

Republic of the Philippines DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

CENTRAL OFFICE

Manila

ADB Loan No. 4432-PHI and AIIB Loan No. L0724A
ADB Project P52310-001 - Republic of the Philippines:
Bataan-Cavite Interlink Bridge Project
AIIB Project P000724 - Philippines Bataan-Cavite Interlink Bridge
Project - Tranche 1

Contract ID No. **24Z00016**, Contract Package 6 (CP6) – Construction of South Channel Bridge and High-Level Approaches (HLA)

BID BULLETIN No. 9

COMPILATION OF CONTRACTOR'S QUERY

This Bid Bulletin No. 9 is issued to clarify the contractor's questions regarding the procurement for the above-mentioned project, tabulated below:

CONTRACTORS' QUERY	RESPONSE
1. South Channel Bridge Pier Foundation Erection Sequence 1~3 (Dwg. 6601-00, 6602-00, 6603-00) Since there is no "Note" in the drawing, please clarify the Contractor shall follow these sequences.	Drawings 6601 thru 6603 shall adhere to the same notes shown on Sheet No. 6611-01.
 Please confirm if the additional Geotechnical Investigation Sum of Php 200M is specific for permanent design works or it includes provision for the temporary works GI requirements. 	Refer to Supplemental Bulletin No. 5 for the amended Annex I Supplemental Specifications.
 Final Bidding Documents Section 3: Evaluation and Qualification Criteria Form EXP – 2: Construction Experience in Key Activities We would like to seek clarification regarding the terminology used in the EQC above: 	 A Cable-Stayed Bridge is a type of Cable-Supported Bridge. Confirmed. The 500 LM (cumulative girder length) is the main span length.
Can the term "Cable-Stayed Bridge" be understood as a "Cable-Supported Bridge" for the purposes of this project?	
2. Can the term "500 lm (cumulative girder length)" be understood as a main span length?	

4. III - ADDITIONAL REQUIREMENTS RELATING TO THE CONTRACT WORKS (M) TEMPORARY WORKS

The specification requires Temporary Works that remain as part of the permanent structure to have the same 100-year service life as permanent structures. Considering the nature of these works, would it be possible to ease this requirement?

5. III - ADDITIONAL REQUIREMENTS RELATING TO THE CONTRACT WORKS (N) TRAVELER RAILS

Our understanding is that the UBMT (Under-Bridge Maintenance Traveler) will be supplied by a separate contractor, while the Bidder is responsible for installing the rails beneath the bridge for UBMT movement.

To ensure proper design and installation, we need to coordinate with the UBMT supplier regarding the rail design. Could you please confirm the identity of the UBMT supplier and advise when we can initiate discussions with them?

6. We would like to seek clarification and request a possible revision regarding the testing frequency requirement for concrete with durability-related performance requirements, as stated in the specifications:

"One ASTM C1876 test (three samples) shall be performed for every 75 m³ for each class of concrete or fraction thereof placed each day."

Considering the practicality of construction and industry standards, we believe that requiring ASTM C1876 testing at such a high frequency may be excessive. Frequent testing at this rate

RESPONSE

The requirement is maintained.

As noted in Part III - ADDITIONAL REQUIREMENTS RELATING TO THE CONTRACT WORKS, (M) TEMPORARY WORKS of the Specifications, any temporary works remaining as part of the permanent structure shall be designed to the same service life standards as the permanent structure. Temporary components incorporated into the final structure must achieve the 100-year Service Life. The design of any temporary works remaining as part of the permanent structure shall be submitted for the review and approval by the Engineer.

Understanding is correct, the UBMT shall be supplied and installed by others under separate future contracts as described in Project Specifications Section IV Performance Specifications. The Contractor is also alerted to Section 8 of the Performance Specifications "Under-Bridge Maintenance Traveler (UBMT). Bidders are advised of the stipulation of GCC 4.6 (Co-operation).

Durability testing frequency to be 1 per 75 m3. However, if consistency and uniformity of a material is demonstrated by having 10 tests in a row for a concrete mixture meeting requirements as accepted by the Engineer, the frequency can be reduced to 1 per 750 m3 until results no longer meet requirements, at which time frequency is to be 1 per 75m3 until consistency is re-established.

	CONTRACTORS' QUERY	RESPONSE
	could lead to significant cost and time implications without necessarily enhancing quality control in proportion to the effort required.	Refer to Supplemental Bulletin No. 5 for the amended Annex I Supplemental Specification
	Therefore, we kindly request a revision to the testing frequency to a more reasonable interval, such as [proposed alternative, e.g., "every 150 m³ or as per an agreed-upon schedule based on initial test results"]. Please confirm if such an adjustment is feasible or provide further clarification on the rationale behind the current requirement.	
7.	We seek clarification regarding the quantity stated for Pay Item 423(1)1a in the provided Bill of Quantities.	The quantity reflects the weight of the strand alone. The anchorages are included in Pay Item 423(1)1a, and shall be assessed as noted in the
	The quantity provided for Pay Item 423(1)1a (4,600,000 kg) appears to account only for the Strand, while the Anchorage seems to be excluded.	Project Specifications and Drawings.
	Could you please confirm whether the stated quantity includes both the Strand and Anchorage as per the item description? If not, should the Anchorage quantity be accounted for separately, or will there be an adjustment to this pay item?	
8.	Final Bidding Documents, Bill of Quantities, Pay Item No. 407(8)	Confirmed. This item refers specifically to permanent caisson ballast only.
	We seek clarification regarding Pay Item 407(8) – Lean Concrete, Class B (16.5 MPa) in the provided Bill of Quantities.	
	Could you please confirm whether this item specifically refers to Caisson Ballast only? If not, kindly provide further details on its intended application.	
9.	Please kindly clarify that supply and installation of air terminal, lighting conductor, grounding in the tower internal & pier internal are not the scope of works under Package P6 according to the text in the drawing referenced herein.	Supply & installation of air terminals, lightning down conductors up to the connection point at pile cap reinforcing bars are part & scope of CP6.

CONTRACTORS' QUERY	RESPONSE
	Refer to Section 4, Bill of Quantities, Item 1109(7) and Annex I Supplemental Specifications.
10. Please kindly clarify that supply and installation of electrical panel service rack are not the scope of works under Package P6 according to the text in the drawing referenced herein.	Service rack or mounting racks for panelboards are part & scope of CP6. Refer to Annex I Supplemental Specification, Item 1100(10), Conduit and Accessories.
11. 2. Concrete Supply "Concrete mixing and batching facilities shall be located adjacent to the Wet Dock to minimize transportation times and ensure timely delivery of concrete." The term "adjacent" is somewhat subjective and lacks a precise definition, which could create	Refer to FIDIC GCC 4.1, Paragraph 3 "The Contractor shall be responsible for the adequacy, stability and safety of all the Contractor's operations and activities, of all methods of construction and of all the Temporary Works."
challenges for the bidder in preparing a comprehensive and accurate technical proposal including cost estimation. To ensure that the bidder can submit a competitive and well-defined proposal, we kindly	
request that the Employer either provide further clarification on the specific meaning of "adjacent" in this context or allow the bidder to determine the most suitable location for the concrete mixing and batching facilities.	
This would enable the bidder to propose a more cost-effective and feasible solution.	
12. (D) CAISSON ERECTION Installation Tolerances The term "Minimal settlement" is subjective and open to interpretation. To ensure clarity and enable the bidder to accurately prepare their proposal and costing, kindly provide specific requirements or allowable tolerances. This will ensure full compliance with the Specifications.	The term "minimal settlement" is used in a qualitative context to describe the expected performance of the caisson system but does not represent a defined numerical value. No specific vertical settlement tolerance is prescribed for the installed caisson as the bridge must be built to the final dimensions shown on the design drawings. As such, the Contractor is fully responsible for monitoring settlement of the caisson during and after

CONTRACTORS' QUERY	RESPONSE
	and actual settlement during construction staging, and ensuring that the as-built geometry of the towers and superstructure matches the required final elevations and alignments shown in the Drawings, within the tolerances specified in the Plans and Specifications. There is no geotechnically defined vertical placement tolerance for the caisson. The Contractor shall implement all necessary adjustments to achieve the required final geometry, and costs associated with settlement monitoring and corrective actions shall be borne by the Contractor.
13. 703(2).2.4 Gravel Placement Tolerances The "multi-purpose scrader concept" mentioned has been found to be a technology developed by a specific company. In this regard, please confirm whether bidders may adopt any similar levelling method for gravel filling other than the mentioned technology, subject to compliance with the tolerances stated in the specification.	The Contractor may adopt similar levelling methods for gravel placement. Refer to FIDIC GCC 4.1 and Annex I Supplemental Specifications, Part III - ADDITIONAL REQUIREMENTS RELATING TO THE CONTRACT WORKS, (B) Notice of Operations.
14. There is "Deck Drain (Sealing Metal)" item in Bill of Quantities. However, we cannot find any details of drain sealing for South Channel Bridge. Please provide the detail drawings of "Deck Drain (Sealing Metal)"	For the South Channel Bridge (SCB) see Drawings 6390-01 through 6390-04, 6391-00 and 6392-00.
 15. According to the notes on the drawing sheet no. 6481-01, the design of the elevator system is by others in accordance with the specification. However, the related specification states as below "1203(2).1 Description: Vendor to provide a quotation to design, supply, install and test new electric rack and pinion special purpose elevators designed to ASME A17.1 Section 5.7 and marine environment." 	Tower elevator design shall be provided by the elevator vendor in accordance with the Specifications. Tower elevator details for Pay Item 1203(2) are to be provided by the elevator supplier as indicated in the Notes on Sheets 6481-01 to 6481-04 and 6481-11 to 6481-14 in accordance with the Specifications.
We are so confused whether the scope of works for design, supply and installation of the tower	

CONTRACTORS' QUERY	RESPONSE
elevators is the Contractor's scope of works or not.	
Please confirm that our understanding is correct as shown below.	
Tower Elevators By Package 6 Contractor By Others Design V Supply V Installation V	
And if our understanding (Design by others, Supply and Installation by the Contractor) is correct, please provide us the detailed drawings of tower elevators.	
16. NOTES 3. states: "THE CONTRACTOR SHALL COORDINATE WITH THE DAVIT CRANE MANUFACTURER/SUPPLIER TO INCORPORATE THE EMBEDDED INTERMITTENT STABILIZATION ANCHORS (ISA) INTO THE FABRICATION OF THE TOWER." Since the Davit Crane is not under the Contractor's scope, we request the Employer to provide the details of the supplier so that we can coordinate accordingly. Additionally, please clarify who is responsible for the installation of the embedded items required for the Davit Crane.	Understanding is correct, the Davit Crane shall be supplied and installed by others under separate contracts as described in Project Specifications Section IV Performance Specifications. Refer to Dwg. No. 6481-31, Note 2, which states "Details shown are for illustration purposes only. Actual details of the davit crane system including connections to the permanent structure shall be provided by the Contractor." Bidders are advised of the stipulation of FIDIC GCC 4.6 (Co-operation).
17. The quantity of Prestressed Concrete (Installation/Erection of Box Girder) (100m) is 10 in the BOQ. While the 100m span will be erected by cantilever method, there will be 6 cantilever erection to form the 5×100m span, so the total cantilever erection of 100m is 12 nos., and 4 nos. erection of 25m of side span. Same situation for 406(3)a1/a2, and both south/north HLA. Please kindly revise the BOQ to match the actual site activity.	The current BOQ is maintained.

CONTRACTORS' QUERY	RESPONSE
18. Drawing No. 6491-65 Please provide the installation detail drawing that include the fixing method for the 2-50mm Rigid Metal Conduit (RMC) conduit inside the tower	Refer to Annex I Supplemental Specifications, Part III – ADDITIONAL REQUIREMENTS RELATING TO THE CONTRACT WORKS, (G) Integrated Shop Drawings, which partly states "It is anticipated that various conflicts will be encountered between embedded items. The ISD shall be of sufficient detail to demonstrate compatibility of the embedded items."
19. Appendix A.1, Section 1.1. It is noted that the survey is described as being carried out "around the Towers", but the exact meaning of "around" remains unclear. Please specify the precise range or boundary intended by this phrase.	The extent of the survey around the towers should be adequate to confirm that the quantities and tolerances of the various items that are called out in these technical specifications. Example requirements are included in Annex I Supplemental Specification, Section 703(2) and Section 1501(4).

20. ITEM 103 STRUCTURE EXCAVATION (MARINE BRIDGES)

Please check, is there flexibility to extend the allowable overflow duration if fine particles (e.g., silt, clay) are present? If yes, what justification is required?

Please confirm, are there specific intervals or waiting periods required between consecutive overflow cycles?

Please confirm, are there specific depth requirements for below-surface overflow discharge to ensure compliance?

RESPONSE

Overflow is only permitted when dense, clean sands are dredged using approved methods. Overflow of fine materials is not permitted due to environmental concerns, unless otherwise approved by the Engineer. Any request for exception must include iustification with sediment modeling, turbidity and mitigation/monitoring plan.

Overflow is limited to 15 minutes per load. The specification does not prescribe fixed intervals between cycles; however, overflow frequency and timing must be addressed in the Contractor's Dredging Operation Plan and remain within environmental compliance thresholds.

All overflows must be discharged below the water surface. While a specific depth is not defined, the system must be designed to prevent surface turbidity and plume formation. The Engineer may require verification of discharge depth and effectiveness.

Further, refer to Annex I Supplemental Specification, Part III - ADDITIONAL REQUIREMENTS RELATING TO THE CONTRACT WORKS, (B) Notice of Operations and FIDIC GCC 4.18 Protection of the Environment.

21. Appendix B.2, Technical Specifications Package 6 Geotechnical Survey, 2.6.1.1 and 2.6.1.2 Please confirm whether the Downhole CPT and the Seabed/Top-Push CPT are considered independent investigation or part of a combined CPT.

In Annex I Supplemental Specification, Appendix B.1, paragraph 1 of section 1.1 the reference to "seabed CPT" is changed to "downhole CPT". Seabed CPTs are not requested by scope of work. However, the Contractor can consider performing seabed CPTs at an adjacent location in lieu of downhole CPT, as long as the required coverage is achieved between seabed CPTs and downhole CPTs. Refer to Supplemental Bulletin No. 5 for the amended Specification.

CONTRACTORS' QUERY	RESPONSE
22. Appendix B.2, Technical Specifications Package 6 Geotechnical Survey, 2.6.1.1 and 2.6.1.2 Kindly clarify if the cone penetrometer used for Seabed/Top-push CPTs is capable of measuring cone resistance up to 100 MPa, in alignment with the capacity requirement stated for Downhole CPT.	The Specification initially referred to "seabed CPT" but has now clarified that the intended method is downhole CPT because the scope requires greater depth penetration since seabed CPTs may encounter early refusal on hard layers and cannot achieve the full depth of penetration required. However, the Specification permits seabed CPT at adjacent locations since there maybe locations were 40- or 50-meter penetration could be achieved by seabed CPT and at these locations it maybe more efficient to do the seabed CPT to the maximum depth possible and then continue with downhole CPT in the main borehole below this depth. Typically, Seabed CPT operations are much faster than downhole CPT, and have the advantage of continuous data collection to the depth that they penetrate but have limitations regarding the maximum penetration depth that can be achieved. Further, refer to Annex I Supplemental Specification, Part III - ADDITIONAL REQUIREMENTS RELATING TO THE CONTRACT WORKS, (B) Notice of Operations. The Specification initially referred to "seabed CPT" but has now clarified that the intended method is downhole CPT because the scope requires greater depth penetration since seabed CPTs may encounter early refusal on hard layers and cannot achieve the full depth of penetration required. However, the Specification permits seabed CPT at adjacent
	permits seabed CPT at adjacent locations since there maybe locations were 40 or 50 meter penetration could be achieved by seabed CPT and at these locations it maybe more efficient to do the seabed CPT to the maximum depth possible and then continue with downhole CPT in the main borehole

CONTRACTORS' QUERY	RESPONSE
	below this depth. Typically, Seabed CPT operations are much faster than downhole CPT, and have the advantage of continuous data collection to the depth that they penetrate but have limitations regarding the maximum penetration depth that can be achieved. Further, refer to Annex I Supplemental Specification, Part III - ADDITIONAL REQUIREMENTS RELATING TO THE CONTRACT WORKS, (B) Notice of Operations.
23. Appendix B.2, Technical Specifications Package 6 Geotechnical Survey Please specify whether a seabed-based system or a top-push system from a fixed platform is to be used for the seabed CPTs.	Seabed CPTs are not requested by the scope of work. Specifications for the CPT equipment are provided in Annex I Supplemental Specification, Appendix B.2, Section 2.6. However, the Contractor can consider performing seabed CPTs at an adjacent location in lieu of downhole CPT, as long as the required coverage is achieved between seabed CPTs and downhole CPTs. Top push CPTs from a fixed platform are most likely not practical in this water depth.
	For water depths on the order of 30 to 40 m a top push CPT would require 35 to 45 m of rod with casing between the seabed and the drive unit on the vessel. These would tend to buckle, limiting the penetration depth than can be achieved. Further, refer to Annex I Supplemental Specification, Part III - ADDITIONAL REQUIREMENTS RELATING TO THE CONTRACT WORKS, (B) Notice of Operations.

24. Appendix B.2, Technical Specifications Package 6 Geotechnical Survey

We noted that Seabed CPTs are to reach at least 50 meters below seabed. Please explain the reference or design consideration this depth is based on.

RESPONSE

Please refer to the Scope of Work and the Bill of Quantities in Annex I Supplemental Specification, Appendix B.1, Geotechnical Survey - Scope of Work. There is no requirement for seabed CPTs. There is a requirement for downhole CPTs that reach 50m depth below seabed. However, the Contractor can consider performing seabed CPTs at an adjacent location in lieu of downhole CPT, as long as the required coverage is achieved between seabed CPTs and downhole CPTs.

The pay item does not change. Any additional cost for mobilization or setups for seabed CPT would have to be absorbed by the contractor within the quoted price for downhole CPTS. Also, downhole CPTs would be required below the depth where seabed CPTs refuse if they do not reach the target depth.

Further, refer to Annex I Supplemental Specification, Part III - ADDITIONAL REQUIREMENTS RELATING TO THE CONTRACT WORKS, (B) Notice of Operations.

- 25. In Drawing 6090-00, the bottom of pile cap of dolphins is EL. -0.5m. But the bottom of pile cap in Drawing 6090-01 is 2.5m below MSL.
 - Please clarify the depth from MSL to bottom of pile cap of dolphins.
- 1. Drawing 6090-00 shows the top of pile cap elevation as +2.520 m, with a pile cap depth of 3.0 m. Therefore, the bottom elevation of the pile cap is -0.48 m
- 2. Drawing 6090-01 does not indicate any pile cap elevations.

26. Dwg. 6611-04, Rev 00

Drawing includes step 9 defined as "Continue casting cone wall to the full height as shown" and shows a 7.5 m height recess in the upper part of the cone wall to ensure the stability of the structure during the construction

- Please, confirm that the 7.5 m recess applies to both SNT1 & SST1 as we believe SNT1 could not be stable with that consideration
- Please, confirm the minimum GM that has to be considered during the different floating steps
 Please, could you provide the reinforcement ratio (kg/m³) for each caisson element?
- 27. We are currently reviewing the specifications for the concrete mix to be used in the CISS (Cast-In-Steel-Shell) piles under buried conditions, which fall under the S1 exposure class as defined in Section 405.4.5 of the Specifications.

According to this section, concrete buried in offshore soils (S1 exposure) shall use:

- Type II or Type V cement, or
- Cement with C₃A content less than 8%.

We seek clarification on the following points:

1. If Type I cement is proposed, would it be acceptable for use in CISS piles if test certificates confirm that the C₃A content is less than 8%, in accordance with Section 405.4.5?

If multiple cement options (Type I with C₃A<8%, Type II, or Type V) are acceptable, may the Contractor select the cement type at its discretion based on availability, cost-efficiency, and performance, subject to prior approval by the Engineer?

28. Please confirm whether the damper position above deck is fixed or can be varied.

29. Detailed Engineering Drawings P58 No. 6031-72

It is stated in the drawings as below:

RESPONSE

- 1. The 7.5 m cone wall with recess applies to both SNT1 and SST1 at this stage.
- 2. It is confirmed that the GM (distance between the center of gravity to the metacenter) of the Caisson shall remain positive throughout all floating stages.
- 3. The design drawings provide reinforcement details and geometry for each caisson element enough to calculate the reinforcement ratio.

Use of Type I cement is permitted for CISS piles in S1 exposure conditions provided that certified test results demonstrate a tricalcium aluminate (C3A) content less than 8%, in accordance with Section 405.4.5 of the Specifications. The Contractor may select among Type I (with C3A <8%), Type II, or Type V cements based on availability and performance, subject to prior review and acceptance by the Engineer to ensure compliance with project durability requirements.

Refer to Annex I Supplemental Specifications, 405.5 Concrete Degradation Protection, which states "Concrete buried in offshore soils (S1 exposure class) shall be made with Type II or Type V cement or have a C3A content less than 8%."

Damper position is as shown in the drawings. Refer to Annex I Supplemental Specification, Part III - ADDITIONAL REQUIREMENTS RELATING TO THE CONTRACT WORKS, (B) Notice of Operations.

The inside of the caisson shall remain dry at all times. The drainage system is

CONTRACTORS' QUERY	RESPONSE
The drainage system is designed inside the caisson. Please confirm if the caisson shall be free from water once the bridge is completed.	designed to handle any accidental or emergency conditions.
30. We would like to seek clarification regarding the internal damper system indicated in the mentioned drawings. Would it be acceptable to propose an alternative system, such as an external damper system which are fully complying with the project specification, instead?	The current design is maintained.
31. Item 1501(4) Rock Work (Scour Protection), 1501(4).2 Material Requirement Please advise bidder of the test items and relevant requirement (such as local/international standard / code) required for Scour Protection material.	Materials shall comply with the quality requirements in NCHRP Report 568 and the DPWH Standard Specifications. Refer to Annex I Supplemental Specifications, 1501(4).2 Material Requirements for the required material properties including the referenced report.
32. The total Q'ty of Stay Cable and Tie-Down (Furnish and Install Strand & Anchorage, HDPE Pipes, Guide Pipes Assembly) is 4,600,000 kg.	The quantity is based on the total length of strands between the deck bearing plate and tower bearing plate work point multiplied by 1.3 kg/m.
Q1) Please provide the basis for how this weight (or length, based on a density of 1.3 kg/m) is established. Q2) Does it include the additional strand to be provided for corrosion monitoring for each cable, or the 5% additional reserve capacity required for any group of 3 cables?	The quantities do not include the additional control strand to be provided by the contractor. The 5% additional reserve capacity is already included in the number of strands and anchor unit provided on the drawings and does not need to be included in the quantities.
Please clarify and provide further details.	Refer to Annex I Supplemental Specification, 423(1).2.2.

33. In Technical Specifications A.2 In 2.7.3.2 Interpretation,

The Contractor shall undertake preliminary onboard interpretation of the SSS and Magnetometer data in order to assist in confirming planned geotechnical sample locations and to clear chosen sample locations for UXO or other objects.

For SSS and MAG data, contacts and anomalies shall be picked on a line-by-line basis. Cross correlation of contacts between datasets is required, as is synthesis of contacts to remove duplicates (providing a refined single target pick) such as those caused by picking the same contact on multiple lines.

In 2.7.5 Scope-specific GIS Requirements, Results of SSS and MAG are indicated as Scopespecific GIS requirement.

555 Mosales as single band gootif files with pixel values of true reflectivity and an appropriate format is likely to be an 8-bit integer.

SSS Mosnic Index as a polygon featureclass with attributes to identify each tile of the mesaic.

555 Target / feature list as a point and/or polygon featureclass with attributes to describe the observation, provide an interpretation and identify the dataset from which the feature was observed.

Mag. Target / feature list as a point feature lass with attributes to describe the observation, provide an interpretation and identify the dataset from which the feature was observed,

In Technical Specifications A.1

In 1.1 Scope of Technical Specifications,

"In addition to the scope presented above, the Contractor shall conduct all necessary bathymetric surveys that he deems necessary to facilitate the construction of the P6 permanent and temporary structures and magnetometer, side scan sonar, cable tracker etc. surveys to assess seabed obstructions/hazards including potential UXO hazards to ensure the safe execution of the project."

In addition. In Table 1-1 Bill of Quantities for Geophysical Surveys, 2.3 Seabed Survey (MAG) is shown as below. MAG is indicated only but SSS is not stated.

Please advise us.

- SSS shall be performed with MAG? In other words, SSS is considered to be included in MAG?
- 2) MAG is considered as UXO Scanning of PS 5?

RESPONSE

- 1. SSS is distinct and separate from MAG.
- 2. MAG and SSS will be used in tandem for UXO Scanning, MAG detects magnetic response of ferrous (iron metals) which may be present in UXO and other metal objects in the seabed. SSS images the seabed surface and on "hardness" based the and "softness" (i.e., seismic velocity) of the seabed material and other objects, the image of seabed surface which may show any object lying on the seabed, but it cannot "see" buried objects including buried UXO. SSS alone may not be able to sense buried UXO or other buried objects. MAG may be able to sense buried ferrous materials such as UXO and metal objects but cannot distinguish the type of object. For example, a metal object containing the same amount of iron as a 1000-pound UXO will have the similar magnetic response values. Combining MAG with SSS may aid in distinguishing possible object type or at least help in eliminating non-UXO objects.

34. Stay Cable and Tie-Down (Furnish and Install Strand & Anchorage, HDPE Pipes, Guide Pipes Assembly) 4,600,000kg. Please provide the basis of how this weight (or length based on a density of 1.3kg/m) is established. Does it include the additional strand to be provided for corrosion monitoring for each cable or the 5% additional reserve capacity required for any group of 3

cables?

RESPONSE

The quantity is based on the total length of strands between the deck bearing plate and tower bearing plate work point multiplied by a 1.3 kg/m.

The quantities do not include the additional control strand to be provided by the contractor. The 5% additional reserve capacity is already included in the number of strands and anchor unit provided on the drawings and does not need to be included in the quantities.

Refer to Annex I Supplemental Specification, 423(1).2.2 Stay Cable Anchorage System Components.

35. We understood the Contractor is responsible for the supply and installation of marine buoys units in item 1400(9) buoys (Aids to Navigation).

In this regard, please confirm that below items are not the Contractor's responsibility.

- Supply of Spare Parts for the Employer's operation after the Contractor's supply and installation of the specified marine buoys
- Supply, Installation and Commissioning of AIS monitoring system on land
- Provision of training program for the Employer's staff and/or a Ports staff

Contractor's obligations are limited to the following stipulations:

(i) Annex I Supplemental Specification, 1400(9).1 Description and 1400(9).2 Material Requirements, for items to be supplied by the Contractor, and (ii) refer to FIDIC GCC 7.5 Defects and Rejection.

- 36. Based on the following, we understand that the "walls of the cofferdam" will be removed, while the "bottom of the cofferdam" will remain in place after the completion of the foundation work.
 - According to Step 16 of the SCB Erection Sequence Drawing (SET NO. P6-N, SHEET NO. 6603-00), it indicates that the bottom of the cofferdam remains after the foundation has been completed.
 - 2) According to the response to Contractor's Query 15 in Bid Bulletin No.2, it is stated that

The Contractor's understanding is correct.

CONTRA CHICAGO ALIMBIA	
CONTRACTORS' QUERY	RESPONSE
"The walls of the precast shell or cofferdam shall not be left in place after the completion of the foundations"	
Please confirm if the Contractor's understanding is correct.	
37. SET NO. P6-N SHEET NO. 6603-00/ Query 15 in Bid Bulletin No. 2/ (M) TEMPORARY WORKS, Section III — ADDITIONAL REQUIREMENTS RELATING TO THE CONTRACT WORKS Based on the following, we understand that the "walls of the cofferdam" will be removed, while the "bottom of the cofferdam" will remain in place after the completion of the foundation work.	It is the contractor's responsibility to design the temporary works. The thickness of the cofferdam bottom slab may vary from 300 mm to 450 mm, depending on the erection methods, temporary support conditions, number of construction stages, etc. The Contractor shall perform their own evaluations.
1) According to Step 16 of the SCB Erection Sequence Drawing (SET NO. P6-N, SHEET NO. 6603-00), it indicates that the bottom of the cofferdam remains after the foundation has been completed.	Further, refer to FIDIC GCC 4.1, "The Contractor shall be responsible for the adequacy, stability and safety of all the Contractor's operations and activities, of all methods of construction and of all the Temporary Works."
2) According to the response to Contractor's Query 15 in Bid Bulletin No.2, it is stated that "The walls of the precast shell or cofferdam shall not be left in place after the completion of the foundations"	
In addition, according to Clause (M) TEMPORARY WORKS, Section III – ADDITIONAL REQUIREMENTS RELATING TO THE CONTRACT WORKS, the design of any temporary works that will remain as part of the permanent structure shall be submitted for review and approval by the Engineer.	
In order for the Contractor to adequately reflect the appropriate Temporary Works Design in the bid, please provide information on the load assumptions that have been applied to the "bottom of the cofferdam" in the Detailed Design.	

38. The permitted movement within guide pipe shown in the tender drawing are in the very low range. They do not account for cable deviation we can expect for those type of bridge. Without the anchorage rotation information, the guide pipe diameter can not be determined.

Please provide the anchorage rotation information for all cables, at all stages of construction and at final, including patterned loading.

39. Specifications 400(18)c.5 Basis of Payment Final Bidding Documents Page 4-47, 4-50~52

In the Technical Specification, it is stated shown below.

"The accepted quantities measured as prescribed in this item, shall be paid for at the contract unit price of each of the item listed below, which price and payment shall be full compensation for furnishing and placing all materials including all labor, equipment, tools, and incidentals as well as temporary works, staging areas necessary to complete the work prescribed in this item."

In Bill of Quantities – I. SOUTH CHANNEL BRIDGE (CABLE-STAYED), there's no payment item regarding reinforcing steel bars and structural concrete for CISS Piles

In Bill of Quantities — II. SOUTH (HIGH-LEVEL APPROCACH-HLA), there's payment item regarding reinforcing steel bars for Pile and Pile Cap but no payment item regarding structural concrete for CISS Piles.

In Bill of Quantities — III. NORTH (HIGH-LEVEL APPROCACH-HLA), there's no payment item regarding reinforcing steel bars and structural concrete for CISS Piles.

RESPONSE

The cable rotations and Guide Pipe Sizes were coordinated with major cable suppliers during the design stage for the in-service bridge conditions. The rotations during construction will need to be coordinated with the Contractor's engineer performing the erection analysis.

Roles and responsibilities of the CE are enumerated in Annex I Supplemental Specifications, III - ADDITIONAL REQUIREMENTS RELATING TO THE CONTRACT WORKS, (M) REQUIREMENTS FOR CONSTRUCTION ENGINEER (CE).

Refer to Annex I Specifications, Subsection 400(18)c.1 Description "Cast-in-steel-shell concrete piling shall consist of open-ended steel shells driven to the specified penetration and partially filled with reinforced cast-in-place concrete and shall conform to the provisions in Item 400, "Piling," of the DPWH Standard Specifications and these Supplemental Specifications.

Further, refer to Subsection 400(18)c.4 Method of Measurement "The quantity to be paid for shall be the length in meters of specified steel pile completed and accepted."

The title shown on page 4-52 is incorrect. The title is changed to "III. NORTH (HIGH-LEVEL APPROACH-HLA), STATION 16 + 095.00 - STATION 16 + 745.00; LENGTH = 650.00m". Refer to Supplemental Bulletin No. 5 for the amended BOQ Title.

CONTRACTORS' QUERY	RESPONSE
In addition, on page 4-52, Bill of Quantities for SOUTH (HIGH-LEVEL APPROCACH-HLA) is repeated under the title "III. SOUTH (HIGH-LEVEL APPROACH-HLA), STATION 18 + 545.00 - STATION 19 + 195.00; LENGTH = 650.00m"	
Please clarify the below. 1) Whether the bidder includes all cost of reinforcing steel bars and structural concrete for CISS Piles in Payment Item Number 400(18)c.1, 400(18)c.2, 400(18)d.1, 400(18)d.2. If so, please revise the Bill of Quantities and provide us with an updated one.	
Please check the page 4-52 whether the title "III. SOUTH (HIGH-LEVEL APPROACH-HLA), STATION 18 + 545.00 - STATION 19 + 195.00; LENGTH = 650.00m" is correct.	
40. There is no document 517(3)a and 517(3)c in provided Technical Specification. Please provide this document to meet requirement.	Refer to DPWH Standard Specifications Item 517(3) Deck Drain. The information has already been provided in the Plans and General Notes.
	Cast steel for SCB drainage troughs shall conform to ASTM A27 Grade 65-35 Class 2. Joint Filler for SCB drainage troughs shall conform to Specification 413(3)c.

For the information and guidance of all concerned.

ADOR G. CANLAS

Undersecretary for Technical Services and Information Management Service Chairperson, Bids and Awards Committee (BAC) for Civil Works