



DELIBERASAUN N. 81A/VII/CAFI/2025

Conselho de Administração do Fundo das Infraestruturas – CAFI, bazeia ba artigo 10º (1) e (3) DL Nº. 25/2024, de 22 de maio, Primeira Alteração ao DL Nº.13/2016, 18 de Maio, realiza reuniaun Extraordinária iha loron Quinta-feira, 17 de julho de 2025, e halo deliberasaun ba assunto tuir mai ne’e:

Asuntu: Pedidu Aprovasaun no autorizaun despesas nune’e mos Konfirma Finansiamentu iha FI 2025 ba projetu mak hanesan tuir mai:

1. Construction of Fatuk Metan Irrigation Project, Vemasse Baucau Municipality;
2. Construction Supervision of Fatuk Metan Irrigation Project, Vemasse Baucau Municipality.

Proponente: Ministério da Agricultura, Pecuária, Pesca e Florestas – MAPPF

Notas/justifikasiun:

- Bazeia ba karta ne’ebi SGP simu husi Ministério da Agricultura, Pecuária, Pesca e Florestas ho no. ref.: 325/DGACPI/VI/2025, data 16 de junho de 2025, ho asuntu Pedidu Agendamentu Encontro ba Projetu Fundo Infraestruturas Ministério da Agricultura, Pecuária, Pesca e Florestas – MAPPF;
- Bazeia ba resultadu verifikasiun ADN, I.P. ho karta no. ref.: 0898/ADN, I.P./VI/2025, data 2 de junho de 2025, ho asuntu resultadu verifikasiun Project New Construction of Vemase Irrigation Scheme, Municipality Baucau no resultadu verifikasiun ADN, I.P. ho karta no. ref.: 0870/ADN, I.P./V/2025, data 30 de maio de 2025, ho asuntu resultadu verifikasiun ToR Consultancy Services for Construction Supervision of of Vemase Irrigation Scheme, Municipality Baucau;
- Desizaun kona ba abertura ka inisiasiun prosesu aprovisionamentu bazeia, Artigo 24 & 25, Decreto Lei No.43/2024, de 20 de Dezembro, regra ezekusaun OGE 2025;
- DL Nº. 25/2024, de 22 de maio, Primeira Alteração ao DL Nº.13/2016, 18 de Maio, kona ba Regulamentu Fundo da Infraestrutura, determina katak aprovisionamento projetu FI nian sei lao tuir Regime Juridiku Aprovizionamento em vigor. Modalidade aprovisionamento sei lao tuir Regime Juridiku Aprovizionamento em vigor;
- Projetu nain sei assume responsabilidade hodi assegura orsamentu ba Ezekusaun no Implementasaun projetu;



IX GOVERNO CONSTITUCIONAL
MINISTÉRIO DO PLANEAMENTO E INVESTIMENTO ESTRATÉGICO
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- Projetu nain konfirma katak sei assume responsabilidade ba monitorizaun e akompanhamentu ba ezekusaun projetu ne'e no sei garante kualidade servisu nian tuir padraun no espesifikasiuna ne'eben aprova ona;

- Lista proposta:

No.	Naran Projeto	Resultadu Verifikasiadaun ADN, I.P./ referensi	Alokasaun Orsamentu iha FI 2025
1	New Construction of Vemase Irrigation Scheme, Municipality Baucau	\$4, 374,340.47 no. ref.: 0898/ADN, I.P./VI/2025, data 2 de junho de 2025	<ul style="list-style-type: none"> • FI 2025: \$ 50.000,00; • Programa A39: Agricultura, Horticultura, Café e de Plantas Industriais e Anuais; • Kodigou atividade A390419: Constrution of Fatuk Metan Irrigation Project.
2	Construction Supervision of Vemase Irrigation Scheme, Municipality Baucau	\$984,250.00 no. ref.: 0870/ADN, I.P./V/2025, data 30 de maio de 2025	<ul style="list-style-type: none"> • FI 2025: \$ 50.000,00; • Programa A39: Agricultura, Horticultura, Café e de Plantas Industriais e Anuais; • Kodigou atividade A390420: Constrution Supervision of Fatuk Metan Irrigation Project.

Rekomendasau:

- 1) CAFI atu aprova no konfirma finasiamentu iha FI tinan 2025, bazeia ba pedidu husi Ministério da Agricultura, Pecuária, Pesca e Florestas – MAPPF ba projetu:
 1. *New Construction of Vemase Irrigation Scheme, Municipality Baucau, ho nia montante verifikadu \$4, 374,340.47;*
 2. *Construction Supervision of Vemase Irrigation Scheme, Municipality Baucau, ho nia montante verifikadu \$984,250.00.*
- 2) CAFI konfirma disponibilidade Orsamentu iha FI tinan 2025 no autoriza despezas bazeia alinea 1 (b) Artigo 5º Dekreto Lei 23/2022, de 19 de Maio, Competência Para a Autorização de Despesa;
- 3) Desizaun kona ba abertura ka inisiasiun prosesu aprovisionamento bazeia, Artigo 24 & 25, Decreto Lei No.43/2024, de 20 de Dezembro, regra ezekusaun OGE 2025;
- 4) DL N°. 25/2024, de 22 de maio, Primeira Alteração ao DL N°.13/2016, 18 de Maio, kona ba Regulamentu Fundo da Infraestrutura, determina katak aprovisionamento projetu FI nian sei lao tuir Regime Juridiku Aprovizionamento em vigor. Modalidade aprovisionamento sei lao tuir Regime Juridiku Aprovizionamento em vigor;

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Pájina 2 hosi 6



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- 5) Decreto-Lei No.22/2022 de 11 de Maio, o regime jurídico do aprovisionamento, dos contratos públicos e das respectivas infracções, artigo 42º Regras Espaciais, desizaun kona ba modalidade aprovisionamentu determina bazeia ba kustu projetu no justifikasaun tekniku no legal husi MAPPF hanesan entidade adjudikante;
- 6) CNA la apresenta resultadu aprovisionamentu mai CAFI bazeia Decreto-Lei No.22/2022 de 11 de Maio “o regime jurídico do aprovisionamento, dos contratos públicos e das respectivas infracções”, artigo 42º Regras Espaciais;
- 7) Dono do projetu sei assume responsabilidade hodi assegura orsamentu ba, Ezekusan no Implementasaun projetu;
- 8) Projetu nain sei assume responsabilidade ba koordenaun entre entidade relevantes ba implementasaun projetu ne'e, e ba supervizaun, monitorizaun e akompanhamentu ba projetu ne'e iha faze implementasaun, e sei garante kualidade servisu konstrusaun nian tuir espesifikasiun nebe aprova ona;

Desizaun:

1. CAFI aprova no konfirma finasiamentu iha FI tinan 2025, bazeia ba pedidu husi **Ministério da Agricultura, Pecuária, Pesca e Florestas – MAPPF**;
2. CAFI konfirma disponibilidade Orsamentu iha FI tinan 2025 no autoriza despezas bazeia alinea 1 (b) Artigo 5º Dekreto Lei 23/2022, de 19 de Maio, Competência Para a Autorização de Despesa;
3. Desizaun kona ba abertura ka inisiasiun prosesu aprovisionamentu bazeia, Artigo 24 & 25, Decreto Lei No.43/2024, de 20 de Dezembro, regra ezekusaun OGE 2025;
4. DL Nº. 25/2024, de 22 de maio, Primeira Alteração ao DL Nº.13/2016, 18 de Maio, kona ba Regulamentu Fundo da Infraestrutura, determina katak aprovisionamento projetu FI nian sei lao tuir Regime Juridiku Aprovizionamento em vigor. Modalidade aprovisionamento sei lao tuir Regime Juridiku Aprovizionamento em vigor;
5. Decreto-Lei No.22/2022 de 11 de Maio, o regime jurídico do aprovisionamento, dos contratos públicos e das respectivas infracções, artigo 42º Regras Espaciais, desizaun kona ba modalidade aprovisionamentu determina bazeia ba kustu projetu no justifikasaun tekniku no legal husi MAPPF hanesan entidade adjudikante;
6. CNA la apresenta resultadu aprovisionamentu mai CAFI bazeia Decreto-Lei No.22/2022 de 11 de Maio “o regime jurídico do aprovisionamento, dos contratos públicos e das respectivas infracções”, artigo 42º Regras Espaciais;
7. Projetu nain sei assume responsabilidade hodi assegura orsamentu ba, Ezekusan no Implementasaun projetu;

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Pájina 3 hosi 6



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FUNDO DAS INFRAESTRUTURAS



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8. Projetu nain sei assume responsabilidade ba koordenaun entre entidade relevantes ba implementasaun projetu ne'e, e ba supervizaun, monitorizasaun e akompanhamentu ba projetu ne'e iha faze implementasaun, e sei garante kualidade servisu konstrusaun nian tuir espesifikasi saun nebe aprova ona;

9. Lista Aprovasaun CAFI:

No.	Naran Projeto	Resultadu Verifikasi saun ADN, I.P./ referensia	Alokasaun Orsamentu iha FI 2025	Orgaun Kompetênti - DL No. 23/2022, 19 de Maio
1	New Construction of Vemase Irrigation Scheme, Municipality Baucau	\$4, 374,340.47 no. ref.: 0898/ADN, I.P./VI/2025, data 2 de junho de 2025	<ul style="list-style-type: none">• FI 2025: \$ 50.000,00;• Programa A39: Agricultura, Horticultura, Café e de Plantas Industriais e Anuais;• Kodigou atividade A390419: Construction of Fatuk Metan Irrigation Project.	<ul style="list-style-type: none">• CAFI : Konfirmasasaun Finansiamentu;• CAFI: alinea 1 (b) Artigo Artigo 5.º Competência para a autorização da despesa.
2	Construction Supervision of Vemase Irrigation Scheme, Municipality Baucau	\$984,250.00 no. ref.: 0870/ADN, I.P./V/2025, data 30 de maio de 2025	<ul style="list-style-type: none">• FI 2025: \$ 50.000,00;• Programa A39: Agricultura, Horticultura, Café e de Plantas Industriais e Anuais;• Kodigou atividade A390420: Construction Supervision of Fatuk Metan Irrigation Project.	<ul style="list-style-type: none">• CAFI : Konfirmasasaun Finansiamentu;• CAFI: alinea 1 (b) Artigo Artigo 5.º Competência para a autorização da despesa.

✓ ✓ ✓

✓



IX GOVERNO CONSTITUCIONAL
MINISTÉRIO DO PLANEAMENTO E INVESTIMENTO ESTRATÉGICO
FUNDO DAS INFRAESTRUTURAS



Conselho de
Administração

Aprovado husi CAFI iha loron 17 de Julho de 2025.

O Conselho de Administração do Fundo das Infraestruturas
O presidente,



Gastão Francisco de Sousa

Ministro do Planeamento e Investimento Estratégico

Santina José Rodrigues Ferreira Viegas Cardoso

Ministra das Finanças

(La Participa iha Reuniaun)



Miguel Marques Gonçalves Manetelu

Ministro dos Transportes e Comunicações

Samuel Marçal

Ministro das Obras Públicas

DELIBERASAUN N.º 81A/VII/CAFI/2025



**IX GOVERNO CONSTITUCIONAL
MINISTÉRIO DO PLANEAMENTO E INVESTIMENTO ESTRATÉGICO
FUNDO DAS INFRAESTRUTURAS**



**Conselho de
Administração**

Annexo:



AGÊNCIA DE DESENVOLVIMENTO NACIONAL, I. P.

Dili, 01 Junho/2025

Ref : 0898 /ADN, I.P./VI/2025

Hato' o ba : Sr. Martinho Laurentino Soares
Diretor Geral da Agricultura, Pecuária, Pescas e Florestas - MAPPF

Asunto : Rezultado Verifikasi – Project New Construction of Vemase Irrigation Scheme, Municipality Baucau

Ho Respeito,

Bazeia ba karta pedidu verifikasi ho no ref: 69/DGCPI/II/2025 ho data 24 de Fevereiro de 2025, ba asuntu ne'ebe mensiona iha leten, ekipa verifikasi Unidade Avaliação do Projetos –ADN, I.P. hala'o ona verifikasi ba dokumentos refere. Ho nune bele hare rezultado verifikasi iha (*anëksu*).

Ba ita bo'ot nia atensaun ami hato' o agradecimento wain no subkreve ho konsiderasaun a'as tebes.

Rui Lourenço da Costa
Diretor Executivo - ADN, I.P.





AGÊNCIA DE DESENVOLVIMENTO NACIONAL, I. P.

FORMULARIO DE DESPACHO

Data de Entrada Documentos : 24/02/2025

Data do Documentos : 24/02/2025

Husi : MAP - DG-ACPI

No. Ref : 69 /DG-ACPI /II/2025

Projecto :

Construction of Vernase Irrigation
Scheme Baixa Municipality

Quantidade Documentos : 6

Anexo a USB ✓

* Cost Estimate 1

* BILL OF Quantity 1

* Technical Specification 2

* Design Drawings 1

* Work Schedule and "S" Curve 1

Assuntos :

Submissaun Dokumentu pedidu Verifikasioun

No.Tlf :

Companhia :

Despacho :

- Unidade de Gestão Administrativa
- Unidade de Avaliação de Projectos
- Unidade de Controlo e Validação de Qualidade
- Unidade de Estudos e Desenvolvimento de Competências

Solicita despacho

Adjunto

Assessor/a

Gabinete DE / Base de Dadus

Other

Data : 27/02/2025

Rui Lourenço da Costa
Director Executivo ADN

SUMMARY

Project Owner : MINISTERÍO DA AGRICULTURA, PECUÁRIA, PESCA E FLORESTAS
Project : CONSTRUCTION OF VEMASE IRRIGATION SCHEME
Location : Baucau Municipality

No.	Work Description	Amount (USD)	AMOUNT USD (VERIFIED BY A.D.N)
I.	Preparatory work	\$ 394.842,00	\$ 139.326,00
II.	Construction of Access Road/ Inspection Road	\$ 37.119,88	\$ 27.994,37
III.	Construction Weir (include abutment and scouring way)	\$ 1.804.031,90	\$ 1.125.451,01
IV.	Construction Intake - Sandtrap Basin - Regulating Structure	\$ 526.015,48	\$ 279.281,34
V.	Right Main Canal & Hydraulic Structures	\$ 1.697.150,20	\$ 1.032.925,22
VI.	Left Main Canal & Hydraulic Structures	\$ 1.582.345,08	\$ 975.257,52
VII.	Construction of Building Facility	\$ 48.470,49	\$ 42.119,39
A	CONSTRUCTION COST	\$ 6.089.975,01	\$ 3.622.354,86
B	PROFIT (10% x A)	\$ 608.997,50	\$ 362.235,49
C	CONTIGENCIES (5% x A)	\$ 304.498,75	\$ 181.117,74
E	OVERHEAD	\$ 354.275,00	\$ 122.861,00
F	TAX 2% of (A +B+C)	\$ 133.979,45	\$ 85.771,38
G	GRAND TOTAL COST	\$ 7.491.725,71	\$ 4.374.340,47

Verified by :



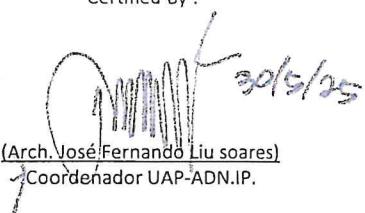
(Eng. Vidal Guterres)
ADN. Engineer

Checked By :



(Eng. Rogerio Marcal Pires)
Sefi Departamento, ITIAS - ADN.IP.

Certified By :



(Arch. José Fernando Liu Soares)
Coordenador UAP-ADN.IP.
30/5/25



REPÚBLICA DEMOCRATICA DE TIMOR LESTE
MINISTERÍO DA AGRICULTURA, PECUÁRIA, PESCA E FLORESTAS
DIREÇÃO-GERAL DE AGRICULTURA, CAFÉ E PLANTAS INDUSTRIAS



Ref. No : 69.../DGACPI/II/2025

Ex.mo : Sr. Rui Lourenço da Costa
Director Executivo Agencia de Desenvolvimento Nacional-IP (ADN_IP)

Assunto : Submisaun dokumentu Pedidu Verifikasi saun ba Konstrusaun Eskema Irrigasaun Vemase Municipio Baucau

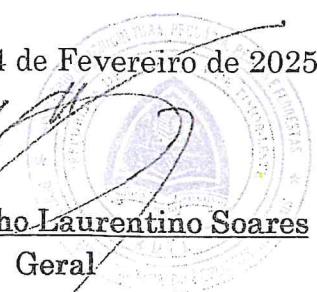
Baseia ba assunto iha leten, Ministerio da Agricultura, Pecuária, Pescas e Florestas, submete dokumentus Konstrusaun ba Eskema Irrigasaun Vemase Municipio Baucau, ba Agencia de Desenvolvimento Nacional-IP (ADN_IP) atu halo verifikasi saun no aprovasaun. Orsamento ba Projeto eskema irrigasaun iha leten, mai husi Fundus Infraestrutura ano fiscal 2025, ho nia programa A39 *ho kodigo aktividade A390419*

Dokumentos atu halo verifikasi saun no aprovasaun mak hanesan:

1. Desenho, Custo Estimasaun, BoQ no Espesifikasi saun Tekniku, *Hardcopy*
2. Softcopy iha USB (Desenho, Custo Estimasaun, BoQ no Espesifikasi saun Tekniku)

Mak nee deit ba ita nia servico hamutuk hato'o obrigado.

Dili, 24 de Fevereiro de 2025


Martinho Laurentino Soares
Diretor Geral

Cc :

1. Sua. Excia. Ministro da Agricultura, Pecuária Pesca e Florestas
2. Inspektur Geral – MAPPF;
3. Arkivo

ESTRUTURA DO SERVIÇO GOVERNAMENTO NACIONAL

CHECK LIST DOKUMENTOS BA VERIFIKASAUN
NARAN PROJECTO : Konst. Esquema Irrigasaun Venase
Municipio Baucau.

No	DOKUMENTOS NIA NARAN	
1.	Karta Akompanhamento Husi Projecto Nain	✓
2.	Fundo Husi : (LM...FI...PDIM)	✓
	A. Kapital de Desenvolvimento	
	B. Bens de Servico	
	C. Transferencia Public	
	D. Other :	
3.	Alokasaun Orsamento ba Sa Tinan	✓
4.	Programa Orsamento	✓
5.	TOR ou Justifikasau kona ba projetu ne'be atu implementa.	
6.	Titik Koordinat husi Projecto neébe atu implementa	
7.	Desenhu tenke iha HVS Medida A3 no hetan Aprovasaun husi Projetu Nain no Ministerio (MOP)	✓
8.	Cost Estimasaun ho BOQ Tenke Hetan Aprovasaun Husi Projectu Nain ou Ministerio (MOP)	✓
9.	Unit Price Analisis	✓
10.	Backup Quantidade	✓
11.	Spesifikasi Teknik	
12.	Soft Copy (BOQ iha Excel) no (Desenho iha Auto Cad) /USB	✓
14.	Desenhu tenke Aneksu Mapa Quarry no hetan Aprovasaun husi Projetu Nain	



AGÊNCIA DE DESENVOLVIMENTO NACIONAL, I. P.

Díli, 30 de Maio de 2025

No. Ref : 0010/ADN, I.P/V/2025

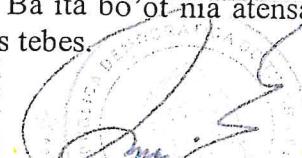
Hato' o ba : Sr. Martinho Laurentino Soares
Diretor Geral – DGACPI

Asuntu : Resultado Verifikasi – Terms of Reference (ToR) Consultancy Services for Construction Supervision of Vemase Irrigation Scheme, Baucau Municipality

Ho Respeito,

Bazeia ba karta pedidu verifikasi ho no ref: 67/DGACPI/II/2025 ho data 24 de Fevereiro de 2025, ba asuntu ne'ebe mensiona iha leten, ekipa verifikasi Unidade Avaliação dos Projetos – ADN, I.P. hala'o ona verifikasi ba dokumentos refere. Ho nune bele hare resultado verifikasi iha (*aneksu*).

Ba ita bo'ot nia atensaun ami hato'o agradecimento wain no subkreve ho konsiderasaun a'as tebes.


Rui Lourenço da Costa
Diretor Executivo - ADN, I.P.



ble

Bedik-Hun, Fatuhac
Dili - Timor-Leste
info@mpic.gov.tl
+670 3310 289

FORMULARIO DE DESPACHO

Data de Entrada Documentos : 24 - 06 - 2025

Data de Documentos 24 - 07 - 2024

Husi / MAPP-DGACPI

No. Ref: 67) DGACPI / II / 2025

Projecto :
 Konstrusao ba Eskema -
 Irrigasao Vasse Vamase
 Municipio Bucalle -

Quantidade Documentos ... 3

Anexo * USB (1)
 * TOR (1)
 * SAMARY (1)

Assuntos :

Submissao Documentos pedido
 Verifikasiacao TOR Supervisao

No.Tlf : -

Companhia : -

Despacho :

- Unidade de Gestão Administrativa
- Unidade de Avaliação de Projectos
- Unidade de Controlo e Validação de Qualidade
- Unidade de Estudos e Desenvolvimento de Competências

- Adjunto
- Assessor/a
- Gabinete DE / Base de Dados
- Other

Data : 21.07.

 Rui Lourenço da Costa
 Director Executivo ADN



REPÚBLICA DEMOCRATICA DE TIMOR LESTE
MINISTERÍO DA AGRICULTURA, PECUÁRIA, PESCA E FLORESTAS
DIREÇÃO-GERAL DE AGRICULTURA, CAFÉ E PLANTAS INDUSTRIAS



Ref. No : 67./DGACPI/II/2025

Ex.^{mo} : Sr. Rui Lourenço da Costa
Director Executivo Agencia de Desenvolvimento Nacional-IP (ADN_IP)

Assunto : Submisaun dokumemtu Pedidu Verifikasiun ToR Supervizaun Konstrusaun ba Eskema Irrigasaun Vemase Municipio Baucau

Baseia ba assunto iha leten, Ministerío da Agricultura, Pecuária, Pescas e Florestas, submete dokumentus ToR Supervizaun Konstrusaun ba Eskema Irrigasaun Vemase Municipio Baucau, ba Agencia de Desenvolvimento Nacional-IP (ADN_IP) atu halo verifikasiun no aprovasaun. Orsamento ba Projetu supervizaun eskema irrigasaun refere, mai husi Fundus Infraestrutura ano fiscal 2025, ho nia programa A39 *ho codigo aktividade A390420*

Dokumentos atu halo verifikasiun no aprovasaun mak hanesan:

1. Terms of Reference ba Supervizaun no Orsamento ba Supervizaun, *Hardcopy*
2. Softcopy iha USB (*TOR no Orsamento ba Supervizaun*)

Mak nee deit ba ita nia servico hamutuk hato'o obrigado.

Dili, 24 de Fevereiro de 2025

Martinho Laurentino Soares
Diretor Geral

Cc :

1. Sua. Excia. Ministro da Agricultura, Pecuária Pesca e Florestas
2. Inspektur Geral – MAPPF;
3. Arkivo

COST ESTIMATIVE

CONSTRUCTION SUPERVISION OF VEMASE IRRIGATION SCHEME, BAUCAU MUNICIPALITY

NO.	DESCRIPTIONS	UNIT	QUANTITY		UNIT PRICE (US\$)	COST (US\$)
			Personel	Duration		
I RENUMERATION INTERNATIONAL EXPERT						
1	Team Leader-Civil/Irrigation Engineer	Month	1	24	\$ 14,000.00	\$ 336,000.00
2	Irrigation Engineer	Month	1	24	\$ 10,300.00	\$ 247,200.00
3	Structure Engineer	Month	1	8	\$ 10,300.00	\$ 82,400.00
Sub-Total International Key Experts			3	56		\$ 665,600.00
II RENUMERATION NATIONAL EXPERTS						
1	Site Supervisor	Month	2	24	\$ 3,325.00	\$ 159,600.00
2	Quality Assurance Engineer	Month	1	24	\$ 3,325.00	\$ 79,800.00
Sub-Total National Key Experts			3	48		\$ 239,400.00
III SUPPORTING PERSONEL						
1	Office Manager	Month	1	24	\$ 600.00	\$ 14,400.00
2	Office Boy	Month	1	24	\$ 250.00	\$ 6,000.00
3	Driver	Month	1	24	\$ 300.00	\$ 7,200.00
Sub-Total Suporting Personel						\$ 27,600.00
IV REIMBURSABLES						
International and Local transportation for Operational						
1	International Transportation	R-Trip	3	2	\$ 1,500.00	\$ 9,000.00
2	Car periodic maintenance / 3 month	Month		8	\$ 600.00	\$ 4,800.00
3	Car fuel	Month		24	\$ 300.00	\$ 7,200.00
4	Motorbike periodic maintenance / 4 month	Month		6	\$ 150.00	\$ 900.00
5	Motorbike Fuel	Month		24	\$ 50.00	\$ 1,200.00
6	Communication	Month	6	24	\$ 50.00	\$ 1,200.00
Sub-Total Reimbursables						\$ 24,300.00
V REPORTING						
1	Inception Report	Ls	1		\$ 150.00	\$ 150.00
2	Monthly Report	Month		24	\$ 200.00	\$ 4,800.00
3	Final Report	Ls	1		\$ 500.00	\$ 500.00
Sub-Total Reporting						\$ 5,450.00

COST ESTIMATIVE

CONSTRUCTION SUPERVISION OF VEMASE IRRIGATION SCHEME, BAUCAU MUNICIPALITY

NO.	DESCRIPTIONS	UNIT	QUANTITY		UNIT PRICE (US\$)	COST (US\$)
			Personel	Duration		
VI FASILITIES & TRAINING						
1	Office Equipment, Engineering equipment and Furniture (Comp,Printer,Scanner, Surveying Equipment, etc)	Ls	1	1	\$ 7,500.00	\$ 7,500.00
2	Office Operations (Office Supplies, Software, Toner, etc) / 4 month	Ls		24	\$ 350.00	\$ 8,400.00
3	Provided Training courses for MALFF Irrigation staffs	Ls	1	1	\$ 6,000.00	\$ 6,000.00
Sub-Total Facilities						\$ 21,900.00
GRAND TOTAL						\$ 984,250.00

Verified by :


Antonia de F. Morais Soares
 Engineer, ADN, I.P.

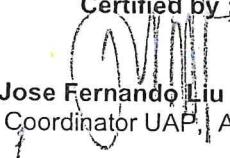
Checked by :


Rogerio M. Pires
 Chefe Dep, ITIAS UAP- ADN, I.P.



Melenia da C. Barros
 National Advisor, ADN, I.P.

Certified by :


Jose Fernando Liu Soares
 Coordinator UAP, ADN, I.P.



MINISTÉRIO DA AGRICULTURA, PECUÁRIA, PESCA E FLORESTAS



DETAILED ENGINEERING DESIGN

CONSTRUCTION OF VEMASE IRRIGATION SCHEME

872,94 Ha

BAUCAU MUNICIPALITY

DESIGN DRAWINGS

MAY 2024

PREPARED BY

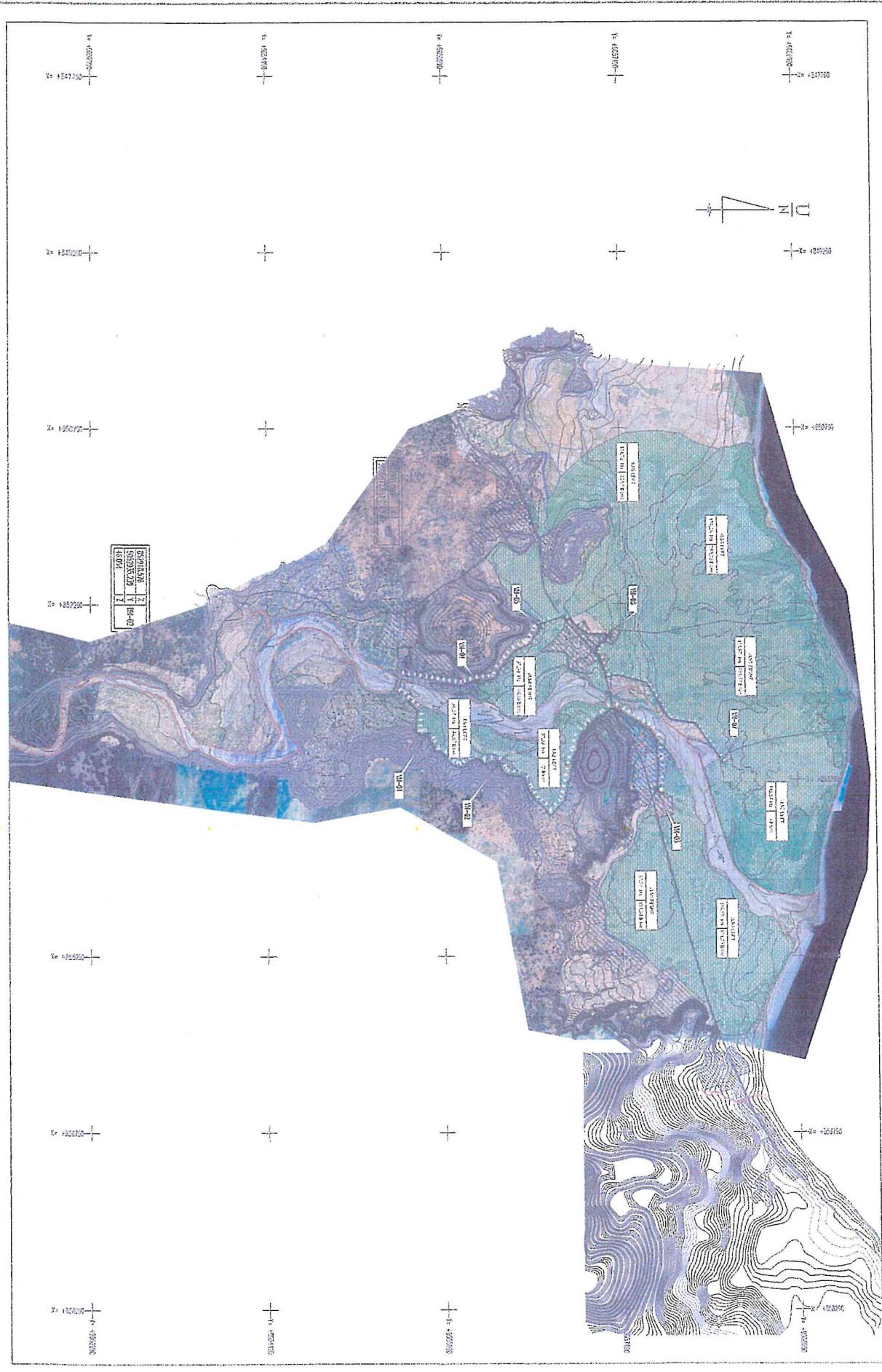


PT. SUWANDA KARYA MANDIRI
Survey pemetaan-penercanaan-pengawasan



ISO 9001
LSSM-045-HON

CONSTRUCTION OF VEHASSE IRRIGATION SCHEME	
BAGHANJ MUNICIPALITY	
ON THE BASIS OF VEHASSE IRRIGATOR	
VEHASSE	REMARKS
10.01.15	SIGNATURE





TERM OF REFERENCES

Consulting Services for Construction Supervision of Laclo-Sumase Irrigation Scheme, Manatuto Municipality

May 2025



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I. INTRODUCTION

1. Definition

a. Name of Project:

The Name of Project is Consultant Supervision of Laclo-Sumase Irrigation Scheme, Manatuto Municipality.

b. Owner:

The Owner of this activity is the Ministry of Agriculture, Livestock, Fisheries and Forestry (MALFF).

c. Management of Activities:

The overall Management of Activities is led by a Project Manager who is the Director of Irrigation and Water Management of MALFF under the guidance of the Project Owner and Project Steering Committee (PSC). The PSC consists of the representative of the MALFF, the Ministry of Public Works (MPW), and the Ministry of Finance (MOF). To facilitate payment procedures, The Agency of National Development (ADN) and the Major Project Secretary (MPS) will participate in all PSC meetings whenever the products considered as milestones for the various payments are presented.

d. Procurement Commission:

The procurement of a Construction Supervision Consultant will be carried out by the National Procurement Commission (NPC). The NPC will be arranging a pre-bid meeting, receiving and evaluating the proposals, and proposing the winner.

e. Construction Supervision Consultant:

Any consulting company which is selected as the winner of the procurement process, and will sign the contract together with the Employer.

2. Background

- a. The Laclo-Sumase Irrigation Scheme has been selected as a high-priority project by the Government of Timor-Leste for which a budget has been approved by the National Parliament of Timor-Leste. The construction development of the Laclo-Sumase Irrigation Scheme is scheduled to be implemented in 2025 and will likely require 36 months for completion. The construction and supervision works will be funded by the Government of Timor-Leste under Infrastructure Funds (IF).
- b. The Laclo-Sumase Irrigation Scheme is a major irrigation scheme that has a total area of 2,029.6 hectares with beneficiaries of Manatuto municipality.
- c. This irrigation scheme has no weir yet, damage to the canal bed causing leakage or seepage of water into the soil, and less water supply from the upstream off-take. The population still uses traditional canals to irrigate their rice field by making free intake on the Laclo-Sumase River.
- d. In general, for the entire irrigation scheme, the cropping patterns are still using the group system or rotation, but at the time of the survey at the field, it is known that the land preparation and planting of paddy will be held in May and just do one time planting in one year.
- e. For all irrigation schemes, the value of cropping intensity in the previous year according to a description of the survey results in the production is an average of 5.3 tons/ha, this is mean that the presentation is only 59.23 %.



- f. A subsequent detailed engineering design, cost estimate, and feasibility study for construction works of the irrigation scheme were completed in 2024.
- g. Essential components of the works have been identified and it will be the task of the Construction Supervision Consultant to assist the MALFF in the preparation of instructions to the Contractor on the issuance of work orders for the completion of the scheme.
- h. This project is categorized as an important project requiring appropriate and high-quality construction control during implementation. The required supervision services will assist the Contractor during implementation and include the provision of formal and on-the-job training to MALFF Irrigation Staff assigned to work with the Construction Supervision Consultant.
- i. For these purposes, the consulting services offered by eligible bidders will be considered against the criteria set out above in order to obtain high-quality supervision services in accordance with professional rules, norms, and behavior.
- j. The Terms of Reference (TOR) for the construction supervision work should be used for reference for the consulting services in order to support the performance of construction supervision to conform to required standards.

3. Objectives

- a. These Terms of Reference (TOR) should be used for guidance for the project. This TOR sets out the output, principles, criteria, process, and input.
- b. In the tasks, the Construction Supervision Consultant will implement the duties in a good manner and deliver all outputs in accordance with the technical specifications and standards stated in this TOR.
- c. This TOR is to provide technical guidance and instruction to the bidders so that they can fulfill the technical specification in terms of structural and functional aspects.



4. Location

Administratively, the Laclo-Sumase Irrigation Scheme is planned to be in Manatuto Districts. The coordinate of the Laclo-Sumase irrigation area is:

➤ X = 822886,60 ; Longitude = 8°33'36.05"S
➤ Y = 9052560,38 ; Latitude = 125°55'58.55"E

Plan location of the Weir is on the Laclo-Sumase River in the Manatuto district, with coordinates as:

Point IRB-R

Point IRB-L

➤ X = 817784,00
➤ Y = 9051424,29

➤ X = 817918,15
➤ Y = 9051070,94

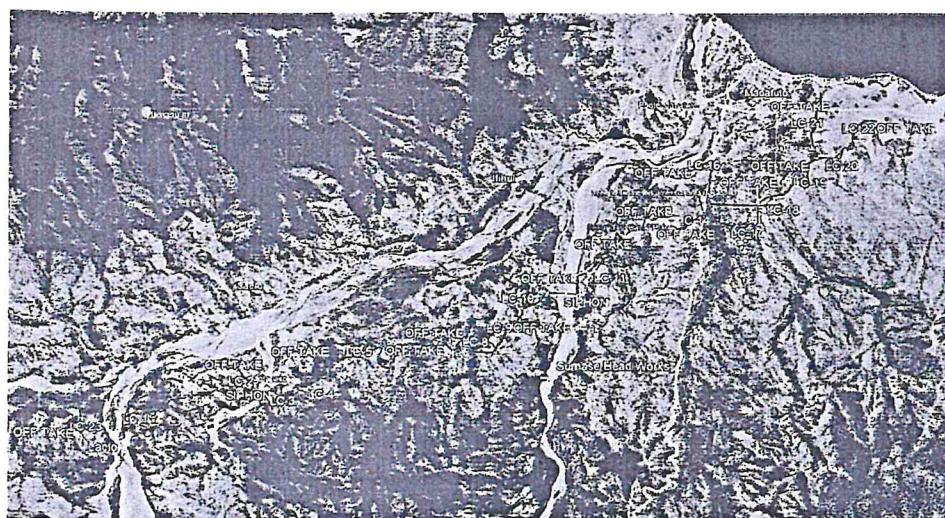
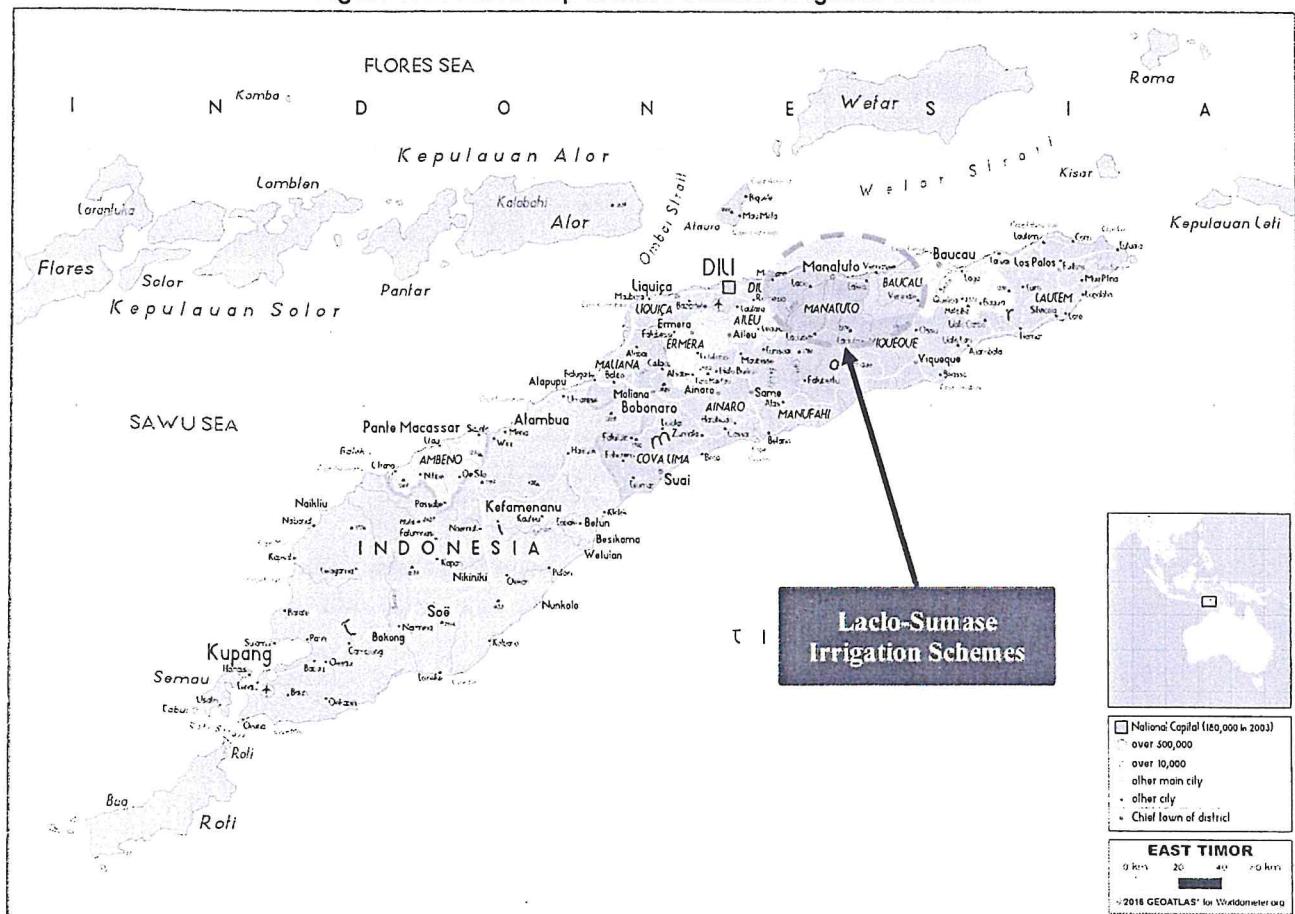
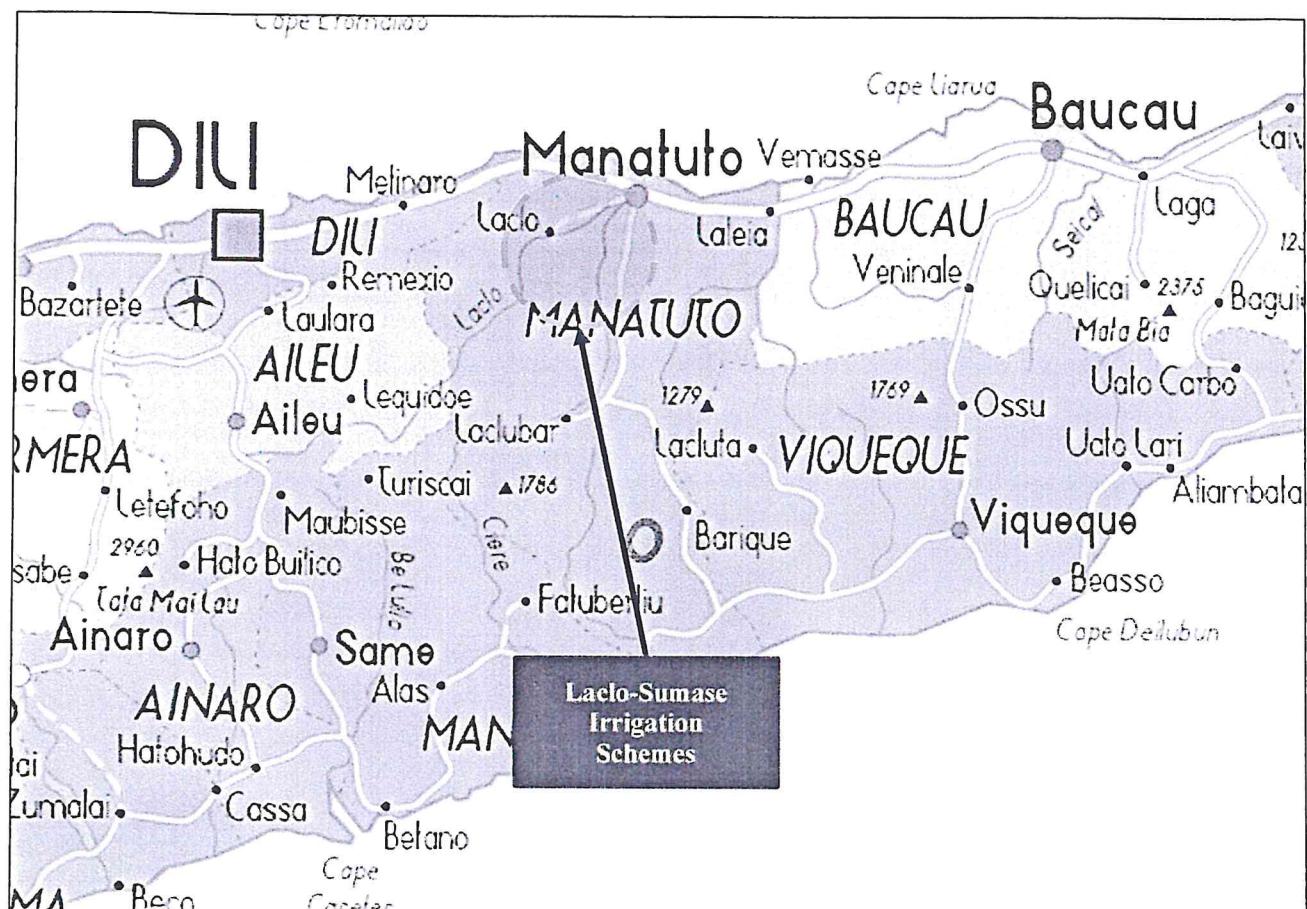




Figure 1: Location Map of Laclo-Sumase Irrigation Scheme







II. SCOPE OF WORKS

The Construction Supervision Consultant shall carry out the following:

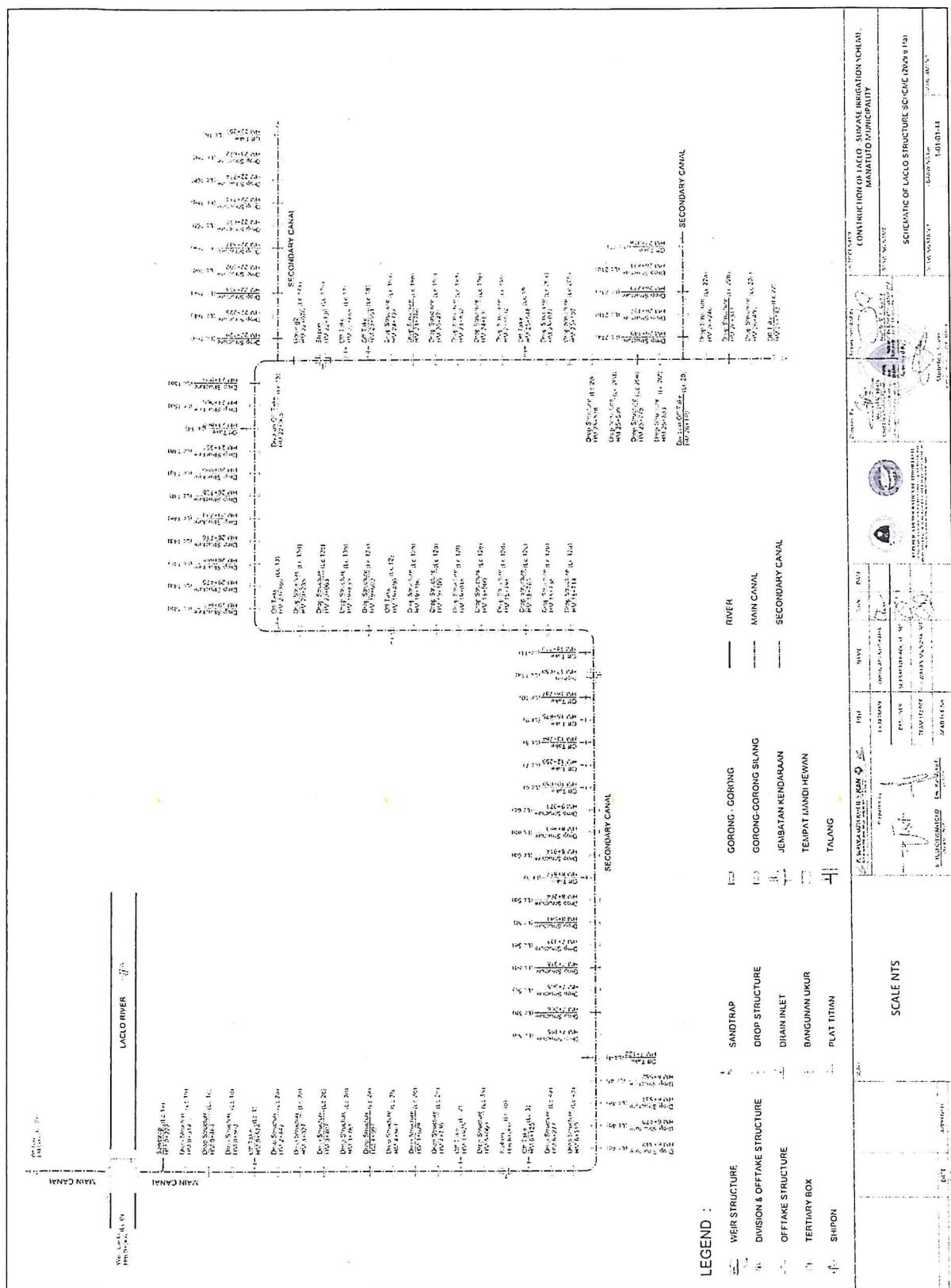
1. Check and study the document for the implementation of the construction of the essential components of the scheme development.
2. The essential components of the Laclo-Sumase Irrigation Scheme comprise:
 - a. Preparatory works.
 - b. Construction of Access Road/ Inspection Road.
 - c. Construction of weir (including abutment and Scouring way).
 - d. Construction Intake - Sand trap Basin - Regulating Structure.
 - e. Construction of 3 Syphon Structures.
 - f. Construction of Right and Left Retaining Wall (U/S & D/S Weir).
 - g. Construction of Right Main Canal & Hydraulic Structures ($L = 30,525\text{ m}'$).
 - h. Construction of Left Main Canal & Hydraulic Structure ($L = 688\text{ m}'$).
 - i. Construction of Building Facility.
 - j. Hydro-mechanical Work.
3. Check the Technical specifications which are to regulate the Contractor toward proper progress and accomplishment of the construction work.
4. Check the shop drawings provided by the Contractor.
5. Supervise the utilization of labor, material, equipment, and working methods, as well as time and cost control of the construction, works.
6. Supervise the implementation of the construction works in the aspects of quantity, quality control testing, and physical progress and confirm that construction is being performed according to the drawings, as defined in the Technical Specifications, and comply with the schedule.
7. Monitor the testing program and testing procedures of samples in the laboratory to ensure that these comply with the Technical Specifications.
8. Ensure that the environmental impact of the scheme is controlled through sound environmental management practices.
9. Inform the Project Manager to take appropriate action in case land acquisition and resettlement action plans or land dispute issues may arise to enable the project to continue without delay.
10. Collect data and information in the field to solve problems during the implementation of construction work.
11. Keep a field logbook to document all quality control related to the test results taken on the site.
12. Review the planned work schedule and monitor physical progress against the Contractor work program and when necessary, take appropriate action to ensure that the contractor maintains an adequate rate of progress to complete the work on schedule.
13. Review all technical designs, drawings, and cost estimates prepared for the development of the scheme and make recommendations on any changes, additions, and deductions that are deemed necessary to the Project Manager. The changes and additions and deductions so suggested will be discussed with the Project Steering Committee and if approved will be redesigned and drawn by the Construction Supervision Consultant and presented to the Contractor for implementation.
14. All communications, reports, and minutes of meetings shall be addressed to the Project Manager.
15. The Project Manager shall have the sole discretion to approve or change the Team Leader based on technical qualifications and experience in a similar position.



16. Review and check the Contractor's interim progress for accurate payments.
17. Design and discuss with the Project Manager any additional and/or deduction works (addendums, amendments, variations construction) that would enhance the quality of the development.
18. Advise the Project Manager of the likelihood of possible construction delays in the completion of the works, which might require revision to the duration of the construction and supervision periods, and recommend alternative timings of key personnel inputs.
19. Prepare recommendations to the Project Manager of any possible contract modifications between the Contractor and the Owner that in the Consultant's professional opinion would result in more achievement of the development objectives.
20. Hold weekly site meetings at a fixed and regular time with the Contractor and present the minutes of the meeting, which are signed and agreed to by the participants, to the Project Manager on Monday of the following week. The Construction Supervision Consultant shall present a progress report once a month at a meeting organized by the Project Manager.
21. Provide short-term on-the-job training courses for MALFF Irrigation staff to improve their capacity to understand how to deal with contract supervision, Owner's responsibility, technical specification, benchmarks surveys, accuracy of design drawings, drawing preparation, measurement and payment procedures, Contractor's work plan, quality control test, recordkeeping, acceptance procedure of completed work, defective works, and monitoring during the maintenance liability period.
22. Provide on-the-job training for MALFF Irrigation staff assigned to the project in the use of a total station survey, equipment, to survey and install benchmarks at the works' sites, and how to use the equipment in topographic surveys and mapping.
23. Provide on-the-job training for the MALFF Irrigation staff assigned to the project in the operation of the gates of the irrigation structures during normal conditions, during the flood, during the dry season, etc.
24. Provide on-the-job learning in the maintenance of the irrigation structures covering weirs, sediment traps, irrigation canals, drainage canals, division boxes, turnouts, gates, stilling basins, siphons, tunnels, flumes, drop structure chutes, etc.
25. Prepare monthly reports on supervision works based on the input of regular site meetings, daily reports, weekly reports, and monthly reports of the construction works provided by the Contractor.
26. Prepare a list of defective works prior to handing over; supervise the reparation
27. within the maintenance liability period and the submission of the final report of supervision works.
28. Prepare a manual of standards for the operation and maintenance works of the facilities.
29. Check the as-built drawings provided by the Contractor prior to the handing over of the completed works.
30. Assist the Project Manager during handing over and final acceptance of completed civil works related to the development and commissioning of the irrigation scheme.
31. Witness and report on any commissioning of the civil works when the Contractor has declared that the work has been completed and prepare a written report on the commissioning and stating the results of the tests measuring the status of the constructed facilities.
32. Prepare reports on physical progress, defect liability, handing over, commissioning, and final acceptance of completed civil works related to the development.



Figure 2: The schematic Drawing of the Laclo-Sumase Irrigation Scheme





REPÚBLICA DEMOCRATICA DE TIMOR LESTE
MINISTERIO DA AGRICULTURA, PECUÁRIA, PESCAS E FLORESTAS
DIREÇÃO-GERAL DE AGRICULTURA, CAFÉ E PLANTAS INDUSTRIALIS
Direcção Nacional de Irrigação de Utilização de Água

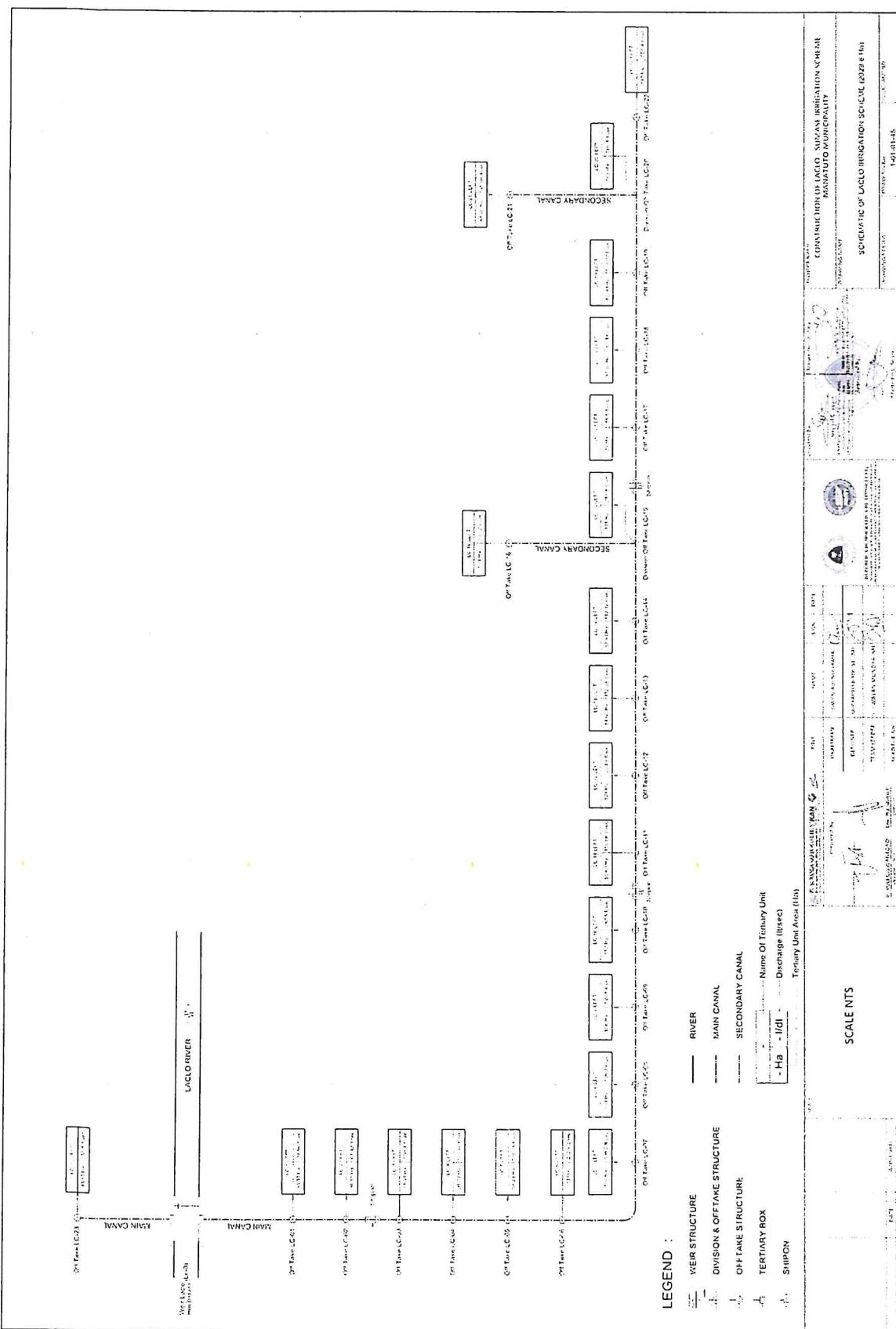
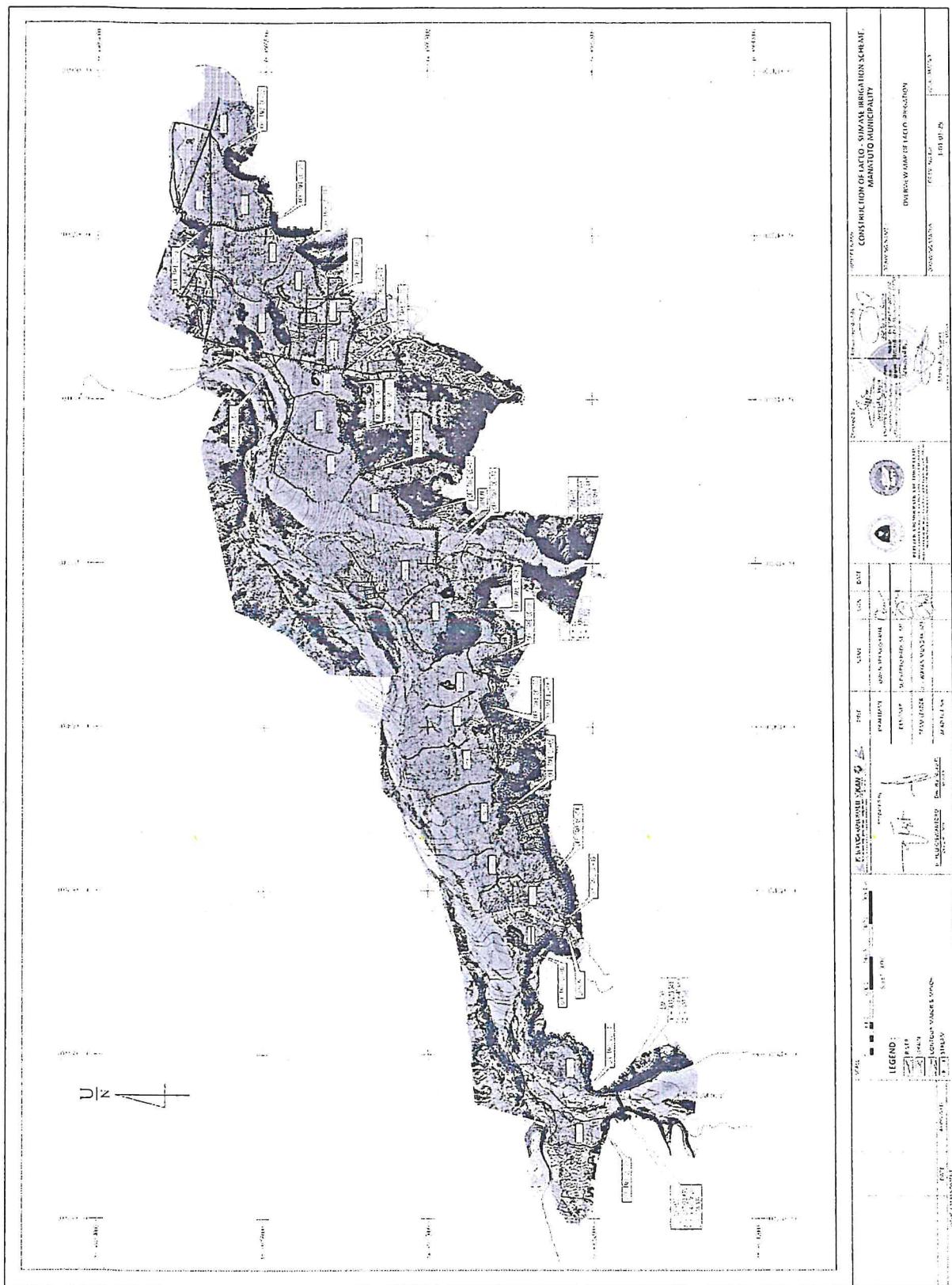


Figure 3: The area of the Laclo-Sumase Irrigation Scheme



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III. RESPONSIBILITY OF CONSTRUCTION SUPERVISION CONSULTANT

1. The Construction Supervision Consultant is responsible professionally for the supervision services to conform to the regulations and in accordance with the ethical code of professionalism.
2. In general, the responsibility of the Construction Supervision Consultant covers the following:
 - a. Review of Detailed Engineering Designs for the essential works as defined above, including recommendations on amendments and revisions
 - b. Identification of priorities for repair and improvements to water irrigation canals. The Construction Supervision Consultant will present recommendations to the Owner on these works within that stated in the works Contract or, if found necessary, to a greater value to enable a variation in the works Contract to be agreed
 - c. The result of construction supervision works should fulfill supervision qualification standards
 - d. The result of construction supervision works should accommodate the limitations expressed by the Owner including through this TOR such as in the aspect of payment, work schedule, and the quality of constructions to be constructed
 - e. The result of construction supervision works should fulfill the regulations, standards, and technical guidance of construction that are generally in effect in Timor-Leste.

IV. CONSTRUCTION SUPERVISION COST

1. The construction supervision consulting services will be provided at a fixed cost based on the selected bidder's offer price and financed in negotiation with the Owner.
2. Upon signing of the Contract, there will not be any additional cost unless as subsequently agreed between the Construction Supervision Consultant and the Owner through, and incorporate in, a written Contract Amendment.

V. OUTPUT OF CONSTRUCTION SUPERVISION CONSULTANT ACTIVITIES

The output resulting from the Construction Supervision Consultant of these activities is presented in a systematic format as follows:

1. Inception Report

The stage of construction supervision concept consists of as follows:

- a. The concept of technical construction supervision works includes the number and qualification of the team members and their responsibilities and methodology of implementation.
- b. Scope of services, report of the existing site data and information, and other purposes needed.

The Inception Report will be submitted within 1 (one) month of mobilization of the Construction Supervision Consultant in 1 (one) original and 6 (six) hard copies, and 6 (six) electronic copies on CDs and/or other agreed forms of electronic copies.



Comments on the Inception Report will be prepared and discussed between the Construction Supervision Consultant and the Owner and an agreed technical construction supervision concept will be approved by the Owner during the first 6 (six) weeks of the assignment enabling the Construction Supervision Consultant to continue his work with minimal delay.

2. Daily Record

The Daily Record contains all events in the field, instructions, guidance from the Project Manager, Irrigation Engineers, and Supervisor to the Site Engineer's Contractor.

3. Daily Report

The Daily Report contains information indicating discussions between Supervisors, and the Contractor regarding the following:

- a. Labors working on the site.
- b. Materials supplied at the site, accepted and or rejected.
- c. Equipment to be used for construction.
- d. The physical progress of the construction works is being implemented by the Contractor.
- e. Time for implementing the construction work.
- f. Reporting all kinds of the influence the construction activities, such as weather, storm, stream, flood, earthquakes, landslides, etc.

4. Weekly Report

Weekly Report contains the resume of Daily Report.

5. Monthly Report

- a. Monthly Report based on the input of regular Site Meetings, Daily Reports, Weekly Reports and Monthly Reports of the construction works provided by the Contractor.
- b. These documents should be submitted in 1 (one) original and 6 (six) hard copies, and 6 (six) electronic copies on CDs and/or other agreed forms of electronic copies and/or other forms of electronic copies.

6. Time Schedule

The Schedule of the construction works in Bar Chart- "S" Curve and Network Planning winch are prepared by the Contractor.

7. Construction Progress Reports

Construction Progress Reports will be prepared and incorporated on a monthly report by the Construction Supervision Consultant and will be necessary to support the payment of invoices submitted by the Contractor to the owner.



8. Shop Drawings

Shop Drawings are to be prepared by the Contractor and reviewed by the Construction Supervision Consultant.

9. Document of Design Changes

A document containing construction phase design changes, addition, or deduction of works will be provided by the Construction Supervision Consultant to the Project Manager.

10. Document of Quality Control

A document containing all results of quality control, testing, and measurements for payment to the Contractor taken at the sites during construction.

11. Document of Extra Claims

A document containing extra items or extra claimed by the Contractor that was approved by the Project Manager.

12. Minutes of Site Meeting

Minutes of Site Meetings and physical progress meetings as signed and agreed between the Project Manager, the Construction Supervision Consultant, and the Contractor.

13. Record of on-the-job Training

- Record of capacity development training to the MALFF Irrigation staff assigned to the project both on-the-job training and lecture-type training to understand supervision contract, Owner's responsibility, technical specifications, benchmarks surveys, the accuracy of design drawings, drawing preparation, measurement and payment procedures, Contractor's work plan, quality control test, record keeping, acceptance procedure of completed work, defective works, and monitoring during the defect liability periods.
- Record capacity development on-the-job training and lecture-type training to the MALFF Irrigation staff assigned to the project in the use of a total station survey, equipment, engineering, and other surveys and install benchmarks and the use of equipment in topographic surveys and mapping.

14. Photographs & Video

Photographs and Video showing the sequence of construction progress, and ongoing activities.

15. As-built Drawings

As-built drawings of the construction work.

16. Manuals

Manuals of equipment are prepared by the Contractor.

17. Record of Commissioning

Record of equipment/structures commissioning



18. Construction Supervision Completion Report

The Construction Supervision Completion Report will include the following:

- a. Minutes of Meetings.
- b. Minutes of Site Meetings.
- c. Daily Report.
- d. Document of Design Changes.
- e. Document of Quality Control.
- f. Document of Claims.
- g. Record of Training.
- h. Photographs and Videos.
- i. As-built Drawings.
- j. Manual.
- k. Record of Commissioning.

These documents should be submitted in 1 (one) original and 6 (six) hard copies, and 6 (six) electronic copies on CDs and/or other agreed forms of electronic copies.

VI. PRINCIPLES

The Construction Supervision Consultant in the implementation of its tasks should take note of the principles as follows:

- 1. Within reasonable limits implementation of the works should cause minimal disturbance to the farm and other activities in the locality of the works.
- 2. Works should be designed to minimize the life-cycle costs of the works including investment, operation, and maintenance.
- 3. The construction works should be completed in minimum time without compromising quality such the improved facilities are available for use as soon as possible.
- 4. The facilities constructed should increase the quality of the environment.

VII. CONSTRUCTION SUPERVISION CRITERIA

1. General Criteria

Any construction supervision works should be accomplished properly until giving results as required and well accepted satisfactorily by the Project Manager.

2. Objective Criteria

The implementation of construction supervision works relating to the type, quality and quantity, cost, and schedule of works should be accomplished to meet the supervision standard.



3. Functional Criteria

The implementation of construction supervision works should be accomplished to fulfill the professionalism to increase the project performance.

4. Procedure Criteria

The administrative procedure of the works on the site should be accomplished in accordance with the regulation in effect.

5. Technical Criteria

The construction supervision works should use the standard and technical guide in effect.

VIII. CONSTRUCTION SUPERVISION PROCESS

The Construction Supervision Consultant should prepare a description of activities in detail for every part of supervision work on the site as follows:

1. Preparation

- a. Formulation of a work program, allocation of personnel, and the concept of technical construction supervision work.
- b. Check the Time Schedules, Bar-Charts, "S" Curves, and Network Planning prepared by the Contractor and forwarded to the Project Manager for approval.

2. Implementation

- a. Implement supervision in general, coordination, site supervision, and inspection continuously.
- b. Supervise the labor, quantity, and quality of materials, equipment, working method, quantity and quality of works, and accuracy of measurement in the site
- c. Supervise the physical progress and take action properly and fast in order to ensure the implementation time to meet the schedules.
- d. Give input on additional or deduction works that could give affect the cost and time for approval by the Project manager.
- e. Give instructions to the Contractor with no deviation against the contract and make a report of it to the Project Manager.

3. Consultation

- a. Hold regular meetings with the Project Manager to discuss any issues that arise during construction. Then, make minutes of the meeting
- b. Hold regular site meetings at least twice a month with the Project Manager and Contractor to discuss issues that arise during construction. Then, make minutes of the meeting and send them to all parties related, and expected to be received within one week.
- c. Hold meetings out of regular schedules as required. Then, make minutes of the meeting



4. Reports

- a. Prepare reports on administrative and technical aspects to the Project Manager regarding the quality, quantity, and value of works constructed by the Contractor.
- b. Prepare reports regarding the materials, labor, and equipment to be used.
- c. Prepare reports regarding the real work progress and compare them with the schedules approved.
- d. Check the additional drawings prepared by the Contractor particularly as the result of additional or deduction works, and the shop drawings.

5. Documents

- a. Prepare documents on physical progress at each scheme for payments.
- b. Check and prepare documents on quantity and value of physical progress and additional or deduction works for payment.
- c. Prepare forms for daily, weekly and monthly reports, documents on work progress, and handing over and acceptances of completed works.

IX. CONSTRUCTION SUPERVISION INPUT

1. Information

- a. To implement the tasks, the Construction Supervision Consultant should collect the information required, besides the information provided by the Owner.
- b. The Construction Supervision Consultant should check the validity of information to be used in the implementation of his tasks either the information provided by the Owner or collected by himself.
- c. The faults of construction supervision work as the result of faults of information will be the responsibility of the Construction Supervision Consultant.
- d. The information required and should be obtained for supervision are as follows:
 - 1) Terms of Reference of Construction Supervision.
 - 2) Minutes of Pre-bid Meeting and Assignment of Contractor.
 - 3) Contract document of Contractor.
 - 4) Work Schedule in Bar-Chart, "S" Curve, and Network Planning prepared by the Contractor.
 - 5) Technical Specifications.
 - 6) Shop drawings.
 - 7) Regulations, standards, and manuals including technical guidance for quality control testing.



2. Personnel

The Construction Supervision Consultant should provide key personnel to fulfill the requirements to implement this work, either considering based on the scope of work or the level of complexity of the works. The key personnel required for the construction supervision activities consists of as follows:

a. International Key Expert

1) Team Leader (Civil / Water Resources Engineer)

The Team Leader must have a Master Degree in civil/water resources engineering with 14 years of total professional experience with a minimum of 10 (ten) years of working experience in the supervision of irrigation and water resources-related construction projects, contract management, and FIDIC Conditions of Contracts. The Team Leader must have a Certificate of Expertise issued by a recognized institution and must be proficient in English. Having previous work experience in Timor-Leste or Asian, training experience, and proficiency in Tetum, Bahasa Indonesia or Portuguese will be an added advantage.

The tasks of the Team Leader are the followings:

- a) Plan, coordinate, and control all activities and personnel involved in this work so that the work could be finished in a good manner within the scheduled time and achieve the expected result.
- b) Prepare implementation guidance in the stage of data collection, processing, and final presentation of the whole work.
- c) Plan and implement all activities covering construction supervision and give input to the other experts related to this supervision work.
- d) Responsible for all contract management between the Project Owner and the Contractor and ensuring that all procedure for the administration of the Contract is followed.
- e) Advise the Project Owner on legal issues regarding the contract extension/addendum/amendment, suspension, sanction, termination, force majeure, disputes, and other contractual issues.
- f) Reviewing and evaluating contract documents, which were previously part of the Contract Engineer's duties.

2) Irrigation Engineer

The Irrigation Engineer must have a university degree in Irrigation Engineering with 12 years of total professional experience and with a minimum of 8 (eight) years of working experience in construction supervision of irrigation and drainage project. The Irrigation Engineer must have a Certificate of Expertise issued by a recognized institution and must be proficient in English. Having previous work experience in Timor-Leste or Asian, training experience, and proficiency in Tetum, Bahasa Indonesia or Portuguese will be an added advantage.

The tasks of Irrigation Engineers are the followings:

- a) Assist and advise the Team Leader on engineering issues as required.



- b) Supervise field surveys, including inventory and condition of the weir, irrigation canal, drainage canal, and all other irrigation structures.
- c) Inspect all activities on the site, ensuring safe practices and good workmanship.
- d) Maintain a detailed record of daily activities on the site including labor, material,
- e) Equipment, weather conditions, work stoppages and the reasons, therefore, etc.
- f) Progress monitoring and quality control of works implementation.
- g) Verify all contractual issues arising from the commencement to the completion of the project.
- h) Review the claims by the Contract and Monitoring the Contractor schedule on the legal aspect.

3) Structure Engineer

The Structure Engineer should have a Bachelor's Degree or higher level of education in Civil Engineering from a recognized university with 12 years of total professional experience and with a minimum of 8 (eight) years of working experience in construction supervision works of Irrigation schemes or Weir. The Structure Engineer must have a Certificate of Expertise issued by a recognized institution and must be proficient in English. Having previous work experience in Timor-Leste or Asian, training experience, and proficiency in Tetum, Bahasa Indonesia or Portuguese will be an added advantage.

The tasks for Structure Specialist are the following:

- a) Assist and advise the Team Leader on irrigation issues as required.
- b) Supervise field surveys, including inventory and condition of the weir, intake, sandtrap, and all other irrigation structures.
- c) Inspect all activities on the site, ensuring safe practices and good workmanship.
- d) Maintain a detailed record of daily activities on the site including labor and material,
- e) Equipment, weather conditions, work stoppages and the reasons, therefore, etc.
- f) Progress monitoring and quality control of works implementation.
- g) Verify all contractual issues arising especially in structuring from the commencement to the completion of the project.
- h) Review the claims by the Contract and Monitoring the Contractor schedule on the legal aspect.
- i) Safety Supervision: Ensuring that safety protocols are followed on the construction site.

b. National Expert(It is mandatory for the following local counterpart staff to be citizens of Timor-Leste of Local Timorese).

1. Site Supervisor

Education : Bachelor's Degree in Civil Engineering

Experience : Either at least minimum 5 years

2. Quality Assurance Engineer

Education : Bachelor's Degree in Architect

Experience : Either at least minimum 5 years



c. **Supporting Personnel**

The Consultant Firm is responsible for ensuring adequate technical support and administrative staff.

3. Person Month of Consulting Service

It is estimated that 264 person-month of key personnel will be required, during the construction supervision period as presented in Table 1.

NO.	DESCRIPTIONS	UNIT	QUANTITY	
			Personel	Duration
I RENUMERATION INTERNATIONAL EXPERT				
1	Team Leader-Civil/Irrigation Engineer	Month	1	36
2	Irrigation Engineer	Month	1	36
3	Structure Engineer	Month	1	12
Sub-Total International Key Experts			3	84
II RENUMERATION NATIONAL EXPERTS				
1	Site Supervisor	Month	2	36
2	Quality Assurance Engineer	Month	1	36
Sub-Total National Key Experts			3	72
III SUPPORTING PERSONEL				
1	Office Manager	Month	1	36
2	Office Boy	Month	1	36
3	Driver	Month	1	36
Sub-Total National Supporting Staff			3	108

4. Facilities Provided by the Government of Timor-Leste

The Government will provide the following:

- Counterpart staff according to availability for assistance with surveys and progress monitoring.
- Assistance and advice on the processing of visas and work permits for Consultant staff as requested.

5. Facilities Provided by the Supervision Consultant

The Supervision Consultant will provide the following:

- All survey equipment as required.
- Computing, drafting, and mapping equipment and software.
- Other office supplies and equipment for use on or near the location of the irrigation schemes.
- Travel costs to and from Timor-Leste.



- f. Maintenance, fuel (car and motorcycle), and driver provide by consultant.
- g. Site Office will provide by contactor.
- h. Communication Cost
- i. Training Courses for MALFF Irrigation Staffs.

X. PAYMENT COST

The payment of this construction supervision activity will be scheduled as follows:

- a. The payment will be paid to the Construction Supervision Consultant upon discussion and approval by the Employer.
- b. The payment will be paid to the Construction Supervision Consultant in accordance with the progress of works, work phases, and deliverables.

The progress of works with the timeframe of construction schedule and deliverables are breakdown below:

- The construction plan will be conducted in phases with a duration of thirty six (36) months.
- The consultant must comply with the requirements of the following deliverable and submit the required report based on the required deliverables.
- The Consultant must comply with the terms and conditions stated in the contract as well as the implementation phases for the construction must be done carefully, and thoroughly to guarantee the quality of the outputs.

No	Progress of Works from the Construction Milestones	Percentage (%) of Payment
I	Preparatory Works	3.5% of the Contract Price
II	Construction of Access Road/ Inspection Road 100% is complete	4.0% of the Contract Price
III	The construction weir (including abutment and scouring way) is 25%, 50%, 75%, 100% complete	42.0% of the Contract Price
IV	Construction Intake – Sand trap Basin - Regulating Structure is 100% complete	4.0% of the Contract Price
V	Construction 3 Syphon Structures – Sand trap Basin - Regulating Structure is 50%, 100% complete	16.0% of the Contract Price
VI	The Right and Left Retaining Wall (U/S & D/S Weir) are 100% complete	3.0 % of the Contract Price
VII	The right main canal & Hydraulic Structures are 50%, 100% complete	13.0% of the Contract Price
VIII	The Left main canal & Hydraulic Structure are 100% complete	7.0% of the Contract Price
IX	Construction of the Building facility is 100% complete	1.0% of the Contract Price



X	Hydro-mechanical Work is 100% complete	1.5% of the Contract Price
XI	Defect Liability Period 5%	5.0% of the Contract Price

XI. WORK PROGRAM

- 1) The Construction Supervision Consultant should arrange work program minimum covers:
 - a. Work Schedule in detail on Bar Chart- 'S" Curve and Network Planning
 - b. Manning Schedule
 - c. Allocation of experts completely with their discipline and expertise. The experts proposed should attach the Curriculum Vitae and a Letter of Availability to work.
 - d. Concept of technical construction supervision work.
- 2) The Work Schedule will be governed by the procurement schedule for irrigation development project construction. The Construction Supervision Consultant shall mobilize 5 (five) days before the Contactor.
- 3) The work program should get approval from the Owner after presentation by the Construction Supervision Consultant and get input from the Owner.

BREAKDOWN OF MALFF STAFFS SHORT TERM TRAINING (LUMP-SUM)

NO	SUBJECT	UNITS	QUANTITIES	COST(\$)	TOTAL COST (\$)
1	Operation and Maintenance Training to the Gates Keepers	Weeks	2	\$ 3,000.00	\$ 6,000.00
2					
TOTAL					\$ 6,000.00

- a. Capacity development training to the of MALLF irrigation staff assigned to the project both the lecture type training and on-the-job training

COST ESTIMATE

Project Owner : MINISTÉRIO DA AGRICULTURA, PECUÁRIA, PESCA E FLORESTAS
Project : CONSTRUCTION OF VEMASE IRRIGATION SCHEME
Location : Baucau Municipality

No.	Work Description	Unit	Quantity	Unit Price (USD)	Amount (USD)	VERIFIED BY A.D.N			
						UNIT	QUANTITY	UNIT PRICE	AMOUNT USD
I.	Preparatory work								
I.1.	Mobilization to site	trip	1,00	142.160,00	142.160,00	trip	1,00	\$ 49.205,00	\$ 49.205,00
I.2.	Demobilization from site	trip	1,00	125.786,00	125.786,00	trip	1,00	\$ 18.350,00	\$ 18.350,00
I.3.	Contractor's site office	nos	1,00	31.855,00	31.855,00	nos	1,00	\$ -	\$ -
I.4.	Provision and maintenance of project signs	nos	1,00	286,00	286,00	nos	1,00	\$ 286,00	\$ 286,00
I.5.	Site Office for Consultant	nos	1,00	16.635,00	16.635,00	nos	1,00	\$ 16.635,00	\$ 16.635,00
I.6.	Vehicles for the Engineers	Ls	1,00	78.120,00	78.120,00	Ls	1,00	\$ 54.850,00	\$ 54.850,00
TOTAL BILL I						394.842,00			139.326,00
II.	Construction of Access Road/ Inspection Road								
II.1.	Subbase course	cu.m	325,00	54,09	17.579,25	cu.m	325,00	\$ 17,52	\$ 5.694,53
II.2.	Base Course	cu.m	325,00	55,36	17.992,00	cu.m	325,00	\$ 63,50	\$ 20.638,82
II.3.	Asphalt macadam penetration, 5 cm thickness	cu.m	162,50	9,53	1.548,63	cu.m	162,50	\$ 10,22	\$ 1.661,03
TOTAL BILL II						37.119,88			27.994,37
III.	Construction Weir (include abutment and scouring way)								
III.1.	Temporary Cofferdam and Dewatering Works								
III.1.1.	Temporary Cofferdam	cu.m	12.314,25	6,80	83.736,90	cu.m	12.314,25	\$ 4,70	\$ 57.876,98
III.1.2.	Dewatering with pumping system	hr	1.440,00	59,38	85.507,20	hr	1.440,00	\$ 59,15	\$ 85.175,10
TOTAL BILL III.1						169.244,10			\$ 143.052,08
III.2.	Construction of Intake Weir								
III.2.1.	Earth Work								
1	Common excavation	cu.m	12.354,90	5,70	70.422,95	cu.m	12.354,90	\$ 2,81	\$ 34.717,95
2	Rock excavation (mechanic)	cu.m	0,00	4,00	0,00	cu.m			
3	Embankment with compaction, selected material	cu.m	0,00	3,82	0,00	cu.m			
4	Backfill with compaction	cu.m	809,42	3,73	3.019,14	cu.m	809,42	\$ 2,51	\$ 2.032,43
III.2.2.	Masonry Work								
1	Stone masonry 1 : 3	cu.m	8.768,82	120,26	1.054.538,63	cu.m	8.768,82	\$ 62,23	\$ 545.713,63
2	Plastering 1 : 3	sq.m	104,65	6,05	633,13	sq.m	104,65	\$ 5,40	\$ 565,11
3	Pointing 1 : 2	sq.m	713,07	5,92	4.221,35	sq.m	713,07	\$ 4,72	\$ 3.365,67
4	Rip-rap	cu.m	556,52	74,49	41.454,99	cu.m	556,52	\$ 44,94	\$ 25.009,90
5	Supply & installation of gabion box, size 2.0 x 1.0 x 0.5 m	cu.m	2.032,00	69,63	141.488,16	cu.m	2.032,00	\$ 62,35	\$ 126.695,20
III.2.3.	Concrete Work								
1	Concrete Type-B (f'c = 25 Mpa/ K300)	cu.m	692,72	214,56	148.629,57	cu.m	692,72	\$ 153,06	\$ 106.027,18
2	Concrete Type-C (f'c = 18,7 Mpa/ K225)	cu.m	5,79	210,03	1.216,24	cu.m	5,79	\$ 142,69	\$ 826,27
3	Concrete Type-E (f'c = 14,5 Mpa/ K175)	cu.m	0,00	204,40	0,00	cu.m	0,00	\$ 135,91	\$ -
4	Reinforcement Bar, deformed	kg	0,00	2,53	0,00	kg	0,00	\$ -	\$ -
5	Reinforcement Bar, plain	kg	57.513,15	1,57	90.295,64	kg	57.513,15	\$ 1,73	\$ 99.440,23
6	Form Type F2, exposed surface	sq.m	765,98	23,03	17.640,61	sq.m	765,98	\$ 18,54	\$ 14.201,34
7	Form Type F4, curved exposed surface	sq.m	0,00	42,74	0,00	sq.m	0,00	\$ -	\$ -
III.2.4.	Miscellaneous Work								
1	Supply & Installing Weep Hole	nos	12,80	3,76	48,13	nos	12,80	\$ 3,76	\$ 48,13
2	Nomenclature	nos	1,00	203,14	203,14	nos	1,00	\$ 203,14	\$ 203,14
3	Supplying and installing Peil Scale	nos	2,00	40,77	81,54	nos	2,00	\$ 40,77	\$ 81,54
4	Supply & Install trashrack	nos	2,00	547,11	1.094,23	nos	2,00	\$ 547,11	\$ 1.094,23
5	Supply & Install. Flushing gate b = 1.50 h = 1.50 H = 4.80	nos	4,00	11.009,62	44.038,49	nos	4,00	\$ 4.326,60	\$ 17.306,40
6	Supply & Install. Left intake gate b = 1.50 h = 0.70 H = 2.75	nos	1,00	8.469,24	8.469,24	nos	1,00	\$ 2.829,35	\$ 2.829,35
7	Supply & Install. Right intake gate b = 0.90 h = 0.50 H = 2.50	nos	1,00	7.292,62	7.292,62	nos	1,00	\$ 2.241,23	\$ 2.241,23
TOTAL BILL III.1						1.634.787,80			\$ 982.398,94
TOTAL BILL III						1.804.031,898			1.125.451,010
IV.	Construction Intake - Sandtrap Basin - Regulating Structure								
IV.1.	Left Intake, Feeder Chanel, Sandtrap Basin & Regulating Structure								
IV.1.1.	Earth Work								
1	Common excavation	cu.m	6.843,50	5,70	39.007,95	cu.m	6.843,50	\$ 2,81	\$ 19.230,61
2	Backfill with compaction	cu.m	1.775,95	3,73	6.624,29	cu.m	1.775,95	\$ 2,51	\$ 4.459,36
IV.1.2.	Masonry Work								
1	Stone masonry 1 : 3	cu.m	2.114,84	120,26	254.330,42	cu.m	2.114,84	\$ 62,23	\$ 131.613,55
2	Plastering 1 : 3	sq.m	820,77	6,05	4.965,66	sq.m	820,77	\$ 5,40	\$ 4.432,16
3	Pointing 1 : 2	sq.m	2.592,01	5,92	15.344,70	sq.m	2.592,01	\$ 4,72	\$ 12.234,29
IV.1.3.	Concrete Work								
1	Concrete Type-C (f'c = 18,7 Mpa/ K225)	cu.m	2,00	210,03	419,64	cu.m	2,00	\$ 142,69	\$ 285,09
2	Concrete Type-E (f'c = 14,5 Mpa/ K175)	cu.m	0,83	204,40	169,24	cu.m	0,83	\$ 135,91	\$ 112,54
3	Reinforcement Bar, plain	kg	448,01	1,57	703,37	kg	448,01	\$ 1,73	\$ 774,61
4	Form Type F2, exposed surface	sq.m	42,88	23,03	987,53	sq.m	42,88	\$ 18,54	\$ 795,00
IV.1.4.	Miscellaneous Work								
1	Supply & Install. Intake gate b = 2.00 h = 0.60 H = 1.40	nos	1,00	7.921,99	7.921,99	nos	1,00	\$ 2.789,72	\$ 2.789,72
2	Supply & Install. Flushing gate b = 2.00 h = 1.50 H = 4.85	nos	1,00	12.036,64	12.036,64	nos	1,00	\$ 5.020,56	\$ 5.020,56
3	Supply & Installing hand rail, GSP pipe dia. 2.5"	lin.m	229,50	26,56	6.095,52	lin.m	229,50	\$ 17,92	\$ 4.112,64
TOTAL BILL IV.1						348.606,96			\$ 185.860,11

IV.2.	Right Intake, Feeder Chanel, Sandtrap Basin & Regulating Structure								
IV.2.1.	Earth Work								
1	Common excavation	cu.m	4.225,40	5,70	24.084,78	cu.m	4.225,40	\$ 2,81	\$ 11.873,61
2	Backfill with compaction	cu.m	1.045,86	3,73	3.901,04	cu.m	1.045,86	\$ 2,51	\$ 2.626,11
IV.2.2.	Masonry Work								
1	Stone masonry 1 : 3	cu.m	972,38	120,26	116.938,72	cu.m	972,38	\$ 62,23	\$ 60.514,67
2	Plastering 1 : 3	sq.m	383,32	6,05	2.319,09	sq.m	383,32	\$ 5,40	\$ 2.069,93
3	Pointing 1 : 2	sq.m	1.053,51	5,92	6.236,78	sq.m	1.053,51	\$ 4,72	\$ 4.972,57
IV.2.3.	Concrete Work								
1	Concrete Type-C ($f'c = 18.7 \text{ Mpa} / K225$)	cu.m	1,93	210,03	406,03	cu.m	1,93	\$ 142,69	\$ 275,84
2	Concrete Type-E ($f'c = 14.5 \text{ Mpa} / K175$)	cu.m	0,79	204,40	161,88	cu.m	0,79	\$ 135,91	\$ 107,64
3	Reinforcement Bar, plain	kg	429,88	1,57	674,91	kg	429,88	\$ 1,73	\$ 743,26
4	Form Type F2, exposed surface	sq.m	41,45	23,03	954,59	sq.m	41,45	\$ 18,54	\$ 768,48
IV.2.4.	Misceleneous Work								
1	Supply & Install. Intake gate $b = 1.20 \text{ h} = 0.60 \text{ H} = 1.20$	nos	1,00	6.692,46	6.692,46	nos	1,00	\$ 2.304,92	\$ 2.304,92
2	Supply & Install. Flushing gate $b = 1.20 \text{ h} = 1.50 \text{ H} = 4.75$	nos	1,00	10.376,96	10.376,96	nos	1,00	\$ 4.019,25	\$ 4.019,25
3	Supply & Installing hand rail, GSP pipe dia. 2,5"	lin.m	175,50	26,56	4.661,28	lin.m	175,50	\$ 17,92	\$ 3.144,96
	TOTAL BILL IV.2				177.408,52				\$ 93.421,23
	TOTAL BILL IV				526.015,476				279.281,341
V.	Right Main Canal & Hydraulic Structures								
V.1.	Right Main Canal, open channel (OsVm.0 - OsVm.3)	4.017	M			4.017	M		
V.1.1.	Canal Works								
1	Stripping of top soil, $t=15 \text{ cm}$	sq.m	10.389,01	0,44	4.571,16	sq.m	10.389,01	\$ 0,63	\$ 6.545,08
2	Common excavation	cu.m	29.623,42	5,70	168.853,47	cu.m	29.623,42	\$ 2,81	\$ 83.243,42
3	Embankment with compaction, selected material	cu.m	3.726,93	3,82	14.236,88	cu.m	3.726,93	\$ 2,51	\$ 9.358,21
4	Sandy gravel embankment with compaction	cu.m	1.160,10	11,51	13.352,75	cu.m	1.160,10	\$ 2,51	\$ 2.912,98
5	Concrete cycloop K225	cu.m	5.716,64	193,40	1.105.598,18	cu.m	5.716,64	\$ 109,33	\$ 625.012,98
6	Form Type F2, exposed surface	sq.m	14.556,49	23,03	335.236,01	sq.m	14.556,49	\$ 18,54	\$ 269.877,36
	TOTAL BILL Canal Works				1.641.848,44				\$ 996.950,02
V.1.2.	Structure Works	15	Nos			15	Nos		
a.	Oftake Structures	3	Nos			3	Nos		
1	Common excavation	cu.m	73,00	5,70	416,09	cu.m	73,00	\$ 2,81	\$ 205,13
2	Concrete cycloop K225	cu.m	112,08	193,40	21.676,56	cu.m	112,08	\$ 109,33	\$ 12.254,12
3	Concrete Type-E ($f'c = 14.5 \text{ Mpa} / K175$)	cu.m	0,34	204,40	69,90	cu.m	0,34	\$ 135,91	\$ 46,48
4	Reinforcement Bar, plain	sq.m	28,86	1,57	45,31	sq.m	28,86	\$ 1,73	\$ 49,90
5	Form Type F2, exposed surface	sq.m	425,03	23,03	9.788,47	sq.m	425,03	\$ 18,54	\$ 7.880,08
6	Supplying and installing Peil Scale	nos	3,00	40,77	122,31	nos	3,00	\$ 40,77	\$ 122,31
7	Supplying and installing:								
	Slide gate $b = 0.60 \text{ h} = 0.60 \text{ H} = 1.40$	nos	6,00	2.917,73	17.506,368	nos	6,00	\$ 2.036,63	\$ 12.219,78
b.	Drop Structures	12	Nos			12	Nos		
1	Common excavation	cu.m	28,51	5,70	162,52	cu.m	28,51	\$ 2,81	\$ 80,12
2	Concrete cycloop K225	cu.m	28,51	193,40	5.514,221	cu.m	28,51	\$ 109,33	\$ 3.117,28
	TOTAL BILL Structure Works				55.301,75				\$ 35.975,20
	TOTAL BILL V				1.697.150,20				1.032.925,22
VI.	Left Main Canal & Hydraulic Structures								
VI.1.	Left Main Canal, open channel (OsVm.0 - OsVm.7)	3.839	M			3.839	M		
VI.1.1.	Canal Works								
1	Stripping of top soil, $t=15 \text{ cm}$	sq.m	14.015,20	0,44	6.166,69	sq.m	14.015,20	\$ 0,63	\$ 8.829,58
2	Common excavation	cu.m	9.785,66	5,70	55.778,26	cu.m	9.785,66	\$ 2,81	\$ 27.498,24
3	Embankment with compaction, selected material	cu.m	6.191,75	3,82	23.652,49	cu.m	6.191,75	\$ 2,51	\$ 15.547,30
4	Sandy gravel embankment with compaction	cu.m	1.061,70	11,51	12.220,17	cu.m	1.061,70	\$ 2,51	\$ 2.665,90
5	Concrete cycloop K225	cu.m	5.646,46	193,40	1.092.025,36	cu.m	5.646,46	\$ 109,33	\$ 617.340,05
6	Form Type F2, exposed surface	sq.m	13.717,89	23,03	315.922,97	sq.m	13.717,89	\$ 18,54	\$ 254.329,65
	TOTAL BILL Canal Works				1.505.765,94				\$ 926.210,71
VI.1.2.	Structure Works	18	Nos			18	Nos		
a.	Oftake Structures	4	Nos			4	Nos		
1	Common excavation	cu.m	109,17	5,70	622,28	cu.m	109,17	\$ 2,81	\$ 306,78
2	Concrete cycloop K225	cu.m	168,67	193,40	32.621,16	cu.m	168,67	\$ 109,33	\$ 18.441,28
3	Concrete Type-E ($f'c = 14.5 \text{ Mpa} / K175$)	cu.m	0,53	204,40	108,54	cu.m	0,53	\$ 135,91	\$ 72,17
4	Reinforcement Bar, plain	sq.m	44,77	1,57	70,29	sq.m	44,77	\$ 1,73	\$ 77,41
5	Form Type F2, exposed surface	sq.m	471,26	23,03	10.853,03	sq.m	471,26	\$ 18,54	\$ 8.737,09
6	Supplying and installing Peil Scale	nos	4,00	40,77	163,08	nos	4,00	\$ 40,77	\$ 163,08
7	Supplying and installing:								
	Slide gate $b = 0.60 \text{ h} = 0.60 \text{ H} = 1.40$	nos	8,00	2.917,73	23.341,824	nos	8,00	\$ 2.036,63	\$ 16.293,04
b.	Drop Structures	14	Nos			14	Nos		
1	Common excavation	cu.m	44,19	5,70	251,90	cu.m	44,19	\$ 2,81	\$ 124,19
2	Concrete cycloop K225	cu.m	44,19	193,40	8.547,042	cu.m	44,19	\$ 109,33	\$ 4.831,78
	TOTAL BILL Structure Works				76.579,14				\$ 49.046,81
	TOTAL BILL VI				1.582.345,08				975.257,52

VII.	Construction of Building Facility	4	Nos			4	Nos		
VII.1	Construction of Guard House including fence and Installation of Electrical System (Type I : 4m x 3.30m)	3	Nos			3	Nos		
1	Common excavation	cu.m	27,75	5,70	158,15	cu.m	27,75	\$ 2,81	\$ 77,97
2	Backfill with Compaction	cu.m	9,02	3,73	33,64	cu.m	9,02	\$ 2,51	\$ 22,64
3	Stone Masonry 1 : 3	cu.m	6,87	120,26	826,10	cu.m	6,87	\$ 62,23	\$ 427,50
4	Unstamping	cu.m	3,90	74,49	290,81	cu.m	3,90	\$ 29,42	\$ 114,86
5	Sandfill	cu.m	3,27	31,06	101,63	cu.m	3,27	\$ 16,95	\$ 55,46
6	Concrete Type-E (f'c = 14.5 Mpa/ K175)	cu.m	2,29	204,40	467,63	cu.m	2,29	\$ 135,91	\$ 310,94
7	Reinforcement Bar, Plain	kg	571,99	1,57	898,02	kg	571,99	\$ 1,73	\$ 988,96
8	Form Type F2, exposed surface	sq.m	38,81	23,03	893,89	sq.m	38,81	\$ 18,54	\$ 719,61
9	Lean Concrete	cu.m	0,79	147,96	117,18	cu.m	0,79	\$ 110,67	\$ 87,65
10	Brick Masonry	sq.m	40,61	14,68	596,10	sq.m	40,61	\$ 14,37	\$ 583,51
11	Finishing Cement groove of red brick wall	sq.m	78,84	2,79	219,96	sq.m	78,84	\$ 2,79	\$ 219,96
12	Render	sq.m	4,38	5,20	22,78	sq.m	4,38	\$ 3,32	\$ 14,54
13	Make and Install Door and window, wooden frame class II/III	cu.m	1,86	625,46	1.160,35	cu.m	1,86	\$ 625,46	\$ 1.160,35
14	Make and Install Double plywood door, with wood frame class II	sq.m	4,14	51,49	213,17	sq.m	4,14	\$ 51,49	\$ 213,17
15	Install louvre window include Steel guard	sq.m	5,80	72,94	423,34	sq.m	5,80	\$ 72,94	\$ 423,34
16	Install Conventional wooden truss, class I, II and III	cu.m	0,08	506,28	41,56	cu.m	0,08	\$ 506,28	\$ 41,56
17	Install Purlin, wood Class II	cu.m	0,28	147,93	41,42	cu.m	0,28	\$ 147,93	\$ 41,42
18	Install ceiling frame, (60x60) cm wood class II / III	sq.m	13,20	11,34	149,69	sq.m	13,20	\$ 13,96	\$ 184,27
19	Install ceramic floor tile size (40 x 40) cm	sq.m	13,20	19,35	255,42	sq.m	13,20	\$ 7,50	\$ 99,00
20	Install plywood ceiling	sq.m	13,20	4,78	63,10	sq.m	13,20	\$ 4,78	\$ 63,10
21	New Painting Wall (1 layer, 1 layer of primer, two coats cover)	sq.m	87,60	3,92	343,39	sq.m	87,60	\$ 4,50	\$ 394,20
22	Install Corrugated Zinc	sq.m	35,00	5,43	190,05	sq.m	35,00	\$ 5,43	\$ 190,05
23	Install Ordinary Lock	nos	2,00	10,77	21,54	nos	2,00	\$ 10,77	\$ 21,54
24	Install Door Hinge	nos	4,00	5,27	21,08	nos	4,00	\$ 5,27	\$ 21,08
25	Install Butterfly Hinge for Window	nos	10,00	4,52	45,20	nos	10,00	\$ 3,21	\$ 32,10
26	Install Latch Lock	nos	12,00	4,06	48,72	nos	12,00	\$ 4,21	\$ 50,52
27	Install Mono Block Closet	nos	1,00	310,09	310,09	nos	1,00	\$ 310,09	\$ 310,09
28	Install Lavatory Sink	nos	1,00	150,34	150,34	nos	1,00	\$ 115,71	\$ 115,71
29	Construction of fence	lin.m	22,60	40,00	904,00	lin.m	22,60	\$ 40,00	\$ 904,00
30	Installation of electrical system	set	1,00	211,86	211,86	set	1,00	\$ 211,86	\$ 211,86
TOTAL BILL Structure Works					9.220,19				\$ 8.100,97
TOTAL BILL Construction of 3 Guard House					27.660,58				24.302,90
VII.2	Construction of Water User Association (WUA) House including fence & Installation of Electrical System (Type II : 10 m x 6.0 m)	1	Nos			1	Nos		
1	Common excavation	cu.m	53,28	5,70	303,67	cu.m	53,28	\$ 2,81	\$ 149,71
2	Backfill with Compaction	cu.m	18,19	3,73	67,85	cu.m	18,19	\$ 2,51	\$ 45,68
3	Stone Masonry 1 : 3	cu.m	18,07	120,26	2.172,80	cu.m	18,07	\$ 62,23	\$ 1.124,40
4	Unstamping	cu.m	9,69	74,49	721,81	cu.m	9,69	\$ 29,42	\$ 285,08
5	Sandfill	cu.m	10,85	31,06	336,84	cu.m	10,85	\$ 16,95	\$ 183,82
6	Concrete Type-E (f'c = 14.5 Mpa/ K175)	cu.m	4,61	204,40	941,65	cu.m	4,61	\$ 135,91	\$ 626,13
7	Reinforcement Bar, Plain	kg	1.224,23	1,57	1.922,03	kg	1.224,23	\$ 1,73	\$ 2.116,69
8	Form Type F2, exposed surface	sq.m	80,33	23,03	1.849,88	sq.m	80,33	\$ 18,54	\$ 1.489,23
9	Lean Concrete	cu.m	3,60	147,96	532,66	cu.m	3,60	\$ 110,67	\$ 398,42
10	Brick Masonry	sq.m	166,82	14,68	2.448,87	sq.m	166,82	\$ 14,37	\$ 2.397,16
11	Finishing Cement groove of red brick wall	sq.m	172,80	2,79	482,11	sq.m	172,80	\$ 2,79	\$ 482,11
12	Render	sq.m	9,60	5,20	49,92	sq.m	9,60	\$ 3,32	\$ 31,87
13	Make and Install Door and window, wooden frame class II/III	cu.m	3,10	625,46	1.940,18	cu.m	3,10	\$ 625,46	\$ 1.940,18
14	Make and Install Double plywood door, with wood frame class II	sq.m	10,35	51,49	532,92	sq.m	10,35	\$ 51,49	\$ 532,92
15	Install louvre window include Steel guard	sq.m	5,08	72,94	370,77	sq.m	5,08	\$ 72,94	\$ 370,77
16	Install Conventional wooden truss, class I, II and III	cu.m	0,20	506,28	99,51	cu.m	0,20	\$ 506,28	\$ 99,51
17	Install Purlin, wood Class II	cu.m	0,73	147,93	108,28	cu.m	0,73	\$ 147,93	\$ 108,28
18	Install ceiling frame, (60x60) cm wood class II / III	sq.m	60,00	11,34	680,40	sq.m	60,00	\$ 13,96	\$ 837,60
19	Install ceramic floor tile size (40 x 40) cm	sq.m	60,00	19,35	1.161,00	sq.m	60,00	\$ 7,50	\$ 450,00
20	Install plywood ceiling	sq.m	60,00	4,78	286,80	sq.m	60,00	\$ 4,78	\$ 286,80
21	New Painting Wall (1 layer, 1 layer of primer, two coats cover)	sq.m	192,00	3,92	752,64	sq.m	192,00	\$ 4,50	\$ 864,00
22	Install Corrugated Zinc	sq.m	102,48	5,43	556,47	sq.m	102,48	\$ 5,43	\$ 556,47
23	Install Ordinary Lock	nos	5,00	10,77	53,85	nos	5,00	\$ 10,77	\$ 53,85
24	Install Door Hinge	nos	10,00	5,27	52,70	nos	10,00	\$ 5,27	\$ 52,70
25	Install Butterfly Hinge for Window	nos	14,00	4,52	63,28	nos	14,00	\$ 3,21	\$ 44,94
26	Install Latch Lock	nos	12,00	4,06	48,72	nos	12,00	\$ 4,21	\$ 50,52
27	Install Mono Block Closet	nos	1,00	310,09	310,09	nos	1,00	\$ 310,09	\$ 310,09
28	Install Lavatory Sink	nos	1,00	150,34	150,34	nos	1,00	\$ 115,71	\$ 115,71
29	Construction of fence	lin.m	40,00	40,00	1.600,00	lin.m	40,00	\$ 40,00	\$ 1.600,00
30	Installation of electrical system	set	1,00	211,86	211,86	set	1,00	\$ 211,86	\$ 211,86
TOTAL BILL Construction of Water User Association (WUA) House					20.809,91				17.816,49
TOTAL BILL VII					48.470,49				42.119,39

Project Owner

MINISTERÍO DA AGRICULTURA, PECUÁRIA, PESCA E FLORESTAS

Project

CONSTRUCTION OF VEMASE IRRIGATION SCHEME

Location

Baucau Municipality

OVERHEAD

PAY ITEM	ITEM DESCRIPTION	VERIFIED BY A.D.N			
		UNIT	QUANTITY	UNIT PRICE	AMOUNT USD
1 PROJECT TEAM					
	Project Manager	Ls	1,00	\$ 12.000,00	\$ 12.000,00
	Site Manager	Ls	1,00	\$ 19.200,00	\$ 19.200,00
	Site Engineer	Ls	1,00	\$ 12.000,00	\$ 12.000,00
	Quality Control	Ls	1,00	\$ 10.000,00	\$ 10.000,00
	Surveyor	Ls	1,00	\$ 10.000,00	\$ 10.000,00
	Logistics	Ls	1,00	\$ 6.000,00	\$ 6.000,00
	Administration	Ls	1,00	\$ 4.800,00	\$ 4.800,00
	Cleaning Staff	Ls	1,00	\$ 3.600,00	\$ 3.600,00
	Security	Ls	1,00	\$ 3.600,00	\$ 3.600,00
	SUB TOTAL				\$ 81.200,00
2 KUSTU OPERASIONAL					
	Stationary	Ls	1,00	\$ 600,00	\$ 600,00
	Communication	Ls	1,00	\$ 1.200,00	\$ 1.200,00
	Electricity	Ls	1,00	\$ 2.400,00	\$ 2.400,00
	Water	Ls	1,00	\$ 1.200,00	\$ 1.200,00
	Daily, weekly, monthly reports	Ls	1,00	\$ 600,00	\$ 600,00
	Shop drawings, as built drawings	Ls	1,00	\$ 600,00	\$ 600,00
	SUB TOTAL				\$ 6.600,00
3 KUSTU SERVISU APOIO NIAN					
1	Material Sampling & Testing	Ls	1,00	\$ 33.461,00	\$ 33.461,00
2	Personal protective equipment (PPE)	Ls	1,00	\$ 600,00	\$ 600,00
	SUB TOTAL				\$ 34.061,00
4 KUSTU SOSIAL					
	Launching ceremony	Ls	1,00	\$ 500,00	\$ 500,00
	Completion ceremony	Ls	1,00	\$ 500,00	\$ 500,00
	SUB TOTAL				\$ 1.000,00
	TOTAL				\$ 122.861,00