



Annex "C": Terms of Reference including Scope of Works

TERMS OF REFERENCE

BACKGROUND:

The Kalinga State University is to engage for the Construction services of a qualified construction company to upgrade the 3-Phase Line Distribution Power System of Bulanao Campus- Phase I.

I. CONTRACT DESCRIPTION

a. Name of Contract	: Negotiated Procurement for Upgrading of 3-Phase Line Distribution Power System of KSU Bulanao Campus- Phase I
b. Location of Contract	: Kalinga State University – Main Campus National Highway, Purok 6, Bulanao Centro, Tabuk City, Kalinga
c. Floor Area	: 1 Lot (Coverage of the scope of works)
d. End-Users	: Dr. Lope T. Buen, Bulanao Campus Administrator
e. Implementing Unit	: Infrastructure Office

II. OBJECTIVE OF THE TERMS OF REFERENCE (TOR)

- 2.1 To provide a background information regarding the preparation and submission of bid proposal to the Kalinga State University;
- 2.2 To provide a background information regarding the proposed project which should be handled at the lowest possible cost, acceptable quality and performance and in the shortest possible time the bidder has to offer;
- 2.3 To outline and summarize the "Scope of Work" of the Contractor that has to be performed under the terms of its contract with the Kalinga State University
- 2.4 To provide penalties in case of breach of the Contractor's obligations

III. ROLE OF THE CONTRACTOR

- 3.1 The Contractor, for which this TOR applies, shall furnish necessary equipment, labor, tools, facilities and instruments for the construction of the Architectural, Structural, Electrical and Sanitary (if applicable) related to the project sufficient enough to perform construction services that is covered in the contract.

In this regard, the Contractor or the key personnel to be assigned must have professional experience compatible with the undertaking.

- 3.2 The Contractor at all times, should refer to the KSU Infrastructure Unit regarding corrections, plans and specifications, Variation orders and Quality control requirements of the project;
- 3.3 The Contractor shall assign to its designated project engineer to prepare daily construction logbook and pouring permits which must be approved by the KSU Infrastructure unit prior to pouring.
- 3.4 The Contractor shall also implement the construction activities to complete the project in accordance with the approved construction drawings and specifications and the scope of work as specified in the contract;
- 3.5 Construction Phase should be completed within **Ninety-Five (95) calendar days from the receipt of Notice to Proceed.**

IV. GENERAL CONDITIONS

- 4.1 The Contractor shall supply labor, materials and equipment, necessary for the **Negotiated Procurement for Upgrading of 3-Phase Line Distribution Power System of KSU Bulanao Campus- Phase I.**

The activities of the Contractor for the construction would include but will not be limited to the following:

- 4.1.1 Designate one (1) Project Engineer who shall work full time during the construction period/duration of the contract. He shall be in charge of the construction work and is expected to perform the following:
 - a. Document, schedule, oversee & monitor the day-to-day construction works.
 - b. Coordinate, address and resolve all concern/s of nearby buildings and structures relative to the construction and related services as required by LGU and other regulating agencies.



- c. Keep a close coordination with the KSU Infrastructure Unit during project implementation and submit progress report as required.

4.1.2 Designate one (1) Materials Engineer who shall work full time during pouring periods.

V. PROJECT IMPLEMENTATION/CONSTRUCTION

5.1 The Contractor shall carry out and complete all items of work in accordance with the approved plans and specifications.

5.1.1 ENGINEERING SUPPORT SERVICES

The Contractor shall prepare the revised major modifications/changes in the design after the approval of the proponent during the construction implementation, if any.

5.1.2. PROGRESS REPORTS

The Contractor shall prepare weekly and monthly accomplishment reports supported with progress photographs and S-Curves to monitor actual progress to be used as basis for progress billing to be submitted to the KSU Infrastructure Unit.

5.1.3 TURN-OVER OF THE COMPLETED PROJECT

The Contractor shall fully address and comply with the final punchlist to be issued by the KSU Infrastructure unit prior to the Turn-over and Acceptance of the completed project.

5.1.4 WATER AND ELECTRICITY

If applicable, the Contractor shall install electric meter and water meter in their construction sites and shall pay the actual amount water and electricity bills based on their usage at prevailing rate. During concrete pouring, the contractor shall bring his own water.

VI. PROVISIONS FOR STORAGE & MATERIAL HANDLING

6.1 The Contractor shall store his materials, equipment and tools in one place of the construction site during construction. The area shall be coordinated with the KSU Infrastructure Unit. It shall be kept neat and clean at all times. Any damage thereto or to the surrounding area arising from any accident, paint spills, etc. shall be repaired and/or restored to its original condition. Likewise, extra care shall be taken in the storage of hazardous chemicals (paints, thinners, lacquers, oils, solvents, etc.) in order to avoid accidents, explosions and/or fires. Oily rags, solvent-soaked foams, paint brushes and rollers shall be kept in metal containers tightly sealed and shall be cleaned and/or removed from the job site at the end of every working day.

6.2 Provisions for securing and safekeeping of stored materials, tools and equipment during the construction project shall be for the account of the Contractor.

VII. CLEARING OF SITE

The Contractor shall clean the whole area by removing debris, discards, paint spots, excesses and spillage and shall leave the entire premises free from rubbish caused by their work to the satisfaction of the KSU at no extra cost.

VIII. WARRANTIES OF THE BUILDER

- 8.1 The Contractor warrants that it shall conform strictly to the terms and conditions of these Terms of Reference.
- 8.2 The Contractor warrants, represents and undertakes reliability of the service and that their manpower complements are hardworking, qualified/reliable and dedicated to do the service required to the satisfaction of the KSU. It shall employ well-behaved and honest employees.
- 8.3 The Contractor shall comply with the laws governing employee's compensation, Philhealth, Social Security and/or labor standards and other laws, rules and regulations applicable to its personnel employed by the Contractor on account of contracted services. The Builder shall pay its personnel not less than the minimum wage and other benefits mandated by law.



- 8.4 The Contractor in performance of its services shall secure, maintain at its own expense all registration, licenses or permits required by National or Local Laws and shall comply with the rules, regulations and directives of Regulatory Authorities and Commissions. The Contractor undertakes to pay all fees or charges payable to any instrumentality of government or to any other duly constituted authority relating to the construction project.
- 8.5 The Contractor's personnel shall take all necessary precautions for the safety of all persons and properties at or near their area of work and shall comply with all the standard and established safety regulations, rules and practices.
- 8.6 The Contractor shall coordinate with the KSU Infrastructure unit in the performance of their jobs.
- 8.7 The Contractor shall be liable for any loss, damage, or injury as may be due directly through the fault or negligence of its personnel. It shall assume responsibility thereof and the Contractor shall be specifically liable from any responsibility arising therefrom.

IX. TERMS OF PAYMENT

- 9.1 The Contractor, upon request, may be granted an advance payment in an amount equivalent to fifteen percent (15%) of the total contract price, net of VAT and applicable withholding taxes, upon the submission of performance bond in the form of cash or irrevocable standby Letter of Credit issued by a reputable commercial bank or Surety Bond issued by a bonding company duly certified by the Insurance Commission to be of good standing.
- 9.2 Advance Payment shall be repaid by the Contractor thru deduction by BIR RR7 of fifteen percent (15%) from the Contractor's periodic progress billing.
- 9.3 The Contractor shall collect payment on progress billings based on the percentage of work accomplished, within a reasonable time from submission of all the required documents, subject to the required Expanded Withholding Tax (EWT) of two percent (2%) and Final Withholding VAT of five percent (5%), reduction based on Section 10.2, if any, and ten percent (10%) retention fund.
- 9.4 The retention fund shall be released only upon issuance of Certification of Final Acceptance issued by the Head of the Procuring Entity, and submission by Contractor of Post-Construction Documentation.
- 9.5 Progress Billing shall be based on the following:

PROGRESS BILLING	PERCENT OF WORK COMPLETED	PERCENTAGE TERMS OF PAYMENT
First Billing	Thirty (30%) of the work accomplished	Thirty percent (30%) of the Contract Price less advance payment (Sec. 13.2), applicable withholding taxes and retention fund of ten percent (10%) of the contract price (Sec. 13.3)
Second up to the next progress billing and Final billing	Above or equal to (15%) of work accomplished.	Above or equal to (15%) of the Contract Price less advance payment (Sec. 10.2), applicable withholding taxes and retention fund of ten percent (10%) of the contract price (Sec. 10.4)

The percentage of completion of work shall be subject to review and evaluation by KSU Infrastructure Unit.

- 9.6 Payments shall be made within a reasonable time from submission of the required documents based on existing applicable laws.

X. PRE-TERMINATION OF CONTRACT

- 10.1 The contract of the **Negotiated Procurement for Upgrading of 3-Phase Line Distribution Power System of KSU Bulanao Campus- Phase I** may be pre-terminated by the **Kalinga State University** upon notice of any violation of the terms of the contract. In case of pre-termination, the Contractor shall be informed by the **KSU** within thirty (30) calendar days prior to such termination.
- 10.2 In case of pre-termination, the Contractor shall be liable to an additional liquidated damages equivalent to five percent (5%) of the contract price as provided by the Government Accounting and Auditing Manual (GAAM) and forfeiture of the Performance Security.
- 10.3 The **KALINGA STATE UNIVERSITY (KSU)** shall have the right to blacklist the Contractor in case of pre-termination.



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XI. SCOPE AND COVERAGE OF THE PROJECT WITH SPECIFICATION

ITEM	ITEMS OF WORK TO BE DONE	UNIT	QUANTITY	SCOPE OF WORKS
100 (3)a1	CLEARING AND GRUBBING (Individual trimming of Trees)	EACH	20.00	clearing and lay outing of: Trimming of all tree trunks that can obstruct the lines
B-2	PROJECT BILLBOARD	LS	1.00	specs are as follows: 1/4"x4'x8' marine plywood good lumber tarpaulin (4'x8') CWN (assorted)
1100	Electrical Works	lot	1.00	<p>Specs are as follows: All materials shall be in accordance with the standards of the following: -IEC, IEEE, PEC, NETA, NEC, Distribution Code Covers items specified in the plan Scope of works includes the following: -Installation of 5- 40' and 7-35' steel poles -Assembly of 2-C1, 2-C4-1, 2-C7 & 11-J3 top pole line hardwares - dismantling of 1-50KVA transformer beside gymnasium; and transferring and installation to the admin building -Installation of 3-75KVA transformer and accessories as located at the existing Pole beside gymnasium; 1-75KVA transformer located at library building and 3-25KVA at food processing center or as specified ' in the plan. - transfer of the existing 3 phase transformer to pole # 2 - assembly of M2-11A grounding assembly - installation of 9-E3-2 or E2-2T guy - installation of 9-F2-1 anchor assembly - installation of 6-M5-6, 6-M5-1, and 6-M5-10 miscellaneous accessories -Payoff of Bare, #1/0, AWG, ACSR and INSULATED, #1/0, AWG, ACSR -Testing of all wiring insulation of insulated copper wires, and testing of all transformers supplied passing all local and national provisions specially requirement of the local electric cooperative (KAELCO). -Provide brochures, catalogues and test reports of all transformers, cables, steel poles and line hardwares supplied</p> <p>LINE HARDWARES</p> <p>Pole # 01</p> <p>35'</p> <p>Materials</p> <p>Description</p> <p>a. Top Pole</p> <p>Insulator, Pin type, Porcelain, ANSI, Class 55-5 Pin, Pole Top, Channel, 1" Thread, 20" long Bolt, machine, 5/8" x Required length Washer, Square, Flat, 2-1/4", x 3/16", 13/16" diameter hole Pin, Crossarm, Steel, 5/8"x 10-3/4" Brace, Crossarm, 28", Steel Bolt carriage 3/8" x 4-1/2" Insulated single upset bolt x required bolt Spring washer, 5/8"</p>



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				Locknuts
				35' steel pole
			b.	Grounding (M2-11A)
				Compression connector
				Ground rod, steel galvanized, 10' long, 5/8" dia
				Clamp, ground rod, tamper proof
				Clip, ground wire
				Staples, ground wire, 2"x1/2", gauge 8
				Jumper, No. 4 AWG, aluminum alloy, stranded
				Ground wire, No. 4 AWG, aluminum
				Connector, split bolt type
			Pole # 02	40'
				Materials
				Description
			a.	Top Pole (C4-1)
				Washer, Square, Flat, 2-1/4", x 3/16", 13/16" diameter hole
				Suspension insulator 6" (6-5 3/4" x 10")
				5/8" eye bolt connector
				5/8" eye nut
				Shackle, anchor, forged steel, galvanized
				Deadend assembly, Primary
				Deadend assembly, Neutral
				Locknuts
				40' steel pole
			b.	Grounding (M2-11A)
				Compression connector
				Ground rod, steel galvanized, 10' long, 5/8" dia
				Clamp, ground rod, tamper proof
				Clip, ground wire
				Staples, ground wire, 2"x1/2", gauge 8
				Jumper, No. 4 AWG, aluminum alloy, stranded
				Ground wire, No. 4 AWG, aluminum
				Connector, split bolt type
			c.	Guy (2-E2-2T)
				Single overhead guy through bolt type
				Washer, curved, 3" sq. x 5/16 w/ 11/16 hole connectors
				clamp, guy, 3-bolt, 6" heavy duty
				3/8" guy strand
				Nut, thimble eye, 5/8"
				Bolt, thimble eye, 5/8"
				Jumpers, #6 SD or equivalent
				Locknut, 5/8"
			d.	Anchor (2-F2-1)/(2FP-1)
				Helix hub, single blade
				Anchor shaft
				Extension rod, 3'-6"
			e.	Miscellaneous (3-M5A)
				Bolt, Machine, 5/8ft x Required Length
				Washer, 2 1/4" Square With 11/16. Hole
				Insulator, Post, Clamp Type, 1 3/4. Stud
				Bracket, Pole Top
				Locknut, 5/8"
			Pole # 03	35'
				Materials
				Description
			a.1	Top Pole (C1)
				Insulator, Pin type, Porcelain, ANSI, Class 55-5
				Pin, Pole Top, Channel, 1" Thread, 20" long



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				Bolt, machine, 5/8" x Required length
				Washer, Square, Flat, 2-1/4", x 3/16", 13/16" diameter hole
				Pin, Crossarm, Steel, 5/8"x 10-3/4"
				Brace, Crossarm, 28", Steel
				Bolt carriage 3/8" x 4-1/2"
				Insulated single upset bolt x required bolt
				Spring washer, 5/8"
				Locknuts
				35' steel pole
		a.2		Top Pole (2-J3)
				3-Wire Rack, with bolts
				Bolt, machine, 5/8" x 9"
				Washer, Square, Flat, 2-1/4", x 2-1/4", 3/16", 13/16" diameter hole
				Locknut, 5/8"
		b.		Grounding (M2-11A)
				Compression connector
				Ground rod, steel galvanized, 10' long, 5/8" dia
				Clamp, ground rod, tamper proof
				Clip, ground wire
				Staples, ground wire, 2"x1/2", gauge 8
				Jumper, No. 4 AWG, aluminum alloy, stranded
				Ground wire, No. 4 AWG, aluminum
				Connector, split bolt type
		c.		Guy (1-E2-2T)
				Single overhead guy through bolt type
				Washer, curved, 3" sq. x 5/16 w/ 11/16 hole connectors
				clamp, guy, 3-bolt, 6" heavy duty
				3/8" guy strand
				Nut, thimble eye, 5/8"
				Bolt, thimble eye, 5/8"
				Jumpers, #6 SD or equivalent
				Locknut, 5/8"
		d.		Anchor (1-F2-1)/(1-FP-1)
				Helix hub, single blade
				Anchor shaft
				Extension rod, 3'-6"
			Pole # 5	35'
				Materials
				Description
		a.2		Top Pole (J3)
				3-Wire Rack, with bolts
				Bolt, machine, 5/8" x 9"
				Washer, Square, Flat, 2-1/4", x 2-1/4", 3/16", 13/16" diameter hole
				Locknut, 5/8"
				35' steel pole
			Pole # 7	35'
				Materials
				Description
		a.2		Top Pole (2-J3)
				3-Wire Rack, with bolts
				Bolt, machine, 5/8" x 9"
				Washer, Square, Flat, 2-1/4", x 2-1/4", 3/16", 13/16" diameter hole
				Locknut, 5/8"
				35' steel pole
		b.		Guy (2-E2-2T)



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				Single overhead guy through bolt type
				Washer, curved, 3" sq. x 5/16 w/ 11/16 hole connectors
				clamp, guy, 3-bolt, 6" heavy duty
				3/8" guy strand
				Nut, thimble eye, 5/8"
				Bolt, thimble eye, 5/8"
				Jumpers, #6 SD or equivalent
				Locknut, 5/8"
			d.	Anchor (2-F2-1)/(2FP-1)
				Helix hub, single blade
				Anchor shaft
				Extension rod, 3'-6"
			Pole # 8	40'
				Materials
				Description
			a.1	Top Pole
				Insulator, Pin type, Porcelain, ANSI, Class 55-5
				Pin, Pole Top, Channel, 1" Thread, 20" long
				Bolt, machine, 5/8" x Required length
				Washer, Square, Flat, 2-1/4", x 3/16", 13/16" diameter hole
				Pin, Crossarm, Steel, 5/8"x 10-3/4"
				Brace, Crossarm, 28", Steel
				Bolt carriage 3/8" x 4-1/2"
				Insulated single upset bolt x required bolt
				Spring washer, 5/8"
				Locknuts
				40' steel pole
			a.2	Top Pole (J3)
				3-Wire Rack, with bolts
				Bolt, machine, 5/8" x 9"
				Washer, Square, Flat, 2-1/4", x 2-1/4", 3/16", 13/16" diameter hole
				Locknut, 5/8"
			b.	Transformer
				75KVA SINGLE PHASE TRANSFORMER
			c.	Miscellaneous
				Bolt, Machine, 5/8" x Required Length
				Connectors
				Lightning Arrester
				Fused Cutout
				Jumpers, #6 S.D. Copper or Equiv.
				Washer, Spring, 5/8"
				Bracket, Transformer
				Bracket, Combination Cutout and Arrester
			Pole # 8A	35'
				Materials
				Description
			a.2	Top Pole (J3)
				3-Wire Rack, with bolts
				Bolt, machine, 5/8" x 9"
				Washer, Square, Flat, 2-1/4", x 2-1/4", 3/16", 13/16" diameter hole
				Locknut, 5/8"
				35' steel pole
			b.	Guy (2-E2-2T)
				Single overhead guy through bolt type
				Washer, curved, 3" sq. x 5/16 w/ 11/16 hole connectors



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				clamp, guy, 3-bolt, 6" heavy duty
				3/8" guy strand
				Nut, thimble eye, 5/8"
				Bolt, thimble eye, 5/8"
				Jumpers, #6 SD or equivalent
				Locknut, 5/8"
			c.	Anchor (1-F2-1)/(1FP-1)
				Helix hub, single blade
				Anchor shaft
				Extension rod, 3'-6"
			Pole # 04	40'
				Materials
				Description
			a.1	Top Pole
				Insulator, Pin type, Porcelain, ANSI, Class 55-5
				Pin, Pole Top, Channel, 1" Thread, 20" long
				Bolt, machine, 5/8" x Required length
				Washer, Square, Flat, 2-1/4", x 3/16", 13/16"
				diameter hole
				Pin, Crossarm, Steel, 5/8"x 10-3/4"
				Brace, Crossarm, 28", Steel
				Bolt carriage 3/8" x 4-1/2"
				Insulated single upset bolt x required bolt
				Spring washer, 5/8"
				Locknuts
				40' steel pole
			a.2	Top Pole (J3)
				3-Wire Rack, with bolts
				Bolt, machine, 5/8" x 9"
				Washer, Square, Flat, 2-1/4", x 2-1/4", 3/16", 13/16"
				diameter hole
				Locknut, 5/8"
				35' steel pole
			b.	Transformer & metering accessories
				75KVA SINGLE PHASE TRANSFORMER
				Screw, steel, 1/2" x 4"
				Connectors
				RSC Conduit, 1-1/4"
				Condulet, type LB
				Conduit, straps
				Transformer secondary bracket
				Meter box, meter and test block
				Transformer, current
				Service head
				Wire, #12 insulated
				Wire, #14 insulated
			c.	Grounding (M2-11A)
				Compression connector
				Ground rod, steel galvanized, 10' long, 5/8" dia
				Clamp, ground rod, tamper proof
				Clip, ground wire
				Staples, ground wire, 2"x1/2", gauge 8
				Jumper, No. 4 AWG, aluminum alloy, stranded
				Ground wire, No. 4 AWG, aluminum
				Connector, split bolt type
			d.	Miscellaneous (3-M5-6, 6-M5-10)
				M5-6
				Connectors
				Lightning Arrester
				Jumpers and Leads
				M5-10



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				Connectors
				Jumpers and Leads
				Cutout and Arrester Combination
			Pole # 09	40'
				Materials
				Description
			a.	Top Pole (C4-1)
				Washer, Square, Flat, 2-1/4", x 3/16", 13/16" diameter hole
				Suspension insulator 6" (6-5 3/4" x 10")
				5/8" eye bolt connector
				5/8" eye nut
				Shackle, anchor, forged steel, galvanized
				Deadend assembly, Primary
				Deadend assembly, Neutral
				Locknuts
				40' steel pole
			b.	Grounding (M2-11A)
				Compression connector
				Ground rod, steel galvanized, 10' long, 5/8" dia
				Clamp, ground rod, tamper proof
				Clip, ground wire
				Staples, ground wire, 2"x1/2", gauge 8
				Jumper, No. 4 AWG, aluminum alloy, stranded
				Ground wire, No. 4 AWG, aluminum
				Connector, split bolt type
			c.	Guy (2-E2-2T)
				Single overhead guy through bolt type
				Washer, curved, 3" sq. x 5/16 w/ 11/16 hole connectors
				clamp, guy, 3-bolt, 6" heavy duty
				3/8" guy strand
				Nut, thimble eye, 5/8"
				Bolt, thimble eye, 5/8"
				Jumpers, #6 SD or equivalent
				Locknut, 5/8"
			d.	Anchor (2-F2-1)/(2FP-1)
				Helix hub, single blade
				Anchor shaft
				Extension rod, 3'-6"
			e.	Miscellaneous (3-M5A)
				Bolt, Machine, 5/8ft x Required Length
				Washer, 2 1/4" Square With 11/16. Hole
				Insulator, Post, Clamp Type, 1 3/4. Stud
				Bracket, Pole Top
				Locknut, 5/8"
			Pole # 10	40'
				Materials
				Description
			a.1	Top Pole
				Insulator, Pin type, Porcelain, ANSI, Class 55-5
				Pin, Pole Top, Channel, 1" Thread, 20" long
				Bolt, machine, 5/8" x Required length
				Washer, Square, Flat, 2-1/4", x 3/16", 13/16" diameter hole
				Pin, Crossarm, Steel, 5/8"x 10-3/4"
				Brace, Crossarm, 28", Steel
				Bolt carriage 3/8" x 4-1/2"
				Insulated single upset bolt x required bolt
				Spring washer, 5/8"
				Locknuts
				40' steel pole



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			a.2	Top Pole (J3)
				3-Wire Rack, with bolts
				Bolt, machine, 5/8" x 9"
				Washer, Square, Flat, 2-1/4", x 2-1/4", 3/16", 13/16" diameter hole
				Locknut, 5/8"
			b.	Transformer
				25KVA SINGLE PHASE TRANSFORMER
			c.	Grounding (M2-11A)
				Compression connector
				Ground rod, steel galvanized, 10' long, 5/8" dia
				Clamp, ground rod, tamper proof
				Clip, ground wire
				Staples, ground wire, 2"x1/2", gauge 8
				Jumper, No. 4 AWG, aluminum alloy, stranded
				Ground wire, No. 4 AWG, aluminum
				Connector, split bolt type
			d.	Miscellaneous
				Bolt, Machine, 5/8" x Required Length
				Connectors
				Lightning Arrester
				Fused Cutout
				Jumpers, #6 S.D. Copper or Equiv.
				Washer, Spring, 5/8"
				Bracket, Transformer
				Bracket, Combination Cutout and Arrester
			Pole # 12	35'
				Materials
				Description
			a.2	Top Pole (2-J3)
				3-Wire Rack, with bolts
				Bolt, machine, 5/8" x 9"
				Washer, Square, Flat, 2-1/4", x 2-1/4", 3/16", 13/16" diameter hole
				Locknut, 5/8"
				35' steel pole
			b.	Guy (2-E2-2T)
				Single overhead guy through bolt type
				Washer, curved, 3" sq. x 5/16 w/ 11/16 hole connectors
				clamp, guy, 3-bolt, 6" heavy duty
				3/8" guy strand
				Nut, thimble eye, 5/8"
				Bolt, thimble eye, 5/8"
				Jumpers, #6 SD or equivalent
				Locknut, 5/8"
			d.	Anchor (2-F2-1)/(2FP-1)
				Helix hub, single blade
				Anchor shaft
				Extension rod, 3'-6"
			Pole # 13	35'
				Materials
				Description
			a.1	Top Pole
				Insulator, Pin type, Porcelain, ANSI, Class 55-5
				Pin, Pole Top, Channel, 1" Thread, 20" long
				Bolt, machine, 5/8" x Required length
				Washer, Square, Flat, 2-1/4", x 3/16", 13/16" diameter hole
				Pin, Crossarm, Steel, 5/8"x 10-3/4"



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KALINGA STATE UNIVERSITY
BIDS AND AWARDS COMMITTEE
 National Highway, Purok 6, Bulanao, Tabuk City, Kalinga
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				Brace, Crossarm, 28", Steel
				Bolt carriage 3/8" x 4-1/2"
				Insulated single upset bolt x required bolt
				Spring washer, 5/8"
				Locknuts
				35' steel pole
			a.2	Top Pole (J3)
				3-Wire Rack, with bolts
				Bolt, machine, 5/8" x 9"
				Washer, Square, Flat, 2-1/4", x 2-1/4", 3/16", 13/16" diameter hole
				Locknut, 5/8"
			c.	Miscellaneous
				Bolt, Machine, 5/8" x Required Length
				Connectors
				Lightning Arrester
				Fused Cutout
				Jumpers, #6 S.D. Copper or Equiv.
				Washer, Spring, 5/8"
				Bracket, Transformer
				Bracket, Combination Cutout and Arrester
				CONDUCTORS
				Bare, #1/0, AWG, ACSR
				INSULATED, 2/0, AWG, ACSR
B.7	OCCUPATIONAL SAFETY AND HEALTH PROGRAM	lot	1.00	Contractor must provide the following for its workers during the duration of the project until project is completed:
				safety gloves
				safety shoes
				safety helmets
				caution tapes
				Safety signages
				Contractor also must have a safety officer, and a first aider to be deployed at site specially during critical activities

Prepared by:

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