

East Micronesian Cable (EMC) ESMP UPDATE - Kosrae Component Only

The below information has been developed to ensure the existing Kosrae component of the EMC project's ESMP reflects the final scope of work for both the delivery of the marine (ocean through to the Beach Man Hole – BMH) and terrestrial (BMH through to the Cable Landing Site – CLS) components. The original project ESMP did not include the terrestrial component.

The original project ESMP information is to be used unless updates are included below. Information pertaining to Kiribati and Nauru are outside of this review.

Executive Summary:

Original Summary is suitable with the direct findings and impacts relevant to the project.

Two suggested up dates are recommended for inclusion:

Paragraph 4 should be replaced with the following:

- *The agreed submarine cable alignment will originate from a southern branch line from the Pohnpei to Kiribati cable line (EMC) located to the northeast of Kosrae. The agreed submarine cable alignment for the island of Kosrae is to enter the natural deep water reef passage and channel through the islands outer barrier reef entering Lelu harbor. It then is to follow the channel veering south and enter the shallow subtidal and intertidal waters on the southern side of the harbor. The cable will terminate (Beach Man Hole) on the southern shoreline at the Sansrit school (5°19'13.27N and 163°01'33.04E), which is located on reclaimed state government land. The terrestrial component of the cable alignment will be deployed underground within the Kosrae state road easement to terminate at the projects Cable Landing Site (CLS) located within Tofol on government land within an existing building.*

Paragraph 5 should include:

- *Additional risk assessment for the presence of Unexploded Ordnances (UXO) within the direct area of influence for the submarine cable alignment within the shallow water marine areas (Lelu channel through to BMH) needs to be undertaken to ensure impacts from UXO are known and managed.*

1.0 Introduction:

All sectors remain relevant. Section 1.4 should include (an addition to the second last paragraph):

- *A second in-depth site specific marine benthic ecological assessment of the agreed shallow water (coastal) submarine cable alignment was undertaken in November 2019 to identify marine ecology and habitats present within the proposed cable alignment with recommendations provided for inclusion into the projects existing EMP. The assessment was developed as a stand alone report.*

2.0 Policy, legal and Administrative Framework:

No changes are recommended, however the below items clarify a number of issues.

- Kosrae State – section 2.1, 2.1.1 (third paragraph) is out dated information (e.g. Micronesian Maritime Authority (MMA) is the National Oceanic Resource Management Authority (NORMA) – this change was effective years (10) before this document was written? *This needs to be replaced with: National*

Oceanic Resource Management Authority (NORMA) should replace MMA references within the text.

- Fourth paragraph - *The Kosrae Marine Resources is now a Department Fisheries and Marine Resources (DFMR) under Division of Resource Economic Administration (DREA). This should be replaced to reflect the current status.*
- Section 2.5.2 Kosrae & Kiribati - *The Kosrae project remains a category B and the original safeguard policies and instruments – as described remain the same. This includes: OP 4.01 (Environmental Assessment); OP 4.04 (Natural Habitats); OP 4.11 (Physical Cultural Resources).*

3.0 Project Description:

The below information should be included to reflect the further development of the projects specific cable alignment and locations of the Beach Man Hole (BMH) and Cable Landing Site (CLS).

The final cable alignment has been agreed. The submarine cable is to pass through the Lelu channel (eastern side of the island) entering Lelu harbor and land at a Beach Man Hole (BMH) at the Sansrik Elementary School (BMH6 site). The cables terrestrial alignment is to follow the island main road (within the easement through to a new agreed Cable Landing Site (CLS) located to the east of the original suggested site (Figure 1). All terrestrial delivery system components will be located within state owned/leased land and remain within the states road easement.

Figure 1: Proposed cable alignment



Final location of the shallow water cable alignment, BMH position, road easement location will be determined once technical contractors have evaluated the project and provided final deployment sites. Precautionary notifications highlighted in the original ESMP are to be followed.

CLS Location Changed: The CLS no longer is to be located within the FSM Telecommunications Corporation Earth Station in Tofol as describe in the ESMP, it is

now to be located at the “old Telecom site’ located on government land directly east of the police-goal, within Tofol (refer Figure 2). The site is owned by the state government (Annex 1).

Figure 2: New site location of the CLS.



The new CLS site is elevated, fully fenced, contains 3 main buildings in various levels of disrepair, an old currently unused satellite dish, various equipment currently stored on site and has direct access to the main road via a gravel driveway with an approximately length of 50 m (55 yards). The fenced land parcel has a perimeter of 155 m (170 yard) and an approximate land area of 1,492 m² (1,884 yard²).

The site has been cleared of original vegetation during the 1960’s and remains a highly disturbed land parcel. No natural flora and fauna exists (refer Figure 2 and photos below).



BMH: The location of the Beach Man Hole (BMH) remains the same – Sansrik Elementary school land parcel and access road are located on State government owned land with direct access to the road easement through government land (Annex 2 – ownership documents) (Figure 3).

Figure 3: Location of the BMH.



The site is located on the foreshore and intertidal reclaimed reef flat, fully fenced, contains 3 functioning school classroom buildings and associated infrastructure and has direct access to the main road via a gravel drive way with an approximately length of 30 m (33 yards). The fenced land parcel has a perimeter of 128 m (250 yard) and an approximate land area of 3,815 m² (3,190 yard²).

The site has been reclaimed and cleared of original vegetation during the 1960's and remains highly disturbed land parcel. No natural flora and fauna exists (refer photos below).





The site is owned by the state government (Annex 2).

Section 3.2.1 Submarine Component. This in part is out dated as the additional marine assessment of the shallow water cable alignment has been completed. However, this section should remain, as it was correct at the time of the original ESMP. The marine assessment undertaken in November 2019 is referred to in an additional section of the report (see below) and thus reflects the final agreed alignment and subsequent impacts and mitigation required.

4.0 Baseline Data:

Baseline Data Report: Annex 1 in the original report

Annex 1: Provides a very general summary of biological – ecological attributes of

Kosrae (as required by the original TOR). However there is very limited information provided on the preferred shallow water marine and terrestrial sites within the projects area of Influence associated with the proposed cable alignment path. Thus very limited information is available (reported) to ensure key significant biological resources (flora and fauna) and ecological systems are not impacted due to the scope of works. This is essential information to ensure WB safeguard requirements are met.

The ESMP report specifies the “cable contractor” will undertake and complete the detailed marine assessment of the final cable alignment route. This is somewhat confusing.

The cable contractor is required to undertake a bathymetric survey-assessment of the deep water environments to ensure cable alignment meets the requirements detailed in the ESMP (distances from seamounts etc) (see comments below on table 4.1) and similarly bathymetric assessment of the cable alignment when entering Lelu harbor through to the BMH (the agreed final cable alignment). However, the cable contractor needs to be guided by the ESMP and specific information in the projects EMP on the inshore benthic habitat that they can and cannot enter. As such to ensure the project ESMP meets these requirements a marine benthic biological resource and abiotic assessment needs to be undertaken and findings provided to the cable contractor before they initiate their work. As such a marine benthic resource and substrate assessment was undertaken and completed in November 2019. This report was developed as a standalone document and should be referred when information is required. The report documents key findings of the assessment and recommendations to be included in the EMP.

Key findings of the marine assessment include;

- **Potential Impacts:** The impacts derived from the marine scope of works are expected to be very minor, localized to the immediate footprint of the works, and easily managed through standard engineering good practice mitigation measures. There are no threats to the area’s marine and coastal biodiversity associated with the project. As such the potential impacts of the works on the marine environment are considered to be minor, temporary, mitigatable and overall insignificant.
- **Mitigation Measures:** Recommended mitigation measures during the construction phase of the project should include; (i) Deploy silt curtain/s around the termination location (shoreline adjacent to the BMH) of the submarine cable during all construction and redevelopment activities to directly manage and reduce the dispersion of benthic substrate (silt) disturbed during construction, and (ii) Ensure due diligence when operating machinery during all work activities to prevent and manage petrochemical spillage and contamination of the waters associated with the project.

The overall potential impact of the works on the marine biological environment is expected to be minor, localized and overall insignificant provided standard mitigation measures associated with good engineering practice as identified above are implemented. Furthermore due to the nature of potential minor impacts of the scope of works it is recommended that no specific marine monitoring program is required other than close supervision of the works to ensure that the above recommended mitigation measures are

implemented and effective throughout the marine construction works.

Unexploded Munitions – UXO

Specific Comments on Section 2.8 in the Ecological Baseline Data Report (Annex 1). This section states:

“All three countries have significant World War II histories. Although the risk is considered low, due diligence and careful consideration will be needed during near-shore stages of cable deployment to ensure that the presence of unexploded WW II ammunition, that may be presently buried in the substrate for Kosrae, Kiribati and Nauru and if present is removed”. The document further states “A detailed assessment of the cable alignment will need to be undertaken during the survey assessment to ensure unexploded munitions UXO are located and removed before the cable is deployed”.

The marine assessment details the past history (literature review and stakeholder conversations) of WWII activities within Lelu harbor and concluded that there is a potential issue with UXO within the submarine cable Area of influence – recommending a risk assessment be undertaken to identify this issue and mitigation activities. This assessment needs to be undertaken before the cable is deployed.

Summary of UXO in Lelu harbor (from the marine assessment) and need to be included in the update projects ESMP include.

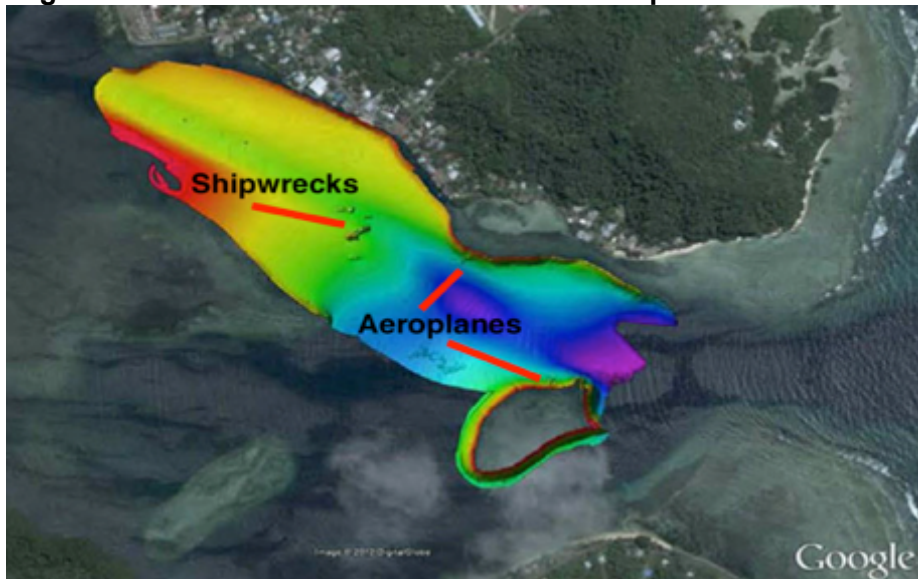
Background historical references and discussions with local dive industry, marine resources and stakeholders in Kosrae clearly indicated that Lelu harbor during WWII received in the order of 30 tons of bombs from American aircraft. The bombing of Lelu left the island and foreshore demolished and included the sinking of the Japanese navy cargo ship “Ebon Maru” which remains on the bottom within the Lelu harbor. As such all anecdotal discussion with key stakeholders indicated that there is the possibility that UXO remain within the Lelu harbor area and that no past marine identification and removal has taken place within the harbor. WW II equipment including UXO has been removed from the Lelu Island shoreline and interior.

Therefore, due diligence and careful consideration needs to be undertaken during all stages of cable deployment from the entrance of the Lelu harbor through to the beach man hole (Sansrit school) for the possible presence of unexploded WWII ammunition, that may be present in the substrate.

It is recommended that a detailed assessment of the cable alignment be undertaken during the initial cable bathymetric survey assessment undertaken by the contractor to ensure unexploded munitions are located and removed before the cable is deployed. This is essential if cable trenching will be undertaken within the harbor. Potential impacts decrease if the cable is laid on the sea floor and trenching is not undertaken.

Moreover, resting on the sea floor within Lelu harbor are two aircrafts (PBM Mariner crashed 1951 and a Navy plane (HU-16) crashed in 1972) and 3 ships including a whaling ship (they think was the “MV Waverly”) reported sunk in 1836, Japanese cargo vessel (Ebon Maru) sunk in 1945 and an unknown vessel. Both planes and all vessels are located on the sea floor on the north western side of the harbor submerged coral island in the center of the harbor – towards the Lelu dock (Figure 5). All are located well outside of the projects area of influence and as such will not be impacted by the project.

Figure 5: Location of the sunken vessels and planes Lelu harbor.



The ESMP has very limited information detailing the terrestrial flora associated with the proposed cable alignment (school BMH through to the new CLS). This is not significant to the ESMP as the alignment will be within the road easement however – there are a number of plants – trees that have encroached onto the road easement that may be required to be removed. This is dependent on the side of the road the cable will be deployed (assuming it will be under ground). Road easement cleaning of vegetation occurs periodically by the state (road cleaning), telecommunication, water, power providers and landowners. Removal of this vegetation, predominately grass and weeds (non natives) encroaching on the road corridor is supported and acceptably activities and as such general stakeholder discussion indicated that this is fully accepted as part of the road easement arrangements. If large vegetation (e.g. trees) are required to be removed then specific discussions need to be undertaken with the land owners adjacent to the road corridor. Several pictures of the road are included below.

In addition, the terrestrial cable deployment route includes several areas that are in close proximity to the coastal shoreline (within the road corridor) and crosses several small streams. Consideration of the position of the cable (if underground) needs to be mindful of these habitats and long term potential negative impacts of climate change.





Baseline 4.0 – Table 4.1 Project Influence areas delineations and conditions.

This table remains suitable for the area of influence.

5.0 Analysis of Alternatives

All remains relevant – proposed site has been identified. No changes.

6.0 Anticipated Impacts & Mitigation Measures

This section is based on expected impacts, which are suitable, however additional site specific information resulting from the marine assessment is required to be incorporated into this document. This changes the impacts as they reflect on actual issues not perceived impacts as documented in the original ESMP.

6.2 General Environment

6.2.1 Deep Ocean Waters: – No comments or changes.

6.2.2 Intertidal Coastal Areas: Remains relevant, no changes.

Comment: The use of plough trenching and placement to be used to delivery the cable in coastal waters. This remains suitable, however needs the contractor to advise if this is to be used or placement of cable on the bottom is used instead. Issues with UXO need to be addressed.

6.2.3 Terrestrial Areas: The cable is to be buried and this section is suitable. Furthermore the design team will need to specify which side of the road (both sides have an easement) that the cable is to be deployed - the shore side road easement in one location – roughly a km northwest of the BMH – is directly exposed to the shoreline and as such the road as well as the cable would require structure strengthening in terms of rock revetment wall. The use of the inland side of the road to avoid the above issue is recommended for consideration.

6.3 Poverty & Gender Impact: No changes, however it is understood that during additional stakeholder and community awareness all groups will be included in the programs.

6.4 Land Acquisition & Resettlement. No changes to the recommendations associated with Involuntary Resettlement and Land Acquisition.

6.5 Risk Assessment & Impact Identification methodology - discussions remain the same.

6.6. Outcome of Risk Assessment – remain relevant.

6.7 Other potential Impact and benefits – All discussions points remain the same.

7.0 Information Disclosure. Consultation & participation.

7.1 Introduction – no changes.

7.2 Kosrae: Information provided is suitable for original report. – No changes. However it is understood that continued stakeholder consultations and awareness programs will be undertaken to ensure full community are informed of the project and its management systems (e.g. GRM).

7.5 Disclosure – It is understood that all documents will be up loaded and disclosed on the DOFA – CIU web site when available.

7.6 Ongoing Consultation & Participation – As above – no changes. The projects specific GRM has been up dated for the EMC and is disclosed on web sites. Understanding and access to the projects GRM will be included in the stakeholder awareness program. The up dated GRM is attached in Annex 3.

8 Environmental and Social Management Plan (ESMP)

8.1 Introduction - No changes.

The tables develop are more aligned to the ADB's environmental project requirements not the WB, however remain useful and cover potential marine issues. This format has been retained.

These tables have been up dated and amended to meet the WB standard EMP format. They have been further developed to include both marine and terrestrial project requirements for pre–construction, construction and operational phases of the project. These tables are to be included in the respective bid documents.

The up dated tables are attached in a separate document.

8.2 performance indicators – No changes – these remain relevant.

8.3 Implementation Arrangements.

Information in the projects ESMP are suitable, however the specific requirements and responsibilities of each agencies and stakeholder associated with the Kosrae section of the EMC have been further developed and finalized. These are detailed in project additional documents and as such supersede this document as required.

8.3.1 – Overview – remains suitable. Although not specific to Kosrae only.

8.3.2 – ESMP Implementation Arrangements – remains suitable. Although not specific to Kosrae only.

8.4 Institutional Capacity Assessment - no changes information remains relevant.

8.5 Mitigation and Monitoring costs

8.5.1 Environment; 8.5.2 Social Development Programs and Resettlement Costs; and 8.5.3 Total costs. This section was relevant at the time of developing this report – this information has changed and has been further developed and costs allocated. It therefore suggested that this section be left as reported. The CIU safeguard team will take on the overall safeguard management role of the project in

conjunction with the IA and project partners.

8.6 Report and Monitoring Requirements - Similar to above – project safeguard monitoring and reporting will be managed by CIU safeguard team in conjunction with IA and partners.

8.6.1 Environmental Codes of Practice. This separate annex is a general document produced by external consultants for the ADB for general guidance for the deployment of submarine cables within the Pacific. It has very useful information and guidelines. However specific activities within the codes of practice need to be evaluated and amended to meet the specific requirements of the Kosrae project – several guidelines associated with distance from inshore environmental key habitats (e.g. coral reef seagrass) are not relevant to the spatial scale of this project. These changes have been amended in the ESMP.

9.0 GRM

9.1 Introduction – suitable summary.

9.2 Proposed GRM – This was suitable at the time of the report preparation. This structure has been further defined and finalized for the Kosrae component. The agreed GRM has been disclosed and is to be used for the project.

The updated GRM is in Annex 3.

10.0 Conclusions and Recommendations. This is suitable and the recent site specific marine assessment findings support the original conclusions. Issues with the potential UXO within the shallow water substrate need to be addressed.

ANNEX'S: There is confusion between the main reports annexes and its final appendices document (separate document) in terms of annex numbering and activity? This makes this confusing to review. For the below the final appendices separate document (Final) has been reviewed and number is reflected below.

Annex 1: Baseline data Report - this has been discussed in section 4 above.

Annex 2: Land Due Diligence Report – Much of this report is now out of date however was relevant to the original report at the time – information pertaining to land usage, management and access remains relevant – no changes required.

Annex 3: International Conventions and Treaties – this is suitable no change.

Annex 4: Evaluation of Compliance with WB Safeguard Policy & ADB Safeguard Policy Statement (SPS) Environmental Requirements – this is relevant to the original report – not changes required.

Annex 5: Chance Find Procedure – this remains relevant to the project – no changes required.

Annex 6: Potential cable alignments and BMH sites – this is relevant to the original report – not changes required.

Annex 7: Consultation Summaries – this is relevant to the original report – no changes required.

Annex 8: List of Attendees – this is relevant to the original report – no changes required.

Annex 9: Environmental Mitigation (ESMiT) and Monitoring (ESMoT) tables.

These have been redeveloped to reflect the information for Kosrae only and the WB format to allow direct inclusion into the projects bidding documents.

NOTE: This was annex 8 in the EMC – Project – ESIA –Final?

Annex 1: Ownership document of the Proposed Cable Landing Site (CLS) in Kosrae.



GOVERNMENT OF KOSRAE

Office of the Governor

Post Office Box 158

Kosrae, Federated States of Micronesia 96944

Telephone: 691-370-3002/3003..Facsimile: 691-370-3162

December 06, 2019

Mr. Gordon Segal

FSMT Cable Corp

SUBJECT: Authorization and land identification for Beach Manhole and CLS building use.

PROJECT: FSMTCC/EMC Submarine Project

ENCLOSURE: (1) Cadastral Plat No. 056 K 00
(2) Land Lease Sketch No. TELSAT-1
(3) Location Map of Cadastral Parcel No. 068K05

Dear Mr. Segal,

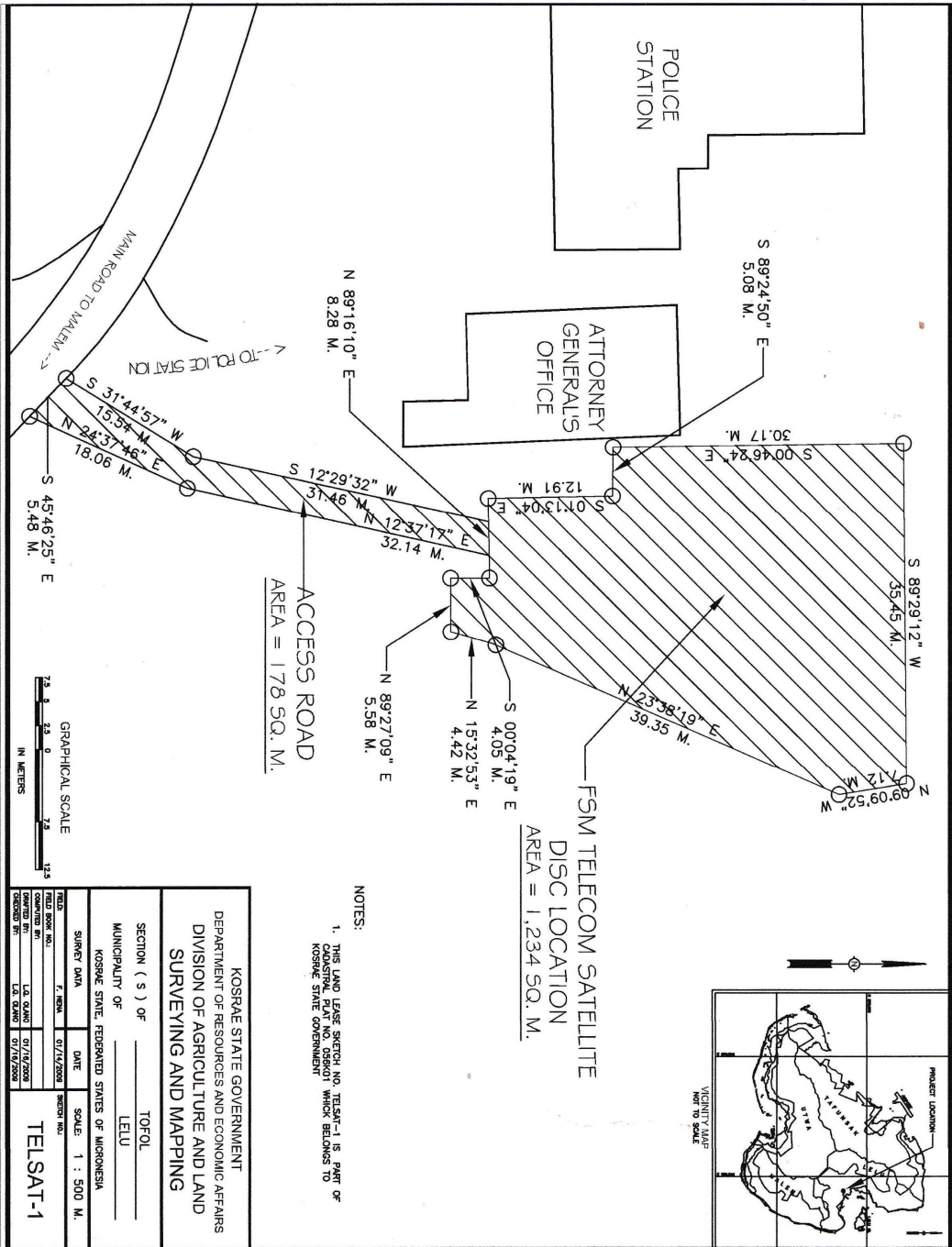
As per your e-mail dated December 04, 2019 to our Director of the Department of Transportation & Infrastructure about your request for the documentation and letter of approval of the land parcels that will be used for the EMC submarine fiber project. This is to confirm that the land parcels mentioned above is belongs to Kosrae State Government.

Thank you and we hope people of Kosrae will be of great benefit for this project.

Approval is granted by,

CARSON K. SIGRAH

Governor



KOSRAE STATE GOVERNMENT DEPARTMENT OF RESOURCES AND ECONOMIC AFFAIRS DIVISION OF AGRICULTURE AND LAND SURVEYING AND MAPPING			
SECTION (S) OF _____	TOFOL _____		
MUNICIPALITY OF _____	LELU _____		
KOSRAE STATE, FEDERATED STATES OF MICRONESIA			
SURVEY DATA	DATE	SCALE	1 : 500 M.
F. SERIAL	07/14/2008		
FIELD BOOK NO.		SHEET NO.	
COMPILED BY	L.S. QUAIN	DATE	07/14/2008
DESIGNED BY	L.S. QUAIN	DATE	07/14/2008
			TELSAT-1

Annex 2: Ownership document of the proposed Beach Man Hole (BMH) – Sansrit School.



GOVERNMENT OF KOSRAE

Office of the Governor

Post Office Box 158

Kosrae, Federated States of Micronesia 96944

Telephone: 691-370-3002/3003..Facsimile: 691-370-3162

December 06, 2019

Mr. Gordon Segal

FSMT Cable Corp

SUBJECT: Authorization and land identification for Beach Manhole and CLS building use.

PROJECT: FSMTCC/EMC Submarine Project

ENCLOSURE: (1) Cadastral Plat No. 056 K 00
(2) Land Lease Sketch No. TELSAT-1
(3) Location Map of Cadastral Parcel No. 068K05

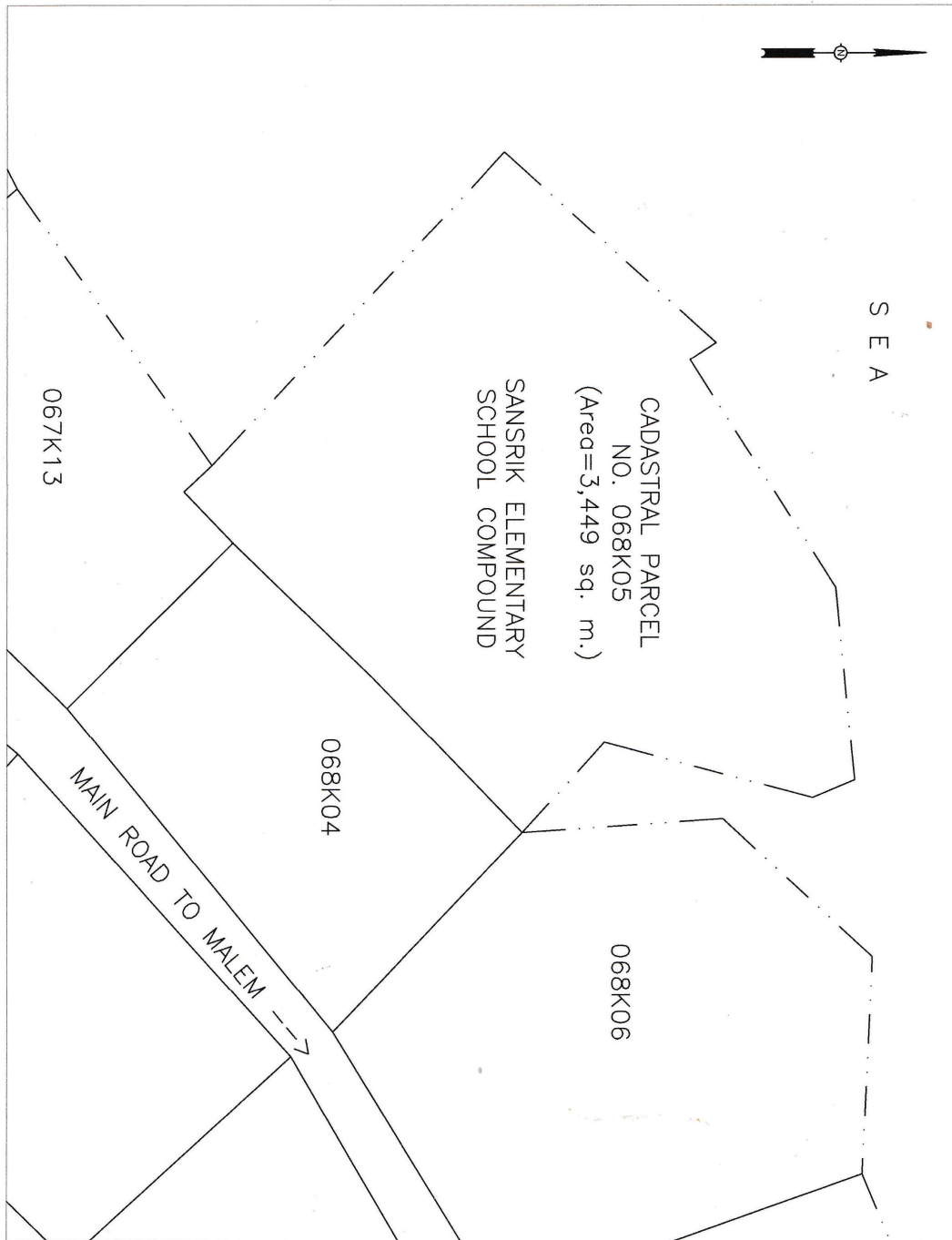
Dear Mr. Segal,

As per your e-mail dated December 04, 2019 to our Director of the Department of Transportation & Infrastructure about your request for the documentation and letter of approval of the land parcels that will be used for the EMC submarine fiber project. This is to confirm that the land parcels mentioned above is belongs to Kosrae State Government.

Thank you and we hope people of Kosrae will be of great benefit for this project.

Approval is granted by,


CARSON K. SIGRAH
Governor



Annex 3: Up dated GRM. Attached in a separate report.