CITY OF GENEVA ELECTRIC DEPARTMENT
1800 SOUTH STREET
GENEVA, IL 60134

SPECIFICATIONS AND CONTRACT DOCUMENTS 25-1
2025-2026
DISTRIBUTION TRANSFORMERS
(Material Only)

Bid Opening:	10:00 A.M.	MONDAY, APRIL 7, 2025
Bid Deposit:	NOT REQUIRED	
Performance Bond:	NOT REQUIRED	
Specifications:	Attached	
Return Bids To:	City Administrator City of Geneva 22 South First Street Geneva, IL 60134	

Please Mark the Return Envelope and specify the:

1. Bid Opening Date & Time
2. Title of Job

For Additional Information regarding bid, contact:

Jennifer Shelley
Purchasing & Inventory Coordinator
City of Geneva Electric Department
1800 South Street
Geneva, IL 60134
630-232-1503

Please submit entire document in duplicate intact.

Thursday, March 13, 2025

NOTICE

DUPLICATE sealed BIDS submitted in a sealed envelope with the words "DISTRIBUTION TRANSFORMERS" marked on it, will be received by the City of Geneva , Illinois, until 10:00 A.M, , Monday, April 7, 2025, at the Office of the Administrator, City of Geneva, 22 South First Street, Geneva, Illinois, 60134.

This work shall be done in accordance with the specifications of the City of Geneva.

Contractors and Subcontractors shall pay not less than the prevailing Rate of Wages as found by the Department of Labor or as are determined by the Court of Appeal , Kane County, to all laborers, workman, and mechanics performing work under the Contract. A signed certification stating the above as well as the fact that the bidder is not barred from bidding as a result of a violation of either Section 33E-3 or 33E-4 of Chapter 720, Illinois Compiled Revised Statutes, [720 ILCS 5/33E-3 and 5/33E4 (2009)].

The City reserves the right to defer acceptance of any proposal for a period not to exceed (60) days after the date bids are received.

The City of Geneva reserves the right to reject any or all bids and waive technicalities.

Bid packages are available for download on the city's website at https://www.geneva.il.us/bids.aspx or can be obtained by contacting Jennifer Shelley, Purchasing and Inventory Coordinator, City of Geneva, 1800 South Street, Geneva, IL 60134, or by calling 630-232-1503.

To be published in the Daily Herald on the following date:

Thursday, March 13, 2025

CITY OF GENEVA

BID PROPOSAL NO. 25-1 OPENING DATE: 4-07-2025

FOR: DISTRIBUTION TRANSFORMERS

OPENING TIME: 10:00 AM

DEPARTMENT: PUBLIC WORKS

QUANTITIES

SPECIFIC QUANTITIES ESTIMATED QUANTITIES

BID DEPOSIT REQUIREMENTS

NOT REQUIRED CHECK OR BID BOND $1000.00

PERFORMANCE BOND

NOT REQUIRED TO BE SUBMITTED
IN AMOUNT OF
OF CONTRACT TOTAL

SAMPLES

NOT REQUIRED TO BE SUBMITTED
WITH BID

DESCRIPTIVE LITERATURE & TECHNICAL DATA

NOT REQUIRED TO BE SUBMITTED WITH BID

INSTRUCTIONS TO BIDDERS

Bids shall be submitted to the City Administrator, City of Geneva, 22 South First Street, Geneva, IL 60134.

Bids shall be in sealed envelopes clearly marked as to what the bid pertains to as well as time and date of bid opening. Return address should be on outside of bid envelope.

Bids shall be submitted in DUPLICATE to the City of Geneva.

Bids shall be received on or before the time specified at which time the bids will be publicly opened and read aloud at the office of the City Administrator. Bids received after the specified time and date will be returned to the bidder unopened.

BIDS SHALL BE SUBMITTED ON CITY OF GENEVA BID FORMS INCLUDED IN THE CONTRACT DOCUMENT (BID PACKAGE).

The manufacture or assembly of equipment shall be commenced within ten (10) calendar days after written notice to proceed and shall be completed within the time stated in the successful bidder's proposal.

The City reserves the right to consider such factors as time of completion or delivery, materials, method of construction, experience, and responsibility of the bidder and similar factors in determining which bid it deems to be in the City's best interest.

The City reserves the right to reject any or all of the bids, to waive informalities or technicalities in any bid and to accept the bid which it deems to be in the best interest of the City of Geneva.

A bid deposit will be required if indicated on the “NOTICE TO BIDDERS” form. Each bid MUST be accompanied by a Bid Bond signed by a surety company authorized to do business in Illinois, or by a cashier’s check or certified check in the amount of $1000.00. Any bid not accompanied by a required bid deposit may be rejected.

All bid deposits (except that of the lowest responsible bidder) will be returned after the lowest responsible bidder is determined by the City Council. The return of the bid deposit to the successful bidder or awardee will be contingent upon that bidder’s execution of a written contract with the City.

Any bidder may withdraw his or her bid by letter or telegraphic request or, with proper identification, by personally securing the bid proposal at any time prior to the time fixed for opening of bids and provided that written confirmation of any telegraphic withdrawal over the signature of the Bidder is placed in the mail and postmarked prior to the time set for bid opening. Telephonic request to withdraw a bid will not be considered.

The City of Geneva is exempt from the Illinois Retailers Sales and Occupation Tax. An exemption certification will be furnished upon request.

Delivery of Goods F.O.B. Point- City of Geneva ELECTRIC UTILITY, 1800 South Street, Geneva, IL 60134 may be indicated in City's Purchase Order or Notice to Proceed. Should any goods be damaged during shipment, bidder shall repair or replace and damaged equipment or materials. Bidder shall negotiate on the City's behalf, at no cost to the City, with the carrier or other persons as required, to obtain compensation for such repair or replacement.

The City shall be notified 24 hours prior to any shipment of materials or equipment. Please call Jennifer Shelley at (630) 232-1503 during the hours of 7:00 AM to 3:00 P.M.

All deliveries are to be made during City of Geneva Electric Utility business hours of 7:00 AM to 11:30 A.M. and 12:30 P.M. to 3:00 P.M.

Each bidder shall submit a lump sum price for material or equipment covered by the specifications, together with any prices for alternate materials or equipment or other prices or data listed in the Form of Proposal or as specified.

ESCALATION CLAUSES ARE NOT ACCEPTABLE.

The bidder may at his option, base quotes on furnishing substitutions that are equivalent of any item described, named, or specified, provided the selection meets the quality and are direct equals to the item specified. Burden of proof that proposed substitutions are equivalent, rests with the bidder.

Submit separate prices, alternate prices, or adjusted prices for materials or equipment as requested in the Form of Proposal. Bidders may in addition, submit prices for a combination of these separately priced schedules. If submitting combination quotes, bidders must submit separate schedule bids. Each schedule will be independent and subject to acceptance or rejection without alteration or qualification.

The City may award Purchase Order on basis of separate quotes or combination bids.

Prepare bids in duplicate on Form of Proposal included herewith, one copy submitted to the City, one copy to be retained by the bidder.

A legally authorized representative of bidder shall sign the bid.

Submit manufacturer's specifications and descriptive data on proposed materials.

All laborers, workers, mechanics, etc., employed in any public work under this contract shall be paid in accordance with the Prevailing Wage Rates approved by the City of Geneva, Kane County, as attached to the project specifications.

A statement certifying that the bidder is not barred from bidding on the Project Specifications as a result of a violation of either Section 33E-3 or 33E-4 of Chapter 720, Illinois Compiled Statutes [720 ILCS 5/33E-3 and 5/33E-4 (2009)]. The certificate form is attached to the Project Specifications.

Bidders must supply a self addressed, stamped envelope for bid results.

Absolutely no results will be given out over the telephone.

Questions regarding this Legal Notice, Instructions to Bidders, and Specifications should be directed to Jennifer Shelley, Purchasing and Inventory Coordinator, Geneva Electric Utility at (630) 232-1503.

USE FORM OF PROPOSAL INCLUDED HEREIN

CERTIFICATION OF COMPLIANCE

The undersigned hereby certifies as follows:

1. That he has the authority and consent to make this certification on behalf of the bidder,

_____.
(Name of Company)

2. That he has knowledge of the City of Geneva Codes pertaining to the disqualification of certain bidders.

3. That he knows that the bidder listed above is not disqualified from bidding under the aforementioned sections.

4. That he has knowledge of the City of Geneva ordinances relating to Fair Employment Practices and knows and understands the contents thereof; he certifies hereby that it is the policy of the bidder to recruit, hire, train, upgrade, promote, and discipline its employees without regard to race, creed, color, religion, age, sex, or physical or mental impairment.

5. That said bidder is not barred from bidding on the aforementioned contract as a result of a violation of Sections 33E-3 or 33E-4 of Chapter 720, Illinois Compiled Statutes, [720 ILCS 5/33E-3 and 33E-4 (2009)].

6. That pursuant to Chapter 65, Section 11-42.1-1 [65ILCS 5/11-42.1-1] of the Illinois Revised Statutes, the bidder is not delinquent in the payment of any taxes administered by the Department of Revenue.

7. That the contractor (either as an individual or company agrees to provide a drug free workplace as provided for by the "30 ILCS 580/1 et. seq."

8. That all work under this contract shall comply with the Occupational Safety and Health Act (OSHA) of 1975 as amended, and all other Federal, State, or Local statutes, rules, or regulations including all City of Geneva Safety Procedures affecting the work done under the contract.

9. That all work done under this contract shall comply with the Prevailing Wage Rate Act of the State of Illinois [820 ILCS 130/1 et. seq.] County of Kane, Illinois in effect at the time the work is performed.

10. Contractor acknowledges that the Freedom of Information Act, 5 ILCS 140/1 et seq. (the "ACT") places an obligation on the City of Geneva to produce certain records that may be in possession of the Contractor. Contractor shall comply with the record retention and documentation requirements of the Local Records Retention Act, 50 ILCS 205/1 et seq. and the Act and shall maintain all records relating to this Agreement in compliance with the Local Records Retention Act (complying in all respects as if the Contractor was, in fact, the City). Upon notice from the City, Contractor shall review its records promptly and produce to the City within two business days of said notice from the City the required documents which are responsive to a request under the Act. If additional time is necessary to comply with the request, the Contractor may request the City to extend the time to do so, and the City will, if time and a basis for extension under the Act permits, consider such extensions. In the event Contractor fails to produce the requested records or fails to produce the requested records within the time period required above and the City is assessed a fine, fee or penalty for failure to timely comply with Act do to Contractor's actions, Contractor shall reimburse City for all fines, fee or penalties, including reasonable attorney's fees, paid by the City.

By submission of this bid, I certify that the bid has been arrived at independently and has been submitted without collusion between or among any vendor of materials, supplies, equipment, or services.

_____

Name of Corporation, Partnership, or Proprietor

_____

Address

_____

City State Zip

_____

Telephone

_____

Authorized Signature/Title

SUBSCRIBED AND SWORN to before me

this _____day of _____, 20_____.

_____Notary Public

My commission expires:_____

FORM OF PROPOSAL

Name of Bidder _____

Address of Bidder _____

Telephone No. of Bidder _____

To: City Administrator

City of Geneva
22 South First Street
Geneva, IL 60134

The undersigned bidder, having examined the specifications of the following proposal, hereby proposes to provide the required labor, services, and materials described in this Form of Proposal, the Instruction to Bidders, and Specifications for the sum or sums stated hereinafter:

I. DISTRIBUTION TRANSFORMERS

FURNISH AND DELIVER _____

_____

AS SPECIFIED FOR THE SUM OF: _____(DOLLARS)

TO BE DELIVERED ON :_____, 20_____.

Prices contained herein are firm through _____ .

The undersigned bidder states that this proposal is made in conformity with the specifications and agrees that, in the event of any discrepancies between any conditions of this proposal and the specifications prepared by the City of Geneva, the provisions of the latter shall prevail.

The undersigned bidder certifies that this proposal is made in good faith, without collusion or connection with any other person or persons bidding for these services, labor and materials.
Signed by :

BIDDER: _____

BY : _____

TITLE : _____

DATE : _____

NOTICE : SUBMIT PROPOSALS ON PROPOSAL FORM ONLY

CITY OF GENEVA PUBLIC WORKS
ELECTRIC DIVISION

APRIL 7, 2025

SIZE, TYPE, AND ESTIMATED QUANTITY OF

TRANSFORMERS

KVA	PRIMARY VOLTAGE	SECONDARY VOLTAGE	ESTIMATED QUANTITY	COST
THREE PHASE PAD MOUNTED TRANSFORMERS				
45	12470GRY/7200	208Y/120	1	_____
45	12470GRY/7200	480Y/277	1	_____
45	12470GRY/7200	240 DELTA/ 120 MIDTAP	1	_____
75	12470GRY/7200	208Y/120	1	_____
75	12470GRY/7200	480Y/277	1	_____
75	12470GRY/7200	240DELTA/ 120 MIDTAP	1	_____
112.5	12470GRY/7200	208Y/120	1	_____
112.5	12470GRY/7200	480Y//277	1	_____
112.5	12470GRY/2700	240 DELTA/ 120 MIDTAP	1	_____
150	12470GRY/7200	208Y/120	1	_____
150	12470GRY/7200	480Y/277	1	_____
150	12470GRY/7200	240DELTA/ 120 MIDTAP	1	_____

225	12470GRY/7200	208Y/120	1	_____
225	12470GRY/7200	480Y/277	1	_____
225	12470GRY/7200	240 DELTA/ 120 MIDTAP	1	_____
300	12470GRY/7200	208Y/120	1	_____
300	12470GRY/7200	480Y/277	1	_____
300	12470GRY/7200	240 DELTA/ 120 MIDTAP	1	_____
500	12470GRY/7200	208Y/120	1	_____
500	12470GRY/7200	480Y/277	1	_____
500	12470GRY/7200	240 DELTA/ 120 MIDTAP	1	_____
750	12470GRY/7200	208Y/120	1	_____
750	12470GRY/7200	480Y/277	1	_____
750	12470GRY/7200	240 DELTA/ 120 MIDTAP	1	_____
1000	12470GRY/7200	208Y/120	1	_____
1000	12470GRY/7200	480Y/277	1	_____
1000	12470GRY/7200	240 DELTA/ 120 MIDTAP	1	_____
1500	12470GRY/7200	480Y/277	1	_____
1500*	12470GRY/7200	4160GRY/2400	1	_____
1500	12470GRY/7200	240 DELTA/ 120 MIDTAP	1	_____
2000	12470GRY/7200	480Y/277	1	_____
2000*	12470GRY/7200	4160GRY/2400	1	_____

2500	12470GRY/7200	480Y/277	1	_____
2500*	12470GRY/7200	4160GRY/2400	1	_____
3750	12470GRY/7200	480Y277	1	_____
3750*	12470GRY/7200	4160GRY/2400	1	_____

* The secondary connection of transformers rated 4,160/2400 will also be dead front and shall consist of three (3) 600 amp non-loadbreak all copper current path bushings.

SINGLE PHASE PADMOUNT TRANSFORMERS

1	7200/12470Y	120/240	1	_____
5	7200/12470Y	120/240	1	_____
10	7200/12470Y	120/240	1	_____
25	7200/12470Y	120/240	1	_____
37.5	7200/12470Y	120/240	1	_____
50	7200/12470Y	120/240	1	_____
75	7200/12470Y	120/240	1	_____
100	7200/12470Y	120/240	1	_____
167	7200/12470Y	120/240	1	_____

POLEMOUNTED TRANSFORMERS

1	7200/12470Y	120/240	1	_____
5	7200/12470Y	120/240	1	_____
10	7200/12470Y	120/240	1	_____
10	7200/12470Y	240/480	1	_____
15	7200/12470Y	120/240	1	_____
15	7200/12470Y	240/480	1	_____
25	7200/12470Y	120/240	1	_____
25	7200/12470Y	240/480	1	_____
37.5	7200/12470Y	120/240	1	_____
37.5	7200/12470Y	240/480	1	_____
50	7200/12470Y	120/240	1	_____
50	7200/12470Y	240/480	1	_____
75	7200/12470Y	120/240	1	_____
75	7200/12470Y	240/480	1	_____
75	7200/12470Y	277	1	_____
100	7200/12470Y	120/240	1	_____
100	7200/12470Y	240/480	1	_____
100	7200/12470Y	277	1	_____

167	7200/12470Y	120/240	1	_____
167	7200/12470Y	240/480	1	_____
167	7200/12470Y	277	1	_____
250	7200/12470Y	120/240	1	_____
250	7200/12470Y	240/480	1	_____
250	7200/12470Y	277	1	_____

NOTES:

PLEASE BE AWARE THAT THESE ARE AN ESTIMATED QUANTITY LISTED ABOVE. THE CITY OF GENEVA MAY PURCHASE MORE THAN THE ESTIMATED QUANTITY OR MAY NOT PURCHASE ANY OF THE TRANSFORMERS LISTED ABOVE.

THE CITY OF GENEVA WILL HAVE THE OPTION TO BUY ANY AMOUNT OF QUANTITIES OF THESE TRANSFORMERS.

PLEASE PROVIDE ESTIMATED DELIVERIES ON THE ABOVE UNITS.

ALL TRANSFORMERS ARE REQUIRED TO BE SHIPPED ON A PALLET AND TO BE ON AN OPEN TOP, SIDE UNLOAD TRAILER.

DELIVERY NOTIFICATION MUST BE MADE 24 HOURS PRIOR TO DELIVERY BY CALLING JENNIFER SHELLEY AT 630-232-1503. FAILURE TO DO SO WILL RESULT IN A REFUSED DELIVERY WITH NO ADDITIONAL COSTS BEING ASSESSED TO THE CITY OF GENEVA.

DELIVERY HOURS ARE MONDAY THROUGH FRIDAY FROM 7:00 AM TO 11:30 AM AND 12:30 PM TO 3:00 PM.

CITY OF GENEVA PUBLIC WORKS
ELECTRIC DEPARTMENT

THREE PHASE PAD MOUNTED TRANSFORMER SPECIFICATIONS

THREE PHASE PAD MOUNTED TRANSFORMERS (75, 112.5, 150, 225, 300, 500, 750, 1000, 1500, 2000, and 2500 KVA) - This specification covers the electrical characteristics and mechanical features of three-phase, 60HZ, mineral-oil filled, self-cooled, pad mounted type distribution transformer, Rated 2500 KVA and smaller, primary voltage 12,470 volts and below as specified, secondary voltage 4,160 volts and below as specified.

The transformer shall meet all applicable requirements of ANSI C57.12.20 and C57.12.26 except as otherwise specified herein.

The primary connection will be dead front and will consist of six (6) bushings made up of wells and factory installed inserts, arranged in a staggered vee configuration suitable for loop feed. (FIG. 2 - C57.12.26). The secondary connection of transformers rated 4,160/2400 will also be dead front and shall consist of three (3) 600 amp non-loadbreak all-copper current path bushings

Cable accessory parking stands shall be located adjacent to the bushing wells.

Units with dual voltage primary shall be equipped with an internal switch for series multiple. The operating handle for the switch shall be located in the primary compartment and clearly marked with identification. The operating handle shall have a positive position locking device.

All transformers, 75 KVA and above will be provided with primary taps at 2 1/2 percent and 5 percent above and below rated voltage and shipped in center tap.

All transformers shall be equipped with an internal switch for the primary taps. The operating handle for the switch shall be located in the primary compartment and clearly marked with identification. The operating handle shall have a positive locking device.

All transformers 1000 KVA and below will be protected by three (3) Flapper Bay-O-Net Assembly fuses with isolating link located in the primary compartment; Load Sensing (358C) through 150KVA, Fault Sensing (353C) for 225 KVA and above. All transformers above 1000 KVA shall have an isolating link located in the primary compartment and no Bay-O-Net Assembly fuses.

High-Voltage 12470Y/7200	KVA	Fuse Size	CPS 353C Cat. No.
	75	10	4000358C05
	112.5	15	4000358C08
	150	15	4000358C08
	225	25	4000353C10
	300	25	4000353C10
	500	40	4000353C12
	750	65	4000353C14
	1000	100	4000353C16

All transformers shall be equipped with an automatic pressure relief device, oil level gauge and transformers 750KVA and above shall be equipped with a thermometer with drag hand reset.

All units with a wye/wye configuration shall have the primary neutral internally connected to the tank in back of the exterior tank ground pad in the primary compartment, but not connected to the secondary neutral. Provisions shall be made to open this connection for test.

All units with a wye/delta configuration shall have the primary neutral brought out in the primary compartment through a fully insulated bushing and equipped with a removable ground strap. All units with a wye connected secondary shall have the secondary neutral brought out in the secondary compartment through a fully insulated bushing and equipped with a removable ground strap. The four (4) low voltage bushings shall be fitted with appropriately sized spade type terminals. Secondary bushing spades shall be designed in a staggered arrangement with a minimum of 5 1/2" horizontal clearance between spades and 3 3/4" clearance from any side wall.

For transformer terminals requiring six holes or less, the pair of terminal holes nearest the transformer tank wall shall be located to allow for the mounting of current transformers. Current transformers are inserted on, and supported by, the terminals between these holes and the tank wall. This requires a minimum unobstructed space of 3" measured from the center of the terminal holes nearest the tank wall toward the tank wall or bushing studs. The current transformer window dimensions are 4" vertical and 3-1/2" horizontal.

For transformer terminals requiring more than six holes, the first pair of terminal holes located away from the low-voltage terminal shall be located to allow for the mounting of current transformers on the spade extensions. Current transformers are inserted on the spade extension between these holes and the low-voltage terminals. This requires a minimum unobstructed space of 3-1/2" horizontal.

For transformer terminals requiring more than six holes, spade extensions are not required. If they are used, they must conform to the following guidelines. These spade extensions shall be connected to the low-voltage terminals and shall be supported to minimize twisting of the bushings. Support shall be required on spades with more than (6) holes. The support shall be made of non-hygroscopic material and shall be readily removable to allow for the installation of the current transformers. The low-voltage terminal dimensions shall be in accordance with the latest revision of ANSI C57.12.26. Alternate designs must be specifically approved by City of Geneva Electric Utility.

When terminal extension plates are used to meet the minimum number of terminal hole requirement, they should be fastened to the spade using stainless steel nuts, bolts, flat washers, and Belleville washers. One Belleville washer and one flat washer shall be on the bolt head side of the bolt with the Belleville washer nearest the head. One flat washer shall be on the nut side of the connection. The flat washers are to be 0.165" thick. A not-grit oxide inhibiting compound (such as Alcoa No. 2) shall be used when making contact between the spade and the terminal extension plate.

The thickness of the terminal extension plates shall be determined by the manufacturer such that the thermal ampacity of the plates is not the limiting factor for transformer loading.

Spades are to consist of holes as indicated in the table below. Spade supports are required for all transformers at 500 KVA and above.

KVA RATING	LOW-VOLTAGE RATING	MINIMUM NO. OF USABLE CABLE TERMINATION HOLES
75-300	208y/120, 240x480	4 (A)
150-300	480Y/277	4 (A)
500	208y/120, 240x480	6 (A)
750	480Y/277	6 (A)
750	208y/120, 240x480	8 (B,E)
1000	480Y/277	8 (B,E)
1000	208y/120, 240x480	10 (B,E)
1500	480Y/277	10 (B,E)
1500	208y/120, 240x480	12 (C,E)
2500	480Y/277	12 (C,E)

TABLE NOTES:

A. The low-voltage copper terminal shall be in accordance with the latest revision of ANSI C57.12.12.
B. The bus bar extension shall be attached to a 6 hole copper terminal spade.
C. The bus bar extension shall be attached to a 8 hole copper terminal spade
D. All terminals and bus bars are to be suitably plated for either copper connections or aluminum connections.
E. The bus bar extension plates shall be made from 4" copper bar with a minimum thickness based on calculations by the manufacturer so that the plates will not be the limiting factor for the loading of the transformer.

There shall be a connection from the grounding eye on the bushing insert to the eye on the well retainer with #16 copper wire. The ends of the wire need to be twisted to secure the connection in place.

All units shall be equipped with a minimum of two grounding pads locates in the middle portion of the primary compartment and within a maximum distance of (24) inches form the top primary bushing. Two more grounding pads shall be located in the lower portion of the secondary compartment.

All units shall be fitted with a one-inch upper filter press and filling plug or cap. Units up to and including 300 KVA shall be supplied with a one-inch drain plug. Units over 300 KVA shall be supplied with a one-inch drain valve with built-in sampling device. Such drain plug or valve shall be located in the low voltage compartment.

The transformer shall be of cubicle type construction with completely separate compartments for both the primary and the secondary. The primary and secondary compartments shall be side by side on one side of the transformer tank, with the secondary compartment on the right side when facing the compartment. They shall be completely enclosed with removable front sills and doors, separate door fasteners with each having a recessed locking device containing padlock provisions and a pentahead locking bolt using the floating door nut plate concept for tamper-resistant operation. The high voltage compartment door shall be of the interlock type and shall be secured by a 1/2 in. corrosion- resistant bolt held in the center frame which is accessible only after the low voltage door is opened.

The transformer must have a bolted cover that is fully detachable for access to the tank, it shall have a wrap-around guard that is removable only when the compartment doors are opened and shall enclose the tank cover nuts.

All transformers shall be equipped with lifting lugs or other suitable means for safely lifting the units.

Maximum transformer dimensions shall not exceed the values specified in the following table (fins included):

KVA	HEIGHT	WEIGHT	WIDTH	DEPTH
75	55	2600	66	44.7
112.5	55	2700	66	47.7
150	55	3200	66	49.2
225	55	3850	66	61
300	55	4150	69.9	61
500	58.5	5600	68.7	65
750	69	7400	80.1	68.9
1000	69	8600	84.7	70.7
1500	69	11000	94.7	72.5
2000	74	13000	88.6	83.5
2500	74	13800	98.6	86

Note: Dimensions are in inches and weights are in pounds.

Each transformer shall have an instruction nameplate located in the low voltage compartment that clearly indicates the connection diagram, the location of the protective devices and all other pertinent information related to the unit, including PCB content. Each transformer also shall have an instruction nameplate permanently fixed to the outside front of each unit in an easily accessible location.

Each transformer shall meet, or exceed the latest revision of ANSI C57.12.28 for security and tamper-resistant operation. Vendor to supply certified statement of compliance.

The transformer coating shall also meet the latest revision of ANSI C57.12.28 coating guidelines for pad mounted equipment and the successful vendor must provide certified test reports insuring he meets this requirement.

Transformer and transformer components shall be new. Remanufactured or reconditioned transformers or transformer parts are not acceptable. New transformer assembly and manufacturing processes shall be separate and removed from any rebuilding/rewinding operation. Winding equipment shall be computer controlled.

NOTES:

1. Bidders shall complete the bid evaluation forms for each transformer, as per the attached evaluation form. The successful vendor shall provide certified test reports on each transformer supplied under this bid.

2. All transformers shall be palletized and delivered on an open type flat bed trailer. Twenty-four (24) hour notice is required prior to delivery by calling (630) 232-3273 between the hours of 7:00 a.m. and 3:30 p.m. weekdays. Hours of delivery are 7:00-11:30 am and 12:30 - 3:00 p.m. If the transformer weighs over 12,000 pounds, the City of Geneva must be given 48 hours notice in order to arrange for a crane to unload the transformer.

3. Award of this bid may be to multiple vendors.

TRANSFORMER EVALUATION INFORMATION

The transformer evaluation will be based on the total cost as determined by the following formulas:

Cost of Core Loss = Present Worth of Core losses for 30yrs x Average Core Losses (KW) / 1000*

Cost of Winding Loss = Present Worth of Winding Losses for 30yrs x Average Winding Losses (KW) / 1000*

* (In order to compare transformers equally, bidders must specify temperature rise at 100% load.)

Total Cost = Original Cost + Cost of Core Loss + Cost of Winding Loss.

Enclosed is a description of the transformer loss analysis published by General Electric that we use to evaluate the bids we receive on distribution transformers. This analysis provides the following:

PRESENT WORTH OF CORE (NO LOAD) LOSSES FOR 30 YEARS IS $5682.98/KW

PRESENT WORTH OF WINDING (FULL LOAD) LOSSES FOR 30 YEARS IS $1315.95/KW

The bidders are expected to complete the bid evaluation forms for each transformer, as per the typical evaluation form below.

CITY OF GENEVA TRANSFORMER EVALUATION

BID EVALUATION FORM FOR:

_____KVA Transformer, Secondary _____ Volts

Temperature rise at 100% load _____ degrees C.

Original cost = $_____.

Cost of Core Loss = $ 5682.98 per KW x _____KW = $_____.

Cost of Winding Loss = $ 1315.95 per KW x _____KW = $_____.

Total Cost = $_____ + $_____ + _____ = $_____.

NOTE: Please use the following format (3 pages) for evaluating transformers. Please contact Kirk Landberg @ 630-232-3273 or klandberg@geneva.il.us I will be gladly E-mail forms if you so desire.

CITY OF GENEVA PUBLIC WORKS
ELECTRIC DEPARTMENT

PAD MOUNTED TRANSFORMER SPECIFICATIONS

SINGLE PHASE PAD MOUNTED TRANSFORMERS (10, 15, 25, 37.5, 50, 75, 100, and 167 KVA). This specification covers the electrical characteristics of single phase, 60HZ mineral-oil filled, self-cooled, pad mounted type distribution transformers rated 167 KVA and smaller, with dual primary voltages of 12,470X4160 grounded wye of 7200X2400, and secondary voltage 240/120 volts.

The transformer shall meet all applicable requirements of ANSI C57.12.25 and ANSI C57.12.20 except as otherwise specified herein.

The transformer KVA size shall be in accordance with the specific requirements of each inquiry or purchase order.

The primary connection will be dead front and will consist of two (2) single-phase bushings made up of wells and factory installed inserts, suitable for loop feed.

All transformers to be protected by one (1) Flapper Bay-O-Net Fuse Assembly to include coordinated isolation link assembly. Bayonet fusing will be load sensing (358C) up to and including 150KVA. All larger size KVA shall be fault sensing (353C).

The secondary shall consist of three (3) fully insulated secondary bushings with an external 5/8 in. diameter - 11 copper stud. The three (3) low voltage bushings shall be fitted with appropriately sized spade type terminals. Secondary bushing spades shall be designed in a staggered arrangement with a minimum of 5 1/2" horizontal clearance between spades and 3 3/4" clearance from any sidewall. A removable ground cable must be provided, for connection to the neutral bushing.

There shall be a removable, hinged compartment door with a recessed locking assembly containing padlock provisions and pentahead locking bolt using the floating door nut plate concept, removable bottom skirt, mounting provisions for stand-off insulator, internally clamped temporary cable entrance, suitable provisions for lifting and an automatic pressure relief device.

Each transformer shall have an instruction nameplate located in the low voltage section that clearly indicates the connection diagram, the location of protection devices and all other pertinent information related to the unit, including PCB content. Each transformer shall also have an instruction nameplate permanently fixed to the outside of each unit in an easily accessible location.

The low voltage windings shall be interlaced.

Each transformer shall meet or exceed ANSI C57.12.28 for security and tamper resistant

operation. Vendor to supply certified statement of compliance.

The transformer coating shall also meet the latest ANSI C57.12.28 finishing guidelines for pad mounted equipment and the successful vendor must provide certified test reports insuring he meets this requirement.

Transformer and transformer components shall be new. Remanufactured or reconditioned transformers or transformer parts are not acceptable.

CITY OF GENEVA PUBLIC WORKS
ELECTRIC DEPARTMENT

POLE MOUNTED TRANSFORMER SPECIFICATIONS

These specifications cover the electrical characteristics and mechanical features of single-phase, 60 Hz, mineral oil immersed, self-cooled, overhead type distribution transformers rated 500 kVA and smaller. High voltages 2400 through 34400, low voltages 120/240, 240/480, and 277.

All requirements shall be in accordance with the latest revision of ANSI C57.12.20-1988 and ANSI C57.12.28-1988, except as modified by these specifications.

All transformers manufactured under this specification shall be tested for no load (85 degrees C) and total (85 degrees C) losses, per cent impedance (85 degrees C) and exciting current (100% voltage) and subjected to a full wave voltage impulse. Actual test data must be available to the customer on request on a per order basis.

Vendor shall supply verification that the design has passed all design criteria per ANSI C57.12.00-1987 and C57.12.90-1987.

The low voltage windings shall be interlaced.

Tank covers shall be domed or shaped for moisture run-off.

When required, tap changers and/or dual voltage switch shall be externally operable through the tank wall. Designs to be individually approved.

Primary taps at 2 1/2 percent and 5 percent above and below rated voltage are to be included on transformers 100 KVA and larger. Transformers with taps will be shipped on the center tap.

All insulating paper used as a layer insulation in transformer coils shall be bonded type, coated on both sides with a thermosetting adhesive and properly cured prior to impregnating with oil.

Nameplates shall be made of a corrosion resistant material and shall meet ANSI standard C57.12.00-1987 for Nameplate A.

When required and previously approved, an oil immersed secondary breaker shall be provided.

Color shall be Munsell No. 5BG-7.0/0.4 Light Gray color. Painting shall meet or exceed E.E.I. finishing guidelines (1985).

Efffective 01/03/00
file\ohtrnspc.rpt