



PAMBANSANG PUNONGHIMPILAN TANOD BAYBAYIN NG PILIPINAS
(National Headquarters Philippine Coast Guard)
139 25th Street, Port Area,
1018 Manila

CGLSC/CGIDS

26 April 2019

CIRCULAR
NUMBER04-19

PREPARATION OF AGENCY ESTIMATES FOR
PCG INFRASTRUCTURE PROJECTS

I. REFERENCES:

1. Logistics Letter Directive Number MB-98-01, GHQ, AFP dtd 27 March 1998, Preparation of Agency Estimates for Construction and R & U Projects.
2. Department Order No. 197 s. 2016, DPWH dtd 07 October 2016, Revised Guidelines in the Preparation of Approved Budget for the Contract (ABC).
3. Department Order No. 04 s. 2018, DPWH dtd 10 January 2018, Breakdown of Allocation of the Authorized 3.5% Deductions from the Project Funds for Engineering and Administrative Overhead (EAO) under FY 2018 GAA, DPWH Budget.
4. Memorandum Circular No. 2012-008, PNP dtd 23 July 2012, Revised Guidelines and Policies on Programming of Funds and Implementation of PNP Infrastructure Projects.
5. Annex "A" Government Procurement Policy Board (GPPB) Resolution No. 09-2005 dtd 28 April 2005, Guidelines on Implementation of Infrastructure Projects Undertaken by the AFP Corps of Engineers.
6. DOTC Department Order No. 2007-29, Approving Authority of the Commandant, Philippine Coast Guard.

II. PURPOSE:

The purpose of this circular is to set the guidelines and procedures in the preparation of agency construction estimates for the guidance of all concerned.

III. SCOPE:

This circular covers all construction estimates prepared by PCG units for any infrastructure (purely civil and/or with components of mechanical and/or electrical works) projects whether new construction, repair and/or maintenance activities to be implemented either by administration or by contract.

IV. POLICIES:

1. PCG units who shall prepare the construction estimates shall ensure that said estimates are computed to a reasonable degree of accuracy in conformity with the technical designs and work drawing/plans.
2. PCG units who shall prepare the construction estimates shall be fully responsible for the accuracy of the same in comparison with current market prices of materials and equipment usage, cost-effectiveness of the choice of construction methods and equipment, numbers/types of equipment/labor used, etc., as well as the confidentiality of the construction estimate.
3. The CGIDS shall ensure that all estimates prepared by other PCG units, when submitted for validation and/or evaluation, are in accordance with the prescribed guidelines and standard format as embodied in this circular.
4. The Total Estimated Cost (TEC) prepared by PCG units, duly validated and evaluated by CGIDS, shall become the Approved Agency Estimates (AAE) only upon approval of proper authority. Similarly, the Total Construction Cost (TCC) shall become the Approved Budget of the Contract (ABC) upon approval of the same.
5. The signing and approving authority for infrastructure projects with a TEC amounting up to Twenty Million Pesos (P20,000,000.00), shall be the Commandant, PCG. While, infrastructure projects with TEC higher than Twenty Million Pesos (P20,000,000.00), shall be submitted to the Secretary, DOTr, for review and approval.
6. The authority who approves the TEC can revise/amend the prepared construction estimates as part of the quasi-judiciary exercise of his authority.
7. The PCG unit preparing the construction estimate shall continuously update their information/statistics on market prices of all construction inputs and use only unit prices that are realistic based on valid up-to-date information, in contrast to guesswork and haphazard pricing. All assumptions in generating the construction estimate should be shown in the cost analysis.
8. The CGIDS shall secure and maintain a copy of the quarterly Construction Materials Price Database (CMPD) from the Department of Public Works and Highways (DPWH) which shall be the basis in the preparation of construction cost estimates.

V. GUIDELINES AND PROCEDURES:

The following guidelines and procedures shall be followed in the preparation, request for approval and submission of the agency estimate reflected in the recapitulation:

1. The Direct Cost (DC) shall consist of the following:

a. Material Cost: Materials are all supplies, including consumables, used in accomplishing the project, which includes but not limited to the following:

- i. Cost at source, including processing, crushing, stockpiling, loading, royalties, local taxes, construction and/or maintenance of haul roads, etc.;**
- ii. Expenses for hauling to project site;**
- iii. Handling expenses;**
- iv. Storage, and;**
- v. Allowance for waste and/or losses.**

b. Labor Cost:

- i. Salaries and wages as authorized by the Department of Labor and Employment (DOLE);**
- ii. Fringe benefits, such as vacation and sick leaves, benefits under the Workmen's Compensation Act, GSIS and SSS contributions, allowances, 13th month pay, bonuses, etc.**

c. Equipment Expenses:

The equipment expenses comprises the equipment rental, mobilization/demobilization and transshipment which is one percent (1%) of the Civil Works (sum of Material and Labor cost).

Equipment refers to all facilities, appliances, materials or things required for the execution and completion of the project but shall not form or are not intended to form part of the project and shall not be not be subjected to OCM and Contractor's profit mark-up.

- i. Rental of equipment which shall be based on the prevailing "Associated Construction Equipment Lessors, Inc." (ACEL)**

rental rates approved for use by the Department of Public works and Highways (DPWH). Rental rates of equipment not indicated in the ACEL booklet shall be taken from the rental rates prepared by the Bureau of Equipment, DPWH. For simplicity in computation, the operated rental rates are preferred over the bare rental rates as the former includes operator's wages, fringe benefits, fuel oil, lubricants and equipment maintenance.

- ii. Mobilization and demobilization of the equipment shall be computed on a case to case basis, considering the equipment requirements of the project stipulated in the proposal.
- iii. Transshipment refers to the shipment of construction materials, containers and/or equipment to an intermediate destination, then to yet another destination. One possible reason or transshipment is to change the means of transport during the journey (e.g., from land transport to port and sea transport).

d. Other General Requirement Expenses

Other General Requirement Expenses are the cost or expenses for permits, clearances and other government taxes (i.e. MMDA Permit, LGU Permits, Bureau of Fire Protection Clearance, etc.) shall be included in the direct cost but should not be subjected to OCM and Contractor's profit mark-up.

2. The Indirect Cost (IC) shall consist of the following:

- a. **Overhead Expenses (O)** – ranges from 7 - 11% of the Direct Cost (A & B only), which includes:
 - i. Engineering and Administrative Supervision;
 - ii. Transportation allowances;
 - iii. Office Expenses (Office Equipment and Supplies);
 - iv. Premium on Contractor's All Risk Insurance (CARI).

v. **Financing Cost**

- 1) Premium on Bid Security
- 2) Premium on Performance Security
- 3) Premium on Surety for Advance Payment
- 4) Premium on Warranty Bond (one year)

b. **Contingencies (C)** – ranges from 0.5 - 3% of the Direct Cost (A & B only) to cover any escalation cost, meetings, coordination with the stakeholders, billboards, stages during ground breaking and inauguration ceremonies, and other unforeseen events.

c. **Miscellaneous Expenses (M)** – ranges from 0.5 - 1% of the Direct Cost (A & B only). These include laboratory tests for quality control and plan preparation

d. **Contractor's Profit Margin (Profit)** – shall be 8% of the Direct Cost (A & B only) for projects above ₱ 5 Million and 10% for projects ₱ 5 Million and below.

NOTE: For the percentage to be used for sub para a, b, c and d, refer to OCM (Overhead, Contingency and Miscellaneous) and Profit Column in the tabulation below.

AMOUNT OF CIVIL WORKS (A + B)	INDIRECT COST		TOTAL INDIRECT COST FOR OCM & PROFIT, %
	OCM, %	PROFIT, %	
Up to ₱ 5 Million	15	10	25
Above ₱ 5M - 50M	12	8	20
Above ₱ 50M - 150M	10	8	18
Above ₱ 150M	8	8	16

3. The **Value Added Tax (VAT) Component** – shall be five percent (5%) of the sum Total Direct Cost (TDC) and Total Indirect Cost (TIC).

4. The **Engineering and Administrative Overhead (EAO) Expenses** is to ensure fund allocation for the supervision of construction projects and preparation of detailed engineering, an amount not exceeding three percent (3%) of the ABC shall be included in the programming of funds as EAO. However, EAO shall not be authorized for infrastructure projects costing One million (P1,000,000.00) and below.

The percent allocation for the EAO in every project shall have the following computation:

a. An amount equivalent to three percent (3%) of the TCC shall be allotted for infrastructure projects that are located in separate islands or too hundred kilometers (200km) and above from the office location of the supervising engineer. However, the EAO shall not exceed Three Hundred Thousand Pesos (P300,000.00) for infrastructure projects with implementation duration of one (1) year and below regardless of the amount of TCC;

b. An amount equivalent to two percent (2%) of the TCC shall be allotted for infrastructure projects located below 200 km but not less than 150 km away from the office location of the supervising engineer. However, the EAO shall not exceed Two Hundred Fifty Thousand Pesos (P250,000.00) for infrastructure projects with implementation duration of one (1) year and below regardless of the amount of TCC;

c. An amount equivalent to one percent (1%) of the TCC shall be allotted for infrastructure projects located below 150 km but not less than 50 km away from the office location of the supervising engineer. However, the EAO shall not exceed Two Hundred Thousand Pesos (P200,000.00) for infrastructure projects with implementation duration of one (1) year and below regardless of the amount of TCC; and

d. No EAO shall be authorized for infrastructure projects located less than 50 km away from the office location of the supervising engineer regardless of the amount of the TCC.

e. CGIDS or the implementing unit shall ensure that the EAO can support the infrastructure project until its completion.

Tabulation of percent allocation of EAO:

200 km and above	150 - 200 km	50 - 150 km	Below 50 km
3% of TCC or P 300,000.00	2% of TCC or P 250,000.00	1% of TCC or P200,000.00	No EAO authorized

5. The **Approved Budget for the Contract (ABC)** is the sum of the Total Direct Cost (TDC), Total Indirect Cost (TIC) and Value Added Tax (VAT). This shall be

the amount used for the purpose of the conduct of public bidding for infrastructure projects.

The ABC shall be compared with the Contractor's Bid and is to be the basis for the judging whether the bids received are reasonable or not, while, the AAE shall be based on the proposal and contract booklet and should contain the same work items and quantities as those used by the Contractor in preparing his bid.

6. The **Approved Agency Estimates** which shall compose of Drawing plans/designs/technical specifications, Scope of Works, Bill of Materials/Detailed Cost Estimates, Summary and Recapitulation. Upon approval of the AAE, the set of documents except the Bill of Quantities/Detailed Cost Estimates shall be provided to the Bids and Awards Committee (BAC) for purposes of confidentiality and bid evaluation.
 - a. The **Drawing Plans/Designs** should be prepared in accordance with the National Structural Code of the Philippines (NSCP), Building Code of the Philippines, Batas Pambansa 344 or the Accessibility Law, Fire Code of the Philippines and other applicable rules and regulations.
 - b. The **Scope of Works** shall be composed of Specifications and General Notes which will serve as guide in complying the requirements as indicated in the drawing plans/designs with instruction to submit the as-built plans and pictures after the completion of project.
 - c. **Bill of Quantities/Detailed Cost Estimates.** All the material requirements, labor cost and work items for the completion of the project should be reflected in the Bill of Quantities/Detailed Cost Estimates in reference with the Construction Materials Price Data (CMPD) updated and requested quarterly from DPWH Main Office.

The prescribed Bill of Quantities/Detailed Cost Estimates format is filled-up with the following procedures: (see **Annex A**)

- i. Columns (1) to (6) are self-explanatory.
- ii. Columns (7) is the Total Direct Cost (TDC) of the work item as calculated and reflected in the cost analysis prepared by the Estimator.
- iii. Columns (8) and (9) are the mark-ups in percent for OCM and Profit respectively.

iv. Column (10) is the total mark-up, which is the sum of the percentages under columns (8) and (9).

v. Column (11) is the Peso value of the total mark-up. It is determined by multiplying the total mark-up on percent in column (10) with the TDC (column 7).

vi. Column (12) is the VAT component which is 5% of the sum of columns (7) and (11).

vii. Column (13) is the Total Indirect Cost (TIC) which is the sum of columns (11) and (12).

viii. Column (14) is the Total Cost of each work item or the sum of columns (7) and (13).

ix. Column (15) is the unit cost for each item of works determined by dividing the estimated Total Cost in column (14) by its total quantity in column (3).

d. **Summary.** All work items are indicated in the Summary with corresponding Material Cost, Labor Cost, Equipment Expenses (Equipment Rental, Mobilization/Demobilization and Transshipment) and other Government Requirement Expenses (Permits, Clearances and other Government taxes).

e. **Recapitulation.** The Recapitulation format to be utilized will vary depending on the amount of the Approved Budget for the Contract (ABC).

ABC amounting to One Million (P1,000,000.00) and below are considered to be Repair and Utilities (R&U) projects shall either be implemented by Administration or by Contract depending on the capacity of the implementing unit.

ABC amounting to above One Million (P1,000,000.00) are considered to be New Construction projects and shall be implemented by contract through public bidding.

For the purpose of implementation of the projects, the Approved Agency Estimated (AAE) has recapitulation with prescribed formats as shown in the annexes below with following instructions for filling up the format.

- i. Annex B – By Contract for New Construction
- ii. Annex C – By Contract for R&U
- iii. Annex D – By Administration for R&U

By Contract for New Construction

- a. The Total Direct Cost (TDC) is computed by adding the Material Cost (A), Labor Cost (B), Equipment Expenses (C) and other General Requirements (D). The values of "A", "B", "C" and "D" are derived from the Bill of Quantities/Detailed Cost Estimate.
- b. The values for the Overhead, Contingencies, and Miscellaneous (E), and Contractor's Profit (F), shall be determined by multiplying each applicable percentage (see OCM and Profit Table) to the Material Cost (A) and Labor Cost (B) only.
- c. The Total Indirect Cost (TIC) shall be computed by adding the values of "E", and "F".
- d. The Value Added Tax (VAT) shall be computed by adding the values of TDC and TIC then multiplying the sum by five percent (5%).
- e. The Total Construction Cost (TCC) shall become the Approved Budget for the Contract (ABC) for purposes of bidding once the proposal is approved. Computed as the sum of the TDC, TIC and VAT.
- f. The Engineering and Administrative Overhead (EAO) Expenses shall be computed by multiplying accordingly to the allotted equivalent of percent to project location to the Total Construction Cost (TCC) but shall not form part of the cost for bidding.
- g. The Total Estimated Cost (TEC) for purposes of fund availability shall be computed as the sum of the Total Construction Cost (TCC) and Engineering and Administrative Overhead (EAO) Expenses.

By Contract for R and U

- a. The Total Direct Cost (TDC) is computed by adding the Material Costs (A), Labor Cost (B), Equipment Expenses (C) and other General Requirements (D). The values of "A", "B", "C" and "D" are derived from the Bill of Quantities/Detailed Cost Estimate.
- b. The values for the Overhead, Contingencies, and Miscellaneous (E), and Contractor's Profit (F), shall be determined by multiplying each applicable

percentage (see OCM and Profit Table) to the Material Cost (A) and Labor Cost (B) only.

- c. The Total Indirect Cost (TIC) shall be computed by adding the values of "E", and "F".
- d. The Value Added Tax (VAT) shall be computed by adding the values of TDC and TIC then multiplying the sum by five percent (5%).
- e. The Total Construction Cost (TCC) which shall become the Approved Budget for the Contract (ABC) for purposes of bidding once the proposal was approved is the sum of the TDC, TIC and VAT.
- f. The Total Estimated Cost (TEC) for purposes of fund availability shall be computed as the sum of the TDC, TIC and VAT.

By Admin for R and U

- a. The Total Direct Cost (TDC) is computed by adding the Material Cost (A), Labor Cost (B), Equipment Expenses (C) and other General Requirements (D). The values of "A", "B", "C" and "D" are derived from the Bill of Quantities/Detailed Cost Estimate.
- b. The Value Added Tax (VAT) shall be computed by multiplying the TDC by five percent (5%).
- c. The Total Construction Cost is equivalent to Total Estimated Cost (TEC) for purposes of fund availability shall be computed as the sum of the Total Direct Cost (TDC) and VAT.

7. In addition, sample of a prescribed formats are hereto attached:

- | | |
|---------|--|
| Annex E | - Summary |
| Annex F | - Scope of Works |
| Annex G | - Bill of Quantities / Detailed Cost Estimates |

VI. RESCISON:

All publication in conflict with this Circular are hereby rescinded.


VII. EFFECTIVITY:

This Circular shall take effect upon publication.

BY COMMAND OF ADM HERMOGINO PCG:

OFFICIAL:

**EDUARDO D FABRICANTE
COMMO PCG
Chief of Coast Guard Staff**


**HAZEL A POLIDARIO
ENS PCG
Acting Coast Guard Adjutant**

- Annex A*** - Bill of Quantities / Detailed Cost Estimates
- Annex B*** - Recapitulation (New Construction by Contract)
- Annex C*** - Recapitulation (R&U Project by Contract)
- Annex D*** - Recapitulation (R&U Project by Administration)
- Annex E*** - Summary
- Annex F*** - Scope of Works
- Annex G*** - Drawing Plans / Designs

"Serving Our Nation by Ensuring Clean, Safe and Secure Maritime Environment"

ANNEX A - Bill of Quantities/Detailed Cost Estimates

Department of Transportation
 PHILIPPINE COAST GUARD
HEADQUARTERS COAST GUARD LOGISTICS COMMAND
COAST GUARD INFRASTRUCTURE DEVELOPMENT SERVICES
 Muelle dela Industria, Farola Compound, Binondo
 1006 Manila

PROJECT NAME:

LOCATION:

OWNER: PHILIPPINE COAST GUARD

SUBJECT: BILL OF QUANTITIES / DETAILED COST ESTIMATES

Contract Duration: _____

ITEM NO	DESCRIPTION	QTY	UNIT	MATERIAL COST	LABOR COST	ESTIMATED DIRECT COST	MARK-UPS IN PERCENT		TOTAL MARK-UP		VAT	TOTAL INDIRECT COST	TOTAL COST	UNIT COST
							OCM	PROFIT	%	VALUE				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11) (7)x(10)	(12) 5%[(7)+(11)]	(13) (11)+(12)	(14) (7)+(13)	(15) (14)/(3)
I	CLEARING AND DEMOLITION													
	Clearing and Grubbing	1.00					0	0	25%	0	0	0	0	0
	Sub-Total I	1.00		0	0	0	0	0	25%	0	0	0	0	0
II	EARTHWORKS													
	Excavation	1.00					0	0	25%	0	0	0	0	0
	Filling materials	1.00					0	0	25%	0	0	0	0	0
	Sub-Total II	1.00		0	0	0	0	0	25%	0	0	0	0	0
III	SITE PREPARATION													
	Termite Control	1.00					0	0	25%	0	0	0	0	0
	Sub-Total III	1.00		0	0	0	0	0	25%	0	0	0	0	0
IV	PLAIN & REINFORCED CONCRETE													
	Pile Cap / Footing	1.00					0	0	25%	0	0	0	0	0
	Concrete Volume	1.00					0	0	25%	0	0	0	0	0
	Portland Cement	1.00					0	0	25%	0	0	0	0	0
	Sand	1.00					0	0	25%	0	0	0	0	0
	3/4" Crushed Gravel	1.00					0	0	25%	0	0	0	0	0
	25mm Ø Reinf. Steel Bars	1.00					0	0	25%	0	0	0	0	0
	Sub-Total IV	1.00		0	0	0	0	0	25%	0	0	0	0	0

ANNEX A - Bill of Quantities/Detailed Cost Estimates

V	STEEL DECKING	1.00					0	0	25%	0	0	0	0	0
	1st Floor	1.00					0	0	25%	0	0	0	0	0
	Columns	1.00					0	0	25%	0	0	0	0	0
		1.00					0	0	25%	0	0	0	0	0
	Sub-Total V	1.00		0	0	0	0	0	25%	0	0	0	0	0
VI	CONCRETE MASONRY WORKS	1.00					0	0	25%	0	0	0	0	0
	Plastering	1.00					0	0	25%	0	0	0	0	0
	Area	1.00					0	0	25%	0	0	0	0	0
	Portland Cement	1.00					0	0	25%	0	0	0	0	0
	Sand	1.00					0	0	25%	0	0	0	0	0
		1.00					0	0	25%	0	0	0	0	0
	Sub-Total VI	1.00		0	0	0	0	0	25%	0	0	0	0	0
VII	EQUIPMENT EXPENSES	1.00					0	0	25%	0	0	0	0	0
	Compactor	1.00					0	0	25%	0	0	0	0	0
		1.00					0	0	25%	0	0	0	0	0
	Sub-Total VII	1.00		0	0	0	0	0	25%	0	0	0	0	0
VIII	OTHER GENERAL REQUIREMENTS	1.00					0	0	25%	0	0	0	0	0
	Permits	1.00					0	0	25%	0	0	0	0	0
		1.00					0	0	25%	0	0	0	0	0
	Sub-Total VIII	1.00		0	0	0	0	0	25%	0	0	0	0	0
	TOTALS	1.00		0	0	0	0	0	25%	0	0	0	0	0
							0	0		0	0	0	0	0

Prepared/Submitted by:

Checked by:

Recommending Approval:

Approved by:

ANNEX B - Recapitulation (New Construction by Contract)

PHILIPPINE COAST GUARD
HEADQUARTERS COAST GUARD LOGISTICS COMMAND
COAST GUARD INFRASTRUCTURE DEVELOPMENT SERVICE
CGBF, Muelle dela Industria, Farola Compound, Binondo
1006 Manila

PROJECT TITLE:
LOCATION :
OWNER : PHILIPPINE COAST GUARD
SUBJECT : RECAPITULATION

RECAPITULATION

I	DIRECT COST (DC)		
	A. MATERIAL COST	₱	-
	B. LABOR COST		-
	C. EQUIPMENT EXPENSES		-
	D. OTHER GENERAL REQUIREMENTS		-
	TOTAL DIRECT COST (TDC)	₱	-
II	INDIRECT COST (IC)		
	E. OVERHEAD, CONTINGENCIES and MISCELLANEOUS (% of the A + B)		-
	F. CONTRACTOR'S PROFIT (% of the A + B)		-
	TOTAL INDIRECT COST (TIC)	₱	-
III	VAT [5% of (TDC + TIC)]	₱	-
	TOTAL CONSTRUCTION COST (TCC) (for bidding purposes)		-
V	ENGINEERING AND ADMINISTRATIVE OVERHEAD (EAO) (3% of ABC)		-
VI	TOTAL ESTIMATED COST (TEC) (for the purpose of Fund Availability)	₱	-

ANNEX C - Recapitulation (R and U by Contract)

PHILIPPINE COAST GUARD
HEADQUARTERS COAST GUARD LOGISTICS COMMAND
COAST GUARD INFRASTRUCTURE DEVELOPMENT SERVICE
CGBF, Muelle dela Industria, Farola Compound, Binondo
1006 Manila

PROJECT TITLE:
LOCATION :
OWNER : PHILIPPINE COAST GUARD
SUBJECT : RECAPITULATION

RECAPITULATION

I	DIRECT COST (DC)		
	A. MATERIAL COST	₱	-
	B. LABOR COST		-
	C. EQUIPMENT EXPENSES		-
	D. OTHER GENERAL REQUIREMENTS		-
	TOTAL DIRECT COST (TDC)	₱	-
II	INDIRECT COST (IC)		
	E. OVERHEAD, CONTINGENCIES and MISCELLANEOUS (12% of the A + B)		-
	F. CONTRACTOR'S PROFIT (10% of the A + B)		-
	TOTAL INDIRECT COST (TIC)	₱	-
III	VAT [5% of (TDC + TIC)]	₱	-
	TOTAL ESTIMATE COST (TEC) (for the purpose of Fund Availability)	₱	-

PHILIPPINE COAST GUARD
HEADQUARTERS COAST GUARD LOGISTICS COMMAND
COAST GUARD INFRASTRUCTURE DEVELOPMENT SERVICE
CGBF, Muelle dela Industria, Farola Compound, Binondo
1006 Manila

PROJECT TITLE:
LOCATION :
OWNER : PHILIPPINE COAST GUARD
SUBJECT : RECAPITULATION

RECAPITULATION

I	DIRECT COST (DC)		
	A. MATERIAL COST	₱	-
	B. LABOR COST		-
	C. EQUIPMENT EXPENSES		-
	D. OTHER GENERAL REQUIREMENTS		-
	TOTAL DIRECT COST (TDC)	₱	-
III	VAT (5% of TDC)	₱	-
III	TOTAL ESTIMATED COST (TEC) (for purpose of fund availability)	₱	-

PHILIPPINE COAST GUARD
 HEADQUARTERS COAST GUARD LOGISTICS COMMAND
 COAST GUARD INFRASTRUCTURE DEVELOPMENT SERVICE
 CGBF, Muelle dela Industria, Farola Compound, Binondo
 1006 Manila

PROJECT TITLE :
 LOCATION :
 OWNER : PHILIPPINE COAST GUARD
 SUBJECT : **SUMMARY**

SUMMARY

		MATERIALS		LABOR	
I	CLEARING AND DEMOLITION	₱	-	₱	-
II	EARTHWORKS		-		-
III	SITE PREPARATION		-		-
IV	PLAIN & REINFORCED CONCRETE		-		-
V	STEEL DECKING		-		-
VI	CONCRETE MASONRY WORKS		-		-
MATERIAL COST		₱	-		
LABOR COST				₱	-
VII	EQUIPMENT EXPENSES				₱ -
VIII	OTHER GENERAL REQUIREMENTS				₱ -



Philippine Coast Guard
HEADQUARTERS COAST GUARD LOGISTICS COMMAND
COAST GUARD INFRASTRUCTURE DEVELOPMENT SERVICE
CGBF, Muelle dela Industria, Farola Compound, Binondo
1006 Manila



PROJECT TITLE: PROPOSED TITLE
LOCATION: PROPOSED LOCATION
OWNER: PHILIPPINE COAST GUARD
SUBJECT: SCOPE OF WORKS (SUMMARY) and GENERAL NOTES

SCOPE OF WORKS

1. Conduct survey/inspection on the site of work and examine the premises, so as to fully understand all existing conditions relative to the project.
2. Furnish labor, materials, tools and equipment, facilities and other incidentals for the satisfactory completion of the project.
3. Construction of temporary facilities for the protection of property, work, structure, workmen and other people from damage or injury.
4. Supply of labor, tools and equipment for the excavation in preparation for concreting of footing and column footing, sizes, depths and location as indicated in the plan. Excavation shall be to the depths indicated reckoned either from the natural grade line (NGL) or finish grade whichever is lower.
5. Supply of labor, materials, tools and equipment for the construction of wood forms, hangers and support, in preparation for the concreting works as indicated in the plan.
6. Supply of labor, materials, tools and equipment for the construction of masonry walls for exterior and for interior partition and plastering of masonry walls, location as indicated in the plan including concrete moldings.
7. Provision for the installation of complete ceiling system as indicated in the plan.
8. Supply of labor, materials, tools and equipment for the new installation of doors and other fenestrations complete with all the appropriate hinges and locksets. Provision for the supply and installation of aluminum frame doors, windows (Analok) and Stair Handrails as indicated in the plan.
9. Provision for the installation of wall tiles and floor tiles for Heads (T&B) and ceramic floor tiles for ground floor and 2nd floor Hallways, Vinyl floor tiles for Ground and 2nd Floor Quarters including installation of trims and application of grouts.
10. General (3-coats) painting on all surfaces i.e. masonry and concrete surfaces, ceilings, cornice, baseboards, casing including metal / steel surfaces.

ANNEX F – Scope of Works

11. Provision for the installation / application of membrane water proofing along concrete slab occupied by comfort room.
12. Supply of labor, materials, tools and equipment for the new installation of sanitary and plumbing system complete with all the necessary accessories as provided in the plan.
13. Provision for the new construction of septic vault.
14. Supply of labor, tools, materials and equipment for the installation of electrical wiring system. (i.e Lighting, Power, and ACU's) Complete with all necessary piping and other incidentals.
15. Supply of labor, tools, materials and other incidentals for the installation of electrical equipment needed (i.e. panelboards and circuit breakers etc). All equipment and all through-out the whole system shall be properly grounded.
16. Supply of labor, tools, materials and equipment for the installation of solar panel lighting system as provided on the plan, diagram and drawings. Complete with all the necessary incidentals.
17. Supply of labor, tools, materials and equipment for the installation of Auxiliary wiring systems (Telephone / LAN / Cable TV) complete with all necessary accessories and incidentals.
18. Provision for the installation of grounding system including necessary hand holes and all necessary materials and incidentals, or as indicated in plans.
19. Supply of labor, tools, materials and equipment for the testing of all electrical equipment before and after installation. Test results shall be submitted to owner's representative.
20. Clearing and cleaning in all affected areas during the implementation of the project.

GENERAL NOTES:

1. This simplified scope of works and the specifications are prepared in a concise manner which intention is to save time and to simplify specifications elaborateness. All work covered in the contract shall be executed in the highest form of workmanship and quality.
2. The drawings and specifications are intended to explain each mutually, and anything shown or called for in one and not the other shall be executed as part of the contract as though both are shown and specified.
3. The contractor shall take all the precautionary measures for the protection of adjacent properties from injury, damage or loss arising in connection with this contract. He shall be responsible for all damages to person and property, which may occur with the prosecution of work.
4. The contractor shall be in close coordination with the Philippine Coast Guard Technical Representatives (Coast Guard Infrastructure Development Service) on matters

ANNEX F – Scope of Works

pertaining to engineering works. Any changes in work and materials shall be approved by the authorized representative and shall be to the advantage of the Philippine Coast Guard.

5. All works, materials and undertakings found necessary during the course of the construction shall be executed for the satisfactorily completion of the project, and shall be subject to general conditions and inspection before proper installation.

6. All permits, fees, inspections, material testing, commissioning, etc., necessary for the satisfactorily completion of the project shall be done at the expense of the contractor.

7. Submission of complete six (6) sets of as-built plans of the project, signed and sealed, indicating all measurements and details. Warranties and test results shall also be submitted in six (6) copies for all installed materials. Project warranty (2-years) shall take effect upon actual acceptance of the completed project.

8. All materials to be used shall be subjected to general conditions and inspection before proper installation. Results of material testing shall be submitted to the Coast Guard representative and shall conform to the existing local, national and international standards. It shall be the responsibility of the Contractor to check all the numbers and units as may be indicated on the specifications or drawings and shall supply actual required units.

9. The contractor shall undertake/furnish all the necessary items, materials, tools, equipment, labor, plants, appliances, methods and all operations that may be needed and other incidentals for the satisfactorily completion of the PROPOSED COAST GUARD.

10. The project shall be completed within _____ days and commence upon accept of notice to proceed.

SPECIFICATIONS

1. CONCRETE

a. Concrete compressive strength must be at 3000 psi (20 Mpa). Class "A" mixture, 1:2:4 proportions.

b. Portland Cement shall conform to the requirement of ASTM C-150 Type for Normal Portland cement; Type III for High Early Strength Portland Cement, 40 kg per bar.

c. Reinforcing bars must be at yield strength of 33000 psi $F_y = 230$ Mpa for all concreting works.

d. Aggregates must be $\frac{3}{4}$ " course aggregate, clean and washed. Sand must be clean, hard, coarse river sand conforming to ASTM C-33.

e. Reinforcing bars shall be fixed into the other by means of adequate steel wire ties to form a rigid reinforcement cages or nets. The minimum concrete covering must be 40mm from the outer face of the reinforcement

ANNEX F – Scope of Works

bars to face forms. Main reinforcement bars must be anchored by means of an end hook/bend. Splices must be 0.60 m minimum.

2. MASONRY

Masonry/Hollow masonry units shall be ordinary 6" concrete hollow blocks for exterior walls and 4" concrete hollow block for interior walls plumb and align when installation is finished. Cement must be Portland 40kgs, mixture proportion Class "B". Masonry wall system must be plastered and finished smooth. Reinforcement must be grade 33.

3. STEEL WORKS

Truss members shall conform to ASTM A-36 steel shapes and sizes. Welding electrode shall be an E-7 electrode. All joints must be full welded, cleaned and primed with anti-rust coatings for metal.

4. CARPENTRY AND JOINERY WORKS

a. Stress grade lumber must be seasoned, close grained lumber of specified specie: Tanguile for all carpentry works at high quality of good appearance, without imperfections and suitable for use without waste due to defects and suitable also for natural finished.

b. Plywood shall be of good grade and made of laminated wood strips bonded together with water restraint resin glue, shall be free from defects such as split in veneer, buckling or warping and shall contain to the requirement of the Philippine Trade Standard 631-02.

c. Fiber Cement Board shall be oil impregnated for moisture/water resistance.

d. Use 5mm (1/4") thk. plywood as ceiling boards and 50mm x 50mm (2" x 2") lumber as ceiling joist.

5. HARDWARE

a. All rough hardware required for carpentry works such as nails, screws, etc., must be first class quality.

b. Finishing hardware consisting of locksets, latches, etc., shall be first class quality conforming to the following specifications.

B.1 Door Locksets – shall be durable construction, preferably the product of reputable manufacturer for consistent quality and master keying.

B.2 Hinges must be brass-coated wrought iron steel with non-rising loose pins with button tips and mounting screw of the same materials.

6. ROOFING MATERIALS

ANNEX F – Scope of Works

Aluminum roofing sheets, gutters, valleys, flashing and ridge roll shall be fabricated from cold rolled galvanized iron sheets tempered for extra strength and durability at gauge 26 (0.4 mm). Roof Insulator shall be installed (PE Foam 1"x1"x50m) double sided.

7. TILEWORKS

Ceramic tiles and trims shall be made of clay, hard dense tiles of homogeneous composition.

8. PAINTING WORKS

All painting materials shall be known quality and of known brands with good quality and durability. One brand shall be used in the entire painting job.

9. WOOD PRESERVATIVES

a. All concealed lumber shall be sprayed or applied with anti-wood termites.

b. Surface in contact with masonry or concrete must be coated with creosote or equivalent.

10. ELECTRICAL WORKS:

1. SERVICES

Service voltage inside the building shall be 230-Volts, 1-Phase, 3-Wires, 60 Hertz. Grounding wire shall be provided, sizes and color.

2. WIRING METHODS

a. Primary service conduit shall be in PVC (Polyvinyl Chloride), thick walled, and shall be encased in concrete pedestal.

b. All others shall be done in the following manner or as indicated in the plan:

1. RSC (Rigid Steel Conduit) - for exposed power service entrance
2. IMC (Intermediate Metallic Conduit) - for feeder raceways and all exposed feeders
3. EMT (Electrical Metallic Tubing) - for all exposed power and lighting branch circuit
4. PVC (Polyvinyl Chloride), Thick-Walled - for all power and lighting branch circuit raceways running embedded in concrete slab and partitions.
5. FMC (Flexible Metallic Conduit)/Royal Cord - for all connection between lighting fixtures and junction boxes.
6. LQT (Liquid-Tight) Flexible Conduit - for all exposed connections from conduit to motors or electrical devices/equipment to where vibrations are eminent and to all wet/damped locations.

ANNEX F – Scope of Works

3. GROUNDING

The following shall be grounded in accordance with the drawings and the requirements of the latest edition of the Philippine Electrical Code and Standard Grounding Practices.

- a. All metal frames, cabinets, structures and other metal masses.
- b. All metallic conduits and raceway system including boxes.
- c. All systems, distribution, power, lighting fixtures, outlets (Convenience Outlets and Switches) and all auxiliary system. Sizes as indicated in the plans and drawings.
- d. Provide grounding bond on all metal conduit connections, joints and coupling for effective grounding continuity.
- e. Ground wire shall be green in color for the entire installations, except for the main service feeder and equipment grounding of the MDS (Main Disconnect Switch), which are white and orange, respectively.

4. DISTRIBUTION FEEDERS

Feeder conductors and raceways shall be installed as shown on the plans and no changes in size shall be made without written consent of the Design Engineer/CGIDS. Unless otherwise indicated, feeder conductor shall be continuous without splices between terminals as possible.

5. BRANCH CIRCUITS

The plans indicate the general methods of the installation of all circuit wiring and the outlet which are to be supplied from these circuits. Branch circuits shall be run from outlets to panel boards as direct as the building conditions will allow, no wire of different circuit shall be inserted in one conduit. Where homeruns exceed 30 meters for lighting and power outlet branch circuit, the next higher size of wire shall be used. Exact location of lighting and power outlet shall be properly identified on site.

6. PANELBOARDS

Bus bar shall be made from solid copper with silver plating on connection points. All main CB of each panel board shall be vertically mounted and located above center of branch CB.

Panel boards front cover shall be provided with nameplate and back of the front cover shall have a directory which will indicate the location of the outlets or load served and its actual phase connection to panel board.

The word "space" as indicated in the panel board schedule shall mean that complete bus and insulators etc. shall be included and ready to accept future circuit breaker of the same frame and size as the largest branch circuit breaker or as indicated in the load schedule.

Panel boards shall be provided with grounding kit/bus terminals with number of lugs equal to the number of branch circuit plus two spares. Splicing of ground wire within the panel boards shall not be accepted.

7. WIRE/CABLE GUTTERS/TRAY AND PULLBOXES

Wire gutters, cable trays, cabinets and common pullboxes shall be fabricated from 1.9mm thick galvanized steel plate/sheet powder coated and bake enamel, beige/gray paint finished. Details as provided in the working plans.

Junction, utility, and splice boxes embedded in concrete slabs and partitions shall be Ga. #14, deep type made of GI materials to be coated with primer paint before installation. PVC boxes are not accepted. All outlet boxes shall have ground terminal for bonding of ground wires.

8. RACEWAYS

Conduits and tubing shall be as specified in the Material Specifications. No more than four (4) 90 degrees bends shall occur in any run. When it becomes necessary to have more than four (4) 90 degrees or a total of 360 degrees offsets and bends in any run, an intermediate pullbox shall be provided to facilitate wire/cable pulling. Methods of installation shall be as stated in Article 2.

Exposed conduits shall be run in parallel to or perpendicular with building lines and shall be secured fastened in place by means of approved supports and fastenings. Conduit supports shall be fastened to wall by means of screw or bolts with expansion sleeves or directly welded on steel building frames. The use of wooden or lead plugs is not permitted. All ends shall be firmly attached to cabinets or boxes by means of locknut and bushings.

Metal conduit bushing shall be a grounding type. Field bends shall not be allowed for rigid steel conduit larger than 20mm in diameter. Threadless couplings and connections used with tubing shall be of concrete-tight type. Fields bends in tubing shall have a radius of curvature not less than those specified in the latest edition of Philippine Electrical Code. No tubing smaller than 15mm in diameter shall be used.

For more than one exposed conduit a unistrut type channel shall be used with an angular steel hanger attached on concrete slab by means of expansion bolt. Hangers shall be two (2) at every length of conduit. Conduit or tubing shall be attached on the unistrut channel by means of u-clamp/bolt on both ends.

Exposed conduits shall be treated with read lead primer and finished with gray color paint. All field cut threads shall be painted with galvanizing paint.

9. INSTALLATION TEST

Test shall be carried out in order that the Electrical Contractor can guarantee the security of the wiring connections, tightness of terminals, the insulation and ground continuity of the system.

10. TEST AND TEST SEQUENCE

ANNEX F – Scope of Works

For all power circuits the following tests shall be carried out in the order specified and the results recorded on the test sheet. Each circuit test sheet shall be signed off by the Field Work Engineer and Philippine Coast Guard Electrical Engineer before the circuit may be energized.

The Electrical Contractor shall ensure that test engineers are suitably qualified, trained and provided with appropriate test equipment. Test engineers shall not be taken from installation teams but shall be brought into site as independent individuals. They will not, therefore be influenced by the Contractor people.

MATERIAL SPECIFICATIONS

1. Conformity to the standard specification

Materials to be used shall conform to the standard and specifications set by the following where such standard and specifications have been established for particular type of materials or equipment in question.

- a. US UNDERWRITER'S LABORATORIES
- b. US NATIONAL BOARD OF FIRE UNDERWRITER'S
- c. NATIONAL ELECTRICAL MANUFATURER'S ASSOCIATION
- d. INSULATED POWER CABLE
- e. AMERICAN STANDARD ASSOCIATION
- f. BRITISH INTERNATIONAL STANDARD
- g. BUREAU OF STANDARD, DEPARTMENT OF TRADE AND INDUSTRY
- h. PHILIPPINE NATIONAL STANDARD

2. WIRES AND CABLES

Wires shall be recent manufacture and in no case be more than one year old. Any conductor whose insulation shows sign of deterioration within one year from final acceptance of work shall be replaced by the Contractor at his own expense. Sufficient length of slack shall be left inside boxes, hand holes/manholes and for splicing and/or connecting to apparatus without straining the cable. Wires and cables shall be copper, soft drawn and annealed, of 98% conductivity with insulation rated at 600 Volts.

Feeders and Sub-feeders	-	use type THW only
Branch Circuits	-	use type THHN/THWN only
Ground Wires	-	use type TW only
Earthing	-	use Bare Copper Wire

Wire/Cable insulation shall be color coded as follows:

1. Line 1 - Red; Line 2 - Black; Line 3 - Blue
2. Ground Wires - Green on sub-feeders and branch circuits
 - White from entrance to MDS, ATS, and MDP
 - Orange from MDS to Grounding Rod

ANNEX F – Scope of Works

3. Control Wires (lighting) - Yellow

All joint or splice for 8.0 mm² or larger shall be made with a double indent mechanical compression connector. After the conductor have been made mechanically and electrically secured, the entire joint shall be covered with rubber and plastic tape to make the insulation of the joint/splice equal to the insulation of the conductors and all the connectors shall be UL approved. All feeders shall be properly marked as to number of phase, wire size, and feeder designation and voltage capacity.

3. CONDUITS

a. RIGID STEEL CONDUIT (RSC)

Shall be hot-dipped galvanized steel pipe made on standard weight with smooth circular bore and shall conform to local and US specifications. Conduit shall be in standard length of 3.05 meters including coupling reamed and threaded on each end, to be used on sub-feeder raceways.

b. INTERMEDIATE METAL CONDUIT (IMC)

Shall be hot-dipped galvanized standard weight pipes, made of mild steel with smooth circular bore and shall conform to local and US specifications. Standard length of 3.05 meters including coupling reamed and threaded on each end, to be used on feeders.

c. ELECTRICAL METTALIC TUBING (EMT)

Shall be made of mild steel pipe, lead tin coated and hot-dipped galvanized finished with smooth circular bore standard weight pipe. Standard length of 3.00 meters, to be used on all exposed lighting and power circuit, and to all fire alarm installations whether exposed or embedded in concrete.

d. NON-METALLIC CONDUIT (PVC)

CS40 smooth wall rigid non-metallic conduit conforming to Philippine National Standard No.14 for PVC pipes. Conduit shall be in standard length 3.05 meter with bell end on one side. To be use on embedded installations and running in concrete slab/walls of lighting and power branch circuit raceways and all other auxiliary system raceways and power feeder, except as stated in 3c.

e. LIQUID TIGHT (LQT) FLEXIBLE METALLIC CONDUIT

Shall be manufactured from an electro-galvanized steel flexible inner core which is pressure coated with an oil resistant, high temperature grade of plasticized PVC. The PVC is keyed into the corrugations of the inner steel flexible core, preventing the PVC from wrinkling when the conduit is bent to its minimum bend radius.

ANNEX F – Scope of Works

4. PANELBOARDS AND CIRCUIT BREAKERS

a. CIRCUIT BREAKERS

Used only one brand of circuit breaker for the entire project, catalogs must be submitted and approved by CGIDS before ordering has to be made.

b. PANELBOARD ENCLOSURES

Panelboard enclosures shall be locally manufactured as per standard set in the latest edition of the Philippine Electrical Code as for size, gauge, and finish, or as provided in the plans. They shall be made of galvanized sheet powder coated and baked enamel finish.

5. LIGHTING FIXTURES

Lighting fixtures shall be as describe or detailed in the plans. Samples of fixtures shall be submitted for approval of CGIDS prior to fabrication or installations.

6. WIRING DEVICES

Convenience Outlets – Universal Type rated at 10 Amperes, 250-Volts, with grounding terminal for all general purpose outlets, duplex or one-gang.

7. OTHERS

All other materials to be used not mentioned herewith shall be approved by CGIDS, for both location and purpose intended, and shall be brand new.

ANNEX F – Scope of Works

PROJECT TITLE: PROPOSED TITLE

LOCATION: PROPOSED LOCATION

OWNER: PHILIPPINE COAST GUARD

PROJECT COST: ₱

SUBJECT: SCOPE OF WORKS (SUMMARY) and GENERAL NOTES

Prepared and Submitted by:

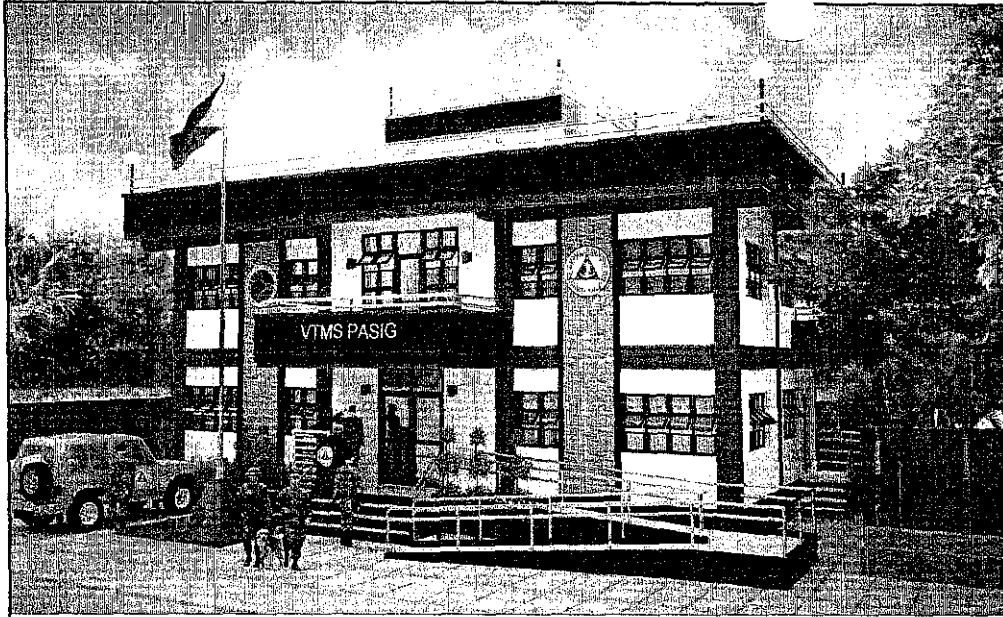
Checked by:

RECOMMEND APPROVAL:

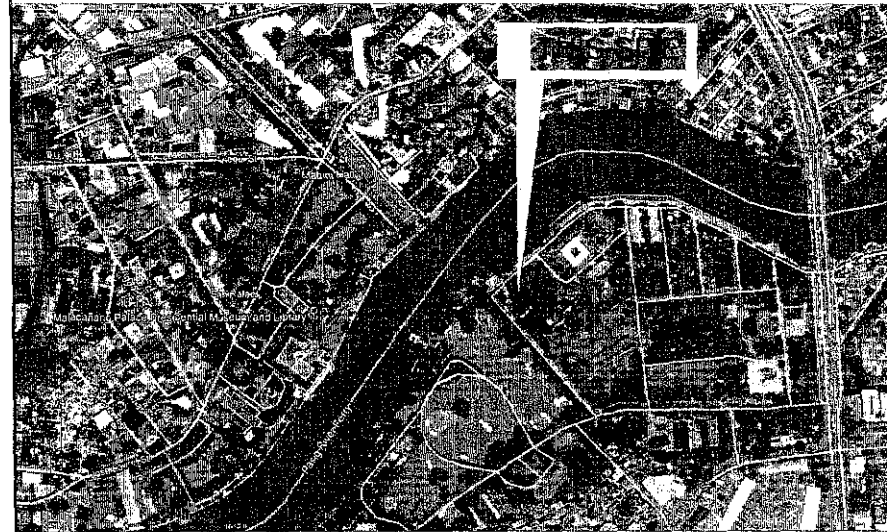
APPROVED / DISAPPROVED:

Commandant, Philippine Coast Guard

ANNEX 6 - Drawing Plans/Design



1 EXTERIOR PERSPECTIVE
SCALE NTS



2 VICINITY MAP
SCALE NTS

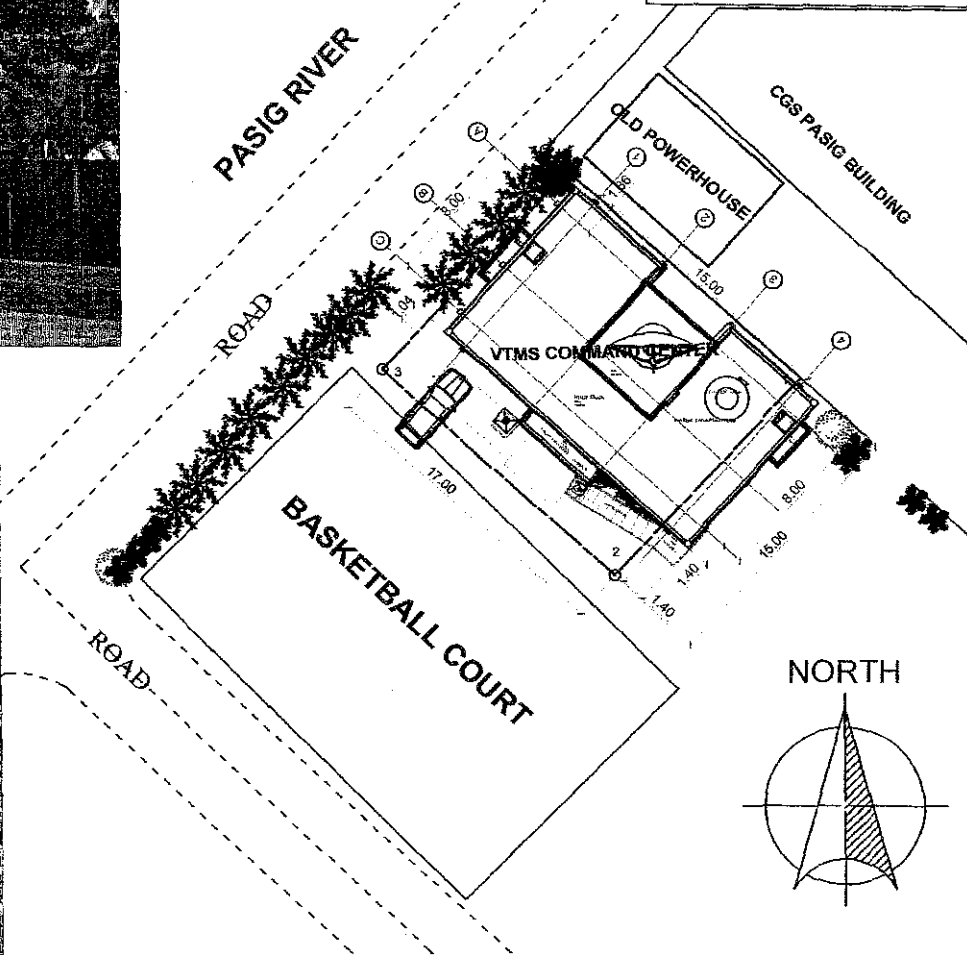
BUILDING COORDINATES

LAT 14°35'41.82"
LONG 120°59'50.18"

TECHNICAL DESCRIPTION		
LINE	BEARING	DISTANCE
LOT VTMS COMMAND CENTER		
1-2	S.40-59W.	15.000 M.
2-3	N.49-01W.	17.000 M.
3-4	N.40-59E.	15.000 M.
4-1	S.49-01E.	17.000 M.
AREA= 255 Sqm		

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3 SITE DEVELOPMENT PLAN
SCALE 1:300m



PHILIPPINE COAST GUARD
HEADQUARTERS PHILIPPINE COAST GUARD
139 25TH ST. PORT AREA MANILA
COAST GUARD INFRASTRUCTURE DEVELOPMENT SERVICE

PROJECT TITLE : PROPOSED COAST GUARD VTMS PASIG BUILDING
LOCATION : MALACAÑANG PARK, MANILA
OWNER : PHILIPPINE COAST GUARD

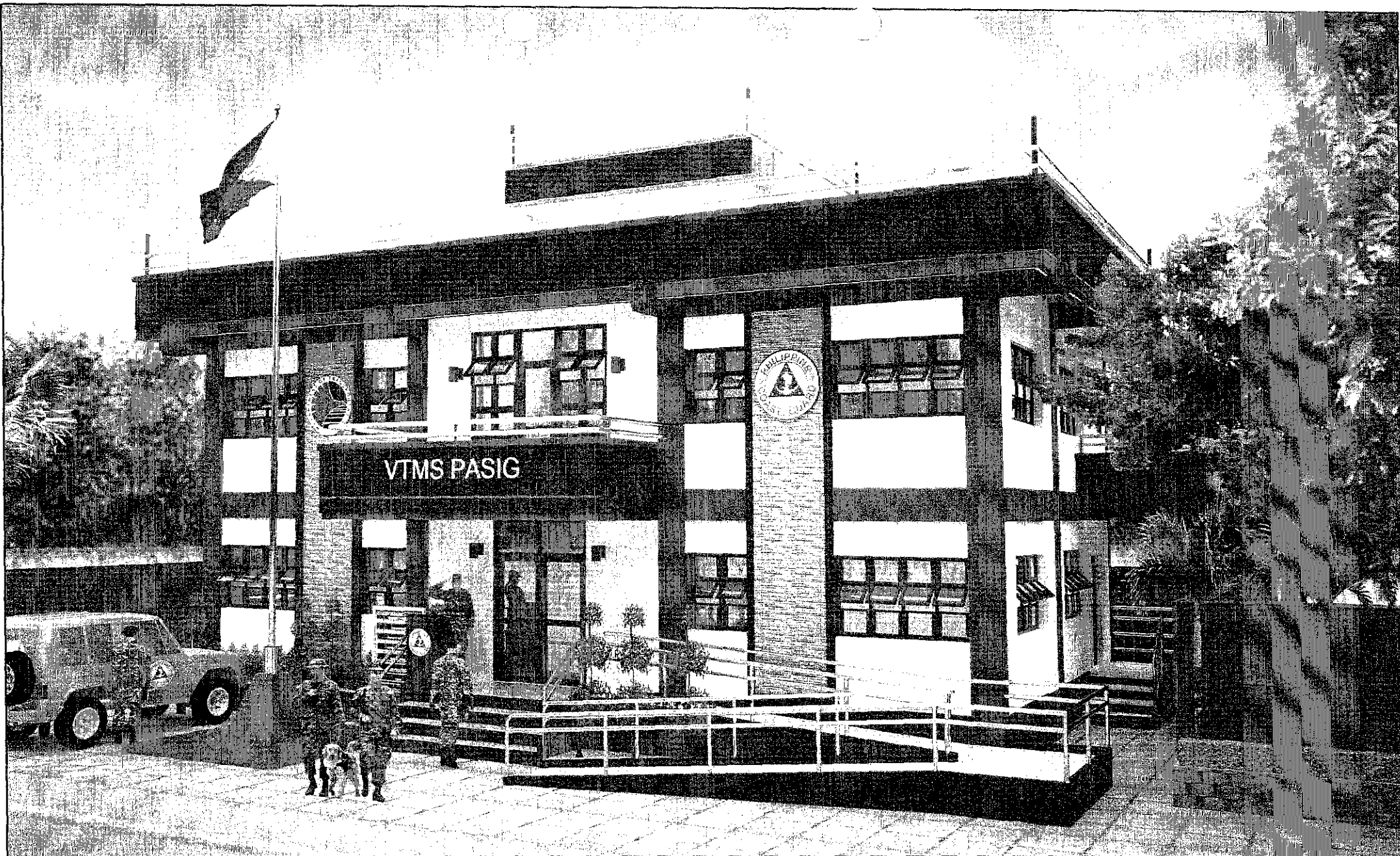
DRAWN BY: PO2 Orlando C Valle PCG
POIC Architectural Branch, CGIDS
REVISION : DATE

CHECKED AND SUBMITTED BY: Engr. Hilario A Adaya, REE
Engineer IV, CGIDS

RECOMMENDED BY: LCDR RAY GARNET C GAMALLO PCG
Deputy Commander, CGIDS

APPROVED BY: CDR LAUREL PAUL N MARIANO JR PCG
Commander, CGIDS

SHEET NO.
A 1
1



PHILIPPINE COAST GUARD

HEADQUARTERS PHILIPPINE COAST GUARD
136 25TH ST. PORT AREA MANILA

**COAST GUARD INFRASTRUCTURE
DEVELOPMENT SERVICE**

PROJECT TITLE : PROPOSED COAST GUARD VTMS PASIG BUILDING
LOCATION : MALACANANG PARK, MANILA
OWNER : PHILIPPINE COAST GUARD

DRAWN BY:
PO2 Orlando C Valle PCG
POIC Architectural Branch, CGIDS

REVISION	DATE
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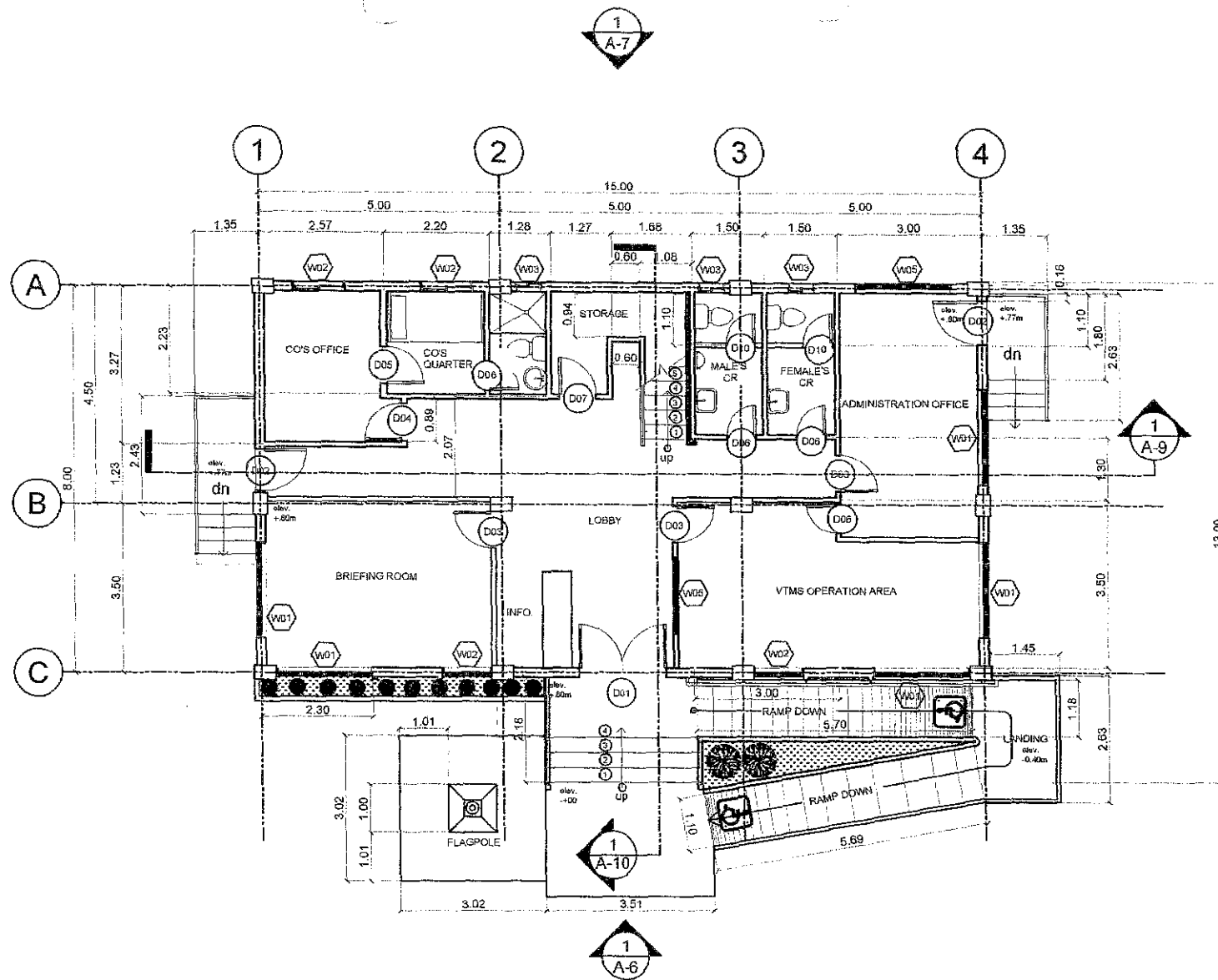
CHECKED BY:
Engr. Hilario A Adaya, REE
Engineer IV, CGIDS

RECOMMENDED BY:
LCDR RAY GARNET C GAMALLO PCG
Deputy Commander, CGIDS

APPROVED BY:
CDR LAUREL PAUL N MARIANO JR PCG
Commander, CGIDS

SHEET NO.

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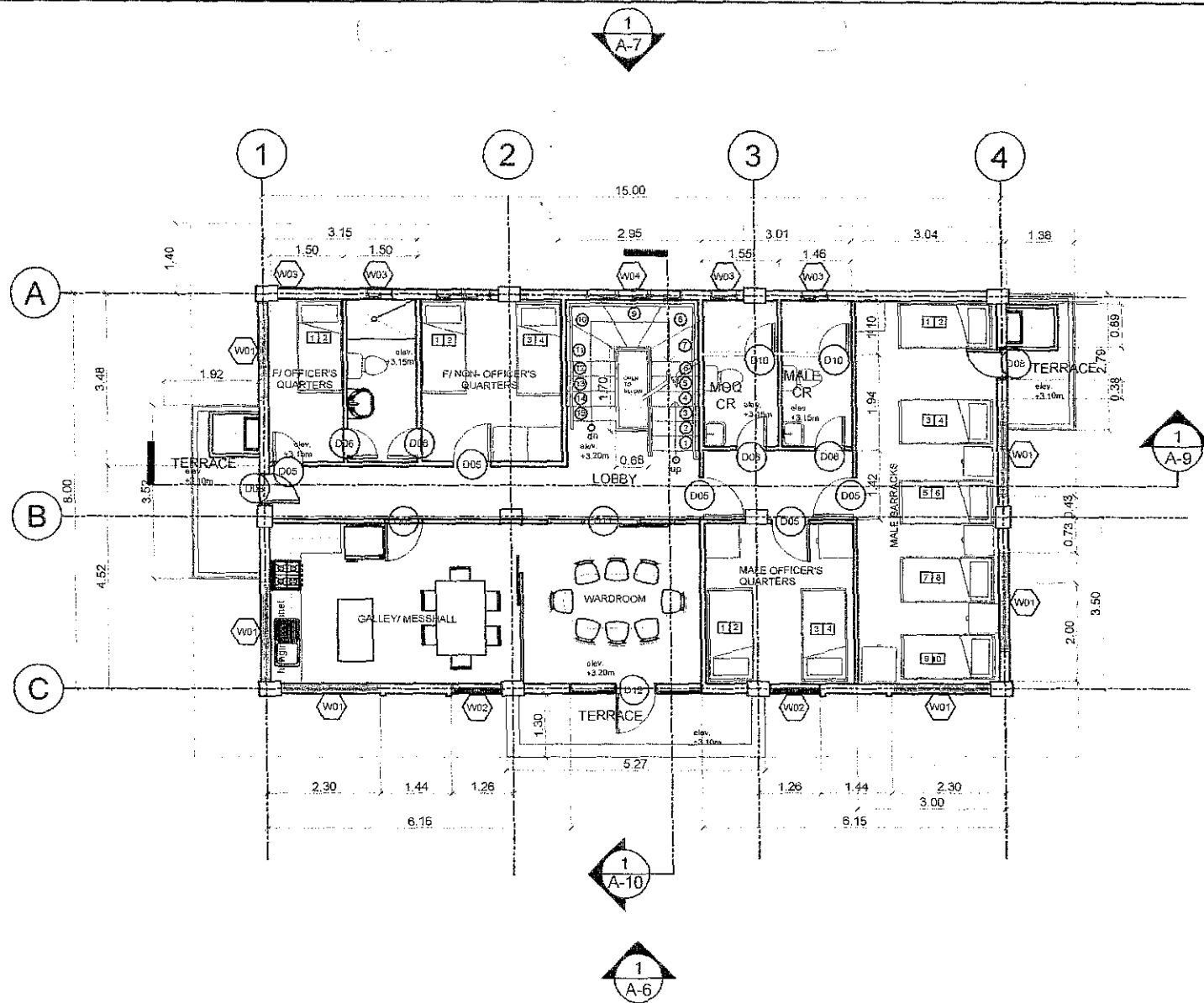
1
A-2
GROUND FLOOR PLAN
 SCALE 1:100m



PHILIPPINE COAST GUARD
 HEADQUARTERS PHILIPPINE COAST GUARD
 139 25TH ST. PORT AREA MANILA
**COAST GUARD INFRASTRUCTURE
 DEVELOPMENT SERVICE**

PROJECT TITLE : PROPOSED COAST GUARD VTMS PASIG BUILDING LOCATION : MALACANANG PARK, MANILA OWNER : PHILIPPINE COAST GUARD	DRAWN BY : PO2 Orlando C Valle PCG POIC Architectural Branch, CGIDS	CHECKED BY : Engr. Hilario A Adaya, REE Engineer IV, CGIDS	RECOMMENDED BY : LCDR RAY GARNET C GAMALLO PCG Deputy Commander, CGIDS	APPROVED BY : CDR LAUREL PAUL N MARIANO JR PCG Commander, CGIDS
REVISION : DATE :				

SHEET NO.
A/2
2



1 SECOND FLOOR PLAN
 A-3 SCALE 1:100m



PHILIPPINE COAST GUARD
 HEADQUARTERS PHILIPPINE COAST GUARD
 138 25TH ST. PORT AREA MANILA
**COAST GUARD INFRASTRUCTURE
 DEVELOPMENT SERVICE**

PROJECT TITLE : PROPOSED COAST GUARD VTMS PASIG BUILDING
 LOCATION : MALACANANG PARK, MANILA
 OWNER : PHILIPPINE COAST GUARD

DRAWN BY:
 PO2 Orlando C Valle, PCG
 POIC Architectural Branch, CGIDS

REVISION	DATE

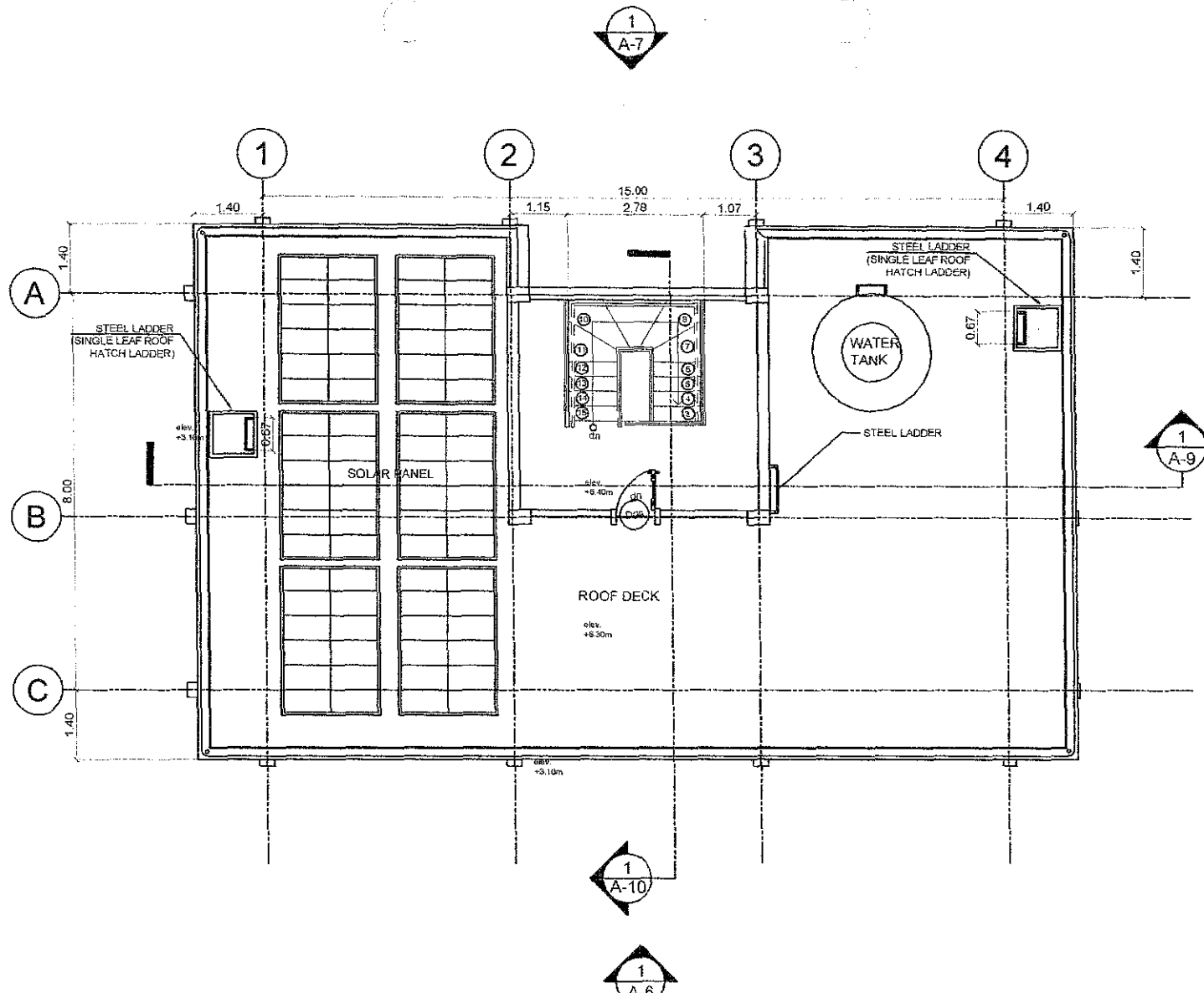
CHECKED BY:
 Engr. Hilario A Adaya, REE
 Engineer IV, CGIDS

RECOMMENDED BY:
 LCDR RAY GARNET C GAMALLO PCG
 Deputy Commander, CGIDS

APPROVED BY:
 CDR LAUREL PAUL N MARIANO JR PCG
 Commander, CGIDS

SHEET NO.

A 3
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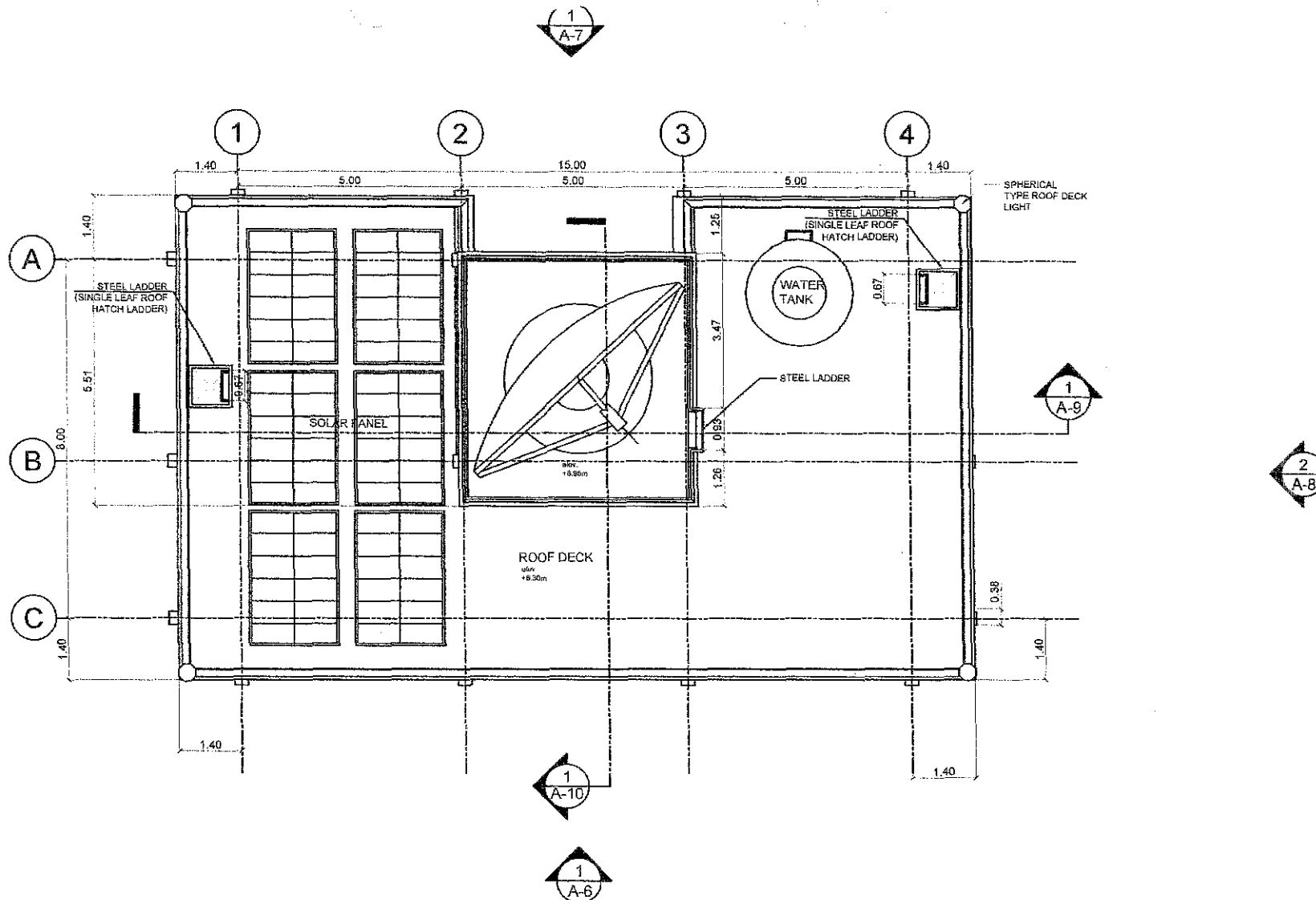


1 **ROOF DECK FLOOR PLAN**
A-4 SCALE 1:100m



PHILIPPINE COAST GUARD
 HEADQUARTERS PHILIPPINE COAST GUARD
 138 25TH ST. PORT AREA MANILA
**COAST GUARD INFRASTRUCTURE
 DEVELOPMENT SERVICE**

PROJECT TITLE : PROPOSED COAST GUARD VTMS PASIG BUILDING LOCATION : MALACANANG PARK, MANILA OWNER : PHILIPPINE COAST GUARD		SHEET NO. A 4 4	
DRAWN BY: PO2 Orlando C Valls PCG POIC Architectural Branch, CGIDS		CHECKED BY: Engr. Hilario A Adaya, REE Engineer IV, CGIDS	
REVISION DATE		RECOMMENDED BY: LCDR RAY GARNET C GAMALLO PCG Deputy Commander, CGIDS	
		APPROVED BY: CDR LAUREL PAUL N MARIANG JR PCG Commander, CGIDS	



1 UPPER ROOF DECK FLOOR PLAN
 A-5 SCALE 1:100m



PHILIPPINE COAST GUARD
 HEADQUARTERS PHILIPPINE COAST GUARD
 139 25TH ST. PORT AREA MANILA
**COAST GUARD INFRASTRUCTURE
 DEVELOPMENT SERVICE**

PROJECT TITLE : PROPOSED COAST GUARD VTMS PASIG BUILDING		CHECKED BY:		RECOMMENDED BY:		APPROVED BY:		SHEET NO. A/5 5
LOCATION : MALACANANG PARK, MANILA		Engr. Hilario A Adeya, REE Engineer IV, CGIDS		LCDR RAY GARNET C GAMALLO PCG Deputy Commander, CGIDS		CDR LAUREL PAUL N MARIANO JR PCG Commander, CGIDS		
OWNER : PHILIPPINE COAST GUARD	DRAWN BY: PO2 Orlando C Valle PCG PCIG Architectural Branch, CGIDS		DATE					