



Republic of the Philippines
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
CENTRAL OFFICE
Bonifacio Drive, Port Area Manila



LAGONG PILIPINAS

November 8, 2023

MEMORANDUM



TO : **KHADAFFY D. TANGGOL**
Regional Director
DPWH-CAR
Engineer's Hill, Baguio City

ATTENTION : **JOSELITO T. ARAO**
District Engineer
Abra District Engineering Office
Bangued, Abra

Transmitted herewith are the **APPROVED** requests for the **modification** of hereunder stated projects:

1. Sustainable Infrastructure Project Alleviating Gaps (SIPAG) - Flood Mitigation Structure protecting Public Infrastructure/Facilities, Construction of Palaquio Flood Control Structure, Bucay, Abra - - - **₱100,000,000.00**
2. OO2: Protect Lives and Properties Against Major Floods, Construction/Rehabilitation of Flood Mitigation Facilities within Major River Basins and Principal River, Construction of Flood Control Structure along Abra Major River Basin (Phase II), Barangay Caupasan, Danglas, Abra - - - **₱150,000,000.00**
3. Sustainable Infrastructure Project Alleviating Gaps (SIPAG) - Flood Mitigation Structure protecting Public Infrastructure/Facilities, Construction of Patagui-Dagsian Flood Control Structure, La Paz, Abra - - - **₱150,000,000.00**
4. OO2: Protect Lives and Properties Against Major Floods, Construction/Rehabilitation of Flood Mitigation Facilities within Major River Basins and Principal River, Construction of Flood Control Structure along Abra Major River Basin, Barangay San Jose Sur, Manabo, Abra - - - **₱150,000,000.00**
5. OO1: Ensure Safe and Reliable National Road System - Asset Preservation - Rehabilitation/ Reconstruction of Roads with Slips, Slope Collapse, and Landslide - Secondary Roads Abra-Kalinga Rd – K0475 + 200 - K0475 + 700 - - - **₱80,000,000.00**

Please be reminded that all approved modifications **shall be posted in the DPWH website within five (5) days** from its approval. Failure to comply with this requirement shall be dealt with accordingly.

REY PETER B. GILLE, D.M.

Assistant Secretary for Regional Operations
in CAR, Regions I, II, IX, X, XI, XII, and XIII

2.3 mksa/OAL/RPBG/ERP



Programming Division Evaluation Sheet

Name of Project:

Construction of Palaquio Flood Control Structure, Bucay, Abra

Project ID: P00740312LZ

Implementing Office: Abra District Engineering Office

Appropriation: 100,000,000

Date: 10/09/2023

A. TYPE OF REQUEST

A.1 Change in Implementing Office/Operating Unit due to

A.1.1 Geographical Jurisdiction
A.1.2 Approval of Authority to Bid/Implement

A.2 PROJECT MODIFICATION/ADJUSTMENTS

A.2.1 Typographical Error/s
A.2.2 Change in Location (for non-existent locations only)
A.2.3 Change in Station Limits
A.2.4 Addition/Deletion of Word/s
A.2.5 Change in Project Component/s Details
A.2.5.1 Change in Targets
Change in Scope of Work

DPWH - OSEC
RECEIVED
NOV 06 2023
By: 125-18332
Control No.: 125-18332
IDTS No.: 1805

B. EVALUATION

B.1 ALLOWED as per the GAA Provisions
B.2 NOT ALLOWED as per the GAA Provisions

C. FUND SOURCE FY 2023 GAA, R.A. 11936

C.1 for issuance of SARO (□Released □Unreleased)
C.2 released thru GAAAO

Amount: 100,000,000

D. IMPACT:

D.1 Condition/s:
% decrease in unit cost
173.85 % Increase in unit cost
64.02 % decrease in physical target
% Increase in physical target

D.2 Additional Project Component
D.3 Certificate of Cost Reasonableness by RD

D.4 Remarks: Change in targets with 173.85% increase in Unit Cost. Reviewed by BOC dated September 22, 2023: reduced amount from Php100,000,000.00 to **Php98,525,851.98** and an excess amount of **Php1,474,148.02**

E. Approving Authority as per D.O. 13, s. 2023, Guidelines on Modification of Allotment under the GAA

E.1 Undersecretary for Operations
E.2 Secretary

Evaluated By:

ALEX G. BOTE

Director, Planning Service

Noted By:

CONSTANTE A. LIANES, JR., CESO III

Assistant Secretary, Planning Service

Project ID: P00740312LZ

FOR SECRETARY MANUEL M. BONOAN OR

ACTION SLIP

Date:

REMARKS:

Reviewed by Planning Service
Recommended for Approval
Remarks:

MARIA CATALINA E. CABRAL, CESO I, Ph.D.
Undersecretary for Planning and PPP Services



Republic of the Philippines
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
OFFICE OF THE SECRETARY
Bonifacio Drive, Port Area, Manila



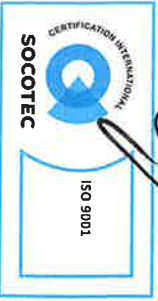
October 5, 2023

MEMORANDUM

FOR : **MANUEL M. BONOAN**
Secretary
This Department

This refers to the memorandum dated 8 September 2023 of **DPWH CAR Regional Director KHADAFY D. TANGGOL**, endorsing the request of District Engineer **JOSELITO T. ARAO** of **Abra District Engineering Office** for the **modification** of the project under FY 2023 GAA, to wit;

As per GAA/Original			As Modified		
Project Description					
UACS No.:300219101302000 Project ID:P00740312LZ					
Sustainable Infrastructure Project Alleviating Gaps (SIPAG) - Flood Mitigation Structure protecting PublicInfrastructure/Facilities, Construction of Palaquio Flood Control Structure, Bucay, Abra			Sustainable Infrastructure Project Alleviating Gaps (SIPAG) - Flood Mitigation Structure protecting PublicInfrastructure/Facilities, Construction of Palaquio Flood Control Structure, Bucay, Abra		
Type of Work/ Physical Target	Unit Cost	Allocation	Type of Work/ Physical Target	Unit Cost	Estimated Cost
CW1- Construction of Flood Mitigation Structure / 820.497l.m.	₱ 117,611.64/ l.m.	₱96,500,000.00	CW1- Construction of Flood Mitigation Structure/ 295.20 l.m.	₱ 322,078.09/ l.m.	₱ 95,077,451.37
EA0	-	₱3,500,000.00	EA0	-	₱ 3,448,400.61
Total: ₱100,000,000.00			Total: ₱100,000,000.00		
Justification:			Justification:		
<ul style="list-style-type: none">The increase in unit cost which resulted to the decrease in the physical target is due to the usage of a reinforced concrete dike type of flood mitigation structure with steel sheet piles consisting of 46.69% of the project direct cost. The steel sheet piles is necessary to prevent scouring and possible failure along the foundation of the proposed flood mitigation structure and ensure over-all stability of the project area.The huge/massive rock embankment and concrete pile cap and cut-off wall consisting of 44.21% and 4.42% of the project cost respectively, also contributed to the high unit cost of the project.The derived unit cost is based on the approved Detailed Unit Price Analysis (DUPA) and Program of Works (POW) with reference to the evaluation made by the Bureau of Construction as per memorandum dated September 28, 2023.See attached Cross-Section Drawing of the Project Submitted by the District Engineer and the Certificate of Reasonableness of Cost Estimates signed by the Regional Director.			<ul style="list-style-type: none">The increase in unit cost which resulted to the decrease in the physical target is due to the usage of a reinforced concrete dike type of flood mitigation structure with steel sheet piles consisting of 46.69% of the project direct cost. The steel sheet piles is necessary to prevent scouring and possible failure along the foundation of the proposed flood mitigation structure and ensure over-all stability of the project area.The huge/massive rock embankment and concrete pile cap and cut-off wall consisting of 44.21% and 4.42% of the project cost respectively, also contributed to the high unit cost of the project.The derived unit cost is based on the approved Detailed Unit Price Analysis (DUPA) and Program of Works (POW) with reference to the evaluation made by the Bureau of Construction as per memorandum dated September 28, 2023.See attached Cross-Section Drawing of the Project Submitted by the District Engineer and the Certificate of Reasonableness of Cost Estimates signed by the Regional Director.		



Based on our evaluation, the submitted request for modification of the said project is in order; hence, approval hereof is recommended.


REY PETER B. GILLE, D.M.

Assistant Secretary for Regional Operations
inCAR, Regions I, II, IX, X, XI, XII, and XIII

RECOMMENDING APPROVAL:

Subject to further on verification

MARIA CATALINA E. CABRAL, Ph.D., CESO I

Undersecretary for Planning
and Public-Private Partnership Services


EUGENIO R. PIPO, JR.

Undersecretary for Regional Operations
in CAR, Regions I, II, IX, X, XI, XII, and XIII

APPROVED / ~~DISAPPROVED~~:


MANUEL M. BONOAN
Secretary

2.3 mksa/MLS/AVS/RPBG/ERP

Department of Public Works and Highways

Office of the Secretary



WIN3E03199



Republic of the Philippines
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
OFFICE OF THE SECRETARY
Bonifacio Drive, Port Area, Manila



October 5, 2023

MEMORANDUM

FOR : **MANUEL M. BONOAN**
Secretary
This Department

This refers to the memorandum dated 8 September 2023 of **DPWH CAR Regional Director KHADAFY D. TANGGOL**, endorsing the request of District Engineer **JOSELITO T. ARAO** of **Abra District Engineering Office** for the **modification** of the project under FY 2023 GAA, to wit;

As per GAA/Original		Project Description		As Modified	
UACS No.:300219101302000 Project ID:P00740312LZ		Sustainable Infrastructure Project Alleviating Gaps (SIPAG) - Flood Mitigation Structure protecting PublicInfrastructure/Facilities, Construction of Palaquio Flood Control Structure, Bucay, Abra			
Type of Work/ Physical Target	Unit Cost	Allocation	Type of Work/ Physical Target	Unit Cost	Estimated Cost
CW1- Construction of Flood Mitigation Structure / 820.497l.m.	₱ 117,611.64/ l.m.	₱96,500,000.00	CW1- Construction of Flood Mitigation Structure/ 295.20 l.m.	₱ 322,078.09/ l.m.	₱ 95,077,451.37
EAO	–	₱3,500,000.00	EAO	–	₱ 3,448,400.61
				Excess:	₱1,474,148.02
Total:		₱100,000,000.00	Total:		₱100,000,000.00
Justification:					
<ul style="list-style-type: none">The increase in unit cost which resulted to the decrease in the physical target is due to the usage of a reinforced concrete dike type of flood mitigation structure with steel sheet piles consisting of 46.69% of the project direct cost. The steel sheet piles is necessary to prevent scouring and possible failure along the foundation of the proposed flood mitigation structure and ensure over-all stability of the project area.The huge/massive rock embankment, and concrete pile cap and cut-off wall consisting of 44.21% and 4.42% of the project cost respectively, also contributed to the high unit cost of the project.The derived unit cost is based on the approved Detailed Unit Price Analysis (DUPA) and Program of Works (POW) with reference to the evaluation made by the Bureau of Construction as per memorandum dated September 22, 2023.See attached Cross-Section Drawing of the Project Submitted by the District Engineer, and the Certificate of Reasonableness of Cost Estimates signed by the Regional Director.					



Based on our evaluation, the submitted request for modification of the said project is in order; hence, approval hereof is recommended.


REV PETER B. GILLE, D.M.

Assistant Secretary for Regional Operations
inCAR, Regions I, II, IX, X, XI, XII, and XIII

RECOMMENDING APPROVAL:


MARIA CATALINA E. CABRAL, Ph.D., CESO I

Undersecretary for Planning
and Public-Private Partnership Services


EUGENIO R. PIPO, JR.

Undersecretary for Regional Operations
in CAR, Regions I, II, IX, X, XI, XII, and XIII

APPROVED / ~~DISAPPROVED~~:


MANUEL M. BONNOAN
Secretary

2.3 mksa/MLS/AVS/PPBG/ERP

September 22, 2023

MEMORANDUM

FOR : Undersecretary EUGENIO R. PIPÓ, JR.
For Regional Operations in CAR, Region I, II, IX, X, XI, XII and XIII

SUBJECT : Request for Modification of Twelve (12) Various Projects Prepared by DPWH Abra District Engineering Office with the total amount of P 1,400,000,000.00

1. P00727254LZ – OO2: Protect Lives and Properties Against Major Floods, Construction/Rehabilitation of Flood Mitigation Facilities within Major River Basins and Principal River, Construction of Flood Control Structure along Abra Major River Basin, Barangay San Jose Sur, Manabo, Abra
2. P00726387LZ – OO2: Protect Lives and Properties Against Major Floods, Construction/Rehabilitation of Flood Mitigation Facilities within Major River Basins and Principal River, Construction of Flood Control Structure along Abra Major River Basin, Barangay Palaquio, Bucay, Abra
3. P00726385LZ – OO2: Protect Lives and Properties Against Major Floods, Construction/Rehabilitation of Flood Mitigation Facilities within Major River Basins and Principal River, Construction of Flood Control Structure along Abra Major River Basin, Barangay Palaquio, Bucay, Abra
4. P00740308LZ – Sustainable Infrastructure Project Alleviating Gaps (SIPAG) – Flood Mitigation Structure Protecting Public Infrastructure/Facilities, Construction of Patagui-Dagsian Flood Control Structure, La Paz, Abra
5. P00726381LZ – OO2: Protect Lives and Properties Against Major Floods, Construction/Rehabilitation of Flood Mitigation Facilities within Major River Basins and Principal River, Construction of Flood Control Structure along Major Abra River Basin (Phase II), Barangay Caupasan, Danglas, Abra
6. P00740312LZ – Sustainable Infrastructure Project Alleviating Gaps (SIPAG) – Flood Mitigation Structure protecting Public Infrastructure/Facilities, Construction of Palaquio Flood Control Structure, Bucay, Abra

7. **P00739551LZ – CONVERGENCE AND SPECIAL SUPPORT PROGRAM, Special Road Fund – Motor Vehicle User's Charge (MVUC) as per R.A. 11239, Installation of Road Safety Devices Along Abra-Ilocos Norte Rd – K0427 + 023 – K0430 + 967**
8. **P00739555LZ - CONVERGENCE AND SPECIAL SUPPORT PROGRAM, Special Road Fund – Motor Vehicle User's Charge (MVUC) as per R.A. 11239, Installation of Road Safety Devices Along Abra-Kalinga Rd – K0441 + 001.8 – K0449 + 943.0**
9. **P00739552LZ - CONVERGENCE AND SPECIAL SUPPORT PROGRAM, Special Road Fund – Motor Vehicle User's Charge (MVUC) as per R.A. 11239, Installation of Road Safety Devices Along Abra-Ilocos Norte Rd – K0431 + 104 – K0432 + 050**
10. **P00739553LZ - CONVERGENCE AND SPECIAL SUPPORT PROGRAM, Special Road Fund – Motor Vehicle User's Charge (MVUC) as per R.A. 11239, Installation of Road Safety Devices Along Abra-Ilocos Norte Rd – K0432 + 058 – K0433 + 460**
11. **P00739554LZ - CONVERGENCE AND SPECIAL SUPPORT PROGRAM, Special Road Fund – Motor Vehicle User's Charge (MVUC) as per R.A. 11239, Installation of Road Safety Devices Along Abra-Kalinga Rd – K0433 + 587 – K0440 + 990**
12. **P00739550LZ - CONVERGENCE AND SPECIAL SUPPORT PROGRAM, Special Road Fund – Motor Vehicle User's Charge (MVUC) as per R.A. 11239, Installation of Road Safety Devices Along Abra-Ilocos Norte Rd – K0416 + 938 – K0426 + 392**

Forwarded herewith are the results of the review/evaluation for the six (6) projects (Project Nos. 1 to 6) out of fifteen (15) projects requested for modification which were referred to this Office per Memorandum dated August 02, 2023 (**Annex "A"**). Please be informed that the aforementioned fifteen (15) projects were returned by this Office for compliance and submission of the lacking documents, through Memorandum dated August 08, 2023 (**Annex "B"**), however, twelve (12) projects of which were resubmitted by that Implementing Office on September 08, 2023 (**Annex "C"**). Likewise, six (6) of the projects (Project Nos. 7 to 12) were withdrawn due to necessary corrections on the Detailed Unit Price Analysis (DUPAs) per Memorandum dated September 20, 2023 (**Annex "D"**) of the District Engineer, Abra District Engineering Office, CAR.

SCOPE OF WORK OF PROJECT NO. 1:

The amount of **P100,000,000.00** (inclusive of EAO) for the **313.20 linear meter** Bangbangcag Flood Control Structure as submitted was reduced to **P98,121,072.74** (inclusive of EAO) due to the corrections made on the quantities and unit cost of materials. Likewise, the items of work and corresponding quantities were based on the Approved Program of Works (POWs) and Detailed Engineering Design plans duly approved by the District Engineer, DPWH - Abra DEO.

ITEM NO.	DESCRIPTION	AMOUNT (Total Cost)	PERCENT Weight (%)
Part A	Facilities for the Engineer	P 157,512.60	0.17%
Part B	Other General Requirements	P 1,116,882.37	1.18%
Part F	Bridge Construction	P 3,571,046.34	3.77%
Part G-A	Drainage and Slope Protection Structures	P 41,549,624.59	43.88%
Part I-A	Earthworks	P 489,564.83	0.52%
Part I-B	Bank and Slope Protection	P 47,802,204.46	50.48%
	GRAND TOTAL	P 94,686,835.19	100.00%

Cost per linear meter of Flood Mitigation Structure = $\frac{P\ 94,686,835.19}{313.20\ \text{lin. m.}}$ = **P 302,320.67 /lin. m.**

The cost per linear meter of **P302,320.67** as modified is due to the design requirements as reflected in the duly approved plans considering all items of work from Parts A to I-B. The estimated cost per linear meter includes the use of a considerable amount of 21,971.88 cubic meter of Hand-laid Rock Embankment and 4,698.00 meters of Steel Sheet Piles, which account to 43.88% and 31.59% respectively, or an aggregate amount of **75.47%** of the total project cost. Hence, it is considered reasonable as the Unit Costs of the pay items of work involved are within the range of the prevailing cost of the Department.

SCOPE OF WORK OF PROJECT NO. 2:

The amount of **P150,000,000.00** (inclusive of EAO) for the **494.00 linear meter** Flood Control Structure in Barangay San Jose Sur, Manabo as submitted was reduced to **P147,088,594.16** (inclusive of EAO) due to the corrections made on the quantities and unit cost of materials. Likewise, the items of work and corresponding quantities were based on the Approved Program of Works (POWs) and Detailed Engineering Design plans duly approved by the District Engineer, DPWH - Abra DEO.

ITEM NO.	DESCRIPTION	AMOUNT (Total Cost)	PERCENT Weight (%)
Part A	Facilities for the Engineer	P 167,208.30	0.12%
Part B	Other General Requirements	P 1,486,100.39	1.05%
Part F	Bridge Construction	P 6,942,406.94	4.89%
Part G-A	Drainage and Slope Protection Structures	P 49,150,369.05	34.63%
Part I-A	Earthworks	P 849,199.31	0.60%
Part I-B	Bank and Slope Protection	P 83,345,209.36	58.72%
	GRAND TOTAL	P 141,940,493.36	100.00%

Cost per linear meter of Flood Mitigation Structure = $\frac{P\ 141,940,493.36}{494.00\ \text{lin. m.}}$ = **P 287,328.93 /lin. m.**

The cost per linear meter of **P287,328.93** as modified is due to the design requirements as reflected in the duly approved plans considering all items of work from Parts A to I-B. The estimated cost per linear meter includes the use of a considerable amount of 49,868.32 cubic meter of Hand-laid Rock Embankment and 7,410.00 meters of Steel Sheet Piles, which account to 34.63% and 33.61% respectively, or an aggregate amount of **68.24%** of the total project cost. Hence, it is considered reasonable as the Unit Costs of the pay items of work involved are within the range of the prevailing cost of the Department.

SCOPE OF WORK OF PROJECT NO. 3

The amount equivalent to **P150,000,000.00** (inclusive of EAO) for the **460.00 linear meter** of flood control as submitted were reduced to **P148,023,062.20** (inclusive of EAO) due to the corrections in the price of reinforcing steel for item 404 and gravel for item 405 & 1712(2). Likewise, the items of works and corresponding quantities were based in the submitted Programs of Works (POW) and Detailed Engineering Design plans duly approved by the District Engineer, DPWH Abra DEO.

ITEM NO.	DESCRIPTION	AMOUNT (Total Cost)	PERCENT Weight (%)
Part A	Facilities for the Engineer	P 167,208.30	0.12%
Part B	Other General Requirements	P 1,528,743.47	1.07%
Part I-A	Earthworks	P 1,129,594.88	0.79%
Part I-B	Bank and Slope Protection Works	P 71,183,439.97	49.83%

Part F	Bridge Construction	P	5,252,094.89	3.68%
Part G-A	Bank and Slope Protection	P	63,581,173.51	44.51%
	GRAND TOTAL	P	142,842,255.02	100.00%

Cost per linear meter of Flood = P 142,842,255.02 = **P 310,526.64 /lin. m.**
Mitigation Structure 460.00 lin. m.

The estimated cost of **P310,526.64 per** linear meter for the Construction of Flood Control Structure Along Major Abra River Basin, Barangay Palaquio, Bucay, Abra is due to the design requirements as reflected in the approved design plans and DUPA wherein the scope of works involves the provisions of concrete slope protection and steel sheet piles, L = 6.0m at 60.0 kg/m, which accounts to **98.81%** of the total project cost.

SCOPE OF WORK OF PROJECT NO. 4:

The amount equivalent to **P150,000,000.00** (inclusive of EAO) for **613.20 linear meter** of protection dike as submitted were reduced to **P147,816,687.50** (inclusive of EAO) due to the corrections in the price of reinforcing steel for item 404 and gravel for item 405 & 1712(2). Likewise, the items of works and corresponding quantities were based in the submitted Programs of Works (POW) and Detailed Engineering Design plans duly approved by the District Engineer, DPWH Abra DEO.

ITEM NO.	DESCRIPTION	AMOUNT (Total Cost)	PERCENT Weight (%)
Part A	Facilities for the Engineer	P 167,208.30	0.12%
Part B	Other General Requirements	P 1,474,913.04	1.03%
Part I-A	Earthworks	P 1,137,137.21	0.80%
Part I-B	Bank and Slope Protection Works	P 84,257,346.84	59.07%
Part F	Bridge Construction	P 6,413,898.05	4.50%
Part G-A	Bank and Slope Protection	P 49,192,599.99	34.49%
	GRAND TOTAL	P 142,643,103.44	100.00%

Cost per linear meter of Flood = P 142,643,103.44 = **P 232,620.85 /lin. m.**
Mitigation Structure 613.20 lin. m.

The estimated cost of **P232,620.85** per linear meter for the Construction of Patagui-Dagsian Flood Control Structure, La Paz, Abra is due to the design requirements as reflected in the approved design plans and DUPA wherein the scope of works involves the provisions of concrete slope protection and steel sheet piles, L = 6.0m at 60.0 kg/m, which accounts to **98.85%** of the total project cost.

SCOPE OF WORK OF PROJECT NO. 5:

The amount equivalent to **P150,000,000.00** (inclusive of EAO) for **939.20 linear meter** of floodway as submitted were reduced to **P147,338,088.15** (inclusive of EAO) due to the corrections in the price of reinforcing steel for item 404 and gravel for item 405 & 1712(2). Likewise, the items of works and corresponding quantities were based in the submitted Programs of Works (POW) and Detailed Engineering Design plans duly approved by the District Engineer, DPWH Abra DEO.

ITEM NO.	DESCRIPTION	AMOUNT (Total Cost)	PERCENT Weight (%)
Part A	Facilities for the Engineer	P 167,208.30	0.12%
Part B	Other General Requirements	P 662,626.72	0.47%
Part I-A	Earthworks	P 2,504,288.08	1.76%
Part I-B	Bank and Slope Protection Works	P 115,541,235.31	81.26%
Part F	Bridge Construction	P 8,438,891.71	5.94%
Part G-A	Bank and Slope Protection	P 14,867,004.95	10.46%
	GRAND TOTAL	P 142,181,255.07	100.00%

Cost per linear meter of Flood = P 142,181,255.07 = **P 151,385.49 /lin. m.**
Mitigation Structure 939.20 lin. m.

The estimated cost of **P151,385.49** per linear meter for the Construction of Flood Control Structure Along Major Abra River basin (Phase II), Barangay Caupasan, Danglas, Abra is due to the design requirements as reflected in the approved design plans and DUPA wherein the scope of works involves the provisions of concrete slope protection and steel sheet piles, L = 6.0m at 60.0 kg/m, which accounts to **99.42%** of the total project cost.

SCOPE OF WORK FOR PROJECT NO. 6:

The amount of **P100,000,000.00** (inclusive of EAO) for the **295.20 linear meters** Palaquio Flood Control Structure, as submitted, was reduced to **P98,525,851.98** (inclusive of EAO) due to corrections made on the pay item quantities, quantity of materials components, and materials unit prices. Likewise, the items of work and corresponding quantities were based on the proposed Program of Works (POW) and Detailed Engineering Design Plan duly approved by the District Engineer, DPWH Abra District Engineering Office.

ITEM NO.	DESCRIPTION	AMOUNT (Total Cost)	PERCENT Weight (%)
Part A	Facilities for the Engineer	P 157,512.60	0.17%
Part B	Other General Requirements	P 1,008,118.59	1.06%

Part F	Bridge Construction	P	4,352,846.72	4.58%
Part G-A	Drainage and Slope Protection Structures	P	43,559,247.87	45.81%
Part I-A	Earthworks	P	458,286.00	0.48%
Part I-B	Bank and Slope Protection	P	45,541,319.44	47.90%
	GRAND TOTAL	P	95,077,331.23	100.00%

Cost per linear meter of Flood Mitigation Structure = $\frac{P\ 95,077,331.23}{295.20\ \text{lin. m.}}$ = **P 322,077.68 /lin. m.**

The estimated cost of **P322,077.68** per linear meter is due to the design requirements as reflected in the approved design considering all items of work from Part A to I-B. The said unit cost per linear meter includes the provision of three (3) major scope of works of the project construction such as large volume of hand laid rock embankment (23,034.59 cubic meters), concrete slope protection (1,845 cubic meters) and provision of steel sheet piles (4,428 linear meters) which accounts to 45.81%, 18.02%, and 29.88% respectively or an aggregate total of **93.71%** of the total project cost. Hence, it is considered reasonable as the Unit Costs of the items of work involved are within the range of the prevailing cost of the Department.

Please be informed that the resulting cost for Project Nos. 1 to 6 were based on the submitted canvassed prices from three (3) suppliers of Steel Sheet Piles (Type II) and Reinforcing Steel Bar Grade 40, as provided and certified by the District Engineer, Abra District Engineering Office – CAR. (**Annex "E"**).

For the Undersecretary's information.

ALAN S. BORROMEO, CESO III
Director, Bureau of Construction

cc: Undersecretary ADOR G. CANLAS, for Technical Services and Information Management Service (IMS)
Regional Director KHADAFY D. TANGGOL, DPWH Cordillera Administrative Region (CAR)
District Engineer JOSELITO T. ARAO, DPWH-Abra District Engineering Office

OIC – Asst. Dir. MIP
JTS
CBC
ATA
RTO
PPL
MVG
JML

[Handwritten initials and signatures over the list]

6.1.1 MVG/JML/PPL/RTO/ATA/CBC/JTS/MIP
09222023_Modification Abra 12 Proj (Evaluated)
BOC Ref. No.: 6.1-188-9299
PCD Ref. No.: 6.1.1-348-02

7.	P00740312LZ – Sustainable Infrastructure Project Alleviating Gaps (SIPAG) – Flood Mitigation Structure protecting Public Infrastructure/facilities, Construction of Palauio Flood Control Structure, Bucay, Abra	P	100,000,000.00
8.	P00726858LZ – OO2: Protect Lives and Properties Against Major Floods, Construction/Rehabilitation of Flood Mitigation Facilities within Major River Basins and Principal River, Construction of Bull Flood Control, La Paz, Abra	P	100,000,000.00
9.	P00726861LZ – OO2: Protect Lives and Properties Against Major Floods, Construction/Rehabilitation of Flood Mitigation Facilities within Major River Basins and Principal River, Construction of Malabbaga Flood Control, La Paz, Abra	P	100,000,000.00
10.	P00739551LZ – CONVERGENCE AND SPECIAL ,SUPPORT PROGRAM, Special Road Fund – Motor Vehicle User's Charge (MVUC) as per R.A. 11239, Installation of Road Safety Devices Along Abra-Ilocos Norte Rd – K0427 + 000 – K0431 + 100	P	100,000,000.00
11.	P00739555LZ – CONVERGENCE AND SPECIAL ,SUPPORT PROGRAM, Special Road Fund – Motor Vehicle User's Charge (MVUC) as per R.A. 11239, Installation of Road Safety Devices Along Abra-Ilocos Norte Rd – K0432 + 600 – K0450 + 000	P	100,000,000.00
12.	P00739552LZ – CONVERGENCE AND SPECIAL ,SUPPORT PROGRAM, Special Road Fund – Motor Vehicle User's Charge (MVUC) as per R.A. 11239, Installation of Road Safety Devices Along Abra-Ilocos Norte Rd – K0431 + 100 – K0432 + 000	P	100,000,000.00
13.	P00739553LZ – CONVERGENCE AND SPECIAL ,SUPPORT PROGRAM, Special Road Fund – Motor Vehicle User's Charge (MVUC) as per R.A. 11239, Installation of Road Safety Devices Along Abra-Ilocos Norte Rd – K0432 + 000 – K0433 + 650	P	100,000,000.00
14.	P00739554LZ – CONVERGENCE AND SPECIAL ,SUPPORT PROGRAM, Special Road Fund – Motor Vehicle User's Charge (MVUC) as per R.A. 11239, Installation of Road Safety Devices Along Abra-Kalinga Rd – K0425 + 500 – K0432 + 600	P	100,000,000.00
15.	P00739550LZ – CONVERGENCE AND SPECIAL ,SUPPORT PROGRAM, Special Road Fund – Motor Vehicle User's Charge (MVUC) as per R.A. 11239, Installation of Road Safety Devices Along Abra-Ilocos Norte Rd – K0416 + 400 – K0426 + 500	P	100,000,000.00
GRAND TOTAL AMOUNT			P 1,700,000,000.00

In order to facilitate the review/evaluation of the said request, please comply with the noted comments and submit the following lacking documents, to wit:

1. The station limits in the section details sheets for Dike A and B were inconsistent with the station limits indicated in the cross section sheets for project no. 7;
2. The quantities for cut and fill in the cross section sheets does not coincide with the values used in the computation of quantities sheet for project no. 7;
3. The programmed quantities of Steel Sheet Pile in project no. 7 were found inconsistent with the station limits indicated in the approved plans, please rectify;
4. Incorporate in Pay Item No. 1712 (2), Concrete Slope Protection, the necessary reinforcing steel bars, weep holes (PVC), filter cloth, and granular filter instead of a separate Pay Item No. 517 (1)b, Drain Pipe for project nos. 1 to 9;
5. Rectify the quantity computation of reinforcing steel bars and steel sheet piles, i.e., ensure that the correct unit weights as indicated in the approved plan were used in the calculations for project nos. 1 to 9;
6. The quantity in pay items A.1.1 (6), A.1.1 (15) and A.1.2 (6) in Itemized Breakdown of Program of Works (POW), were found inconsistent with the Summary of Quantities reflected in the Detailed Engineering Design Plans for project nos. 10 to 12;
7. The pay item for Solar LED Streetlight must be in accordance with the Department Order (D.O.) No. 26, Series of 2023, *Revised DPWH Standard Specification for Item 624 - Roadway Lighting*. The concrete footing and reinforcing steel bars will be measured and paid for as provided under item 405 and 404 respectively, as stipulated in the aforementioned D.O. for project nos. 10 & 15;
8. The provided canvassed prices/quotations for the materials were inconsistent with the utilized prices used in the program in pay items for Solar LED Streetlights for project no. 10 & 15 and Double Roller Safety Barrier System for project nos. 10 to 15;
9. Provide calculation/derivation for the unit quantity of materials in pay item for Double Roller Safety Barrier System for project nos. 10 to 15;
10. Three (3) canvassed prices from various suppliers as supporting documents for the unit cost used for reinforcing steel bars, steel sheet piles, cement, boulders, aggregates, etc., and are to be supported with Certification signed by the head of the Implementing Office;
11. Provide computations for utilized dry operated rental rates as per D.O. 63, Series of 2022 with supporting canvasses/price reference for fuel and lubricant;
12. Include the calculation/derivation and necessary justifications for construction duration adopted in all projects in accordance with the existing D.O.;

13. Duly signed updated Hauling Cost Analysis reflecting the material sources, terrain and road condition and station limits to determine the reasonableness of the unit cost of materials for each pay item involved, if there's any; and

14. Provide electronic file copy (compact disc) of the Approved Budget for the Contract following the standard format per D.O. 163, Series of 2015, also known as the *Standard Forms of Program of Works (POW), Approved Budget for the Contract (DUPA), and Detailed Unit Price Analysis (DUPA)*.

For the District Engineer's information and appropriate action.


ALLAN S. BORROME0
Director, Bureau of Construction

cc : Underscretary ADOR G. CANLAS, for Information Management and Technical Services
Underscretary EUGENIO R. PIPO, JR., for Regional Operations in CAR, Region I, II, IX, X, XI, XII and XIII
Regional Director KHADAFY D. TANGGOL, DPWH Cordillera Administrative Region (CAR)

6.1.1 JML/MVG/ECS/PPU/ATA/CBC/JTS/MIP
08082023_Modification Abra 15 Proj (Returned)
BOC Ref. No.: 6.1-188-9299
PCD Ref. No.: 6.1.1-348-02



Republic of the Philippines
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
CORDILLERA ADMINISTRATIVE REGION
Engineer's Hill, Baguio City



BACONG PILIPINAS

September 9, 2023

MEMORANDUM

FOR : MANUEL M. BONOAN
Secretary

THRU : EUGENIO R. PIPO, JR.
Undersecretary for Regional Operations in
CAR, Regions I, II, IX, X, XI, XII and XIII

SUBJECT : Request for the Modification of the Project: CONVERGENCE AND SPECIAL SUPPORT PROGRAM - Sustainable Infrastructure Projects Alleviating Gaps (SIPAG) - SIPAG - Flood Mitigation Structures protecting Public Infrastructures/Facilities - Construction of Palaquio Flood Control Structure, Bucay, Abra

We are respectfully forwarding the Memorandum dated September 7, 2023 from District Engineer JOSELITO T. ARAO, Abra District Engineering Office, of the above project in the amount of **One Hundred Million Pesos (Php 98,525,851.98)**, as indicated below:

CF

	As per GAA/Original	As Modified
Project ID	P007403121Z	
UACS	300219101302000	
Physical Target	820.497 Lineal meters	295.200 Lineal meters

The supporting documents based on D.O. No. 23, series of 2023 are attached for your ready reference.

For the consideration of the Secretary.


KHADAFY D. TANGGOL
Regional Director

CAR.1 TPL/FFD/JWC/ABM



Republic of the Philippines
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
ABRA
DISTRICT ENGINEERING OFFICE
CORDILLERA ADMINISTRATIVE REGION
Bangued, Abra



September 7, 2023

MEMORANDUM

FOR : KHADAFFY D. TANGGOL
Regional Director

THRU : ANGELITA B. MABITAZAN
Chief, Planning and Design Division

SUBJECT : Request for the Modification of the Project: CONVERGENCE AND SPECIAL SUPPORT PROGRAM - Sustainable Infrastructure Projects Alleviating Gaps (SIPAG) - Flood Mitigation Structures protecting Public Infrastructures/Facilities, Construction of Palaquio Flood Control Structure, Bucay, Abra

We are respectfully submitting for review and evaluation the above-mentioned subject for Modification, amounting to **One Hundred Million Pesos ((Php 98,525,851.98))**, as indicated below:

FROM	TO
Project Title: Construction of Palaquio Flood Control Structure, Bucay, Abra	Project Title: Construction of Palaquio Flood Control Structure, Bucay, Abra
Physical Target: CW1 – 820.497 Lineal meters	Physical Target: CW1 – 295.2 Lineal meters

The supporting documents based on D.O. No. 23, series of 2023 are attached for your ready reference.


JOSELITO T. ARAO
District Engineer

CAR.8.1 MJD/CLAR/JTA

#166 23PA0052

CHECKLIST

PROJECT MODIFICATION

Implementing Office : **Abra District Engineering Office**
Project Name/Location : **CONVERGENCE AND SPECIAL SUPPORT PROGRAM - Sustainable Infrastructure Projects
Alleviating Gaps (SIPAG) - Flood Mitigation Structures protecting Public
Infrastructures/Facilities, Construction of Palaquio Flood Control Structure, Bucay, Abra**

Project ID	:	P007403121Z	UACS Code	:	300219101302000
Project Allocation	:	Php 100,000,000.00			

☒ **1. Modification Request Form**

☒ **2. AIP**

☒ **3. Certificate of Availability of Funds**

☒ **4. Supporting Data & Analysis**

☒ a. Road Condition (RBA Latest Official Database)

☒ b. Traffic Volume Capacity Ratio (for Widening Projects)

☒ c. Bridge Condition (BMS Latest Official Database)

☒ d. Hydraulic & Hydrologic Analysis (for New/Replacement Bridges and Flood Control Projects)

☒ e. RSM Forms (for Road Slips)

☒ f. Project Impact Analysis (for Flood Control Projects)

☒ g. Master Plan (for Flood Control Projects)

☒ **5. BP 202**

☒ **6. Geotagged Photos**

☒ a. Hard Copy

☒ b. Electronic Copy

☒ c. Plotted in the GIS Map

☒ **7. Certificate of No Overlapping**

☒ a. District Engineer

☒ b. Construction and Maintenance Division Chiefs

☒ **8. ROW Clearance**

☒ a. District Engineer

☒ b. LGU

☒ **9. Environmental Clearances**

☒ a. Not Within a "No Build Zone" (MGB)

☒ b. Tree Cutting Permit (if Applicable-EMB)

☒ c. CNC/ECC/EIA (EMB)

☒ **10. Social Clearance (not within a Declared Heritage/Cultural Site-NCCA)**

☒ **11. Certificate of Reasonableness (for Projects with Changes in Unit Cost)**

☒ **12. Project Details**

☒ a. POW

☒ b. DUPA

☒ c. Plans

☒ 1. Coverage

☒ 2. Summary of Quantities

☒ 3. Cross Section Showing Changes (if Applicable)

☒ d. Materials Source Map

☒ **13. Certificate of Local Government Unit**

Checked by:


ERINDA F. DOLENTE
Engineer III
Chief, Planning Section

Modification Request Form

A. GENERAL

1. REGION	2. DEO	3. LEGISLATIVE DISTRICT
Cordillera Administrative Region	Abra District Engineering Office	Abra Lone District
B. ORIGINAL PROJECT		C. PROPOSED REVISED PROJECT

4. UACS (Unified Account Code Structure as defined in GAA)			
300219101302000			
5. Project Id			
P007403121Z			
6. Project Category			
Convergence and Special Support Program			
7. Sub-Program (P/A/P)			
Sustainable Infrastructure Projects Alleviating Gaps (SIPAG) - Flood Mitigation Structures protecting Public Infrastructures/Facilities			
8. Operating Unit		18. Operating Unit (Change subject to DBM approval)	
Central Office		Central Office	
9. Type of Work (Enter Details for all Components below)		19. Type of Work (Enter Details for all Components below)	
Component ID	Type of Work	Component ID	Type of Work
CW1	Construction of Flood Mitigation Structure	CW1	Construction of Flood Mitigation Structure
EA0	Choose an item.	EA0	Choose an item.
Click here to enter text.	Choose an item.	Click here to enter text.	Choose an item.
Click here to enter text.	Choose an item.	Click here to enter text.	Choose an item.
10. PROJECT DESCRIPTION (as recorded in GAA)		20. PROJECT DESCRIPTION (of the revised project)	
Construction of Palaquio Flood Control Structure, Bucay, Abra		Construction of Palaquio Flood Control Structure, Bucay, Abra	
11. ALLOTMENT (P'000) (as recorded in GAA)		21. REVISED ESTIMATED COST	
100000		(P'000) (Equal to, or lower than GAA allotment)	
		100000	
		22. CAF (To be obtained from Financial Management office)	
		<input type="checkbox"/> YES	
12. PHYSICAL TARGET (Enter Details for all Components below)		23. PHYSICAL TARGET (Enter Details for all Components below)	
Component ID	Target	Component ID	Target
CW1	820.497	CW1	295.20
	Lineal Meters (lm)		Lineal Meters (lm)
EA0	Click here to enter text.	EA0	Click here to enter text.
Click here to enter text.	Choose an item.	Click here to enter text.	Choose an item.
13. UNIT COST (Enter Details for all Components below)		24. UNIT COST (Enter Details for all Components below)	
Component ID	Component Cost (P'000)	Component ID	Component Cost (P'000)
	Target Unit Cost (P'000/Target Unit)		Target Unit Cost (P'000/Target Unit)
CW1	96500	CW1	95077.45137
	117.61164		322.07809
EA0	3500	EA0	3448.40061
	Click here to enter text.		Click here to enter text.
Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.
		PHYSICAL RESERVE	1474.14802
			Click here to enter text.

Modification Request Form

Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.
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Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.
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14. PROJECT WORK LOCATION (Must be defined in strict accordance with DO 65 Series 2014) Click here to enter text.	25. PROJECT WORK LOCATION (Must be defined in strict accordance with DO 65 Series 2014. Also complete "ANNEX A" for National Road projects under 00-1) Click here to enter text.
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Start X	120.737	End X	120.74	Start X	120.737	End X	120.74
Start Y	17.5611	End Y	17.5623	Start Y	17.5611	End Y	17.5623

15. ROAD CLASSIFICATION (if applicable) Choose an item.	26. ROAD CLASSIFICATION (if applicable) Choose an item.
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16. IMPLEMENTING OFFICE (Record the Implementing Office of the original project) Abra District Engineering Office	27. IMPLEMENTING OFFICE (Record the Implementing Office of the proposed revised project) Abra District Engineering Office
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17. PROJECT IMPLEMENTATION PLAN (PIP)		28. PROJECT IMPLEMENTATION PLAN (PIP)	
Planned Start Date	Planned End Date	Planned Start Date	Planned End Date
October 1, 2023	July 5, 2024	October 1, 2023	July 5, 2024

29. OVERLAP? <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES	30. UNDER WARRANTY? <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES
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D. ATTACHMENTS & JUSTIFICATIONS

31. PROJECT IMPACT ANALYSIS ATTACHED? (For Flood Control Projects) <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES <input type="checkbox"/> N/A
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32. TECHNICAL JUSTIFICATION (Explain in detail in Bullet point format; minimum of 2 points)
<ul style="list-style-type: none">The increase in unit cost which resulted to the decrease in the physical target is due to the usage of a reinforced concrete dike type of flood mitigation structure with steel sheet piles consisting of 46.69% of the project direct cost. The steel sheet piles are necessary to prevent scouring and possible failure along the foundation of the proposed mitigation and ensure over-all stability of the project area.Also, the huge/massive rock embankment consisting of 44.21% of the project cost contributed to the high unit cost of the project.The derived unit cost is based on the approved Detailed Unit Price Analysis (DUPA) and Program of Works (POW) with reference to the evaluation made by the Bureau of Construction as per memorandum dated September 22, 2023.See attached Cross-Section Drawing of the Project Submitted by the District Engineer, and the Certificate of Reasonableness of Cost Estimates signed by the Regional Director.

33. PHOTOS SUBMITTED <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES

34. A MAP OF THE PROPOSED PROJECT WORK LOCATION SUBMITTED <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES
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