CONTRACT DOCUMENTS
&
TECHNICAL SPECIFICATIONS

HU 2026-103

DON HENRY POWER CENTER
GENERATOR EXCITATION REPLACEMENT

CITY OF HASTINGS

Proposals Will Be Opened Promptly At
4:00 PM, Wednesday, December 16, 2026

Bid Submitted By: _____

HASTINGS
Nebraska

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CONTRACT AND SPECIFICATIONS
FOR
DON HENRY POWER CENTER
GENERATOR EXCITATION REPLACEMENT
FOR
CITY OF HASTINGS
HASTINGS, NEBRASKA

Contract No. HU 2026-103

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ADVERTISEMENT FOR BIDS

The City of Hastings, Nebraska, will receive bids for the **Don Henry Power Center Generator Excitation Replacement, HU 2026-103** until 4:00 p.m. at the City of Hastings, 1228 N Denver Ave., Hastings, Nebraska, on Wednesday, December 16, 2026, at which time and place all bids will be publicly opened and read aloud. **Brief description of project: Design, build, install, test, and commission a new generator excitation system for the gas turbine at Don Henry Power Center in Hastings, Nebraska.** If you plan on bidding and are not already on our approved bidders list for this project, you are REQUIRED to fill out the Plan Holders Submittal Form that is located on the City website: https://www.cityofhastings.org/bids/.

The Contract Documents, including plans and specifications, are on file at the City of Hastings 1228 N Denver Avenue, Hastings, Nebraska 68901. Copies of the plans and specifications in electronic (PDF) format may be obtained by visiting the City of Hastings Website: www.cityofhastings.org/bids. A paper copy is available for $75.00, plus sales tax ($5.25), plus shipping.

Each bid shall be accompanied by a certified check, drawn on a solvent bank in the State of Nebraska, or a bid bond in an amount of not less than five percent (5%) of the total bid of all contract construction costs, made payable to the City Treasurer of the City of Hastings, Nebraska, as security that the bidder to whom the contract may be awarded will enter into a contract to build all the improvements in accordance with this notice and give bond in the sum hereinafter provided for the construction of improvements.

No bid shall be withdrawn after opening of bids without the consent of the City of Hastings, Nebraska, for a period of sixty (60) days after scheduled time of closing bids.

Time is of the essence in this contract. In evaluating bid(s) received, the City will consider the timelines of completion of prior construction contracts, existing workload of bidders and available manpower that bidder commits to the project.

The successful bidder will be required to furnish a Performance Bond in the sum of the full amount of the Contract within ten (10) days of the date of award. No additional time will be allowed the Contractor for providing the Performance Bond.

DATED AT HASTINGS, NEBRASKA, this 10th day of November, 2026.

CITY OF HASTINGS, NEBRASKA

_____

Tyler Ficken, City Clerk

Publish:
November 13, 2026
November 20, 2026

Furnish 2 proofs of publication

INSTRUCTIONS TO BIDDERS

All proposal information, including any unit price fill in sheets or other required information, shall be submitted on the proposal forms hereto attached. Copies of addenda, if any, shall be signed and attached. City of Hastings does NOT accept faxed or emailed bid returns.

Bidders shall inform themselves of all relevant matters, and, if awarded the contract, shall not be allowed any extra compensation by reason of any matter or thing concerning which such Bidder might not have fully informed himself, prior to the bidding.

The Bidder bidding on the Specifications herein, who has exceptions to those called for in the Specifications, must so state in the space provided below and/or attach a letter explaining in detail the exceptions taken to those required in the Specifications. This letter of explanation shall become a part of the bid and shall be attached hereto. Failure by the Bidder to outline his exceptions will require the successful Bidder to comply with these Specifications.

EXCEPTIONS TO SPECIFICATIONS:

_____

_____

_____

_____

_____

The City will not assume obligations resulting from losses or damages until acceptance of the equipment.

If any person contemplating submitting a bid for this contract is in doubt as to the true meaning of any part of the Specifications or other proposed contract documents, he may submit to Purchaser a written request for an interpretation thereof. The person submitting the request will be responsible for its prompt delivery. Any interpretation of the proposed documents will be made only by addendum duly issued or delivered to each person receiving a set of such documents. The Purchaser will not be responsible for any other explanation or interpretation of the proposed documents.

All addendums must be signed and attached to bid documents.

IF YOU HAVE QUESTIONS OR NEED HELP ON THESE SPECIFICATIONS

PLEASE CONTACT ANY OF THE FOLLOWING:

TECHNICAL QUESTIONS

Brandon Miller – Mechanical Engineer
1228 N Denver Ave
Hastings, NE 68901
Ph# 402-462-3653
Email: bidquestions@cityofhastings.org

GENERAL QUESTIONS OR REQUESTS

Renae Griess
Engineering Admin Assistant
Ph# 402-462-3665
Email: bidquestions@cityofhastings.org

IMPORTANT SUBMITTAL INSTRUCTIONS

ON HOW TO SUBMIT YOUR BID
FOR
CITY OF HASTINGS
DON HENRY POWER CENTER
GENERATOR EXCITATION REPLACEMENT
Contract No. HU 2026-103

Your bid MUST be returned by means of hand delivery, USPS, Fed-X, UPS, or other carrier by 4:00 p.m. on the date of the bid opening. Any bids received after this time will be returned unopened to the Vendor. City of Hastings DOES NOT ACCEPT bids that are faxed or emailed.

ALL the following documents are TO BE SUBMITTED in your bid packet.

1. **Cover sheet with your company's name filled in**
2. **ALL addendums received – must be acknowledged and signed**
3. **Bid Bond**
4. **If Exceptions, Instructions to Bidders with any exceptions listed**
5. **Proposal Page(s)**
6. **Preliminary Project schedule including expected dates for deliverables and Lead times on equipment**
7. **Proposed progress payment schedule**

FAILURE TO RETURN REQUIRED BID DOCUMENTS

COULD SUBJECT YOUR BID PROPOSAL TO BE REJECTED

IMPORTANT MAILING (OR HAND DELIVERY) INSTRUCTIONS

Please address your return envelope as shown in the example below. All bids must be sealed in a properly marked envelope.

To hand deliver, please drop off between the hours of 8am – noon and 1-5pm Monday through Friday.

Your Return Address

City of Hastings
Attn: Renae Griess
1228 N Denver Avenue
Hastings, NE 68901

This Information MUST BE typed or written in the lower left hand corner of return envelope
OR SIMPLY CUT OUT AND TAPE ON YOUR RETURN ENVELOPE

✂ ✂ ✂ ✂

BID DOCUMENTS ENCLOSED
ATTN: Renae Griess
Contract No: Don Henry Generator Excitation Replacement HU 2026-103
Bid Opens: Wednesday, December 16, 2026 @ 4:00 PM

If returning Fed-X or similar carrier, please enclose the bid in an "inner" envelope which is sealed. Please make sure BOTH envelopes are properly marked on the OUTSIDE OF THE ENVELOPE as shown in the example above.

One bid per envelope. Bid submittal via email is not allowed. Bids must be checked in to the City of Hastings prior to 4:00 pm deadline.

Proposal for Don Henry Power Center
Generator Excitation Replacement
Contract No. HU 2026-103

TO: City of Hastings
1228 N. Denver Ave
Hastings, NE 68901

Bid Opening: December 16, 2026 (Wednesday)
SEALED BIDS MUST BE RECEIVED BY 4:00 P.M. AND WILL BE OPENED PROMPTLY AT THAT TIME

We, the undersigned, being familiar with all parts of these documents, being Notice to Bidders, Bid Proposal Price Sheets, Contract Document Forms, Plans and Specifications, Affidavit, and all other parts of this document, do herein submit our proposal to furnish, install, and perform all tasks required to complete said project area(s) for the total costs.

The labor portion is not subject to sales tax; however, the material portion is taxed accordingly. The project is inside of city limits and is subject to **7.0% sales tax**. See following tax rules and regulation language.

BID SECTION I: Generator Excitation Replacement

Item#	Description	Unit Price	Total
1	Design, supply, and delivery of a new generator excitation system per the specifications	LUMP SUM	$
2	Demolition of existing excitation system, installation of new excitation hardware, installation of new control and power wiring per the specifications	LUMP SUM	$
3	Commissioning support – 10 days of field services to support initial startup, configuration, and tuning of excitation system per the specifications	LUMP SUM	$
4	Sales Tax	*(For Option 1 Contractors only) Sales Tax on materials of the above items	$
TOTAL SECTION I			
			$
In Words			

Equipment Delivery Date: October 26, 2027
Project Completion Date : December 20, 2027

For purposes of sales/use tax, this project falls under Nebraska Sales and Use Tax Regulation 1-017 for Contractors. By definition, a contractor is "any person who repairs property annexed to, or who annexes property to, real estate, including leased property, by attaching building materials to the annexed property or improvement being built or repaired, or who arranges for annexation of property." Please refer to www.revenue.nebraska.gov/salestax.html for additional information.

For calculating this proposal:

Proposal for Don Henry Power Center
Generator Excitation Replacement
Contract No. HU 2026-103

- All contractors are to include sales/use tax on materials in the bidder's prices, if applicable.
- **Option 1 contractors must separately state materials, sales tax, labor, and other charges on all invoices for the project. Any invoices submitted that do not include this required breakdown of the charges will not be accepted for payment. (This requirement does not apply to Option 2 or 3 contractors.)**
- The sales/use tax rate on building materials is 7.0% for projects within Hastings' city limits and 5.5% for projects outside of city limits.
- Contractor labor charges for this proposal are not subject to sales/use tax per the Nebraska Department of Revenue Notice to Contractors effective October 1, 2007.
- In submitting this bid, the bidder certifies that he will comply with all applicable laws, ordinances, and codes of the City of Hastings and the State of Nebraska.
- For this project, Contractor will supply all materials.

What contractor option have you registered with the Nebraska Department of Labor (must select one)? Please refer to https://dol.nebraska.gov for additional information.

Option 1 _____

Option 2 _____

Option 3 _____

Is Nebraska Sales/Use Tax included in the above prices.

Yes _____ No _____

(ALL COSTS TO INCLUDE CITY AND STATE SALES TAX)

The undersigned bidder agrees to furnish the required performance bond and to enter into a contract within ten (10) days after acceptance of the Proposal and further agrees to complete all work covered by the foregoing Proposal in accordance with specified requirements.

Exceptions: No ☐ Yes ☐ (If yes, list on ***"Instructions to Bidders"*** page)

Any modification of bid proposal will be considered non-conformance of the bid. All exceptions to the proposal shall be noted as an exception to the bid.

City of Hastings may at its own discretion delete any project area and / or component prior to award of contract. City of Hastings will award any or all bid sections to one contractor.

In submitting this proposal, it is further understood that the City of Hastings reserves the right to reject any or all proposals and may waive any informalities and may accept the proposal which best suits its needs. It is further understood that this proposal may not be withdrawn for a period of sixty days (60) days after bids are opened.

Proposal for Don Henry Power Center
Generator Excitation Replacement
Contract No. HU 2026-103

All bid documents, including proposals, bid bonds, subcontractor designation, etc., must be submitted with original signatures. No copies will be accepted.

OFFICIAL NAME & ADDRESS

Firm Name	Signature
Address	Typed or Printed Name
City, State, Zip	Title
Phone No.	Date
Fax No.	Email Address

ALL BIDS MUST BE CHECKED IN TO THE CITY OF HASTINGS PRIOR TO 4:00 PM DEADLINE

AGREEMENT

THIS AGREEMENT, made and entered into this __ day of _____, 2026, by and between the City of Hastings, Party of the First Part, hereinafter called the "Purchaser" or "City", and _____of (town) _____ in the State of _____, Party of the Second Part, hereinafter called the "Contractor".

WITNESSETH: THAT,

WHEREAS: The Purchaser has caused the necessary contract documents to be prepared for defining material, equipment, and/or labor to be supplied to the City of Hastings and delivered complete as specified in the accompanying contract documents.

WHEREAS: The Purchaser has advertised for bids from Contractors, has received said bids, analyzed same and duly awarded a contract to the "Contractor", "Party of the Second Part", for material, equipment, and/or labor as hereinafter set forth and as stated more in detail in the Proposal and related contract documents to wit; Notice to Bidders, Instructions to Bidders, Specifications; all of which documents are attached hereto and made a part of this Contract.

NOW, THEREFORE: It is hereby agreed that for the sum of_____. ($ _____)

to be paid by the Purchaser, within Thirty (30) days after the acceptance of material, equipment, and/or labor by the Purchaser, to the Contractor, the Contractor agrees to furnish all materials, equipment, and/or labor as required by the accompanying specifications, and the aforesaid contract documents, for **HU 2026-103 Don Henry Power Center Generator Excitation Replacement.**

All materials, equipment, and/or labor shall be in accordance with the accompanying contract documents and specifications which are as much a part of this Agreement as if repeated verbatim herein.

It is further agreed that the Contractor will start work promptly, furnish the necessary drawings promptly and complete the work in the number of days set forth in the Proposal.

IN WITNESS WHEREOF: The Parties of the First and Second Parts have hereto set their hands and seals on the day and year above written.

CITY OF HASTINGS
Party of the First Part

By: _____

Date: _____

ATTEST:

_____
City Clerk

CONTRACTOR
Party of the Second Part

SEAL

_____

By: _____

Title: _____

Date: _____

APPROVED TO FORM:

_____
City Attorney

Note: If executed by one other than President, Partner or the individual Owner, a Power-of-Attorney authorizing execution should accompany this Contract.

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS:

That we, the undersigned, _____,
as principal, and _____,
a corporation organized and existing under the laws of the State of _____,
and duly authorized to transact business in the State of Nebraska, as surety are held and firmly bound unto the CITY OF HASTINGS, NEBRASKA, a municipal corporation organized and existing under the laws of the State of Nebraska, hereinafter referred to as CITY, in the penal sum of _____ Dollars ($_____),
lawful money of the United States, for the payment of which will and truly be made, we the said principal and the said surety do hereby bind ourselves, our heirs, executors, administrators and assigns, jointly and severally, by these presents as follows:

The condition of this obligation is such that, whereas the principal, by an instrument in writing attached hereto and bearing the date of _____, 20____, has agreed with the CITY to do all work necessary and to furnish all labor, materials, supplies, tools and equipment to

_____

_____

_____

as specified thereby and in the specifications, proposals and contract forming the Contract Documents attached thereto and made a part hereof:

NOW THEREFORE, if the principal shall well and truly in good, sufficient and in a workmanlike manner, and to the satisfaction of the CITY perform and complete the work required, and shall defend, indemnify and save harmless the CITY against all damages, claims, demands, expenses and charges of every kind (including claims of patent infringement) arising from any act, omission or neglect of said principal, his agents, servants or employees, with relation to said work, and shall pay all costs, charges, rentals and expenses for labor, materials, supplies and equipment and deliver the said improvement to the CITY completed and ready for operation and free from all encumbrances or claims for labor, materials or otherwise, and shall pay all other expenses lawfully chargeable to the CITY, and this bond shall also be for the use and benefit of all persons who may perform any work or labor or furnish any material in the execution of said Contract and may be

sued on thereby in the name of any such party claiming the benefit hereof, then this obligation shall be void, otherwise the same shall remain in full force and effect. This obligation shall be in full force and effect for the full guarantee period provided in the specifications contained herein.

PROVIDED FURTHER, that said surety for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or the work to be performed thereunder or the specifications accompanying the same shall in any way affect its obligation on this bond, and it does hereby waive notice of any change, extension of time, alteration or addition to terms of the Contract, to the work or to the specifications.

PROVIDED FURTHER, that if the principal of his, their or its subcontractor or subcontractors fail to duly pay for any labor, materials team, hire sustenance, provisions, provender or any other supplies or materials used or consumed by such contractor of his, their or its subcontractors in performance of the work contracted to be done, the surety will pay the same in any amount not exceeding the sum specified in the bond together with interest as provided by law.

IT WITNESS WHEREOF, said principal and surety have hereunto set their hands and seals at _____ this _____ day of _____, 20____,

This Bond is executed in triplicate counterparts.

_____
Principal

_____
Street Address

(SEAL)

_____ _____
Witness City, State, Zip

_____
Name of Person Executing

_____
Surety

ATTEST:

_____ By: _____
_____ Title: _____

INSURANCE COVERAGE

The undersigned hereby certifies that Workmen's Compensation, Public Liability and Property Damage, and Automobile Liability and Property Damage Insurance is in force and effect in accordance with the requirements contained in "Instruction To Bidders" which is a part of this document "Bid Proposal And Specifications". We further agree to give ten (10) days notice to the City of Hastings before effective date of cancellation or reduction of any of the above coverage.

This Insurance Coverage applies only to _____

_____

Dated _____

_____
SUPPLIER

By _____

Title_____

Date _____

_____
INSURANCE COMPANY

By_____

Title_____

Address_____

_____

Date_____

A F F I D A V I T

State of Nebraska)
) ss.
County of Adams)

I _____ , _____
Name Title

of _____
Firm Name

do hereby certify that all subcontractors, vendors, persons or firms who have furnished labor or material for the _____

_____

_____

have been fully paid and that all taxes have been paid.

_____
Signature

_____
Date

Subscribed and sworn to me this _____ day of _____, 20_____

_____
Notary Public

My commission expires _____.

A signed and notarized copy of affidavit must be in City of Hastings file before final payment may be made.

Copy of forms will be supplied by City of Hastings prior to final payment.

GENERAL CONDITIONS

GC.1 Contract Documents

It is understood and agreed that the Notice to Bidders, Instructions to Bidders, Proposal, Proposal Data, Contract Agreement, Performance Bond, Payment Bond, General Conditions, Special Conditions, Specifications, Drawings, Addenda, and Change Orders issued by the Purchaser or the Engineer, and specifications and engineering data furnished by the Contractor and accepted by the Purchaser, are each included in this Contract and the work shall be done in accordance therewith.

GC.2 Definitions

Words, phrases, or other expressions used in these contract documents shall have meanings as follows.

1. "Contract" or "contract documents" shall include the items enumerated above under CONTRACT DOCUMENTS.
2. "Purchaser" shall mean the City of Hastings named and designated in the Contract Agreement as "Party of the First Part," and their duly authorized agents. All notices, letters, and other communication directed to the Purchaser shall be addressed and delivered to:

   City of Hastings
   1228 North Denver Avenue
   P.O. Box 398
   Hastings, Nebraska 68902-0289
   Attention: Mr. Brandon Miller
   Mechanical Engineer

3. "Contractor" shall mean the corporation, company, partnership, firm or individual named and designated in the Contract Agreement as the "Party of the Second Part," who has entered into this Contract for the performance of the work covered thereby, and its, his, or their duly authorized representatives.
4. "Subcontractor" shall mean and refer only to a corporation, partnership, or individual having a direct contract with the Contractor for performing work covered by these contract documents.
5. "Engineer" shall also refer to City of Hastings as the purchaser.
6. "Date of contract," or equivalent words, shall mean the date written in the first paragraph of the Contract Agreement.
7. "Day" or "days," unless herein otherwise expressly defined, shall mean a calendar day or days of 24 hours each.
8. "The work" shall mean the equipment, supplies, materials, labor, and services to be furnished under the contract and the carrying out of all obligations imposed by the contract documents.
9. "Drawings" or "plans" shall mean all (a) drawings furnished by the Purchaser as a basis for proposals, (b) supplementary drawings furnished

by the Purchaser to clarify and to define in greater detail the intent of the contract drawings and specifications, (c) drawings submitted by the successful bidder with his proposal, provided such drawings are acceptable to the Purchaser, (d) drawings furnished by the Purchaser to the Contractor during the progress of the work, and (e) engineering data and drawings submitted by the Contractor during the progress of the work, provided such drawings are acceptable to the Engineer.

10. Whenever in these contract documents the words "as ordered," "as directed," "as required," "as permitted," "as allowed," or words or phrases of like import are used, it shall be understood that the order, direction, requirement, permission, or allowance of the Purchaser or Engineer is intended only to the extent of judging compliance with the terms of the contract; none of these terms shall imply that the Purchaser or the Engineer has any authority or responsibility for supervision of the Contractor's forces or construction operations, such supervision and the sole responsibility therefor being strictly reserved for the Contractor.

11. Similarly the words "approved," "reasonable," "suitable," "acceptable," "proper," "satisfactory," or words of like effect and import, unless otherwise particularly specified herein, shall mean approved, reasonable, suitable, acceptable, proper, or satisfactory in the judgment of the Purchaser or Engineer, to the extent provided in (10) above.

12. Whenever in these contract documents the expression "it is understood and agreed" or an expression of like import is used, such expression means the mutual understanding and agreement of the parties executing the Contract Agreement.

13. "Official acceptance" shall mean the Purchaser's written acceptance of all work performed under this Contract, based on the Engineer's final inspection and issuance of a final payment certificate.

14. “Project completion” shall mean that the excitation system has been installed and tested and the Don Henry Gas Turbine is ready for operation. The project completion date is at the end of day, December 20th, 2027.

15. “Final Acceptance” shall mean that all work has been completed in accordance with these specifications, the project has been walked down, punch list items have been completed, and Purchaser is ready to accept the Work as complete.

16. “Stop Work Order” shall mean that the Purchaser will provide a written order to the Contractor requiring the Contractor to stop all, or any part of, the work called for by this Contract, for a time defined by the order. The order shall specify the reasoning for the suspended work, which may include, but are not limited to, engineering considerations, changes to the project scope, safety or environmental concerns, or other issues detrimental to the project. Upon receipt of the order, the Contractor shall immediately comply with its terms and take all reasonable steps to minimize the incurrence of costs allocable to the work covered by the

order. As soon as practical, the Purchaser and Contractor shall discuss the impacted activities, schedule, materials, labor, and equipment. If applicable, Purchaser and Contractor will seek to negotiate an equitable adjustment in the schedule, Contract price, or both, and the contract shall be modified, or a change order issued, as necessary. Upon any agreement and finalization of commercial conditions, Purchaser to provide written order to cancel the stop work order.

GC.3 Execution of the Contract

Once the bids have been evaluated, the Purchaser will electronically submit the Contract Agreement to the Contractor. The Contractor shall sign the Contract Agreement and return to Purchaser for the final approval process. Upon final approvals, the Contract Agreement will be signed by the Purchaser and electronically returned to the Contractor. Contractor shall then mail one hardcopy of required bonds, one electronic or hardcopy of insurance documents, and one electronic or hardcopy of power of attorney forms to the Purchaser. The date of contract on the bond forms and power of attorney forms shall match the date provided on the Contract Agreement by the Purchaser.

The Purchaser will review the final documents and electronically send a final conformed contract to the Contractor.

GC.4 Legal Addresses

The business address of the Contractor listed in the Proposal is hereby designated as the place to which all notices, letters, and other communication to the Contractor will be mailed or delivered. The address of the Purchaser appearing in section GC.2 is hereby designated as the place to which all notices, letters, and other communication to the Purchaser shall be mailed or delivered. Either party may change his address at any time by an instrument in writing delivered to the Engineer and to the other party.

GC.5 Scope and Intent of Contract Documents

The various parts of the contract documents are intended to supplement but not necessarily duplicate each other. Any work exhibited in one part and not in another shall be executed as if it had been set forth in all parts, so that the work will be performed according to the complete design as determined by the Engineer.

Should anything necessary for a clear understanding of the work be omitted from the contract documents, or should the requirements appear to be in conflict, the Contractor shall secure written instructions from the Engineer before proceeding with the work affected thereby. It is understood and agreed that the work shall be performed according to the true intent of the contract documents.

GC.6 Independent Contractor

The relationship of the Contractor to the Purchaser shall be that of an independent contractor.

GC.7 Assignment

The Contractor shall not assign the work, or any part thereof, without the previous written consent of the Purchaser, nor shall he assign, by power of attorney or otherwise, any of the money payable under this Contract unless written consent of the Purchaser has been

obtained. No right under this Contract, nor claim for any money due or to become due hereunder shall be asserted against the Purchaser, or persons acting for the Purchaser, by reason of any so-called assignment of this Contract or any part thereof, unless such assignment has been authorized by the written consent of the Purchaser. In case the Contractor is permitted to assign moneys due or to become due under this Contract, the instrument of assignment shall contain a clause subordinating the claim of the assignee to all prior liens for services rendered or materials supplied for the performance of the work.

GC.8 Oral Statements

It is understood and agreed that the written terms and provisions of this agreement shall supersede all oral statements of representatives of the Purchaser, and oral statements shall not be effective or be construed as being a part of this Contract.

GC.9 Reference Standards

Reference to the standards of any technical society, organization, or association, or to codes of local or state authorities, shall mean the latest standard, code, specification, or tentative standard adopted and published at the date of taking bids, unless specifically stated otherwise.

GC.10 Source of Materials

To the extent possible, materials, and equipment (including components thereof) furnished under these specifications shall be produced, processed, manufactured, and assembled within the United States of America. Substitution of foreign materials for domestic materials will not be permitted unless such substitution is clearly stated in the Proposal and accepted by the Purchaser.

GC.11 Contractor to Check Drawings and Lists

The Contractor shall check all dimensions, elevations, and quantities indicated on the drawings and lists furnished to him by the Engineer. The Contractor shall notify the Engineer of any discrepancy between the drawings and the conditions at the site, or any error or omission in the drawings, or in the layout as given by stakes, points, or instructions, which he may discover in the course of the work. The Contractor will not be allowed to take advantage of any error or omission in the drawings or other contract documents that a reasonable inspection of them by Contractor would reveal. Full instructions will be furnished by the Engineer should such error or omission be discovered, and the Contractor shall carry out such instructions as if originally specified.

GC.12 Figured Dimensions to Govern

Dimensions and elevations indicated on the drawings shall be accurately followed even though different from scaled measurements. No work indicated on the drawings, the dimensions of which are not indicated, shall be executed until necessary dimensions have been obtained from the Engineer.

GC.13 No Waiver of Rights

Neither the inspection by the Purchaser or Engineer or any of their officials, employees, or agents, nor any order by the Purchaser or Engineer for payment of money, or any payment for, or acceptance of, the whole or any part of the work by the Purchaser or Engineer, nor any

extension of time, nor any possession taken by the Purchaser or its employees, shall operate as a waiver of any provision of this Contract, or of any power herein reserved to the Purchaser, or any right to damages herein provided, nor shall any waiver of any breach in this Contract be held to be a waiver of any other or subsequent breach.

GC.14 Authority of the Engineer

To prevent delays and disputes, and to discourage litigation, it is agreed by the parties to this Contract that the Engineer shall determine the quantities of work which are to be paid for under the contract and shall resolve all questions in relation to the work.

If, in the opinion of the Contractor or the Purchaser, a decision made by the Engineer is not in accordance with the meaning and intent of the contract, either party may file with the Engineer and the other party to the contract, within 30 days after receipt of the decision, a written objection to the decision. Failure to file an objection within the allotted time will be considered acceptance of the Engineer's decision and the decision shall become final and conclusive.

The Engineer's decision and the filing of the written objection thereto shall be a condition precedent to the right to request arbitration or to start action in court.

It is the intent of this agreement that there shall be no delay in the execution of the work and the decision of the Engineer as rendered shall be promptly observed.

GC.15 Engineering Inspection

The Purchaser may appoint (either directly or through the Engineer) such inspectors as the Purchaser deems proper to inspect the work for compliance with the contract documents. The Contractor shall furnish all reasonable assistance required by the Engineer, or inspectors, for the proper inspection of the work. Should the Contractor object to any interpretation of the contract by an inspector, the Contractor may make written appeal to the Engineer for a decision.

Inspectors shall have the authority to reject work which is unsatisfactory, faulty, or defective or does not conform to the requirements of the contract documents. Inspection shall not relieve the Contractor from any obligation to construct the work strictly in accordance with the contract documents.

Upon the failure of the Contractor or its Subcontractors to comply with any of the requirements of this Contract (but not limited to quality or safety), the Purchaser shall have the authority to stop any portion of the work affected by such failure until such failure is remedied. If the Purchaser issues a Stop Work Order, the Purchaser shall not be liable for any costs or expenses claimed by Contractor arising out of such issuance. The construction schedule shall not be delayed or extended as a result of the Purchaser’s issuance of a Stop Work Order.

GC.16 Contractor Default

If the work to be done under this Contract is abandoned by the Contractor; or if this Contract is assigned by him without the written consent of the Purchaser; or if the Contractor is

adjudged bankrupt; or if a general assignment of his assets is made for the benefit of his creditors; or if a receiver is appointed for the Contractor or any of his property; of if at any time the Engineer certifies in writing to the Purchaser that the performance of the work under this Contract is being unnecessarily delayed, that the Contractor is violating any of the conditions of this Contract, or that he is executing the same in bad faith or otherwise not in accordance with the terms of said contract; or if the work is not substantially completed within the time named for its completion or within the time to which such completion date may be extended; then the Purchaser may serve written notice upon the Contractor and his surety of the Purchaser's intention to terminate this Contract. Unless within 5 days after the serving of such notice, a satisfactory arrangement is made for continuance, this Contract shall terminate. In the event of such termination, the surety shall have the right to take over and complete the work, provided that if the surety does not commence performance within 30 days, the Purchaser may take over and prosecute the work to completion, by contract or otherwise. The Contractor and his surety shall be liable to the Purchaser for all excess cost sustained by the Purchaser by reason of such prosecution and completion. The Purchaser may take possession of, and utilize in completing the work, all materials, equipment, tools, and plant on the site of the work.

GC.17 Beginning, Progress, and Completion of the Work

The time of completion is a basic consideration of this Contract. Unless otherwise specified in these contract documents or advised by written order of the Purchaser, the Contractor shall begin work within 10 days after the date of contract. The work shall be prosecuted to completion in accordance with the specified schedule, subject to adjustment as provided in these contract documents.

A detailed construction schedule shall be prepared by the Contractor and submitted to the Purchaser for review. The schedule shall contain the various activities required to perform the work and the dates the activities will be started and completed in order to complete the work in accordance with the specified schedule requirements. The Contractor is responsible for determining the sequence and time estimates of the detailed construction activities. However, the Purchaser reserves the right to require the Contractor to modify any portion of the schedule the Purchaser determines to be impracticable or unreasonable; as required to coordinate the Contractor's activities with those of other contractors, if any, engaged in work for the Purchaser on the site; to avoid undue interference with the Purchaser's operations; and to assure completion of the work by the date or dates stipulated. Upon acceptance by the Purchaser of the Contractor's detailed construction schedule, the Contractor will be responsible for maintaining such schedule.

If at any time the Contractor's work is behind schedule, he shall immediately put into effect definite procedures for getting the work back on schedule. The procedures shall be subject to review and modification by the Purchaser.

GC.18 Hindrances and Delays

The Contractor expressly agrees that in undertaking to complete the work within the time specified, he has made allowances for all hindrances and delays which might usually be expected to occur in performing the work. No claims shall be made by the Contractor for such hindrances and delays.

If the Contractor experiences hindrances and delays which, in his opinion, are not usually to be expected in the performance of the work and which affect the performance of the work, he may request a change in the contract. Such hindrances and delays may include, but not be limited to, acts or failure to act by the Purchaser or other contractors employed by the Purchaser, fires, floods, labor disputes, epidemics, or acts of God. Such hindrances and delays shall not include rain, snow, or other non-severe inclement weather. Claims by the Contractor for any change in the contract due to such hindrances and delays shall be made in accordance with the requirements of Article GC.22, CHANGES TO THE CONTRACT. The Contractor shall use all reasonable means to minimize the extent of the delay.

GC.19 Suspension of Work

The Purchaser reserves the right to suspend and reinstate execution of the whole or any part of the work without invalidating the provisions of the contract. Suspension or reinstatement of the work will be by written notice to the Contractor from the Purchaser.

Suspension of work shall not automatically entitle the Contractor to additional compensation or a change in the contract time; however, the Contractor will be reimbursed for real and unavoidable direct costs incurred by him as a result of such suspension and/or the contract will be extended as required to compensate for any delay due to such suspension. Claims by the Contractor for change of contract time or an adjustment of the contract price, due to work suspensions ordered by the Purchaser shall be made in accordance with the requirements of Article GC.22, CHANGES TO THE CONTRACT. The Contractor shall use all reasonable means to minimize the consequences of such suspension.

GC.20 Cancellation of Work

The Purchaser reserves the right to cancel the unshipped portion of the work by giving written notice to the Contractor. In the event of cancellation, the Purchaser will pay the Contractor reasonable and proper cancellation costs.

Cancellation of the work shall not constitute the basis for a claim for damages or loss of anticipated profits.

The Contractor shall, after consultation with the Purchaser, take all reasonable steps to minimize the costs related to cancellation. The Contractor shall provide the Purchaser with an accounting of costs claimed, including adequate supporting information, and the Purchaser may, at its expense, audit the claimed costs and supporting information.

GC.21 Modifications

The Contractor shall modify the work whenever so ordered by the Purchaser and such modifications shall not affect the validity of the contract. Modifications may involve changes in the amount of the work to be performed or changes in the contract time for which appropriate changes to the contract will be made.

Contract changes due to modifications shall be made in accordance with the requirements of Article GC.22, CHANGES TO THE CONTRACT.

GC.22 Changes to the Contract

The contract may be changed only by duly executed change orders issued by the Purchaser.

If, in the opinion of the Purchaser or the Contractor, any event or action by the other party justifies a change in the contract, either party shall initiate with the other party, within 5 days after such event or action, a request for a change to the contract. All documentation required to substantiate the proposed change shall be submitted within a minimum reasonable time after initiating the request for change. Upon the parties reaching agreement regarding the proposed change, the Purchaser will issue a written change order therefor.
Notwithstanding the foregoing provisions requiring duly authorized change orders, in the event agreement has been reached between authorized representatives of the parties regarding the change in the contract pending processing of such change order, the Contractor shall proceed with the work on the basis of written interim authorization from the Purchaser.

If the Contractor claims that any instruction, request, drawing, specifications, or other directive or action of the Purchaser or the Engineer constitutes a change in the contract, but has not been authorized as such by a change order in writing by the Purchaser, the Contractor shall immediately request a written interim authorization and proceed without delay to perform the work in accordance with such authorization. The Contractor shall provide written notice of the claim or dispute to the Engineer and the Purchaser within 5 days of the request for interim authorization. The Contractor's failure to give said written notice within the 5-day period shall constitute a waiver and relinquishment of any such claim or dispute. The Purchaser's written interim authorization shall not constitute approval of the claim for increased or decreased work, but shall be a condition precedent to the Contractor's right to receive payment for such work and to the Contractor's right to prosecute or maintain any proceeding to recover for such work.

GC.22.1 Contract Price Changes

The contract price may be changed due to modifications which involve extra work or decreased work; or due to work suspensions, hindrances, and delays over which the Contractor has no control. Claims for changes in the contract price shall conform to the requirements specified herein.

GC.22.1.1 Increased Price

If a change in the contract is required due to work suspensions or hindrances and delays, the contract price will be increased according to agreed lump sums, agreed acceleration costs, or other demonstrable costs submitted by the Contractor and substantiated to the satisfaction of the Purchaser.

If a change in the contract price is required due to a modification which increases the amount of the work, and the added work or any part thereof is of a type and character which can properly and fairly be classified under one or more unit price items of the contract, then the contract price will be increased according to the amount actually done and at the applicable unit price. Otherwise, such work shall be paid for as herein-after provided.

Contract price changes for modifications involving extra work will be based on agreed lump sums or on agreed unit prices whenever the Purchaser and the Contractor agree upon such

prices before the extra work is started; otherwise, payments for extra work will be based on actual direct cost plus the specified percentage allowance.

For the purpose of determining whether proposed extra work will be authorized, or for determining the payment method for extra work, the Contractor shall submit to the Engineer, upon request, a detailed cost estimate for proposed extra work. The estimate shall indicate itemized quantities and charges for all elements of direct cost. Charges for the Contractor's and subcontractor's extra profit, extra general superintendence, extra field office expense, and extra overheads shall be indicated as a percentage addition to the total estimated direct cost. Unless otherwise agreed upon by the Contractor and the Purchaser, such percentage additions shall be 15 percent for the extra work performed by the Contractor's own forces or 20 percent for extra work performed by a subcontractor.

When payment for extra work is based on actual direct cost, the Contractor will be paid the actual direct cost plus an allowance of 15 percent if the extra work is performed by the Contractor's own forces or 20 percent if the extra work is performed by a subcontractor. The allowance will be paid as full compensation for the Contractor's and sub-contractor's extra profit, extra general superintendence, extra field office expense, extra overheads, and all other elements of extra cost not defined herein as actual direct cost.

The actual direct cost shall include only those extra costs for labor and material expended in direct performance of the extra work and may include the following.

a. The actual payroll cost of all workmen such as laborers, mechanics, craftsmen, and foremen.

b. The Contractor's or subcontractor's net cost for materials and supplies.

c. The rental charge for vehicles and construction equipment.

d. The transportation charges for equipment.

e. The charges for extra power, fuel, lubricants, water, and special services.

f. The charges for extra payroll taxes, bond premiums, and insurance premiums.

The form in which actual direct cost records are kept, the construction methods, and the type and quantity of equipment used shall be acceptable to the Engineer.

Construction equipment which the Contractor has on the jobsite and which is of a type and size suitable for use in performing the extra work shall be used. The hourly rental charges for equipment shall not exceed 1/2 percent of the latest applicable monthly rental rates as published by Dataquest Incorporated in its "Rental Rate Blue Book" and shall apply to only the actual time the equipment is used in performing the extra work.

When extra work requires the use of equipment which the Contractor does not have on the jobsite, the Contractor shall obtain the concurrence of the Engineer before renting or otherwise acquiring additional equipment. The rental charges for the additional equipment shall not exceed the latest applicable "Rental Rate Blue Book" published rental rates.

GC.22.1.2 Decreased Price

If a change in the contract price is required due to a modification which decreases the amount of work, such decrease shall not constitute the basis for a claim for damages or anticipated profits on work affected by such decrease. Where the value of omitted work is not covered by applicable unit prices, the Engineer shall determine, on an equitable basis, the amount of:

a. Credit due the Purchaser for contract work deleted as a result of an authorized change,

b. Allowance to the Contractor for any actual loss incurred in connection with the purchase, delivery, and subsequent disposal of materials or equipment required for use on the work as planned and which could not be used in any part of the work as actually built, and

c. Any other adjustment of the contract amount where the method to be used in making such adjustment is not clearly defined in the contract documents.

Unless otherwise agreed upon by the Purchaser and the Contractor, the credit due the Purchaser for reductions in the amount of work to be done shall be the estimated direct cost of the deleted work plus an overhead allowance of the following.

- 10 percent of the estimated direct cost if the work was to have been done by the Contractor's own forces, or
- 15 percent of the estimated direct cost if the work was to have been done by a subcontractor.

Direct cost referred to above shall include the category of costs listed as actual direct costs, Items (a) to (f) inclusive of the article entitled Increased Price.

GC.22.2 Contract Time Changes

The contract time may be changed due to work modifications, hindrances and delays, and work suspensions over which the Contractor has no control.

Contract time will not be changed for delays caused by unfavorable weather or unsuitable ground conditions normally incident to the work, inadequate construction force, failure to place timely orders for equipment and materials, or other causes within the control of the Contractor.

GC.23 Step Dispute Resolution

In the event of any controversy, claim or dispute between the Parties arising out of or relating to this Agreement, including its enforcement, such controversy, claim or dispute, including disputes regarded as such by only one of the Parties, the Parties shall negotiate in good faith to resolve such dispute, including third party mediation, if the Parties so agree.

If no settlement is achieved, either Party may pursue a claim in a federal or state court with competent jurisdiction.

GC.24 Laws and Regulations

The Contractor shall observe and comply with all ordinances, laws, and regulations, and shall protect and indemnify the Purchaser and the Purchaser's officers and agents, including the Engineer, against any claim or liability arising from or based on any violation of the same.

GC.25 Taxes, Permits, and Licenses

The Contractor shall pay all sales, use, and other taxes that are lawfully assessed against the Purchaser or Contractor in connection with the work and shall obtain and pay for all required licenses, permits, and inspections.

The Contractor will be compensated for any increase in tax rates, license fees, and permit fees or any new taxes, licenses, or permits imposed after the date of the Proposal; provided, however, that this provision shall be limited to sales, use, and excise taxes assessed against the completed work and to licenses and permits required specifically for the proposed work.

GC.26 Patents

Royalties and fees for patents covering materials, articles, apparatus, devices, equipment, or processes used in the work shall be included in the contract amount. The Contractor shall satisfy all demands that may be made at any time for such royalties or fees and he shall be liable for any damages or claims for patent infringements. The Contractor shall, at his own cost and expense, defend all suits or proceedings that may be instituted against the Purchaser for alleged infringement of any patents involved in the work and, in case of an award of damages, the Contractor shall pay such award. Final payment to the Contractor by the Purchaser will not be made while any such suit or claim remains unsettled.

GC.27 Materials and Equipment

Unless specifically provided otherwise in each case, all materials and equipment furnished for permanent installation in the work shall conform to applicable standard specifications and shall be new, unused, and undamaged when installed or otherwise incorporated in the work. No such material or equipment shall be used by the Contractor for any purpose other than that intended or specified, unless such use is specifically authorized by the Purchaser in each case.

All required tests in connection with acceptance of source of materials shall be made at the Contractor's expense by a properly equipped laboratory of established reputation whose work and testing facilities are acceptable to the Purchaser. Any change in origin or method of preparation or manufacture of a material being routinely tested will require new tests. Reports of all tests shall be furnished to the Engineer or Purchaser in as many copies as required.

GC.28 Guarantee

The Contractor guarantees that the work herein contracted will be as specified and will be free from defects in design, workmanship, and materials. Contractor does not guarantee or warrant parts subject to normal wear and tear during operation. If within the guarantee period the work fails to meet the provisions of this guarantee, the Contractor shall promptly correct any defects, including nonconformance with the contract documents by adjustment, repair, or replacement of all defective parts or materials at the Contractor's option and expense, after consulting with the Purchaser on the proposed remedy plans.

Except as otherwise prescribed by the terms of any special guarantees required by the contract documents, the guarantee period shall begin on the date of final payment and shall end 12 months later.

The cost of all materials, parts, labor, transportation, supervision, special tools, and supplies required for replacement or repair of parts and for correction of defects shall be paid by the Contractor or by the surety.

This guarantee shall be extended to cover all repairs and replacements furnished under the guarantee and the period of the guarantee for each such repair or replacement shall be 1 year after correction of the defect except as otherwise prescribed by the terms of any special guarantees required by the contract documents.

The Contractor will be given an opportunity to confirm the existence of the defect, but he shall not delay the correction while making such determination.

If within 10 days after the Purchaser has notified the Contractor of a defect, failure, or abnormality in the work, the Contractor has not started to make the necessary repairs or adjustments, the Purchaser is hereby authorized to make the repairs or adjustments or to order the work to be done by a third party; the cost of the work to be paid by the Contractor.

In the event of an emergency where, in the judgment of the Purchaser, delay would cause serious loss or damage, repairs or adjustments may be made by the Purchaser or a third party chosen by the Purchaser without advance notice to the Contractor and the cost of the work shall be paid by the Contractor or by the surety.

GC.29 <u>Contractor's Insurance Coverage</u>

The Contractor shall not commence work under this Contract until Contractor has obtained all the insurance required under this article. Furthermore, the Contractor shall not allow any sub-contractor to commence work under this Contract until the sub-contractor has obtained the same insurance as is required of the Contractor. The sub-contractor alone shall be responsible for the sufficiency of its own insurance program.

GC.29.1 <u>Certificates of Insurance</u>

Certificates of Insurance acceptable to the Purchaser shall be filed with the Purchaser prior to commencement of the work. All insurance carried shall conform to the relevant provisions of the respective Project Documents and be with insurance companies which are rated "A, X" or better by Best's Insurance Guide, or other insurance companies of recognized responsibility satisfactory to the Purchaser.

GC.29.2 <u>Proof of Carriage of Insurance.</u> Satisfactory certificates of insurance shall be filed with the Purchaser prior to starting any construction work on this contract. The parties agree that the requirements with respect to requirements to procure and maintain insurance under this Section is a material part of this Agreement.

GC.29.3 Additional Insureds

Insurance coverages furnished under this Contract, with the exception of Workers' Compensation and Employer's Liability, shall include the City of Hastings and their members, directors, officers, agents, and employees as named Additional Insureds on a primary and noncontributory basis, and shall include Products and completed operations with respect to the activities of the Contractor and shall be maintained for the full duration of the project including for a period after completion to include the statute of repose.

Notwithstanding any other provision of these policies, the insurance afforded shall apply separately to each insured, with respect to any claim, suit, or judgment made or brought by or for any other insured, as though a separate policy had been issued to each, except the insurer's liability shall not be increased beyond the amount or amounts for which the insurer would have been liable had only one insured been named.

The Purchaser shall not by reason of their inclusion under these policies incur liability to the insurance carrier for payment of premium for these policies.

GC.29.4 Waiver of Subrogation

To the extent permitted by applicable law, the Contractor and their sub-contractor shall require their insurance carriers, with respect to all insurance policies, to waive all rights of subrogation against the Purchaser their partners, directors, officers, agents, and employees.

GC.29.5 Workers' Compensation and Employer's Liability Insurance

The Contractor shall procure, and shall maintain during the life of this Contract, Workers' Compensation Insurance as required by workers' compensation laws of the State of Nebraska and also of the state in which the sub-contractor is domiciled.

The Contractor shall also be protected against claims for injury, disease, or death of employees which, for any reason, may not fall within the provisions of a workers' compensation law. The Employer's Liability Insurance shall contain the following limits of liability:

Bodily Injury by Accident	$500,000 each accident
Bodily Injury by Disease	$500,000 each employee
Bodily Injury by Disease	$500,000 policy limit

GC.29.6 General Liability Insurance

This insurance shall be written per project on an “occurrence” policy form, including coverage for premises/operations, products/completed operations, blanket contractual liability, independent contractors and personal injury, with no exclusions for explosion, sudden and accidental pollution or an absolute or total pollution exclusion, collapse and underground perils. The commercial general liability policy shall also include a severability of interest clause and a cross liability clause in the event more than one entity is “named insured” or “named additional insured” under the liability policy.

Limits of Insurance shall be as follows:

Each Occurrence Limit	$1,000,000

Products/Completed Operations	$2,000,000
General Aggregate Limit	$2,000,000
Personal and Advertising Injury	$1,000,000

GC.29.7 Automobile Liability Insurance

This insurance shall be written under a Business Auto Policy and shall protect the Contractor and Additional Insureds against claims arising from injuries to members of the public or damage to property of others arising from the use of automobiles whether such automobiles are owned, non-owned, or hired. Automobile insurance shall include Motor Carrier Endorsement Act MCS 90 and transportation pollution coverage if applicable. If work is being done near a railroad track, the 50' railroad right of way exclusion must be deleted.

Limit of Liability $1,000,000 each accident

GC.29.8 Umbrella Liability Policy

This insurance shall protect the Contractor and the Additional Insureds against all claims in excess of the limits provided under the employer's liability, automobile liability, and general liability policies. The liability limits of the umbrella liability policy shall be not less than $5,000,000 per occurrence. This policy shall be an "occurrence" type policy. However, Purchaser reserves the right to require higher limits with respect to each project.

GC.29.9 Pollution Liability – If Applicable

Limits of at least: $1,000,000 per occurrence; $1,000,000 aggregate

If Contractor or its Sub-subcontractor's work includes but not limited to remediating, handling, processing or disposing of hazardous material including but not limited to asbestos containing materials, silica, lead, PCBs, contaminated soil, etc, coverage shall be provided for bodily injury, property damage and clean-up costs resulting for pollution conditions.

GC.29.10 Riggers Liability – Not Applicable

GC.29.11 Railroad Protective Liability – Not Applicable

GC.29.12 Professional Liability – If Applicable (Applicable for contractors providing or is responsible for providing design/engineering/surveying services/or consulting services):

Limits of at least: $1,000,000 per occurrence; $1,000,000 aggregate

Policy shall provide for a retroactive date prior to the starting date of services for which this agreement applies. Policy shall not exclude damages for bodily injury, property damage, or pollution liability. Coverage shall remain in force for a minimum of 3 years following substantial completion of construction through either policy renewal or the purchase of an Extended Reporting Provision. Contractor agrees to waive its rights of recovery. Subcontractor's insurer shall endorse the policy to waive subrogation against Owner and their respective agents, officers, directors and employees.

GC.29.13 Transportation Insurance – If Applicable
Contractor shall purchase inland marine coverage at the expense of Contractor on all equipment and materials, where Purchaser has an insurable interest. Insurance shall protect for Contractor and Purchaser from physical loss of equipment while loading, unloading, in transit to jobsite, and until equipment or materials have been installed or received by Purchaser.

GC.29.14 Property Insurance A.K.A. Builder's Risk – Not Applicable

GC.30 Indemnification
To the fullest extent permitted by laws and regulations, the Contractor shall defend, indemnify, and hold harmless the Purchaser, their officers, directors, members, consultants, agents, and employees from and against all claims, damages, losses, and expenses, direct, indirect, or consequential (including but not limited to fees and charges of engineers, architects, attorneys, and other professionals and court and arbitration costs) arising out of or resulting from the negligent, wrongful, or defective performance of the work by the Contractor, any sub-contractor, any person or organization directly or indirectly employed by any of them to perform or furnish any of the work, or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder or arises by or is imposed by law and regulations regardless of the negligence of any such party.

In any and all claims against the Purchaser, or of any of their officers, directors, members, consultants, agents, or employees by any employee of the Contractor, any sub-contractor, any person or organization directly or indirectly employed by any of them to perform or furnish any of the work or anyone for whose acts any of them may be liable, this indemnification obligation shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for the Contractor or any such sub-contractor or other person or organization under workers' or workmen's compensation acts, disability benefit acts, or other employee benefit acts, nor shall this indemnification obligation be limited in any way by any limitation on the amount or type of insurance coverage provided by the Purchaser, the Contractor, or any of their sub-contractors.

GC.31 Release of Liability
Acceptance by the Contractor of the last payment shall be a release to the Purchaser and every officer and agent thereof, from all claims and liability hereunder for anything done or furnished for, or relating to the work, or for any act or neglect of the Purchaser or of any person relating to or affecting the work.

GC.32 Claims for Labor and Materials
The Contractor shall indemnify and save harmless the Purchaser from all claims for labor and materials furnished under this Contract. When requested by the Purchaser, the Contractor shall submit satisfactory evidence that all persons, firms, or corporations who have done work or furnished materials under this Contract, for which the Purchaser may become legally liable, have been fully paid or satisfactorily secured. In case such evidence is not furnished or is not satisfactory, an amount will be retained from money due the Contractor which, in addition to any other sums that may be retained, will be sufficient, in the opinion of the

Purchaser, to liquidate all such claims. Such sum will be retained until the claims as aforesaid are fully settled or satisfactorily secured.

Before final acceptance of the work by the Purchaser, the Contractor shall submit to the Engineer in duplicate a notarized affidavit stating that all subcontractors, vendors, persons, or firms who have furnished labor or materials for the work have been fully paid and that all taxes have been paid. If a performance bond has been executed, a statement from the surety shall also be submitted consenting to the making of the final payment.

GC.33 Final Inspection

When the work has been substantially completed and at a time mutually agreeable to the Purchaser and Contractor, the Purchaser will make a final inspection of the work as to the acceptability and completeness of the work.

GC.34 Payments

Payment will be based on the Contractor's progress payment schedule which he will submit to the Purchaser for approval. The Purchaser will retain five percent (5%) of the total contract amount for all work completed including change orders.

GC.35 Hazardous Materials

As required under Federal Hazardous Communications Standards and certain state and local laws, the Contractor shall provide Material Safety Data Sheets covering all hazardous materials furnished under or otherwise associated with the work under this Contract. The Contractor shall provide the Purchaser with either copies of the applicable Material Safety Data Sheets or copies of a document certifying that no Material Safety Data Sheets are required under any federal, state, or local law, regulation, statute, or ordinance in effect at the jobsite.

Hazardous materials are defined in the applicable statue which may use the terminology "toxic substances" instead of "hazardous materials." The Contractor is responsible for determining if any substance or material furnished, used, applied, or stored under this Contract is within the provisions of any applicable statute.

If the work under this Contract includes onsite construction or erection, the Contractor shall provide written notice of the presence of hazardous materials to local fire, medical, and law enforcement agencies as required with a copy of such notice to the Purchaser.

The Contractor shall provide labeling of hazardous materials and training of employees in the safe usage of such materials as required under any applicable federal, state, or local law, regulation, statute, or ordinance.

GC.36 Liquidated Damages

Time is a material provision of this Agreement. If the Contractor is unable to meet the agreed upon completion dates, the Contractor shall immediately notify the Purchaser and confirm the notice in writing within ten (10) business days of the delaying event. The notice shall contain detailed information of the delay including Contractor's estimate of the duration of

the delay, Contractor's estimate of the delay's impact to Contractor's schedule and Contractor's plan to mitigate the effects of the delay.

Contractor shall be excused for delays in completion of the work only in accordance with GC.18. In the event of any such delay, Contractor shall only be allowed an extension of the date of completion for a period of time reasonably necessary to overcome the effect of the delay. Contractor shall not be entitled to any extra compensation for such delay. Contractor shall promptly notify the Purchaser in writing, with confirmation receipt of notification,

The liquidated damages amount per calendar day specified in the proposal form will be assessed, not as a penalty but as predetermined and agreed liquidated damages. The Purchaser and Contractor specifically agree the per calendar day amount to be assessed as liquidated damages is fair and reasonable and not excessive. The parties further agree that said per calendar day amount accurately reflect the anticipated loss and inconvenience to the public and lost revenue to or use by the Purchaser due to the project not being completed by the end of the project period or the end of the contract completion date.

The Purchaser shall have the right to deduct liquidated damages from any money in its hands, otherwise due, or to become due, to the Contractor; to submit invoice for payment; or to sue for and recover compensation for damages for nonperformance of this Contract within the time stipulated.

The Liquidated Damages for this project will be $1,000.00 per calendar day past the project completion date.

GC.37 Consequential Damages

Except for Supplier's third party obligations arising out of or liability for breach of Articles GC.26 and/or GC.30, Purchaser and Supplier will not be liable to each other for loss of profits, loss of use, loss of contracts, or consequential damages arising out of this Contract. This Section will not relieve Supplier of any obligation under GC.36.

GC.38 Limitation of Liability

With the exception of (a) indemnification stated in Article GC.30 and (b) the insurance coverages and limits set forth in Article GC.29, Supplier's total limit of liability on any claim, whether for breach of Contract, breach of warranty, tort, negligence, strict liability, or any other legal theory, for any loss or damage arising out of or connected to, or resulting from this Contract, shall be limited to the purchase price to be paid by Purchaser.

GC.39 Confidentiality

"Confidential Information" means the confidential or proprietary designs, know-how, processes, trade secrets, and other information owned or controlled by Purchaser, Engineer, or Supplier respectively. Supplier agrees to hold any Confidential Information received in the strictest confidence, shall only use the Confidential Information as necessary to perform the work. Purchaser agrees to hold any Confidential Information received in the strictest confidence and shall only use the confidential information as necessary for engineering, construction, start-up, commissioning, maintenance, or other purposes related to the project.

Each party shall use the same degree of care as is used for its own information of similar importance, but no less than reasonable care.

GC.40 Work Eligibility Status

The Contractor is required and hereby agrees to use a federal immigration verification system to determine the work eligibility status of new employees physically performing services within the State of Nebraska. A federal immigration verification system means the electronic verification of the work authorization program authorized by the Illegal Immigration Reform and Immigrant Responsibility Act of 1996, 8 U.S.C. 1324a, known as the E-Verify Program, or an equivalent federal program designated by the United States Department of Homeland Security or other federal agency authorized to verify the work eligibility status of a newly hired employee.

GC.41 Fair Labor Standards

The Contractor agrees to comply with all current applicable State, Federal, and City fair labor standards in the execution of the contract. Pursuant to the Title VI Non-Discrimination Program of the City of Hastings, Contractor agrees to comply with the provisions set forth by CITY's Title VI Non-discrimination Program, if applicable. A copy of said provisions are as follows:

During the performance of this contract, the contractor, for itself, its assignees and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

(1) Compliance with Regulations: The contractor shall comply with the Regulation relative to nondiscrimination in Federally-assisted programs of the Department of Transportation (hereinafter, "DOT") Title 49, Code of Federal Regulations, Part 21, and the Federal Highway Administration (hereinafter "FHWA") Title 23, Code of Federal Regulations, Part 200 as they may be amended from time to time, (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.

(2) Nondiscrimination: The Contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, or national origin, sex, age, and disability/handicap in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor shall not participate either directly or indirectly in the discrimination prohibited by 49 CFR, section 21.5 of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of the Regulations.

(3) Solicitations for Subcontractors, Including Procurements of Materials and Equipment: In all solicitations either by competitive bidding or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the contractor of the contractor's obligations under this contract and the Regulations relative to nondiscrimination on the grounds of race, color, or national origin, sex, age, and disability/handicap.

(4) Information and Reports: The contractor shall provide all information and reports required by the Regulations or directives issued pursuant thereto, and shall permit

access to its books, records, accounts, other sources of information, and its facilities as may be determined by the (Recipient) or the FHWA to be pertinent to ascertain compliance with such Regulations, orders and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish this information the contractor shall so certify to the (Recipient), or the FHWA as appropriate, and shall set forth what efforts it has made to obtain the information.

(5) Sanctions for Noncompliance: In the event of the contractor's noncompliance with the nondiscrimination provisions of this contract, the (Recipient) shall impose such contract sanctions as it or the FHWA may determine to be appropriate, including, but not limited to:

(a.) Withholding of payments to the contractor under the contract until the contractor complies, and/or

(b.) Cancellation, termination or suspension of the contract, in whole or in part.

(6) Incorporation of Provisions: The contractor shall include the provisions of paragraphs (1) through (6) in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto.

The contractor shall take such action with respect to any subcontract or procurement as the (Recipient) or the FHWA may direct as a means of enforcing such provisions including sanctions for non-compliance: Provided, however, that, in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the contractor may request the (Recipient) to enter into such litigation to protect the interests of the (Recipient), and, in addition, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

SECTION 2 – GENERAL DESCRIPTION AND SCOPE OF WORK

2.1 General:

The City of Hastings (Owner) is accepting bids for the design, supply, installation, and commissioning of a new Generator Excitation System for the Don Henry Power Center Gas Turbine in Hastings, Nebraska. The bidder is strongly encouraged to visit with Hastings prior to submitting a bid. The Bidder shall inform themselves of all conditions and factors which would affect the execution of the work. No claims for financial compensation or time extension, based on the lack of such prior information (or its effect on the cost of the work) will be permitted by the Owner. Please contact Brandon Miller, Mechanical Engineer, at 402-462-3653 if you have any questions about this project or would like to set up a visit.

2.2 Description of System and Scope of Work:

Don Henry Power Center is a General Electric PG5341 gas turbine generator unit. The current excitation system includes a cabinet located in the main control room at Don Henry.

The contractor shall perform the following scope of work:

1. Hardware & Software Design
    a. Supplier to provide all engineering necessary to design the new excitation hardware and software.
    b. Coordinate with Owner to incorporate changes needed in new DCS control system for new excitation system

2. Equipment Removal and Installation
    a. Remove excitation system components as required to support the upgrade.
    b. Install new excitation system hardware (AVR and associated components) per approved drawings and manufacturer requirements.
    c. Remove and Replace the existing PPT transformer, including:
        i. Mechanical removal of the existing PPT.
        ii. Installation and mounting of the new PPT transformer in existing enclosure
        iii. Primary and secondary wiring terminations per design documents.
    d. Install associated auxiliary components including sensing devices, power supplies, and control hardware.

3. Wiring and Integration
    a. Route, dress, and terminate new control and power wiring associated with the excitation system and PPT transformer.
    b. Interface new excitation equipment with:
        i. Generator excitation circuits
        ii. Existing protective relays
        iii. Plant control and monitoring systems (existing control system to be replaced with new Emerson Ovation DCS during Fall 2027 outage)
    c. Perform point-to-point wire verification and continuity checks.

4. Assistance with Configuration and Testing

a. Provide on-site support to Hastings Utilities and/or designated engineers during:
    i. Initial energization of the excitation system
    ii. Configuration and setup of the AVR
    iii. Functional Testing of excitation controls and protective features
b. Support on-line tuning and verification of:
    i. Generator voltage regulation
    ii. Stability and response
    iii. Proper operation of the PPT transformer and sensing circuits

5. Provide the following or equivalent hardware:
    a. New DECS-450 Static Exciter to replace the existing DECS-300 SCT/PPT exciter
    b. New Power Potential Transformer (PPT)
    c. New IDP-801 Interactive Display Panel
    d. All other hardware and equipment needed for a complete excitation upgrade
    e. The following equipment will be reused:
        i. Generator Protection Relay
        ii. Excitation Control/ Rectifying Enclosure
            1. Existing cabinet located in the Don Henry control room is approximately 39”W x 90” H x 36” D
            2. Supplier has option of removing the existing enclosure and providing a new enclosure.
                a. Supplier shall specify in their proposal whether they intend to reuse or replace existing enclosure.

6. Other requirements:
    a. New hardware and excitation controls shall interface with New Emerson Ovation DCS that will be installed during Fall 2027 outage.

2.3 <u>Work by Others:</u>

Other work on the Don Henry Gas Turbine will be performed during the same outage period. The following work will be performed by others:

- Design, supply, manufacture, and commissioning of a new Emerson Ovation DCS control system.
- Installation of new MCC and other electrical equipment.
- All balance of plant electrical design and installation.

2.4 <u>Miscellaneous Materials and Services Scope:</u>

Miscellaneous Materials and Services Scope			
Item	Description	Contractor (Applies to)	Owner (Applies to)
1.	Receipt, inspection, unloading and storage of materials provided by Equipment Supplier		X
2.	Receipt, inspection, unloading and storage of materials supplied by Contractor		X
3.	Supply and installation of anchor bolts for contractor installed equipment	X	

4.	All hardware, welding supplies, and miscellaneous materials not provided by owner that is necessary for the completion of the work	X	
5.	Removal and disposal of all demolished equipment, wiring, and materials	X	
6.	Supply, installation, and removal of all temporary erection bracing, rigging, attachments and supports	X	
7.	All tooling and equipment required to perform the specified work	X	
8.	Tests and inspections as required by specification	X	
9.	Station services including air, water, and electrical power		X
10.	Sanitary services in the form of portable toilets	X	
11.	Supply of common trash dumpster		X
12.	Clean up of work area	X	

2.5 <u>Other Requirements:</u>

The contractor shall comply with the following:

- All of Contractor's employees and any Sub-Contractor's employees shall take a mandatory safety orientation provided by City of Hastings before starting work on the project. The safety orientation is required once a year and is good from Jan 1 through Dec 31 each year.
- Contractor shall comply with site LOTO policy. LOTO will be performed by City of Hastings prior to starting any work on the system.
- Contractor shall follow all relevant OSHA regulations including fall protection and trenching and shoring.
- Weekly progress meetings between Contractor's project superintendent and Project Engineer.

2.6 <u>Project Schedule:</u>

This shall include the completion of various activities in accordance with the milestone time periods and dates listed below.

Activity	Schedule
Bid Opening	Wednesday, December 16, 2026 @ 4:00 PM
Anticipated Contract Award Date	Monday, January 11, 2027
Material Delivery Date	By October 26, 2027
Start of Outage	Friday, October 26, 2027
End of Outage	Friday, December 20, 2027
Pre-Outage Construction	As available prior to October 26, 2027
Commissioning and System Checkout	Monday, December 13, 2027 through December 20, 2027

2.7 Project Deliverables:

The supplier shall provide the following drawings and documentation during the design phase of the project:

- Elementary System Diagram Drawing
- Wiring Schematics
- System Connection Drawings
- Demolition Drawings
- Control System Interface Drawings
- Bill of Material (BOM)
- Instruction Manuals
- Startup Report
- Software Settings
- Functional Description for programming of Basler equipment to Control System

Drawings to be provided in AutoCAD format. Supplier responsible for providing As-Built drawings after installation of system.

2.8 Attachements:

The following drawings are attached. Other drawings can be provided upon request.

- ICS Drawings:
    - Generator Protection System – Dwg No. 99174-GTB-103

APPENDIX A

DRAWINGS

FOR

CONTRACT NO. HU 2026-103

DON HENRY POWER CENTER

GENERATOR EXCITATION REPLACEMENT

CITY OF HASTINGS

HASTINGS, NEBRASKA

HASTINGS UTILITIES

HASTINGS, NEBRASKA

GE FRAME 5 GAS TURBINE

GENERATOR PROTECTION SYSTEM

Proprietary Information of:

ICS INNOVATIVE CONTROL SYSTEMS, INC.

REV	DESCRIPTION:	BY	APPROVED	DATE
REV 2	MODIFICATIONS:	CS		02/19/01
REV 1	AS BUILTS:	CF		04/17/00

TITLE SHEET
GENERATOR PROTECTION SYSTEM
99174-GTB-103

CUSTOMER: HASTINGS UTILITIES

SITE: DON HENRY POWER CENTER

APPROVED BY:		DRAWING NO. 99174-GTB-103-000-2	SCALE: NTS
DRAWN BY: C. FISHER	01/17/00		SHEET NO. 000 1 OF 39

99174-GTB-103 GENERATOR PROTECTION SYSTEM

SHEET NUMBER	E2 REF. DWG	DESCRIPTION
000		TITLE SHEET
001		SHEET INDEX
002		GENERATOR PANEL LAYOUT
003		GENERATOR PANEL LAYOUT (REAR)
004		GENERATOR PANEL LAYOUT (LEFT)
005		GENERATOR PANEL LAYOUT (RIGHT)
006		GENERATOR PANEL POWER DISTRIBUTION
010		SCADA METER INTERNAL WIRING
EA04	9944T1562	DEVICE CONNECTIONS & ARRANGEMENTS
E001	9944T1562	GENERATOR POWER 3 LINE
E002	9944T1562	GENERATOR POWER 3 LINE
E002A	9944T1562	GENERATOR POWER 3 LINE
E003	9944T1562	STATION SERVICE POWER 3 LINE
E004	9944T1562	MANUAL/AUTO SYNCHRONIZING
E005	9944T1562	GENERATOR FIELD/EXCITATION
E006A	9944T1562	DECS-300 POWER
E006B	9944T1562	DECS-300 RECTIFIER CHASSIS
E006C	9944T1562	DECS-300 FIRING CIRCUIT
E006D	9944T1562	DECS-300 CONTROL OUTPUTS
E006E	9944T1562	DECS-300 CONTROL INPUTS
E006F	9944T1562	DECS-300/125VDC RELAY CONTROL
E007	9944T1562	125VDC EXCITATION CONTROL
E009A	9944T1562	125VDC AUXILIARY CONTROL
E009B	9944T1562	125VDC AUXILIARY CONRTOL
E010	9944T1562	GENERATOR FIELD GROUND DETECTION
E011	9944T1562	"CLOSE" CIRCUIT
E012	9944T1562	"TRIP" CIRCUIT
E013	9944T1562	GENERATOR LOCKOUT RELAY
E014	9944T1562	PLC ALARM INPUTS
E015	9944T1562	CONTROL STATUS INPUT TO PLC
E016A	9944T1562	CONTROL OUTPUTS FROM PLC
E016B	9944T1562	CONTROL OUTPUTS FROM PLC
E016C	9944T1562	CONTROL OUTPUTS FROM PLC
E017	9944T1562	SEL-300 AND M-3420 CONNECTION DIAGRAM
E018	9944T1562	TERMINAL BLOCK CONNECTION DIAGRAM
E019	9944T1562	TEST SWITCH CONNECTION DIAGRAM
E020	9944T1562	GUAGE, SWITCH, & AUX. RELAY DIAGRAM
E021	9944T1562	DECS-300 CONNECTION DIAGRAM
EA06	9944T1562	SYSTEM ONE-LINE

GENERATOR AUXILLARY COMPARTMENT

GENERATOR COMPARTMENT DEVICE

GENERATOR CONTROL PANEL DEVICE

ANY DEVICE LOCATED IN THE GENERATOR PANEL IS NOT IDENTIFIED WITH THE ⊛ SYMBOL THRU OUT THE PRINTS.

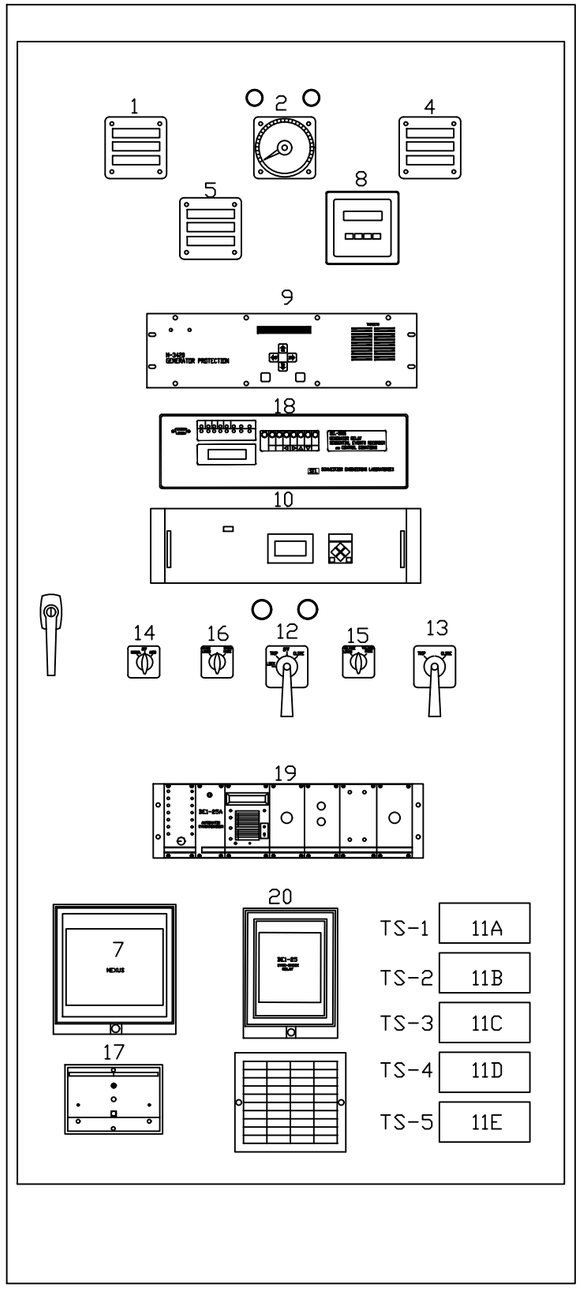
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REV 2	MODIFICATIONS:	CS		02/19/01
REV 1	AS BUILTS:	CF		04/17/00

INDEX SHEET
GENERATOR PROTECTION SYSTEM
99174-GTB-103

CUSTOMER: HASTINGS UTILITIES
SITE: DON HENRY POWER CENTER
APPROVED BY:
DRAWN BY: C. FISHER 01/17/00
DRAWING NO. 99174-GTB-103-001-2
SCALE: NTS
SHEET NO. 001 2 OF 39

1- BUS VOLTAGE METER, GENRATOR VOLTAGE METER
2- SYNCHRONIZING SCOPE & LIGHTS
4- GENERATOR FREQUENCY METER
5- MW METER, MVAR METER
7- SCIENTIFIC COLUMBUS WATT-HR METER
8- POWER MONITORING INTERFACE
9- GENERATOR PROTECTION RELAY #1 3420
10- DECS-300 EXCITATION CONTROL
11A-11E- GENERATOR TEST SWITCHES
12- GENERATOR BREAKER CONTROL SWITCH
13- GENERATOR PROTECTION LOCKOUT
14- MAN/AUTO SYNCH SELECTOR SWITCH
15- GENERATOR VOLTAGE RAISE/LOWER SWITCH
16- TURBINE SPEED RAISE/LOWER SWITCH
17- MACHINE FIELD GROUND PROTECTION RELAY
18- SEL-300G GENERATOR RELAY
19- AUTO SYNCHRONIZER
20- SYNCH CHECK RELAY



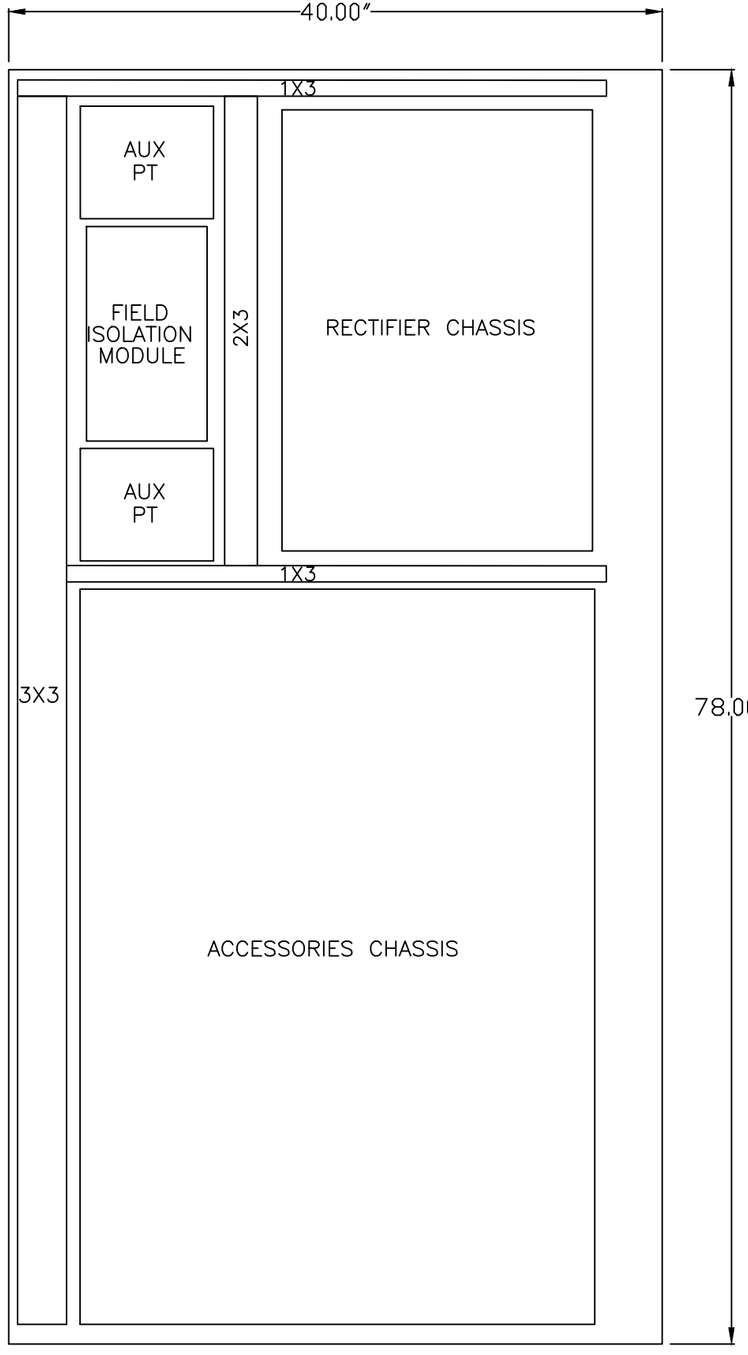
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REV 1	AS BUILTS:	CF		09/10/01

GENERATOR PANEL LAYOUT
GENERATOR PROTECTION SYSTEM
99174-GTB-103

CUSTOMER: HASTINGS UTILITIES
SITE: DON HENRY POWER CENTER
APPROVED BY:
DRAWN BY: C. FISHER 11/29/99
DRAWING NO. 99174-103-GTB-002-2
SCALE: NTS
SHEET NO. 002 3 OF 39



Proprietary Information of:

ICS INNOVATIVE CONTROL SYSTEMS, INC.

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GENERATOR PANLE (REAR)

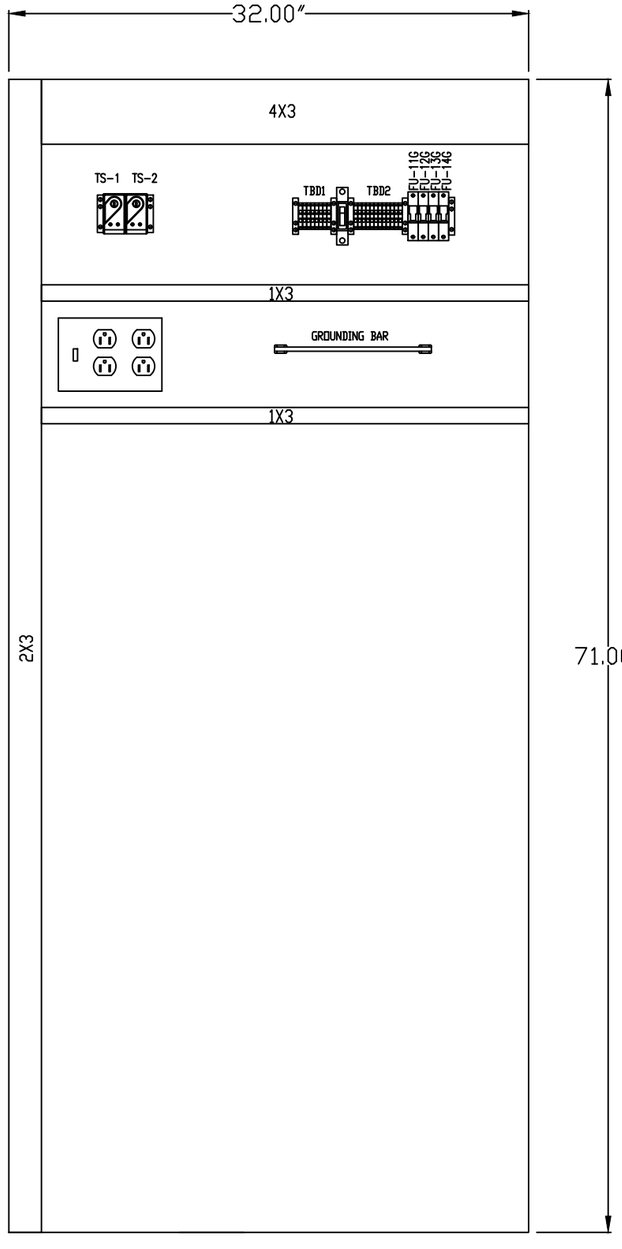
GENERATOR PROTECTION SYSTEM

99174-GTB-103

CUSTOMER: HASTINGS UTILITIES

SITE: DON HENRY POWER CENTER

APPROVED BY:		DRAWING NO. 99174-103-GTB-003-1	SCALE: NTS
DRAWN BY: C. FISHER	11/29/99		SHEET NO. 003 4 OF 39



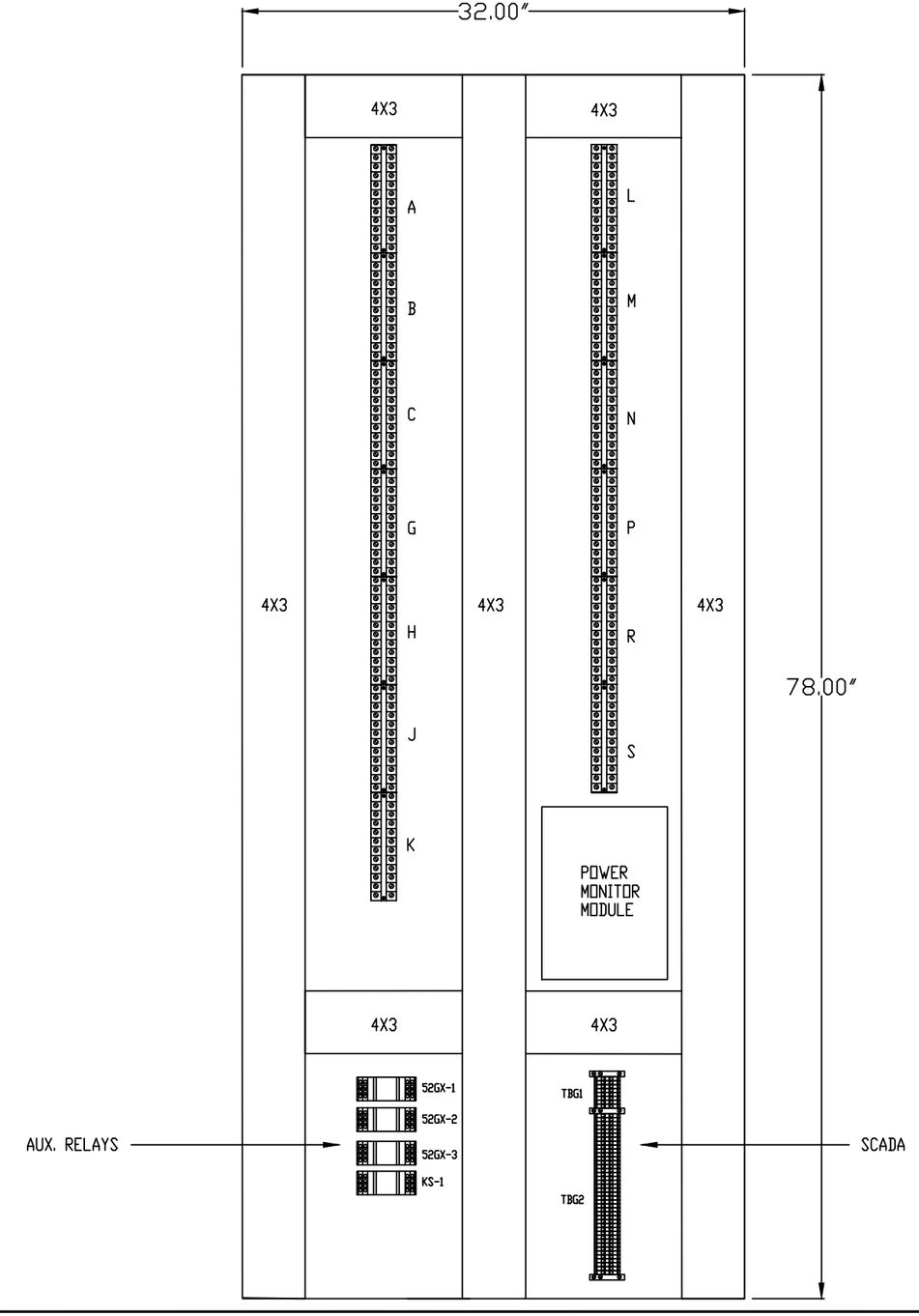
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REV 1	AS BUILTS:	CF		04/17/00

GENERATOR PANEL (LEFT)
GENERATOR PROTECTION SYSTEM
99174-GTB-103

CUSTOMER: HASTINGS UTILITIES
SITE: DON HENRY POWER CENTER
APPROVED BY:
DRAWN BY: C. FISHER 11/29/99
DRAWING NO. 99174-103-GTB-004-1
SCALE: NTS
SHEET NO. 004 5 OF 39



Proprietary Information of:

ICS INNOVATIVE CONTROL SYSTEMS, INC.

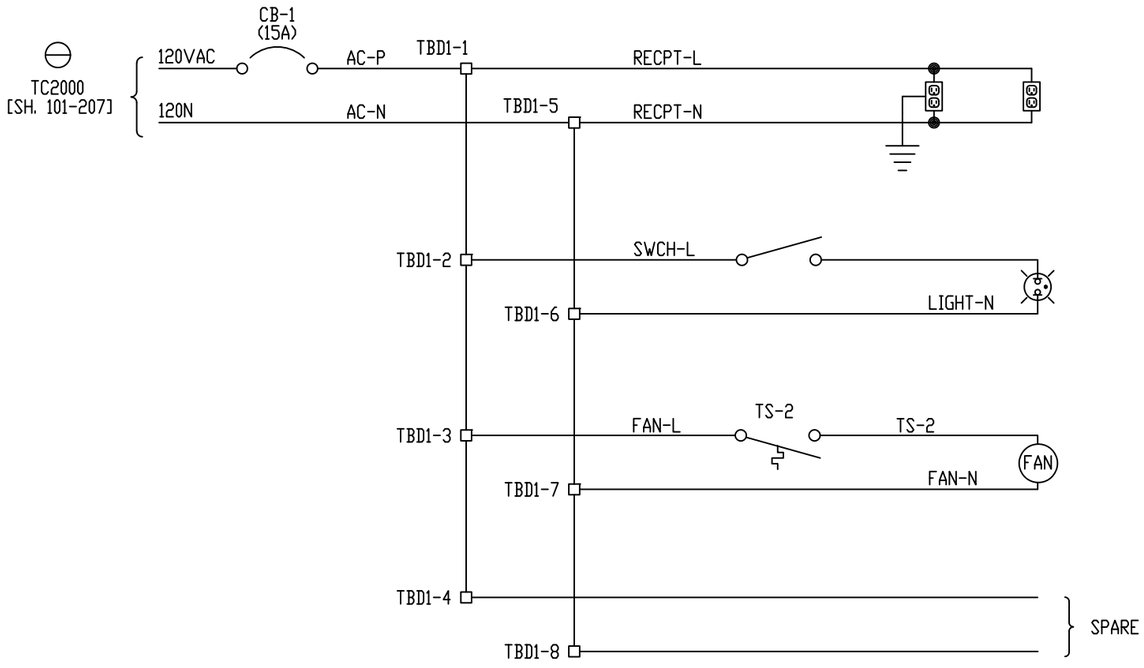
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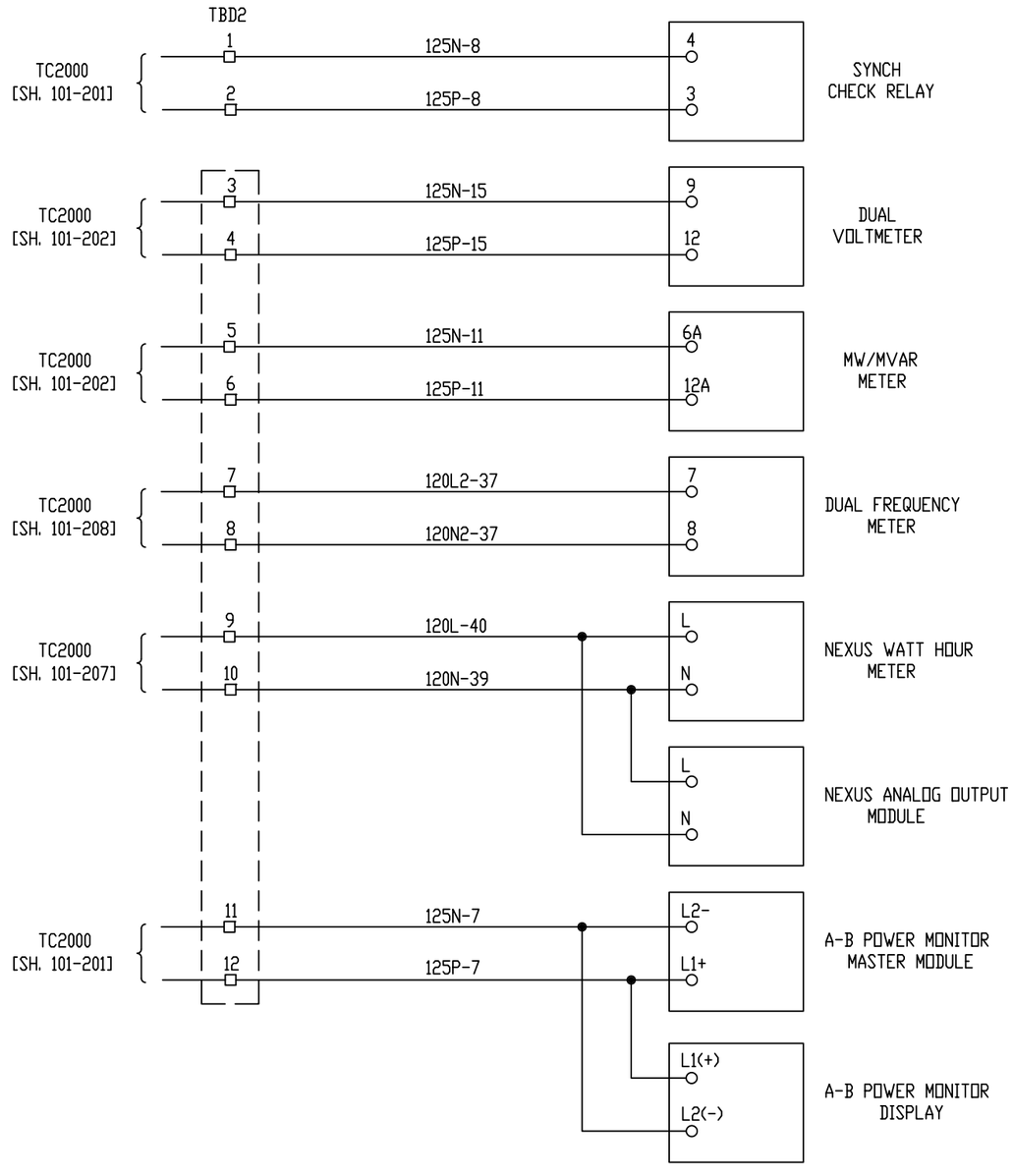
GENERATOR PANEL (RIGHT)
TURBINE GENERATOR CONTROLLER
99174-GTB-103

CUSTOMER: HASTINGS UTILITIES

SITE: DON HENRY POWER CENTER

APPROVED BY:		DRAWING NO. 99174-103-GTB-005-2	SCALE: NTS
DRAWN BY: C. FISHER	11/29/99		SHEET NO. 005 6 OF 39





Proprietary Information of:
ICS INNOVATIVE CONTROL SYSTEMS, INC.

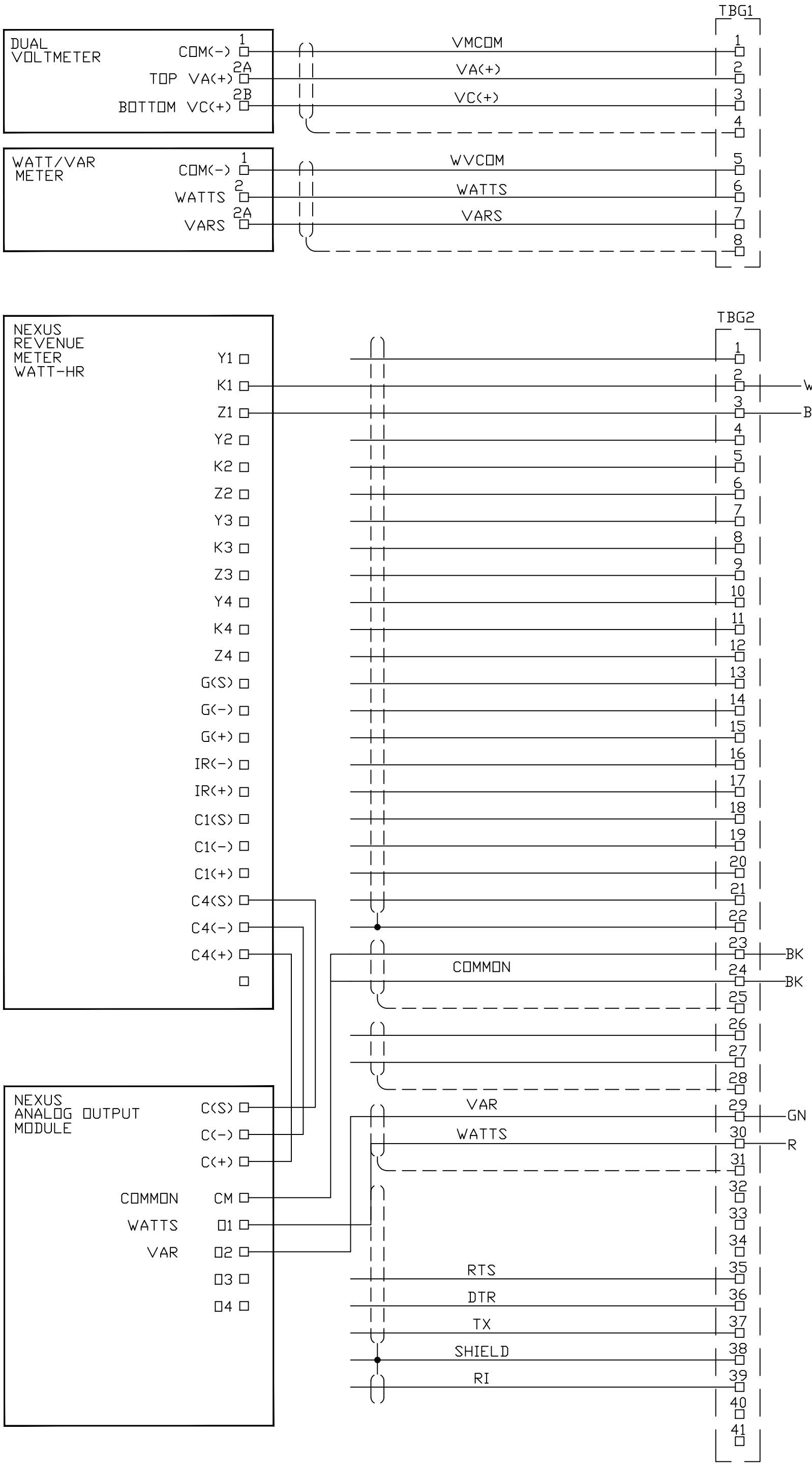
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REV 2	MODIFICATIONS:	CS		09/10/01
REV 1	AS BUILTS:	CF		04/17/00

GENERATOR PANEL POWER DISTRIBUTION
GENERATOR PROTECTION SYSTEM
99174-GTB-103

CUSTOMER: HASTINGS UTILITIES

SITE: DON HENRY POWER CENTER

APPROVED BY:		DRAWING NO.	SCALE: NTS
DRAWN BY: C. FISHER	01/17/00	99174-GTB-103-006-3	SHEET NO. 006 7 OF 39



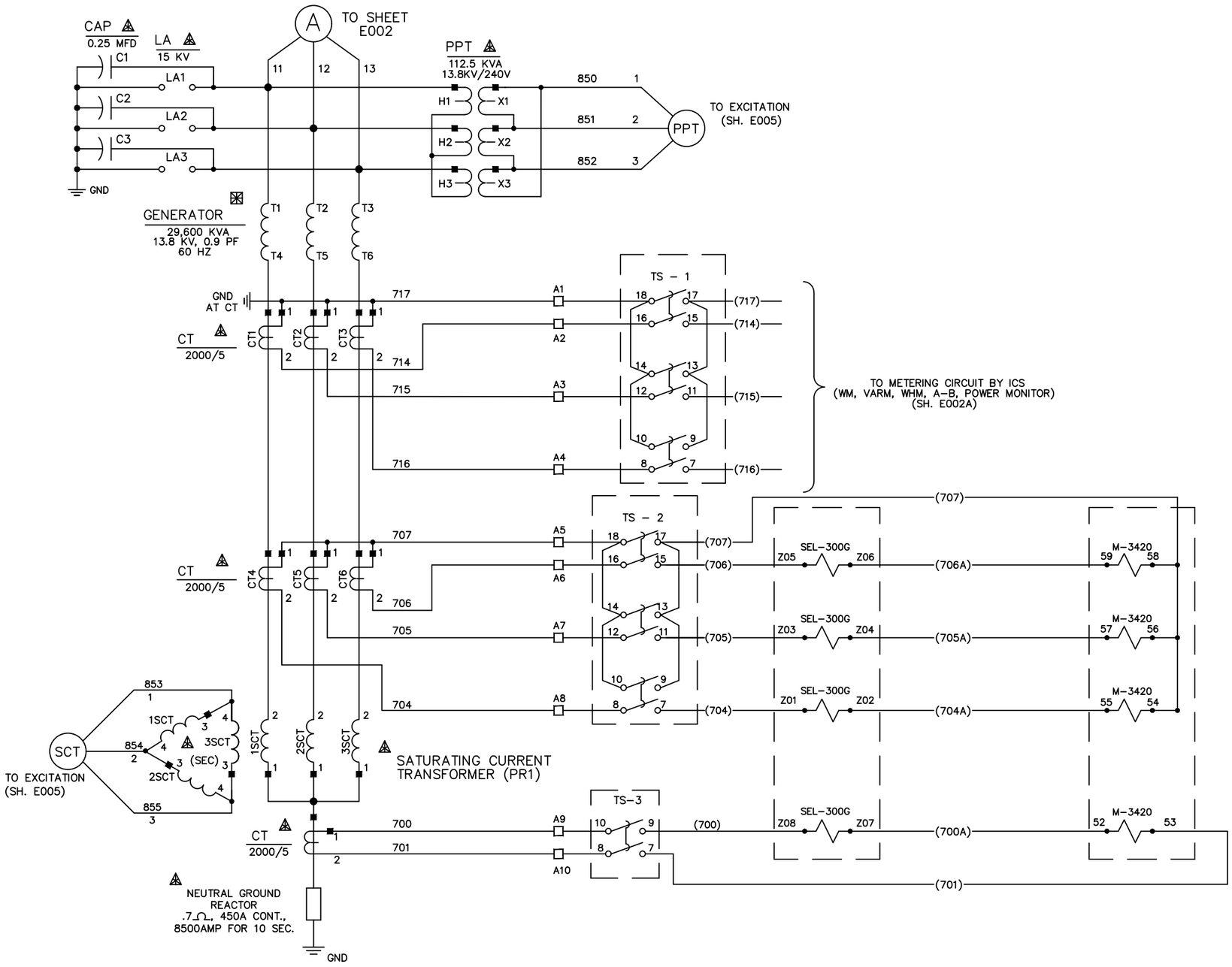
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ICS INNOVATIVE CONTROL SYSTEMS, INC.

REV	DESCRIPTION:	BY	APPROVED	DATE
REV 1	AS BUILTS:	CF		04/17/00

SCADA METER INTERNAL WIRING
GENERATOR PROTECTION SYSTEM
99174-GTB-103

CUSTOMER: HASTINGS UTILITIES
SITE: DON HENRY POWER CENTER
APPROVED BY:
DRAWN BY: D. LANGLEY 01/17/00
DRAWING NO. 99174-GTB-103-010-1
SCALE: NTS
SHEET NO. 010 8 OF 39



Proprietary Information of:

ICS INNOVATIVE CONTROL SYSTEMS, INC.

REV	DESCRIPTION:	BY	APPROVED	DATE
REV 2	MODIFICATIONS:	CS		02/19/01
REV 1	AS BUILTS:	CF		04/17/00

GENERATOR POWER 3 LINE
GENERATOR PROTECTION SYSTEM
99174–GTB–103

CUSTOMER: HASTINGS UTILITIES

SITE: DON HENRY POWER CENTER

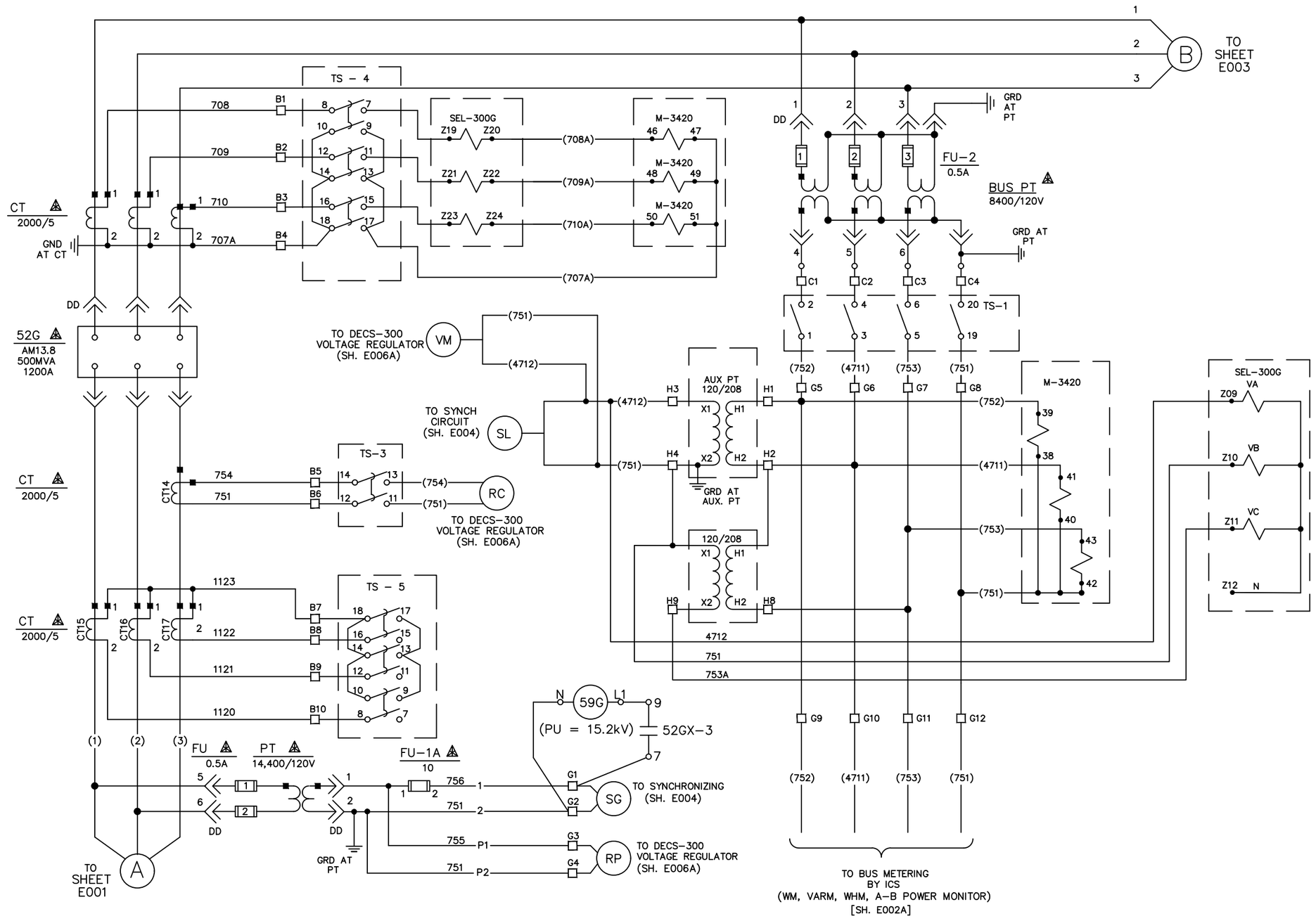
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DRAWN BY: C. FISHER 01/17/00

DRAWING NO. 9944T1562

SCALE: NTS

SHEET NO. E001
10 OF 39

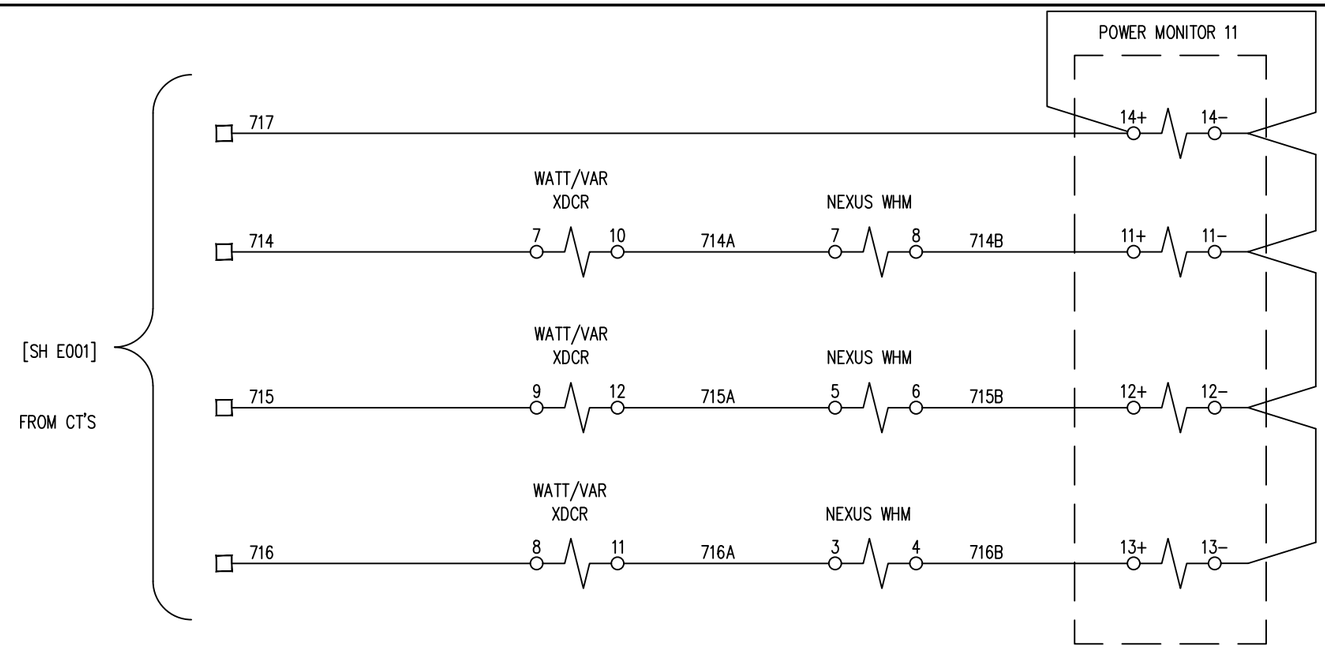


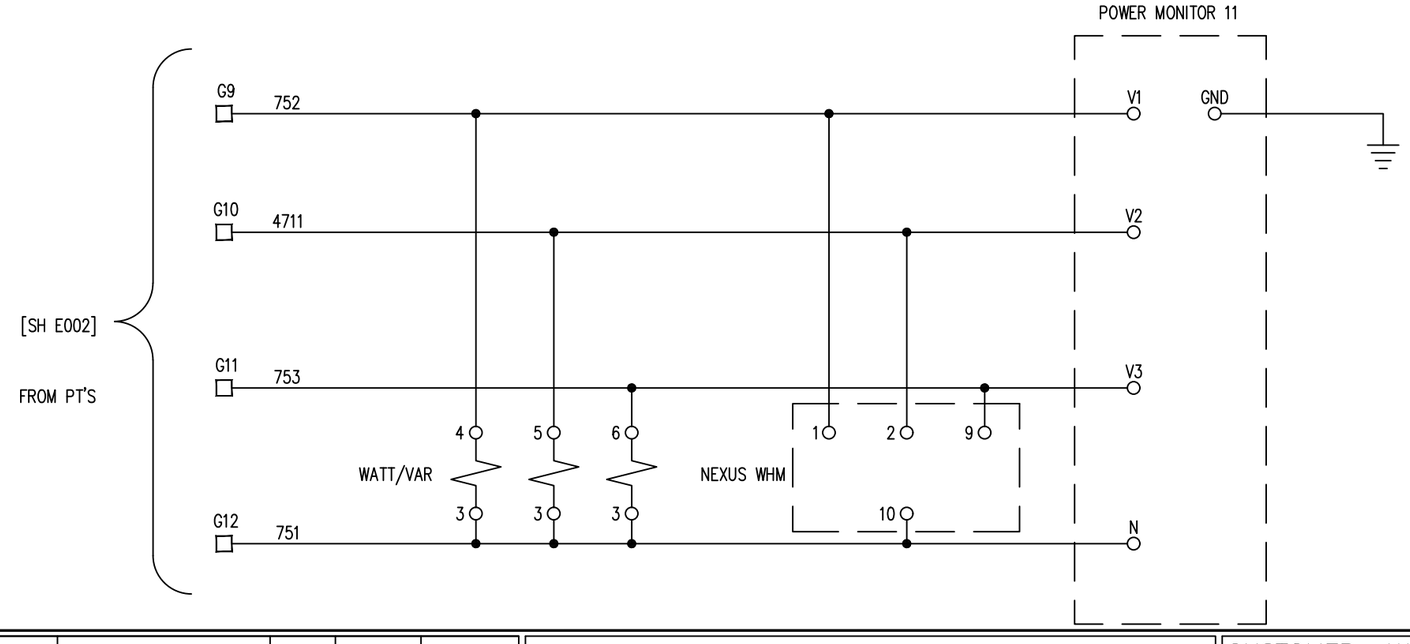
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REV 1	AS BUILTS:	CF		04/17/00
REV	DESCRIPTION:	BY	APPROVED	DATE

Proprietary Information of:
ICS INNOVATIVE CONTROL SYSTEMS, INC.

GENERATOR POWER 3 LINE
GENERATOR PROTECTION SYSTEM
99174–GTB–103

CUSTOMER: HASTINGS UTILITIES
SITE: DON HENRY POWER CENTER
APPROVED BY:
DRAWN BY: C. FISHER 01/17/00
DRAWING NO. 9944T1562
SCALE: NTS
SHEET NO. E002 11 OF 39





Proprietary Information of:

ICS INNOVATIVE CONTROL SYSTEMS, INC.

REV	DESCRIPTION:	BY	APPROVED	DATE
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REV 2	MODIFICATIONS:	CS		02/19/01
REV 1	AS BUILTS:	CF		04/17/00

GENERATOR POWER 3 LINE
GENERATOR PROTECTION SYSTEM
99174-GTB-103

CUSTOMER: HASTINGS UTILITIES

SITE: DON HENRY POWER CENTER

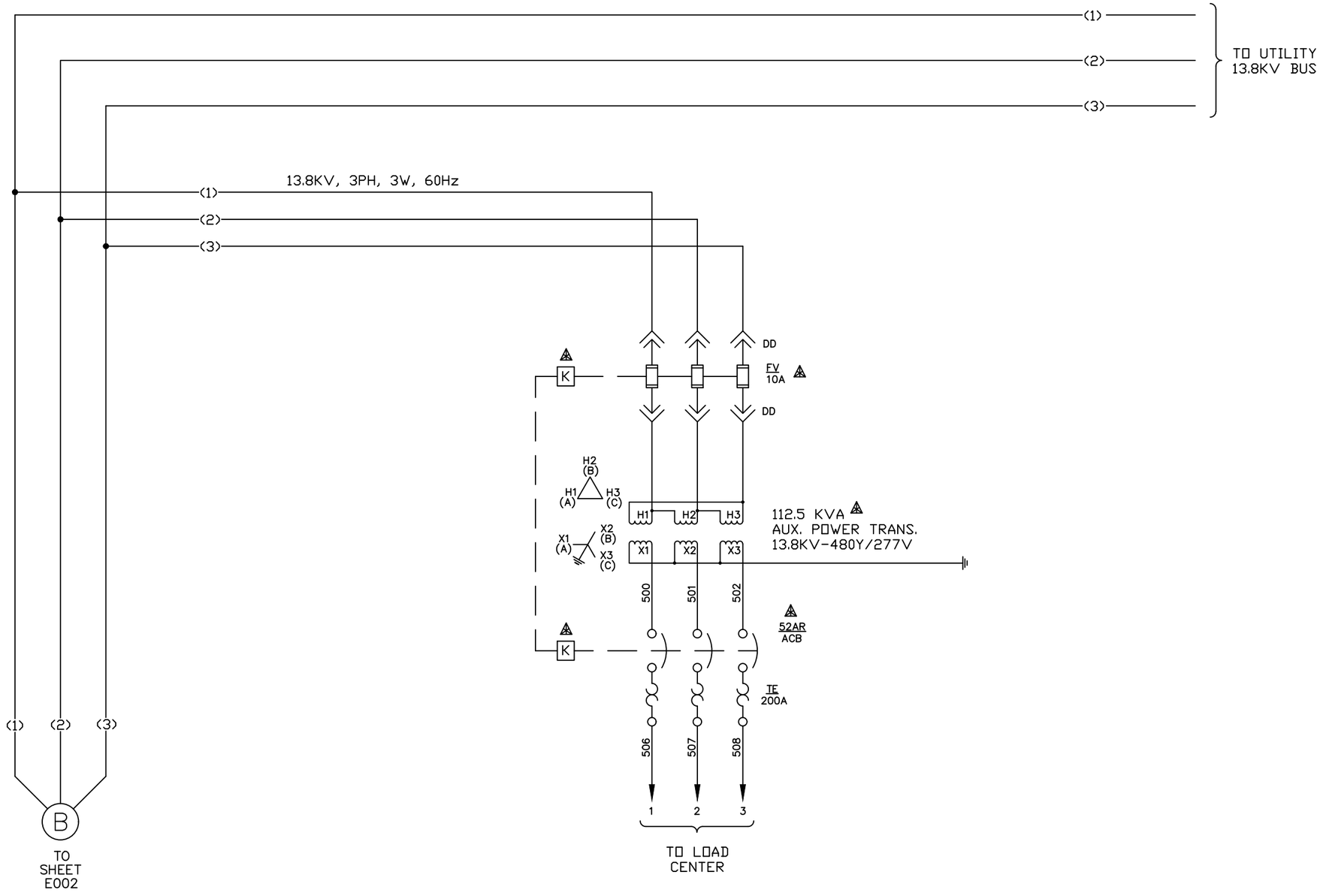
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DRAWN BY: C. FISHER 01/17/00

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SCALE: NTS

SHEET NO. E002A 12 OF 39



Proprietary Information of:

ICS INNOVATIVE CONTROL SYSTEMS, INC.

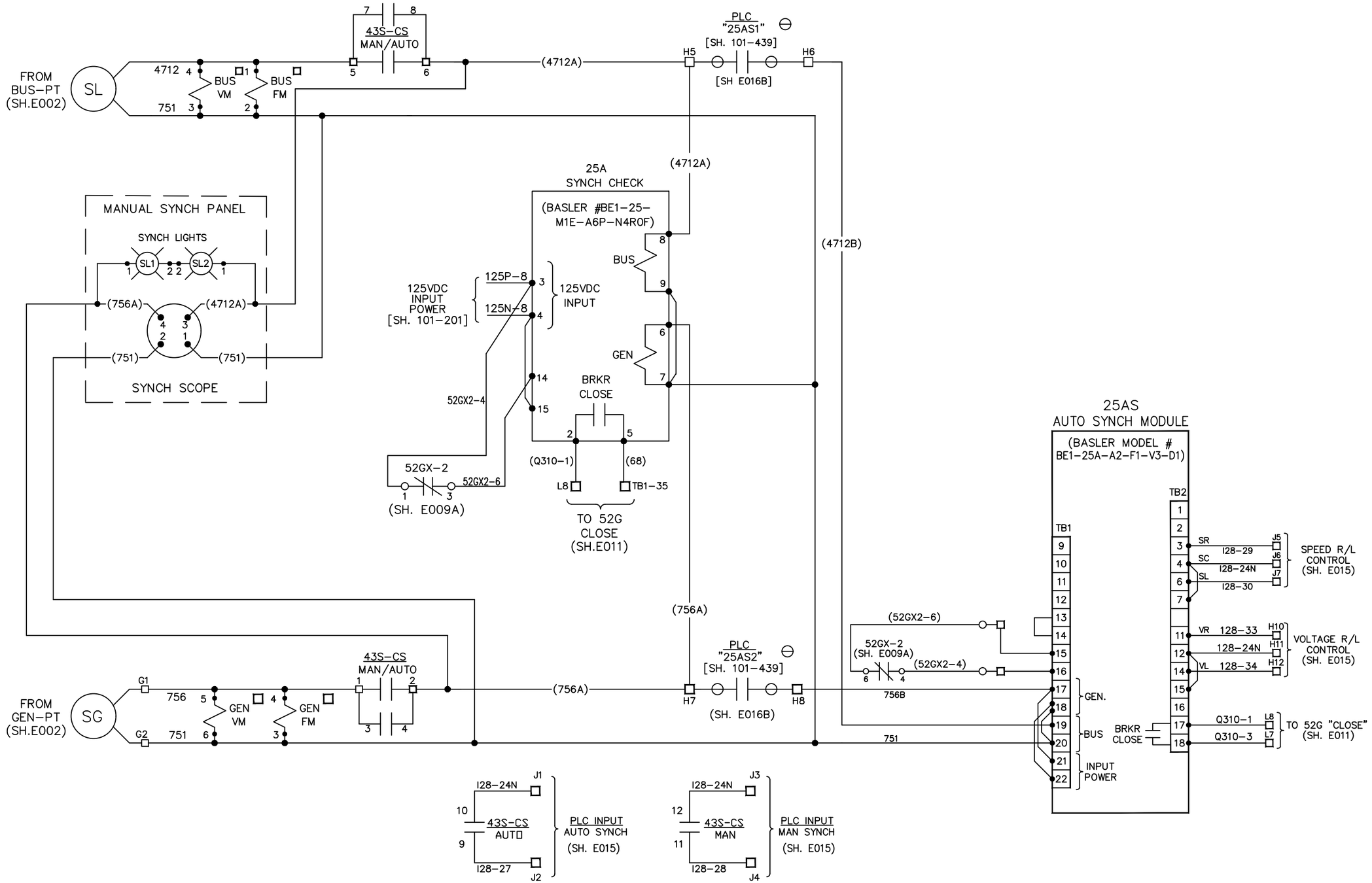
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REV 1	AS BUILTS:	CF		04/17/00

STATION SERVICE POWER 3 LINE
GENERATOR PROTECTION SYSTEM
99174-GTB-103

CUSTOMER: HASTINGS UTILITIES

SITE: DON HENRY POWER CENTER

APPROVED BY:		DRAWING NO. 9944T1562	SCALE: NTS
DRAWN BY: C. FISHER	01/17/00		SHEET NO. E003 13 OF 39



Proprietary Information of:

ICS INNOVATIVE CONTROL SYSTEMS, INC.

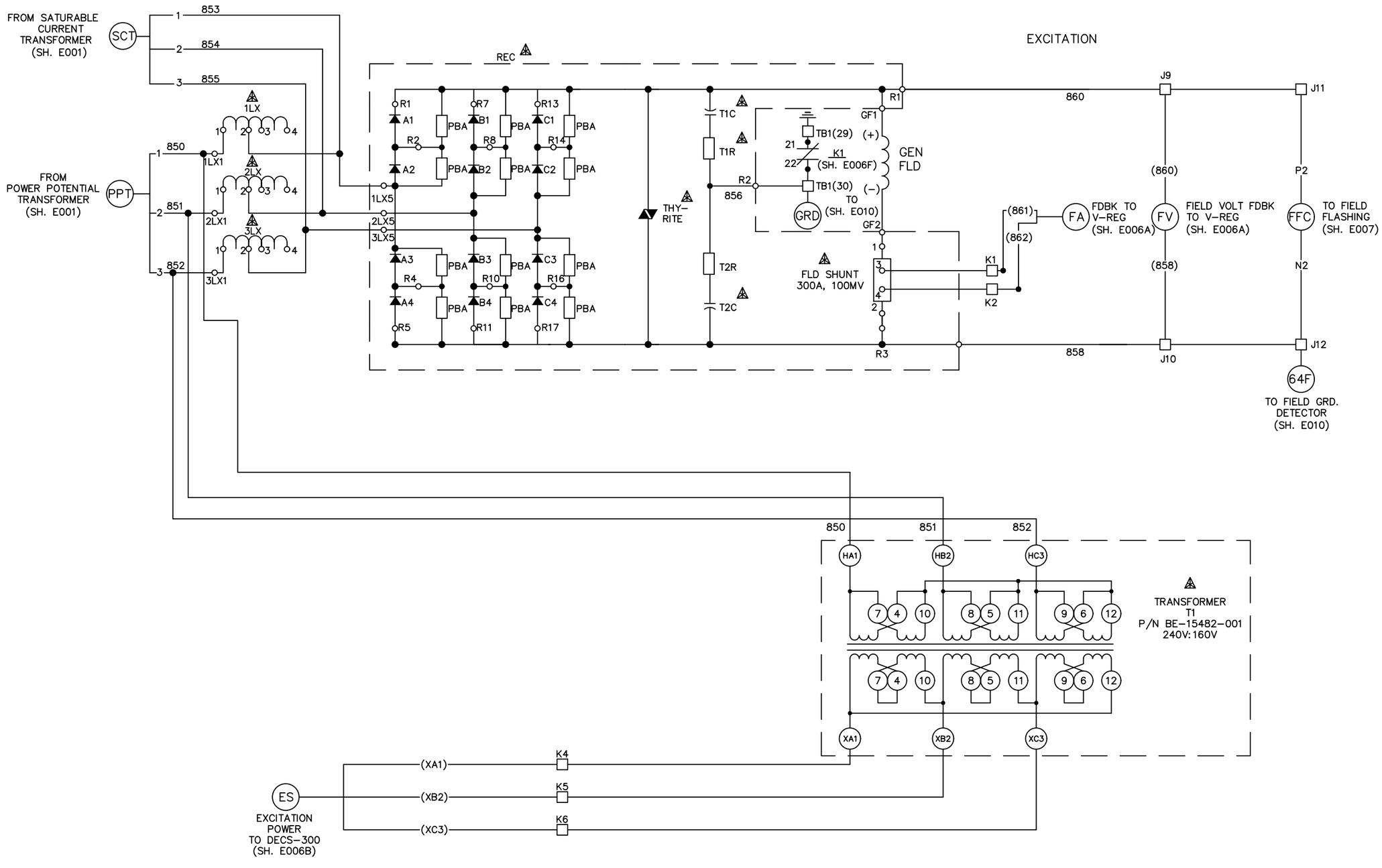
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REV 1	AS BUILTS:	CF		04/17/00
REV	DESCRIPTION:	BY	APPROVED	DATE

MANUAL/AUTO SYNCHRONIZING GENERATOR PROTECTION SYSTEM 99174-GTB-103

CUSTOMER: HASTINGS UTILITIES

SITE: DON HENRY POWER CENTER

APPROVED BY:		DRAWING NO. 9944T1562	SCALE: NTS
DRAWN BY: C. FISHER	01/17/00		SHEET NO. E004 14 OF 39



Proprietary Information of:

ICS INNOVATIVE CONTROL SYSTEMS, INC.

REV	DESCRIPTION:	BY	APPROVED	DATE
REV 1	AS BUILTS:	CF		04/17/00

GENERATOR FIELD/EXCITATION
GENERATOR PROTECTION SYSTEM
99174–GTB–103

CUSTOMER: HASTINGS UTILITIES

SITE: DON HENRY POWER CENTER

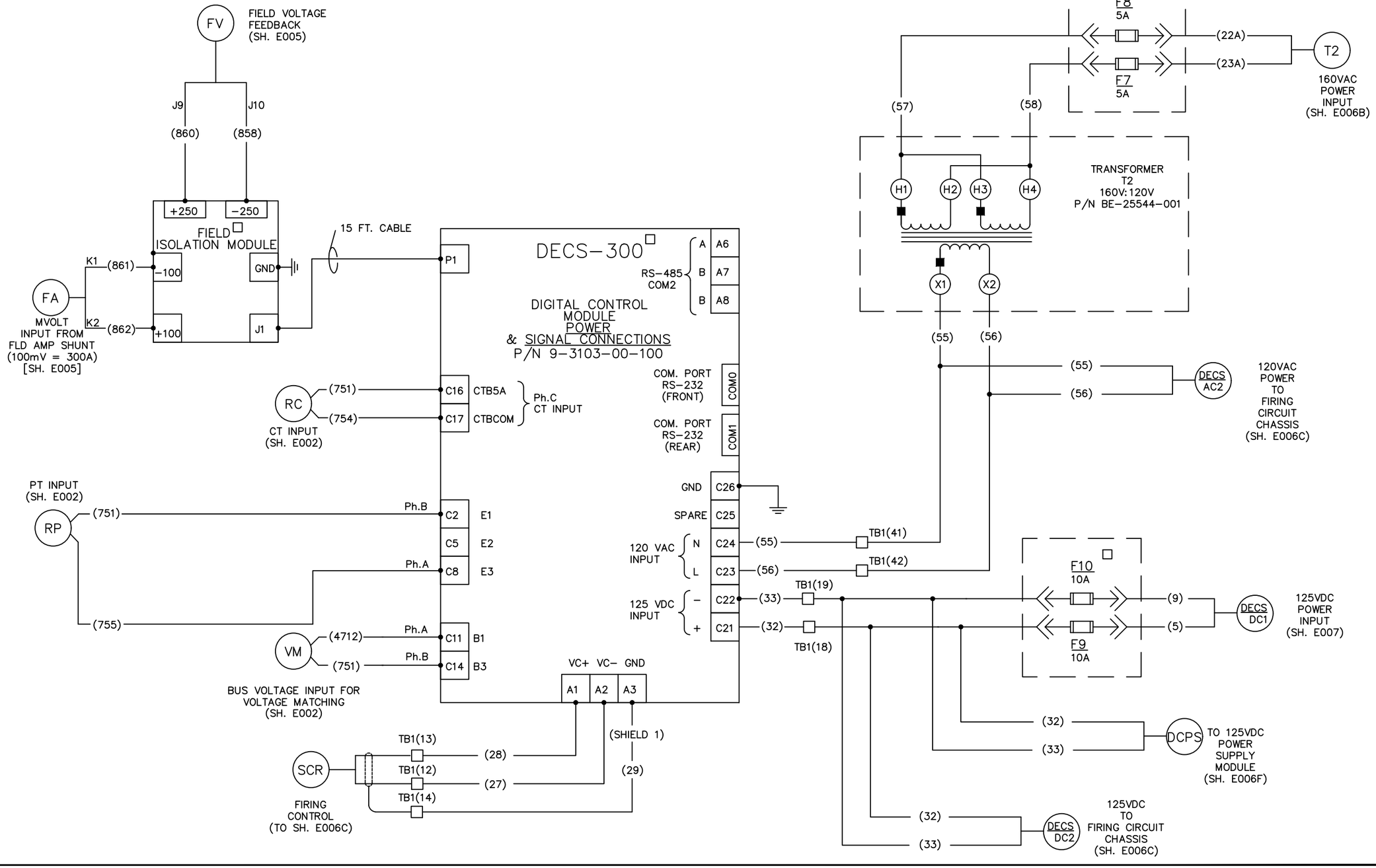
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DRAWING NO. 9944T1562

SCALE: NTS

SHEET NO. E005 15 OF 39



Proprietary Information of:

ICS INNOVATIVE CONTROL SYSTEMS, INC.

REV	DESCRIPTION:	BY	APPROVED	DATE
REV 2	MODIFICATIONS:	CS		02/19/01
REV 1	AS BUILTS:	CF		04/17/00

DECS−300 POWER GENERATOR PROTECTION SYSTEM 99174−GTB−103

CUSTOMER: HASTINGS UTILITIES

SITE: DON HENRY POWER CENTER

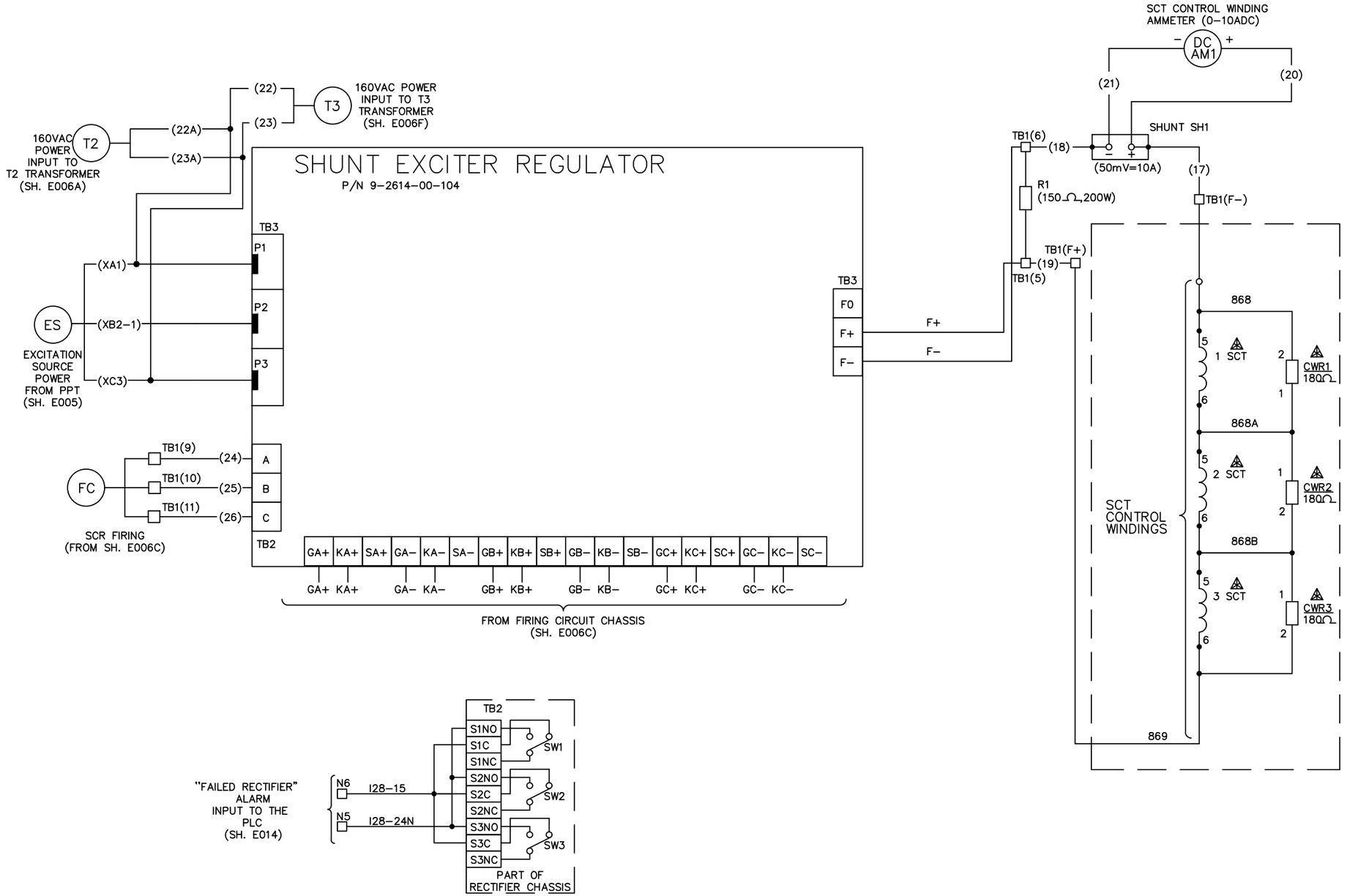
APPROVED BY:

DRAWN BY: C. FISHER 01/17/00

DRAWING NO. 9944T1562

SCALE: NTS

SHEET NO. E006A 16 OF 39



Proprietary Information of:

ICS INNOVATIVE CONTROL SYSTEMS, INC.

REV 2	MODIFICATIONS:	CS		02/19/01
REV 1	AS BUILTS:	CF		04/17/00
REV	DESCRIPTION:	BY	APPROVED	DATE

DECS-300 RECTIFIER CHASSIS
GENERATOR PROTECTION SYSTEM
99174-GTB-103

CUSTOMER: HASTINGS UTILITIES

SITE: DON HENRY POWER CENTER

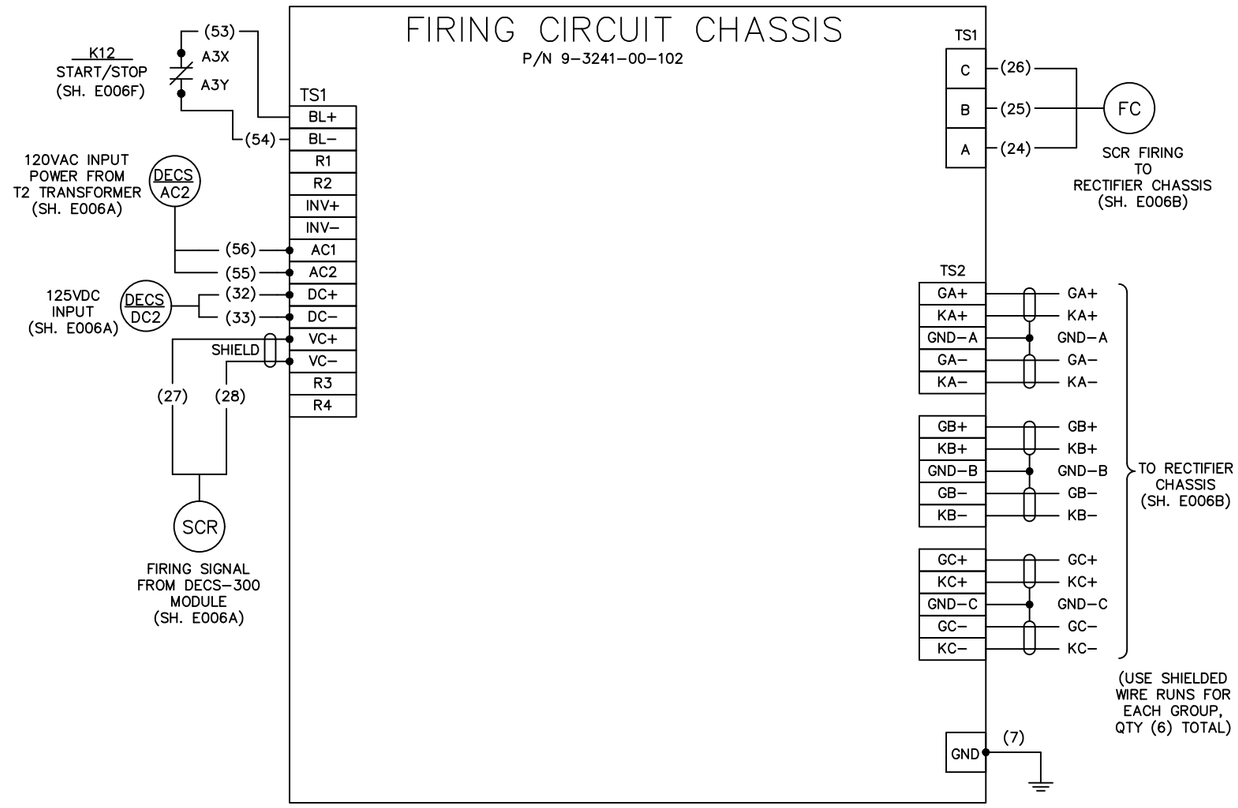
APPROVED BY:

DRAWN BY: C. FISHER 01/17/00

DRAWING NO. 9944T1562

SCALE: NTS

SHEET NO. E006B 17 OF 39



Proprietary Information of:

ICS INNOVATIVE CONTROL SYSTEMS, INC.

REV	DESCRIPTION:	BY	APPROVED	DATE
REV 2	MODIFICATIONS:	CS		02/19/01
REV 1	AS BUILTS:	CF		04/17/00

DECS-300 FIRING CIRCUIT
GENERATOR PROTECTION SYSTEM
99174-GTB-103

CUSTOMER: HASTINGS UTILITIES

SITE: DON HENRY POWER CENTER

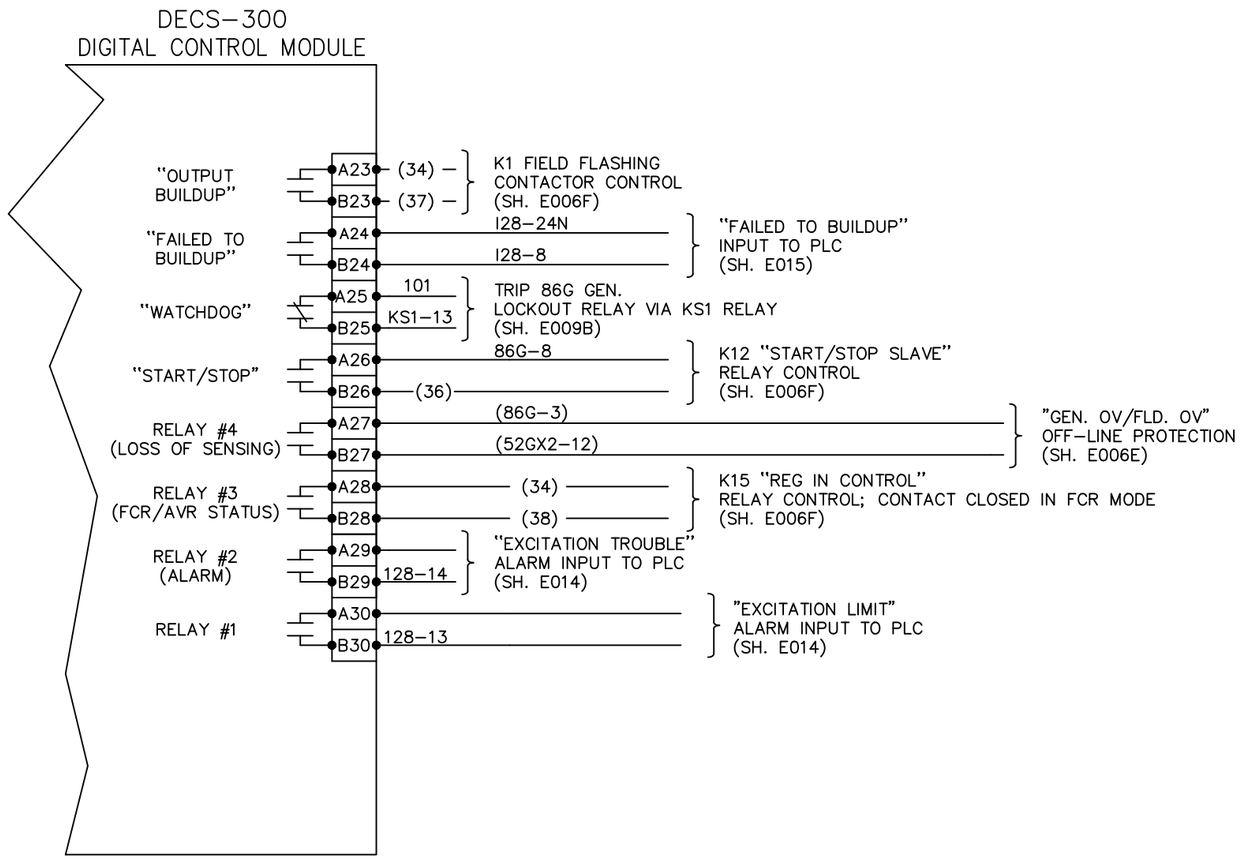
APPROVED BY:

DRAWN BY: C. FISHER 01/17/00

DRAWING NO. 9944T1562

SCALE: NTS

SHEET NO.E006C 18 OF 39

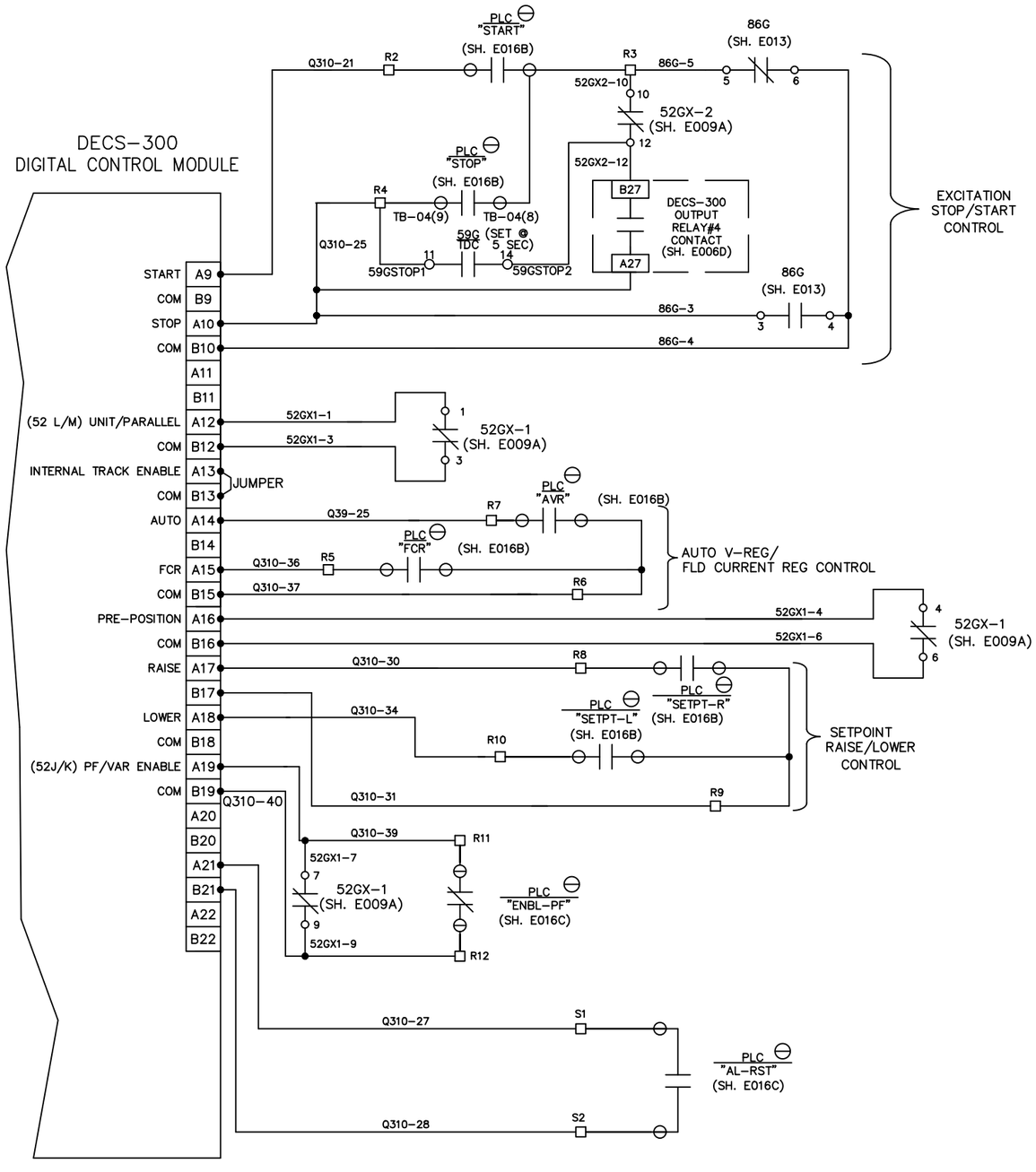


Proprietary Information of:
ICS INNOVATIVE CONTROL SYSTEMS, INC.

REV	DESCRIPTION:	BY	APPROVED	DATE
REV 2	MODIFICATIONS:	CS		02/19/01
REV 1	AS BUILTS:	CF		04/17/00

DECS–300 CONTROL OUTPUTS
GENERATOR PROTECTION SYSTEM
99174–GTB–103

CUSTOMER: HASTINGS UTILITIES
SITE: DON HENRY POWER CENTER
APPROVED BY:
DRAWN BY: C. FISHER 01/17/00
DRAWING NO. 9944T1562
SCALE: NTS
SHEET NO. E006D 19 OF 39



Proprietary Information of:

ICS INNOVATIVE CONTROL SYSTEMS, INC.

REV	DESCRIPTION:	BY	APPROVED	DATE
REV 2	MODIFICATIONS:	CS		02/19/01
REV 1	AS BUILTS:	CF		04/17/00

DECS-300 CONTROL INPUTS
GENERATOR PROTECTION SYSTEM
99174-GTB-103

CUSTOMER: HASTINGS UTILITIES

SITE: DON HENRY POWER CENTER

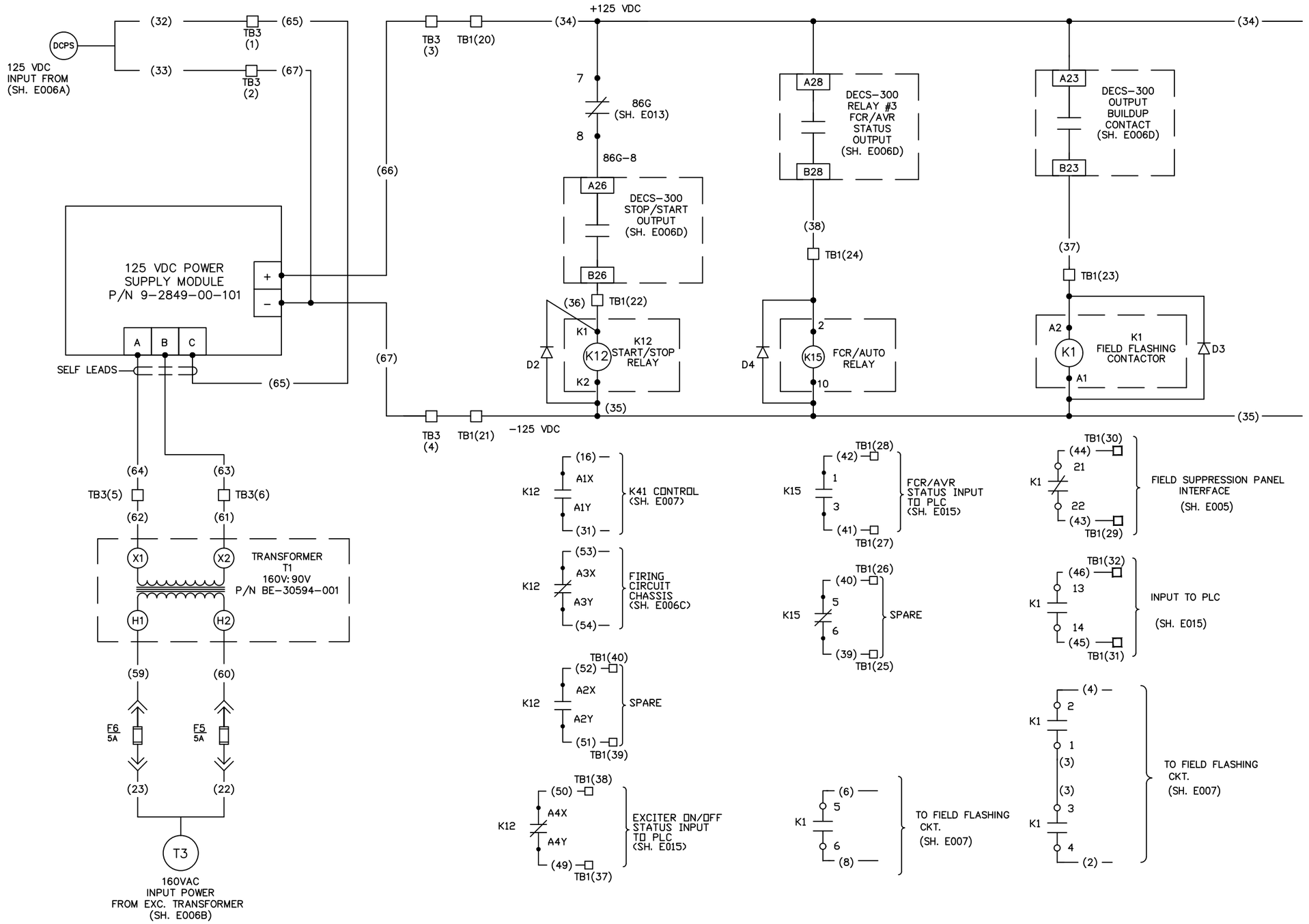
APPROVED BY:

DRAWN BY: C. FISHER 01/17/00

DRAWING NO. 9944T1562

SCALE: NTS

SHEET NO.E006E 20 OF 39



Proprietary Information of:

ICS INNOVATIVE CONTROL SYSTEMS, INC.

REV 2	MODIFICATIONS:	CS		02/19/01
REV 1	AS BUILTS:	CF		04/17/00
REV	DESCRIPTION:	BY	APPROVED	DATE

DECS-300/125VDC RELAY CONTROL
GENERATOR PROTECTION SYSTEM
99174-GTB-103

CUSTOMER: HASTINGS UTILITIES

SITE: DON HENRY POWER CENTER

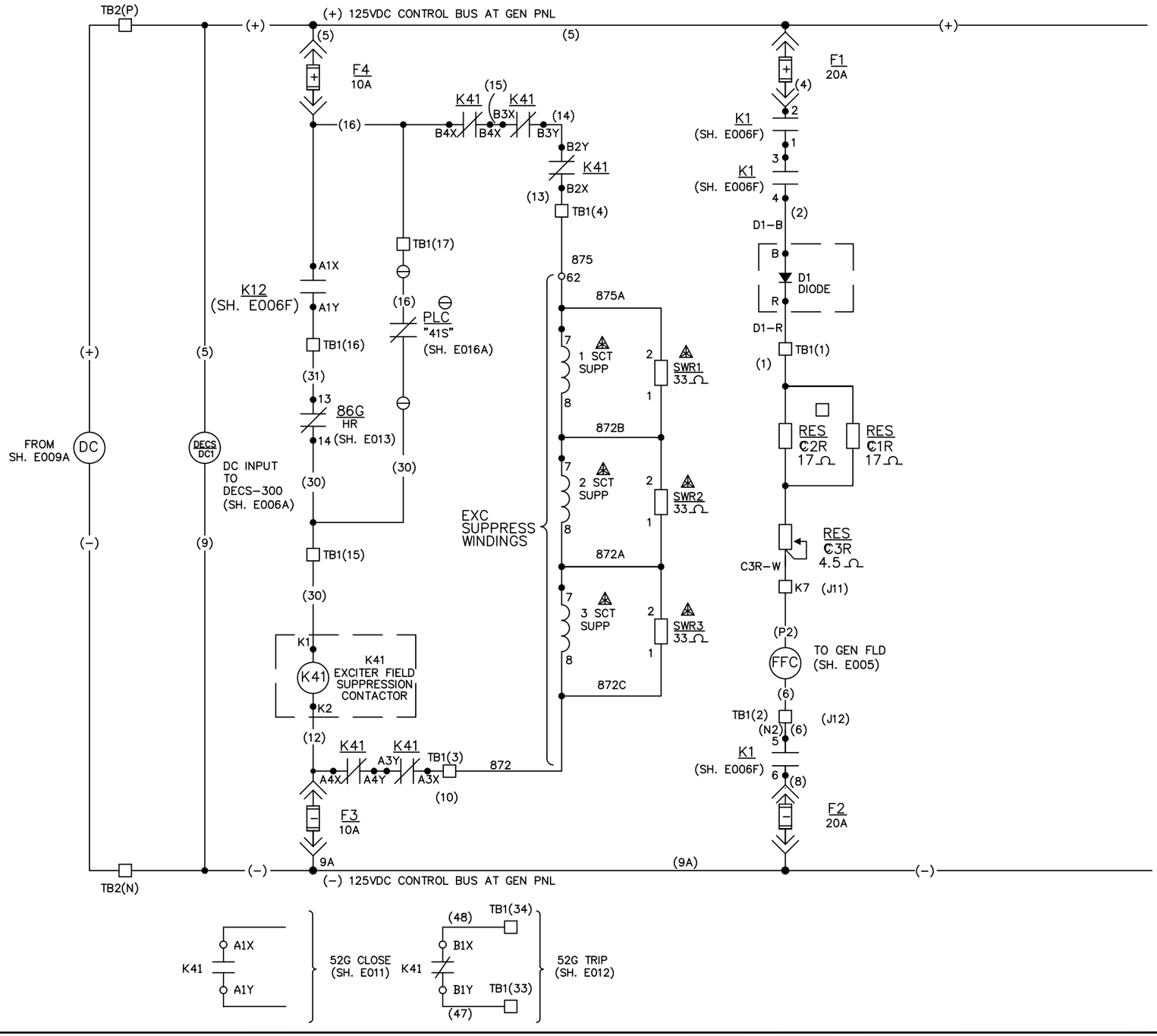
APPROVED BY:

DRAWN BY: C. FISHER 01/17/00

DRAWING NO. 9944T1562

SCALE: NTS

SHEET NO.E006F 21 OF 39



Proprietary Information of:

ICS INNOVATIVE CONTROL SYSTEMS, INC.

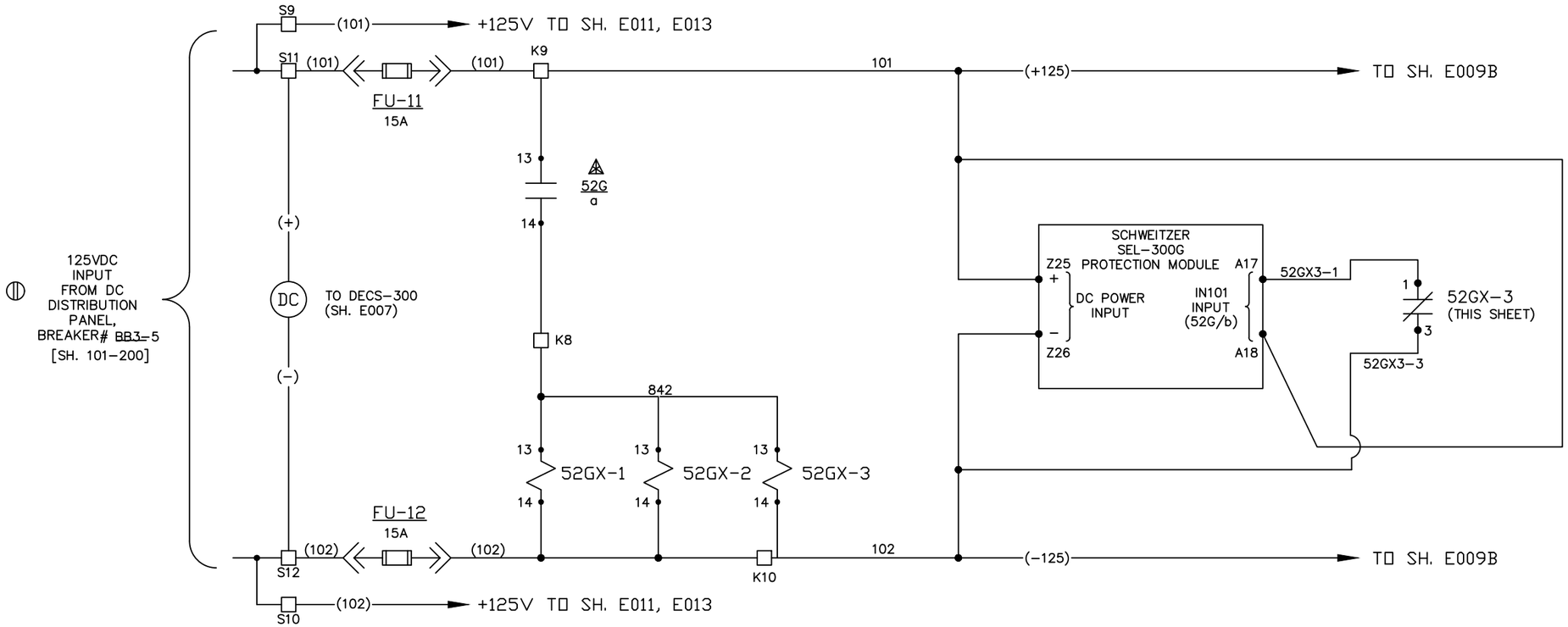
REV	DESCRIPTION:	BY	APPROVED	DATE
REV 2	MODIFICATIONS:	CS		02/19/01
REV 1	AS BUILTS:	CF		04/17/00

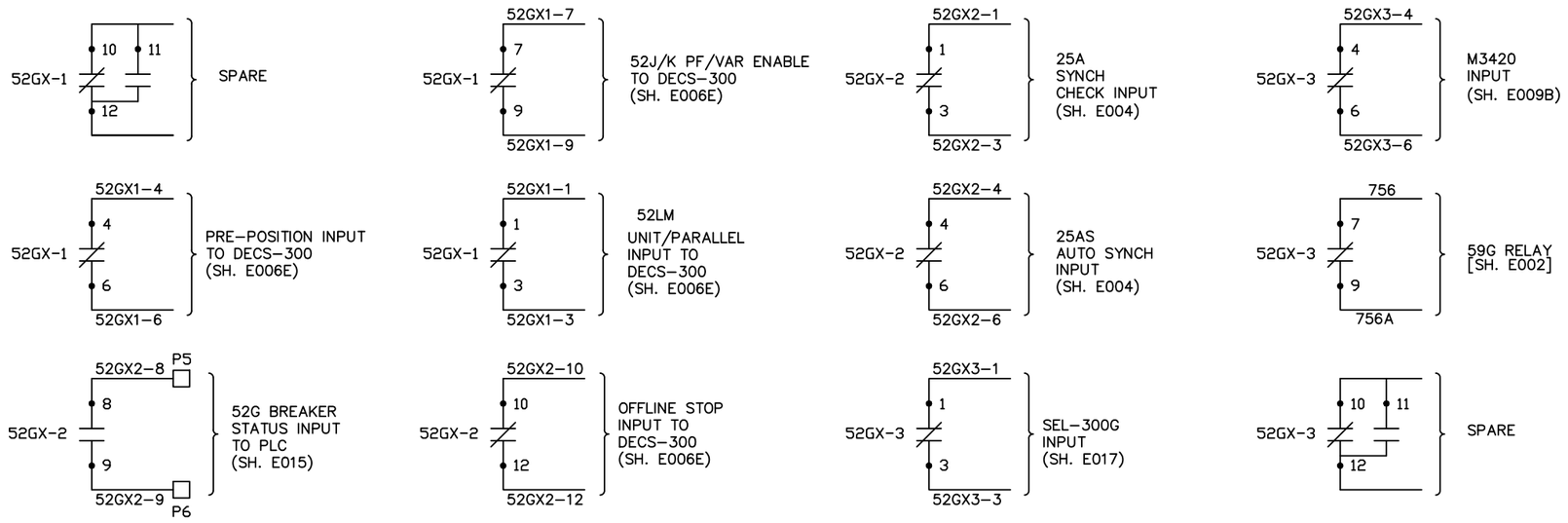
125VDC EXCITATION CONTROL
GENERATOR PROTECTION SYSTEM
99174–GTB–103

CUSTOMER: HASTINGS UTILITIES

SITE: DON HENRY POWER CENTER

APPROVED BY:		DRAWING NO. 9944T1562	SCALE: NTS
DRAWN BY: C. FISHER	01/17/00		SHEET NO. E007 22 OF 39





Proprietary Information of:

ICS INNOVATIVE CONTROL SYSTEMS, INC.

REV	DESCRIPTION:	BY	APPROVED	DATE
REV 2	MODIFICATIONS:	CS		02/19/01
REV 1	AS BUILTS:	CF		04/17/00

125VDC AUXILIARY CONTROL
GENERATOR PROTECTION SYSTEM
99174-GTB-103

CUSTOMER: HASTINGS UTILITIES

SITE: DON HENRY POWER CENTER

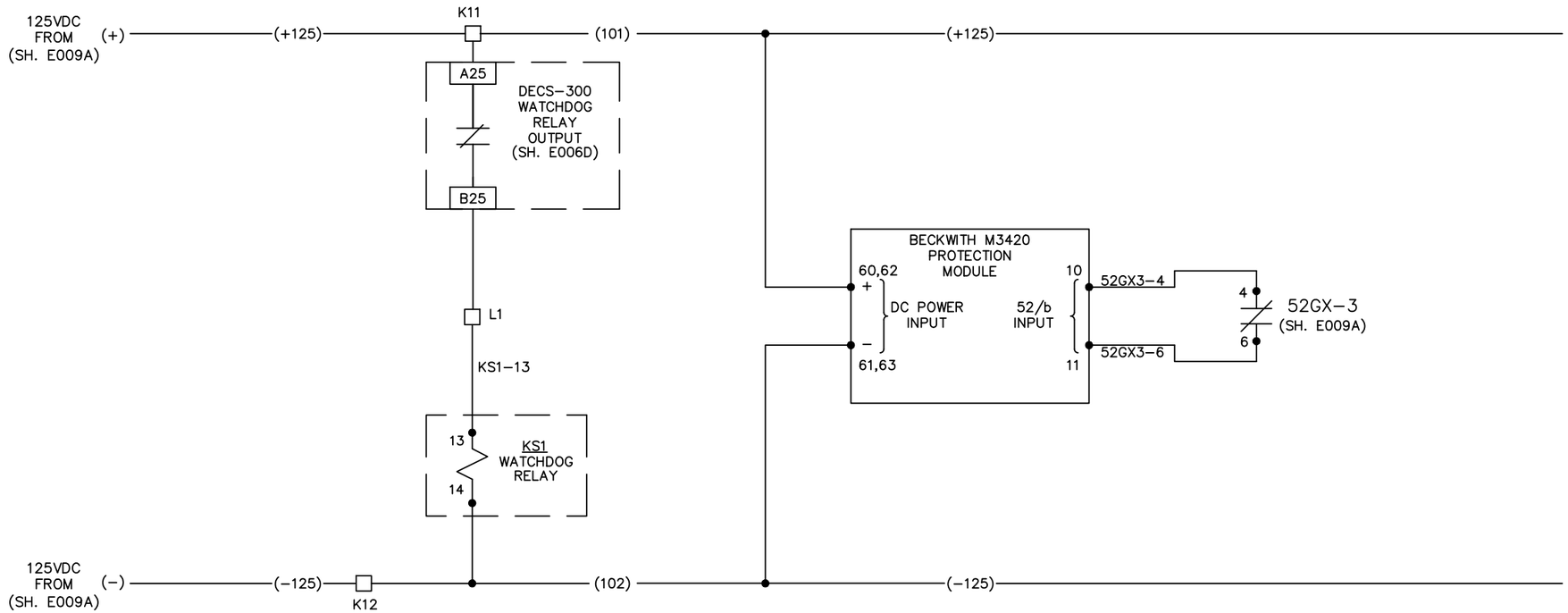
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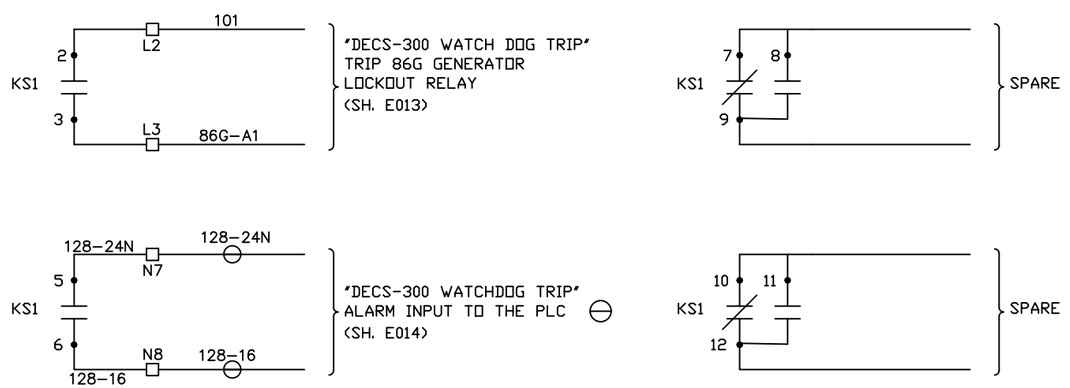
DRAWN BY: C. FISHER 01/17/00

DRAWING NO. 9944T1562

SCALE: NTS

SHEET NO.E009A 23 OF 39





Proprietary Information of:

ICS INNOVATIVE CONTROL SYSTEMS, INC.

REV	DESCRIPTION:	BY	APPROVED	DATE
REV 2	MODIFICATIONS:	CS		02/19/01
REV 1	AS BUILTS:	CF		04/17/00

125VDC AUXILIARY CONTROL GENERATOR PROTECTION SYSTEM 99174–GTB–103

CUSTOMER: HASTINGS UTILITIES

SITE: DON HENRY POWER CENTER

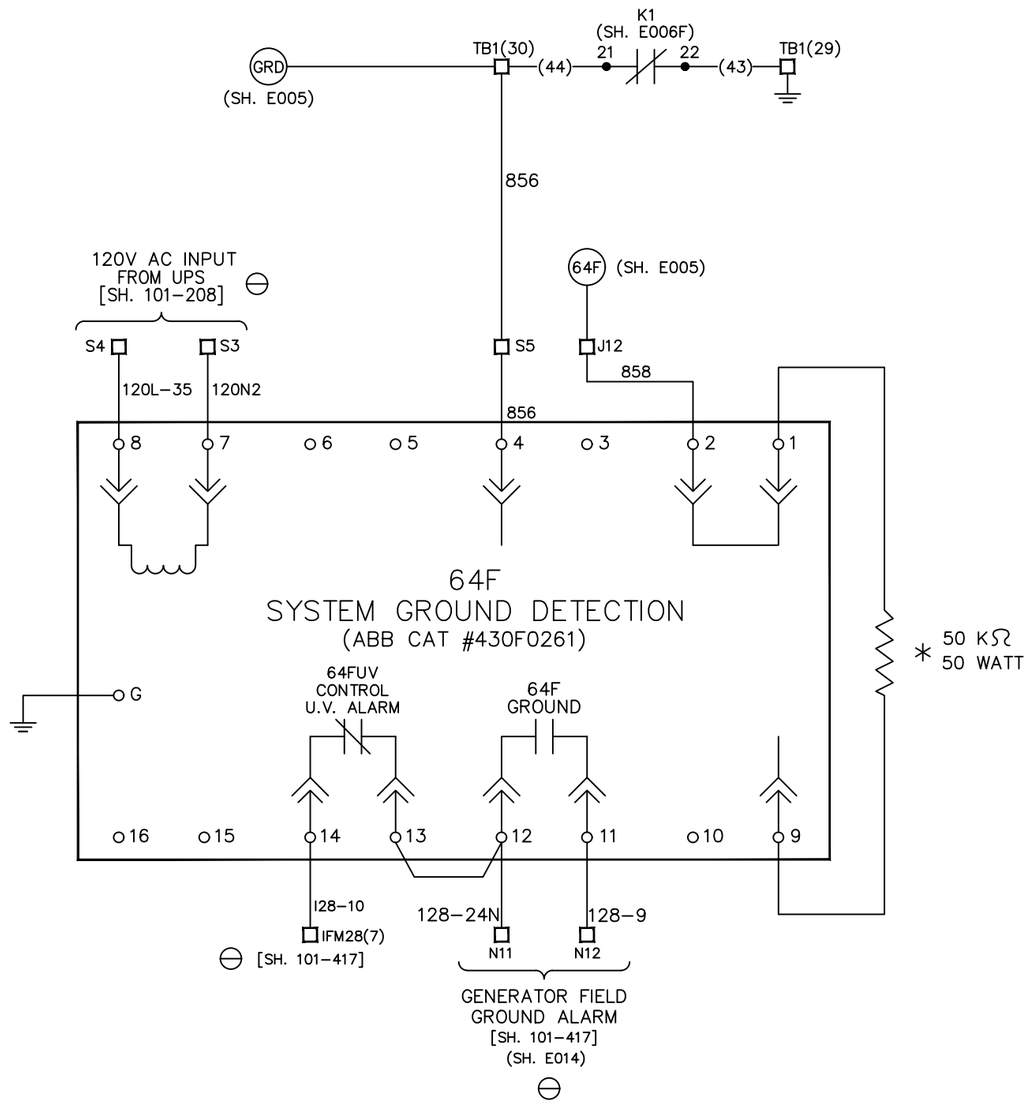
APPROVED BY:

DRAWN BY: C. FISHER 01/17/00

DRAWING NO. 9944T1562

SCALE: NTS

SHEET NO. E009B 24 OF 39



* EXTERNAL RESISTOR SUPPLIED WITH RELAY.

Proprietary Information of:

ICS INNOVATIVE CONTROL SYSTEMS, INC.

REV	DESCRIPTION:	BY	APPROVED	DATE
REV 2	MODIFICATIONS:	CS		02/19/01
REV 1	AS BUILTS:	CF		04/17/00

GEN. FIELD GND. DETECTION
GENERATOR PROTECTION SYSTEM
99174-GTB-103

CUSTOMER: HASTINGS UTILITIES

SITE: DON HENRY POWER CENTER

APPROVED BY:

DRAWN BY: C. FISHER 01/17/00

DRAWING NO. 9944T1562

SCALE: NTS

SHEET NO. E010 25 OF 39

TO SHEET E009A

S9 — (101) — (+) 125V DC CONTROL BUS — (101) — (101) — TO SHEET E012

3 FB ⚠ 20A
4

1141

L6

PLC "25AS-C" (SH. E016A)

PLC "25MS-C" (SH. E016A)

Q310-6 — L9

Q310-3 — L7

18 — 25AS AUTO SYNCH MODULE — 17

PLC "D-BUS" (SH. E016A)

1 — 52G/CS CLOSE — 2

Q310-1 — L8 — Q310-1

2 — 25A SYNCH CHECK (SH. E004) — 5

(68) — TB1(35) — K41 — A1Y A1X — (69) — TB1(36)

(SH.E007)

(69) — 15 — 86G HR (SH.E013) — 16 — 1152 — L10 — 86B2301 ⚠ — L11 — (1152) — D13

9 — 3 — 52b ⚠ — 4 — 9 — 21 — 52Y ⚠ — 22 — 9 — 32 — 52Y ⚠ — 31 — 9 — 1 — SRC ⚠ — 2 — 8 — NO — LS3 ⚠ — C — 8A — NC — LS2 ⚠

1 — 52Y — 2

NO — LS2 — C — 8C — NC ⚠

NO — LS4 ⚠ — C

14 — 52Y ⚠ — 13

D16 — 16 — 5 — 1 — 88 — 2 — 5A — NO — LS1 — C

D3 — 3 — NC — LS1

6

15 — D15 — FB ⚠ 20A — (102) — TO SHEET E012

TO SHEET E009A — S10 — (102) — (102) — (−) 125V DC CONTROL BUS

Proprietary Information of:

ICS INNOVATIVE CONTROL SYSTEMS, INC.

REV	DESCRIPTION:	BY	APPROVED	DATE
REV 3	MODIFICATIONS:	JL		10/09/03
REV 2	MODIFICATIONS:	CS		02/19/01
REV 1	AS BUILTS:	CF		04/17/00

GT BREAKER "CLOSE" CIRCUIT
GENERATOR PROTECTION SYSTEM
99174-GTB-103

CUSTOMER: HASTINGS UTILITIES

SITE: DON HENRY POWER CENTER

APPROVED BY:

DRAWN BY: C. FISHER 01/17/00

DRAWING NO. 9944T1562

SCALE: NTS

SHEET NO. E011 26 OF 39

TO SHEET E011

(+) 125V DC CONTROL BUS

(101)

1 — FA 20A — 2

1157

M1

GIL — RES 2000 — 1

GIL — OPEN IND LAMP (TOP) — RES 2500 — 1154 — M7

RIL — CLOSE IND LAMP (BOT) — RES 2500 — 1156 — M2

RIL — RES 2000 — 1

1154

1156

SW. GR. C.S. — 1C — 69 TRIP

TB1(34) — (48) — B1X — K41 — B1Y — (SH. E007) — (47) — TB1(33)

M3

1 — 86G HR — 2 — (SH.E013)

PLC "52GTRP" (SH. E016A)

31 — M-3420 OUT2 — 32 — (SH. E017)

M4

(1157)

M5

A03 — SEL-300G OUT102 — A04 — (SH. E017)

3 — 52G/CS TRIP — 4

1156 — M8

PLC "OCFA" (SH. E016A)

1157

86B 2301

(1156)

M6

1156

3 — FU-7 6A — 4

1200

(+)

(TO PCB ELEVATING CIRCUIT)

(−)

1201

2 — FU-7 6A — 1

(102)

(−) 125V DC CONTROL BUS

TO SHEET E011

D4 — 4 — 13 — 7 — 52b — 8 — 14 — 14 — D14

D1 — 1 — 9 — 1 — 52a — 2 — 9A — T — 2 — 10A — 6 — 52a — 5 — 2 — D2

4 — FA 20A — 3

K8 — 14 — 52G STA — 13 — K9

52GX-1 & 52GX-2 CONTROL (SH. E009A)

12 — 52G STA — 11

TO 52HG (SEE GE MCC ELEM 176B9731 SH 52D) (GEN. HTR.)

CONTACTS HANDLE END		CLOSE	NAC	NAT	TRIP	USED
1 1c 2c 2	1				X	X
	2	X				X
3 3c 4c 4	3		X	X		
	4		X	X		
5 5c 6c 6	5	X	X			
	6	X	X			

SPRING RTN.

BREAKER CONTROL SWITCH DEVELOPMENT

D11 — 11 — 9 — a — 10 — 12 — D12 — SCADA GEN BRK STATUS — 52G STA

D9 — 9 — 11 — b — 12 — 10 — D10 — GEN HTR. — 52G STA

D7 — 7 — 13 — a — 14 — 8 — D8 — CONTROL — 52G STA

D5 — 5 — 15 — b — 16 — 6 — D6

BREAKER AUXILIARY CONTACTS

b a

F1 — 1 — 3 — F2

2 — 4 — F4 — F3

F5 — 5 — 6 — F6

7 — 9 — F8 — F7

F9 — 8 — 10 — F10

11 — 12 — F12 — F11

MOC-2

MOC AUXILIARY CONTACTS

b a

E1 — 1 — 3 — E2

2 — 4 — E4 — E3

E5 — 5 — 6 — E6

7 — 9 — E8 — E7

E9 — 8 — 10 — E10

11 — 12 — E12 — E11

MOC-1

MOC AUXILIARY CONTACTS

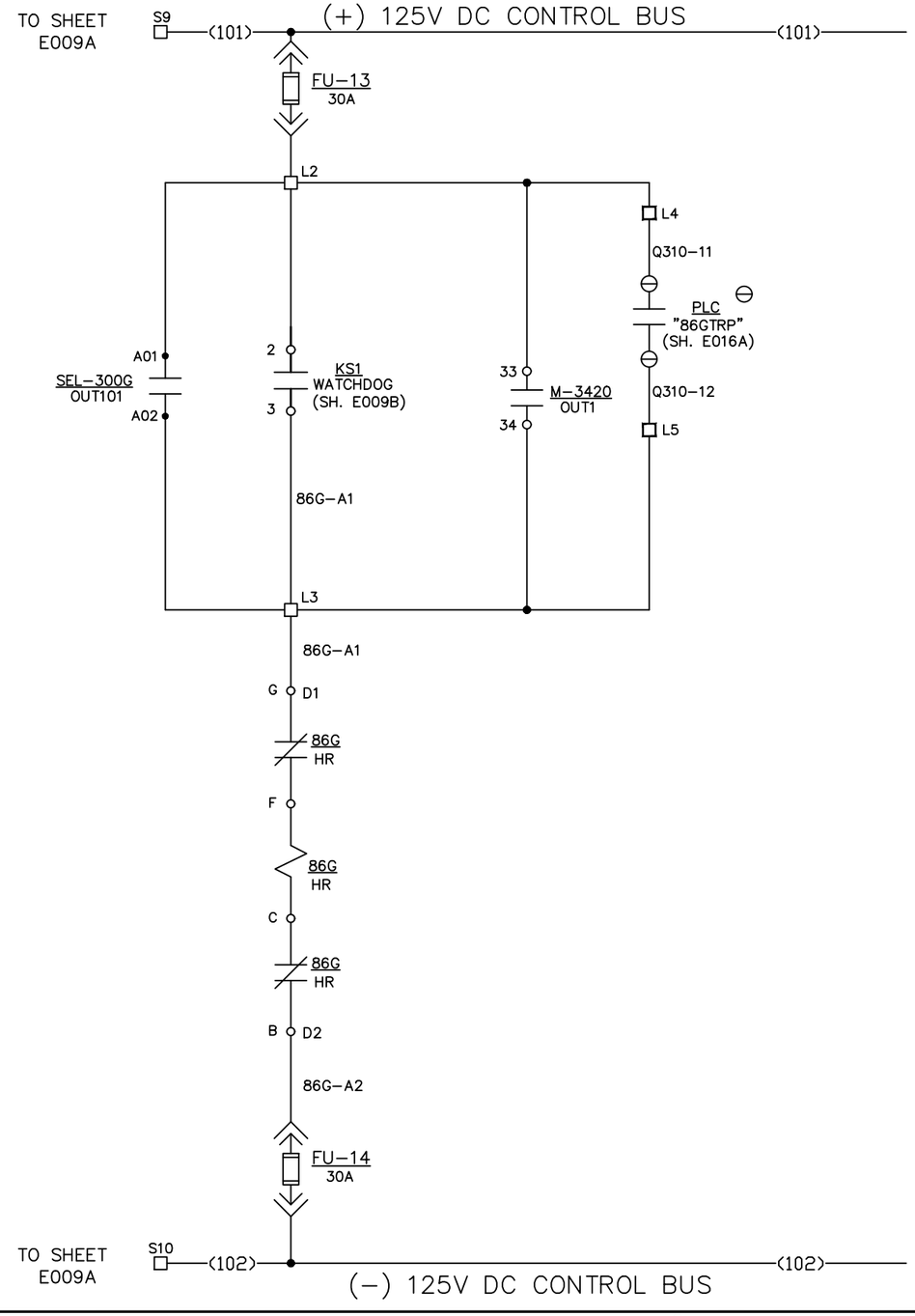
Proprietary Information of:

ICS INNOVATIVE CONTROL SYSTEMS, INC.

REV	DESCRIPTION:	BY	APPROVED	DATE
REV 3	MODIFICATIONS:	JL		10/09/03
REV 2	MODIFICATIONS:	CS		02/19/01
REV 1	AS BUILTS:	CF		04/17/00

GT BREAKER "TRIP" CIRCUIT
GENERATOR PROTECTION SYSTEM
99174-GTB-103

CUSTOMER: HASTINGS UTILITIES
SITE: DON HENRY POWER CENTER
APPROVED BY:
DRAWN BY: C. FISHER 01/17/00
DRAWING NO. 9944T1562
SCALE: NTS
SHEET NO. E012 27 OF 39



86G GENERATOR DIFF. LOCKOUT RELAY

86G CONTACTS ASSIGNMENT		
POSITION	CIRCUIT	SHEET
1 — 2	52G TRIP	E012
3 — 4	DECS STOP	E006E
5 — 6	DECS START	E006E
7 — 8	K12 CONTROL	E006F
9 — 10	TURBINE PLC	E015
11 — 12	SPARE	
13 — 14	K41 CONTROL	E007
15 — 16	52G CLOSE	E011
17 — 18	SPARE	
19 — 20	SPARE	
21 — 22	MASTER PROTECTION	E015
23 — 24	SPARE	

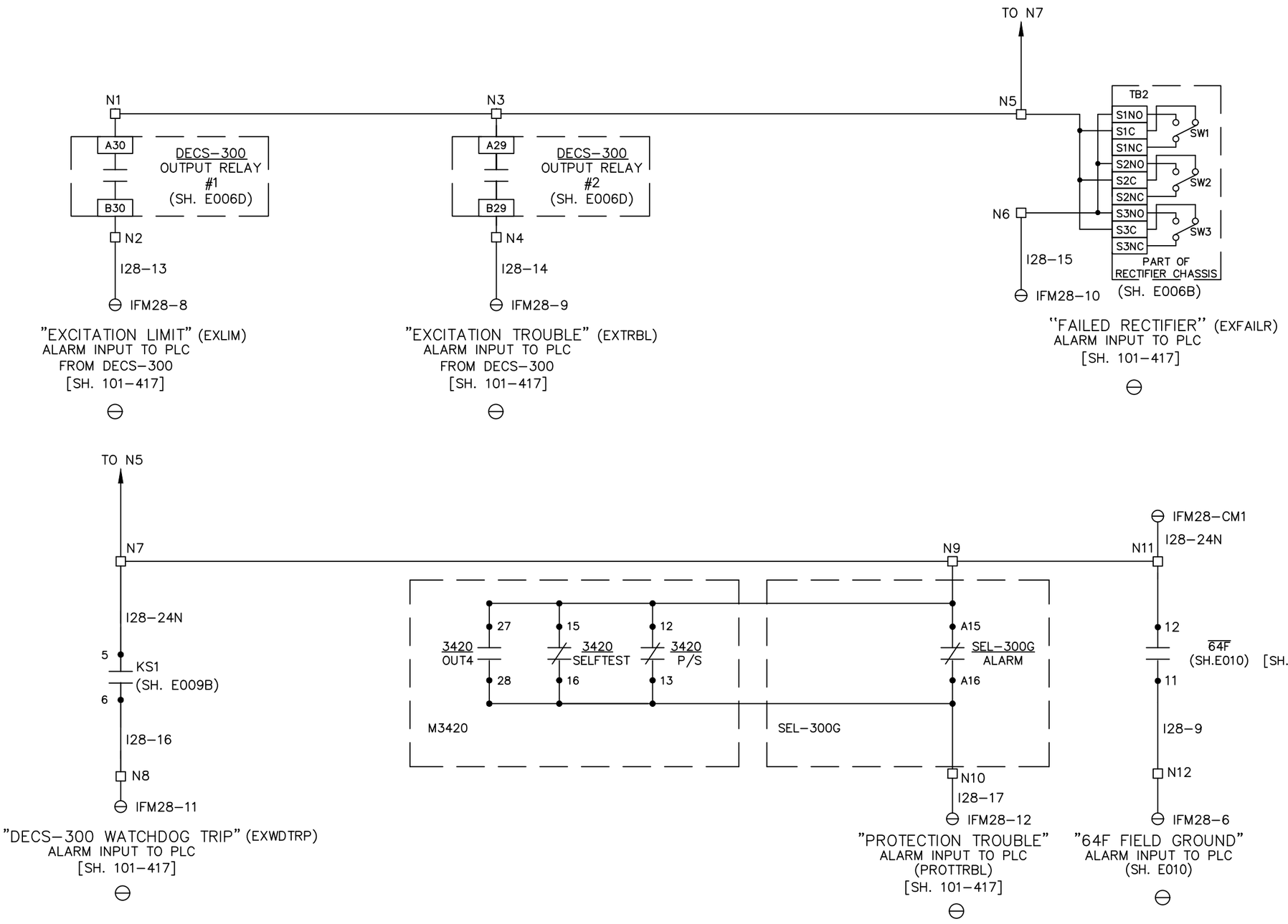
Proprietary Information of:

ICS INNOVATIVE CONTROL SYSTEMS, INC.

REV	DESCRIPTION:	BY	APPROVED	DATE
REV 2	MODIFICATIONS:	CS		02/19/01
REV 1	AS BUILTS:	CF		04/17/00

GENERATOR LOCKOUT RELAY
GENERATOR PROTECTION SYSTEM
99174-GTB-103

CUSTOMER: HASTINGS UTILITIES
SITE: DON HENRY POWER CENTER
APPROVED BY:
DRAWN BY: C. FISHER 01/17/00
DRAWING NO. 9944T1562
SCALE: NTS
SHEET NO. E013
28 OF 39



Proprietary Information of:

ICS INNOVATIVE CONTROL SYSTEMS, INC.

REV	DESCRIPTION:	BY	APPROVED	DATE
REV 1	AS BUILTS:	CF		04/17/00

PLC ALARM INPUTS
GENERATOR PROTECTION SYSTEM
99174–GTB–103

CUSTOMER: HASTINGS UTILITIES

SITE: DON HENRY POWER CENTER

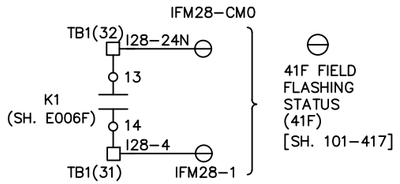
APPROVED BY:

DRAWN BY: C. FISHER 01/17/00

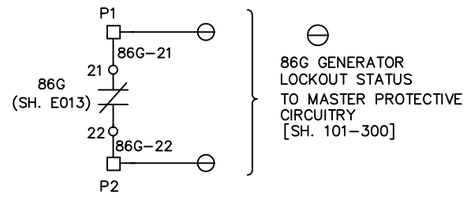
DRAWING NO. 9944T1562

SCALE: NTS

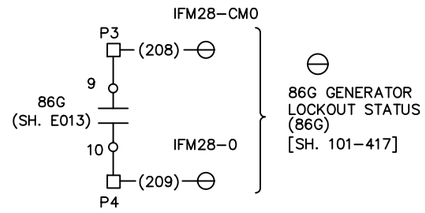
SHEET NO. E014
29 OF 39



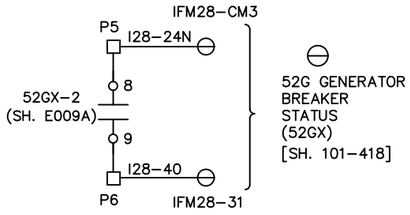
41F FIELD FLASHING STATUS (41F) [SH. 101-417]



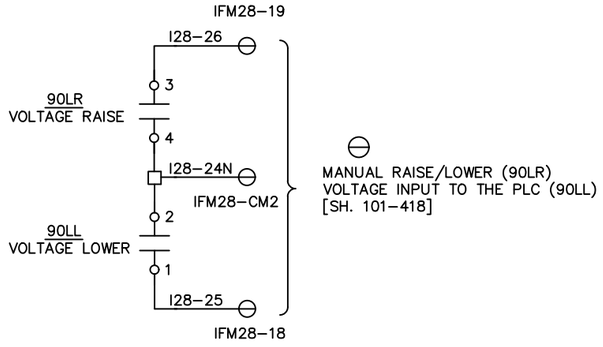
86G GENERATOR LOCKOUT STATUS TO MASTER PROTECTIVE CIRCUITRY [SH. 101-300]



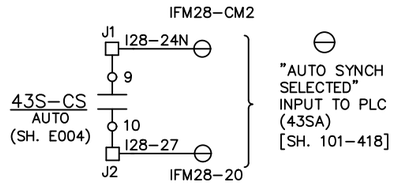
86G GENERATOR LOCKOUT STATUS (86G) [SH. 101-417]



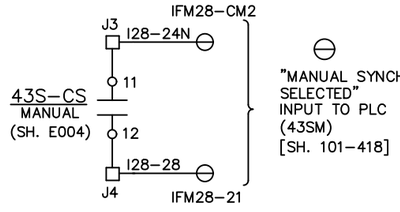
52G GENERATOR BREAKER STATUS (52GX) [SH. 101-418]



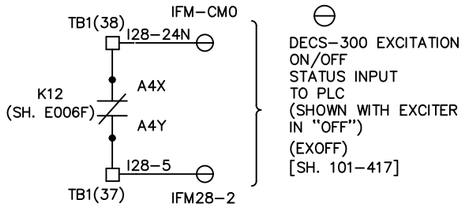
MANUAL RAISE/LOWER (90LR) VOLTAGE INPUT TO THE PLC (90LL) [SH. 101-418]



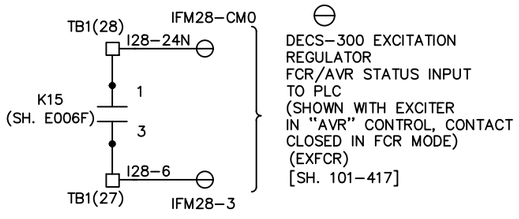
"AUTO SYNCH SELECTED" INPUT TO PLC (43SA) [SH. 101-418]



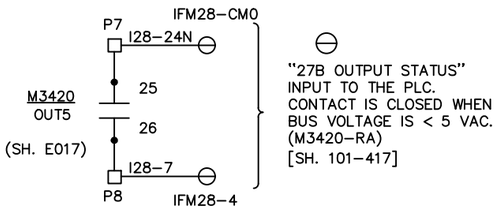
"MANUAL SYNCH SELECTED" INPUT TO PLC (43SM) [SH. 101-418]



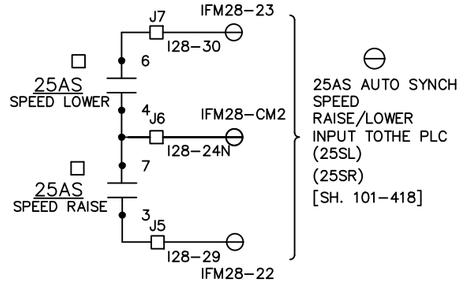
DECS-300 EXCITATION ON/OFF STATUS INPUT TO PLC (SHOWN WITH EXCITER IN "OFF") (EXOFF) [SH. 101-417]



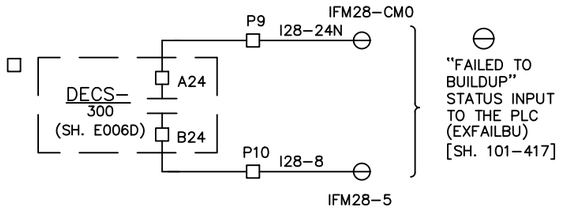
DECS-300 EXCITATION REGULATOR FCR/AVR STATUS INPUT TO PLC (SHOWN WITH EXCITER IN "AVR" CONTROL, CONTACT CLOSED IN FCR MODE) (EXFCR) [SH. 101-417]



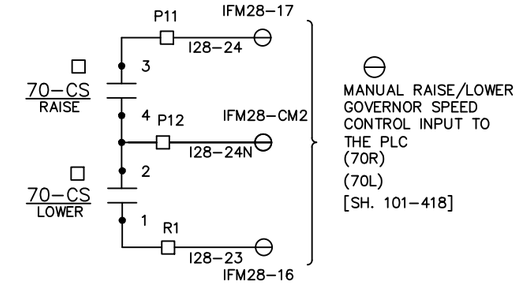
"27B OUTPUT STATUS" INPUT TO THE PLC. CONTACT IS CLOSED WHEN BUS VOLTAGE IS < 5 VAC. (M3420-RA) [SH. 101-417]



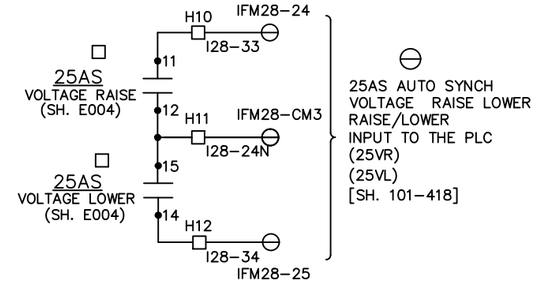
25AS AUTO SYNCH SPEED RAISE/LOWER INPUT TOTHE PLC (25SL) (25SR) [SH. 101-418]



"FAILED TO BUILDUP" STATUS INPUT TO THE PLC (EXFAILBU) [SH. 101-417]



MANUAL RAISE/LOWER GOVERNOR SPEED CONTROL INPUT TO THE PLC (70R) (70L) [SH. 101-418]



25AS AUTO SYNCH VOLTAGE RAISE LOWER RAISE/LOWER INPUT TO THE PLC (25VR) (25VL) [SH. 101-418]

Proprietary Information of:

ICS INNOVATIVE CONTROL SYSTEMS, INC.

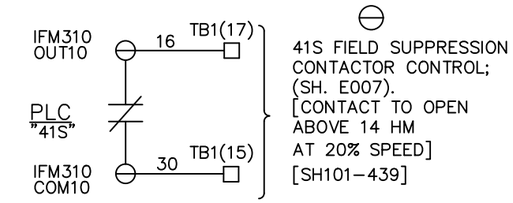
REV 2	MODIFICATIONS:	CS		02/19/01
REV 1	AS BUILTS:	CF		04/17/00
REV	DESCRIPTION:	BY	APPROVED	DATE

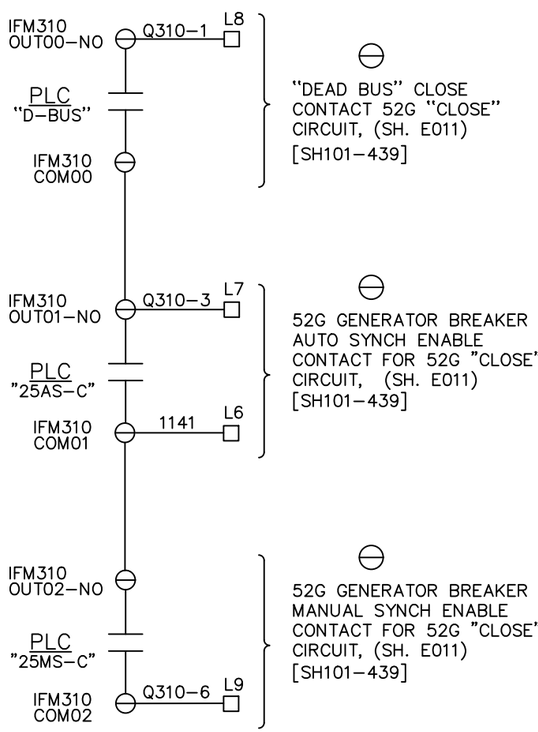
CONTROL STATUS INPUT TO PLC
GENERATOR PROTECTION SYSTEM
99174-GTB-103

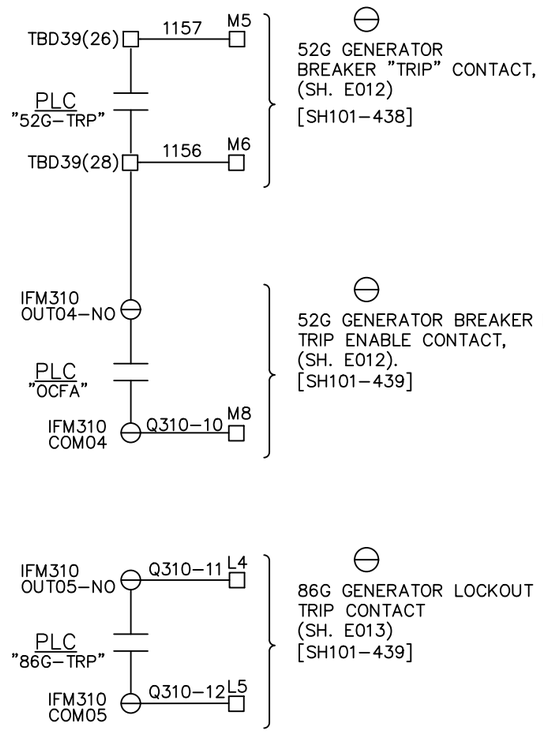
CUSTOMER: HASTINGS UTILITIES

SITE: DON HENRY POWER CENTER

APPROVED BY:		DRAWING NO. 9944T1562	SCALE: NTS
DRAWN BY: C. FISHER	01/17/00		SHEET NO. E015 30 OF 39







Proprietary Information of:

ICS INNOVATIVE CONTROL SYSTEMS, INC.

REV	DESCRIPTION:	BY	APPROVED	DATE
REV 1	AS BUILTS:	CF		04/17/00

CONTROL OUTPUTS FROM PLC
GENERATOR PROTECTION SYSTEM
99174-GTB-103

CUSTOMER: HASTINGS UTILITIES

SITE: DON HENRY POWER CENTER

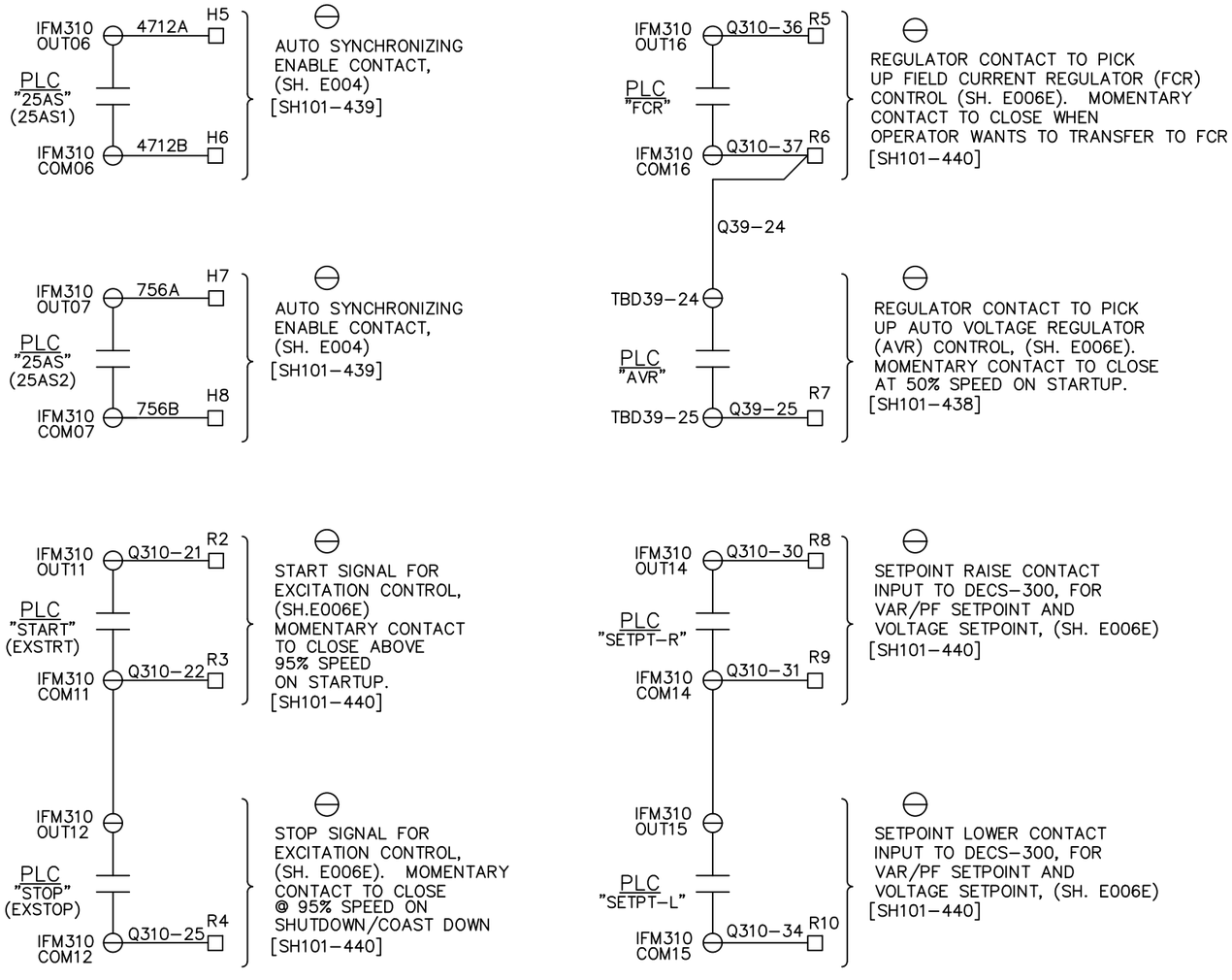
APPROVED BY:

DRAWN BY: C. FISHER 01/17/00

DRAWING NO. 9944T1562

SCALE: NTS

SHEET NO. E016A
31 OF 39

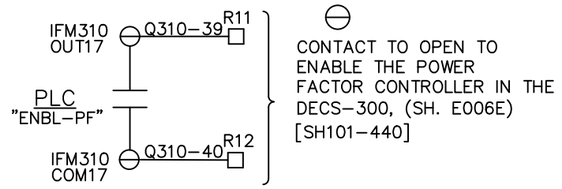


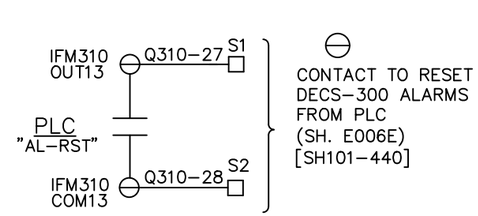
Proprietary Information of:
ICS INNOVATIVE CONTROL SYSTEMS, INC.

REV	DESCRIPTION:	BY	APPROVED	DATE
REV 1	AS BUILTS:	CF		04/17/00

CONTROL OUTPUTS FROM PLC
GENERATOR PROTECTION SYSTEM
99174-GTB-103

CUSTOMER: HASTINGS UTILITIES
SITE: DON HENRY POWER CENTER
APPROVED BY:
DRAWN BY: C. FISHER 01/17/00
DRAWING NO. 9944T1562
SCALE: NTS
SHEET NO. E016B 32 OF 39





Proprietary Information of:
ICS INNOVATIVE CONTROL SYSTEMS, INC.

REV	DESCRIPTION:	BY	APPROVED	DATE
REV 2	MODIFICATIONS:	CS		02/19/01
REV 1	AS BUILTS:	CF		04/17/00

CONTROL OUTPUTS FROM PLC
GENERATOR PROTECTION SYSTEM
99174–GTB–103

CUSTOMER: HASTINGS UTILITIES

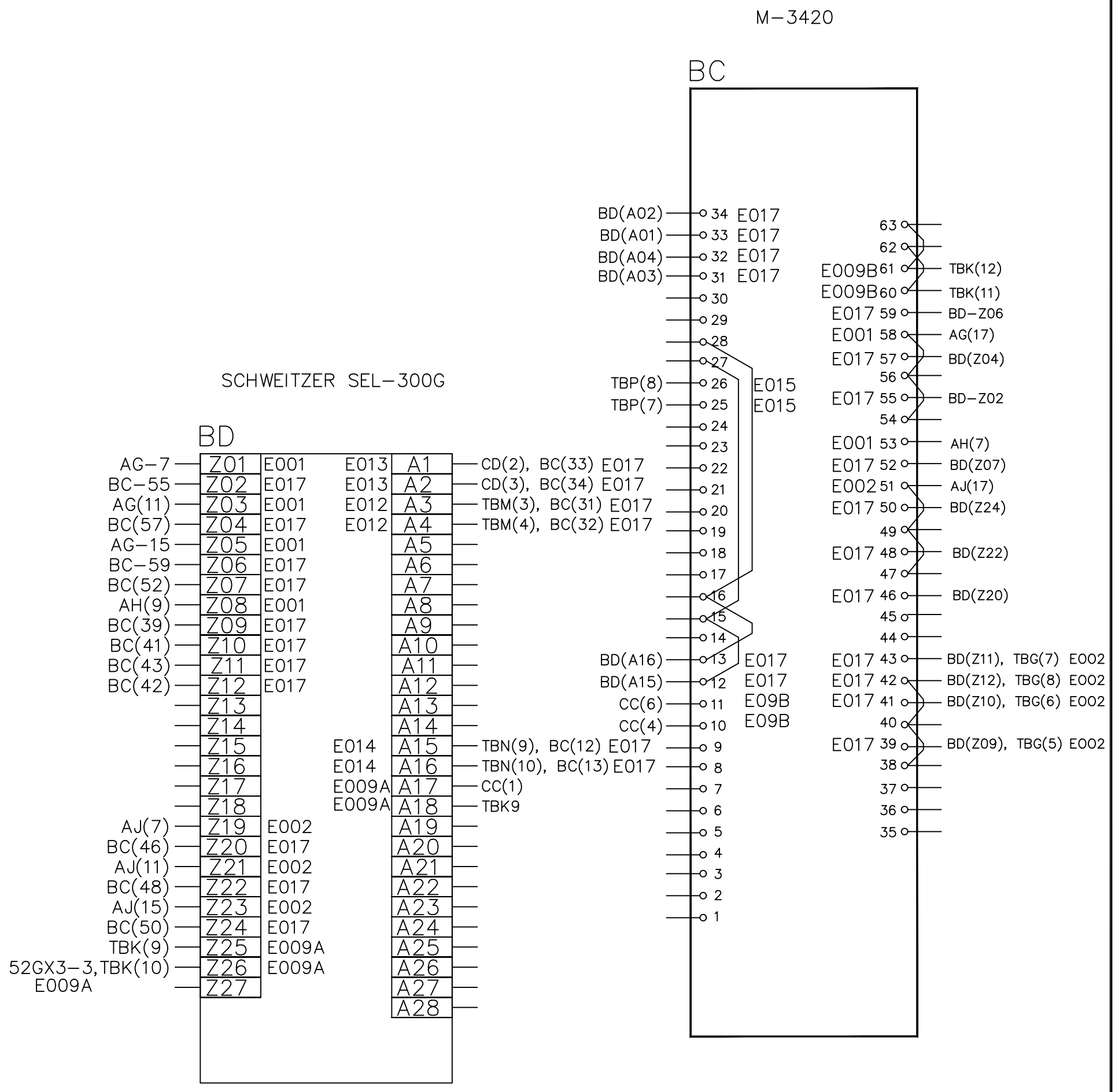
SITE: DON HENRY POWER CENTER

APPROVED BY:

DRAWN BY: C. FISHER 01/17/00

DRAWING NO. 9944T1562

SCALE: NTS



NOTE: ALL TEXT DENOTED E0** ARE SHEET NUMBERS.

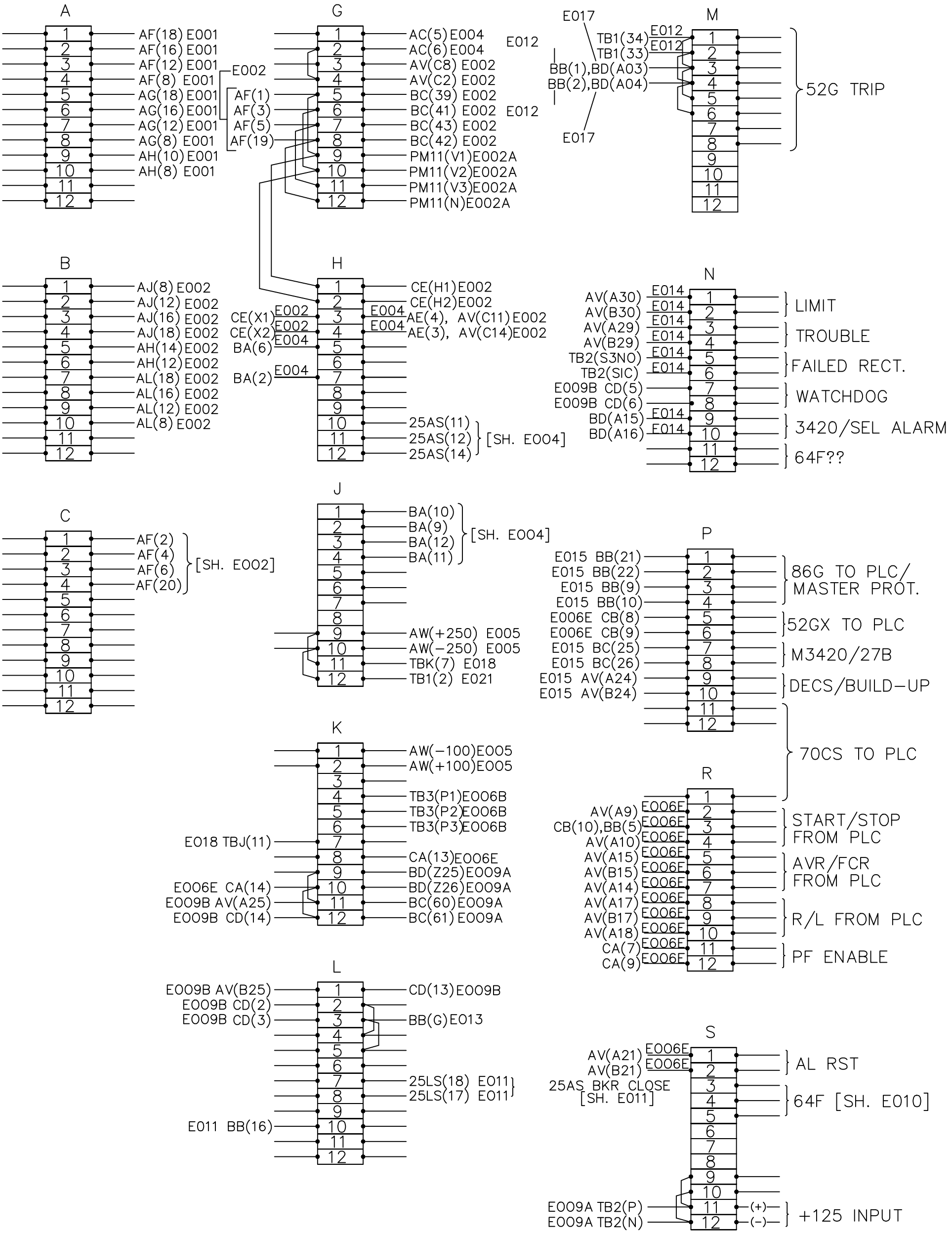
Proprietary Information of:
ICS INNOVATIVE CONTROL SYSTEMS, INC.

REV	DESCRIPTION:	BY	APPROVED	DATE
REV 2	MODIFICATIONS:	CS		09/10/01
REV 1	AS BUILTS:	CF		04/17/00

SEL–300 AND M–3420 CONNECTION DIAGRAM
GENERATOR PROTECTION SYSTEM
99174–GTB–103

CUSTOMER: HASTINGS UTILITIES
SITE: DON HERRY POWER CENTER
APPROVED BY:
DRAWN BY: D. LANGLEY 01/17/00
DRAWING NO. 9944T1562
SCALE: NTS
SHEET NO. E017 34 OF 39

ALARMS



NOTE: ALL TEXT DENOTED E0** ARE SHEET NUMBERS.

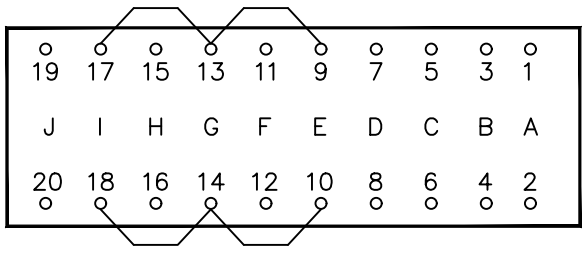
Proprietary Information of:
ICS INNOVATIVE CONTROL SYSTEMS, INC.

REV	DESCRIPTION:	BY	APPROVED	DATE
REV 3	REPLACE JEM-10 WITH NEXUS	NJB		06/24/2016
REV 2	MODIFICATIONS:	CS		02/19/01
REV 1	AS BUILTS:	CF		04/17/00

TERMINAL BLOCK CONNECTION DIAGRAM
GENERATOR PROTECTION SYSTEM
99174-GTB-103

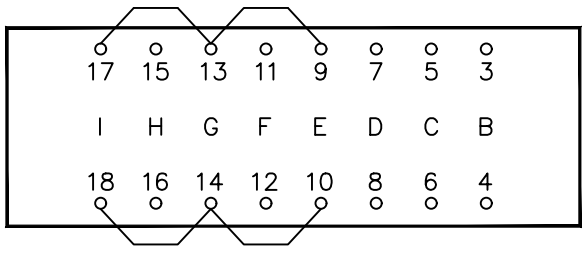
CUSTOMER: HASTINGS UTILITIES
SITE: DON HERRY POWER CENTER
APPROVED BY:
DRAWN BY: D. LANGLEY 01/17/00
DRAWING NO. 9944T1562
SCALE: NTS
SHEET NO. E018 35 OF 39

AF TS-1



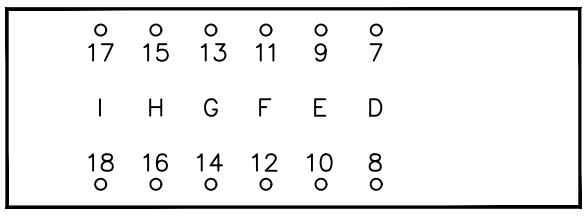
6–	TBC(3) E002	5–	TBG(7) E002		
8–	TBA(4) E001	7–	W/V(8)E002A	1–	TBG(5) E002
10–		9–		2–	TBC(1) E002
12–	TBA(3) E001	11–	W/V(9)E002A	3–	TBG(6) E002
14–		13–		4–	TBC(2) E002
16–	TBA(2) E001	15–	W/V(7)E002A	19–	TBG(8) E002
18–	TBA(1) E001	17–	PM11(14+)E002A	20–	TBC(4) E002

AG TS-2



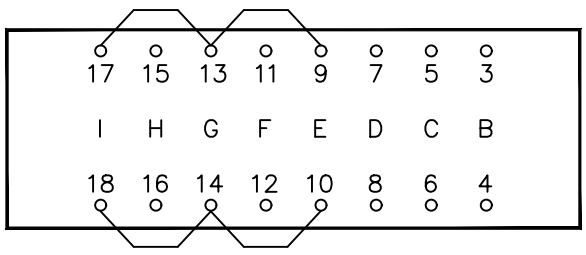
15–	BD(Z05)E001	11–	BD(Z03)E001	7–	BD(Z01)E001
16–	TBA(6) E001	12–	TBA(7) E001	8–	TBA(8) E001
17–	BC(58) E001	9–		5–	
18–	TBA(5) E001	10–		6–	

AH TS-3



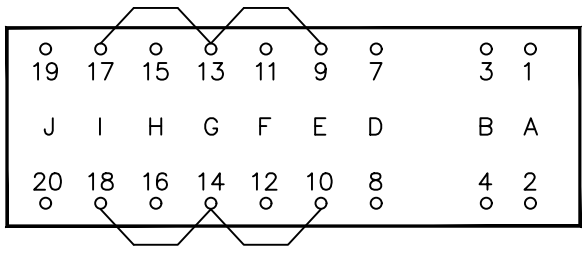
14–	TB(5)E002	9–	BD(Z08)E001	7–	BC(53) E001
16–		10–	TBA–9 E001	8–	TBA(10) E001
17–		11–	AV(C16)E006A	9–	BD(Z08)E001
18–		12–	TBB(6) E002	10–	TBA(9) E001
13–	AV(C–17)E006A				

AJ TS-4



15–	BD(Z23)E002	9–		7–	BD(Z19) E002
16–	TBB(3) E002	10–		8–	TBB(1) E002
17–	BC(51) E002	11–	BD(Z21)E002	5–	
18–	TBB(4) E002	12–	TBB(2) E002	6–	

AL TS-5



8–	TBB(10)E002	7–		1–	
10–		9–		2–	
12–	TBB(9) E002	11–		3–	
14–		13–		4–	
16–	TBB(8) E002	15–		19–	
18–	TBB(7) E002	17–		20–	

TE: ALL TEXT DENOTED EO** ARE SHEET NUMBERS.

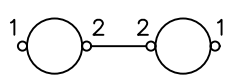
Proprietary Information of:
ICS INNOVATIVE CONTROL SYSTEMS, INC.

REV	DESCRIPTION:	BY	APPROVED	DATE
REV 3	REPLACE JEM-10 WITH NEXUS	NJB		06/24/2016
REV 2	MODIFICATIONS:	CS		02/19/01
REV 1	AS BUILTS:	CF		04/17/00

TEST SWITCH CONNECTION DIAGRAM
GENERATOR PROTECTION SYSTEM
99174-GTB-103

CUSTOMER: HASTINGS UTILITIES
SITE: DON HENRY POWER CENTER
APPROVED BY:
DRAWN BY: D. LANGLEY 01/17/00
DRAWING NO. 9944T1562
SCALE: NTS
SHEET NO.E019 36 OF 39

AA
SYNC LIGHTS



1– AB(4)
1– AB(3)
} E004

AB SYNCH SCOPE

5– AM(2)
2– AD(3)
3– BA(6)
4– BA(2), TBH(7)
} E004

AC GEN VM

5– AD(4), TBG(1)
6– AD(3), TBG(2)
} E004

AD GEN FM

4– AC(5), BA(1)
3– AC(6), AB(2), AM(2)
} E004

AE BUS VM

4– TB(H3), (1)
3– TB(H4), (2)
} E002
E004

AM BUS FM

1– AE(4), BA(5)
2– AE(3), AB(1), AD(3)
} E004

BA 43S–CS

JUMPERS
1–3
2–4
5–7
6–8

1– AD(4)		7–	
2– TBH(7), AB(4)		8–	
3–		9– TBJ(2)	
4–		10– TBJ(1)	
5– AM(1)		11– TBJ(4)	
6– TBH(5), AB(3), AA(1)		12– TBJ(3)	

} E004

BB 86G

JUMPERS
4–6

B– FU–14(4)	G– TBL(3)		
1– TBM(3)	9– TBP(3)	17–	
2– TBM(4)	10– TBP(4)	18–	
3– TBR(4)	11–	19–	
4– AV(B10)	12–	4–	
5– TBR(3)	13– TB1(16)	20–	
6– AU(B10)	14– TB1(15)	21– TBP(1)	
7– TB1(20)	15– TB1(36)	22– TBP(2)	
8– AV(A26)	16– TBL(10)	24–	

} E013

CA 52GX–1

1– AV(A12)		8–	
2–		9– AV(B19), TBR(12)	
3– AV(B12)		10–	} SPARE
4– AV(A16)		11–	
5–		12–	
6– AV(B16)		13– TBK(8), CB(13)	
7– AV(A19), TBR(11)		14– TBK(10), CB(14)	

E021
E006E

CB 52GX–2

1–		8– TBP(5)	
2–		9– TBP(6)	
3–		10– TBR(3)	
4–		11–	
5–		12– AV(B27)	
6–		13– CA(13), CC(13)	
7–		14– CA(14), CC(14)	

E021
E006E

CC 52GX–3

1– BD(A17)		8–	} SPARE
2–		9–	
3– BD(A18)		10–	} SPARE
4– BC(10)		11–	
5–		12–	
6– BC(11)		13– CB(13)	
7– SPARE		14– CB(14)	

E017

CD KS–1

1–		8–	
2– TBL(2), BD(A01)		9–	
3– TBL(3), BD(A02)		10–	
4–		11–	
5– TBN(7)		12–	
6– TBN(8)		13– TBL(1)	
7–		14– TBK(12)	

E017
E009B

CD AUX PT – 208/120V

H1 – TBH(1)	X1 – TBH(3)
H2 – TBH(2)	X2 – TBH(4)

E002

NOTE: ALL TEXT DENOTED EO** ARE SHEET NUMBERS.

Proprietary Information of:
ICS INNOVATIVE CONTROL SYSTEMS, INC.

REV	DESCRIPTION:	BY	APPROVED	DATE
REV 3	AS BUILTS MODIFICATIONS	DDL		12/14/01
REV 2	MODIFICATIONS:	CS		09/10/01
REV 1	AS BUILTS:	CF		04/17/00

GUAGE, SWITCH, AND AUX RELAY CONNECTION DIAGRAM
GENERATOR PROTECTION SYSTEM
99174–GTB–103

CUSTOMER: HASTINGS UTILITIES
SITE: DON HENRY POWER CENTER
APPROVED BY:
DRAWN BY: D. LANGLEY 01/17/00
DRAWING NO. 9944T1562
SCALE: NTS
SHEET NO. E020 37 OF 39

AV DECS-300

A1	TB1(13) E006A	B1		C1	
A2	TB1(12) E006A	B2		C2	TBG(4) E002
A3	SHIELD E006A	B3		C3	
A4		B4		C4	
A5		B5		C5	
A6		B6		C6	
A7		B7		C7	
A8		B8		C8	TBG(3) E002
A9	TBR(2) E006E	B9		C9	
A10	TBR(4) E006E	B10	BB(4) E006E	C10	
A11		B11		C11	TBH(3) E002
A12	CA(1) E006E	B12	CA(3) E006E E006E	C12	
A13		B13		C13	
A14	TBR(7) E006E	B14		C14	AH(4) E002
A15	TBR(5) E006E	B15	TBR(6) E006E	C15	
A16	CA(4) E006E	B16	CA(6) E006E	C16	AH(11) E006A
A17	TBR(8) E006E	B17	TBR(9) E006E	C17	AH(13) E006A
A18	TBR(10) E006E	B18		C18	
A19	CA(7) E006E	B19	CA(9) E006E	C19	
A20		B20		C20	
A21	TBS(1) E006E	B21	TBS(2) E006E	C21	TB1(18) E006A
A22		B22		C22	TB1(19) E006A
A23	TB1(20) E006F	B23	TB1(23) E006F	C23	TB1(42) E006A
A24	TBP(9) E015	B24	TBP(10) E015	C24	TB1(41) E006A
A25	TBK(11) E009B	B25	TBL(1) E09B	C25	
A26	BB(8) E006F	B26	TB1(22) E006F	C26	GND E006A
A27		B27	CB(12) E006A	P1	AW(J1) E006A
A28	TB1(20) E006F	B28	TB1(24) E006F		
A29	TBN(3) E014	B29	TBN(4) E014		
A30	TBN(1) E014	B30	TBN(2) E014		

JUMPERS
A10-A27
A13-B13
A23-A28

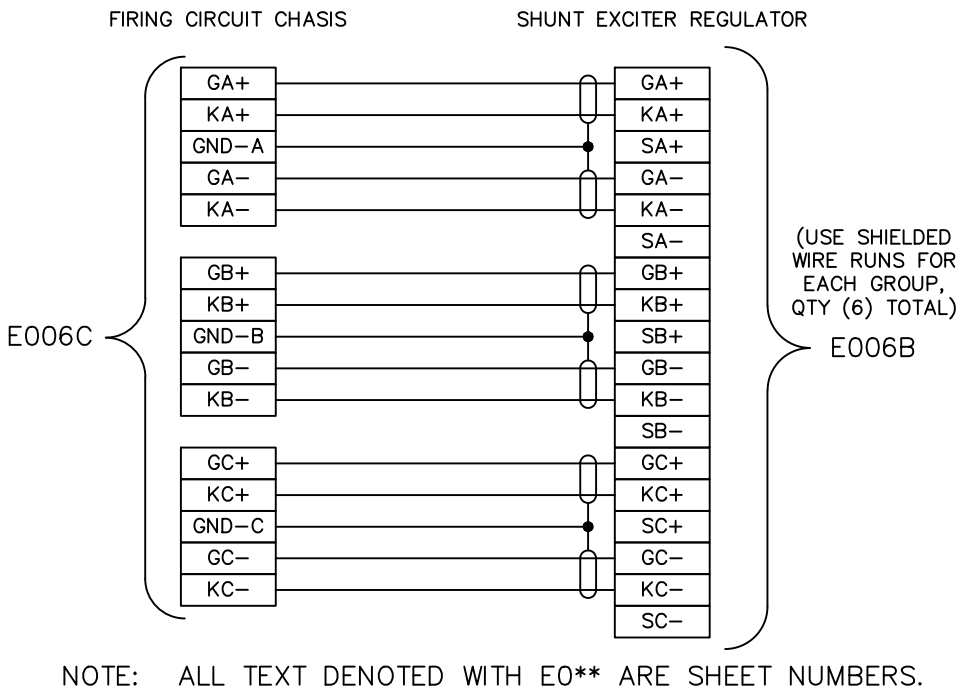
AW FIELD ISOLATION MODULE

+250 - TBJ(9)
-250 - TBJ(10) } E005

+100 - TBK(2)
-100 - TBK(3) } E005

J1 - AV(P1) E006A

SCR FIRIING CONNECTION DIAGRAM



NOTE: ALL TEXT DENOTED WITH E0** ARE SHEET NUMBERS.

TERMINAL BLOCK 1

F-	E006B
F+	E006B
1	
2	TBJ(12) E018
3	
4	
5	TB3(F+) E006B
6	TB3(F-) E006B
7	TB3(P1) E021
8	TB3(P3) E021
9	TB2(A) E006B
10	TB2(B) E006B
11	TB2(C) E006B
12	AV(A2) E006A
13	AV(A1) E006A
14	SHIELD E006A
15	BB(14) E020
16	BB(13) E020
17	
18	AV(C21) E006A
19	AV(C22) E006A
20	BB(7), AV(A28), TB3-3 E020, E021, E006F
21	TB3-4 E006F
22	AV(B26) E006F
23	AV(B23) E006F
24	AV(B28) E006F
25	
26	
27	
28	
29	
30	
31	
32	
33	TBM(2) 1156 E012
34	TBM(1) 1157 E012
35	25A(5) E004
36	BB(15) E011
37	
38	
39	
40	
41	AV(C24) E006A
42	AV(C23) E006A
43	
44	
45	
46	

TERMINAL BLOCK 2

A	TB1(9) E006B
B	TB1(10) E006B
C	TB1(11) E006B

TERMINAL BLOCK 3

P1	TBK(4), TB1(7) E006B
P2	TBK(5) E006B
P3	TBK(6), TB1(8) E006B
F-	TB1(6) E006B
F+	TB1(5) E006B
F0	

Proprietary Information of:
ICS INNOVATIVE CONTROL SYSTEMS, INC.

REV	DESCRIPTION:	BY	APPROVED	DATE
REV 2	MODIFICATIONS:	CS		02/19/01
REV 1	AS BUILTS:	CF		04/17/00

DECS-300 CONNECTION DIAGRAM
GENERATOR PROTECTION SYSTEM
99174-GTB-103

CUSTOMER: HASTINGS UTILITIES
SITE: DON HENRY POWER CENTER
APPROVED BY:
DRAWN BY: D. LANGLEY 01/17/00
DRAWING NO. 9944T1562
SCALE: NTS
SHEET NO. E021 38 OF 39

43S–CS SYNCHRONIZING CONTROL SWITCH

CONTACT	POSITION		
	MANUAL	OFF	AUTO
1 — 2			X
3 — 4	X		
5 — 6			X
7 — 8	X		
9 — 10			X
11 — 12	X		

(SH. E004)
KRAUS & NAIMER MODEL XXXX

X – DENOTES CONTACT CLOSED

86G GENERATOR LOCKOUT RELAY

CONTACT	POSITION	
	TRIP	RESET
1 — 2	X	
3 — 4	X	
5 — 6		X
7 — 8		X
9 — 10	X	
11 — 12	X	
13 — 14		X
15 — 16		X
17 — 18	X	
19 — 20	X	
21 — 22		X
23 — 24		X

(SH. E013)
KRAUS & NAIMER MODEL XXXX

52G–CS GENERATOR BREAKER CONTROL SWITCH

CONTACT	POSITION			
	LCO	TRIP	OFF	CLOSE
1 — 2				X
3 — 4	X	X		
5 — 6	X			
7 — 8	X			

(SH. E011 & E012)
KRAUS & NAIMER MODEL XXXX

70–CS GOVERNEOR RAISE/LOWER CONTROL SWITCH

CONTACT	POSITION		
	LOWER	OFF	RAISE
1 — 2	X		
3 — 4			X

(SH. E015)
KRAUS & NAIMER MODEL XXXX

Proprietary Information of:
ICS INNOVATIVE CONTROL SYSTEMS, INC.

REV	DESCRIPTION:	BY	APPROVED	DATE
REV 1	AS BUILTS:	CF		04/17/00

DEVICE CONNECTIONS & ARRANGMENTS
GENERATOR PROTECTION SYSTEM
99174–GTB–103

CUSTOMER: HASTINGS UTILITIES
SITE: DON HENRY POWER CENTER
APPROVED BY:
DRAWN BY: D. LANGLEY 01/17/00
DRAWING NO. 9944T1562
SCALE: NTS

13.8kV BUS

STATION SERVICE TRANSFORMER

112.5kVA 13.8kV – 480Y/277

52AR

TO 480V MOTOR CONTROL CENTER

PT–B

BUS PT
8400/120V

(3) 0.5A

CT5

CT5
2000/5

(3)

AUTO SYNC

A

25AS

A

CLOSE 52G

52G
AM 13.8
500MVA
1200A

PT–B

CT5

CT5A

SCHWEITZER SEL–300G
MULFUNCTION RELAY

24 – VOLTS/HZ
27 – UNDERVOLTAGE
32 – REVERSE POWER
40 – LOSS OF FIELD
46 – NEGATIVE SEQUENCE
50BF – GEN. BREAKER FAILURE
50/27 – INADVERTENT GEN. ENERG.
59 – OVERVOLTAGE
51N – STATOR GND. FAULT
60FL – FUSE LOSS DETECTION
810/U – OVER/UNDER FREQUENCY
87G – GENERATOR DIFFERENTIAL

ALARMS TRIP 52G TRIP 86G GNCTA CT1A

GEN PT
14,000/120V

PT–G

(1) 0.5A

PT–B

TO BUS DIFFERENTIAL RELAYS

PT–B

POWER MONITOR

CT4
2000/5

(3)

PT–G

CT3
2000/5

(1)

CT2

LA

SURGE CAPS

PPT

PT–G

SW

DECS–300
DIGITAL
V–REG
CONTROL

CT3

FA

FV

CW

ET

GEN.
FLD.

GEN
29,600kVA
13.8kV 60HZ
1238A .9PF

FA XDCR

STATIC
EXCITATION
RECTIFIER
& REACTORS

SHUNT
(300A = 100mV)

SCT

FV XDCR

CT2
2000/5

(3)

CT1

CT1
2000/5

(3)

SCT

CW

SW

SCT

PT–B

CT5A

SCHWEITZER SEL–300G
MULFUNCTION RELAY

24 – VOLTS/HZ
27 – UNDERVOLTAGE
32 – REVERSE POWER
40 – LOSS OF FIELD
46 – NEGATIVE SEQUENCE
50BF – GEN. BREAKER FAILURE
50/27 – INADVERTENT GEN. ENERG.
59 – OVERVOLTAGE
51N – STATOR GND. FAULT
60FL – FUSE LOSS DETECTION
810/U – OVER/UNDER FREQUENCY
87G – GENERATOR DIFFERENTIAL

GNCTA

CT1A

ALARMS TRIP 52G TRIP 86G GNCTA CT1

64F

ALARM

GNCT

GNTC
2000/5

(1)

NEUTRAL GROUND REACTOR
.7 OHMS 450A CONT.,
8500AMP FOR 10 SEC.

GND

Proprietary Information of:

ICS INNOVATIVE CONTROL SYSTEMS, INC.

REV	DESCRIPTION:	BY	APPROVED	DATE

SYSTEM ONE LINE
GENERATOR PROTECTION SYSTEM
99174–GTB–103

CUSTOMER: HASTINGS UTILITIES
SITE: DON HENRY POWER CENTER
APPROVED BY:
DRAWN BY: D. LANGLEY 01/17/00
DRAWING NO. 9944T1562
SCALE: NTS
SHEET NO. EA06 39 OF 39