



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

June 15, 2017

**MEMORANDUM**

**FOR : MARK A. VILLAR**  
Secretary  
This Department

Respectfully submitted is the Memorandum dated 08 May 2017 of **OIC-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><b>MFO 1 – National Road Network Services Network Development - Construction of By-Passes/ Diversion Roads, including ROW</b></p> <p>Construction of Concrete Road and Construction of Road Slope Protection Structure - Davao City Coastal Bypass Road at Jct. Davao-Cotabato Road-Bago Aplaya- Talomo-Matina Aplaya-Roxas Avenue (Bago Aplaya-Times Beach Section), Davao City (Package 4)</p> <p><b>Allocation :</b> <b>Total = ₱240.00 Million</b> Construction of Concrete Road = ₱171,531,243.00 Construction of Road Slope Protection Structure = ₱68,468,757.00 <b>Physical Target :</b> Construction of Concrete Road = 1.456 lane km Construction of Road Slope Protection Structure = 1,820 sq.m. <b>Unit Cost :</b> Construction of Concrete Road = ₱117,809,919.64/lane km Construction of Road Slope Protection Structure = ₱37,620.20/sq.m.</p>	<p><b>MFO 1 – National Road Network Services Network Development - Construction of By-Passes/ Diversion Roads, including ROW</b></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), Davao City (Package 4)</p> <p><b>Allocation :</b> <b>Total = ₱240.00 Million</b> Construction of Asphalt Road = ₱167,448,573.62 Construction of Road Slope Protection Structure = ₱72,551,426.38 <b>Physical Target :</b> Construction of Asphalt Road = 1.504 lane km Construction of Road Slope Protection Structure = 4,140 sq.m. <b>Unit Cost :</b> Construction of Asphalt Road = ₱111,335,487.78/ lane km Construction of Road Slope Protection Structure = ₱17,524.50/sq.m.</p>

**JUSTIFICATION:**

Increase in physical target for roads from 1.456 lane km to 1.504 lane km since the embankment works needed for this road section is not as high as the contiguous contract packages, hence, generated savings which was utilized for the extension of said road length. The road component comprises various scopes of work. The road component mainly involves 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 4.6 m which requires a considerable volume of 9,490.70 cu. m. of embankment. Said 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 19,264.68 cu.m. (P46,036,277.86) 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. The cost for facilities for engineer and other general requirements is incorporated also in the road component cost. With all these various scopes of work for the road component, there is considerable unit and component cost for the road. Attached is a typical roadway section detail including seawall and grouted riprap together with the detailed cost for every scope of work for roads and slope protection.

Increase in physical target (area including length) for slope protection (seawall and grouted riprap) from 1,820 sq.m. to 4,140 sq.m. as per actual need and design (height of structure varies depending on the depth of sea water).

Concreting of the road was not considered for the design due to the anticipation of settlement of the ground/sea bed (embankment works) which may result damage to the concrete pavement. In order that said embankment will 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 that asphalt is a flexible pavement (considering the settlement). This design scheme was submitted to the Department (BOD) and was approved. Hence, change in type of work.


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 consideration and approval.

  
**DIMAS S. SOGUILON, CESO II**  
Assistant Secretary for Mindanao Operations

**APPROVED/DISAPPROVED:**

**MARK A. VILLAR**  
Secretary

  
**RAFAEL A. YASUT**  
Senior Undersecretary  
Officer-In-Charge

Department of Public Works and Highways  
Office of the Secretary



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