explained to you by Navy personnel on 22 June 1962. (No previous mention has been made of those surveys in order that the basic issues in-so-far as the Government of Guam is concerned would not be clouded.)
  - f. Other points you may determine to be appropriate to the needs of the situation and which can expedite the completion of a program such as is explained herein.
12. Pending the completion of your investigations we will continue to assist you in every way possible to the end that your tour of duty here will result in the maximum benefit for the Government of Guam.

JAMES W. DARLING

JWDarling:fjg

C  
O  
P  
Y

U. S. DEPARTMENT OF COMMERCE  
COAST AND GEODETIC SURVEY

3 July 1962

SUR 16-2/mm

To: Mr. Richard F. Hansen  
Coast and Geodetic Survey  
P. O. Box 1433  
Agana, Guam

From: Captain H. J. Seaborg  
Honolulu District Officer  
Coast and Geodetic Survey  
P. O. Box 3887, Honolulu 12, Hawaii

Subject: Reconnaissance Report, Guam Island

Your memorandum dated June 26, 1962 with copy of memorandum from the Territorial Surveyor attached has been received.

SUPPLEMENTAL INSTRUCTIONS 610/HJI/ljh dated June 21, 1962 covers your immediate objectives quite clearly. The net result will be a completed reconnaissance sketch with recovery notes on old stations and reconnaissance type descriptions for all newly selected stations. This applies to the secondary stations as well as to the primary and should follow the wishes of the Territorial Surveyor with regard to actual station site location as much as possible. The drifting of the reconnaissance sketch by the Territorial Surveyor's Office is very much appreciated.

As mentioned previously you should make the determinations requested in paragraph 4 of the SUPPLEMENTAL INSTRUCTIONS. Also, when known, inform me of your approximate completion date.

Your report should be addressed to the Territorial Surveyor through the Honolulu District Officer and should cover your actual reconnaissance work. Special emphasis should be placed on the number of stations involved and any towers or preparatory building required before actual observations. Assuming a nucleus of about 8 or 10 experienced Coast Survey personnel with a like number of Guam Government employees, you should estimate the time required to complete the observation work. This report need not necessarily be completed while still in Guam but if a rough draft is brought to Honolulu we can finalize it here. Please assure the Territorial Surveyor that your report will be completed and forwarded promptly. Your report should also include any comment you wish to make with reference to the Surveyor's memorandum to the extent of your definite knowledge.

The following comments are relative to the numbered paragraphs of the Surveyor memorandum:

2. Your report should be addressed to the Territorial Surveyor. A copy of your report with covering letter will be forwarded to the Director with recommendations. The Director's Office should make the final report to the Governor of Guam indicating when the work can be scheduled and at what cost.

3. The Director's report will no doubt be most conclusive.

4. It is quite agreed that the use of all these different systems leads to confusion but am unable to comment on item d.

5. The establishment of a good new secondary scheme will mean, I believe, the complete recomputation of many land boundaries using the new values.

6. A new scheme completely reobserved will result in a new set of values which may not follow any of the old systems.

7. @ The destruction of any old stations would be strictly left to the local interests. It is suggested that instead of the destruction of the surplus marks that they be used as reference marks in every case possible. The station mark can be marked by a white post or similar item.

8. Instructions call for secondary stations at about 2 mile spacing. General conditions will dictate this.

10. The placing of station marks will certainly speed up the eventual observational work.

11a. I do not believe that you or I are qualified to indicate relative worth. We only know that the various systems in use do not correlate and one way to correct this is to provide a complete new scheme. This is what we propose.

11b,c,d. In the course of the new observations as many of the existing stations (that is the marks) will be utilized as possible. Such stations used will in all probability undergo a computed change of position. The use of towers was covered previously.

11e. Discretion should be used in your comments.

Any comments you wish to make relative to any of the above subject matter will be appreciated.

H. J. Seaborg, Capt., C&GS  
Honolulu District Officer

GOVERNMENT OF GUAM

AGANA

July 12, 1962

Memorandum

To: Mr. Richard F. Hanson  
Coast & Geodetic Survey Representative

From: Director of Land Management

Subject: Funding Plan, Triangulation Survey, Guam

1. By a letter dated June 21, 1962, addressed to the Honolulu District Officer, Coast and Geodetic Survey, a copy of which was furnished direct to the writer, the Director of the Coast and Geodetic Survey requested information regarding the intentions of the Government of Guam for the actual field work required to give effect to the reconnaissance survey you are now doing and for the funding of those intentions.
2. As has been previously outlined to you, it is the intent of the Territorial Surveyor to monument every triangulation station recommended by you to compose the basic primary and secondary nets. In addition, the Territorial Surveyor also proposes to monument all the traverse stations of the complete secondary net, both to be done before any actual field work is undertaken. Procurement of the materials needed for such work is being initiated and it is anticipated that the placement thereof can be commenced by on or about 6 August 1962. A target date for the completion of this work is on or about 15 January 1963, or the approximate end of the current rainy season.
3. It is hoped that a request can soon be made for the Coast and Geodetic Survey to commence the required field work by no later than 1 February 1963 in order to take maximum advantage of the then anticipated coming dry season. Since the required station points will be in place by that time there should be no delays while awaiting their installation.
4. At the present time there is available approximately \$26,000 of unexpended funds that can be made available for the actual labor required to be done by Coast and Geodetic Survey personnel. Support labor furnished by the Government of Guam will be paid for out of regular appropriations for the Survey Division of the Department of Land Management. Special general funds are available for the payment of travel and per diem for Coast and Geodetic Survey personnel and for the shipping charges of technical equipment not available on Guam and which will be brought by Coast and Geodetic Survey personnel.

5. Also, at the present time, there is available a maximum amount of \$15,000 to be used for the purchase of materials, small tools, marking devices, etc., needed for the marking of the triangulation and traverse stations and for the field measurement work to follow.
6. Not knowing the approximate costs of the program as presently proposed, and which can not be formally stated until completion of your reconnaissance, it is difficult to say that the balances indicated above are adequate for the entire program. It is entirely possible that the available funds would be totally insufficient and legislative action for additional appropriations might be required. Or, it could be such that only a small amount of extra money would be needed and slight adjustments in the local overall fiscal picture could be undertaken.
7. If substantial additional funds would be required it is not practical to expect that an immediate appropriation to cover them would be made available in the coming January session of the Legislature. Under such conditions it might be necessary to postpone the field measurements until the 1964 dry season as it would be unwise to start work of this kind without carrying it through to completion in one operation.
8. I do not know the policies of the Coast and Geodetic Survey with regard to the funding of a program such as ours but there is always the possibility that a deficit could be financed on a deferred payment plan. Again, not knowing the exact costs it is not possible to intelligently discuss such a matter. But it is one that could and should be explored.
9. As another possibility, there is an outside chance that Federal funds might be made available. This is predicated on the fact that the situation which we are now trying to correct came about entirely prior to the time that Guam attained its territorial status. Thus, the condition cannot be attributed to the negligence of the Territorial Government or to its present elected officials; it is a condition over which they had no control except the correction thereof. But this possibility cannot be explored until costs are more firm and the entire program formulated.
10. In addition to the costs involved for the installation of the primary and secondary systems, there will also be the cost of making many individual surveys and maps to properly utilize the new data that will ensue. These surveys and maps are an absolute must as it is mandatory that the utter confusion of the present systems be eradicated in the least possible time lest this new work lose its effect in a maze of conflicting descriptions. The task is a sizable one and warrants the best of effort if any tangible results of our new system are to be realized. Because of the financial burden imposed by this following task any easing of the cost load for the primary and secondary controls by the Coast and Geodetic Survey will be appreciated.
11. Since the work you are now doing for us will be soon completed, I would like to close this memo to you by expressing our thanks to you, to Captain Seaborg, and to Admiral Karo for the invaluable assistance made

available to us through combined efforts. Or, as it is said in our  
humble expression, 'Si Nos Maase.'

F. I. SAN NICOLAS  
Acting

JWDarling.fjg

cc. Land Management  
Territorial Survey

Honolulu District Office  
P.O. Box 3387  
Honolulu 12, Hawaii

July 25, 1962

Mr. James W. Darling  
Territorial Surveyor  
Department of Land Management  
Government of Guam  
Agana, Guam

Dear Jim;

Enclosed are all of the missing descriptions, I just finished them up this afternoon. Last night when I was checking the descriptions against the sketch I discovered that the description for station FACPI isn't among the sepia copies, nor among my rough originals. I have it crossed out in my book so know that I wrote it, and believe that it was done before the ones that I gave you Sunday night. So if it doesn't turn up be sure to let me know and I will retype it and send it to you.

Evelyn and I got here to Honolulu between plane crashes in good shape, but were tired as we didn't sleep all the way. She went on over to Molokai yesterday afternoon so she could start getting our things on the way to Lanai. I believe I will make it over about Friday.

We are working on the reports and have them about done so you will be getting them soon.

You no doubt will have all the station marks set before the end of this year. Captain Seaborg and I were just discussing this and he mentioned that since the Coast and Geodetic Survey will probably not do the survey work before the beginning of 1963 that is the date that should be stamped on them, the usual procedure being to have the year of occupation stamped on the marks.

The manila envelope was waiting here for me Monday morning but the tube of sketches didn't arrive until Tuesday afternoon for some reason.

Be sure to tell Mr. San Nicolas hello for me, also Ben and Pcte.

Best regards,

P.S. In checking over the sketch today I discovered one mistake: a line from ANANTS to TENLAJE is shown on your master copy but should not be there. It would see, except for high trees, and is not necessary anyway. I will delete it from the sepia copy.

/s/Richard F. Hanson

Honolulu, Hawaii

July 26, 1962

MEMORANDUM

To: Captain Harold J. Seaborg  
Honolulu District Officer  
Coast and Geodetic Survey

From: Richard F. Hanson  
Surveying Technician  
Coast and Geodetic Survey

Subject: Report on Reconnaissance Survey, Guam, Marianna Islands.

1. In accordance with the Director's INSTRUCTIONS dated April 30, 1962, I departed from Honolulu, Hawaii, via Pan American Airways at 2:00 AM on June 3, 1962 and arrived at Agana, Guam at 6:30 AM on June 4, 1962 (Guam time). The Territorial Surveyor, Department of Land Management, Government of Guam, met Mrs. Hanson and myself at the airport.
2. Quarters suitable for light housekeeping, together with the necessary linens, dishes, and cooking utensils, were provided by the Government of Guam at nominal cost. A sedan was assigned me by the Government of Guam on a permanent basis so that I could conduct my operations without being dependent on the intermittent availability of transportation from a "pool".
3. During the next few days I was introduced to various government officials, was briefed by the Territorial Surveyor with respect to the various triangulation systems in effect on Guam, and was conducted on a tour of the island to familiarize myself with the terrain features and transportation problems.
4. A study had been made of correspondence pertinent to prior surveys made on Guam and also of the notes on the adjustment of these surveys by the Coast and Geodetic Survey. Considerable discussion was had with Government of Guam survey personnel regarding the problems encountered when using the results of the several surveys now in existence. The various agencies performing land surveys in the past have used different basic control systems. When common land boundaries were determined, discrepancies arose which became difficult to reconcile. I was shown sketches prepared by the Territorial Surveyor showing differences as great as 40 feet in relative position when using the coordinate values of the three systems.
5. All of this information was relayed to your office by various letters and memorandums. Your report No. 1, Reconnaissance for Horizontal Control, Guam Island, reference SUR 16-2/mm, dated 13, 1962, to The Director resulted in the issuance of SUPPLEMENTAL INSTRUCTIONS, Job G149R, dated June 21, 1962.

These instructions covered reconnaissance for a first-order geodetic triangulation net covering the entire island. Also covered was reconnaissance for a supplemental second-order scheme connected to the first order net to provide usable stations along roads and in populated areas. Representatives of the Guam Government were to indicate the approximate placement of these second-order stations. The procedure of a complete reconnaissance survey for the establishment of new primary and secondary triangulation schemes seems to be the best solution to the control problem on the Island of Guam.

6. Reconnaissance surveys were commenced on June 11, 1962, prior to receipt of the SUPPLEMENTAL INSTRUCTIONS. To facilitate my work the Territorial Surveyor assigned a party chief and two rodmen, together with a 4-wheel drive truck. Also, arrangements were made with the U.S. Navy for helicopter service, which proved somewhat limited in its service for landing personnel. However, helicopters will be able to provide an excellent means for the delivery of materials at certain locations when actual field surveys begin.

7. The reconnaissance work continued, except for rainy days, until July 20, 1962. Some isolated stations situated on commanding hilltops were not visited as it was determined by other means that lines of sight were possible from them. A total of 28 primary stations and 67 secondary stations were established. Essentially the first-order or primary scheme follows the station pattern of the Pacific Island Engineer's survey of 1949 with several modifications to strengthen the overall net. There are many old stations on the island not readily accessible for use in land surveys and these stations were not visited or tied into the new reconnaissance survey.

8. The Territorial Surveyor made the facilities of his office available to me at all times and assisted me in accordance with my needs whenever I required an extra service. His office prepared the final reconnaissance sketch and station descriptions for me. In this connection he retained the original copies of the sketch and descriptions, furnishing me with a sepia reproducible copy of each for Coast and Geodetic Survey uses.

9. During my stay on Guam I was introduced to personnel of the U.S. Air Force and Navy who are responsible for survey work within their respective organizations. It was determined that Navy personnel are conducting a limited triangulation survey of their own but they are merely reoccupying existing stations and turning angles to every other visible station, their base line being an unproved line from a previous survey. The Navy is hoping that some other agency will measure one of their lines with a Tellurometer for use as a base. They are apparently making no provisions for any secondary work tied into the basic net to be used for the actual survey of individual properties, hence it would appear that these surveys will not satisfy the needs of the Guam Government.

10. The following comments are made with respect to my reconnaissance survey and to my observations on general survey matters on Guam:

- a. There is a definite need to abandon the present three systems of

Captain Harold J. Seaborg, 26 July 1962

triangulation control and to install a new system, complete with an appropriate secondary scheme; such a new system to be in accord with the reconnaissance survey.

b. The new system should be installed as soon as possible so that maximum use may be made of it. The survey personnel of the government of Guam are in full agreement with this concept.

c. The actual field work required for the triangulation control should be accomplished by a nucleus of Coast and Geodetic Survey personnel, assisted by survey personnel of the Department of Land Management of the Government of Guam. No organization on Guam has the trained personnel or equipment to do the work of the required precision within a reasonable time limit.

d. The Territorial Surveyor plans on having sufficient Government of Guam survey marks manufactured and will mark all stations selected as a result of the reconnaissance survey, beginning sometime in August 1962. Other existing marks at station sites should be used as reference marks.

e. For an efficient observing schedule it is recommended that four (4) steel towers be shipped to Guam. One 90 ft, one 50 ft and two 64 ft towers will be required. If possible, the Government of Guam should arrange with the Coast and Geodetic Survey to have at least two (2) 50 foot steel towers left on Guam, one of which would be reinforced and left in place at station BARRIGADA, and the other to be available for use in temporary locations should it be necessary to add additional secondary control at some future date.

f. All materials to be sent via ocean freight from the States should be at sea no less than 6 weeks ahead of the estimated starting date of the work.

g. The dry season on Guam is normally distinct between January 15 and May 15 and all field work should be scheduled for accomplishment between those dates.

h. With regard to paragraph 4 of SUPPLEMENTAL INSTRUCTIONS, the attached memorandum from Mr. F. I. San Nicolas, Acting Director of Land Management, clearly states that the Government of Guam hopes that the surveys will commence no later than February 1, 1963. Also outlined are the funds which will be available for the surveys.

i. Suitable truck transportation is available from the Guam Government for the needs of the triangulation party.

11. All field work was completed on July 20, 1962 and my departure from Guam was on July 22, 1962, Guam time, and arrival in Honolulu was on July 22, 1962, Honolulu time.

Respectively submitted,

Richard F. Hanson  
Surveying Technician

Honolulu District Office  
P.O. Box 3387  
Honolulu 12, Hawaii

27 July 1962

SUR 16-2/mm

Mr. F. I. San Nicolas  
Acting Director of Land Management  
Government of Guam  
Agana, Guam

Dear Mr. San Nicolas,

Mr. Richard F. Hanson, Geodetic Engineer of the Coast and Geodetic Survey has recently completed the reconnaissance for a triangulation survey of Guam Island. Upon evaluation of the present status of basic geodetic control on Guam it appeared best to execute a complete reconnaissance for the establishment of new primary and secondary nets, these survey control nets to conform to specifications contained in Coast and Geodetic Survey Special Publication No. 247 for Class II, First and Second-Order Triangulation.

Attached to this letter is copy of Mr. Hanson's report to me on his reconnaissance work on Guam. During his stay on Guam Mr. Hanson worked very closely with Mr. James W. Darling, Territorial Surveyor. Twenty-eight (28) and sixty-seven (67) primary and secondary stations respectively were selected for the new surveys. Mr. Darling indicated the desired placement of most of the secondary stations to provide control for the cadastral surveys within the road system and inhabited areas. A considerable number of old stations with marks in place were not incorporated into the new proposed nets of triangulation. It was determined that these stations would serve no useful purpose either for the primary net or as secondary stations.

I have at hand your memorandum dated July 16, 1962 addressed to Mr. Hanson. Rear Admiral H. Arnold Karo, Director, Coast and Geodetic Survey will be informed immediately of your government's desire to commence these triangulation surveys not later than February 1, 1963 and that funds are now available. It is estimated that about three months time will be required to complete these surveys, once started, if a 15-man party is placed in the field. This 15-man party would be comprised of possibly between 8 to 10 trained Coast and Geodetic Survey personnel, the balance being Guam Government Survey personnel.

Any final decisions on the time of work, the number of personnel, and the cost of this project must come from our Washington D.C. Office. I would say that you can expect a reply within a reasonable time.

It is hoped that present Government of Guam Survey supervisory personnel will be available during the actual triangulation observations as they are

familiar with the concept of the proposed work. The placing of your own survey marks prior to any observations will materially aid in the progress of this project. It is believed that the different marks now in place at some of the station sites can be incorporated into the new survey as reference marks to the main station, thus preserving the work of other agencies.

I wish to take this opportunity to thank you and all of your staff members for the courtesy and splendid cooperation given Mr. Hanson. He informs me that it was a pleasure to work with the various members of the Government of Guam.

Sincerely yours,

H. J. Seaborg  
Captain, USC&GS  
District Officer

Attachments

cc:  
Director, USC&GS

August 31, 1962

AIR MAIL

Mr. F. I. San Nicolas  
Acting Director of Land Management  
Government of Guam  
Agana, Guam

Dear Mr. San Nicolas:

Your letter of August 23rd has been forwarded to me by Captain Seaborg of our Honolulu District Office.

The interest you and other officials of the Government of Guam have displayed in obtaining a rigid triangulation survey is most heartening, and the cooperation you rendered to our Mr. Hanson on his reconnaissance is very much appreciated by this bureau.

As a territory of the United States, Guam is entitled to support from us in meeting its geodetic requirements. Unfortunately, no provision was made for this in our 1963 budget, so that we are not in a position to finance more than a portion of the total cost of the surveys planned by Mr. Hanson.

We estimate that it may possibly take five and a half months to complete the triangulation, although under favorable conditions it may be accomplished in much less time. Assuming that we furnish eight technicians with instrumental equipment, aided by up to seven or eight of your surveyors as may be needed, the cost for five and a half months operations, exclusive of the pay of your people, is estimated as follows:

|                                              |              |
|----------------------------------------------|--------------|
| Pay, 8 C&GS technicians                      | \$22,000     |
| Travel to and from Guam                      | 10,000       |
| Per diem, 8 men @ \$15                       | 20,000       |
| Air shipment, instruments & personal effects | 4,000        |
| Shipments, 2 steel towers, 2 ways            | 500          |
| Materials, supplies, etc.                    | <u>4,000</u> |
| TOTAL                                        | \$60,500.    |

You will note that the shipment of only two towers is included. As you wish to retain two steel towers after the project is completed, and as we have no way of transferring property to you, it is suggested that you purchase two towers for your continued use. These may be obtained from Aermotor Company, 2500 Roosevelt Road, Chicago, for something in the neighborhood of \$3,000.

If we provide the pay of our technicians, the estimated cost to you would be \$38,500 plus the two new towers. Please understand that we have made

these estimates rather liberal to cover unforeseen eventualities.

It is estimated that the adjustment of the triangulation will cost about \$5,000. This will be undertaken by us at no expense to you.

Our personnel can be assigned to begin the work by January 15, 1963 if this is agreeable to you.

Sincerely yours,

/s/James C. Tison, Jr.  
Rear Admiral, USN&GS  
Deputy Director

## APPENDIX L

### HISTORY OF THE ISLAND OF GUAM

#### GRID SYSTEMS

#### AND

#### VERTICAL CONTROL NETWORKS

NOTE: This was extracted from a Department of Land Management Report.

## CHAPTER VII

### HISTORY OF THE ISLAND OF GUAM GRID SYSTEMS AND VERTICAL CONTROL NETWORKS

According to the testimony of the older inhabitants of Guam, the Spanish made only minor isolated surveys during their occupation. The first agency to establish survey control points on Guam was the U.S. Navy Hydrographic Office which located a few semi-permanent stations in 1910.

In 1913, a party of Army Engineers from the Philippine Department came to Guam to establish an accurate and comprehensive triangulation system to serve as control for topographic mapping and cadastral surveys. Using the geographic coordinates of a U.S. Coast and Geodetic Station, "Longitude" on Orote Peninsula, and a short base line on the Beach at Sumay, horizontal control was extended, monumented, and coordinated on a Metric Grid System. This grid system is known as the "Butler Grid" being named after the officer who established it. The system had as its origin a large concrete monument, known as "Agana" Monument, in the City of Agana which was assigned coordinate values of 50,000 Meters North and 50,000 Meters East. These values were assigned so that there would be no negative values for points South and West of this station. Vertical control was also established for the Island by a determination of mean-lower-low-water. This datum was established after interpolation of two years of tide observations made by an automatic tide gauge located in the old Agana basin.

The Japanese invasion in December, 1941, resulted in the destruction of numerous survey records by the natives to keep them from falling into the hands of the occupation forces. The ravages of war and the decay of time also resulted in the disturbance or loss of several monumented control points. The Japanese during their occupation completed only a few minor surveys.

The intensive construction program that was initiated by the American Forces after the liberation of Guam lacked sufficient survey control for the numerous surveys that were required by construction work. Practically all of the advanced Base construction surveys and maps are either referred to a locally assumed coordinate grid system or are not referred to any control. The Naval survey ships, USS Bowditch, and USS Hydrographer, were assigned the job of making a recovery and extension survey of the Butler Island Control Net. These units completed a considerable volume of work along this line, particularly in the Harbor area, before being dispatched to another zone of operations.

Chief of Naval Operations by its letter serial 177213 dated 3 March 1945 to Commander L.J. Watson, CEC, USNR directed surveys to be made to establish and preserve boundary lines and markers and to assist the Land and Claims Commission for Guam in regard to the following:

- (1) Action to be taken to determine the ownership of land
- (2) Restoration of boundaries and a land record system
- (3) Compensation of owners in money or in kind for land used, acquired, or to be acquired by the United States
- (4) Procedure for the settlement, when authorized, of claims of inhabitants of Guam for damages to real and personal property and for personal injury or death incident to military operations.

The survey group which arrived on Guam on 23rd April 1945 immediately organized a search for existing land records. Four survey note books were given to the group by one of the native surveyors employed by the Naval Government in Pre-war days. These books which contained data transcribed from other sources were invaluable for use in identifying and locating existing triangulation stations and land survey control markers. As previously reported some survey notes were destroyed by the Natives to keep them from falling into the hands of the Japanese occupation forces.

The record books of the former Department of Records and Accounts were found practically intact. The surveys recorded in these books were transcribed by members of the field survey parties and plotted as tract maps by the draftsmen.

All maps of the survey division of the pre-war Naval Government Public Works Department were lost, but later as property surveys were completed, the individual property owner was given a blue print of the plot which contained his lands.

Members of the triangulation department of the survey group contacted personnel attached to the survey ship USS Bowditch and obtained triangulation data which had been compiled by both the USS Bowditch and the USS Hydrographer. The Triangulation Department spent the first two months trying to reconcile the existing land coordinate system established in 1913-1914 with a Polyconic Grid Projection of plane rectangular coordinates. Extensive study and analysis of the few existing records available still left uncertainties as to the exact method employed in establishing the land coordinate system.

It was decided to re-triangulate the Island and establish a plane rectangular coordinate system, having as its origin the geographic position, East longitude  $144^{\circ}-44'-55.520''$  and north longitude  $13^{\circ}-28'-20.870''$ . This point was assigned a value of 50,000 meters east and 50,000 meters north, these values being the same as assigned to this geographic position by the military land survey of 1913-1914. However, during the process of retriangulation a traverse was run from two existing markers in the City of Agana to relocate this position known as the "Agana Monument 1913". The monument was found to be removed but its old location was sufficiently verified to justify setting a new monument by centering the hole. The new monument was included in the triangulation system but its new computed coordinates do not check the old assigned coordinate value of 50,000 meters east and 50,000 meters north. The "Agana Monument 1913" was found to have the coordinates of 49,999.364 meters east and 49,998.781 meters north under the land and claims 1945 Metric Grid System. This monument is of value since it can be used to relocate lots

that were tied to it, although it has ceased to be of value as designating the origin of the coordinate grid system. A monument was set at the geographic position east longitude  $144^{\circ}-44'$  -  $55.520''$  and north latitude  $13^{\circ}-28'-20.870''$  to serve as the origin for the now coordinate Grid System. This monument is called "Agana Monument - 1945" and has the assigned coordinate values of 50,000 meters east and 50,000 meters north.

Field checks made on the existing 1913-1914 military survey triangulation stations "Tenjo", "Togcha", "Alifan", "Butler #4", and "McCaro #4" indicated that the relative geographic positions of these stations as listed were correct. Since the majority of the land surveys in progress at that time were in the vicinity of these stations, it was decided to begin the triangulation system there. To chain an accurate base line with the equipment and time available was entirely impracticable. Accordingly the stations of "Tenjo" and "Togcha" being on opposite sides of the proposed grid meridian and also being in the group of stations whose relative geographic positions was checked as correct were selected as the base line for the triangulation system. Plane rectangular coordinates were computed for these stations by the Polyconic method of Grid Projection from their 1913-1914 Military Survey Geographic positions.

As the triangulation progressed North and East from its assumed Base line a steadily increasing difference was noted between the "Y" ordinate of plane coordinates computed by direct triangulation and the "Y" ordinate of plane coordinates established by the military survey for various common stations. At the extreme north and north-east ends of the Island on the stations of "Machanao" and "Pati Point" this difference amounted to about two and one-half ( $2\frac{1}{2}$  Meters) although the turned azimuth checked the military survey computed azimuth between these stations within five seconds. The latitudes for these stations as determined by the USS Bowditch is approximately the same as calculated by the triangulation Department.

Since the difference in coordinates mentioned above were quite apparent and since the Triangulation System as a whole was based on the assumption that the computed base line between "Tenjo" and "Togcha" was correct, it was decided to chain a base line at the North end of the Island by the best methods available. Triangulation Stations "East Base" and "West Base" comprised the proposed base line. A standardized tape was secured from the USS Bowditch to establish a comparative standardization on the tape to be used in measuring the base line. A thermometer, chaining bucks, and a tension jig were used in chaining. The thermometer was attached to the chain and was read and recorded for each distance measured. Two chaining bucks were used for each measurement and their differences in elevation were determined by a hand level. The base line was measured twice commencing at opposite ends and the measurements corrected for inclination and temperature separately. The two measurements checked better than one part in ninety thousand (90,000). An opportunity was then available to check the base line tape against a standardized tape in the possession of the 103rd Naval Construction Battalion. This check showed a difference of (0.037) of a foot per 100 foot between standardized tapes. None of tapes mentioned above was an "Invar" tape. Neither of the two standard tapes had been used since being standardized and the base line tape was used only for that one measurement. The computed distance from triangulation; the measured distance

obtained by the first standardization value on the base line tape; and the measured distance re-computed from the Second Standardization Value on the base line tape is given below:

- a. "East Base" to "West Base" by direct triangulation -- 10,116.15 Feet
- b. "East Base" to "West Base" (Measured) using tape  
Standard from USS Bowditch -- 10,118.64 Feet
- c. "East Base" to "West Base" (Computed Measurement)  
using tape standard from 193rd NCB -- 10,114.90 Feet.

The triangulation System described in the preceding paragraphs was established solely for use in Cadastral surveys. The distances from "Tenjo" to "Machanao" and from "Tenjo" to "Pati Pt." by triangulation are 33,600 Meters and 34,600 Meters respectively. An error of 2 1/2 Meters in either of these distances will give an error of closure far better than that normally expected in Cadastral Survey work.

In addition to the Primary triangulation system, transit and chain traverses were run along certain primary roads for secondary control. Boundary Surveys were run either by transit and tape or stadia and were tied to the primary triangulation system or to the Secondary Control traverses. The Land and Claims Commission control system as completed in November 1945 consisted of 69 primary control points (some of 1913 origin and others new), and over 50 secondary control monuments. Further information on the Land and Claims 1945 Grid System will be found in "Report on Cadastral Survey of the Island of Guam, Marianas group, Pacific Ocean" which is in the Commander Naval Forces, Base Development Survey files.

Vertical control was established by using the 1913 Butler #1 monument. Lever circuits were closed over the highest monuments and readily accessible triangulation stations. The Vertical Control System as completed in November 1945 consisted of over 50 Bench Marks.

There are three other grid systems on Guam; the Harbor Grid, the Marine Artillery Grid and the World Polyconic Grid. The Marine Artillery Grid which is in yards gives negative values to ordinates of points lying below Talofofo. The World Polyconic Grid Band 111 North, Zone "A", appears on some of the overall maps of Guam made by various Government Agencies in the United States. Both the Marine Artillery Grid and the World Polyconic Grid are not used in general engineering survey work and cadastral mapping on Guam. In 1945 the 193rd Naval Construction Battalion established a Harbor Grid to be used specifically for engineering construction and mapping in the Apra Harbor Area. This grid has for its origin the "Fort Santa Cruz" Monument which has the following geographic coordinates: East Longitude  $14^{\circ} 30' 41.94''$ , and North Latitude  $13^{\circ} 26' 22.07''$ . The origin was arbitrarily assigned the plane coordinate values of 10,000 feet east and 10,000 feet north. This grid gives negative coordinate values to points lying in the extreme southern and western sections of the Apra Harbor Reservation. The Guam Dredging Contractor has used this grid for Harbor dredging and in making sounding charts. Conversion factors have been established for converting Marine

Artillery Grid coordinates and Harbor Grid coordinates to the Land and Claims Commission 1945 Grid. The conversion factors which are approximate are sufficiently accurate for general engineering work. The grid conversion factors are available in the Commander Naval Forces, Marianas, Base Development files.

Realizing the shortcomings of the triangulation network as developed by the Land and Claims Commission in 1945 for Geodetic surveying, topographic mapping, cadastral surveys and other special military needs, the Officer in Charge of Construction directed the Pacific Island Engineers under Contract NOy 13626 to establish a primary control network system. The field work for this survey was performed intermittently between 1946 and 1948.

Two base lines were used, one in the east central part of the Island, known as the Togcha Base Line and the other on the west side, adjacent to Apra Harbor, known as the Apra Harbor Base Line. The Base Lines were measured with a 50 meter standardized "Lovar" tape which was calibrated against another "Lovar" tape used as the "Base Tape". The Togcha Base Line has a probable error of length of 1/3,800,000 and the Apra Harbor Base Line has a probable error of length of 1/3,300,000. Differences in elevations of the 4 x 4 posts used along the base lines were determined by means of an engineer's level. Portable chaining bucks were used where permanent posts were not feasible. The Base Lines were chained forward and backward. A tension of fifteen Kilograms was maintained for all tape measurements using a standard spring balance, and the tape was supported at the mid-point for all full chains. Small set-ups were measured with a small steel scale. It was also necessary to construct three chaining towers to clear difficult terrain. Tape temperature was also taken. The Base Line measurements were corrected for temperature, inclination, calibration, and reduced to sea level.

For the triangulation work two 60 foot observation towers were erected by the construction contractor, one on Barrigada Mountain and the other near Ritidian Point. A network consisting of 37 stations was established, most of these stations were new and were located so as to improve the strength and coverage of the net. All angles were observed with a Buff and Buff repeating theodolite having a 10 inch horizontal circle reading to the nearest 10 seconds. Angles were measured 6 times direct and 6 times with the telescope inverted. The Island wide net developed around these stations was broken into three smaller nets designated as north, center, and south; the Base Lines being in the central net. The nets were adjusted by least squares with the central net being adjusted first followed by the south and north nets. The azimuth of P.I.E. #2 to Macajna was determined by two observations on Polaris.

Togcha 1913 Monument, which was replaced by a standard P.I.E. monument and renamed Lee #7, and which formed one end of the Tenjo to Togcha Base Line used by the Land and Claims Commission in 1945, became the initial geographic position in the new net. The 1913-1914 geographic position of Togcha (Lee #7) as determined by the Butler survey, was used to calculate the geographic positions of all other stations. Geographic positions were converted into rectangular coordinates based on the Agana

1945 monument. A complete analysis of the new island wide grid is given in "Triangulation for Primary - Horizontal Control on Guam, M.I." prepared for the Department of the Navy, Bureau of Yards and Docks, by the Pacific Island Engineers, under Contract N0y 13626.

While it is recognized that the new Pacific Island Engineers network is a decided improvement from an accuracy standpoint over the Land and Claims 1945 system, the new system will be adopted slowly. The differences between the P.I.E. network and the Land and Claims 1945 system cannot be considered for transformation purposes as a fixed constant, but are rather a matter of a large number of discrepancies which vary with each control point. It is estimated that better than 95 percent of all surveyed property on Guam is at present tied to the Land and Claims 1945 grid system including such major items as those areas under the village rehabilitation program and those to be acquired for permanent military activities. In addition, the bulk of the permanent post war construction work has been referenced to this grid system. The P.I.E. network extends the entire length of the Island, however, there are several small areas in which the only control available is that tied to the Land Claims System.

The Contractor also prepared a vertical control network extending over 130 primary triangulation stations, L&CC Road Monuments and miscellaneous Bench Marks. This work is reported in "Vertical Control for Guam, M.I. as of January 1950" established for the Department of the Navy, Bureau of Yards & Docks by the Pacific Island Engineers under Contract N0y 13626.

## CHAPTER VIII

### LAND ACQUISITION, LAND RENTAL, AND VILLAGE REHABILITATION PROGRAMS ON GUAM

#### GENERAL

The policy with regard to the acquisition and rental of land on Guam was promulgated by Chief of Naval Operations Letter Serial 09P22 dated 9 November 1945 to Commander in Chief U.S. Pacific Fleet and Pacific Ocean Areas which approved in principle acquisition and rental of land in accordance with the following:

"(a) The purchase in fee of lands definitely required for Post-War Naval and Military Development.

(b) The acquisition by lease, with option to purchase, of land now occupied by Military and Naval activities which may or may not be required for the Post War establishment pending final determination of need.

(c) Acquisition in Fee or by perpetual easement of Rights-of-way for highways, water supply and distribution, power lines and other communication and distribution systems". Public Law #594 passed by the 79th Congress of the United States of America on August 2, 1946 authorized the Secretary of the Navy to acquire in fee or otherwise, certain lands and rights in land on the Island of Guam and for other purposes. This law was further implemented by Public Law #519 of the 80th Congress wherein the Bureau of Yards and Docks was authorized through the Secretary of the Navy to enter into contracts and to liquidate such contracts from currently available funds heretofore appropriated for Naval Public works as follows, "Naval Base Guam: Acquisition of land as authorized by act of August 2, 1946 - 1,600,000." The general duties of organizations handling land matters on Guam and the procedures to be followed in acquisition and transfers of land on Guam were outlined in enclosures (1) through (6) of the Governor of Guam letter Serial 986 dated 6 January 1947. Enclosures (1) through (6) respectively covered the following points:

- (1) Procedure for acquisition of land on Guam for use by the Federal Services
- (2) Procedure for acquisition of land for use by the Naval Government
- (3) Procedure to be followed in acquisition of land for rehabilitation of Guamanian villages
- (4) Procedure to be followed in transfer of land from a land owner on Guam to a citizen of Guam

- (5) Procedure to be followed in lease of land by a land owner on Guam to other than a Guamanian citizen.
- (6) Procedure for issuance of temporary revocable permit to occupy and use, or for transfer of, federal owned lands.

The procedures in the foregoing articles have been modified to suit changing conditions but in general they outline the systematic action taken on all land problems on Guam.

### SURVEYS

As the Base Development Department of Commander Naval Forces Marianas did not have sufficient personnel to make the required military boundary surveys and maps, the OINCC by its letter serial #5302 dated 2 September 1947 directed the architect-engineer, Contract NOy 13626 to carry out this work. The land and claims Commission supplied the architect-engineer with the necessary information to make the boundary line lot severances and also plotted the interior lots on the final maps. The architect-engineer prepared boundary maps of the following areas:

1. Naval Ammunition Depot
2. Command Center including ComMar and Housing Area #5
- \* 3. Camp Dealey
4. Asan Point Housing
- \* 5. Ethridge Beach
6. Medical Center
7. Asan Point Tank Farm
8. Agana Springs
9. Navy Communication Station
10. ACEORP Maui Well Entrance
11. Nimitz Beach
12. Housing Area #3
13. NAS Agana including housing area #7
14. Radio Barrigada
15. Apra Harbor Reservation
16. Sasa Valley Tank Farm
- \*\*17. Fena River Reservation Boundary

\* Areas have been abandoned because of extensive damage caused by typhoon "Allyn" in November 1949.

\*\* This map includes only the dam and reservoir section of the watershed

With the recent reduction in the architect-engineer personnel, the base development department has undertaken the Military Survey and mapping activities of that organization in addition to its regular duties. This has been made possible by the absorption of the land and claims commission personnel by the Base Development Department of Commander Naval Forces, Marianas. The Base Development Department has prepared boundary maps of the following military areas:

1. Loran Station - Cocos Island
2. Agana Diesel Electric Generating Plant

3. Fena River Reservoir (additional watershed area)
4. Civil Aeronautics Administration Radio Range
5. Mt. Barrigada V.H.F. Station Site
6. Mt. Tenjo V.H.F. Station Site
7. Camp Witek, FMF

In addition to the above areas boundary maps will be prepared for miscellaneous minor areas examples of which are the Mt. Alutom Navigational Aid Light Site, the Apra Harbor Pear Range Site, and the Mt. Santa Rosa Navigational Aid Light Site. Base Development has also prepared several Easement Maps for Power Transmission systems and POL lines from information supplied by the architect-Engineer. Easement Surveys and Maps for highway rights-of-way are being made by the Base Development Engineering Forces.

Boundary line surveys including maps for army and Air Force Areas were made either directly by the Corps of Engineers, U.S. Army, Office of the District Engineer, Guam District, Engineering Forces or by their Contractor Robert and Company Inc. architects and engineers of Atlanta, Georgia. The old Land and Claims Commission aided in this work by supplying Grid information, property ownership, and by preparing supplementary maps on some areas. The Army and Air Force Areas which have been mapped and monumented are as follows:

#### Army Areas

1. AV-Gas Tank Farm No. 12
2. AV-Gas Tank Farm No. 11
- \* 3. Tumon Maui Well
4. Marbo Engineer Depot and Camp Edusa
5. Marbo Base Command Area
6. Agafo Gunas Area
- \* 7. Tumon Bay Recreation Area
8. Mt. Santa Rosa Reservoir
9. Sewage Disposal Area

\* Joint Area with Air Force

#### Air Force Areas

1. Tarague Natural Wells
2. Northwest Guam Air Force Base
3. North Guam Air Force Base
4. AACCS Radio Range Area #49
5. Harmon Air Force Base Area #52
6. AACCS Radio Range Area #54
7. Mt. Santa Rosa V.H.F. Relay Station

In addition to the above areas the Corps of Engineers have prepared Easement Maps for various utilities. These maps have been filed and the required easements secured.

All of the Navy, Army, and Air Force foregoing listed mapped areas have been purchased in fee. The only major area which has not been purchased is the Harmon Field Area identified as Area "52" on M.A. DWG. No. 6842 - "Map of Guam, showing land to be leased for the Armed Forces for Fiscal Year 1951". This area has been surveyed, monumented, and mapped. Should future Air Force

policy direct acquisition of this area, the necessary information is available for its purchase.

Base Development is engaged in an extensive program of Cadastral Mapping on Guam. This work was initiated by the Old Land and Claims Commission in 1945. The Island has been sub-divided into Land Squares for this work. Each 5000 Meter land square is subdivided into four 2500 meter square sections. Each land square section is further subdivided into 25, -500 meter squares identified alphabetically from "A" to "Y". Each land square usually consists of four section maps. Where necessary as in the municipality of Agana for example maps are made of the Section Units in order to properly plot the numerous small lots. The land square section maps are made to a scale of one inch equals a 100 meters and the section unit maps are made to a scale of one inch equals twenty meters.

In the village rehabilitation program, the following village boundary lines have been surveyed, monumented, and mapped: Agana, Agat, Asan, Barrigada, Piti, Santa Rita, Sinajana, Talofofo, Toto, and Yona. The interior lots within these villages have also been laid out and monumented in the field.

#### OWNERSHIP DETERMINATIONS

In the determination of ownerships of the various individual tracts of land comprising areas selected for acquisition, the major difficulty was the absence of adequate land records due to the destruction during the period of Japanese occupation of such records as were in existence, and the fact that the indigenous population of Guam generally had not recorded conveyances of, or encumbrances on, lands prior to the war. The records were particularly incomplete on lands included in the estates of decedent landowners due to the practice of dividing among the heirs extra judicially rather than instituting probate proceedings.

Over 350 property ownership checks have been made, as well as approximately 1260 field investigations. Action has been taken on over 270 probate cases and 130 guardianship proceedings. Approximately 2700 petitions to Compromise have been prepared of which 1610 have been filed in court and orders issued thereon. It is estimated that approximately 12,000 Abstracts of Title will be necessary on privately owned tracts of land now acquired in fee and proposed for acquisition. To date approximately 10,500 Abstracts have been prepared. These Abstracts are being kept current to reflect changes caused by death, sub-division, sale or legal proceedings. Over 12,400 title opinions have been prepared in addition to approximately 325 mortgage bond and lien releases and over 775 deeds.

#### APPRAISALS

Appraisals are made upon each individual holding in every condemnation action filed. This work involves physical examination of the property, computation of the extent of each ownership and the application of standard methods of determining fair market value. To date over 12,000 appraisals have been completed for fee, easement, and leasehold acquisition.

## NEGOTIATIONS AND SETTLEMENT

The village Commissioners generally have assisted in the negotiations with land owners. In connection with approximately 80 per cent of the negotiations, meetings are called in the offices of the Commissioners in the villages, ordinarily attended by 10 to 20 landowners. When ever it appears that the land owners do not have sufficient comprehension of the English language full explanations are given in Chamorro by a Guamanian negotiator assisted by the Commissioner. Stipulations for settlement are the presented to the landowners for execution. In the remainder of the cases, individual landowners are contacted at their homes or at the Base Development office and the same procedure is followed. In the event a landowner does not wish to sign the stipulation, a record is made of the reason for refusal and the stipulation is returned for an evaluation of the landowners contentions. Where the objection is as to the price offered and the reasons presented by the landowner are sufficient to justify an increase in the offer, the stipulation is revised and a new offer made in the same manner as before.

Approximately 7200 stipulations have been prepared to date. Roughly 4900 stipulations have been executed by the landowners and approximately 280 stipulations have been returned unexecuted. In these latter cases, the reasons given for refusal are, in the order of frequency, that the landowner (a) wished to purchase other land from the government before agreeing to settle the question of value, (b) has a natural aversion to land condemnation action, or (c) believes the value of the land taken to be higher than the amount offered. It is estimated that a total of approximately 9,000 additional stipulations will be required to complete the land acquisition program.

A judicial hearing is necessary where settlement agreement cannot be reached with the land owner. Only a small number of such hearings have been held as the efforts of the legal and negotiating staff has been concentrated on obtaining judgments and voluntary agreements in order to cover the maximum land are involved in the various condemnation proceedings.

## LEASEHOLD SETTLEMENTS

Approximately 6670 acres of land is held in the 1951 Fiscal Year leasehold. About 6000 acres of the above figure covers areas that are not designated for fee acquisition. The remaining 670 acres covers utility systems and military roads. As the necessary utility system and road easement drawings are prepared, the required easements will be secured. As leased areas become surplus to military needs, negotiations are conducted with the lessors with the view to the execution of a release agreement involving termination of the leasehold estate; the transfer to the lessor of all or part of the government constructed improvements in lieu of physical restoration of the premises or payment for damage to the premises resulting from the government's use; the payment by the lessor of an amount, if any, representing the difference between the fair market value of the improvements and the government's restoration obligation; the deduction from the amount to be paid by the lessor of all rentals due from the Government; and the waiver of the lessor of all claims and demands against the Government. Continued effort is being made to reduce

## THE LAND TRANSFER PROGRAM

The program involves the subdivision and re-sale of approximately 2,100 Government owned lots within the ten organized villages including over 1,000 Government owned houses. Over 53 per cent of the vacant lots and 13 per cent of the improved lots have been sold. On the remaining lots, the necessary subdivision survey work has been completed, and the appraisal, sale approval and preparation and delivery of deeds is expected to be completed by 1 September 1950. The organized villages involved in this program are Agaña, Agat, Asan, Barrigada, Piti, Santa Pita, Sirajana, Talofofo, Toto and Yona.

### LAND TRANSFER FROM THE NAVY DEPARTMENT

#### TO THE NAVAL GOVERNMENT OF GUAM

A proposed document designed to effectuate the transfer of certain lands not required for military or Naval purposes to the Naval Government of Guam has been forwarded to the Bureau of Yards and Docks for signature. By adoption of this procedure and the reverse transfer noted herein after the military forces will own and occupy less land on Guam than was held previous to World War II.

#### LAND TRANSFER FROM NAVAL GOVERNMENT OF GUAM TO U.S.A.

A draft of a proposed deed to effectuate the transfer of certain lands required for military or Naval purposes from the Naval Government of Guam to the United States of America has been prepared and sent to Governor of Guam for consideration.

### TEMPORARY USE OF AREAS WITHIN MILITARY RESERVATIONS BY THE GOVERNMENT OF GUAM

The Naval Government of Guam is presently occupying certain areas within the permanent military reservation. A revocable permit covering the use and occupancy of these areas by the Government of Guam subsequent to 1 July 1950 will be issued upon receipt of Area descriptions from the Attorney General.

### TEMPORARY USE OF AREAS WITHIN NAVAL RESERVATIONS BY OTHER MILITARY ACTIVITIES,

#### FEDERAL AGENCIES, COMMERCIAL ORGANIZATIONS AND PRIVATE PARTIES

A program has been placed in effect and is partially complete for properly registering and obtaining approval and legalizing the use of property now determined to be Naval Property owned in fee, by all other services, Federal Agencies, Commercial Organizations and private parties. Principal among these being the Army and Air Force, the Standard Oil Company, the Commercial Pacific Cable Company, and the Naval Government of

Guam all of which occur, as within the Apra Harbor Preservation. There are also many private individuals living within Small Preservations in many cases on their original land. When no conflict with security or operation is indicated, a policy of non-displacement is being adopted.