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United Nations Transitional Administration in East Timor

SCHEDULE 1

Existing Regional Telecommunication Assets and Infrastructure

October 2000
Version 1

DISCLAIMER

East Timor had gone through a traumatic devastation in the post consultation weeks in September October 1999. The telecommunications sector, like most of the infrastructure suffered considerably. Of a respectable network of facilities that existed prior to the consultation only a very small amount of useable assets remain. United Nations and local telecommunications' staff have taken every care in the survey and preparation of this report. It is intended to assist but not to replace research and survey by applicants for the pre-qualification now sought by the government of East Timor. We do not therefore assume any responsibility for inaccuracies or omissions. Applicants should carefully arrive at their own conclusion regarding the existence and state of all assets that they propose to incorporate into their eventual bid.

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General

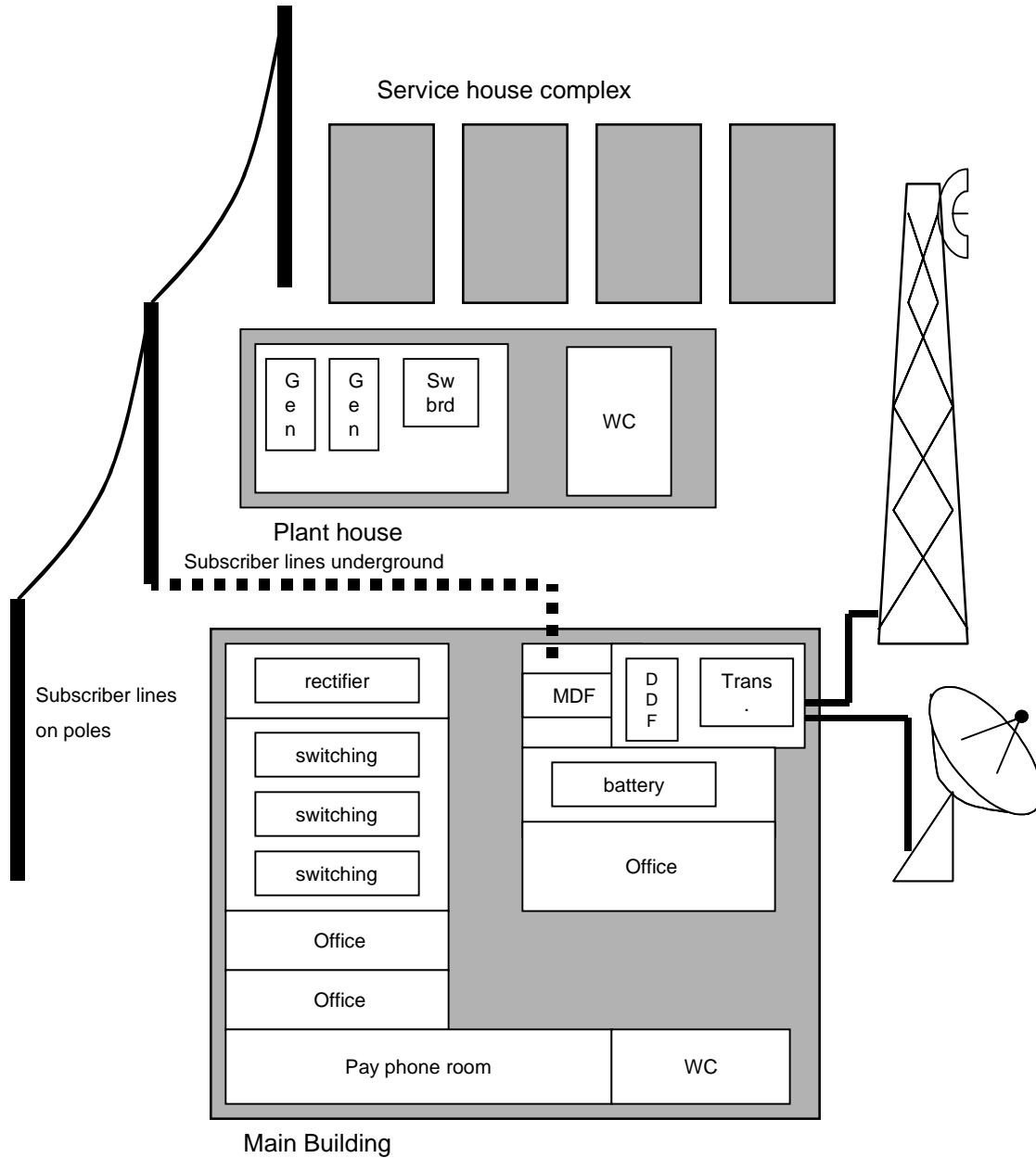
A modern digital telecommunication network had been installed throughout East Timor. A part of this network was damaged in September 1999. The damage was largely limited to buildings and electronic equipment. Towers, outside plant and satellite antennas remained largely undamaged. While some sites sustained significant damage some sites were not affected and are still in operational condition. The power has been switched off on all sites.

Prospective contractors will be given access to sites to allow surveys. The contractors can also refer to a detailed survey of all telecommunication sites in East Timor that UNTAET has carried out in September 2000. The survey results are outlined below.

The assets under consideration are the telecommunications exchange and repeater sites formerly owned by PT. Telkom.

An exchange site typically consists of:

- A main building containing the exchange, transmission, main distribution frame and rectifier room
- A plant building containing the generator plant room, battery room and bathrooms
- An outside plant area next to the exchange room for one or more radio transmission tower (typically lattice towers) and satellite earth station.
- Service house complex (typically consisting of 6 houses)
- A 2WD all weather access road



TYPICAL EXCHANGE SITE

A repeater site typically consists of:

- A main building including an equipment room, battery room, plant-room and service room.
- A lattice radio tower next to the main building with two radio antennas
- A 2WD or 4WD access road

Overview of Sites

Ainaro exchange site

35 metre lattice tower, 2 grid antennas

3.5 metre satellite antenna

Generator plant

Service house complex

Outside plant – copper cables on poles



Site Condition

The exchange building and the plant house have been destroyed and need to be demolished and rebuilt. All electronic equipment was destroyed. The generator sets have been destroyed, the fuel tanks have sustained no visible damage. The tower shows no visible damage. The outside cable plant has been largely stolen, the poles have not been damaged.

All weather access by 2 WD

Overall condition: Very heavy damage



AINARO TOWER, OSP POLES, SATELLITE ANTENNA, SERVICE HOUSES AND GENERATOR HOUSE

Baucau Exchange Site

40 metre lattice tower with 1 grid antenna
3.5 metre satellite antenna
optic fiber line equipment

Site Condition

The site has been damaged extensively. The exchange building was destroyed and need to be demolished and re-built. The plant house has been damaged extensively, generators were destroyed, fuel tanks show only minor damage. The tower and satellite antenna show no major damage. The satellite antenna has no visible damage. All electronic equipment has been destroyed. The outside plant shows no major damage.

All weather access by 2WD vehicle.

Overall condition: Very heavy damage

Bitterlaun Repeater Site

37 metre lattice tower, 2 grid antennas
2 x 34 MB/s Alcatel GMD radio system (installed in mid 1999)
Generator plant with 2 generators

Site Condition

The repeater site has only sustained minor damage at the electrical switchboard. One of the diesel engines need minor repairs. No visible damage to any other equipment. The site is guarded around the clock.

All weather access by 4WD

Overall condition: Light damage.

Buibau

70 metre lattice tower, 1 grid antenna
Digital radio system
Optic fibre line equipment
Generator plant with 2 generators

Site Condition

Desa Bahu was providing transmission links to Baucau via optic fibre. The site sustained no damage and all equipment is expected to be in working order.

Erikslau

35 metre lattice tower with one grid and one parabolic radio link antenna

2 Gensets with 2 fuel tanks

Condition

The building was burned and needs extensive repairs. The generator sets have been destroyed, the fuel tanks show no visible damage. Tower, antennas and feeders show no visible damage.

All weather access by 4WD

Gleno Exchange Site

STDIK digital exchange with 276 subscribers.
34 MB/s radio link
24 metre lattice tower with grid radio link antenna
3.5 metre Satellite antenna
Power plant with 2 Diesel Gensets, 2 diesel tanks and battery bank
Outside plant – copper cables on poles



Site Condition

A fire in the exchange building heavily damaged the buildings and destroyed the exchange and all electronic and electric equipment including the batteries. The building will need extensive repairs.

The satellite antenna, radio link antenna and radio tower sustained no visible damage.

The diesel generators sustained some mechanical but no fire damage and need repair. The diesel tanks show no visible damage.

All weather access by 2WD vehicle.

Overall condition: Heavy damage



GLENO TRANSMISSION RACK, SERVICE COMPLEX,



GLENO GENERATOR ROOM, RADIO TOWER

Gunung Dumihuhun Repeater Site

37 metre lattice tower, 1 grid antenna

Radio link to optic fibre relay

Site Condition

The site provided connectivity to Manatuto via and optic fibre. The site has experienced extensive damage, the electronic equipment has been destroyed. The tower and the radio antenna show no visible damage. The optic fibre shows no visible damage.

All weather access by 4WD.

Overall Condition: Heavy damage

Mt. Guguleur Repeater Site

37 metre lattice tower, 2 grid antennas

2 x 34 MB/s Alcatel GMD radio system (installed in mid 1999)

Generator plant

Site Condition

The site has not sustained any damage and should be in working order. The site is guarded around the clock.

All weather access by 4WD.

Overall condition: No damage

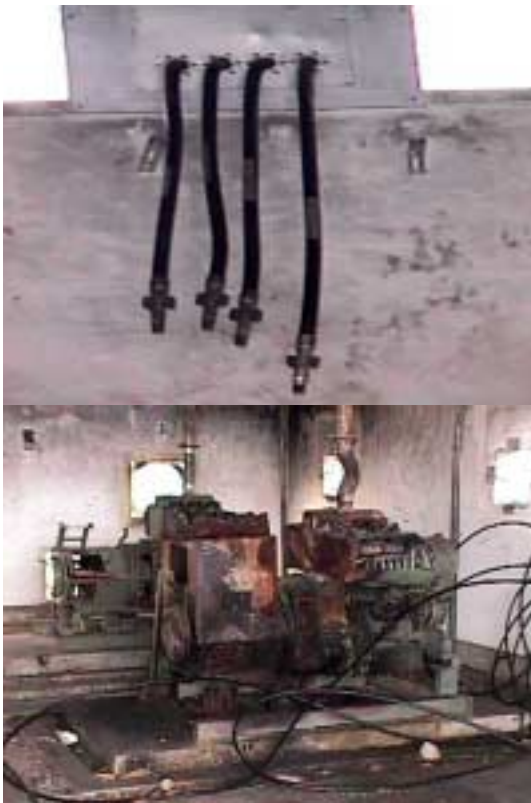
Hataudo Repeater Site

70 metre lattice tower, one 1.8 meter Radome
radio link antenna, one 2 minigrd antennas
2 Gensets with one fuel tank
All weather access by 4 WD



Site Condition

The building was burned and needs repair. All electronic equipment was destroyed or de-installed. Strong soil erosion next to building, stability of foundations need to be evaluated. Tower, antennas and feeders show no visible damage. One generator set was burned and can not be repaired, the second generator set needs repair. The fuel tank show no visible damage. Overall condition: High damage.



HATAUDO RF CABLES FROM TOWER, GENERATOR ROOM

Hohonaro Repeater Site

30 metre lattice tower, 2 grid antennas

Solar panel

2 Generator sets with one diesel tank

Battery banks



Site Condition

Electronic equipment has been de-installed and removed. Both gensets need repair, the tank has no visible damage. The tower and grid antenna are in very good condition. The solar panel has no visible damage and was in use at the time of survey to re-charge batteries of a Portuguese Peace Keeping Force unit. The batteries have no acid.

Access all times by 4WD vehicle.

Overall condition: medium level damage



HOHONARO GENERATOR ROOM AND TRANSMISSION ROOM

Lequivato Repeater Site

Siemens PDH radio system

25 metre lattice tower with 2 radio link antennas

Power plant with 2 Diesel Gensets and battery bank

Site Condition

The site had not sustained any damage and need checking to confirm condition. Instruction manuals for the transmission equipment is on site.

The site is occupied and under surveillance around the clock.

Access all times by 4WD vehicle.

Overall condition: No damage

Liquica Exchange Site

3.5 satellite antenna

26 metre lattice tower

Remote digital line unit site

Outside cable plant on poles

Site Condition

The buildings were not burned but transmission and switching equipment have been destroyed. The buildings need repair. The tower and the radio antenna show no visible damage. The satellite antenna and feeder show no visible damage. The outside plant shows no visible damage.

All weather access by 2WD.

Overall condition: Medium level damage.

Los Palos Exchange Site

3.5 metre satellite antenna

40 metre tower with 1 radio antenna

Outside plant - copper cables on poles



Site Condition

A fire in the main building damaged the buildings and destroyed the exchange and all electronic and electric equipment including the batteries.

The satellite antenna, radio link antenna and radio tower sustained no visible damage. The feeders have been damaged. The building will need extensive repairs.

The diesel generators house was burned the generator have been destroyed.

All weather 2WD access.



Mauloho

70 metre lattice tower

Unfinished site

Site Condition

Mauloho repeater station was not completed. The tower and building are new and undamaged. No antennas, generators or any electronic or electric equipment had been installed.

All weather access by 2WD vehicle.

Maliana Exchange Site

30 metre lattice tower with grid antenna

3.5 satellite antenna

Site condition

The site experienced heavy destruction with all buildings largely destroyed. The tower and the radio antenna show no visible damage. The satellite antenna sustained heavy damage. The generator sets need complete replacement.

All weather access by 2WD vehicle.

Overall condition: Very heavy damage.

Mabia Repeater Site

30 metre lattice tower.

Site Condition

The building was completely destroyed. All equipment needs to be replaced; the building needs to be re-built.

All weather access by 4WD vehicle.

Overall condition: Very heavy damage

Manatuto Exchange Site

Generator Plant with 2 diesel tanks

Optic fibre terminal station with no radio link

Site Condition

The building has been burned and sustained heavy damaged, all electronic equipment was destroyed, the plant room was heavily damaged.

Manatuto has no radio tower, transmission to the site is by optic fibre leading to the FO-Radio repeater site at Mount Dumihuhun. The OF shows no visible damage.

All weather access by 2WD vehicle.

Overall condition: Heavy damage

Ocussi (Pante Makasar) Exchange Site

30 metre narrow lattice Tower

3.5 metre satellite antenna

Power plant with beds for 3 Diesel Gensets, 2

Fuel tanks

Outside plant - copper cables on poles



Site Condition

Most of the equipment has been de-installed and shipped away. The exchange building was burned and needs extensive repair. The plant house (which includes bathrooms and power plant) was not burned and needs basic repair. The satellite antenna and feeder have no visible damage. The tower shows no visible damage. The generator set have been shipped away. The diesel tanks have no visible damage. The outside plant has sustained no visible damage.

Access all times by 2WD vehicle.

Overall condition: High level damage



OCUSSI EXCHANGE ROOM AND OSP FEEDER-POINT CABINET



OCUSSI SECONDARY OSP NETWORK AND TELCO SERVICE COMPLEX



OCUSSI EXCHANGE BUILDING

Oranetete Repeater Site

2 x 34 MB/s Alcatel GMD radio system (installed in 1999)

35 metre lattice tower with 2 radio link antennas

Power plant with 2 Diesel Gensets and battery bank

Wind Generator

Site Condition

The site had not sustained any damage and all equipment is expected to be in working condition. One diesel engine was undergoing repair when the site was abandoned.

The site is occupied and under surveillance around the clock.

Access all times by 4WD vehicle.

Overall condition: No damage

Same Exchange Site

- 3.5 metre satellite antenna
- 100 metre tower with 1 radio antenna
- 2 Generator sets, 2 fuel tanks
- Outside plant - copper cables on poles



Site Condition

The exchange room and service buildings were burned and need extensive repairs. All electronic equipment had been de-installed. The feeders from the satellite antenna and the antennas on the tower had been cut at the bottom. The tower and the radio antenna show no visible damage. One of the two generator sets has been burned and can not be repaired. The other generator set needs extensive repairs. One of the 2 fuel tanks was moved from its original position and left on site. The outside plant has sustained no visible damage. Access at all times by 2WD vehicle. Overall condition: High damage



SAME GENERATOR ROOM, DIESEL TANK, SATELLITE ANTENNA AND EXCHANGE ROOM

Somoro Repeater Site (Pante Makasar)

30 metre lattice tower with one radio antenna
All weather access by 2WD vehicle



Site Condition

Somoro was under installation or commissioning when it was abandoned. Building and tower are in excellent condition. All equipment had been de-installed. Somoro was obviously designed to connect Ocussi via West Timor, as the orientation of the one radio antenna (155°) suggests. Overall condition: Unfinished site with no damage. All civil works completed.



SOMORO GENERATOR ROOM AND TRANSMISSION ROOM

Suai Exchange Site

30 metre narrow lattice tower

40 metre lattice tower with 1.8m antenna

Outside plant - copper cables on poles

3.5 metre satellite antenna

Generator plant



Site Condition

The exchange building was destroyed and need to be demolished and re-built. The plant house has been damaged extensively, generators were destroyed, fuel tanks have been removed. The tower and the feeders from the tower to the exchange building have no visible damage. The satellite antenna has no visible damage. All electronic equipment has been destroyed. The outside plant has sustained no visible damage.

Overall condition: High-level damage



Suai exchange building, MDF room, radio tower, satellite antenna and generator room

Tailabella Repeater Site

25 Metre lattice tower with grid antenna

Site Condition

The building was not burned but sustained damage in the interior. All electronic equipment and the generator sets have been removed. The tower and the radio antenna show no visible damage.

All weather access by 4WD vehicle.

Overall condition: Medium-level damage

Viqueque Exchange Site

30 metre lattice tower

Solar panel

2 Gensets, 2 fuel tanks

Outside plant - copper cables on poles



Site Condition

The inside of the exchange building was damaged; the building structure remained intact. The electronic equipment sustained extensive damage and need replacement, the generator sets need medium-level repair, the electric switchboard needs replacement; the fuel tank sustained no visible damage. The tower and the radio antenna show no visible damage. Tower and feeders and outside cable plant have no visible damage.



VIQUEQUE RECEPTION HALL AND GENERATOR HOUSE



VIQUEQUE TRANSMISSION ROOM AND EXCHANGE ROOM



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United Nations Transitional Administration in East Timor

Regional Telecommunications Infrastructure

Site Survey

Report
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Version 1

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Introduction

A survey to establish the status of the telecommunication infrastructure in East Timor has ended. The main purpose of the survey was to make assessment of the damages and ascertain if some of the structures and fixtures can be used. The team looked at the buildings, towers, the d c-power, a. c power supply, fuel storage, transmission equipment, switching equipment, access cable network, staff accommodation and access roads.

Because of its unique status the set up, potential and the central role that Dili plays in the social and economic development of this country its demands and requirements will be considered separately. It is noted that Telstra is operating the exchange in Dili and is using others facilities.

Sites Surveyed

- The following repeater stations were visited.
Biterlaun ,Dimohuhun,G.Mabia, Lequivato, Rota Bahu, Ds Mualoho, Ossu1,Ossu 2, Erkuislau, Talabala,,Oranetete ,Gn Guguleur, Samoro,Gn Hohonaro and Hataudo.
- The following host stations were visited,
Baucau, Dili, Aileu, Same, Suai, Ainaro, Ermera, Liquica, Maliana, ManatutoViqueque, Los Palos and Pante Makaser.

Sites

- Fencing
All sites are properly fenced. However in some stations either animals or locals have made gaps in the fencing mesh. Entrance gates in a few stations were damaged. Hataudo repair station has wall fence. Due to heavy rains this year, the front part of this wall collapsed.
- Buildings
There are four (4) architectural structures used for telecommunication building in East Timor. These are categorized and their locations indicated. Where damage is not extensive the similarities will make the estimates and repairs costs per building to nearly be similar. However the extent of damage varies from site to site. More than eighty percent of the telecommunications buildings were badly burnt and much structural repairs are needed. Where burning was not extensive, the doors windows and other fittings have been removed or smashed.

Special note. Hataudo Repeater Station.

Due to heavy rains this year, there was landslide at this site, therefore the compound and buildings at Hataudo needs further inspection to ensure that proper soil stabilization is done.

The following repeater stations have similar architectural structures

- a) Biterlaun, Telabella, Liquivato, Oranetete, Guguleur.
- b) Ossu 1, Ossu 2, Erklau, Samoro, Mauloho, Hohonaro and Hataudo

The following Telephone houses have similar architectural structures:

Baucau, Viqueque, Los Palos, Aileu, Maliana, Manatuto and Same.

The following two have architectural structures similar and unique to themselves:

Ainaro and Suai.

The following stations have architectural structures, which are not similar to any:

Liquica and Ermera.

- Power Supply
All stations had either or all of these power systems installed/extended:
Commercial power.
Two stand-by generators
A battery bank
Solar panels
- Electrical Fittings
All The electrical fittings and wiring were either removed or vandalized.
- Water supply system
Sites have water extended to the buildings. Like other systems, water supply in most was destroyed. Where no destruction was done
Minimal repairs are needed.
- Towers
These exist at all sites. Most of them are new and the old ones may need repainting. All the towers can withstand wind of 120 km/h.
- Antenna
Most of the antennas are grid type and are in various sizes. However the minigrid type was extensively used in the network. A few random types exist in the network. Antennas on two sites had been pulled down. (Talabella and Ainaro)
- Feeders
Apart from Oranetete, Guguleur, Lequivato, and Hataudo repeater stations, all the feeders in the other stations were destroyed.
- Fuel Storage
Each station and repeater has two fuel tanks of 1000 liters capacity each. Seven (7) of these were destroyed, removed from the base or taken from the site and two (2) have bullet holes but could be repaired.
See Table –4

- Transmission equipment
With the exception of Liquivato, Guguleur, Oranetete, and Dili all transmission equipment was destroyed. Because radios are manufactured with matching frequencies, it is doubted whether the transmission equipment in these stations can be matched with new one.
- Switching equipment
Apart from Dili Exchange, all switching equipment in other stations was destroyed.
- Access cable network
The access cable network is mainly overhead and it still exists in all towns except Ainaro where the cables were removed (stolen).
Because of the limited time the surveying team never tested the cable network. Some cables are found to be sagging and their regulation is needed.
Very few distribution cabinets do exist in the network and whatever existed was destroyed. There is no distinct demarcation between primary and secondary cable distribution network. However a number of Distribution Points (DPs) do exist in the network. The majority of these are pole mounted DPs.

Table –3 gives a summary transmission information of the network.
Where the height of the antennas was not given, it was due to failure to have the measurements directly taken.

Table- 4 gives the summary of general information on the status of the infrastructure of in the country.

Table –5 gives the summary of Stations data
A number of photographs showings status of the infrastructure were taken and more will be coming in from the District Infrastructure Officers.

Use of sites

Most of the sites are occupied by different organization and below are the tables showing who is occupying what premises.

DISTRICT	SITE	SITE BEARING	TYPE	OCCUPANT
Aileu	Telabella	08 37.59S 125 38.06E	Repeater	PKF (Portuguese)
	Aileu	08 43.74S 125 33.97E	Telephone House	Falantil
	Aileu	08 43.74S 125.33.97E	Staff Houses	UN staff/Locals
Ainaro	Hohonaro	08 52.72S 125 36.96E	Repeater	PKF (Portuguese)
Baucau	Liquivato	08 30.41S 126 21.46E	Repeater	PKF (Thai)
Lautem	Ds Mauloho	08 26.43S 126 57.67E	Repeater	PKF (Thai)
Ermera	Gleno	08 43.42S 125.25.90E	Staff Houses	PKF (
Manufahi	Same	08 59.57S 125 39.06E	Staff Houses	CivPol
Viqueque	Ossu 2	08 42.62S 126 22.15E	Repeater	TIC (Roads Construction Co.)
Viqueque	Viqueque	08 51.56 S 126 21.88E	Staff Houses	Locals
Ainaro	Ainaro	08 59.64S 125 30.08E	Staff Houses	Locals
Liquica	Laquica	08 35.39S 125 20.51E	Staff Houses	Oxfam

Telecommunication Sites that are being occupied and must be vacated.

Table - 1

DISTRICTS	SITE	SITE BEARING	TYPE	OCCUPANT
Dili	Biterlaun	08 32.90S 125 37.04SE	Repeater	RED CROSS UNHCR/ UN
Manatuto	Manatuto	08 30.90S 126 00.84E	Telephone House	NONE
	Dimohuhun	08 30 .93S 126 08.46E	Terminal	NONE.
	G. Mabia	08 32.01S 126 08.92E	Repeater	NONE.
Baucau	Baucau	08 27 77S 126 27.55E	Telephone House	NONE.
	Rota Baru	08 29.31S 126 20.11E	Terminal Optic/Radio	UN/COMM.
Viqueque	Ossu 1	08 42. 88S 126 22.15E	Telephone House	UN/COMM.
Occussi	Pante Makasar	09 12.06S 125 25.46E	Telephone House	NONE.
	Samoro	09 13.24S 124 20.12E	Repeater	NONE.
Manufahi	Hataudo	09 07.33S 125 35.78E	Repeater	UN/COMM.
Cova Lima	Suai	09 18.74S 125 15.34E	Telephone H'se Staff Accom.	NONE.
Ainaro	Ainaro	08 59.64S 125 30.08E	Telephone H'se	NONE.
Aileu	Erkislau	08 42.87S 125 33.97E	Repeater	NONE.
Liquica	Guguleur	08 39.94S 125 11.02E	Repeater	UN/COMM.

Sites that are not occupied /occupied on temporary basis.

Table 2.

General Transmission Information

site	Latitude.	Longitude.	Elevation (m.a.s.l)	Tower Height.	Antenna Type.	Antenna Height.	Antenna Direction	
Dili	08 33.53S	125 34 74E	43	35	Radome Parabolic Minigrd	23		Biterlaun Talabela.
Biterlaun	8 32.90S	125 37.4SE	470	37	Minigrd Parabolic		Biterlaun	Guguleur Oranetete
Manatuto	08 30.90S	12600.84 SE	11				Manatuto	Domihuhun
Dimohuhun	08 3093S	126 01.46E	116	37			Talabela	Mabia
G.Mabia	08 32.01S	126 08.92E	203	35			Domihuhun	Lequivato
Lequivato	08 30.41S	126 21.46E	633	25	Minigrd		Mabia	Desa Baubau Ossu 1
Desa Baubau	08 29.31S	126 20.11E	472	50			Lequivato	Baucau Mauloho
Baucau	08 27.77S	126 27.55E	356	40	Minigrd			Desa Baubau
Mauloho	08 26.43S	126 57.67E	393	70	Minigrd		Desa Baubau	Los Palos
Los Palos	08 31.74S	126 59.86E	377	30				Mauloho
Ossu 1	08 41.88S	126 22.12E	1030	30	Minigrd	23,23	Lequivato	Ossu 2
Ossu 2	08 42 62S	126 22.15E	936	30	Minigrd	23,23	Ossu 1	Viqueque
Viqueque	08 51,56S	126 21.88E	45	30	Minigrd	23		Ossu 2
Guguleur	08 39.94S	125 11,02E	1153	37	Grid		Biterlaun	Somoro Maliana Liquica
Liquisa	08 35.39S	125 20.51E	19	26		Sat.		Guguluer
Talabella	08 37,59S	125.38.06E	1307	25	Parabolic	28,28	Dili	Erkislau
Erkislau	08 42.87S	125 33.66E	1098	35	Grid/Para	28 ,24	Talabella	Aileu Hohonaro
Aileu	08 43.74S	125 33.97E	934	Sat. Dish		30, 24		Talabella
Maliana	08 59.39S	125 12.92E	225	35	Grid	30		Guguluer
Oranetete	08 45.01S	125 25.46E	1525	35	Grid	30 Biterleun 25 Ermera/G	Biterleun	Ermera/Gleno
Gleno/Ermer	08 43.42S	125 25.90E	724	24	Grid	21		Oranetete
Pante Makasar	09 12.06S	125 22.43E	14	Sat. Dish		Sat.		Somoro
Samoro	09 13.24S	124 20 12E	47	30	Grid	New site 24,24		Guguleur
Hohonaro	08 32.72S	125 36.96E	2039	30		Minigrd	Erkislau	Ainaro Same
Ainaro	08 59.64S	125 30.08E	841	30	Minigrd	30,24		Hohonaro
Same	08 59.57S	125 39.06E	522	100	Radome		Hohonaro	Hataudo
Hataudo	09 07 33S	125 35 78E	506	70	Radome	35	Same	Suai
Suai	09 18.74S	125 15.34E	89	40	Radome	28		Hataudo

Table--3

Station Data

<u>Station</u>	<u>Type</u>	<u>Building</u>	<u>Batt.Bank</u>	<u>Acc.Rd</u>	<u>FuelTank</u>	<u>Power/AC</u>	<u>O.F.C</u>	<u>Tower</u>	Tower Ht	<u>Antenna</u>	<u>m.A.S.L.</u>
Maliana	Host	Exists*	Destroyed	O.K	O.K	Destroyed		Exists	35	Destroyed	225
Gululeaur	Repaeter	Exists	Retest	O.K	O.K	O.K		Exists	37	O.K	1153
Bitterlaun	Terminal	Exists	Retest	O.K	O.K	Destroyed		Exists	37	O.K	470
Liquica	DLU	Exists*	Destroyed	N/A	Destroyed	Destroyed		Exists	26	N/A	19
Oranetete	Repaeter	O.K	Retest	Repair	O.K	O.K		Exists	35	O.K	1525
Ermera	Host	Exists*	Destroyed	O.K		Destroyed		Exists	25	Destroyed	724
Dili	Host	Exists*	RetestNW	O.K	O.K	O.K		Exists	30	O.K	43
Talabella	Repaeter	Exists*	Destroyed	O.K	Destroyed	Destroyed		Exists	25	Destroyed	1307
Domihuhun	Terminal	Exists*	Destroyed	O.K	Destroyed	Destroyed	Optical	Exists	37	Destroyed	116
Mabia	Repaeter	Exists*	Destroyed	O.K	Destroyed	Destroyed		Exists	35	Destroyed	203
Lequivato	Repaeter	O.K	Retest	Repair	O.K	O.K		Exists	25	O.K	633
Desa Bahu	Terminal	Exists*	Destroyed	O.K	O.K	Destroyed	Optical	Exists	70	Destroyed	472
Baucau	Host	Exists*	Destroyed	O.K	O.K	Destroyed	Optical	Exists	40	Destroyed	356
Mauloho	Repaeter	Exists*	Destroyed	O.K	O.K	Destroyed		Exists	70	Destroyed	393
Los Palos	Host	Exists*	Destroyed	O.K	Destroyed	Destroyed		Exists	30	Destroyed	377
Ossu 1	Repaeter	Exists*	Destroyed	Repair	O.K	Destroyed		Exists	30	Destroyed	1030
Ossu 2	Repaeter	Exists	Destroyed	O.K	O.K	O.K		Exists	30	O.K	936
Viqueque	Host	Exists*	Destroyed	O.K	O.K	Destroyed		Exists	30	Destroyed	45
Same	Host	Exists*	Destroyed	O.K	Destroyed	Destroyed		Exists	100	Destroyed	522
Hataudo	Repaeter	Exists*	Destroyed	Repair	Destroyed	Destroyed		Exists	70	Destroyed	506
Suai	Host	Exists*	Destroyed	O.K	Destroyed	Destroyed		Exists	40	Destroyed	89
Ainaro	Host	Exists*	Destroyed	O.K	O.K	Destroyed	Not seen	Exists	30	Destroyed	841
Erkislau	Repaeter	Exists*	Destroyed	Repair	O.K	Destroyed	Not seen	Exists	35	Destroyed	1098
Aileu	Host	Exists*	Destroyed	O.K	Destroyed	Destroyed		None		Destroyed	934
Mabilou	Proposed	New				New		New		New	
Pante Makasar	Host	Exists*	Destroyed	O.K	O.K	Destroyed		Exists		Destroyed	14
Manatuto	DLU	Exists*	Destroyed	N/A		Destroyed	Optical	N/A		N/A	11
Somoro	Repaeter	Exists*	Destroyed	O.K	O.K				30	Destroyed	47
Hohonaro	Repaeter	Exists	Retest	Repair		O.K		Exists	30		2039

Exists* The buildings structure do exist, but the roofs windows and skylights were destroyed.
Access Roads-Though classified as O.K same work to improve on roads may be required.

Table -4

GENERAL INFORMATION ABOUT TELECOMMUNICATION INFRASTRUCTURE.

SITE	OFFICE BUILDING	Staff Accomod.	SECURITY HOUSE	FENCE/WALL	TOWER	SBK ANTENNA -	ROAD	TRANS. EQUIP.	BATTERY BANK	HP TOW	SWITC. EQUIP.	MDF	FIBER OPTIC	ACCESS CABLE NETW.	FUEL STORAGE	SOLAR CELL
DILI	Okey	-	O.K	O.K	O.K	-	-	-	-		O.K	Repair	-	-		
BITERLAUN	Repair	-	Repair	O.K	Repaint	-	O.K	Destroyed	Retest	-	-	-	-	-	Rep.	OK/Retest
TAILABELA	Repair	-	Repair	O.K	Repaint	-	O.K	Destroyed	Destroyed	-	-	-	-	-	Des.	-
LIQUICA	Repair		Destroyed	O.K	Repaint	Repaint	-	Destroyed	Destroyed	REP>	Destroyed	Des		Retest/Rep	Des.	-
GUGULEUR	Repair	-	Repair	O.K	Repaint	-	O.K	OK - Retest	Retest	-	-	-		-	Rep.	OK/Retest
BAUCAU	Destroyed	Dest.	-	Rep	Repaint	Destroyed	-	Destroyed	Dest	REP.	Destroyed	Des	OK-Retest	Retest/Rep.	Rep.	-
BUIBAU	Repair	-	Repair	O.K	Repaint		O.K	Destroyed	-	-	-	-	OK-Retest	-	Rep.	-
LEQUIVATO	Repair	-	Repair	O.K	Repaint		Repair	OK - Retest	Destroyed	-	-	-	-	-	Rep.	-
MTT	Destroyed	Dest.	-	O.K	Repaint	Repaint	-	Destroyed	Destroyed	REP<	Destroyed	Des	OK-Retest	Retest/Rep.	Rep.	-
DOMIHUHN	Destroyed	-	Destroyed	Rep	Repaint		O.K	Destroyed	Destroyed	-	-	-	OK-Retest	-	Dest	-
MABIA	Destroyed	-	Destroyed	Rep	Repaint	-	Repair	Destroyed	Destroyed	-	-	-	-	-	Dest	-
VIQ	Repair	Repair	-	O.K	Repaint	Repaint	-	Destroyed	Destroyed	REP.	Destroyed	Des	-	Retest/Rep.	Rep.	OK/Retest
OSSU 1	Repair	-	Repair	O.K	Repaint	-	Repair	Destroyed	-	-	-	-	-	-	Rep.	Destroyed
OSSU 2	Repair	-	Repair	O.K	Repaint	-	O.K	Destroyed	-	-	-	-	-	-	Rep.	Destroyed
Lospal	Destroyed	Dest.	-	Rep	Repaint	Repaint	O.K	Destroyed	Destroyed	Rep.	Destroyed	Des	-	Retest/Rep.	Dest	-
MAULOHO	Repair	-	Repair	O.K	Repaint	-	O.K	Destroyed	Destroyed	-	Destroyed	-	-	-	Rep.	-
AILEU	Repair	Repair	-	Rep	Repaint		O.K						Destroyed	Retest/Repr	Rep.	-
ERKISLAU	Repair	-	Repair	Rep	Repaint	-	Repair	Destroyed	Destroyed	-	-	-	Destroyed	-	Rep.	-
MALIANA	Destroyed	Destr.	-	Rep	Repaint	-	O.K	Destroyed	Destroyed	Rep.	Destroyed	Des		Retest/Repr	Rep.	-
ERMERA	Destroyed	Repair	-	Rep	Repaint	-	O.K	Destroyed	Destroyed	Reop	Destroyed	Des	-	Retest/Repr	Rep.	-
ORANATETE	Repair	-	Repair	Rep	Repaint	-	Repair	OK - Retest	OK - Retest	-	-	-	-	-	Rep.	-
OE-CUSSI	Destroyed	Dest	-	Rep	Repaint	Repaint	O.K	Destroyed	Destroyed	-	Destroyed	Des	-	Destroyed	Rep.	-
SAMORO	Repair	-	Repair	Rep	Repaint	-	O.K	Destroyed	-	-	Destroyed	Des	-	-	Rep.	-
SAME	Destroyed	Destr.	-	Rep	Repaint	Repair	O.K	Destroyed	Destroyed	-	Destroy	Des	-	Repair	Rep.	Destroyed
HATUDO	Repair	-	Repair	Dest	Repaint	-	Repair	Destroyed	Destroyed	-	Destroy	Des	-	-	Dest	-
AINARO	Destroyed	Dest	-	Rep	Repaint	-	O.K	Destroyed	Destroyed	-	Destroy	Des	-	Destroyed	Rep.	-
HOHONARA	Repair	-	Repair	Rep	Repaint	-	Repair	Destroyed	-	-	Destroyed	Des	-	Repair	Rep.	-
SUAI	Destroyed	Repair	-	Rep	Repaint	-	O.K	Destroyed	Destroyed	-	Destroyed	Des	-	Destroyd	Dest	Destroyed
													LEGEND:	Rep=Repair		
														Des.=Destroyed		

Table--5