



BID PROPOSAL

SINGLE PHASE PAD MOUNT TRANSFORMERS

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TOWN OF APEX
APEX, NORTH CAROLINA

NOTICE TO PROSPECTIVE BIDDERS
INVITATION TO BID

PROJECT: SINGLE PHASE PAD MOUNT TRANSFORMER
BID DATE: NOVEMBER 4, 2021 2:30PM

FORMAL BID-NO BID BOND REQUIRED

BIDS WILL BE RECEIVED UNTIL NOVEMBER 4, 2021 2:30PM AND WILL BE OPENED IMMEDIATELY THEREAFTER AND READ PUBLICLY AT APEX PUBLIC WORKS, PURCHASING AND INVENTORY, 105-C UPCHURCH ST., APEX, NC 27502 IN THE PURCHASING OFFICE.

BID MUST BE ENCLOSED IN A SEALED ENVELOPE, BID CAN BE SENT VIA USPS, UPS, FEDEX, OR HAND DELIVERED, ADDRESSED TO THE TOWN OF APEX, 105 UPCHURCH ST., APEX, NC 27502, ATTN: STEVE MAYNARD. THE OUTSIDE OF THE ENVELOPE MUST BE MARKED "FOR BID OPENING NOVEMBER 4, 2021 AT 2:30PM FOR TRANSFORMERS."

NO OTHER BIDS WILL BE ACCEPTED AFTER THE CLOSING TIME.

THE TOWN RESERVES THE RIGHT TO REJECT ANY AND ALL BIDS.

INSTRUCTIONS TO BIDDERS

PROJECT: SINGLE PHASE PAD MOUNT TRANSFORMER
BID DATE: NOVEMBER 4, 2021 AT 2:30PM

1. BIDS

- 1.1 BIDS MUST BE MADE ON FORM(S) PROVIDED AND MUST NOT BE ALTERED IN ANY MANNER. THE ENTIRE PROPOSAL SHALL BE RETURNED.
- 1.2 SHOULD THE BIDDER FIND DISCREPANCIES IN THE DOCUMENTS OR SHOULD HE BE IN DOUBT AS TO THEIR MEANING, HE SHALL AT ONCE CONTACT PAM KITTO, PURCHASING MANAGER, AT 919-249-3371.
- 1.3 NO BID MAY BE WITHDRAWN AFTER THE SCHEDULED CLOSING TIME FOR THE RECEIPT OF BIDS.

2. DELIVERY

- 2.1 DELIVERY OF MATERIALS SHALL BE F.O.B. TOWN OF APEX, ELECTRIC OPERATIONS CENTER, 2850 MILANO AVE, APEX, NC 27502. DELIVERY OF ALL ITEMS SHALL BE MADE AT SUCH TIME AS TO PERMIT UNLOADING BETWEEN THE HOURS OF 7:30 AM TO 11:30 AM, AND 1:00 PM TO 3:30 PM, MONDAY THROUGH FRIDAY, HOLIDAYS EXCLUDED. **FORTY EIGHT HOURS DELIVERY NOTICE IS REQUIRED.**
- 2.2 EQUIPMENT SHALL BE SHIPPED IN AN OPEN-TOP TRUCK SO AS TO ALLOW UNLOADING BY THE TOWN WITH THE USE OF A TRUCK DERRICK OR CRANE.
- 2.3 TRANSFORMERS TO BE STACKED IN GROUPS OF TWO FOR MORE EFFICIENT STORAGE.
- 2.4 CABLE AND TRANSFORMERS WILL BE SHIPPED ON OPEN-BODY TRAILERS PERMITTING SIDE UNLOADING BY THE TOWN WITH A FORKLIFT OR TRUCK DERRICK.

INSTRUCTIONS TO BIDDERS (CONT.)

PROJECT: SINGLE PHASE PAD MOUNT TRANSFORMER
BID DATE: NOVEMBER 4, 2021 AT 2:30PM

3. AWARD OF PURCHASE ORDER

3.1 THE AWARD OF THE PURCHASE ORDER WILL BE MADE TO THE LOWEST RESPONSIVE, RESPONSIBLE BIDDER AS SOON AS PRACTICAL, PROVIDED THAT IN THE SELECTION OF THE ITEMS A PURCHASE ORDER MAY BE AWARDED TO A BIDDER OTHER THAN THE LOWEST, IN THE INTEREST OF STANDARDIZATION OR ULTIMATE ECONOMY, IF THE ADVANTAGE OF SUCH STANDARDIZATION OR ULTIMATE ECONOMY IS CLEARLY EVIDENT.

3.2 THE TOWN RESERVES THE RIGHT TO WAIVE MINOR IRREGULARITIES OR MINOR ERRORS IN ANY PROPOSAL, IF IT APPEARS TO THE TOWN THAT SUCH IRREGULARITIES OR ERRORS WERE MADE THROUGH INADVERTENCE. ANY SUCH IRREGULARITIES OR MINOR ERRORS SO WAIVED MUST BE CORRECTED ON THE PROPOSAL PRIOR TO ITS ACCEPTANCE BY THE TOWN.

3.3 IN ESTIMATING THE LOWEST COST TO THE TOWN, AS ONE OF ITS FACTORS IN DECIDING THE AWARD OF THE PURCHASE ORDER, THE TOWN WILL CONSIDER IN ADDITION TO THE PRICES QUOTED, THE FOLLOWING:

DELIVERY DATE
ADHERENCE TO SPECIFICATIONS AND PLANS
FIRM PRICES
DISCOUNTS OFFERED
COMPATABILITY WITH EXISTING SYSTEM

3.4 THE TOWN RESERVES THE RIGHT TO AWARD ANY SCHEDULE OR COMBINATION THEREOF OR TO AWARD ANY PART OF ANY SCHEDULE. QUANTITIES MAY VARY BY + OR - 5%.

4. PRICES

4.1 PRICES QUOTED SHALL BE FIRM FOR A PERIOD OF NOT LESS THAN 30 DAYS FROM DATE OF OPENING.

GENERAL CONDITIONS

PROJECT: SINGLE PHASE PAD MOUNT TRANSFORMER
BID DATE: NOVEMBER 4, 2021 AT 2:30PM

DEFECTIVE MATERIALS

- 1.1 ALL MATERIALS FURNISHED HEREUNDER SHALL BE SUBJECT TO THE INSPECTION, TESTS, AND APPROVAL OF THE TOWN, AND THE MATERIALMAN SHALL FURNISH ALL INFORMATION REQUIRED CONCERNING THE NATURE AND SOURCE OF ANY MATERIALS.
- 1.2 THE MATERIALMAN SHALL GUARANTEE HIS MATERIALS AND WORKMANSHIP AGAINST DEFECT DUE TO FAULTY MATERIALS OR FAULTY WORKMANSHIP OR NEGLIGENCE FOR A MINIMUM PERIOD OF 12 MONTHS FOLLOWING ACCEPTANCE OF MATERIALS AND OR COMPLETION OF WORK. HE SHALL MAKE GOOD SUCH DEFECTIVE MATERIALS OR WORKMANSHIP AND ANY DAMAGE RESULTING THEREFROM WITHOUT COST TO THE TOWN OF APEX.
- 1.3 THE MATERIALS AND EQUIPMENT FURNISHED HEREUNDER SHALL BECOME THE PROPERTY OF THE TOWN WHEN DELIVERED AT THE POINT TO WHICH SHIPMENT IS TO BE MADE, PROVIDED, HOWEVER, THAT THE TOWN MAY REJECT ANY SUCH MATERIALS AND EQUIPMENT THAT DO NOT COMPLY WITH THE SPECIFICATIONS FOR MATERIALS AND EQUIPMENT AND WARRANTIES OF THE BIDDER AND MANUFACTURERS. RECOGNITION AND SUBSEQUENT REJECTION OF ANY DEFECTIVE MATERIALS AND EQUIPMENT MAY OCCUR EITHER BEFORE OR AFTER INCORPORATION OF SUCH MATERIALS AND EQUIPMENT WITHIN ONE (1) YEAR OF THE DATE OF DELIVERY OF THE MATERIALS AND EQUIPMENT. UPON ANY SUCH REJECTION, THE BIDDER SHALL REPLACE THE REJECTED MATERIALS AND EQUIPMENT WITH MATERIALS AND EQUIPMENT COMPLYING WITH THE SPECIFICATIONS FOR MATERIALS AND EQUIPMENT AND WARRANTIES, F.O.B. TRUCK AT SUITABLE DESTINATION. THE TOWN SHALL RETURN THE REJECTED MATERIALS F.O.B. TRUCK AT THE SAME DESTINATION. IN THE EVENT OF THE FAILURE OF THE BIDDER TO SO REPLACE REJECTED MATERIALS AND EQUIPMENT, THE TOWN MAY MAKE SUCH REPLACEMENT AND THE COST AND EXPENSE THEREOF SHALL BE PAID BY AND RECOVERABLE FROM THE BIDDER.

GENERAL CONDITIONS (CONT.)

PROJECT: SINGLE PHASE PAD MOUNT TRANSFORMER
BID DATE: NOVEMBER 4, 2021 AT 2:30PM

1.4 MISCELLANEOUS

THE BIDDER SHALL HOLD HARMLESS AND INDEMNIFY THE TOWN, ITS AGENTS, AND EMPLOYEES, FROM ANY AND ALL CLAIMS, SUITS, AND PROCEEDINGS FOR INFRINGEMENT OF ANY PATENT OR PATENTS COVERING MATERIALS AND EQUIPMENT PURCHASED HEREUNDER. THE BIDDER SHALL DEFEND ANY SUIT OR PROCEEDING BROUGHT AGAINST THE TOWN, ITS AGENTS, OR EMPLOYEES, BASED UPON A CLAIM THAT THE MATERIALS AND EQUIPMENT OR ANY PART THEREOF CONSTITUTE AN INFRINGEMENT OF ANY PATENT, OR IF THE BIDDER SHALL FAIL TO DEFEND SUCH SUIT OR PROCEEDING, THE TOWN MAY DO SO AND THE BIDDER SHALL MAKE REIMBURSEMENT FOR THE EXPENSE OF SUCH LITIGATION. IF THE MATERIALS AND EQUIPMENT, OR ANY PART THEREOF, ARE HELD TO CONSTITUTE INFRINGEMENT AND THE USE THEREOF IS ENJOINED, THE BIDDER SHALL, AT ITS OWN EXPENSE, EITHER PROCURE FOR THE TOWN THE RIGHT TO CONTINUE TO USE THE MATERIALS AND EQUIPMENT, OR SUCH PART THEREOF, OR SHALL REPLACE THE MATERIALS AND EQUIPMENT, OR SUCH PART THEREOF, WITH NON-INFRINGEMENT MATERIALS AND EQUIPMENT.

2.0 STANDARDS

ALL EQUIPMENT AND MATERIALS COVERED BY THESE SPECIFICATIONS AND ALL TESTS APPLIED THERETO SHALL, UNLESS OTHERWISE STATED HEREIN, BE IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF THE LATEST EDITIONS OF THE STANDARDS OF THE A.S.T.M., A.N.S.I., A.E.I.C., N.E.M.A., I.P.C.E.A., AND I.E.E.E.

WHERE THE TERM "STANDARDS" IS USED IN THE SPECIFICATIONS, IT SHALL BE UNDERSTOOD TO REFER TO THE ABOVE STANDARDS.

SCOPE OF MATERIALS

PROJECT: SINGLE PHASE PAD MOUNT TRANSFORMER
BID DATE: NOVEMBER 4, 2021 AT 2:30PM

1. SCOPE OF THE BID

THE WORK SHALL INCLUDE FURNISHING ALL EQUIPMENT AS SET FORTH IN THE BID SCHEDULE AND AS SPECIFIED HEREIN.

2. GENERAL CONDITIONS

2.1 ALL MATERIALS AND EQUIPMENT SHALL BE NEW.

2.2 THESE SPECIFICATIONS DESCRIBE THE TYPE, SIZE, AND CHARACTERISTICS OF THE VARIOUS MATERIALS AND EQUIPMENT REQUIRED TO BE FURNISHED.

2.3 STRICT ADHERENCE TO THESE GENERAL SPECIFICATIONS IS REQUESTED TO FACILITATE REVIEW AND CONSIDERATION OF THE PROPOSAL.

2.4 PROPOSALS SHALL INCLUDE THE FOLLOWING:

CATALOG NUMBERS, MANUFACTURER, RATINGS, CHARACTERISTICS, TYPES, SIZES, ETC., OF ALL MATERIALS AND EQUIPMENT INCLUDED. A SIMPLE STATEMENT THAT ALL NECESSARY MATERIALS AND EQUIPMENT WILL BE PROVIDED IS NOT SATISFACTORY.

2.5 PRICES SHALL INCLUDE THE COST OF DELIVERY TO THE TOWN OF APEX ELECTRIC OPERATIONS CENTER ON MILANO AVE IN APEX, NORTH CAROLINA.

TOWN OF APEX
TRANSFORMER SPECIFICATIONS

PROJECT: SINGLE PHASE PAD MOUNT TRANSFORMER
BID DATE: NOVEMBER 4, 2021 AT 2:30PM

1.0 TRANSFORMER EVALUATION

DISTRIBUTION TRANSFORMERS WILL BE EVALUATED FOR LOSSES BASED ON THE FORMULA ADOPTED OCTOBER 2002, BY ELECTRICITIES OF NORTH CAROLINA, INC., WHICH REFLECTS THE TOTAL OWNERSHIP COST (TOC), INCLUDING INITIAL PURCHASE PRICE, 30-YEAR FINANCING, AND LOSSES. UNITS WILL BE QUOTED BASED ON GUARANTEED AVERAGE LOSSES BY KVA SIZE, VERIFIED BY PROVIDING INDIVIDUAL CERTIFIED TEST LOSSES FOR EACH UNIT UPON DELIVERY.

IF THE TOTAL OWNERSHIP COST DIFFERENCE BETWEEN THE APPARENT LOWEST COST UNIT AND ANY OTHER UNITS IS LESS THAN 3%, THE TOWN MAY EVALUATE THESE UNITS ON LOWEST INITIAL COST AND AWARD ON THIS BASIS.

THE LOSS EVALUATION FORMULA IS OUTLINED ON PAGE 11 AND SHALL BE COMPLETED FOR EACH UNIT QUOTED.

FOR EACH TRANSFORMER TYPE ORDERED (I.E. 25 KVA SINGLE PHASE 120/240 V SECONDARY IS ONE TYPE, 25 KVA SINGLE PHASE 277V SECONDARY IS ANOTHER), NEITHER THE ACTUAL AVERAGE EXCITATION LOSSES NOR ACTUAL AVERAGE LOAD LOSSES SHALL EXCEED THE GUARANTEED (QUOTED) LOSSES QUOTED FOR THE SPECIFIC TRANSFORMER TYPE OR THE MANUFACTURER SHALL BE REQUIRED TO PAY THE FOLLOWING LIQUIDATED DAMAGE:

- LIQUIDATED DAMAGE (HEREAFTER L.D.) = TWO TIMES THE DIFFERENCE BETWEEN ACTUAL TRUE OWNERSHIP COST (HEREAFTER A.T.O.C.) AND QUOTED TRUE OWNERSHIP COSTS (HEREAFTER Q.T.O.C.) IF A.T.O.C. IS GREATER THAN Q.T.O.C.
- IF A.T.O.C.>Q.T.O.C. THEN L.D. = 2 X (A.T.O.C. – Q.T.O.C.)

LIQUIDATED DAMAGES WILL BE FORWARDED FOR COLLECTION TO THE PURCHASING DEPARTMENT MANAGER AT THE TOWN OF APEX.

TRANSFORMERS REJECTED BY THE TOWN OF APEX FOR DEFECTS AND/OR NON-ADHERENCE TO SPECIFICATIONS SHALL BE RETURNED TO THE SUPPLIER FREIGHT COLLECT FOR A FULL REFUND. ANY SUPPLIER ESTABLISHING A HISTORY FOR PROVIDING TRANSFORMERS WHICH DO NOT MEET QUOTED LOSS VALUES WILL BE EVALUATED ACCORDINGLY IN FUTURE QUOTATIONS AND BID PROPOSALS.

2.0 PAINT

PAD MOUNTED UNITS SHALL BE PAINTED ANSI "OUTDOOR GREEN", MUNSELL NO. 7GY3.29/1.5. ALL SURFACES OF CASE AND COVERS, BOTH EXTERIOR AND INTERIOR, SHALL BE THOROUGHLY CLEANED BY MEANS OF SHOT BLASTING OR ANY OTHER EQUALLY EFFECTIVE METHOD. AT LEAST THREE (3) COATS OF EXTERIOR PAINT SHALL BE APPLIED. PAINT SHALL BE SUITABLE FOR OPERATION IN AN OUTDOOR ENVIRONMENT AT THE ELEVATED TEMPERATURES ASSOCIATED WITH THIS EQUIPMENT WITHOUT DETERIORATION.

3.0 PCB CERTIFICATION

UNITS SHALL BE CERTIFIED AS "NON-PCB" FOR ALL DIELECTRIC FLUIDS WITH A CONTENT OF LESS THAN 2 PPM.

4.0 DRAWINGS

MANUFACTURER SHALL FURNISH DIMENSIONAL OUTLINE DRAWINGS OF ALL SIZES INCLUDED FOR APPROVAL. THE UNITS MAY BE SUPPLIED PER THESE DRAWINGS UNTIL THESE SPECIFICATIONS CHANGE OR THE MANUFACTURER MAKES A CHANGE IN DESIGN. DRAWINGS SHOULD BE SENT IN .PDF AND/OR .DWG FORMAT VIA EMAIL. DRAWINGS SHALL ALSO INDICATE EXPULSION AND CURRENT LIMITING FUSE TYPES AND MANUFACTUER STOCK NUMBERS FOR ALL TRANSFORMERS SHIPPED, INCLUDING SUBSTITUTE FUSE STOCK NUMBERS FROM ALTERNATIVE MANUFACTURERS/SUPPLIERS.

ANY CHANGES IN DESIGN MUST BE APPROVED BY THE TOWN OF APEX BEFORE ANY TRANSFORMERS SO MODIFIED SHALL BE SHIPPED.

TOWN OF APEX
SCHEDULE

PROJECT: SINGLE PHASE PAD MOUNT TRANSFORMER
 BID DATE: NOVEMBER 4, 2021 AT 2:30PM

<u>DESCRIPTION</u>	UNIT	TOTAL
DISTRIBUTION TRANSFORMER, SINGLE PHASE, UNDERGROUND, PADMOUNTED, RATED 22860/13200 (GROUNDED WYE) TO 240/120 VOLTS (GROUNDED WYE), 65* OIL-FILLED, NO HIGH VOLTAGE TAPS, TWO (2) HV UNIVERSAL BUSHING WELLS, LOOP FEED, DEAD FRONT, 5/8" THREADED STUD LV BUSHING, BAYONET HV FUSE WITH INTERNAL PARTIAL RANGE CURRENT LIMITING FUSE, 125KV BIL, PADLOCK PROVISIONS AND PENTA-HEAD CAPTIVE BOLT. CERTIFIED "NON-PCB" WITH STICKER. TRANSFORMER KVA RATING TO BE STENCILED ON EXTERIOR OF LID ABOVE LOCK. EXTERNAL "MR. OUCH" SAFETY LABEL TO BE INCLUDED MINIMUM OF 4.5" X 8".		

<u>TRANSFORMER SIZE</u>	<u>QUANTITY</u>	<u>UNIT PRICE</u>	<u>TOTAL PRICE</u>
<u>25 KVA</u>	<u>30</u>	\$ _____	\$ _____
<u>37.5 KVA</u>	<u>140</u>	\$ _____	\$ _____
<u>50 KVA</u>	<u>30</u>	\$ _____	\$ _____
<u>75 KVA</u>	<u>30</u>	\$ _____	\$ _____
<u>100 KVA</u>	<u>15</u>	\$ _____	\$ _____

MANUFACTURER: _____

DELIVERY SCHEDULE: _____

NEAREST AUTHORIZED REPAIR FACILITY: _____

TOWN OF APEX
TRANSFORMER LOSS EVALUATION

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SUMMARY OF TRANSFORMER LOSS DATA

SIZE	NO LOAD	LOAD	TOC
25 KVA			
37.5 KVA			
50 KVA			
75 KVA			
100 KVA			

TOC = UNIT COST + (A X NO LOAD LOSSES) + (B X FULL LOAD LOSSES)

A=THE COST PER WATT FOR NO LOAD LOSSES

B=THE COST PER WATT FOR LOAD LOSSES

TRANSFORMERS LESS THAN 100 KVA:

“A” FACTOR = \$7.80 PER WATT

“B” FACTOR = \$ 2.10 PER WATT

TRANSFORMERS EQUAL TO OR GREATER THAN 100 KVA:

“A” FACTOR = \$7.80 PER WATT

“B” FACTOR = \$2.10 PER WATT

TOWN OF APEX
APEX, NORTH CAROLINA

PROJECT: SINGLE PHASE PAD MOUNT TRANSFORMER
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SELLER DOES HEREBY COVENANT AND AGREE WITH THE TOWN OF APEX THAT SELLER WILL FAITHFULLY FURNISH THE MATERIALS AS ABOVE SET OUT IN ACCORDANCE WITH EACH AND EVERY ONE OF THE CONDITIONS, COVENANTS, STIPULATIONS, TERMS, AND PROVISIONS CONTAINED IN THE SPECIFICATIONS AT THE PRICES AND RATES RESPECTIVELY NAMED THEREOF IN THE PROPOSAL ATTACHED HERETO, AND WILL FAITHFULLY COMPLY WITH EACH AND EVERY OBLIGATION IMPOSED UPON SELLER BY SAID SPECIFICATIONS OR THE TERMS OF SAID AWARD.

THE TERMS AND CONDITIONS OF SALE AS STATED IN THIS ORDER OR PROPOSAL GOVERN IN EVENT OF CONFLICT WITH ANY TERMS OF SELLER'S PROPOSAL, AND ARE NOT SUBJECT TO CHANGE BY REASON OF ANY WRITTEN OR VERBAL STATEMENTS BY SELLER OR BY ANY TERMS STATED IN SELLER'S ACKNOWLEDGEMENT UNLESS SAME BE ACCEPTED IN WRITING BY THE ENTITY.

ACCEPTANCE OF THE PURCHASE ORDER INCLUDES ACCEPTANCE OF ALL TERMS, CONDITIONS, PRICES, DELIVERY INSTRUCTIONS, AND SPECIFICATIONS AS SHOWN ON THE ORDER OR ATTACHED TO AND MADE A PART OF THIS ORDER.

BUYER SHALL HAVE THE RIGHT TO TERMINATE THIS ORDER IN WHOLE OR PART AT ANY TIME AT ITS CONVENIENCE.

TERMS AND CONDITIONS SUBJECT TO UNIFORM COMMERCIAL CODE, CHAPTER 2.

_____	_____
SIGNED BY SELLER	DATE
COMPANY NAME QUOTING _____	
PERSON TO CONTACT _____	
PHONE NUMBER _____	