

# **BID PROPOSAL**

**Supply, Delivery, Installation, Integration, and  
Testing & Commissioning of MRT-7 Stations and  
Depot Electronics Networks  
(FDAS + ACS Integration)**

*Submitted to:*

**SMC MASS RAIL TRANSIT 7, INC.**

c/o San Miguel Holdings Corporation —

Bidding & Procurement Group

*Submitted by:*

**CMR PHILIPPINES INC.**

174B Bantayan Extension, Palingon-Tipas

Taguig City 1633

Bid Submission Date: 8 May 2026

Bid Validity: Six (6) months

## **A. Executive Summary**

CMR PHILIPPINES INC. is pleased to submit this Bid Proposal for the role of System Integrator on the SMC MRT-7 Stations and Depot Electronics Networks Integration Project. Our scope is the FDAS and ACS Workstation Computer Systems at the Operation Control Center (OCC) and the Fire Command Center Room (FCCR) of the Depot Administration Building, plus integration gateways at each of the 12 MRT-7 stations and approximately 5 depot buildings, plus the inter-building cabling and field devices at Genset Building and Guard Houses per the Responsibility Matrix.

The integration platforms are model-locked to the Civil-Contractor-installed panels: Notifier OnyxWorks for FDAS (compatible with Notifier NFS2-3030 panels per ANNEX\_D1) and Suprema BioStar 2 Enterprise for ACS (compatible with Suprema CoreStation CS-40 controllers per ANNEX\_D2). Both platforms are supplied with perpetual licenses per the BOQ specification.

Total contract duration is 180 calendar days from issuance of Notice to Proceed. Phase 1 (Stations to OCC) and Phase 2 (Depot Buildings to FCCR) are delivered in parallel. Total bid price is PHP 26,665,000.00, VAT-inclusive, valid for six (6) months from submission.

## B. System Architecture

The integration architecture binds the 12 stations and the Depot Administration Building (OCC + FCCR) into a unified centralized monitoring system with redundant head-ends. Phase 1 establishes the OCC as the primary monitoring center; Phase 2 adds the FCCR as the secondary control center and ties in the depot operations buildings.

### System Architecture — FDAS + ACS Centralized Monitoring

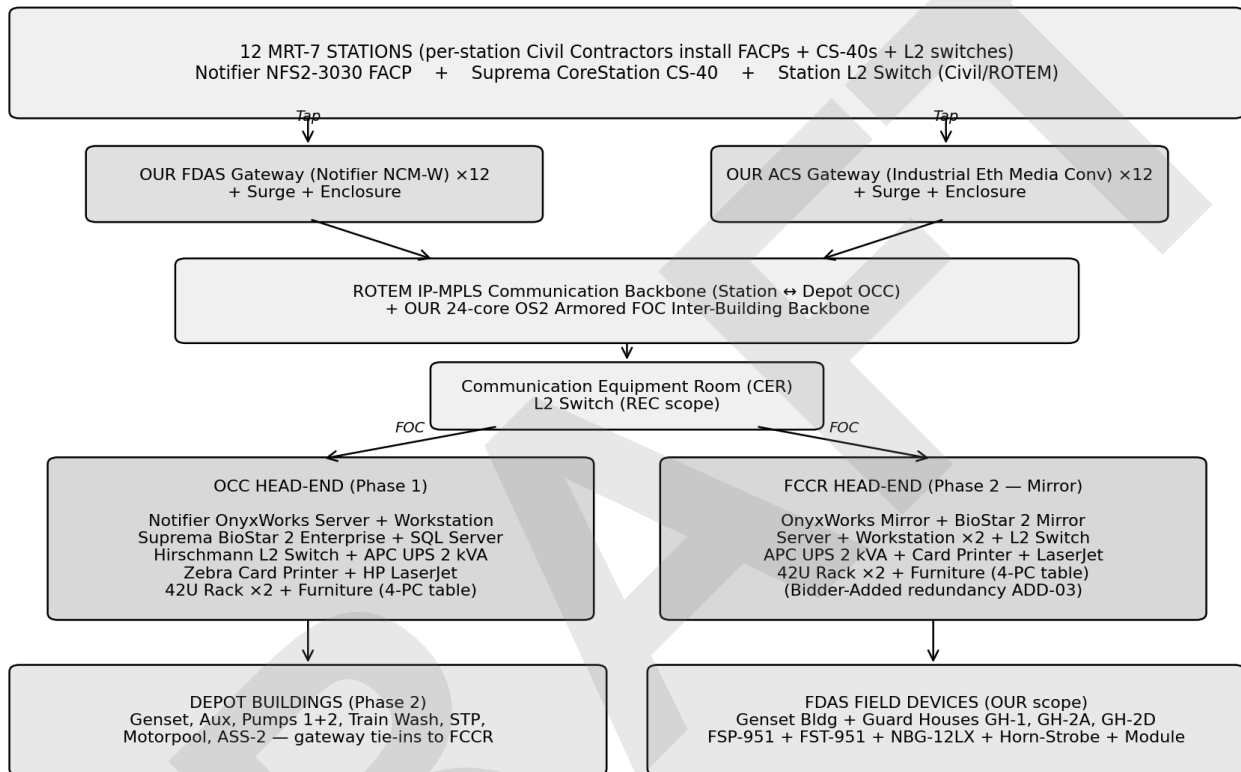


Figure 1 — System Architecture: FDAS + ACS Centralized Monitoring

Each of the 12 stations connects via a Notifier NCM-W gateway (FDAS) and an industrial Ethernet media converter (ACS) to the station L2 switch (Civil/ROTEM scope), which uplinks to ROTEM's IP-MPLS backbone. The backbone terminates at the Communication Equipment Room (CER) at the Depot Administration Building, where our FOC patch cables connect to the OCC head-end. A 24-core OS2 armored FOC inter-building backbone, pulled through the Civil-Contractor-built underground ductbank, distributes the centralized monitoring to the FCCR mirror and to the depot buildings.

## C. Responsibility Split

The project entails coordination with approximately 15-18 contracting parties: the per-station Civil Contractors (one per station for Stations 1-12), the Depot Civil Contractor(s), ROTEM-EEI Consortium (REC), and SMC MRT7, Inc. The Interface Coordination Document (ICD) per TOR §4.6 is the master coordination instrument; an Interface Manager and Interface Engineer per TOR §8.5 own ICD authoring and weekly coordination during construction.

**Responsibility Split — FDAS + ACS Integration**

Scope Item	BIDDER	Sta. Civil	Depot Civil	REC	SMC/DOTr
FDAS FACPs (NFS2-3030) — 12 stations	.	✓			
FDAS FACPs (NFS2-3030) — depot bldgs	.		✓		
FDAS Field Devices — 12 stations	.	✓			
FDAS Field Devices — Genset + 3 GH	✓				
FDAS Workstation @ OCC + FCCR	✓				
FDAS Network Gateway (NCM-W) ×17	✓				
ACS Controllers (CS-40) — 12 stations	.	✓			
ACS Controllers (CS-40) — depot bldgs	.		✓		
ACS Workstation @ OCC + FCCR	✓				
ACS Ethernet Gateway ×17	✓				
Station L2 Switches	.	✓		✓	
CER L2 Switch (Depot Admin Bldg)	.			✓	
Inter-Building FOC Cable + Termination	✓				
Underground Conduit + Manholes (ductbank)	.		✓		
IP-MPLS Communication Backbone	.			✓	
Surge Protection on All Inter-Bldg Cables	✓				
Programming (OnyxWorks + BioStar 2)	✓				
Testing & Commissioning	✓				✓
FAT @ Notifier USA + Suprema Korea	✓				✓
Training + O&M Manual + Spare Parts	✓				
Acceptance + Handover Sign-off	.				✓

Figure 2 — Responsibility Matrix: Scope Allocation Across Contracting Parties

## D. Project Schedule

Total project duration is 180 calendar days from Notice to Proceed (NTP). The Gantt chart below presents the master schedule. A Primavera P6 .xer file accompanies this Technical Proposal per TOR §4.11; monthly schedule updates are delivered to the Owner per TOR §8.13.

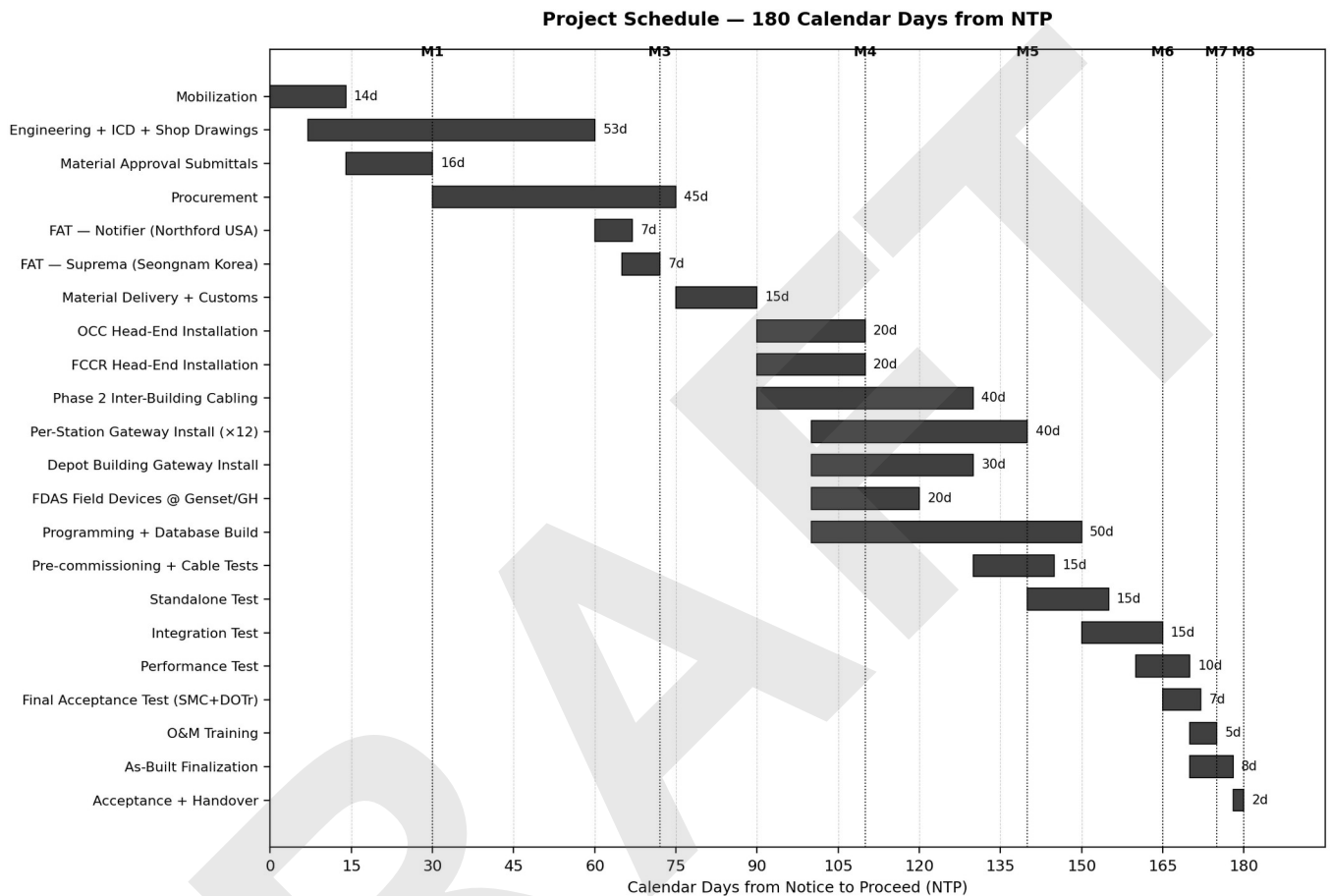


Figure 3 — Master Schedule: 180-Calendar-Day Gantt with M1–M8 Milestones

### Key milestones are:

- M1 (Day 30) — Engineering deliverables submitted (shop drawings, ICD, software design)
- M3 (Day 72) — FAT signoffs complete at Notifier (USA) and Suprema (Korea)
- M4 (Day 110) — OCC head-end installation complete and powered
- M5 (Day 140) — Inter-building cable terminated; Phase 2 head-end installation underway
- M6 (Day 165) — Phase 2 commissioning report signed
- M7 (Day 175) — Training certificates issued; O&M Manual delivered
- M8 (Day 180) — Taking-Over Certificate issued

Phase 1 and Phase 2 run in parallel where the Responsibility Matrix permits. Critical path runs through procurement, FAT travel, installation Phase 2 (inter-building cable + FCCR head-end), Phase-2 T&C, and

training/handover. Float buffers are built in at the per-station gateway-install milestone and the FAT scheduling milestones.

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## E. Manpower Plan

Full-time on-site team for the 180 calendar days: Project Manager (REE), Engineer-in-charge (REE), and 2 Site Supervisors. Part-time engagements: PEE supervisor per R.A. 9292, Interface Manager, and Interface Engineer. Trade teams scaled per phase as follows:

<b>Project Phase (Days)</b>	<b>Headcount Range</b>	<b>Activities</b>
<b>Days 0-30</b>	4-6	Engineering + admin
<b>Days 30-90</b>	5-7	Procurement + FAT travel
<b>Days 90-130</b>	8-12	Installation peak
<b>Days 130-160</b>	7-9	Programming + pre-T&C
<b>Days 160-180</b>	5-7	T&C + acceptance

Total person-months: approximately 81. Total productive man-hours: approximately 2,500. Total PM/engineering/site-supervision overhead: approximately 8,000 hours. Combined: approximately 10,500 man-hours.

## **F. Scope Inclusions and Exclusions**

### **Inclusions (in our scope):**

- FDAS + ACS Workstation Computer Systems at OCC and FCCR — 4 head-end systems total
- Network interface cards / gateways / media converters at 12 stations + ~5 depot buildings — approximately 34 gateways
- Inter-building FOC and STP cables for Phase 2
- Above-ground containment (EMT, GRC, cable tray, pull boxes) — 1,100 m EMT + 200 m GRC + 30 pull boxes + 50 m cable tray (BOQ item P2-08b)
- FDAS field devices at Genset Building and 3 Guard Houses (smoke, heat, manual pull, horn-strobe, monitoring modules)
- All cable terminations, surge protectors, raceway, conduit at OCC, FCCR, and at building stub-ups
- Engineering deliverables: design drawings, shop drawings, ICD, T&C plan, method statements, as-builts (signed and sealed)
- Programming, T&C, training, 2-year spare-parts kit, 3-year software support per TOR §4.18-4.23

### **Exclusions (out of our scope):**

- Site Development underground conduit, ductbank, and manholes (TOR §9.1; Civil + ROTEM scope)
- FDAS FACPs (Notifier NFS2-3030) at all 12 stations and most depot buildings (per-station Civil / ROTEM)
- ACS controllers (Suprema CS-40) at all stations and most depot buildings (per-station Civil / ROTEM)
- In-station cabling, in-station devices, in-station L2 switches, in-station Access Gathering Panels (per-station Civil)
- Communication Network IP-MPLS backbone Station ↔ OCC (REC scope)
- Equipment Monitoring and Control System / EMCS — outside FDAS+ACS integration scope per TOR §4
- Stations 13 (Tala) and 14 (San Jose del Monte) — TOR §4.1 limits scope to Stations 1-12

## **G. Testing and Commissioning**

Testing and Commissioning follows the three-stage TOR §4.21 protocol:

1. Standalone Test — each panel-node and workstation system functionally verified in isolation. Approximately 4-6 hours per FDAS panel; 3-4 hours per ACS controller.
2. Integration Test — end-to-end station-FACP-to-OCC and building-FACP-to-FCCR alarm and event flows, including acknowledge, silence, reset, and audit-trail verification (6-8 hours per path).
3. Performance Test — multi-alarm scenarios, load testing, response-time measurement, and history-event recording.

Pre-commissioning includes cable continuity tests, FOC OTDR tests, and Cat6A wire-test per ANNEX\_C1 §1128. Total T&C effort is estimated at approximately 600 man-hours.

### **Factory Acceptance Tests (FAT):**

FAT at the Notifier facility in Northford, Connecticut, USA, and at the Suprema facility in Seongnam, South Korea, are conducted by the Owner, the DOTr representative, and the Contractor witness team prior to delivery, per TOR §3.8 + §8.11. FAT travel costs are itemized as separate BOQ line items at the bottom of the BOQ (ADD-04 + ADD-05) for cost transparency.

## **H. Training, Spare Parts, and Long-Term Support**

Training per TOR §4.22 covers Operation and Maintenance of both FDAS and ACS systems for MRT-7 personnel and the DOTr representative. Sessions are delivered at the depot OCC and FCCR with classroom and hands-on practice. Coverage: OnyxWorks GUI, BioStar 2 GUI, TLS 1.2 cert renewal, and software-upgrade procedure per TOR §4.23.

Handover deliverables include signed and sealed as-built drawings (soft + hard copy per TOR §4.16), the O&M Manual (FDAS + ACS), the recommended 2-year spare-parts list with justification and metrics per TOR §4.18-4.19, and training certificates for all attendees.

A 12-quarter Preventive Maintenance Schedule covering the 2-year warranty plus 3-year software support period is documented in Attachment #10 (List of Equipment + Preventive Maintenance Schedule).

## I. Commercial Summary

### Total Bid Price:

In figures: **PHP 26,665,000.00**

In words: **Twenty-Six Million Six Hundred Sixty-Five Thousand Pesos**

VAT-inclusive per Email §2 + TOR §3.4. Valid for six (6) months from submission per TOR §11.9.

### Bill of Quantities Summary:

Section	Subtotal (PHP)
<b>0.0 General Requirements</b>	7,310,000
<b>Phase 1 — Stations to OCC Integration</b>	6,990,000
<b>Phase 2 — Buildings to FCCR Integration</b>	3,560,000
<b>Bidder-Added Items (FCCR Mirror, FAT, Spares, Training, Support)</b>	8,805,000
<b>GRAND TOTAL (VAT-inclusive)</b>	<b>26,665,000</b>

### Commercial Terms:

- Lump Sum bid per TOR §11.3
- Three surety bonds per TOR §11.6.1: Advance Payment + 20% Performance + 10% Warranty
- 10% retention on progress billings, released at Final Taking-Over Certificate
- Liquidated damages 1/10 of 1% per day of delay per TOR §11.5
- 2-year warranty from acceptance with 24-hour response time per TOR §10
- 3-year software support per TOR §4.23
- All material UL-listed and NOT-China origin per TOR §8.8 + §8.10

Detailed BOQ with DUPA per Philippine bid practice is submitted in Envelope 2 (Commercial Proposal) in PDF + MS Excel format per TOR §11.11.2.

## **J. Attachments to Technical Proposal (per TOR §11.10)**

The fourteen (14) prescribed attachments accompany this Technical Proposal:

1. Bidder's Updated Company Profile (PCAB, Mayor's + Business Permits, SEC, BIR, BOC)
2. Bill of Materials (BOM) — signed
3. Audited Financial Statements (last 3 years) — signed and notarized
4. Gantt chart / Primavera P6 schedule — signed
5. Table of Organization — signed
6. Manpower Schedule — signed
7. CVs of Key Managers and Engineers — signed
8. List of Accredited Product and Equipment Suppliers — signed
9. List of Completed Projects last 10 years — signed; with Owner Final Acceptance Certificates and PRC licenses
10. List of Equipment + Preventive Maintenance Schedule — signed
11. Notarized Cert of Non-Inclusion in Government Blacklist — signed and notarized
12. Updated Calibration Certificates of Equipment and Instruments
13. Training Certificates of Technical and Safety Personnel — signed
14. Brochures + Technical Datasheets + Certificates per Email §8 (Notifier NFS2-3030, Suprema CS-40, OnyxWorks, BioStar 2, supplier-specific certificates)

## **K. Comments on Draft Contract**

Per TOR §11.11.3, the draft contract is deemed reviewed and accepted; no comments submitted at this time.

*Respectfully submitted,*

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**[Authorized Signatory Name]**

[Title]

CMR PHILIPPINES INC.

[Date and Place]

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## **Appendix 1 — Cover Letter (Transmittal)**

*[BIDDER LETTERHEAD]*

8 May 2026

**Ms. Susan Y. Yu**

Sr. Vice President — Procurement

San Miguel Holdings Corporation

Podium B, SMC Head Office Complex

#40 San Miguel Avenue, Ortigas Center

Mandaluyong City

c/o Mr. John Francis M. Morse / Ms. Joy de Jesus

**Subject: Bid Proposal — Supply, Delivery, Installation, Integration, and Testing & Commissioning of MRT-7 Stations and Depot Electronics Networks (FDAS + ACS Integration)**

Dear Ms. Yu,

CMR PHILIPPINES INC. submits the attached bid for the SMC MRT-7 Stations and Depot Electronics Networks Integration project, as invited by your office.

The bid covers Phase 1 (Stations to Depot Admin OCC integration) and Phase 2 (Depot Buildings to Depot Admin FCCR integration), with our scope limited to FDAS and ACS integration across 12 stations and the depot compound, per Terms of Reference (TOR) Section 4.

**Total bid price (VAT-inclusive, valid for six (6) months from submission):**

In figures: PHP 26,665,000.00

In words: Twenty-Six Million Six Hundred Sixty-Five Thousand Pesos

The proposal is anchored to the manufacturer-specified panels per ANNEX\_D1 and ANNEX\_D2: Notifier NFS2-3030 FACPs (with DVC option) and Suprema CoreStation CS-40 controllers — both installed by the per-station and depot Civil Contractors. Our scope provides the Notifier OnyxWorks and Suprema BioStar 2 Enterprise workstations, plus integration gateways compatible with the installed panels.

The proposal explicitly excludes items identified as out-of-scope in the Responsibility Matrix: Site Development underground conduit and ductbank; FACP / CoreStation equipment supplied by Civil Contractors; L2 network switches at stations and depot buildings supplied by ROTEM; the IP-MPLS backbone supplied by ROTEM-EEI Consortium; and EMCS, which falls outside the FDAS+ACS scope per TOR Section 4.

Two specific items are priced as separate line items at the bottom of the BOQ for transparency: Factory Acceptance Test travel to the Notifier facility in the United States and to the Suprema facility in South Korea, as required by TOR §3.8 + §8.11.

The bid follows the format requirements communicated by your office on 2026-04-29 (DUPA per item, VAT-inclusive, lead time per item, brochures and certificates attached, manpower and schedule per scope) and the contract-level requirements of TOR Rev 3 of 2026-03-16.

We have reviewed the BOQ and the bid documents (ANNEX A through D, TOR Rev 3, Email Text, and the Pre-bid Presentation Material). No comments on the draft contract are submitted at this time; per TOR §11.11.3 the contract is deemed reviewed and accepted.

*Respectfully yours,*

**[Authorized Signatory Name]**

[Title]

CMR PHILIPPINES INC.

## Appendix 2 — Compliance Matrix (TOR Rev 3, 2026-03-16)

Legend: C = Comply | CC = Comply with Comment | D = Deviation | N/A = Not Applicable

### Section 3 — General Conditions

TOR §	Requirement	Status	Bidder Response
3.1	Project location: SMC MRT-7 12 stations + Depot Admin Bldg	C	Acknowledged.
3.2	Surety firm acceptable to SMC MRT7	C	Pacific Cross / Fortune General / BPI-MS panel.
3.4	All prices VAT-inclusive	C	Per A-401.
3.8	FAT at OEM facilities	C	Notifier (Northford CT) + Suprema (Seongnam KR) — BOQ ADD-04 + ADD-05.
3.20 / 3.26	Surety acceptable	C	(see 3.2)

### Section 4 — Technical Specifications

TOR §	Requirement	Status	Bidder Response
4.5	Workstation furniture (4-PC table + ergonomic chairs)	C	BOQ P1-06 + P2-11.
4.11	Primavera P6 monthly schedule + .xer	CC	P6 update committed; .xer subject to internal license.
4.16	As-built drawings, signed/sealed hardcopy	C	BOQ 0.13.
4.17	O&M Manual	C	BOQ ADD-07.
4.18-4.19	Spare-parts kit with metrics	C	BOQ ADD-06.
4.21	T&C — Standalone + Integration + Performance	C	BOQ P1-07 + P2-12.
4.22	Training materials + sessions + certificates	C	BOQ ADD-07.
4.23	3-year software support + upgrades	C	BOQ ADD-08.

### Section 8 — Bidder Obligations

TOR §	Requirement	Status	Bidder Response
8.3	PM (REE) full-time	C	BOQ 0.4 — 6 months.
8.4	EIC (REE) full-time	C	BOQ 0.5 — 6 months.
8.8	UL-listed material	C	RFQ template enforces.
8.10	NOT-China origin	C	Certificate of origin at delivery.
8.11	FAT travel arrangements	C	ADD-04 + ADD-05.
8.13	Daily + Weekly Accomplishment Reports	C	BOQ 0.13.
8.21	Garbage collection + disposal	C	BOQ 0.15.

### Section 9 — Civil Contractor Interface

TOR §	Requirement	Status	Bidder Response
9.1	Underground ductbank by Civil Contractor	N/A	Excluded — Civil scope.

## Section 11 — Submission Requirements

TOR §	Requirement	Status	Bidder Response
11.2	All government permits	C	BOQ 0.11.
11.6.1	Bonds: Adv Pay + Performance 20% + Warranty 10%	C	BOQ 0.10 + RFQ-10.
11.9	6-month bid validity	C	Per A-404.
11.10	Two-envelope submission	C	Technical (E1) + Commercial (E2).
11.11.2	BOQ in PDF + MS Excel	C	Both formats in submission.
11.12	Brochures + datasheets + certificates	CC	Annexed in Technical Proposal.

### Compliance Summary:

- 24 Comply (C) | 2 Comply-with-Comment (CC) | 0 Deviations (D) | 1 Not-Applicable (N/A)
- No material deviations.

## Appendix 3 — Bill of Quantities (BOQ) with DUPA

All prices are in Philippine Pesos (PHP), VAT-inclusive per Email §2 + TOR §3.4. Validity: six (6) months from submission per TOR §11.9.

### Section 0.0 — General Requirements

Item	Description	Unit	Qty	Unit Cost	Amount
0.1 / B.7(2)	Occupational Safety and Health Program (180 CD multi-site)	L.S.	1	350,000	350,000
0.2 / B.8(2)	Traffic Management (12 stations + depot rotation)	L.S.	1	400,000	400,000
0.3 / B.9	Mobilization and Demobilization	L.S.	1	500,000	500,000
0.4	Project Manager (REE, full-time)	month	6	150,000	900,000
0.5	Engineer-in-charge (REE, full-time)	month	6	130,000	780,000
0.6	PEE supervisory engagement (R.A. 9292)	hour	80	3,500	280,000
0.7	Site Supervisors × 2 (full-time, 6 months each)	month	12	75,000	900,000
0.8	Interface Manager + Engineer (part-time blended)	L.S.	1	450,000	450,000
0.9	CAR + 3rd-party + WC insurance (180 CD)	L.S.	1	350,000	350,000
0.10	Surety bonds (Adv Pay + Performance 20% + Warranty 10%)	L.S.	1	500,000	500,000
0.11	All government permits (LGU + MMDA + DOLE + working)	L.S.	1	200,000	200,000
0.12	BOC duties + VAT pass-through	L.S.	1	800,000	800,000
0.13	Reports + P6 update + As-built drawings	L.S.	1	250,000	250,000
0.14	Site office + temp power + comms + vehicles + tools	L.S.	1	600,000	600,000
0.15	Garbage collection + disposal	L.S.	1	50,000	50,000

**Subtotal General Requirements: PHP 7,310,000**

### Phase 1 — Stations to Depot-Admin OCC Integration

Item	Description	Unit	Qty	Unit Cost	Amount
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<b>P1-01</b>	FDAS Workstation @ OCC (Notifier OnyxWorks + Server + WS PC + L2 Switch + UPS + Printer + Rack)	Lot	1	2,010,000	2,010,000
<b>P1-02</b>	ACS Workstation @ OCC (Suprema BioStar 2 Enterprise + Server + WS PC + L2 Switch w/ SFP + Badge Printer + SQL + BioMini Plus 2 + DE-620 + Rack)	Lot	1	2,000,000	2,000,000
<b>P1-03</b>	NIC / gateways for 12 stations × FDAS + ACS = 24 gateways (incl. surge, enclosures, IP config, commissioning)	ps	1	1,600,000	1,600,000
<b>P1-04</b>	Control & Communication Cable @ OCC	ps	1	350,000	350,000
<b>P1-05</b>	Power Supply Cables + Conduit + Boxes @ OCC	ps	1	250,000	250,000
<b>P1-06</b>	Workstation Furniture @ OCC (4-PC table + ergonomic chairs)	ps	1	80,000	80,000
<b>P1-07</b>	Testing and Commissioning — Phase 1	Lot	1	700,000	700,000

**Subtotal Phase 1: PHP 6,990,000**

**Phase 2 — Depot Buildings to Depot-Admin FCCR Integration**

<b>Item</b>	<b>Description</b>	<b>Unit</b>	<b>Qty</b>	<b>Unit Cost</b>	<b>Amount</b>
<b>P2-08</b>	Inter-bldg Cable (1500m FOC OS2 24-core armored + 200m FOC 12-core + 200m STP Cat6A + splices + terminations + surge + pulling labor)	Lot	1	900,000	900,000
<b>P2-08b</b>	Conduit + Cable Tray + Containment (1100m EMT 25mm + 200m GRC + 30 pull boxes + 50m cable tray + fittings + accessories) — excludes underground	Lot	1	750,000	750,000

	ductbank				
<b>P2-09</b>	NIC / gateways Phase 2 depot (5 FDAS + 5 ACS)	ps	1	680,000	680,000
<b>P2-10</b>	Power Supply Cables + Conduit + Boxes @ FCCR	Lot	1	200,000	200,000
<b>P2-11</b>	Workstation Furniture @ FCCR	ps	1	80,000	80,000
<b>P2-12</b>	Testing and Commissioning — Phase 2	Lot	1	950,000	950,000

**Subtotal Phase 2: PHP 3,560,000**

**Bidder-Added Items (per Email §1)**

<b>Item</b>	<b>Description</b>	<b>Unit</b>	<b>Qty</b>	<b>Unit Cost</b>	<b>Amount</b>
<b>ADD-01</b>	FDAS Field Devices @ Genset Building (4× FSP- 951 + 2× FST-951 + 2× NBG-12LX + 2× horn-strobe + 2× monitoring module)	Lot	1	200,000	200,000
<b>ADD-02</b>	FDAS Field Devices @ Guard Houses GH-1, GH- 2A, GH-2D (6× FSP-951 + 3× NBG-12LX + 3× horn-strobe)	Lot	1	180,000	180,000
<b>ADD-03</b>	FCCR Head-End Mirror (FDAS + ACS WS at FCCR mirroring P1-01 + P1-02 + add'l client seats + furniture)	Lot	1	4,200,000	4,200,000
<b>ADD-04</b>	FAT travel — Notifier facility, Northford CT, USA (3-person × 7 days)	L.S.	1	1,260,000	1,260,000
<b>ADD-05</b>	FAT travel — Suprema facility, Seongnam, South Korea (3-person × 7 days)	L.S.	1	615,000	615,000
<b>ADD-06</b>	2-year recommended spare-parts kit (FDAS + ACS)	Lot	1	650,000	650,000
<b>ADD-07</b>	O&M Manual + Training material + Training delivery + Certificates	Lot	1	500,000	500,000
<b>ADD-08</b>	3-year software support + upgrades (OnyxWorks + BioStar 2)	L.S.	1	1,200,000	1,200,000

**Subtotal Bidder-Added: PHP 8,805,000**

## GRAND TOTAL

Section	Amount (PHP)
<b>0.0 General Requirements</b>	7,310,000
<b>Phase 1 (P1-01 to P1-07)</b>	6,990,000
<b>Phase 2 (P2-08, P2-08b, P2-09 to P2-12)</b>	3,560,000
<b>Bidder-Added (ADD-01 to ADD-08)</b>	8,805,000
<b>GRAND TOTAL (VAT-inclusive)</b>	<b>26,665,000</b>

In words: Twenty-Six Million Six Hundred Sixty-Five Thousand Pesos (PHP 26,665,000.00) VAT-inclusive.

## DUPA — Detailed Unit Price Analysis (DPWH-bracket compliant)

Bracket per Philippine bid-practice (PHP 5-50M tier): OCM 11% of Direct | Profit 8% of Direct | VAT 12% (private bid, embedded per A-401). Per row formula:

Direct (A+B+C) → OCM (11%) → Profit (8%) → VAT (12%) → Total (VAT-inclusive)

Complete worksheets for all 36 BOQ rows are appended in the Excel DUPA Workbook ('06-DUPA-workbook.xlsx') submitted with the Commercial Proposal per TOR §11.11.2.

## DUPA Summary — All 36 Line Items

Item	Description	Direct	OCM 11%	Profit 8%	D+O+P	VAT 12%	Total
0.1	Occupational Safety and Health Program (180 CD multi-site)	262,605	28,887	21,008	312,500	37,500	350,000
0.2	Traffic Management (12 stations + depot rotation)	300,120	33,013	24,010	357,143	42,857	400,000
0.3	Mobilization and Demobilization (12 stations + depot)	375,150	41,267	30,012	446,429	53,571	500,000
0.4	Project Manager (REE, full-time)	675,270	74,280	54,022	803,571	96,429	900,000
0.5	Engineer-in-charge (REE, full-time)	585,234	64,376	46,819	696,429	83,571	780,000
0.6	PEE supervisory engagement (R.A. 9292)	210,084	23,109	16,807	250,000	30,000	280,000
0.7	Site Supervisors ×	675,270	74,280	54,022	803,571	96,429	900,000

	2 (full-time, 6 months each)						
<b>0.8</b>	Interface Manager + Engineer (part-time blended)	337,635	37,140	27,011	401,786	48,214	450,000
<b>0.9</b>	CAR + 3rd-party + workmen's-comp insurance (180 CD)	262,605	28,887	21,008	312,500	37,500	350,000
<b>0.10</b>	Surety bonds (Adv Pay + Performance 20% + Warranty 10%)	375,150	41,267	30,012	446,429	53,571	500,000
<b>0.11</b>	All government permits (LGU + MMDA + DOLE + working)	150,060	16,507	12,005	178,571	21,429	200,000
<b>0.12</b>	BOC duties for imported items + VAT pass-through	600,240	66,026	48,019	714,286	85,714	800,000
<b>0.13</b>	Daily/ Weekly Reports + Primavera P6 monthly + As-built drawi...	187,575	20,633	15,006	223,214	26,786	250,000
<b>0.14</b>	Site office + temporary power + comms + vehicles + tools (18...	450,180	49,520	36,014	535,714	64,286	600,000
<b>0.15</b>	Garbage collection + disposal (per TOR §8.21)	37,515	4,127	3,001	44,643	5,357	50,000
<b>P1-01</b>	FDAS Workstation Computer System @ OCC	1,508,103	165,891	120,648	1,794,643	215,357	2,010,000
<b>P1-02</b>	ACS Workstation Computer System @ OCC	1,500,600	165,066	120,048	1,785,714	214,286	2,000,000
<b>P1-03</b>	NIC / media converters / gateways for 12 stations × FDAS+ACS ...	1,200,480	132,053	96,038	1,428,571	171,429	1,600,000
<b>P1-04</b>	Control &	262,605	28,887	21,008	312,500	37,500	350,000

	Communicati on Cable @ OCC (workstation ↔ CER)						
<b>P1-05</b>	Power Supply Cables + Conduit + Boxes @ OCC	187,575	20,633	15,006	223,214	26,786	250,000
<b>P1-06</b>	Workstation Furniture @ OCC (4-PC table + ergonomic chairs)	60,024	6,603	4,802	71,429	8,571	80,000
<b>P1-07</b>	Testing and Commissioni ng — Phase 1 (~250 hr T&C)	525,210	57,773	42,017	625,000	75,000	700,000
<b>P2-08</b>	Inter-bldg Cable (1500m FOC OS2 24-core armored + 200m FOC 1...	675,270	74,280	54,022	803,571	96,429	900,000
<b>P2-08b</b>	Conduit + Cable Tray + Containment (1100m EMT 25mm + 200m GR...	562,725	61,900	45,018	669,643	80,357	750,000
<b>P2-09</b>	NIC / media converter / gateways Phase 2 depot (5 FDAS + 5 A...	510,204	56,122	40,816	607,143	72,857	680,000
<b>P2-10</b>	Power Supply Cables + Conduit + Boxes @ FCCR	150,060	16,507	12,005	178,571	21,429	200,000
<b>P2-11</b>	Workstation Furniture @ FCCR (4-PC table + chairs)	60,024	6,603	4,802	71,429	8,571	80,000
<b>P2-12</b>	Testing and Commissioni ng — Phase 2 (~349 hr)	712,785	78,406	57,023	848,214	101,786	950,000
<b>ADD-01</b>	FDAS Field Devices @ Genset Building	150,060	16,507	12,005	178,571	21,429	200,000
<b>ADD-02</b>	FDAS Field Devices @ Guard Houses GH-	135,054	14,856	10,804	160,714	19,286	180,000

	1, GH-2A, GH-2D						
<b>ADD-03</b>	FCCR Head- End Mirror (FDAS + ACS WS at FCCR mirroring P1- 01 ...	3,151,261	346,639	252,101	3,750,000	450,000	4,200,000
<b>ADD-04</b>	FAT travel — Notifier facility, Northford CT, USA (3- person ...	945,378	103,992	75,630	1,125,000	135,000	1,260,000
<b>ADD-05</b>	FAT travel — Suprema facility, Seongnam, South Korea (3-pers...	461,435	50,758	36,915	549,107	65,893	615,000
<b>ADD-06</b>	2-year recommende d spare-parts kit (FDAS + ACS)	487,695	53,646	39,016	580,357	69,643	650,000
<b>ADD-07</b>	O&M Manual + Training material + Training delivery + Certifi...	375,150	41,267	30,012	446,429	53,571	500,000
<b>ADD-08</b>	3-year software support + upgrades (OnyxWorks + BioStar 2)	900,360	99,040	72,029	1,071,429	128,571	1,200,000
<b>TOTAL</b>	<b>GRAND TOTAL (VAT- inclusive)</b>	<b>20,006,753</b>	<b>2,200,743</b>	<b>1,600,540</b>	<b>23,808,036</b>	<b>2,856,964</b>	<b>26,665,000</b>

## DUPA Detail — Per-Row Worksheets

Each row below decomposes the BOQ unit price into Direct (Materials + Labor + Equipment Use), then applies the DPWH-bracket OCM 11%, Profit 8%, and VAT 12% to derive the VAT-inclusive total.

### 0.1 — Occupational Safety and Health Program (180 CD multi-site)

Unit: L.S. | Qty: 1 | Total: PHP 350,000.00 (VAT-inclusive) | Notes: Multi-site: 13 work sites (12 stations + depot)

<b>A. Materials / Equipment</b>	<b>Subtotal: PHP 65,651.26</b>
• PPE for ~15 personnel (hardhats, vests, gloves, safety shoes)	26,260.50
• Safety signage at 13 sites	19,695.38
• First-aid + emergency kits + reporting tools	19,695.38
<b>B. Labor</b>	<b>Subtotal: PHP 157,563.03</b>
• Safety Officer 6 mo @ PHP 30,000/mo (full-time)	133,928.57
• OSH training + monthly drill labor	23,634.45
<b>C. Equipment Use</b>	<b>Subtotal: PHP 39,390.76</b>
• Vehicle for safety officer multi-site rotation	39,390.76
<b>D. Sub-total Direct (A + B + C)</b>	<b>PHP 262,605.04</b>
<b>E. OCM (11% × Direct)</b>	PHP 28,886.55
<b>F. Profit (8% × Direct)</b>	PHP 21,008.40
<b>G. Sub-total (D + E + F)</b>	PHP 312,500.00
<b>H. VAT (12% × G, embedded)</b>	PHP 37,500.00
<b>I. TOTAL per L.S. (VAT-inclusive)</b>	<b>PHP 350,000.00</b>

### 0.2 — Traffic Management (12 stations + depot rotation)

Unit: L.S. | Qty: 1 | Total: PHP 400,000.00 (VAT-inclusive) | Notes: DPWH B.8(2) typical L.S. for multi-site projects

<b>A. Materials / Equipment</b>	<b>Subtotal: PHP 75,030.01</b>
• Barricades + cones + traffic signs	45,018.01
• Reflectorized warning signs (multi-site)	30,012.00
<b>B. Labor</b>	<b>Subtotal: PHP 180,072.03</b>
• Flagman labor (rotational, 4 mo)	180,072.03
<b>C. Equipment Use</b>	<b>Subtotal: PHP 45,018.01</b>
• Traffic-management vehicle + flashing-light setup	45,018.01
<b>D. Sub-total Direct (A + B + C)</b>	<b>PHP 300,120.05</b>
<b>E. OCM (11% × Direct)</b>	PHP 33,013.21
<b>F. Profit (8% × Direct)</b>	PHP 24,009.60
<b>G. Sub-total (D + E + F)</b>	PHP 357,142.86
<b>H. VAT (12% × G, embedded)</b>	PHP 42,857.14
<b>I. TOTAL per L.S. (VAT-inclusive)</b>	<b>PHP 400,000.00</b>

### 0.3 — Mobilization and Demobilization (12 stations + depot)

Unit: L.S. | Qty: 1 | Total: PHP 500,000.00 (VAT-inclusive) | Notes: DPWH B.9 typical 1-2% of contract

<b>A. Materials / Equipment</b>	<b>Subtotal: PHP 93,787.52</b>
• Initial stockpile materials + container office setup	46,893.76
• Site-establishment fittings + signage	46,893.76
<b>B. Labor</b>	<b>Subtotal: PHP 225,090.04</b>
• Mobilization labor (multi-site setup)	123,799.52
• Demobilization labor (site clearing)	101,290.52
<b>C. Equipment Use</b>	<b>Subtotal: PHP 56,272.51</b>

• Truck + lift hire for mobilization phase	33,763.51
• Demobilization truck-hire	22,509.00
<b>D. Sub-total Direct (A + B + C)</b>	<b>PHP 375,150.06</b>
<b>E. OCM (11% × Direct)</b>	PHP 41,266.51
<b>F. Profit (8% × Direct)</b>	PHP 30,012.00
<b>G. Sub-total (D + E + F)</b>	PHP 446,428.57
<b>H. VAT (12% × G, embedded)</b>	PHP 53,571.43
<b>I. TOTAL per L.S. (VAT-inclusive)</b>	<b>PHP 500,000.00</b>

#### 0.4 — Project Manager (REE, full-time)

Unit: month | Qty: 6 | Total: PHP 900,000.00 (VAT-inclusive) | Notes: Mid-senior REE PM rate, transit-grade infra project

<b>A. Materials / Equipment</b>	<b>Subtotal: PHP 33,763.51</b>
• Office supplies + admin overhead allocation	33,763.51
<b>B. Labor</b>	<b>Subtotal: PHP 607,743.10</b>
• Project Manager — REE — fully loaded (salary + benefits + overhead)	607,743.10
<b>C. Equipment Use</b>	<b>Subtotal: PHP 33,763.51</b>
• Mobile office equipment + comms allocation	33,763.51
<b>D. Sub-total Direct (A + B + C)</b>	<b>PHP 675,270.11</b>
<b>E. OCM (11% × Direct)</b>	PHP 74,279.71
<b>F. Profit (8% × Direct)</b>	PHP 54,021.61
<b>G. Sub-total (D + E + F)</b>	PHP 803,571.43
<b>H. VAT (12% × G, embedded)</b>	PHP 96,428.57
<b>I. TOTAL per month (VAT-inclusive)</b>	<b>PHP 900,000.00</b>

#### 0.5 — Engineer-in-charge (REE, full-time)

Unit: month | Qty: 6 | Total: PHP 780,000.00 (VAT-inclusive) | Notes: Mid-level REE EIC rate

<b>A. Materials / Equipment</b>	<b>Subtotal: PHP 29,261.70</b>
• Office supplies + admin overhead allocation	29,261.70
<b>B. Labor</b>	<b>Subtotal: PHP 526,710.68</b>
• Engineer-in-charge — REE — fully loaded	526,710.68
<b>C. Equipment Use</b>	<b>Subtotal: PHP 29,261.70</b>
• Mobile office equipment + comms allocation	29,261.70
<b>D. Sub-total Direct (A + B + C)</b>	<b>PHP 585,234.09</b>
<b>E. OCM (11% × Direct)</b>	PHP 64,375.75
<b>F. Profit (8% × Direct)</b>	PHP 46,818.73
<b>G. Sub-total (D + E + F)</b>	PHP 696,428.57
<b>H. VAT (12% × G, embedded)</b>	PHP 83,571.43
<b>I. TOTAL per month (VAT-inclusive)</b>	<b>PHP 780,000.00</b>

#### 0.6 — PEE supervisory engagement (R.A. 9292)

Unit: hour | Qty: 80 | Total: PHP 280,000.00 (VAT-inclusive) | Notes: PEE professional rate per R.A. 9292 typical engagement

<b>A. Materials / Equipment</b>	<b>Subtotal: PHP 10,504.20</b>
• Document signoff seals + admin	10,504.20
<b>B. Labor</b>	<b>Subtotal: PHP 189,075.63</b>
• PEE supervisor (R.A. 9292) — engagement billing	189,075.63
<b>C. Equipment Use</b>	<b>Subtotal: PHP 10,504.20</b>
• Site visit transport allocation	10,504.20
<b>D. Sub-total Direct (A + B + C)</b>	<b>PHP 210,084.03</b>
<b>E. OCM (11% × Direct)</b>	PHP 23,109.24

<b>F. Profit (8% × Direct)</b>	PHP 16,806.72
<b>G. Sub-total (D + E + F)</b>	PHP 250,000.00
<b>H. VAT (12% × G, embedded)</b>	PHP 30,000.00
<b>I. TOTAL per hour (VAT-inclusive)</b>	<b>PHP 280,000.00</b>

**0.7 — Site Supervisors × 2 (full-time, 6 months each)**

Unit: month | Qty: 12 | Total: PHP 900,000.00 (VAT-inclusive) | Notes: Foreman/supervisor full-time rate

<b>A. Materials / Equipment</b>	<b>Subtotal: PHP 33,763.51</b>
• Field admin + tracking tools	33,763.51
<b>B. Labor</b>	<b>Subtotal: PHP 607,743.10</b>
• Site Supervisor / Foreman — fully loaded	607,743.10
<b>C. Equipment Use</b>	<b>Subtotal: PHP 33,763.51</b>
• Mobile comms + small site tools	33,763.51
<b>D. Sub-total Direct (A + B + C)</b>	<b>PHP 675,270.11</b>
<b>E. OCM (11% × Direct)</b>	PHP 74,279.71
<b>F. Profit (8% × Direct)</b>	PHP 54,021.61
<b>G. Sub-total (D + E + F)</b>	PHP 803,571.43
<b>H. VAT (12% × G, embedded)</b>	PHP 96,428.57
<b>I. TOTAL per month (VAT-inclusive)</b>	<b>PHP 900,000.00</b>

**0.8 — Interface Manager + Engineer (part-time blended)**

Unit: L.S. | Qty: 1 | Total: PHP 450,000.00 (VAT-inclusive) | Notes: Per TOR §8.5; multi-party coordination across ~17 contractors

<b>A. Materials / Equipment</b>	<b>Subtotal: PHP 16,881.75</b>
• ICD authoring + coordination materials	16,881.75
<b>B. Labor</b>	<b>Subtotal: PHP 303,871.55</b>
• Interface Manager 4 mo @ ~50% × PHP 80K	167,129.35
• Interface Engineer 5 mo @ ~50% × PHP 70K	136,742.20
<b>C. Equipment Use</b>	<b>Subtotal: PHP 16,881.75</b>
• Coordination meeting facilities + conferencing	16,881.75
<b>D. Sub-total Direct (A + B + C)</b>	<b>PHP 337,635.05</b>
<b>E. OCM (11% × Direct)</b>	PHP 37,139.86
<b>F. Profit (8% × Direct)</b>	PHP 27,010.80
<b>G. Sub-total (D + E + F)</b>	PHP 401,785.71
<b>H. VAT (12% × G, embedded)</b>	PHP 48,214.29
<b>I. TOTAL per L.S. (VAT-inclusive)</b>	<b>PHP 450,000.00</b>

**0.9 — CAR + 3rd-party + workmen's-comp insurance (180 CD)**

Unit: L.S. | Qty: 1 | Total: PHP 350,000.00 (VAT-inclusive) | Notes: Typical PH insurance premium ~1.0-1.5% of insured value

<b>A. Materials / Equipment</b>	<b>Subtotal: PHP 249,474.79</b>
• CAR insurance premium (~1% of project value)	137,211.13
• Third-party liability premium	49,894.96
• Workmen's compensation premium per PH labor law	62,368.70
<b>B. Labor</b>	<b>Subtotal: PHP 13,130.25</b>
• Insurance broker / coordinator labor	13,130.25
<b>C. Equipment Use</b>	<b>Subtotal: PHP 0.00</b>
(no equipment use for this line)	—
<b>D. Sub-total Direct (A + B + C)</b>	<b>PHP 262,605.04</b>
<b>E. OCM (11% × Direct)</b>	PHP 28,886.55
<b>F. Profit (8% × Direct)</b>	PHP 21,008.40
<b>G. Sub-total (D + E + F)</b>	PHP 312,500.00

<b>H. VAT (12% × G, embedded)</b>	PHP 37,500.00
<b>I. TOTAL per L.S. (VAT-inclusive)</b>	<b>PHP 350,000.00</b>

**0.10 — Surety bonds (Adv Pay + Performance 20% + Warranty 10%)**

Unit: L.S. | Qty: 1 | Total: PHP 500,000.00 (VAT-inclusive) | Notes: Per TOR §11.6.1 + §3.2; SMC-acceptable surety panel

<b>A. Materials / Equipment</b>	<b>Subtotal: PHP 356,392.56</b>
• Advance Payment Bond premium	53,458.88
• Performance Bond (20% × Contract) premium	178,196.28
• Warranty Bond (10% × Contract, 2-yr) premium	124,737.39
<b>B. Labor</b>	<b>Subtotal: PHP 18,757.50</b>
• Surety coordinator labor	18,757.50
<b>C. Equipment Use</b>	<b>Subtotal: PHP 0.00</b>
(no equipment use for this line)	—
<b>D. Sub-total Direct (A + B + C)</b>	<b>PHP 375,150.06</b>
<b>E. OCM (11% × Direct)</b>	PHP 41,266.51
<b>F. Profit (8% × Direct)</b>	PHP 30,012.00
<b>G. Sub-total (D + E + F)</b>	PHP 446,428.57
<b>H. VAT (12% × G, embedded)</b>	PHP 53,571.43
<b>I. TOTAL per L.S. (VAT-inclusive)</b>	<b>PHP 500,000.00</b>

**0.11 — All government permits (LGU + MMDA + DOLE + working)**

Unit: L.S. | Qty: 1 | Total: PHP 200,000.00 (VAT-inclusive) | Notes: Multi-site permit cost across 13 work locations

<b>A. Materials / Equipment</b>	<b>Subtotal: PHP 142,557.02</b>
• LGU electrical permits (multi-site)	57,022.81
• MMDA + DOLE permits	42,767.11
• Working permits + barangay clearances	42,767.11
<b>B. Labor</b>	<b>Subtotal: PHP 7,503.00</b>
• Permits-runner labor	7,503.00
<b>C. Equipment Use</b>	<b>Subtotal: PHP 0.00</b>
(no equipment use for this line)	—
<b>D. Sub-total Direct (A + B + C)</b>	<b>PHP 150,060.02</b>
<b>E. OCM (11% × Direct)</b>	PHP 16,506.60
<b>F. Profit (8% × Direct)</b>	PHP 12,004.80
<b>G. Sub-total (D + E + F)</b>	PHP 178,571.43
<b>H. VAT (12% × G, embedded)</b>	PHP 21,428.57
<b>I. TOTAL per L.S. (VAT-inclusive)</b>	<b>PHP 200,000.00</b>

**0.12 — BOC duties for imported items + VAT pass-through**

Unit: L.S. | Qty: 1 | Total: PHP 800,000.00 (VAT-inclusive) | Notes: Typical 5-7% landed-cost adder on imports

<b>A. Materials / Equipment</b>	<b>Subtotal: PHP 570,228.09</b>
• BOC duties on imported items (Notifier, Suprema, Hirschmann, etc.)	484,693.88
• Brokerage + customs clearance fees	85,534.21
<b>B. Labor</b>	<b>Subtotal: PHP 30,012.00</b>
• Customs broker + admin labor	30,012.00
<b>C. Equipment Use</b>	<b>Subtotal: PHP 0.00</b>
(no equipment use for this line)	—
<b>D. Sub-total Direct (A + B + C)</b>	<b>PHP 600,240.10</b>
<b>E. OCM (11% × Direct)</b>	PHP 66,026.41
<b>F. Profit (8% × Direct)</b>	PHP 48,019.21

<b>G. Sub-total (D + E + F)</b>	PHP 714,285.71
<b>H. VAT (12% × G, embedded)</b>	PHP 85,714.29
<b>I. TOTAL per L.S. (VAT-inclusive)</b>	<b>PHP 800,000.00</b>

### 0.13 — Daily/Weekly Reports + Primavera P6 monthly + As-built drawings

Unit: L.S. | Qty: 1 | Total: PHP 250,000.00 (VAT-inclusive) | Notes: Per TOR §4.11 + §4.16 + §8.13

<b>A. Materials / Equipment</b>	<b>Subtotal: PHP 46,893.76</b>
• Reporting templates + plotting paper + binding	14,068.13
• Drawing software licenses (CAD, P6)	32,825.63
<b>B. Labor</b>	<b>Subtotal: PHP 112,545.02</b>
• Reporting writer (part-time 6 mo)	33,763.51
• P6 scheduler (part-time 3 mo)	33,763.51
• As-built CAD drafter (~30 days)	45,018.01
<b>C. Equipment Use</b>	<b>Subtotal: PHP 28,136.25</b>
• Plotter + printing equipment	28,136.25
<b>D. Sub-total Direct (A + B + C)</b>	<b>PHP 187,575.03</b>
<b>E. OCM (11% × Direct)</b>	PHP 20,633.25
<b>F. Profit (8% × Direct)</b>	PHP 15,006.00
<b>G. Sub-total (D + E + F)</b>	PHP 223,214.29
<b>H. VAT (12% × G, embedded)</b>	PHP 26,785.71
<b>I. TOTAL per L.S. (VAT-inclusive)</b>	<b>PHP 250,000.00</b>

### 0.14 — Site office + temporary power + comms + vehicles + tools (180 CD)

Unit: L.S. | Qty: 1 | Total: PHP 600,000.00 (VAT-inclusive) | Notes: Multi-site logistics support

<b>A. Materials / Equipment</b>	<b>Subtotal: PHP 112,545.02</b>
• Container office rental + setup	33,763.51
• Tools + small equipment kit	33,763.51
• Office supplies + comms internet 6 mo	45,018.01
<b>B. Labor</b>	<b>Subtotal: PHP 270,108.04</b>
• Site logistics labor	270,108.04
<b>C. Equipment Use</b>	<b>Subtotal: PHP 67,527.01</b>
• Service vehicle ×2 (180 CD lease)	54,021.61
• Generator backup + temporary power	13,505.40
<b>D. Sub-total Direct (A + B + C)</b>	<b>PHP 450,180.07</b>
<b>E. OCM (11% × Direct)</b>	PHP 49,519.81
<b>F. Profit (8% × Direct)</b>	PHP 36,014.41
<b>G. Sub-total (D + E + F)</b>	PHP 535,714.29
<b>H. VAT (12% × G, embedded)</b>	PHP 64,285.71
<b>I. TOTAL per L.S. (VAT-inclusive)</b>	<b>PHP 600,000.00</b>

### 0.15 — Garbage collection + disposal (per TOR §8.21)

Unit: L.S. | Qty: 1 | Total: PHP 50,000.00 (VAT-inclusive) | Notes: Bonded waste-disposal contractor

<b>A. Materials / Equipment</b>	<b>Subtotal: PHP 9,378.75</b>
• Bins + bags + sorting tools	9,378.75
<b>B. Labor</b>	<b>Subtotal: PHP 22,509.00</b>
• Collection labor (rotational)	22,509.00
<b>C. Equipment Use</b>	<b>Subtotal: PHP 5,627.25</b>
• Disposal truck-hire (periodic)	5,627.25
<b>D. Sub-total Direct (A + B + C)</b>	<b>PHP 37,515.01</b>
<b>E. OCM (11% × Direct)</b>	PHP 4,126.65

<b>F. Profit (8% × Direct)</b>	PHP 3,001.20
<b>G. Sub-total (D + E + F)</b>	PHP 44,642.86
<b>H. VAT (12% × G, embedded)</b>	PHP 5,357.14
<b>I. TOTAL per L.S. (VAT-inclusive)</b>	<b>PHP 50,000.00</b>

**P1-01 — FDAS Workstation Computer System @ OCC**

Unit: Lot | Qty: 1 | Total: PHP 2,010,000.00 (VAT-inclusive) | Notes: Per ANNEX\_C1 §1123.2.8; brand-locked Notifier per ANNEX\_D1

<b>A. Materials / Equipment</b>	<b>Subtotal: PHP 1,281,887.76</b>
• Notifier OnyxWorks SW (server + 1 client seat, perpetual)	538,392.86
• Server (Dell PowerEdge R750, Xeon Silver, 64 GB ECC, RAID-1, Win Svr 2019 LTS, 4U)	410,204.08
• Workstation PC (Intel i7 12th-gen, 32 GB DDR4, 1 TB NVMe SSD, 32" LED FHD)	64,094.39
• L2 Industrial Switch (Hirschmann MACH104-20TX-FR, 24G+4SFP, UL 508)	166,645.41
• APC Smart-UPS On-Line 2 kVA (230V 60Hz pure sine, 15-30 min)	64,094.39
• HP LaserJet Color (≥30 ppm, 1200 dpi)	25,637.76
• 42U server rack + cable mgmt + labeling (APC NetShelter SX)	12,818.88
<b>B. Labor</b>	<b>Subtotal: PHP 180,972.39</b>
• Engineer-in-charge — 6 hr × PHP 750/hr	18,097.24
• Programmer (OnyxWorks server install + GUI build) — 8 hr × PHP 1,000/hr	54,291.72
• Wireman (rack assembly + power + data cable) — 8 hr × PHP 350/hr	72,388.96
• Site Supervisor — 4 hr × PHP 470/hr	36,194.48
<b>C. Equipment Use</b>	<b>Subtotal: PHP 45,243.10</b>
• Tools + cable certifier rental (1 day)	22,621.55
• Lift / staging for rack install	22,621.55
<b>D. Sub-total Direct (A + B + C)</b>	<b>PHP 1,508,103.24</b>
<b>E. OCM (11% × Direct)</b>	PHP 165,891.36
<b>F. Profit (8% × Direct)</b>	PHP 120,648.26
<b>G. Sub-total (D + E + F)</b>	PHP 1,794,642.86
<b>H. VAT (12% × G, embedded)</b>	PHP 215,357.14
<b>I. TOTAL per Lot (VAT-inclusive)</b>	<b>PHP 2,010,000.00</b>

**P1-02 — ACS Workstation Computer System @ OCC**

Unit: Lot | Qty: 1 | Total: PHP 2,000,000.00 (VAT-inclusive) | Notes: Per ANNEX\_C1 §1124.2.6; brand-locked Suprema per ANNEX\_D2

<b>A. Materials / Equipment</b>	<b>Subtotal: PHP 1,275,510.20</b>
• Suprema BioStar 2 Enterprise SW (perpetual, multi-site, TLS 1.2)	408,163.27
• ACS Server (Dell PowerEdge, Xeon, 64 GB ECC, Win Svr 2019)	408,163.27
• L2 Switch w/ SFP (Hirschmann/Moxa, UL 508)	165,816.33
• Microsoft SQL Server 2019 LTS Standard	165,816.33
• Zebra ZC card printer (color, MIFARE encoding)	76,530.61
• Suprema BioMini Plus 2 + DE-620 encoder	38,265.31
• 42U server rack + cable mgmt	12,755.10
<b>B. Labor</b>	<b>Subtotal: PHP 180,072.03</b>
• Engineer-in-charge — 6 hr × PHP 750	18,007.20
• Programmer (BioStar 2 server install + SQL setup + cert provisioning) — 8 hr × PHP 1,000	63,025.21

• Wireman — 6 hr × PHP 350	63,025.21
• Site Supervisor — 4 hr × PHP 470	36,014.41
<b>C. Equipment Use</b>	<b>Subtotal: PHP 45,018.01</b>
• Tools + test instruments (1 day)	22,509.00
• Lift for rack install	22,509.00
<b>D. Sub-total Direct (A + B + C)</b>	<b>PHP 1,500,600.24</b>
<b>E. OCM (11% × Direct)</b>	PHP 165,066.03
<b>F. Profit (8% × Direct)</b>	PHP 120,048.02
<b>G. Sub-total (D + E + F)</b>	PHP 1,785,714.29
<b>H. VAT (12% × G, embedded)</b>	PHP 214,285.71
<b>I. TOTAL per Lot (VAT-inclusive)</b>	<b>PHP 2,000,000.00</b>

**P1-03 — NIC / media converters / gateways for 12 stations × FDAS+ACS = 24 gateways**

Unit: ps | Qty: 1 | Total: PHP 1,600,000.00 (VAT-inclusive) | Notes: 12 stations × 2 disciplines = 24 gateways

<b>A. Materials / Equipment</b>	<b>Subtotal: PHP 1,020,408.16</b>
• Notifier NCM-W FDAS gateway × 12 @ ~PHP 60K	459,183.67
• ACS Industrial Ethernet media converter × 12 @ ~PHP 30K (Moxa NPort)	234,693.88
• DIN-rail Surge Protector (Type 2) × 24	81,632.65
• Wall Enclosure IP54 × 24	122,448.98
• Cabling + connectors + labeling	122,448.98
<b>B. Labor</b>	<b>Subtotal: PHP 144,057.62</b>
• Programmer (per-station IP config + commissioning) — 24 sessions × 1 hr × PHP 1,000	57,623.05
• Wireman (gateway mounting + power + termination) — 12 sessions × 4 hr × PHP 350	72,028.81
• Site Supervisor (multi-station rotation)	14,405.76
<b>C. Equipment Use</b>	<b>Subtotal: PHP 36,014.41</b>
• Service vehicle (multi-station rotation)	21,608.64
• Test instruments (laptop + analyzer)	14,405.76
<b>D. Sub-total Direct (A + B + C)</b>	<b>PHP 1,200,480.19</b>
<b>E. OCM (11% × Direct)</b>	PHP 132,052.82
<b>F. Profit (8% × Direct)</b>	PHP 96,038.42
<b>G. Sub-total (D + E + F)</b>	PHP 1,428,571.43
<b>H. VAT (12% × G, embedded)</b>	PHP 171,428.57
<b>I. TOTAL per ps (VAT-inclusive)</b>	<b>PHP 1,600,000.00</b>

**P1-04 — Control & Communication Cable @ OCC (workstation ↔ CER)**

Unit: ps | Qty: 1 | Total: PHP 350,000.00 (VAT-inclusive) | Notes: OCC head-end internal cabling

<b>A. Materials / Equipment</b>	<b>Subtotal: PHP 131,302.52</b>
• FOC patch cables OS2 single-mode (assorted)	39,390.76
• STP Cat6A patch + bulk	39,390.76
• Connectors + LC terminations	26,260.50
• Cable management ties + labels	26,260.50
<b>B. Labor</b>	<b>Subtotal: PHP 105,042.02</b>
• Wireman (cable pulling + termination) — 4 days × PHP 350/hr × 8 hr × 2	105,042.02
<b>C. Equipment Use</b>	<b>Subtotal: PHP 26,260.50</b>
• Fusion splicer rental (1 day)	15,756.30
• OTDR + light source + power meter rental	10,504.20
<b>D. Sub-total Direct (A + B + C)</b>	<b>PHP 262,605.04</b>
<b>E. OCM (11% × Direct)</b>	PHP 28,886.55
<b>F. Profit (8% × Direct)</b>	PHP 21,008.40
<b>G. Sub-total (D + E + F)</b>	PHP 312,500.00

<b>H. VAT (12% × G, embedded)</b>	PHP 37,500.00
<b>I. TOTAL per ps (VAT-inclusive)</b>	<b>PHP 350,000.00</b>

**P1-05 — Power Supply Cables + Conduit + Boxes @ OCC**

Unit: ps | Qty: 1 | Total: PHP 250,000.00 (VAT-inclusive) | Notes: OCC power distribution from existing panel

<b>A. Materials / Equipment</b>	<b>Subtotal: PHP 93,787.52</b>
• THW 2.5/4 mm <sup>2</sup> power cable	37,515.01
• EMT 25mm conduit + couplings + saddles	28,136.25
• Outlet/device boxes + cover plates	28,136.25
<b>B. Labor</b>	<b>Subtotal: PHP 75,030.01</b>
• Wireman (conduit install + cable pulling + termination) — 3 days	75,030.01
<b>C. Equipment Use</b>	<b>Subtotal: PHP 18,757.50</b>
• Conduit bender + threading kit + drill	18,757.50
<b>D. Sub-total Direct (A + B + C)</b>	<b>PHP 187,575.03</b>
<b>E. OCM (11% × Direct)</b>	PHP 20,633.25
<b>F. Profit (8% × Direct)</b>	PHP 15,006.00
<b>G. Sub-total (D + E + F)</b>	PHP 223,214.29
<b>H. VAT (12% × G, embedded)</b>	PHP 26,785.71
<b>I. TOTAL per ps (VAT-inclusive)</b>	<b>PHP 250,000.00</b>

**P1-06 — Workstation Furniture @ OCC (4-PC table + ergonomic chairs)**

Unit: ps | Qty: 1 | Total: PHP 80,000.00 (VAT-inclusive) | Notes: Per TOR §4.5

<b>A. Materials / Equipment</b>	<b>Subtotal: PHP 48,019.21</b>
• Workstation table (4-PC capacity per TOR §4.5)	19,207.68
• Ergonomic operator chairs × 4	19,207.68
• Monitor arm + cable mgmt tray + accessories	9,603.84
<b>B. Labor</b>	<b>Subtotal: PHP 9,003.60</b>
• Furniture delivery + assembly	9,003.60
<b>C. Equipment Use</b>	<b>Subtotal: PHP 3,001.20</b>
• Hand tools + assembly kit	3,001.20
<b>D. Sub-total Direct (A + B + C)</b>	<b>PHP 60,024.01</b>
<b>E. OCM (11% × Direct)</b>	PHP 6,602.64
<b>F. Profit (8% × Direct)</b>	PHP 4,801.92
<b>G. Sub-total (D + E + F)</b>	PHP 71,428.57
<b>H. VAT (12% × G, embedded)</b>	PHP 8,571.43
<b>I. TOTAL per ps (VAT-inclusive)</b>	<b>PHP 80,000.00</b>

**P1-07 — Testing and Commissioning — Phase 1 (~250 hr T&C)**

Unit: Lot | Qty: 1 | Total: PHP 700,000.00 (VAT-inclusive) | Notes: Per TOR §4.21; B3 commissioning-points list

<b>A. Materials / Equipment</b>	<b>Subtotal: PHP 52,521.01</b>
• Test consumables + smoke aerosol + heat-test pole + report binding	52,521.01
<b>B. Labor</b>	<b>Subtotal: PHP 420,168.07</b>
• T&C Engineer 250 hr × PHP 1,500/hr (Standalone + Integration + Performance)	357,142.86
• EIC supervisory presence at signoff milestones	63,025.21
<b>C. Equipment Use</b>	<b>Subtotal: PHP 52,521.01</b>
• OTDR + power meter + cable certifier + multimeter + insulation tester rental	36,764.71

• Network analyzer / Wireshark laptop + sound level meter	15,756.30
<b>D. Sub-total Direct (A + B + C)</b>	<b>PHP 525,210.08</b>
<b>E. OCM (11% × Direct)</b>	PHP 57,773.11
<b>F. Profit (8% × Direct)</b>	PHP 42,016.81
<b>G. Sub-total (D + E + F)</b>	PHP 625,000.00
<b>H. VAT (12% × G, embedded)</b>	PHP 75,000.00
<b>I. TOTAL per Lot (VAT-inclusive)</b>	<b>PHP 700,000.00</b>

**P2-08 — Inter-bldg Cable (1500m FOC OS2 24-core armored + 200m FOC 12-core + 200m STP Cat6A + splices + terminations + 24 surge + pulling)**

Unit: Lot | Qty: 1 | Total: PHP 900,000.00 (VAT-inclusive) | Notes: Inter-building backbone via Civil-built underground ductbank

<b>A. Materials / Equipment</b>	<b>Subtotal: PHP 337,635.05</b>
• FOC OS2 24-core armored OSP × 1500 m @ PHP 250/m (Belden/Corning)	185,699.28
• FOC OS2 12-core × 200 m @ PHP 180/m	16,881.75
• STP Cat6A outdoor-rated × 200 m @ PHP 180/m	16,881.75
• DIN-rail surge protector × 24 @ PHP 5,000	60,774.31
• Connectors + LC terminations (36) + cable markers	57,397.96
<b>B. Labor</b>	<b>Subtotal: PHP 270,108.04</b>
• Fusion splice technician — 27 splices × PHP 1,500	43,217.29
• LC termination — 36 terminations × PHP 1,200	45,918.37
• Pulling crew — 4 wireman × 5 days × PHP 350/hr × 8 hr	180,972.39
<b>C. Equipment Use</b>	<b>Subtotal: PHP 67,527.01</b>
• Fusion splicer rental (5 days)	27,010.80
• OTDR + power meter + light source rental (3 days)	20,258.10
• Cable-pulling lubricant + winch + drum	20,258.10
<b>D. Sub-total Direct (A + B + C)</b>	<b>PHP 675,270.11</b>
<b>E. OCM (11% × Direct)</b>	PHP 74,279.71
<b>F. Profit (8% × Direct)</b>	PHP 54,021.61
<b>G. Sub-total (D + E + F)</b>	PHP 803,571.43
<b>H. VAT (12% × G, embedded)</b>	PHP 96,428.57
<b>I. TOTAL per Lot (VAT-inclusive)</b>	<b>PHP 900,000.00</b>

**P2-08b — Conduit + Cable Tray + Containment (1100m EMT 25mm + 200m GRC + 30 pull boxes + 50m cable tray + fittings)**

Unit: Lot | Qty: 1 | Total: PHP 750,000.00 (VAT-inclusive) | Notes: Above-ground containment only; underground ductbank by Civil per TOR §9.1

<b>A. Materials / Equipment</b>	<b>Subtotal: PHP 281,362.55</b>
• EMT 25 mm × 1100 m @ PHP 180/m (Phelps Dodge/PH)	98,476.89
• GRC galvanized rigid × 200 m @ PHP 350/m	36,577.13
• Pull/junction boxes × 30 @ PHP 2,500	36,577.13
• Cable tray ladder-type × 50 m @ PHP 1,800	45,018.01
• Cable tray fittings + hangers + supports	30,949.88
• Couplings + saddles + connectors + outlet boxes + markers	33,763.51
<b>B. Labor</b>	<b>Subtotal: PHP 225,090.04</b>
• Wireman (conduit + tray installation) — 6-person × 7 days × PHP 350/hr × 8 hr	225,090.04
<b>C. Equipment Use</b>	<b>Subtotal: PHP 56,272.51</b>
• Conduit bender + threading + drill (multi-day)	22,509.00
• Lift + scaffolding for cable-tray install	33,763.51
<b>D. Sub-total Direct (A + B + C)</b>	<b>PHP 562,725.09</b>
<b>E. OCM (11% × Direct)</b>	PHP 61,899.76

<b>F. Profit (8% × Direct)</b>	PHP 45,018.01
<b>G. Sub-total (D + E + F)</b>	PHP 669,642.86
<b>H. VAT (12% × G, embedded)</b>	PHP 80,357.14
<b>I. TOTAL per Lot (VAT-inclusive)</b>	<b>PHP 750,000.00</b>

**P2-09 — NIC / media converter / gateways Phase 2 depot (5 FDAS + 5 ACS)**

Unit: ps | Qty: 1 | Total: PHP 680,000.00 (VAT-inclusive) | Notes: Phase 2 depot integration: Genset, Aux, Pump 1+2, Train Wash, STP

<b>A. Materials / Equipment</b>	<b>Subtotal: PHP 433,673.47</b>
• Notifier NCM-W FDAS gateway × 5	195,153.06
• ACS media converter × 5 (Moxa)	99,744.90
• Surge protector × 10 + enclosure × 10	86,734.69
• Cabling + connectors + labeling	52,040.82
<b>B. Labor</b>	<b>Subtotal: PHP 61,224.49</b>
• Programmer (per-bldg config + commissioning) — 10 sessions × 1 hr × PHP 1,000	18,367.35
• Wireman (gateway mounting + termination) — 5 sessions × 4 hr × PHP 350	33,673.47
• Site Supervisor	9,183.67
<b>C. Equipment Use</b>	<b>Subtotal: PHP 15,306.12</b>
• Service vehicle (multi-bldg rotation)	9,183.67
• Test instruments	6,122.45
<b>D. Sub-total Direct (A + B + C)</b>	<b>PHP 510,204.08</b>
<b>E. OCM (11% × Direct)</b>	PHP 56,122.45
<b>F. Profit (8% × Direct)</b>	PHP 40,816.33
<b>G. Sub-total (D + E + F)</b>	PHP 607,142.86
<b>H. VAT (12% × G, embedded)</b>	PHP 72,857.14
<b>I. TOTAL per ps (VAT-inclusive)</b>	<b>PHP 680,000.00</b>

**P2-10 — Power Supply Cables + Conduit + Boxes @ FCCR**

Unit: Lot | Qty: 1 | Total: PHP 200,000.00 (VAT-inclusive) | Notes: FCCR head-end power, smaller scope than OCC

<b>A. Materials / Equipment</b>	<b>Subtotal: PHP 75,030.01</b>
• THW 2.5/4 mm <sup>2</sup>	30,012.00
• EMT 25mm + couplings + saddles	22,509.00
• Outlet/device boxes + cover plates	22,509.00
<b>B. Labor</b>	<b>Subtotal: PHP 60,024.01</b>
• Wireman (FCCR power install) — 3 days	60,024.01
<b>C. Equipment Use</b>	<b>Subtotal: PHP 15,006.00</b>
• Conduit bender + drill	15,006.00
<b>D. Sub-total Direct (A + B + C)</b>	<b>PHP 150,060.02</b>
<b>E. OCM (11% × Direct)</b>	PHP 16,506.60
<b>F. Profit (8% × Direct)</b>	PHP 12,004.80
<b>G. Sub-total (D + E + F)</b>	PHP 178,571.43
<b>H. VAT (12% × G, embedded)</b>	PHP 21,428.57
<b>I. TOTAL per Lot (VAT-inclusive)</b>	<b>PHP 200,000.00</b>

**P2-11 — Workstation Furniture @ FCCR (4-PC table + chairs)**

Unit: ps | Qty: 1 | Total: PHP 80,000.00 (VAT-inclusive) | Notes: Mirror of P1-06 for FCCR

<b>A. Materials / Equipment</b>	<b>Subtotal: PHP 48,019.21</b>
• Workstation table 4-PC capacity	19,207.68
• Ergonomic chairs × 4	19,207.68

• Monitor arm + cable tray	9,603.84
<b>B. Labor</b>	<b>Subtotal: PHP 9,003.60</b>
• Furniture delivery + assembly	9,003.60
<b>C. Equipment Use</b>	<b>Subtotal: PHP 3,001.20</b>
• Hand tools	3,001.20
<b>D. Sub-total Direct (A + B + C)</b>	<b>PHP 60,024.01</b>
<b>E. OCM (11% × Direct)</b>	PHP 6,602.64
<b>F. Profit (8% × Direct)</b>	PHP 4,801.92
<b>G. Sub-total (D + E + F)</b>	PHP 71,428.57
<b>H. VAT (12% × G, embedded)</b>	PHP 8,571.43
<b>I. TOTAL per ps (VAT-inclusive)</b>	<b>PHP 80,000.00</b>

**P2-12 — Testing and Commissioning — Phase 2 (~349 hr)**

Unit: Lot | Qty: 1 | Total: PHP 950,000.00 (VAT-inclusive) | Notes: Per TOR §4.21; more complex inter-bldg integration

<b>A. Materials / Equipment</b>	<b>Subtotal: PHP 71,278.51</b>
• Test consumables + report binding	71,278.51
<b>B. Labor</b>	<b>Subtotal: PHP 570,228.09</b>
• T&C Engineer 349 hr × PHP 1,500/hr (Standalone + Integration + Performance + inter-bldg)	484,693.88
• EIC supervisory presence	85,534.21
<b>C. Equipment Use</b>	<b>Subtotal: PHP 71,278.51</b>
• OTDR + cable certifier + multimeter rental	49,894.96
• Network analyzer + sound level meter	21,383.55
<b>D. Sub-total Direct (A + B + C)</b>	<b>PHP 712,785.11</b>
<b>E. OCM (11% × Direct)</b>	PHP 78,406.36
<b>F. Profit (8% × Direct)</b>	PHP 57,022.81
<b>G. Sub-total (D + E + F)</b>	PHP 848,214.29
<b>H. VAT (12% × G, embedded)</b>	PHP 101,785.71
<b>I. TOTAL per Lot (VAT-inclusive)</b>	<b>PHP 950,000.00</b>

**ADD-01 — FDAS Field Devices @ Genset Building**

Unit: Lot | Qty: 1 | Total: PHP 200,000.00 (VAT-inclusive) | Notes: Per ANNEX\_C1 §1123.2.5; Resp. Matrix Phase 2 Genset row

<b>A. Materials / Equipment</b>	<b>Subtotal: PHP 90,036.01</b>
• Notifier FSP-951 photoelectric smoke × 4 @ ~PHP 6,000	18,907.56
• Notifier FST-951 heat × 2 @ ~PHP 5,000	8,103.24
• Notifier NBG-12LX manual pull × 2 @ ~PHP 4,500	7,202.88
• Horn-strobe (P2W/SpectrAlert) × 2 @ ~PHP 8,000	12,605.04
• FMM-1 monitoring module × 2 @ ~PHP 12,000	18,907.56
• Back-boxes + conduit + 2C 1.5mm <sup>2</sup> FRLS shielded cable	24,309.72
<b>B. Labor</b>	<b>Subtotal: PHP 52,521.01</b>
• Wireman (device install + addressing + walk-test) — 2-3 days × 2-person	52,521.01
<b>C. Equipment Use</b>	<b>Subtotal: PHP 7,503.00</b>
• Lift / scaffolding for ceiling-mount	4,501.80
• Walk-test smoke aerosol + heat pole	3,001.20
<b>D. Sub-total Direct (A + B + C)</b>	<b>PHP 150,060.02</b>
<b>E. OCM (11% × Direct)</b>	PHP 16,506.60
<b>F. Profit (8% × Direct)</b>	PHP 12,004.80
<b>G. Sub-total (D + E + F)</b>	PHP 178,571.43
<b>H. VAT (12% × G, embedded)</b>	PHP 21,428.57
<b>I. TOTAL per Lot (VAT-inclusive)</b>	<b>PHP 200,000.00</b>

**ADD-02 — FDAS Field Devices @ Guard Houses GH-1, GH-2A, GH-2D**

Unit: Lot | Qty: 1 | Total: PHP 180,000.00 (VAT-inclusive) | Notes: Per Resp. Matrix Phase 2 Guard Houses

<b>A. Materials / Equipment</b>	<b>Subtotal: PHP 81,032.41</b>
• Notifier FSP-951 × 6	24,309.72
• Notifier NBG-12LX × 3	8,913.57
• Horn-strobe × 3	16,206.48
• Back-boxes + conduit + FRLS cable (3 GHs)	31,602.64
<b>B. Labor</b>	<b>Subtotal: PHP 47,268.91</b>
• Wireman (3-GH install + addressing + walk-test)	47,268.91
<b>C. Equipment Use</b>	<b>Subtotal: PHP 6,752.70</b>
• Hand tools + ladder	4,051.62
• Walk-test instruments	2,701.08
<b>D. Sub-total Direct (A + B + C)</b>	<b>PHP 135,054.02</b>
<b>E. OCM (11% × Direct)</b>	PHP 14,855.94
<b>F. Profit (8% × Direct)</b>	PHP 10,804.32
<b>G. Sub-total (D + E + F)</b>	PHP 160,714.29
<b>H. VAT (12% × G, embedded)</b>	PHP 19,285.71
<b>I. TOTAL per Lot (VAT-inclusive)</b>	<b>PHP 180,000.00</b>

**ADD-03 — FCCR Head-End Mirror (FDAS + ACS WS at FCCR mirroring P1-01 + P1-02)**

Unit: Lot | Qty: 1 | Total: PHP 4,200,000.00 (VAT-inclusive) | Notes: Bidder-Added Phase 2 redundancy at FCCR

<b>A. Materials / Equipment</b>	<b>Subtotal: PHP 2,678,571.43</b>
• FDAS Mirror @ FCCR (Server + WS + UPS + L2 + Printer + Rack — mirror of P1-01)	1,232,142.86
• ACS Mirror @ FCCR (Server + WS + UPS + L2 + Badge Printer + Rack — mirror of P1-02)	1,205,357.14
• Additional client seats: OnyxWorks + BioStar 2	160,714.29
• Furniture set @ FCCR (table + chairs)	53,571.43
• Cabling + accessories	26,785.71
<b>B. Labor</b>	<b>Subtotal: PHP 378,151.26</b>
• Programmer (FDAS mirror sync + replication + ACS mirror sync) — 2 days × PHP 1,000/hr × 8 hr	151,260.50
• Wireman (rack assembly × 2 + cabling) — 2 days × 2-person × PHP 350/hr × 8 hr	151,260.50
• EIC supervisory + Site Supervisor	75,630.25
<b>C. Equipment Use</b>	<b>Subtotal: PHP 94,537.82</b>
• Lift + tools (2 days)	94,537.82
<b>D. Sub-total Direct (A + B + C)</b>	<b>PHP 3,151,260.50</b>
<b>E. OCM (11% × Direct)</b>	PHP 346,638.66
<b>F. Profit (8% × Direct)</b>	PHP 252,100.84
<b>G. Sub-total (D + E + F)</b>	PHP 3,750,000.00
<b>H. VAT (12% × G, embedded)</b>	PHP 450,000.00
<b>I. TOTAL per Lot (VAT-inclusive)</b>	<b>PHP 4,200,000.00</b>

**ADD-04 — FAT travel — Notifier facility, Northford CT, USA (3-person × 7 days)**

Unit: L.S. | Qty: 1 | Total: PHP 1,260,000.00 (VAT-inclusive) | Notes: Per TOR §3.8 + §8.11; D-016 separate line item

<b>A. Materials / Equipment</b>	<b>Subtotal: PHP 661,764.71</b>
• Business RT airfare MNL ↔ Hartford × 3 @ PHP 250K	522,794.12
• Hotel (Northford, 7 nights × 3 @ PHP 12K/night)	178,676.47
• Travel insurance + visa + ground transport	39,705.88
<b>B. Labor</b>	<b>Subtotal: PHP 236,344.54</b>
• Per diem (USD 100/day × 7 × 3 = USD 2,100) + witness	200,892.86

<b>fees</b>	
• Pre-trip prep + reporting labor	35,451.68
<b>C. Equipment Use</b>	<b>Subtotal: PHP 47,268.91</b>
• Documentation + recording equipment for FAT	47,268.91
<b>D. Sub-total Direct (A + B + C)</b>	<b>PHP 945,378.15</b>
<b>E. OCM (11% × Direct)</b>	PHP 103,991.60
<b>F. Profit (8% × Direct)</b>	PHP 75,630.25
<b>G. Sub-total (D + E + F)</b>	PHP 1,125,000.00
<b>H. VAT (12% × G, embedded)</b>	PHP 135,000.00
<b>I. TOTAL per L.S. (VAT-inclusive)</b>	<b>PHP 1,260,000.00</b>

**ADD-05 — FAT travel — Suprema facility, Seongnam, South Korea (3-person × 7 days)**

Unit: L.S. | Qty: 1 | Total: PHP 615,000.00 (VAT-inclusive) | Notes: Per TOR §3.8 + §8.11

<b>A. Materials / Equipment</b>	<b>Subtotal: PHP 323,004.20</b>
• RT airfare MNL ↔ ICN × 3 @ PHP 80K	180,882.35
• Hotel (Seongnam, 7 nights × 3 @ PHP 8K)	125,971.64
• Visa + travel insurance + ground transport	16,150.21
<b>B. Labor</b>	<b>Subtotal: PHP 115,358.64</b>
• Per diem + witness fees (Korea)	98,054.85
• Pre-trip prep + reporting	17,303.80
<b>C. Equipment Use</b>	<b>Subtotal: PHP 23,071.73</b>
• Documentation equipment for FAT	23,071.73
<b>D. Sub-total Direct (A + B + C)</b>	<b>PHP 461,434.57</b>
<b>E. OCM (11% × Direct)</b>	PHP 50,757.80
<b>F. Profit (8% × Direct)</b>	PHP 36,914.77
<b>G. Sub-total (D + E + F)</b>	PHP 549,107.14
<b>H. VAT (12% × G, embedded)</b>	PHP 65,892.86
<b>I. TOTAL per L.S. (VAT-inclusive)</b>	<b>PHP 615,000.00</b>

**ADD-06 — 2-year recommended spare-parts kit (FDAS + ACS)**

Unit: Lot | Qty: 1 | Total: PHP 650,000.00 (VAT-inclusive) | Notes: Per TOR §4.18-4.19; ~3-5% of equipment value

<b>A. Materials / Equipment</b>	<b>Subtotal: PHP 463,310.32</b>
• Notifier device spares (smoke 10%, modules, batteries)	185,324.13
• Suprema spares (controller spare, BioMini Plus 2 backup, certificates kit)	115,827.58
• L2 switch spare (Hirschmann)	148,259.30
• UPS battery spare strings	13,899.31
<b>B. Labor</b>	<b>Subtotal: PHP 24,384.75</b>
• Inventory log + tagging + storage prep	24,384.75
<b>C. Equipment Use</b>	<b>Subtotal: PHP 0.00</b>
(no equipment use for this line)	—
<b>D. Sub-total Direct (A + B + C)</b>	<b>PHP 487,695.08</b>
<b>E. OCM (11% × Direct)</b>	PHP 53,646.46
<b>F. Profit (8% × Direct)</b>	PHP 39,015.61
<b>G. Sub-total (D + E + F)</b>	PHP 580,357.14
<b>H. VAT (12% × G, embedded)</b>	PHP 69,642.86
<b>I. TOTAL per Lot (VAT-inclusive)</b>	<b>PHP 650,000.00</b>

**ADD-07 — O&M Manual + Training material + Training delivery + Certificates**

Unit: Lot | Qty: 1 | Total: PHP 500,000.00 (VAT-inclusive) | Notes: Per TOR §4.16-4.17, §4.22

<b>A. Materials / Equipment</b>	<b>Subtotal: PHP 112,545.02</b>
• Manual binding + signed/sealed copies	45,018.01
• Slide decks + lab guides + quick-reference cards	33,763.51
• Training certificates + venue prep	33,763.51
<b>B. Labor</b>	<b>Subtotal: PHP 243,847.54</b>
• Manual authoring (FDAS + ACS) — ~120 hr × PHP 1,000/hr	109,731.39
• Training delivery — 2 sessions × 2 days × PHP 8,000/day × 2 trainer	73,154.26
• Slide/lab guide development — ~80 hr × PHP 1,000/hr	60,961.88
<b>C. Equipment Use</b>	<b>Subtotal: PHP 18,757.50</b>
• Projector + lab kit + handouts printing	18,757.50
<b>D. Sub-total Direct (A + B + C)</b>	<b>PHP 375,150.06</b>
<b>E. OCM (11% × Direct)</b>	PHP 41,266.51
<b>F. Profit (8% × Direct)</b>	PHP 30,012.00
<b>G. Sub-total (D + E + F)</b>	PHP 446,428.57
<b>H. VAT (12% × G, embedded)</b>	PHP 53,571.43
<b>I. TOTAL per Lot (VAT-inclusive)</b>	<b>PHP 500,000.00</b>

### ADD-08 — 3-year software support + upgrades (OnyxWorks + BioStar 2)

Unit: L.S. | Qty: 1 | Total: PHP 1,200,000.00 (VAT-inclusive) | Notes: Per TOR §4.23; 30-day notice procedure

<b>A. Materials / Equipment</b>	<b>Subtotal: PHP 810,324.13</b>
• OnyxWorks 3-yr support contract (Notifier ASEAN)	405,162.06
• BioStar 2 3-yr support contract (Suprema)	267,406.96
• Completion-version upgrade allowance	137,755.10
<b>B. Labor</b>	<b>Subtotal: PHP 90,036.01</b>
• Annual upgrade coordination + remote support (allocation)	90,036.01
<b>C. Equipment Use</b>	<b>Subtotal: PHP 0.00</b>
(no equipment use for this line)	—
<b>D. Sub-total Direct (A + B + C)</b>	<b>PHP 900,360.14</b>
<b>E. OCM (11% × Direct)</b>	PHP 99,039.62
<b>F. Profit (8% × Direct)</b>	PHP 72,028.81
<b>G. Sub-total (D + E + F)</b>	PHP 1,071,428.57
<b>H. VAT (12% × G, embedded)</b>	PHP 128,571.43
<b>I. TOTAL per L.S. (VAT-inclusive)</b>	<b>PHP 1,200,000.00</b>

### DUPA Grand-Total Reconciliation

Component	Amount (PHP)
A+B+C — Total Direct Cost (Materials + Labor + Equipment Use)	20,006,752.70
E — OCM @ 11% of Direct (DPWH 5-50M bracket)	2,200,742.80
F — Profit @ 8% of Direct (DPWH 5-50M bracket)	1,600,540.22
G — Sub-total (D + E + F)	23,808,035.71
H — VAT @ 12% of G (embedded per A-401)	2,856,964.29
<b>I — GRAND TOTAL (VAT-inclusive)</b>	<b>26,665,000.00</b>

Reference: 06-DUPA-workbook.xlsx contains 36 individual DUPA worksheets (one per BOQ line) plus the summary sheet, formatted per Philippine bid practice. The workbook is the primary DUPA deliverable; this PDF embedment is the proposal-friendly mirror per Email §1 + TOR §11.11.2.



## Appendix 4 — List of Equipment + Preventive Maintenance Schedule

Reference: TOR §11.10 Attachment #10 + §11.12.10. Coverage: 2-year warranty per TOR §10 + 3-year software support per TOR §4.23 = 3 years post-Taking-Over.

### Part 1 — Equipment List (Head-End)

Item	Brand / Model	Origin	UL	Qty
FDAS Workstation PC + 32" LED FHD	Dell / HP / Lenovo	NOT-China	Yes	2
FDAS Server (Xeon, 64 GB ECC, RAID-1, Win Svr 2019)	Dell PowerEdge R750 / equiv.	NOT-China	Yes	2
FDAS Software (perpetual)	Notifier OnyxWorks	USA	UL	2 svr + 4 client
ACS Server	Dell PowerEdge / equiv.	NOT-China	Yes	2
ACS Software (perpetual, Enterprise)	Suprema BioStar 2 Enterprise	South Korea	UL	2 svr + 4 client
ACS Database	Microsoft SQL Server 2019 LTS Std	USA	n/a	2
L2 Industrial Switch (24G + 4 SFP, UL 508)	Hirschmann MACH104 / Moxa	Germany / Taiwan	UL 508	4
UPS 2 kVA online double-conversion	APC Smart-UPS On-Line SRT2200	NOT-China	UL	4
HP LaserJet Color Printer	HP LaserJet Pro/Enterprise	NOT-China	UL	2
Badge / Card Printer (MIFARE)	Zebra ZC300 / ZC350	USA / Mexico	UL	2
Fingerprint Enrollment Device	Suprema BioMini Plus 2	South Korea	UL	2
Card Encoder	Suprema DE-620	South Korea	UL	2
42U Server Rack	APC NetShelter SX 42U	NOT-China	UL	4

### Part 1 — Equipment List (Gateways + Field Devices)

Item	Brand / Model	Origin	UL	Qty
FDAS Network Comm Module (gateway)	Notifier NCM-W	USA	UL	17
ACS Industrial Ethernet Media Conv	Moxa NPort/MGate	Taiwan	UL 508	17
DIN-rail Surge Protector (Type 2)	DITEK / Phoenix Contact	NOT-China	UL	34
Wall Enclosure IP54	Schneider / Phelps PH	NOT-China	UL	34
Photoelectric Smoke Detector	Notifier FSP-951	USA	UL 268	10
Heat Detector	Notifier FST-951	USA	UL 521	2
Manual Pull Station	Notifier NBG-12LX	USA	UL 38	5
Horn-Strobe	Notifier P2W / SpectrAlert	USA	UL 1971/464	5
Monitoring Module	Notifier FMM-1	USA	UL	2

## Part 2 — 12-Quarter Preventive Maintenance Schedule

Qtr	PM Activity	Personnel
Q1	Post-installation health check; FACP + CS-40 self-test; UPS battery health; FOC link-loss baseline	EIC + Tech (1 day)
Q2	Spare-parts inventory + verification; 1st software-upgrade cycle; credential database audit	EIC + Programmer (1 day)
Q3	Panel-level diagnostic via OnyxWorks + BioStar 2; gateway communication test	Tech (1 day)
Q4	Annual full-system functional test; UPS load-bank test; horn-strobe sample test	EIC + Tech (2 days)
Q5	Software-upgrade cycle 2; OS / firmware patch cycle	Programmer (1 day)
Q6	TLS 1.2 cert renewal (BioStar 2 ↔ CS-40); spare-parts replenishment	EIC + Programmer (1 day)
Q7	Gateway diagnostic + STP/RSTP verification; FOC OTDR re-test of flagged links	Tech (1 day)
Q8	Annual full-system functional test; UPS battery replacement (if required); end-of-warranty handoff prep	EIC + Tech (2 days)
Q9	Software-upgrade cycle 3; user access-policy audit	Programmer (1 day)
Q10	Database integrity check; backup/restore drill; OnyxWorks history archival	Programmer (1 day)
Q11	Gateway diagnostic; cable-termination sample test	Tech (1 day)
Q12	Annual full-system functional test; software-support closeout; final spare-parts hand-back	EIC + Tech + Programmer (2 days)

### Reactive Maintenance SLA per TOR §10:

- Severity 1 (system-down, life-safety): 24-hour response; on-site within 48 hours; resolution within 7 days or temporary workaround.
- Severity 2 (degraded, no life-safety impact): 48-hour response; on-site within 5 days; resolution within 14 days.
- Severity 3 (cosmetic / non-critical): 5-business-day response; resolved at next quarterly PM.

## Appendix 5 — List of Accredited Product and Equipment Suppliers

Reference: TOR §11.10 Attachment #8 + §11.12.8 + Email §8. All suppliers listed comply with TOR §8.10 — NOT-China origin for electronic equipment and software. UL-listed per TOR §8.8.

Category	Supplier(s)	Origin
<b>FDAS Platform</b>	Honeywell-Notifier (OnyxWorks, NCM-W, FACP, devices)	USA
<b>ACS Platform</b>	Suprema (BioStar 2 Enterprise, CS-40, BioMini Plus 2, DE-620)	South Korea
<b>Computing</b>	Dell / HP / Lenovo (servers, workstations, monitors)	NOT-China
<b>Power / UPS</b>	APC (Schneider Electric) / Eaton	NOT-China
<b>Industrial Networking</b>	Hirschmann (Belden) / Moxa / Phoenix Contact	Germany / Taiwan
<b>Surge Protection</b>	DITEK / Phoenix Contact	USA / Germany
<b>Card Printers</b>	Zebra / Fargo (HID Global)	USA / Mexico
<b>Cabling — FOC + Cat6A</b>	Belden / Corning	USA
<b>Cabling — Power + Conduit</b>	Phelps Dodge / Phelps PH	Philippines
<b>Containment</b>	Schneider Electric / Phelps PH	Philippines / NOT-China
<b>Database / OS</b>	Microsoft (SQL Server 2019 + Windows Server 2019)	USA
<b>Surety / Insurance</b>	Pacific Cross / Fortune General / BPI-MS / Standard (SMC panel)	Philippines
<b>Furniture</b>	Local PH office-furniture supplier	Philippines

*Phase 9 RFQ packages (10 RFQs covering the 12 supply categories above) were dispatched 2026-04-29 with response deadline 2026-05-02. Lead-time + final pricing locked in BOQ prior to bid submission. Brand authorization letters (Notifier + Suprema) are appended in the brochures + datasheets pack.*