RG15

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. BORROMEO** 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
MFO 1 – National Road Network Services: **Network Development - Construction of By-Passes/ Diversion Roads, including ROW** 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), including ROW, Davao City (Package 1) **Allocation :** **Total = ₱ 740.00 Million** Construction of Concrete Road = ₱173,495,887.00 Construction of Road Slope Protection Structure = ₱66,504,113.00 ROW Acquisition = ₱500,000,000.00 **Physical Target :** Construction of Concrete Road = 1.538 lane km Construction of Road Slope Protection Structure = 1,910 sq.m. ROW Acquisition = 33,333 sq.m. **Unit Cost :** Construction of Concrete Road = ₱112,806,168.40/ lane km Construction of Road Slope Protection Structure = ₱34,818.91/sq.m. ROW Acquisition = ₱15,000.15/sq.m.	**MFO 1 –** National Road Network Services: **Network Development - Construction of By-Passes/ Diversion Roads, including ROW** 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 RROW, Davao City (Package 1) **Allocation :** **Total = ₱ 740.00 Million** Construction of Asphalt Road = ₱171,654,555.49 Construction of Road Slope Protection Structure = ₱68,345,444.51 ROW Acquisition = ₱500,000,000.00 **Physical Target :** Construction of Asphalt Road= 1.213 lane km Construction of Road Slope Protection Structure = 3,840 sq.m. ROW Acquisition = 33,333 sq.m. **Unit Cost :** Construction of Asphalt Road = ₱141,512,411.78/ lane km Construction of Road Slope Protection Structure = ₱17,798.29/sq.m. ROW Acquisition = ₱15,000.15/sq.m.

JUSTIFICATION:

Decrease in physical target for roads from 1.538 lane km to 1.213 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. 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 5.8m which requires a huge volume of 16,537.45 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 15,665.79 cu.m. of backfill sand.

The road component also covers the construction of 4-lane (15.0 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 consruction (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)/Slope Protection Structure, Surface Courses and Miscellaneous Structures constitutes 19.29% (₱44,675,342.21), 7.37% (₱17,066,203.62), 6.86% (₱15,877,346.74) and 58.44% (₱135,356,133.72), 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 1,910 sq.m. to 3,840 sq.m. (even though decrease in length from 382 lm to 349 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).

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 C. ROBUT
Senior Undersecretary
Officer-in-Charge

3.5 IMM/LCA/DSS

Department of Public Works and Highways
Office of the Secretary
WIN7G01634