



Wilma Kelly
Purchasing
Manager

City of Alexandria

Purchasing Department
P.O. Box 71
Alexandria, Louisiana
71309-0071



Office: (318) 441-6180
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Sealed bids will be received until **10:00 AM, Tuesday, June 14, 2022**, and publicly opened in the Council Chambers or Council Committee Room.

City of Alexandria Bid #**2378**
Page: 1 of
Date Specifications Prepared: May 14, 2017

Bid Bond Requirements: A bid bond or check for N/A% of the total amount of bid.

Performance Bond Requirements: In the event bid is accepted, a performance bond shall be required in the amount of N/A%.

Please file bid with the following:

Donna Jones, City Clerk
City of Alexandria - City Hall
915 Third Street
P.O. Box 71
Alexandria, LA 71309-0071
Phone: 318-449-5090

INTRODUCTION

Relay Panel for Prescott Substation

It is the intent of the City of Alexandria to secure pricing on PRE-WIRED RELAY PANELS & ASSOCIATED EQUIPMENT, for use by the City of Alexandria Electric Distribution Department for Prescott Substation

All products shall be new and of current year manufacture. Quoted prices shall be for pre-wired relay panels and associated equipment/materials only, NO installation is to be included in bid price.

Each unit shall be equipped with the manufacturer's equipment and accessories which are included as "standard" in the advertised and published literature for the unit. No such item of equipment shall be removed or omitted for the reason that it was not specified in the bid documents.

All bid prices shall include any and all freight charges. All products are to be shipped F.O.B., freight pre-paid, to the City of Alexandria Electric Distribution Department, to the attention of Bobby Clifton, 1015 North Third Street, Alexandria, LA 71303.

Questions and/or clarifications of bid specifications are to be in written form only, either mailed, faxed, or e-mailed to the attention of Bobby Clifton, City of Alexandria - Purchasing Department, P.O. Box 71, Alexandria, LA 71309-0071; Fax #318-473-1325; e-mail Bobby.Clifton@CityofAlex.com; and must be received by close of business (5:00 P.M.) on Thursday, May 31, 2022.

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
PRE-WIRED RELAY PANELS & ASSOCIATED EQUIPMENT**

GENERAL CONDITIONS FOR BIDDERS - PLEASE READ CAREFULLY

1. Pursuant to LA R.S 38:2212.1. C.(1)(2), any manufacturer's preference in this proposal is descriptive, but non-restrictive, and is used only to indicate minimum requirement for type, grade and quality unless otherwise specified.
2. Pursuant to LA R.S. 38:2212 B.(1), the provisions and requirement of this bid shall not be considered as informalities and shall not be waived by the City of Alexandria. Therefore, conditions and specifications on this bid form shall be strictly enforced and any and all alterations, deviations, and non-compliance to said conditions and specifications, either on the bid form or by separate attachment, shall be grounds for immediate disqualification.
3. Preference shall be given to bidders quoting F.O.B. Destination (the City of Alexandria Electrical Distribution Department), FREIGHT PREPAID, unless otherwise requested.
4. Each bidder shall submit his proposal on the proposal form furnished by the City of Alexandria Purchasing Department. The complete bid package must be returned as issued by the City with all pages intact and all specification response columns filled in. Incomplete columns or missing pages, to include addendum pages, shall result in the vendor's entire bid package being rejected.
5. Literature, brochures, and other related paperwork attached to the bid should be identified with the name of the bidder and bid item number.
6. In case of a mathematical discrepancy between unit price and extensions, the unit price shall prevail.
7. Pursuant to LA R.S. 38:2212 F., the bid specifications may contemplate a fixed escalation or de-escalation in accordance with the United States Bureau of Labor Statistic's Consumer Price Index or the Producer Price Index. Bids based on specifications which are subject to a recognized escalation index shall be legal and valid for any item of a public work, at the discretion of the City.
8. Pursuant to LA R.S. 38:2212.1. F., any public procurement unit may participate in a cooperative purchasing agreement with the City of Alexandria to acquire quantities of the above listed items under a contract with the City of Alexandria for items awarded by public bid, pursuant to the cooperative purchasing provisions of Part VII of Chapter 17 of Subtitle III of Title 39 of the Louisiana Revised Statutes of 1950, R.S. 39:1701 et seq.
9. The City of Alexandria reserves the right to award by item or by total bid, unless otherwise specified in the bid specifications. (Price(s) should be itemized.)
10. All erasures or corrections on the bid form must be initialed and the City of Alexandria may rely on the apparent authority represented by the initials.
11. The City of Alexandria reserves the right to reject for cause any and all bids or parts of bids, or accept bids most beneficial to the City.

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
PRE-WIRED RELAY PANELS & ASSOCIATED EQUIPMENT**

General Conditions for Bidders - Please Read Carefully (Continued)

12. Any bid submitted which contains additions, conditional or alternate bids, or irregularities which may make the proposal incomplete, indefinite, or ambiguous as to its meaning, thus requiring clarification after the specified date and time of bid opening shall be rejected.
13. Bids shall be opened publicly in the City Council Chambers or Council Committee Room.
14. Cash discounts may be accepted but SHALL NOT be considered in making award.
15. Regarding a bid for purchase of materials, supplies or services, not to include construction of any public works, a written notice of acceptance mailed or otherwise furnished to the successful bidder shall result in a binding contract without further action by either party.
16. When any bid is accepted for the construction or doing of any public works, a written contract shall be executed by and between the City of Alexandria and the Contractor. No contract shall be binding upon the City until it has been executed by the City and delivered to the successful bidder. Should the bidder to whom the contract is awarded fail to execute the contract, the award shall then be made to the next lowest responsible bidder, or re-advertised for public bid, said decision to be in the sole judgment of the City of Alexandria. This action may result in the loss of bidding privileges for a period of one (1) year.
17. The City of Alexandria shall schedule for payment the invoices for articles or services purchased under this bid within thirty (30) days after due and proper delivery accompanied by invoice.
18. The City of Alexandria is exempt from all sales taxes. A sales tax-exempt form shall be furnished by the City of Alexandria Purchasing Department, if requested.
19. Bidder(s) awarded item(s) by the City of Alexandria shall be responsible for supplying all products at the awarded price(s). Failure may result in the City's cancellation of the remaining items awarded.
20. Regarding Service Contracts and Procurement Contracts, the terms of the contract shall be binding upon any and all parties involved until goods and supplies are delivered, services have been rendered, and/or work has been completed and accepted by the Mayor on behalf of the City of Alexandria and all payments required to be made to the Contractor have been made. However, a contract may be terminated under any and all of the following conditions:
 - (a) By mutual agreement and consent of either party upon thirty (30) days written notice to the other party;
 - (b) By the Mayor, on behalf of the City of Alexandria, as a consequence of the failure of the Contractor to comply with the terms and conditions of the contract or the progress or quality of work to be performed in a satisfactory manner, proper allowance being made for circumstances beyond the control of the Contractor; or
 - (c) By satisfactory completion of all services and obligations described in the contract.

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
PRE-WIRED RELAY PANELS & ASSOCIATED EQUIPMENT**

General Conditions for Bidders - Please Read Carefully (Continued)

If the contract is terminated for any of the terms and conditions authorized in sub-paragraph (b) above, Contractor shall be formally notified in writing by the City of Alexandria Purchasing Department by means of certified mail informing him of cancellation of the contract, giving specific reasons for said cancellation. Contractor shall have the right to appeal to the City Council within ten (10) days from the date that said notification is placed in the U.S. Mail. Contractor's appeal shall be accomplished by means of a letter addressed to the City Council and delivered to the City Clerk, stating that an appeal to the decision of cancellation is desired. The City Council shall thereafter hold a hearing on the appeal, giving all parties the opportunity to present any and all evidence concerning the decision of cancellation. After hearing the appeal, the city Council may, by a majority vote, sustain, modify, or reverse the findings for said decision and shall provide, if requested by Contractor, a written determination of its findings.

21. Contractors submitting bids for Public Works construction projects in excess of \$1.00 must show his Contractor's License Number on the front of the bid envelope, except for certain projects for which a Contractor's License Number is not required by the State Contractor's Licensing Board. Failure to comply with this directive shall result in automatic bid rejection, furthermore, any Contractor who submits a bid for a type of construction for which he is not properly licensed shall be acting in violation of LA R.S. 37:2163, and shall be subject to all provisions for violation and penalties thereof. Contractors who are owned by, and are submitting a bid as a subsidiary of a parent company, whose name is listed in the State of Louisiana's Roster of Licensed Contractors, may do so by including a letter of proof of ownership from the parent company with the submitted bid package. The letter must be signed as per LA R.S. 38:2212 B.(5)(a)(b)(c) (see Item #22 below).

22. All bids submitted via USPS (registered or certified), overnight courier or hand delivered, shall be signed by hand and in ink by an authorized company representative per LA R.S. 38:2212 B.(5)(a)(b)(c), which states:

(c)(i) Evidence of agency, corporate, or partnership authority shall be required for submission of a bid to the division of administration or the State of Louisiana. The authority of the signature of the person submitting the bid shall be deemed sufficient and acceptable if any of the following conditions are met:

(aa) The signature on the bid is that of any corporate officer listed on the most current annual report on file with the Secretary of State, or the signature on the bid is that of any member of a partnership or partnership in commendam listed in the most current partnership records on file with the Secretary of State.

(bb) The signature on the bid is that of an authorized representative of the corporation, partnership, or other legal entity and the bid is accompanied by a corporate resolution, certification as to the corporate principle, or other documents indicating authority which are acceptable to the public entity.

(cc) The corporation, partnership, or other legal entity has filed in the appropriate records of the Secretary of State in which the public entity is located, an affidavit, resolution, or other acknowledged or authentic document indicating the names of all parties authorized to submit bids for public contracts. Such document on file with the Secretary of State shall remain in effect and shall be binding upon the principal until specifically rescinded and canceled from the records of the office.

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
PRE-WIRED RELAY PANELS & ASSOCIATED EQUIPMENT**

General Conditions for Bidders - Please Read Carefully (Continued)

23. In-State preferences shall not apply to procurements involving federal funds.
24. Pursuant to LA R.S. 38:2212 O.(2)(a)(b), any modifications of plans and specifications will be made through an addendum. No addendum shall be issued within seventy-two (72) hours of the bid opening, excluding weekends and legal holidays, without the extension of the bid opening date. An extension of at least seven (7) but no more than thirty (30) working days is required but, re-advertising is not required. The addendum shall be transmitted by any one of the following methods: (1) facsimile transmission; (2) e-mail; (3) by hand; or (4) posted on the City of Alexandria's website (www.cityofalexandrialala.com) and posted on Central Bidding's website (www.centralauctionhouse.com) if applicable.
25. All Federal Transit Administration (FTA) funded procurements, including operating assistance funding contracts, are to follow the *Master Agreement*, to include all applicable federal clauses.
- a. Any bidder that is found listed on the Federal Government's *System for Award Management* (SAM) website, at www.sam.gov/portal/sam, under the advanced search feature for *Excluded Parties List System* (EPLS), shall automatically be rejected for the award of this bid, by Category and/or in its entirety. This applies to any portion of the bid that is a procurement funded by FTA.
26. Under the City's *AFEAT (Alexandria Fairness, Equality, Accessibility, and Teamwork Program)*, participation by minority and/or disadvantaged business enterprise firms is encouraged. The *AFEAT* Program should be inquired about through the Division of Finance.

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
PRE-WIRED RELAY PANELS & ASSOCIATED EQUIPMENT**

Alexandria Fairness, Equality, Accessibility, and Teamwork Program (AFEAT)

Dear Vendor:

Under the City's AFEAT (*Alexandria Fairness, Equality, Accessibility, and Teamwork Program*), participation by minority and/or disadvantaged business enterprise firms is encouraged. The AFEAT Program should be inquired about through the Division of Finance. The goals for qualifying disadvantaged, minority and female owned business in the use of professional service agreements with prime contractors will help effectuate the goals of increasing: the competitive viability of small business, minority, and women business enterprise by providing contract, technical, educational, and management assistance; business ownership by small business persons, minority persons, and women (including professional service opportunities); and the procurement by the City of professional services, articles, equipment, supplies, and materials from business concerns owned by small business concerns, minority persons, and women.

Prime contractors offering subcontracting should take specific action to ensure that a bona fide effort is made to achieve maximum results towards meeting the established goals. Primes shall document efforts and shall implement steps at least as extensive as the following in a good faith effort to reach or exceed the established goals:

- A. *Establish and maintain a current list of minority and female owned businesses in Alexandria, in Rapides Parish, and in the State of Louisiana.*
- B. *Document and maintain a record of all solicitations of offers for subcontracts from minority or female construction contractor and suppliers in Alexandria, in Rapides Parish, and in the State of Louisiana.*
- C. *Secure listing of minority and women owned businesses from the City of Alexandria Purchasing Department, the Central Louisiana Business Incubator, and the State of Louisiana Department of Minority Affairs.*
- D. *Participate in associations which assist in promoting minority and women owned businesses such as the Central Louisiana Business League, the Central Louisiana Business Incubator, and the Entrepreneurial League System.*
- E. *Designate a responsible official to monitor all activity made in the effort to achieve or exceed the established goals; record contacts made, subcontracts entered into with dollar amounts, and other relevant information.*

For more information on AFEAT and the City of Alexandria's Diversity in Action Initiative, and to explore a local and statewide directory of minority businesses, please visit www.diversityinaction.org.

Should you have any questions or comments, please do not hesitate to contact our Finance Department at 318-449-5091 or our Purchasing Department at 318-441-6180.

As a part of its RFP response, each Bidder **shall** submit documentation of its bona fide effort to secure subcontractors that meet the City's AFEAT goals. Each bidder **shall** also submit proof of engagement of any subcontractor selected because of its solicitations. The Bidder's bona fide efforts and engagement(s) are a consideration in bid review and rating.

Sincerely,

City of Alexandria

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
PRE-WIRED RELAY PANELS & ASSOCIATED EQUIPMENT**

1.0 Introduction

1.1 Scope

These specifications cover the requirements for furnishing the completely assembled panelboards described herein with all material designed, manufactured, and tested in compliance with the latest applicable standards of the American National Standards Institute (ANSI), the Institute of Electrical and Electronic Engineers (IEEE), and the National Electrical Manufacturers Association (NEMA).

1.2 Equipment

1.2.1 The intent of these specifications is to purchase one (1) completely engineered panel front assembly, for ultimate installation at the Prescott substation.

1.2.2 A Bill of Material is included for the panel as part of this specification.

2.0 General Specifications

2.1 All mounted equipment will be readily accessible and interchangeable for replacement, if necessary. Control and instrument switches will be located at such a height that the operator may use them conveniently.

2.2 The equipment will operate satisfactorily within the ambient temperature range of -30° to 55°C and a relative humidity as high as 100%.

3.0 Prescott Substation

3.1 The panel front assembly shall installed by others at the Prescott substation.

3.2 The Prescott panel assembly shall include relay/control equipment for the following:

3.2.1 Differential protection of the 138 kV transmission line that extends from the Prescott substation to the Bayou Rapides/Twin Bridges substations.

3.2.2 Differential protection of the 138 kV transmission line that extends from the Prescott substation to the Sterkx Road substation.

3.2.3 Fail-to-trip protection for Circuit Breakers 1, 2, and 3.

3.2.4 Fail-to-trip protection for Circuit Switchers 1 and 2.

3.2.5 Synchronize supervision of Circuit Breakers 1, 2, and 3.

3.2.6 Reclose supervision of Circuit Breakers 1 and 2.

3.2.7 Direct Transfer Trip of the Bayou Rapides and Twin Bridges terminals in the event Circuit Breaker 1 fails to trip.

3.2.8 Direct Transfer Trip of the Sterkx Road terminal in the event Circuit Breaker 3 fails to trip.

3.3 Panel assembly shall include wiring with pigtails for field termination by others. Length of pigtails shall be as indicated on the internal wiring diagram.

4.0 Spare Equipment

4.1 One spare of each of the following items shall be provided:

a) SEL 411L model 0411L0X4X5XXDDXH422XXXX

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
PRE-WIRED RELAY PANELS & ASSOCIATED EQUIPMENT**

5.1 REFERENCES

The Design, manufacture, and test in accordance with this section and applicable sections of the following standards:

- a) ANSI C37 Series, Protective Relays and Proposed Standard C37.21 for Control Switchboards
- b) ANSI C39.1, Switchboard Instruments
- c) ICEA, Specifications for Wire and Cable
- d) NEC, Current Rating of Control Wiring
- e) ASCE 7, Minimum Design Loads for Buildings and Other Structures

6.0 PROJECT/SITE CONDITIONS

- 6.1 Seismic loading per ASCE 7, 0.2 sec spectral response of 0.13g, Importance Factor 1.5, Site Class D.
- 6.2 The panel front assembly will be installed in an existing control building and mounted in an existing panel frame that is directly mounted to a concrete floor.

7.0 Construction

- 7.1 The panels shall be the Vertical Switchboard type. Panel dimensions and equipment layout will conform to the appropriate panel face arrangement diagram.
- 7.2 The panels shall be formed of No. 11 gauge, stretcher leveled or cold finished steel with all front edges and back edges formed in a 1/4-inch radius. All corners shall be welded for rigidity and ground smooth to present a neat appearance. All required interior support attachments shall be welded.
- 7.3 The panels shall be properly cleaned prior to painting per the paint manufacturer's recommendations. The panels shall be primed with zinc chromate primer followed by two coats of ANSI 61 Gray industrial grade paint. One small can of touch-up paint shall be provided as part of each panel.
- 7.4 There will be no butt joints or welds visible from the front of the panels.
- 7.5 All primary and auxiliary devices and all wiring to such devices will be completely accessible for operation, maintenance, removal and replacement. Panel wiring will not pass behind pieces that are not removable.
- 7.6 Cutouts and cover plates will be supplied where specified on approval prints. Cover plates will be fabricated of steel and painted to match the panel.
- 7.7 Power sources will be provided with fuses located within the panel. Fuse blocks will have molded phenolic barriers and will be rated at 250 volts. Fuses will be rated as indicated on the drawings. Fuse blocks will be G.E. Type 8421-3, or approved equal.
- 7.8 A copper 1/4" x 1" ground bus will be mounted near the bottom of each panel with provisions for connecting to adjacent panels. Four spare #10 screw connections will be provided on the ground bus.
- 7.9 Nameplates
 - 7.9.1 Nameplates will be furnished and mounted by the supplier. Nameplates will mount with stainless steel screws in accordance with the panel face arrangement drawings.
 - 7.9.2 Nameplates will be made of laminated black and white plastic with the black layer on the outside. Lettering will be engraved through the black outer layer such that the letters appear white. Nameplates shall be engraved in accordance with the appropriate label schedule as indicated on the nametag schedule.
 - 7.9.3 Nameplates or stencils giving the NEMA device function number and wiring diagram designation letter will be placed on the back of or adjacent to the connection side of each device.

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
PRE-WIRED RELAY PANELS & ASSOCIATED EQUIPMENT**

8.0. Wiring

- 8.1 All control wiring shall be no smaller than No. 14 AWG, 41 strand copper wire which is insulated with SIS insulation rated 600 volts or higher, except wire for current transformer secondary circuits shall be no smaller than No. 12 AWG, 65 strand copper.
- 8.2 Multi-strand Class K hinge wire shall be used where door openings require bending in service.
- 8.3 There will be no splices in the wiring and all connections will be made at device studs or terminal blocks.
- 8.4 All wiring where necessary will be terminated with T&B Stakon Type No. 10RC-10, or approved equal, insulated ring tongue connectors. All compression terminals shall be crimped with hand or power tools approved by the terminal manufacturer. If hand tools are used, they must be "ratchet" type tools that require full compression of the terminal barrel.
- 8.5 Fuse wiring will be arranged such that the source will be at the top and the load at the bottom of the fuse block.
- 8.6 No more than two (2) wires will terminate on each screw terminal.
- 8.7 All wires shall be marked at each end with vinyl printed labels to show local end terminal number-remote end device code and terminal number.
- 8.8 Exposed wiring shall be orderly, square, and neatly tied together with cable ties.
- 8.9 Wiring harnesses shall be provided for internal wiring terminations removed for shipment.

9.0 Equipment

Bills of Material that list the equipment to be installed on each panel are included on the respective panel layout drawings.

10.0 Drawings & Instruction Manuals

10.1 Drawings

10.1.1 The following drawings are included with this specification for each panel for bidding purposes:

- a. Relay Panel Layout Drawing with Nametag Schedule and Bill of Material.
- c. Internal Wiring Diagram.

10.1.2 Owner will supply the following drawings for each panel to the successful bidder for its use in fabricating the panels:

- a. One-line Diagram
- b. A.C. Schematics
- c. D.C. Schematics
- d. Panel wiring diagram and layout as viewed from the rear of the panel
- e. Panel layout as viewed from the front of the panel

10.1.3 In the event that there are any conflicts between the drawings and this specification, or between individual drawings, vendors are to bring such conflicts to the attention of Owner. Any lack of description or omission of required information shall be resolved at the earliest opportunity.

10.2 Instruction Manuals

10.2.1 Copies of instruction books for each panel mounted device will be provided as follows:

- a. One copy of each shall be shipped with the relay panels.
- b. Two copies of each shall be sent to the Owner.
- c. One electronic copy of each shall be sent to the Engineer.

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
PRE-WIRED RELAY PANELS & ASSOCIATED EQUIPMENT**

10.2.2 Included with each instruction book set will be a parts breakdown with ordering information on obtaining spare or replacement components.

11.0 Testing

11.1 Complete tests will be made to insure wiring correctness and proper function of all relay components before shipment from factory.

11.2 Factory tests shall simulate inputs to all current and potential circuits (A.C. Load Test) and verify output of all control, trip, and alarm circuits. All wiring shall be hi-pot tested within restrictions of protective relay specifications.

12.0 Warranty

12.1 The panel fabricator shall warrant the panel and all accessories to be free from defects in material and workmanship for a period of one year from the date of receipt of the panel by Owner. After receipt, the Owner shall inspect the panels for shipping damage and inform the panel fabricator if such damage exists. All parts found to be damaged shall be replaced or repaired to the complete satisfaction of the Owner. During the warranty period, the warranty shall cover the cost of removal from site, transportation to and from the repair facility, and reinstallation after repairs.

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
PRE-WIRED RELAY PANELS & ASSOCIATED EQUIPMENT**

BID FORM

**Relay Panels and Equipment
for Prescott Substation**

BIDDER'S REPRESENTATIONS

In submitting this Bid, Bidder represents that Bidder has examined copies of all the Bidding Documents and of the following Addenda (receipt of all which is hereby acknowledged):

<u>ADDENDUM NUMBER</u>	<u>DATE</u>
_____	_____
_____	_____
_____	_____
_____	_____

BASIS OF BID

Bidder will furnish the Goods in accordance with the specifications and drawings for the following prices:

ITEM DESCRIPTION

A. Prescott Substation Relay Panel

_____ and ____ /100 (\$ _____)
(Use Words) (Use figures)

DELIVERY OF GOODS

BIDDER agrees that the Goods will be delivered to the point of delivery within _____ days.

BIDDER INFORMATION:

Company Name: _____

Address: _____

City/State/Zip: _____

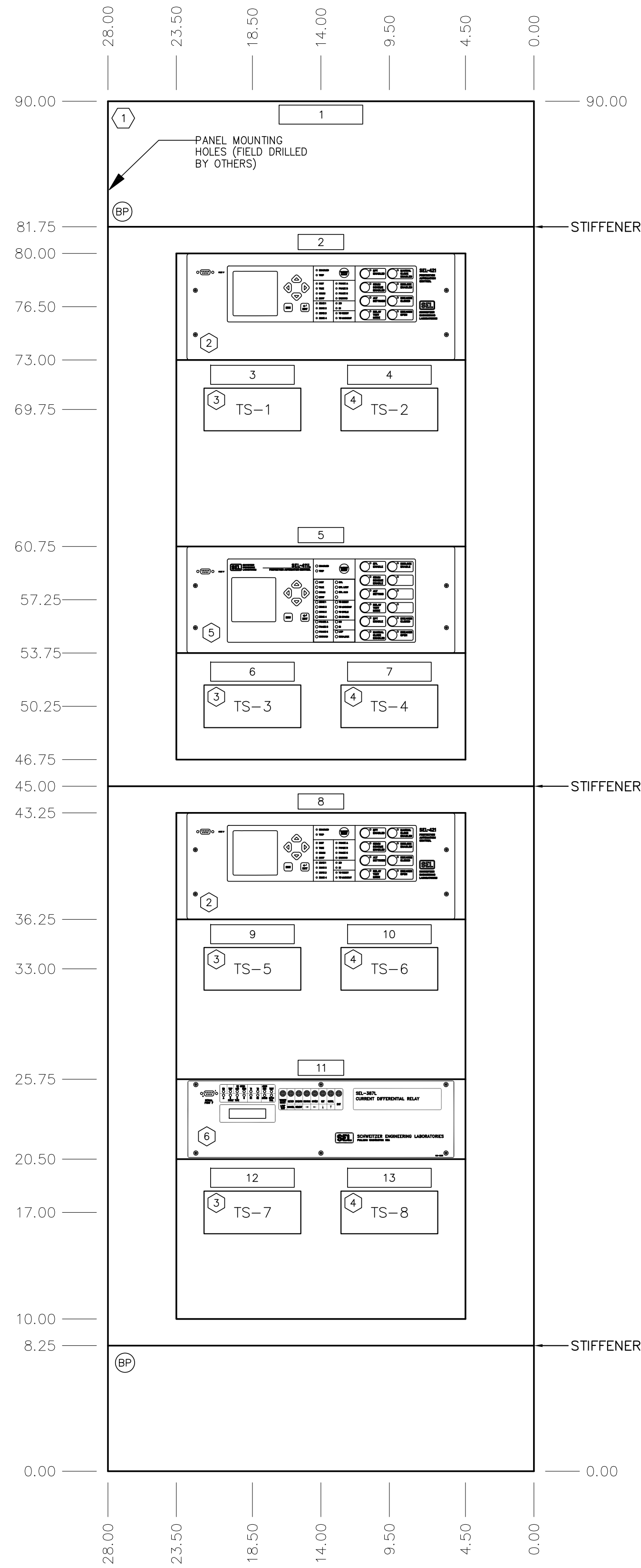
Telephone #: (_____) _____ Fax #: (_____) _____

Authorized Printed Name and Title: _____

Authorized
Signature: _____

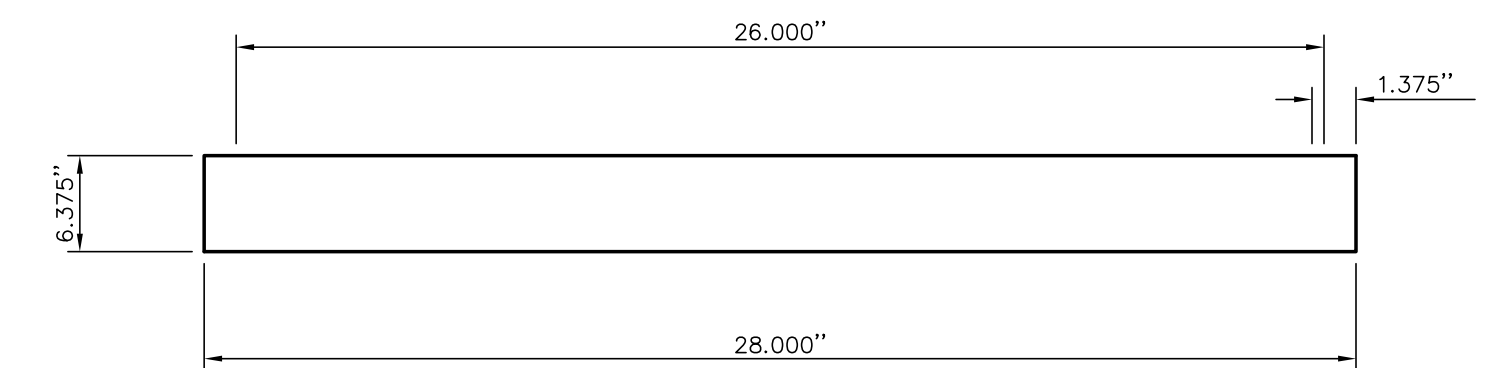
(Per LA R.S. 38.2212(A)(c)(i) – See General Conditions Item #22, Page 4 of these bid specifications.)

BHA246.DWG - 07/14/18
Prepared by Brooke-Henour & Associates, Inc. CAD SERVICES

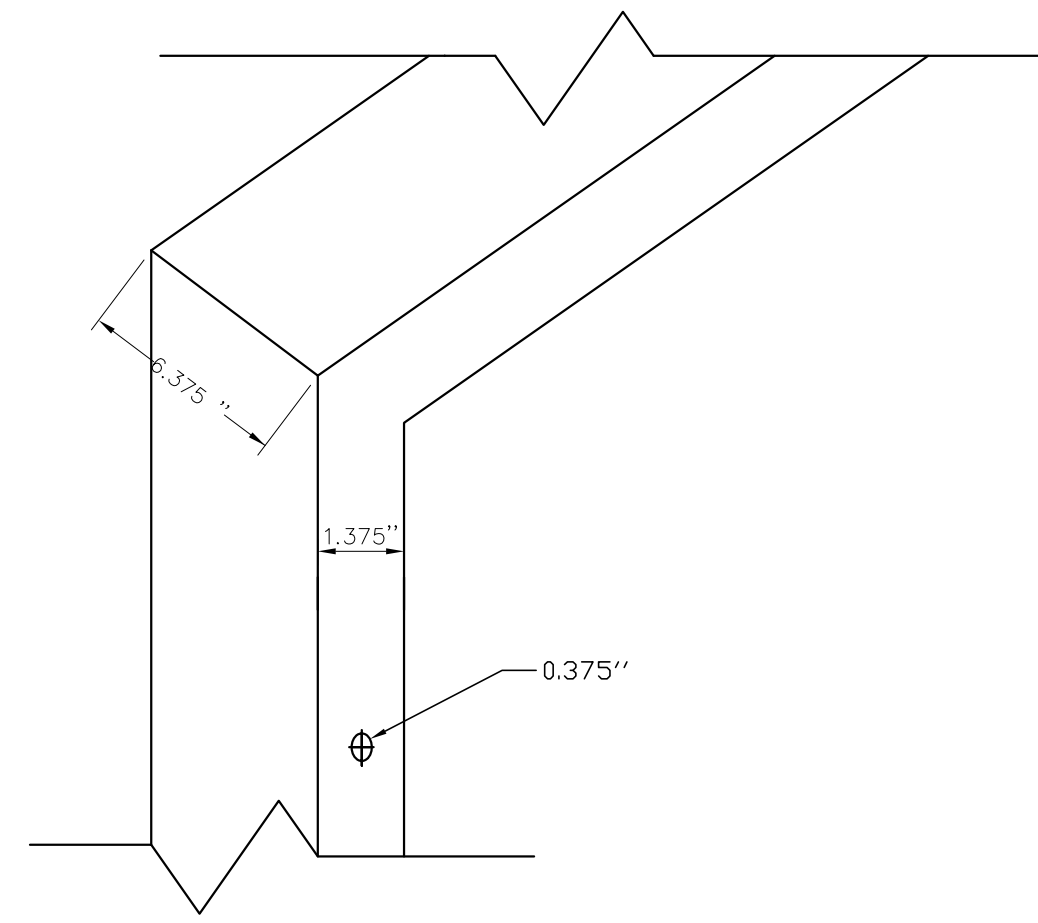


FRONT ELEVATION
LINE PROTECTION PANEL

- ① EQUIPMENT REFERENCE NUMBER - SEE BILL OF MATERIALS (THIS DWG.)
- 1 NAMETAG REFERENCE NUMBER - SEE NAMETAG SCHEDULE (THIS DWG.)
- BP BLANK PLATE - SIZED AS SHOWN



TOP VIEW
NOT TO SCALE



DETAIL
NOT TO SCALE

BILL OF MATERIAL				
ITEM	DESCRIPTION	MANUFACTURER	PART NO.	QTY.
1	STEEL PANEL PER SPECIFICATION	N/A	N/A	1
2	SEL-421 LINE DISTANCE RELAY, 48V DC	SEL	04214415XXX2H21XXXX	2
3	TEST SWITCH	STATES	FMS-10D	4
4	TEST SWITCH	STATES	FMS-10A	4
5	SEL-411 LINE DIFFERENTIAL RELAY, 48V DC	SEL	0411LOX4X5XDDX422XXXX	1
6	SEL-387L LINE CURRENT DIFFERENTIAL RELAY, 48V DC	SEL	0387L03D03X52X1	1
7	FUSE BLOCK 2 POLES, 30A, 600V	BUSSMAN	H25030-2S	8
8	FUSE CARTRIDGE 6A, 250V V NR	BUSSMAN	NON-6	8
9	FUSE CARTRIDGE 3A, 250V V NR	BUSSMAN	NON-3	8

NAMEPLATE ENGRAVING SCHEDULE					
N.P. NO.	SIZE	TEXT HEIGHT	FIRST LINE	SECOND LINE	THIRD LINE
1	1.25" x 5.5"	3/16"	BR/TB PANEL 1R	BAYOU RAPIDES/TWIN BRIDGES	AND STERKX LINES
2	1" x 3"	3/16"	BR/TB LINE 21	BACKUP DISTANCE	RELAY
3	1.25" x 5.5"	1/4"	See Detail #1		
4	1.25" x 5.5"	1/4"	See Detail #2		
5	1" x 3"	3/16"	BR/TB LINE 87L	CURRENT DIFF	RELAY
6	1.25" x 5.5"	1/4"	See Detail #3		
7	1.25" x 5.5"	1/4"	See Detail #4		
8	1" x 3"	3/16"	STERKX LINE 21	BACKUP DISTANCE	RELAY
9	1.25" x 5.5"	1/4"	See Detail #5		
10	1.25" x 5.5"	1/4"	See Detail #6		
11	1" x 3"	3/16"	STERKX LINE 87L	CURRENT DIFF	RELAY
12	1.25" x 5.5"	1/4"	See Detail #7		
13	1.25" x 5.5"	1/4"	See Detail #8		

TS1 - BR/TB 21 BACKUP RELAY										
LINE VOLTS				CB1 CURRENT						
VA	VB	VC	VN	IA OUT	IA IN	IB OUT	IB IN	IC OUT	IC IN	
0.428"	0.516"	0.516"	0.516"	0.516"	0.516"	0.516"	0.516"	0.516"	0.516"	0.428"

DETAIL 1
N.T.S. THIS DWG.

TS5 - STERKX RD 21 BACKUP RELAY										
LINE VOLTS				CB3 CURRENT						
VA	VB	VC	VN	IA OUT	IA IN	IB OUT	IB IN	IC OUT	IC IN	
0.428"	0.516"	0.516"	0.516"	0.516"	0.516"	0.516"	0.516"	0.516"	0.516"	0.428"

DETAIL 5
N.T.S. THIS DWG.

TS2 - BR/TB 21 BACKUP RELAY										
CB1 TRIP							BUS VOLTS			
OUT 102	CB1 BFI	CB1 BFT	CS1 BFT	ALARM	V	N				
0.428"	0.516"	0.516"	0.516"	0.516"	0.516"	0.516"	0.516"	0.516"	0.516"	0.428"

DETAIL 2
N.T.S. THIS DWG.

TS6 - STERKX RD 21 BACKUP RELAY										
CB3 TRIP							BUS VOLTS			
CB3 BFI	CB3 BFT	CB3 BFT	CS2 BFT	ALARM	CB2 BFT	V	N			
0.428"	0.516"	0.516"	0.516"	0.516"	0.516"	0.516"	0.516"	0.516"	0.516"	0.428"

DETAIL 6
N.T.S. THIS DWG.

TS3 - BR/TB 87L LINE DIFF RELAY										
LINE VOLTS				CB1 CURRENT						
VA	VB	VC	VN	IA OUT	IA IN	IB OUT	IB IN	IC OUT	IC IN	
0.428"	0.516"	0.516"	0.516"	0.516"	0.516"	0.516"	0.516"	0.516"	0.516"	0.428"

DETAIL 3
N.T.S. THIS DWG.

TS7 - STERKX RD 87L LINE DIFF RELAY										
				CB3 CURRENT						
				IA OUT	IA IN	IB OUT	IB IN	IC OUT	IC IN	
0.428"	0.516"	0.516"	0.516"	0.516"	0.516"	0.516"	0.516"	0.516"	0.516"	0.428"

DETAIL 7
N.T.S. THIS DWG.

TS4 - BR/TB 87L LINE DIFF RELAY										
CB1 TRIP							87 FAL			
CB1 BFI	CB1 BFT	CB1 BFT	DTT	ALARM	R2	FAL	ALARM			
0.428"	0.516"	0.516"	0.516"	0.516"	0.516"	0.516"	0.516"	0.516"	0.516"	0.428"

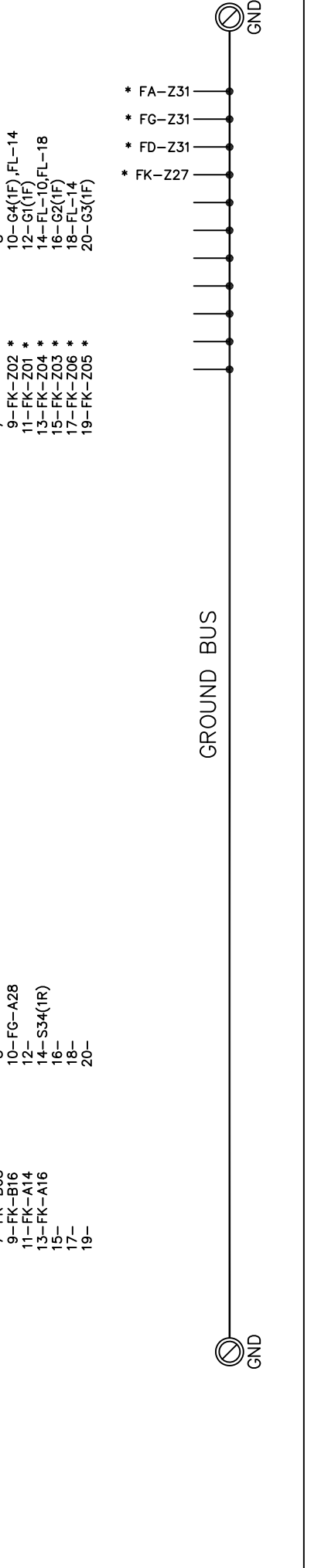
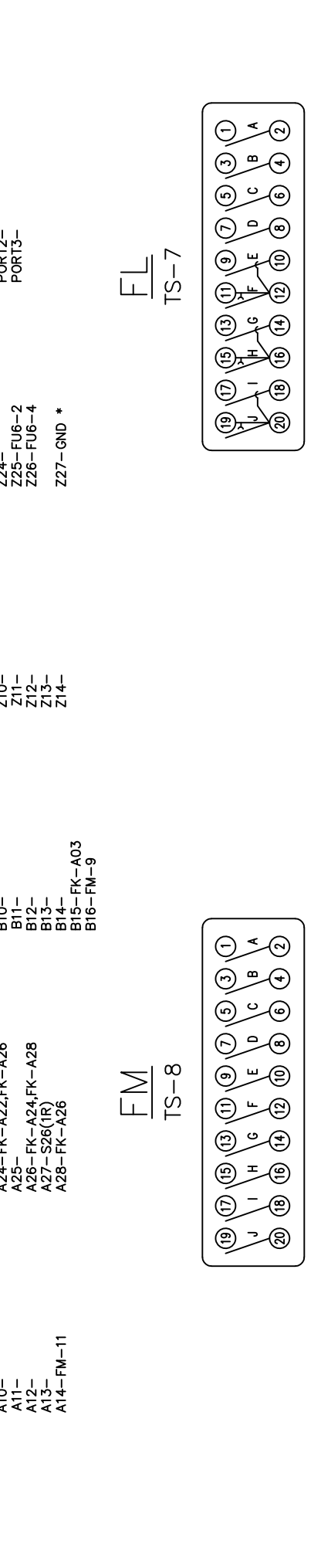
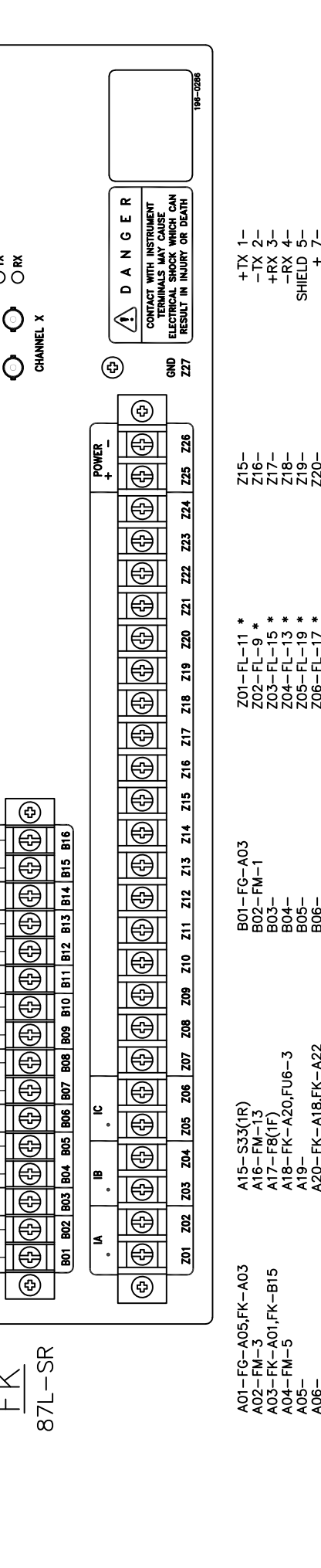
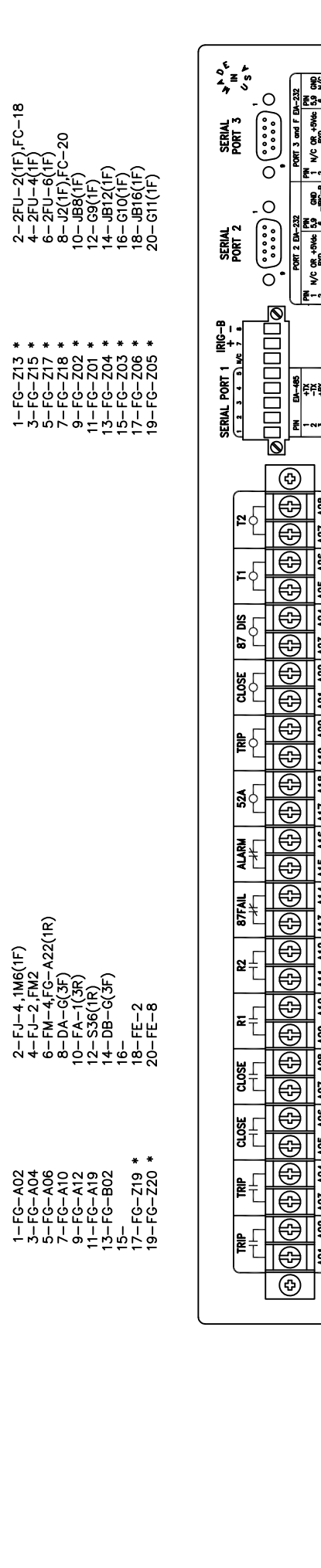
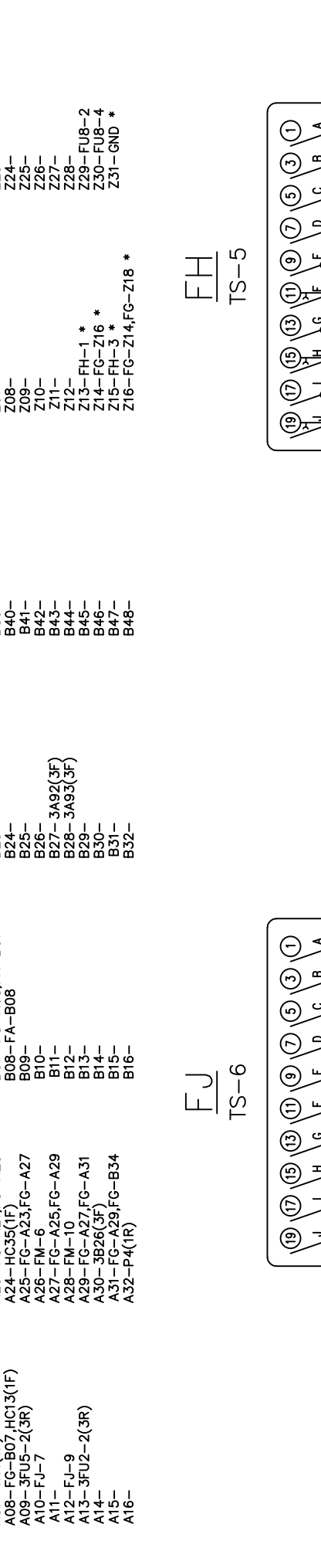
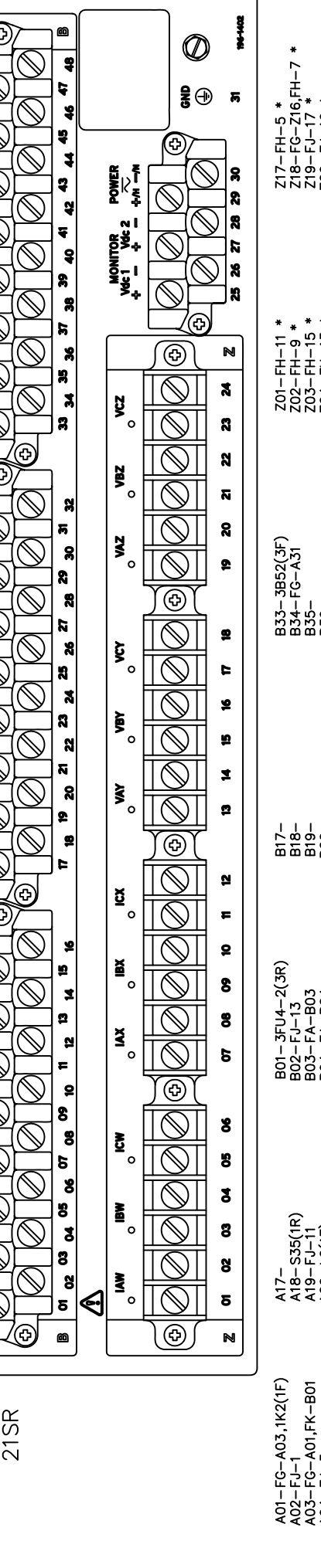
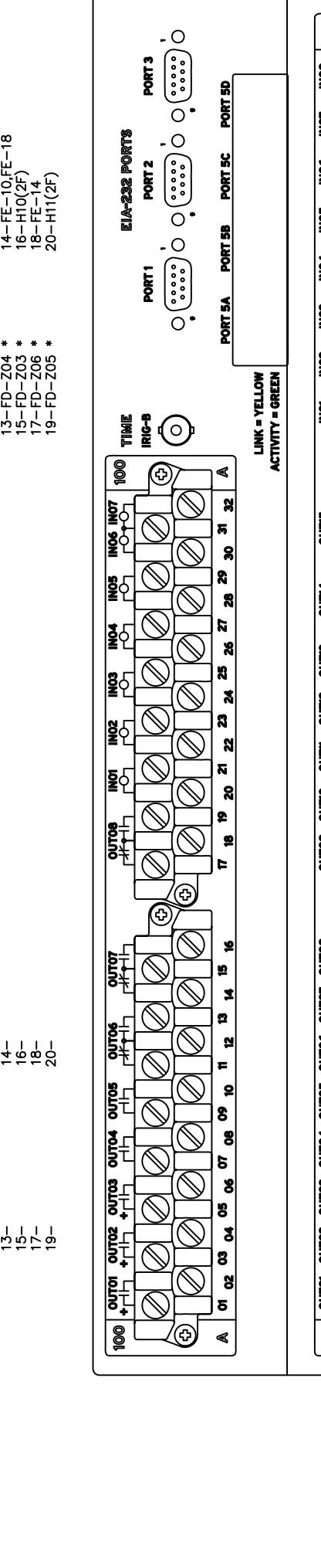
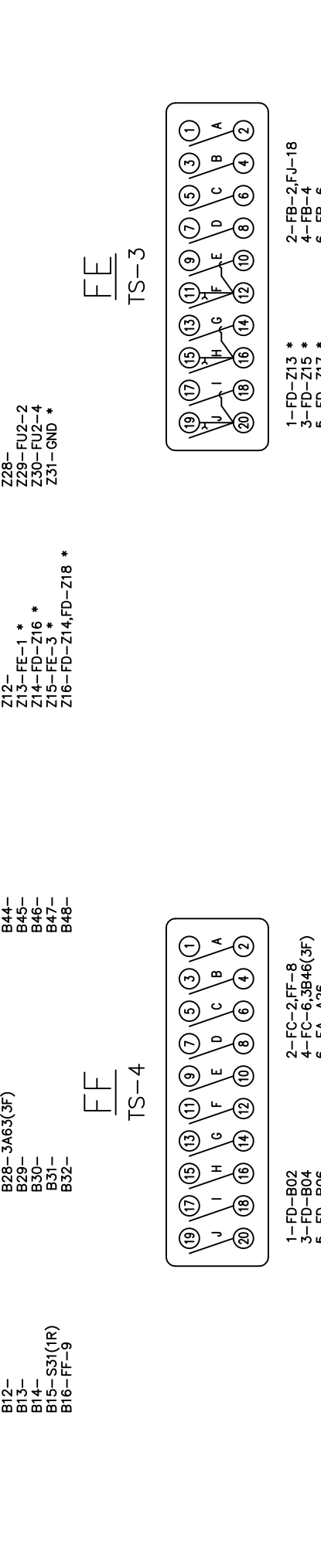
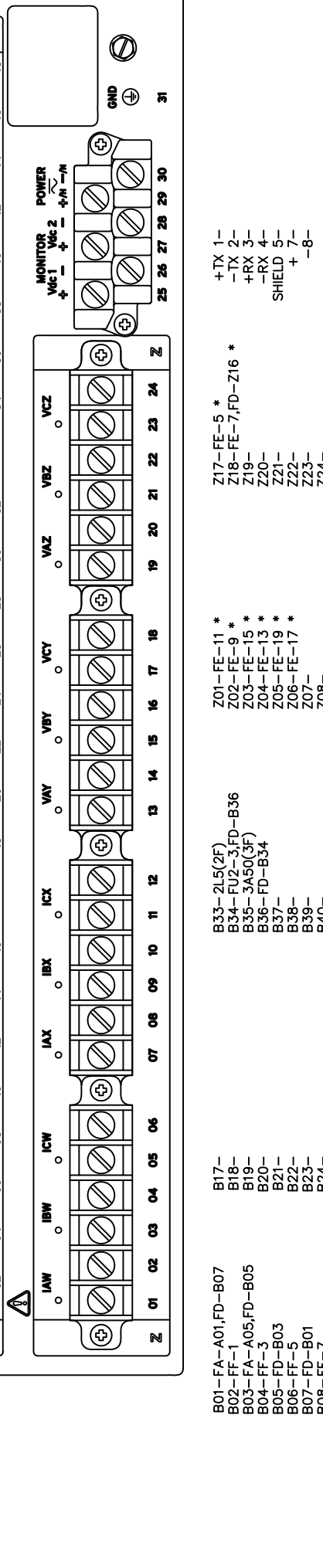
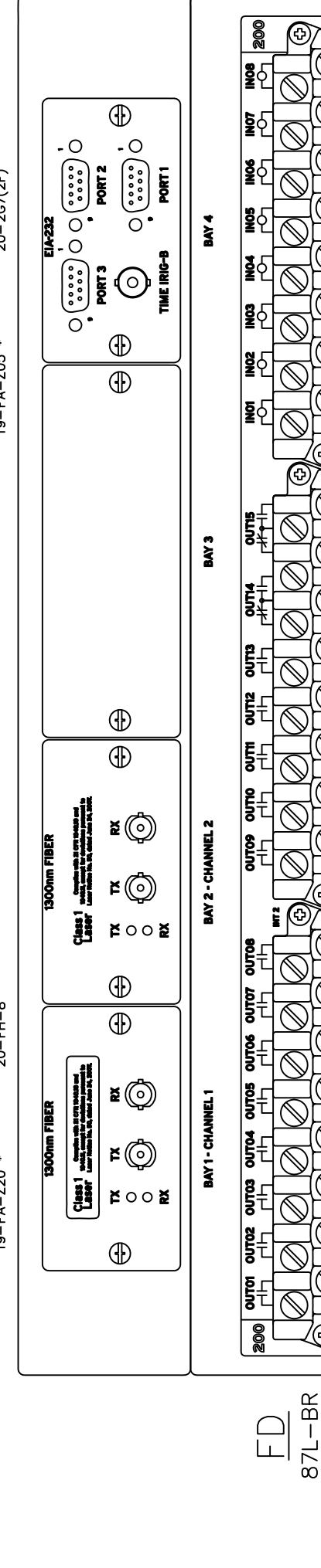
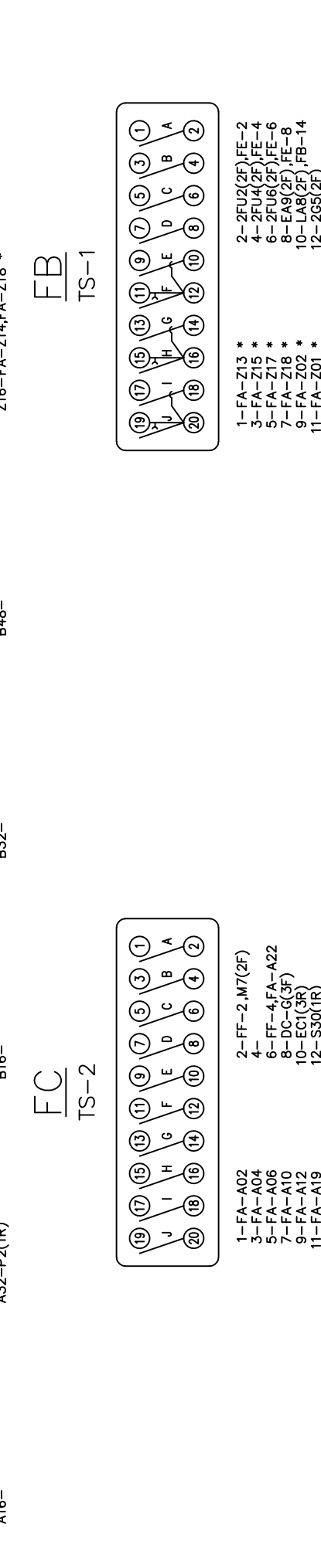
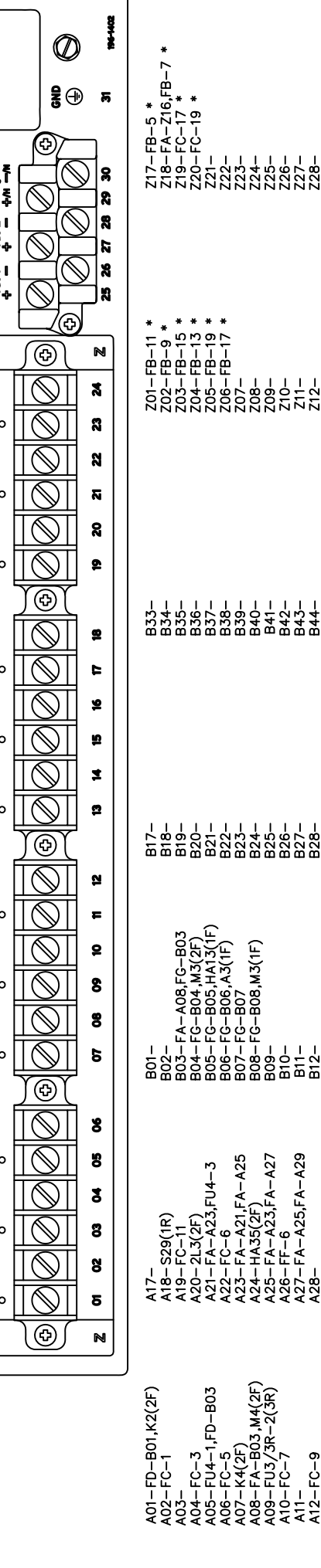
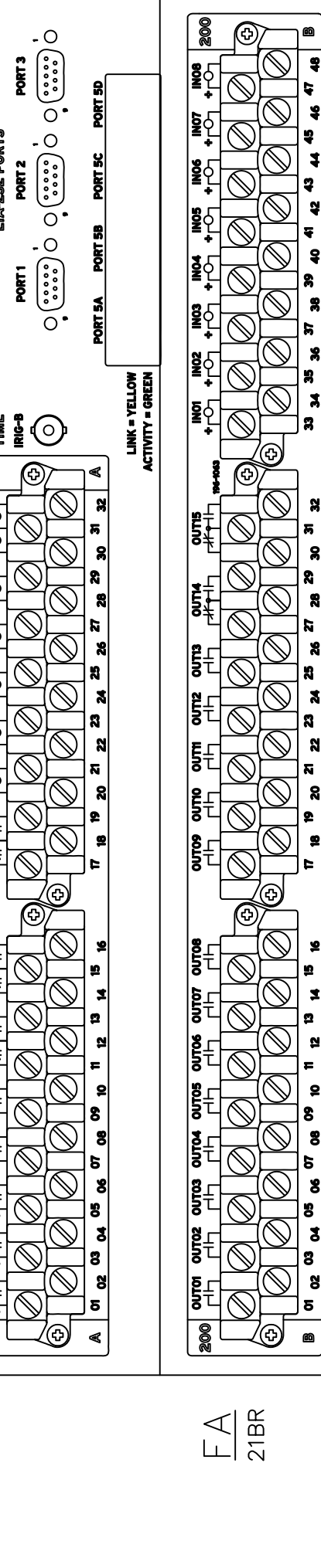
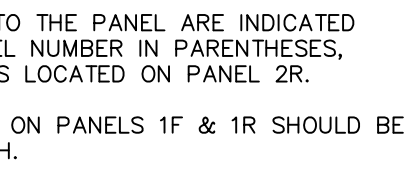
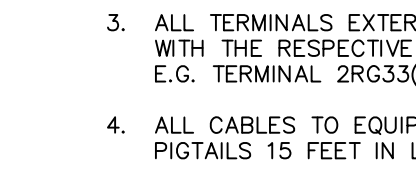
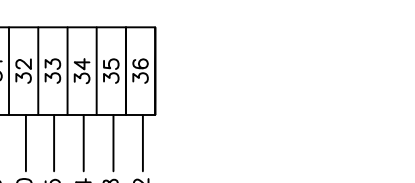
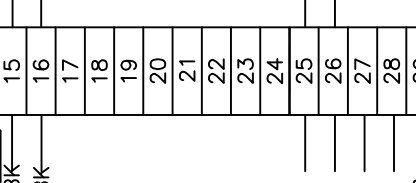
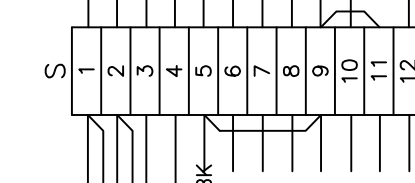
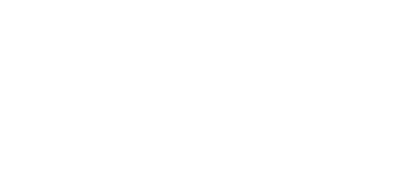
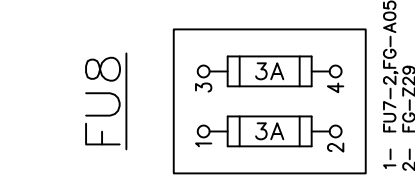
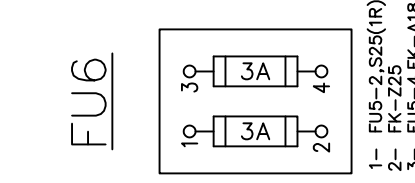
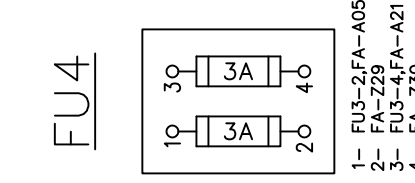
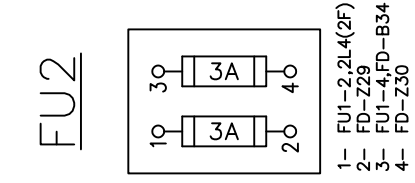
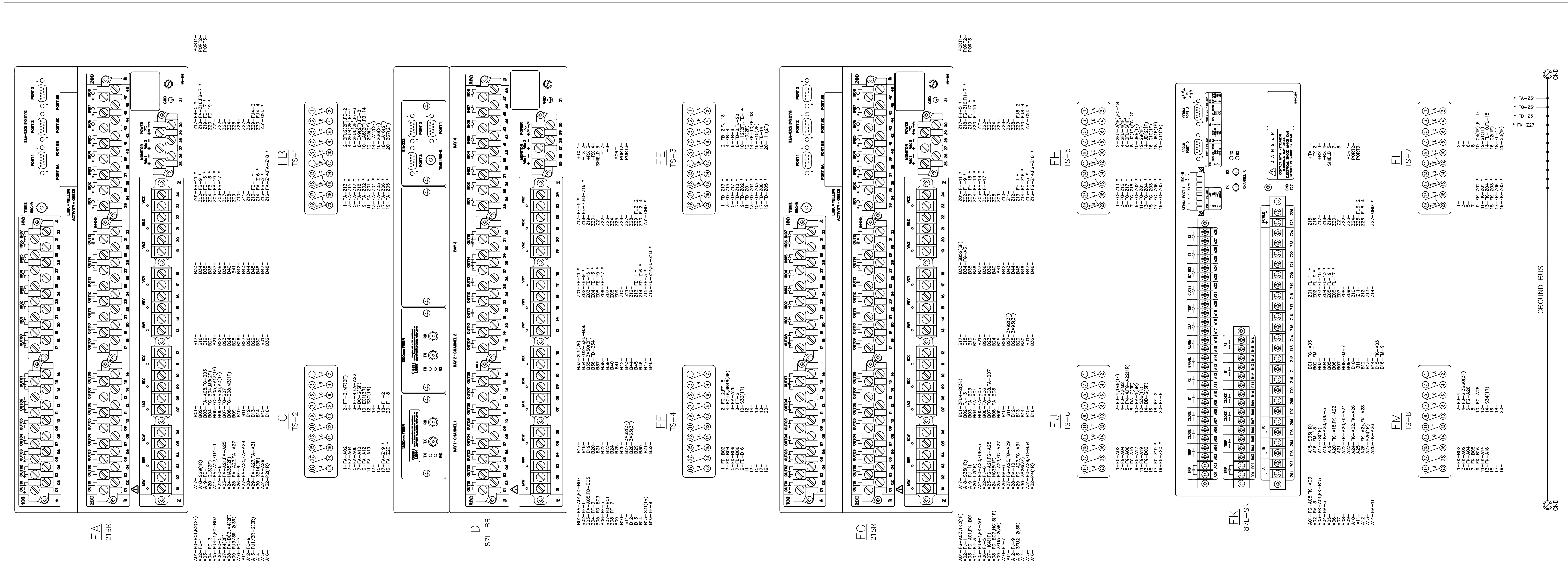
DETAIL 4
N.T.S. THIS DWG.

TS8 - STERKX RD 87L LINE DIFF RELAY										
CB3 TRIP							87 FAL			
CB3 BFI	CB3 BFT	CB3 BFT	CLOSE	R2	FAL	ALARM				
0.428"	0.516"	0.516"	0.516"	0.516"	0.516"	0.516"	0.516"	0.516"	0.516"	0.428"

DETAIL 8
N.T.S. THIS DWG.

FOR BIDDING PURPOSES ONLY

<p>PRESCOTT SUBSTATION 138kV BAYOU RAPIDES AND TWIN BRIDGES LINE PROTECTION PANEL CITY OF ALEXANDRIA ALEXANDRIA, LOUISIANA</p>				<p>SCALE: N.T.S. DATE: 3/17/16 DRAWN: JHD APPROVED:</p>	<p>PROJECT NO.: 2019-E-14D</p>
<p>BHA, INC. BATON ROUGE, LOUISIANA</p>				<p>DRAWING NO.: PR-E8019-P2</p>	<p>REV.: A</p>
NO.	DATE	BY	REVISIONS		
A	4/18/19	BHA	FOR BIDDING PURPOSES ONLY		



- NOTES:**
- THE NEW RELAY PANEL FRONT WILL BE MOUNTED ON PANEL 1R.
 - TERMINAL STRIPS R, P, & S, AND DEVICES RC & SC ARE EXISTING EQUIPMENT MOUNTED ON THE INTERIOR SIDE WALL OF PANEL 1 AND "GND" IS THE GROUND BUS.
 - ALL TERMINALS EXTERNAL TO THE PANEL ARE INDICATED WITH THE RESPECTIVE PANEL NUMBER IN PARENTHESES, E.G. TERMINAL 2RG33(2R) IS LOCATED ON PANEL 2R.
 - ALL CABLES TO EQUIPMENT ON PANELS 1F & 1R SHOULD BE PIGTAILS 15 FEET IN LENGTH.
 - ALL CABLES TO EQUIPMENT ON PANELS 2F & 2R SHOULD BE PIGTAILS 25 FEET IN LENGTH.
 - ALL CABLES TO EQUIPMENT ON PANELS 3F & 3R SHOULD BE PIGTAILS 35 FEET IN LENGTH.
 - ALL WRING SHOULD BE GRAY SIS AWG-14 EXCEPT WHERE INDICATED BY AN ASTERISK (*).
 - ALL WRING INDICATED WITH AN ASTERISK (*) SHALL BE GRAY SIS AWG-10.
 - ALL WRING SHALL BE MARKED AT EACH END WITH VINYL PRINTED LABELS TO SHOW LOCAL END TERMINAL NUMBER-REMOTE END DEVICE CODE AND TERMINAL NUMBER.

NOTES:
1. REDRAWN FROM B&W DWG PR-E8022, REV 1.

FOR BIDDING PURPOSES ONLY

NO.	DATE	BY	REVISIONS
A	1/14/18	BHA	FOR BIDDING PURPOSES ONLY

PRESCOTT SUBSTATION
138kV BAYOU RAPIDES & STERKX LINES
PANEL WIRING - PANEL 1R
CITY OF ALEXANDRIA
ALEXANDRIA, LOUISIANA

SCALE: NONE DATE: 6/2016 DRAWN: JHD APPROVED: PROJECT NO.: 2019-E-14D
DRAWING NO.: PR-E8022 REV: A

BHA, INC.
BATON ROUGE, LOUISIANA

BHA: COA_WG-E8021_1_REV_3.dwg DSF=1 06/14/18 11:13AM #517