



RG 11

Republic of the Philippines
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
OFFICE OF THE SECRETARY
Manila

June 13, 2017

MEMORANDUM

FOR : MARK A. VILLAR
Secretary
This Department

Respectfully submitted is the Memorandum dated 25 April 2017 of **Regional Director ALLAN S. BORROMELO** of DPWH-XI, requesting for approval of the Modification of Project to be implemented by the said region under the FY 2017 GAA in the prescribed form (2017, version 2.1), to wit:

FROM	TO
<p>MFO 1 – National Road Network Services: Network Development Construction of By-passes/ Diversion Roads, including RROW</p> <p>Construction of Concrete Road, Construction of Road Slope Protection and Construction of Concrete Bridge - Davao City Coastal Bypass Road at Jct. Davao-Cotabato Road-Bago Aplaya-Talomo-Matina Aplaya-Roxas Avenue (Bago Aplaya-Times Beach Section), including Bridge, Davao City (Package 3)</p> <p>Allocation : Total = P300.00 Million <i>Construction of Concrete Road</i> = P196,093,761.00 <i>Construction of Road Slope Protection Structure</i> = P57,906,239.00 <i>Construction of Concrete Bridge</i> = P46,000,000.00</p> <p>Physical Target : <i>Construction of Concrete Road</i> = 1.364 lane km <i>Construction of Road Slope Protection Structure</i> = 1,705 sq.m. <i>Construction of Concrete Bridge</i> = 495 sq.m.</p> <p>Unit Cost : <i>Construction of Concrete Road</i> = P143,763,754.40/lane km <i>Construction of Road Slope Protection Structure</i> = P33,962.60/sq.m. <i>Construction of Concrete Bridge</i> = P92,929.29/sq.m.</p>	<p>MFO 1 – National Road Network Services: Network Development Construction of By-passes/ Diversion Roads, including RROW</p> <p>Construction of Davao City Coastal Bypass Road at Jct. Davao-Cotabato Road-Bago Aplaya-Talomo-Matina Aplaya-Roxas Avenue (Bago Aplaya-Times Beach Section), Including Bridge Construction, Davao City (Package 3)</p> <p>Allocation : Total = P300.00 Million <i>Construction of Asphalt Road</i> = P182,724,173.66 <i>Construction of Road Slope Protection Structure</i> = P63,344,306.47 <i>Construction of Concrete Bridge</i> = P53,931,519.87</p> <p>Physical Target : <i>Construction of Asphalt Road</i> = 1.280 lane km <i>Construction of Road Slope Protection Structure</i> = 3,840 sq.m. <i>Construction of Concrete Bridge</i> = 410.13 sq.m.</p> <p>Unit Cost : <i>Construction of Asphalt Road</i> = P142,753,260.67/ lane km <i>Construction of Road Slope Protection Structure</i> = P16,495.91/sq.m. <i>Construction of Concrete Bridge</i> = P131,498.60/sq.m.</p>

JUSTIFICATION:

Decrease in physical target for roads from 1.364 lane km to 1.28 lane km due to considerable amount for the needed scopes of work based on the designed alignment of the road which is along the coastal area. Although the new unit cost for roads is less than that of the unit cost as per original or as per MYPs, still it has a considerable component costs. This is so because the road component comprises various scopes of work, which mainly involves massive earthworks (embankment from borrow), since the alignment of the coastal road was offsetted (maximum of 5 meters) from its original coastline alignment due to RROW problem (more expensive than the estimated RROW). With the new alignment, the maximum height/depth is 7m which requires a huge volume of 19,831.63 cu.m. of embankment. Further, embankment works require miscellaneous structures such as separation geotextile (basal reinforcement woven geotextiles), drainage geotextiles (bi-axial separation and protection non woven geotextile for geotube and hydraulic filter (geotube) which requires a huge volume of 19,559.24 cu.m. of backfill sand.

The road component also covers the construction of 4-lane (15.4 m), 100 mm thick asphalt pavement and construction of sidewalk, curb and gutter, and bicycle lane with a total width of 7.54m. the entire width of the road including off-carriageway is 22.94 m. or almost equivalent to a 7-lane road. The road component includes drainage construction (pipe culverts, canal cover, manholes, grouted riprap and steel sheet piles), provision of metal guardrail (metal beam) including post, concrete fence including post and reflectorized thermoplastic pavement markings. Thus, in turn the breakdown of items/cost/%weight for Earthworks, Drainage Construction (Canal Cover)/Drainage Slope Protection Structure, Surface Courses and Miscellaneous Structures constitutes 28.10% (P51,344,045.26), 6.17% (P11,269,158.10), 8.72% (P15,939,606.12) and 45.88% (P83,836,918.63), respectively of the total cost for road component. Attached is a typical roadway section detail including seawall and grouted riprap together with the detailed cost for every scope of work for roads, bridge and slope protection.

In addition, concreting of the road was not considered in the new design due to the anticipation of settlement of the ground/sea bed (embankment works) which may result damage to the concrete pavement. In order for the said embankment to not be eroded by run-off waters, there is a need to pave the road and provide drainage for safety purposes. As such, the road was designed to be constructed with asphalt pavement instead of concrete especially since asphalt is a flexible pavement (considering the settlement). This design scheme was submitted to the Bureau of Design (BOD) and was approved. Hence, change in type of work.

Increase in area for slope protection (seawall and grouted riprap) from 1,705 sq.m. to 3,840 sq.m. (even though decrease in length from 341 lm to 320 lm, both sides) as per actual need and design requirements especially that the height of structure depends on the depth of the ground/sea bed (deeper depth due to said change/shift of alignment).

Decrease in area for bridge from 495 sq.m. to 410.13 sq.m. (even though increase in length from 20 lm to 21 lm) due to change in designed width based on actual field requirements. There is considerable cost for bridge even though decrease in area due to considerable cost of sheet piles to be used for the bridge abutment protection and due to length of bored piles used in the design which is 35m.

Attached are the required documents, such as Evaluation Form (2017 version 2.1), BP202, Certificate of Availability of Funds (CAF), Approved Program of Work and Geotagged photographs.

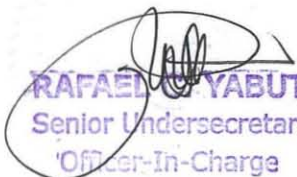
In view of the above, the request for Modification of the Project is respectfully recommended for the Honorable Secretary's approval.


DIMAS S. SOGNILON, CESO II

Assistant Secretary for Mindanao Operations

APPROVED/DISAPPROVED:

MARK A. VILLAR
Secretary


RAFAEL YABUT
Senior Undersecretary
Officer-In-Charge

Department of Public Works and Highways
Office of the Secretary


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