

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>				1. CONTRACT ID CODE		PAGE OF PAGES 1   5	
2. AMENDMENT/MODIFICATION NO. 0002		3. EFFECTIVE DATE 30-Sep-2022		4. REQUISITION/PURCHASE REQ. NO.		5. PROJECT NO.(If applicable)	
6. ISSUED BY USAED, WALLA WALLA - CONTRACTING DIV. HILLARY A. MORGAN 201 N. THIRD AVENUE WALLA WALLA WA 99362		CODE W912EF		7. ADMINISTERED BY (If other than item 6)  <b>See Item 6</b>		CODE	
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code)				X		9A. AMENDMENT OF SOLICITATION NO. W912EF22R0001	
				X		9B. DATED (SEE ITEM 11) 22-Aug-2022	
						10A. MOD. OF CONTRACT/ORDER NO.	
						10B. DATED (SEE ITEM 13)	
CODE		FACILITY CODE					
<b>11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS</b>							
<input checked="" type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of offer <input type="checkbox"/> is extended, <input checked="" type="checkbox"/> is not extended.  Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning <u>1</u> copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.							
12. ACCOUNTING AND APPROPRIATION DATA (If required)							
<b>13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.</b>							
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.							
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).							
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:							
D. OTHER (Specify type of modification and authority)							
E. IMPORTANT: Contractor <input type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.							
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)  The purpose of this amendment is to incorporate the changes outlined below .							
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.							
15A. NAME AND TITLE OF SIGNER (Type or print)				16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)			
				TEL: _____ EMAIL: _____			
15B. CONTRACTOR/OFFEROR		15C. DATE SIGNED		16B. UNITED STATES OF AMERICA		16C. DATE SIGNED	
_____ (Signature of person authorized to sign)				BY _____ (Signature of Contracting Officer)		30-Sep-2022	

## SECTION SF 30 BLOCK 14 CONTINUATION PAGE

**SUMMARY OF CHANGES**

Summary of changes for Amendment-0002  
LGA DC System and LV Switchgear Upgrades  
Solicitation Number: W912EF22R0001

1. Revised solicitation:
  - a. SECTION 00 21 00 - INSTRUCTIONS
    - The bid schedule was revised as follows:
    - Revised CLIN 0003 – Changed CLIN Title
    - Revised CLIN 0005 – Changed CLIN Title
    - Added CLIN 0006 – New CLIN
    - Revised CLIN 0013 – Changed CLIN Title
    - Added CLIN 0016 – New CLIN
    - Revised CLIN 0018 – Changed CLIN Title
    - Revised CLIN 0024 – Changed CLIN Title
    - Revised CLIN 0031 – Changed CLIN to match Specs 01 22 00.00 28 M&P
  - b. SECTION 01 22 00.00 28 “MEASUREMENT AND PAYMENT”
    - Added paragraph 1.7 “CLIN 0006 - REMOVE AND DISPOSE OF EXISTING 4160 VOLT GOVERNOR OIL PUMP MOTORS”
    - Revised paragraph 1.16 “CLIN 0013 - FURNISH AND INSTALL NEW UNIT MOTOR CONTROL CENTERS SU1 - SU6, INCLUDING ASSOCIATED CONTROLS, NEW PLC GOVERNOR OIL PUMP CONTROLS AND NEW FEEDER CABLES”
    - Added paragraph 1.19 “CLIN 0016 - FURNISH AND INSTALL NEW 480 VOLT GOVERNOR OIL PUMP MOTORS”
    - Revised paragraph 1.20 “CLIN 0016AA - FURNISH AND INSTALL NEW 480 VOLT GOVERNOR OIL PUMP MOTORS IN UNITS 1 - 3”
    - Revised paragraph 1.23 “CLIN 0018 - FURNISH AND INSTALL NEW BATTERIES, BATTERY BANK MONITORING COMPUTER, CART, DIAGNOSTIC EQUIPMENT, WIRING, BATTERY BANK MONITORING HARDWARE & SOFTWARE PACKAGE”
2. Revised the following Specifications:

See revised specifications for details.
3. Revised the following Drawings:
  - a. Volume 1 G-007: added Resource Drawings to Index Sheet
  - b. Volume 1 E-505A: Revised Plan Sheet
  - c. Volume 2 E-601: Revised Plan Sheet
  - d. Volume 5 E-301: Revised Plan Sheet
  - e. Added Resource Drawings R-143 through R-156

See revised Plans for details.

**Walla Walla District Corps of Engineers**  
 Little Goose DC System and Low Voltage Switch Gear Upgrades

The magnitude of construction is estimated to be between \$10,000,000 and \$25,000,000

<u>ITEM</u>	<u>DESCRIPTION</u>	<u>QTY</u>	<u>U/M</u>	<u>U/P</u>	<u>AMOUNT</u>
	<b>Base Items</b>				
0001	MOBILIZATION AND DEMOBILIZATION	1	JOB	XXXXX	\$_____
0002	REMOVE AND DISPOSE OF EXISTING TRANSFORMERS AND 480V AC SWITCHGEAR SQO, SQ1, and SQ2	1	JOB	XXXXX	\$_____
0003	REMOVE AND DISPOSE OF EXISTING MAIN UNIT AUXILIARY BOARDS SU1-SU6 AND CP1-CP6	1	JOB	XXXXX	\$_____
0004	REMOVE AND DISPOSE OF EXISTING MOTOR CONTROL CENTERS CQO1, CQO2, CQO4, CQO5, SH AND THE SH TRANSFORMER	1	JOB	XXXXX	\$_____
0005	REMOVE AND DISPOSE OF EXISTING PANELBOARDS CQO3, CQO7, FCQ1, and FCQ2	1	JOB	XXXXX	\$_____
0006	REMOVE AND DISPOSE OF EXISTING 4160 VOLT GOVERNOR OIL PUMP MOTORS	1	JOB	XXXXX	\$_____
0006AA	REMOVE AND DISPOSE OF EXISTING 4160 VOLT GOVERNOR OIL PUMP MOTORS FROM UNITS 1 - 3	1	JOB	XXXXX	\$_____
0006AB	REMOVE AND DISPOSE OF EXISTING 4160 VOLT GOVERNOR OIL PUMP MOTORS FROM UNITS 4 - 6	1	JOB	XXXXX	\$_____
0007	REMOVE AND DISPOSE OF EXISTING 125V AND 48V BATTERIES	1	JOB	XXXXX	\$_____
0008	REMOVE AND DISPOSE OF EXISTING BATTERY CHARGERS BC1, BC2, AND BC3	1	JOB	XXXXX	\$_____
0009	REMOVE AND DISPOSE OF EXISTING DC SWITCHBOARDS AND PANELBOARDS AND PREFERRED AC PANELS	1	JOB	XXXXX	\$_____
0010	REMOVE AND DISPOSE OF EXISTING CONDUCTORS, CONDUIT RISERS, AND EXPOSED CONDUIT	1	JOB	XXXXX	\$_____
0011	REMOVE AND DISPOSE OF EXISTING HEADCOVER, TURBINE BEARING OIL PUMP STARTERS AND CONTROLS	1	JOB	XXXXX	\$_____
0012	FURNISH AND INSTALL NEW 480V AC SWITCHGEAR AND TRANSFORMER LINEUPS SQO, SQ1 AND SQ2, INCLUDING NEW FEEDER CABLES	1	JOB	XXXXX	\$_____
0013	FURNISH AND INSTALL NEW UNIT MOTOR CONTROL CENTERS SU1 - SU6, INCLUDING ASSOCIATED CONTROLS, NEW PLC GOVERNOR OIL PUMP CONTROLS AND NEW FEEDER CABLES	1	JOB	XXXXX	\$_____

0014	FURNISH AND INSTALL NEW STATION SERVICE MOTOR CONTROL CENTERS CQO1, CQO2, CQO4, CQO5 AND SH, INCLUDING ASSOCIATED CONTROLS, NEW SH TRANSFORMER, AND FEEDER CABLES	1	JOB	XXXXX	\$_____
0015	FURNISH AND INSTALL NEW PANELBOARDS CQO3, FCQ1, AND FCQ2, INCLUDING NEW FEEDER CABLES	1	JOB	XXXXX	\$_____
0016	FURNISH AND INSTALL NEW 480 VOLT GOVERNOR OIL PUMP MOTORS	1	JOB	XXXXX	\$_____
0016AA	FURNISH AND INSTALL NEW 480 VOLT GOVERNOR OIL PUMP MOTORS IN UNITS 1 - 3	1	JOB	XXXXX	\$_____
0016AB	FURNISH AND INSTALL NEW 480 VOLT GOVERNOR OIL PUMP MOTORS IN UNITS 4 - 6	1	JOB	XXXXX	\$_____
0017	FURNISH AND INSTALL NEW 125V BATTERY CHARGERS IN BC1 AND BC2	1	JOB	XXXXX	\$_____
0018	FURNISH AND INSTALL NEW BATTERIES, BATTERY BANK MONITORING COMPUTER, CART, DIAGNOSTIC EQUIPMENT, WIRING, BATTERY BANK MONITORING HARDWARE & SOFTWARE PACKAGE	1	JOB	XXXXX	\$_____
0019	FURNISH AND INSTALL NEW BATTERY SWITCHBOARDS, DC DISTRIBUTION PANELBOARDS, 120V AC DISTRIBUTION PANELBOARDS, AND MANUAL BREAKER TRANSFER PANELS INCLUDING NEW FEEDER CABLES	1	JOB	XXXXX	\$_____
0020	FURNISH AND INSTALL BATTERY ROOM UPGRADES	1	JOB	XXXXX	\$_____
0021	PROVIDE NEW LOAD BANK	1	JOB	XXXXX	\$_____
0022	FURNISH AND INSTALL SQ REMOTE CONTROL PANELS	1	JOB	XXXXX	\$_____
0023	FURNISH THEN INSTALL SBC AND SG PANELS	1	JOB	XXXXX	\$_____
0024	RELOCATE EXISTING INVERTERS THEN FURNISH AND INSTALL 125V/48V DC/DC CONVERTERS	1	JOB	XXXXX	\$_____
0025	FURNISH SPARE PARTS AND ACCESSORIES	1	JOB	XXXXX	\$_____
0026	CORE DRILLING AND CONCRETE WORK	1	JOB	XXXXX	\$_____
0027	FURNISH O&M MANUALS	1	JOB	XXXXX	\$_____
0028	FURNISH FINAL RECORD DRAWINGS	1	JOB	XXXXX	\$_____
0029	PROVIDE COMMISSIONING SERVICES AND TRAINING	1	JOB	XXXXX	\$_____

0030	FIRESTOPPING	1	JOB	XXXXX	\$_____
0031	LEAD BASED PAINT REMEDIATION AND DISPOSAL	1	JOB	XXXXX	\$_____
	<b>Optional Items</b>				
0032	GOVERNOR AIR SUPPLY CROSSOVER MODIFICATION	1	JOB	XXXXX	\$_____
0033	FURNISH AND INSTALL NEW CABLE TRAYS	EST	LF	\$_____	\$_____
<b>SCHEDULE TOTAL</b>					<b>\$_____</b>

**IMPORTANT:** See Section 01 22 00.00 28; MEASUREMENT AND PAYMENT; Paragraph; Retainage of Payment, for withholding of payment for final deliverables.

**U/M\*** = Unit of Measure    **U/P\*** = Unit Price    **NTE\*** = Not to Exceed    **EST\*** = Estimated

Quantities identified as Estimated ("**Est**") in the bid schedule are subject to FAR Clause 52.211-18, VARIATION IN ESTIMATED QUANTITY, located in Section 00 70 00.

(End of Summary of Changes)

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- 1.14 CLIN 0011 - REMOVE AND DISPOSE OF EXISTING HEADCOVER, TURBINE BEARING OIL PUMP STARTERS AND CONTROLS
- 1.15 CLIN 0012 - FURNISH AND INSTALL NEW 480V AC SWITCHGEAR AND TRANSFORMER LINEUPS SQO, SQ1 AND SQ2, INCLUDING NEW FEEDER CABLES
- 1.16 CLIN 0013 - FURNISH AND INSTALL NEW UNIT MOTOR CONTROL CENTERS SU1 - SU6, INCLUDING ASSOCIATED CONTROLS, NEW PLC GOVERNOR OIL PUMP CONTROLS AND NEW FEEDER CABLES
- 1.17 CLIN 0014 - FURNISH AND INSTALL NEW STATION SERVICE MOTOR CONTROL CENTERS CQO1, CQO2, CQO4, CQO5 AND SH, INCLUDING ASSOCIATED CONTROLS, NEW SH TRANSFORMER AND FEEDER CABLES
- 1.18 CLIN 0015 - FURNISH AND INSTALL NEW PANELBOARDS CQO3, FCQ1, AND FCQ2, INCLUDING NEW FEEDER CABLES
- 1.19 CLIN 0016 - FURNISH AND INSTALL NEW 480 VOLT GOVERNOR OIL PUMP MOTORS
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## SECTION 01 22 00.00 28

## MEASUREMENT AND PAYMENT

## PART 1 GENERAL

In each instance, the contract price for an item shall constitute full compensation for furnishing all plant, labor, equipment, and materials, and for performing all operations required to complete the work included in the item as herein specified, or as otherwise approved.

## 1.1 RETAINAGE OF PAYMENT

Retainage in the amount of 10 percent of original contract award amount will be withheld until the final submittals listed below have been approved by the Government. The 10 percent final submittals retainage will be held until the Contractor has earned 90 percent of the original contract value. See SECTION 01 78 00.00 28 "CLOSEOUT SUBMITTALS" and SECTION 01 78 23.00 28 "OPERATION AND MAINTENANCE DATA" for additional information.

- a. Final Shop Drawings.
- b. Final As-built Drawings.
- c. Final Record Drawings.
- d. Return of Government Issued Items.
- e. Final Operation and Maintenance Manuals and Parts Catalogs.
- f. Final Spare Parts submission.
- g. Complete all required training.

## 1.2 CLIN 0001 - MOBILIZATION AND DEMOBILIZATION

Measurement and payment for mobilization and demobilization will be in accordance with Contract CLAUSE: PAYMENT FOR MOBILIZATION AND DEMOBILIZATION. This item will be measured for payment as a complete pay item (JOB) under Item No. 0001, "Mobilization and Demobilization", which price and payment shall be full compensation for mobilizing and demobilizing all plant and equipment required for performance of the work, as specified and approved.

## 1.3 CLIN 0002 - REMOVE AND DISPOSE OF EXISTING TRANSFORMERS AND 480V AC SWITCHGEAR SQ0, SQ1, and SQ2

Removal and disposal of existing transformers and 480V AC switchgear SQ0, SQ1, and SQ2 will be measured for payment as a complete pay item (JOB). Payment will be made at the lump sum price for CLIN No. 0002, "REMOVE AND DISPOSE OF EXISTING TRANSFORMERS AND 480V AC SWITCHGEAR SQ0, SQ1, and SQ2", which price and payment shall be full compensation for all work required to remove and dispose of existing transformers and 480V AC switchgear SQ0, SQ1, and SQ2, complete, as specified and approved.

## 1.4 CLIN 0003 - REMOVE AND DISPOSE OF EXISTING MAIN UNIT AUXILIARY BOARDS SU1-SU6 AND CP1-CP6

Remove and dispose of existing main unit auxiliary boards SU1 - SU6 and CP1-CP6 will be measured for payment as a complete pay item (JOB). Payment will be made at the lump sum price for CLIN No. 0003, "REMOVE AND DISPOSE

OF EXISTING MAIN UNIT AUXILIARY BOARDS SU1 - SU6 AND CP1-CP6", which price and payment shall be full compensation for all work required to remove and dispose of existing main unit auxiliary boards SU1 - SU6 and CP1-CP6, complete, as specified and approved.

1.5 CLIN 0004 - REMOVE AND DISPOSE OF EXISTING MOTOR CONTROL CENTERS CQ01, CQ02, CQ04, CQ05, SH AND THE SH TRANSFORMER

Remove and dispose of existing motor control centers CQ01, CQ02, CQ04, CQ05, SH and the SH transformer will be measured for payment as a complete pay item (JOB). Payment will be made at the lump sum price for CLIN No. 0004, "REMOVE AND DISPOSE OF EXISTING MOTOR CONTROL CENTERS CQ01, CQ02, CQ04, CQ05, SH AND THE SH TRANSFORMER", which price and payment shall be full compensation for all work required to remove and dispose of existing motor control centers CQ01, CQ02, CQ04, CQ05, SH and the SH transformer, complete, as specified and approved.

1.6 CLIN 0005 - REMOVE AND DISPOSE OF EXISTING PANELBOARDS CQ03, CQ007, FCQ1, and FCQ2

Remove and dispose of existing panelboards CQ03, CQ07, FCQ1, and FCQ2 will be measured for payment as a complete pay item (JOB). Payment will be made at the lump sum price for CLIN No. 0005, "REMOVE AND DISPOSE OF EXISTING PANELBOARDS CQ03, CQ07, FCQ1, and FCQ2", which price and payment shall be full compensation for all work required to remove and dispose of existing panelboards CQ03, CQ07, FCQ1, and FCQ2 as specified and approved.

1.7 CLIN 0006 - REMOVE AND DISPOSE OF EXISTING 4160 VOLT GOVERNOR OIL PUMP MOTORS

Remove and dispose of existing 4160 volt governor oil pump motors will be measured for payment as a complete pay item (JOB). Payment will be made at the lump sum price for CLIN No. 0006, "REMOVE AND DISPOSE OF EXISTING 4160 VOLT GOVERNOR OIL PUMP MOTORS, which price and payment shall be full compensation for all work required to remove and dispose of existing 4160 volt governor oil pump motors complete, as specified and approved.

1.8 CLIN 0006AA - REMOVE AND DISPOSE OF EXISTING 4160 VOLT GOVERNOR OIL PUMP MOTORS FROM UNITS 1 - 3

Remove and dispose of existing 4160 volt governor oil pump motors from units 1 - 3 will be measured for payment as a complete pay item (JOB). Payment will be made at the lump sum price for CLIN No. 0006AA, "REMOVE AND DISPOSE OF EXISTING 4160 VOLT GOVERNOR OIL PUMP MOTORS FROM UNITS 1 - 3", which price and payment shall be full compensation for all work required to remove and dispose of existing 4160 volt governor oil pump motors from units 1 - 3 complete, as specified and approved.

1.9 CLIN 0006AB - REMOVE AND DISPOSE OF EXISTING 4160 VOLT GOVERNOR OIL PUMP MOTORS FROM UNITS 4 - 6

Remove and dispose of existing 4160 volt governor oil pump motors from units 4 - 6 will be measured for payment as a complete pay item (JOB). Payment will be made at the lump sum price for CLIN No. 0006AB, "REMOVE AND DISPOSE OF EXISTING 4160 VOLT GOVERNOR OIL PUMP MOTORS FROM UNITS 4 - 6", which price and payment shall be full compensation for all work required to remove and dispose of existing 4160 volt governor oil pump motors from units 4 - 6 complete, as specified and approved.

## 1.10 CLIN 0007 - REMOVE AND DISPOSE OF EXISTING 125V AND 48V BATTERIES

Removal and disposal of existing 125V and 48V batteries will be measured for payment as a complete pay item (JOB). Payment will be made at the lump sum price for CLIN No. 0007, "REMOVE AND DISPOSE OF EXISTING 125V AND 48V BATTERIES" which price and payment shall be full compensation for all work required to remove and dispose of existing 125V and 48V batteries complete, as specified and approved.

## 1.11 CLIN 0008 - REMOVE AND DISPOSE OF EXISTING BATTERY CHARGERS BC1, BC2, AND BC3

Remove and dispose of existing battery chargers BC1, BC2, AND BC3 will be measured for payment as a complete pay item (JOB). Payment will be made at the lump sum price for CLIN No. 0008, "REMOVE AND DISPOSE OF EXISTING BATTERY CHARGERS BC1, BC2, AND BC3", which price and payment shall be full compensation for all work required to remove and dispose of existing battery chargers BC1, BC2, AND BC3, complete, as specified and approved.

## 1.12 CLIN 0009 - REMOVE AND DISPOSE OF EXISTING DC SWITCHBOARDS AND PANELBOARDS AND PREFERRED AC PANELS

Remove and dispose of existing DC switchboards and panelboards and preferred AC panels will be measured for payment as a complete pay item (JOB). Payment will be made at the lump sum price for CLIN No. 0009, "REMOVE AND DISPOSE OF EXISTING DC SWITCHBOARDS AND PANELBOARDS AND PREFERRED AC PANELS", which price and payment shall be full compensation for all work required to remove and dispose of existing DC switchboards and panelboards and preferred AC panels complete, as specified and approved.

## 1.13 CLIN 0010 - REMOVE AND DISPOSE OF EXISTING CONDUCTORS, CONDUIT RISERS, AND EXPOSED CONDUIT

Remove and dispose of existing conductors, conduit risers, and exposed conduit will be measured for payment as a complete pay item (JOB). Payment will be made at the lump sum price for CLIN No. 0010, "REMOVE AND DISPOSE OF EXISTING CONDUCTORS, CONDUIT RISERS, AND EXPOSED CONDUIT", which price and payment shall be full compensation for all work required to remove and dispose of existing conductors, conduit risers, and exposed conduit complete, as specified and approved.

## 1.14 CLIN 0011 - REMOVE AND DISPOSE OF EXISTING HEADCOVER, TURBINE BEARING OIL PUMP STARTERS AND CONTROLS

Remove and dispose of existing headcover, turbine bearing oil pump starters and controls will be measured for payment as a complete pay item (JOB). Payment will be made at the lump sum price for CLIN No. 0011, "REMOVE AND DISPOSE OF EXISTING HEADCOVER, TURBINE BEARING OIL PUMP STARTERS AND CONTROLS", which price and payment shall be full compensation for all work required to Remove and dispose of existing headcover and turbine bearing oil pump starters and controls, complete, as specified and approved.

## 1.15 CLIN 0012 - FURNISH AND INSTALL NEW 480V AC SWITCHGEAR AND TRANSFORMER LINEUPS SQ0, SQ1 AND SQ2, INCLUDING NEW FEEDER CABLES

Furnish and install new 480V AC switchgear and transformer lineups SQ0, SQ1 and SQ2, including new feeder cables will be measured for payment as a

complete pay item (JOB). Payment will be made at the lump sum price for CLIN No. 0012, "FURNISH AND INSTALL NEW 480V AC SWITCHGEAR AND TRANSFORMER LINEUPS SQ0, SQ1 AND SQ2, INCLUDING NEW FEEDER CABLES," which price and payment shall be full compensation for all work required to furnish and install new 480V AC switchgear and transformer lineups SQ0, SQ1 and SQ2, including new feeder cables, complete, as specified and approved.

1.16 CLIN 0013 - FURNISH AND INSTALL NEW UNIT MOTOR CONTROL CENTERS SU1 - SU6, INCLUDING ASSOCIATED CONTROLS, NEW PLC GOVERNOR OIL PUMP CONTROLS AND NEW FEEDER CABLES

Furnish and install new unit motor control centers SU1 - SU6, including associated controls, new PLC governor oil pump controls and new feeder cables will be measured for payment as a complete pay item (JOB). Payment will be made at the lump sum price for CLIN No. 0013, "FURNISH AND INSTALL NEW UNIT MOTOR CONTROL CENTERS SU1 - SU6, INCLUDING ASSOCIATED CONTROLS, NEW PLC GOVERNOR OIL PUMP CONTROLS AND NEW FEEDER CABLES", which price and payment shall be full compensation for all work required to furnish and install new unit motor control centers SU1 - SU6, including associated controls, new PLC governor oil pump controls and new feeder cables complete, as specified and approved.

1.17 CLIN 0014 - FURNISH AND INSTALL NEW STATION SERVICE MOTOR CONTROL CENTERS CQ01, CQ02, CQ04, CQ05 AND SH, INCLUDING ASSOCIATED CONTROLS, NEW SH TRANSFORMER AND FEEDER CABLES

Furnish and install new station service motor control centers CQ01, CQ02, CQ04, CQ05 AND SH, including associated controls, new SH transformer and feeder cables will be measured for payment as a complete pay item (JOB). Payment will be made at the lump sum price for CLIN No. 0014, "PROVIDE NEW STATION SERVICE MOTOR CONTROL CENTERS CQ01, CQ02, CQ04, CQ05 AND SH, INCLUDING ASSOCIATED CONTROLS, NEW SH TRANSFORMER AND FEEDER CABLES", which price and payment shall be full compensation for all work required to furnish and install new station service motor control centers CQ01, CQ02, CQ04, CQ05 AND SH, including associated controls, new SH transformer and feeder cables complete as specified and approved.

1.18 CLIN 0015 - FURNISH AND INSTALL NEW PANELBOARDS CQ03, FCQ1, AND FCQ2, INCLUDING NEW FEEDER CABLES

Furnish and install new panelboards CQ03, FCQ1, and FCQ2, including new feeder cables will be measured for payment as a complete pay item (JOB). Payment will be made at the lump sum price for CLIN No. 0015, "FURNISH AND INSTALL NEW PANELBOARDS CQ03, FCQ1, and FCQ2", INCLUDING NEW FEEDER CABLES which price and payment shall be full compensation for all work required to furnish and install new panelboards CQ03, FCQ1, and FCQ2, including new feeder cables complete, as specified and approved.

1.19 CLIN 0016 - FURNISH AND INSTALL NEW 480 VOLT GOVERNOR OIL PUMP MOTORS

Furnish and install new 480 volt governor oil pump motors will be measured for payment as a complete pay item (JOB). Payment will be made at the lump sum price for CLIN No. 0016, "FURNISH AND INSTALL NEW 480 VOLT GOVERNOR OIL PUMP MOTORS", which price and payment shall be full compensation for all work required to provide new 480 volt governor oil pump motors complete, as specified and approved.

1.20 CLIN 0016AA - FURNISH AND INSTALL NEW 480 VOLT GOVERNOR OIL PUMP MOTORS IN UNITS 1 - 3

Furnish and install new 480 volt governor oil pump motors in units 1 - 3 will be measured for payment as a complete pay item (JOB). Payment will be made at the lump sum price for CLIN No. 0016AA, "~~PROVIDE~~FURNISH AND INSTALL NEW 480 VOLT GOVERNOR OIL PUMP MOTORS UNITS 1 - 3", which price and payment shall be full compensation for all work required to provide new 480 volt governor oil pump motors for units 1 - 3 complete, as specified and approved.

1.21 CLIN 0016AB - FURNISH AND INSTALL NEW 480 VOLT GOVERNOR OIL PUMP MOTORS IN UNITS 4 - 6

Furnish and install new 480 volt governor oil pump motors in units 4 - 6 will be measured for payment as a complete pay item (JOB). Payment will be made at the lump sum price for CLIN No. 0016AB, "FURNISH AND INSTALL NEW 480 VOLT GOVERNOR OIL PUMP MOTORS IN UNITS 4 - 6", which price and payment shall be full compensation for all work required to Furnish and install new 480 volt governor oil pump motors in units 4 - 6 complete, as specified and approved.

1.22 CLIN 0017 - FURNISH AND INSTALL NEW 125V BATTERY CHARGERS IN BC1 AND BC2

Furnish and install new 125v battery chargers in BC1 and BC2, which will be measured for payment as a complete pay item (JOB). Payment will be made at the lump sum price for CLIN No. 0017, "FURNISH AND INSTALL NEW 125V BATTERY CHARGERS IN BC1 AND BC2", which price and payment shall be full compensation for all work required to Furnish and install new 125v battery chargers in BC1 and BC2, complete, as specified and approved.

1.23 CLIN 0018 - FURNISH AND INSTALL NEW ~~BATTERY~~BATTERIES, BATTERY BANK MONITORING COMPUTER, CART, DIAGNOSTIC EQUIPMENT, WIRING, BATTERY BANK MONITORING HARDWARE AND SOFTWARE PACKAGE

Furnish and install new ~~battery~~batteries, battery bank monitoring computer, cart, diagnostic equipment, wiring, battery bank monitoring hardware and software package will be measured for payment as a complete pay item (JOB). Payment will be made at the lump sum price for CLIN No. 0018, "FURNISH AND INSTALL NEW ~~BATTERY~~BATTERIES, BATTERY BANK MONITORING COMPUTER, CART, DIAGNOSTIC EQUIPMENT, WIRING, BATTERY BANK MONITORING HARDWARE AND SOFTWARE PACKAGE", which price and payment shall be full compensation for all work required to furnish and install new ~~battery~~ batteries, battery bank monitoring computer, cart, diagnostic equipment, wiring, battery bank monitoring hardware and software package, as specified and approved.

1.24 CLIN 0019 - FURNISH AND INSTALL NEW BATTERY SWITCHBOARDS, DC DISTRIBUTION PANELBOARDS, 120V AC DISTRIBUTION PANELBOARDS, AND MANUAL BREAKER TRANSFER PANELS INCLUDING NEW FEEDER CABLES

Furnish and install new battery switchboards, DC distribution panelboards, 120V AC distribution panelboards, and manual breaker transfer panels including new feeder cables will be measured for payment as a complete pay item (JOB). Payment will be made at the lump sum price for CLIN No. 0019, "FURNISH AND INSTALL NEW BATTERY SWITCHBOARDS, DC DISTRIBUTION PANELBOARDS, 120V AC DISTRIBUTION PANELBOARDS, AND MANUAL BREAKER TRANSFER PANELS INCLUDING NEW FEEDER CABLES", which price and payment shall be full

compensation for all work required to Furnish and install new battery switchboards, DC distribution panelboards, 120V AC distribution panelboards, and manual breaker transfer panels including new feeder cables complete, as specified and approved.

#### 1.25 CLIN 0020 - FURNISH AND INSTALL BATTERY ROOM UPGRADES

Furnish and install battery room upgrades will be measured for payment as a complete pay item (JOB). Payment will be made at the lump sum price for CLIN No. 0020, "FURNISH AND INSTALL BATTERY ROOM UPGRADES", which price and payment shall be full compensation for all upgrades made to the battery room according to contract plans and specifications, as specified and approved.

Battery Room Upgrades consist, but not limited to the following work items:

- a. Remove existing belt driven exhaust fan EF-6 and provide direct drive exhaust fan (retain mark EF-6) and associated fire damper and duct work items.
- b. Piping serving existing emergency shower and eyewash station.
- c. Hydrogen Detector, Smoke Detector, Room Differential Pressure Switch, and Emergency Shower and Eyewash Station Water flow detector; with the output from each of these devices annunciated in the Control Room.
- d. Combination fire smoke damper in the supply air duct serving the battery room with power to the damper and activation annunciated in the Control Room.
- e. Fire damper at the exhaust air opening in the Battery Room.
- f. Battery Monitoring System
- g. Fire rated battery room door and fire barrier signs
- h. Epoxy flooring and containment curb
- i. Battery racks

#### 1.26 CLIN 0021 - PROVIDE NEW LOAD BANK

The new load bank will be measured for payment as a complete pay item (JOB). Payment will be made at the lump sum price for CLIN No. 0021, "PROVIDE NEW LOAD BANK", which price and payment shall be full compensation for all work required to provide provide new load bank complete, as specified and approved.

#### 1.27 CLIN 0022 - FURNISH AND INSTALL SQ REMOTE CONTROL PANELS

Furnish and install SQ remote control panels will be measured for payment as a complete pay item (JOB). Payment will be made at the lump sum price for CLIN No. 0022, "FURNISH AND INSTALL SQ REMOTE CONTROL PANELS", which price and payment shall be full compensation for all work required to furnish and install SQ remote control panels complete, as specified and approved.

#### 1.28 CLIN 0023 - FURNISH THEN INSTALL SBC AND SG PANELS

Furnishing, then installing the SBC and SG panels will be measured for payment as a complete pay item (JOB). Payment will be made at the lump sum price for CLIN No. 0023, "FURNISH THEN INSTALL SBC AND SG PANELS", which price and payment shall be full compensation for all work required to furnish, then install the SBC and SG panels complete, as specified and approved.

1.29 CLIN 0024 - RELOCATE EXISTING INVERTERS THEN FURNISH AND INSTALL  
125V/48V DC/DC CONVERTERS

Relocate existing inverters will be measured for payment as a complete pay item (JOB). Payment will be made at the lump sum price for CLIN No. 0024, "RELOCATE EXISTING INVERTERS", which price and payment shall be full compensation for all work required to relocate existing inverters complete, as specified and approved.

1.30 CLIN 0025 - FURNISH SPARE PARTS AND ACCESSORIES

Furnish spare parts and accessories will be measured for payment as a complete pay item (JOB). Payment will be made at the lump sum price for CLIN No. 0025, "FURNISH SPARE PARTS AND ACCESSORIES", which price and payment shall be full compensation for all work required to furnish spare parts and accessories complete, as specified and approved.

1.31 CLIN 0026 - CORE DRILLING AND CONCRETE WORK

Core drilling and concrete work will be measured for payment as a complete pay item (JOB). Payment will be made at the lump sum price for CLIN No. 0026, "CORE DRILLING AND CONCRETE WORK", which price and payment shall be full compensation for all work required for core drilling and concrete work complete, as specified and approved.

1.32 CLIN 0027 - FURNISH O&M MANUALS

Furnish O&M manuals will be measured for payment as a complete pay item (JOB). Payment will be made at the lump sum price for CLIN No. 0027, "FURNISH O&M MANUALS", which price and payment shall be full compensation for all work required to furnish O&M manuals complete, as specified and approved.

1.33 CLIN 0028 - FURNISH FINAL RECORD DRAWINGS

Furnish final record drawings will be measured for payment as a complete pay item (JOB). Payment will be made at the lump sum price for CLIN No. 0028, "FURNISH FINAL RECORD DRAWINGS", which price and payment shall be full compensation for all work required to furnish final record drawings complete, as specified and approved.

1.34 CLIN 0029 - PROVIDE COMMISSIONING SERVICES AND TRAINING

Provide commissioning services and training will be measured for payment as a complete pay item (JOB). Payment will be made at the lump sum price for CLIN No. 0029, "PROVIDE COMMISSIONING SERVICES AND TRAINING", which price and payment shall be full compensation for all work required to Provide commissioning services complete, as specified and approved.

1.35 CLIN 0030 - FIRESTOPPING

Firestopping will be measured for payment as a complete pay item (JOB). Payment will be made at the lump sum price for CLIN No. 0030, "FIRESTOPPING", which price and payment shall be full compensation for all work required to Provide commissioning services complete, as specified and approved.

## 1.36 CLIN 0031 - LEAD BASED PAINT REMEDIATION AND DISPOSAL

CLIN 00031 - "LEAD BASED PAINT REMEDIATION AND DISPOSAL" will be measured for payment as a complete pay item (JOB). Payment will be made at the lump sum price for CLIN No. 0031, "Lead Based Paint Remediation And Disposal", which price and payment shall be full compensation for all work required for the Lead Based Paint Remediation And Disposal on existing Battery Room Floor LBP, complete, as specified and approved.

## 1.37 OPTIONAL ITEMS

## 1.37.1 CLIN 0032 - GOVERNOR AIR SUPPLY CROSSOVER MODIFICATION

Governor air supply crossover modification will be measured for payment as a complete pay item (JOB). Payment will be made at the lump sum price for CLIN No. 0031, "GOVERNOR AIR SUPPLY CROSSOVER MODIFICATION" which price and payment shall be full compensation for all parts and labor required to modify the governor air supply crossover, as specified and approved.

## 1.37.2 CLIN 0033 - FURNISH AND INSTALL NEW CABLE TRAYS

Furnish and install up to an estimated 800 lineal feet (LF) of 24 inch new cable trays for existing trays not meeting NEC fill requirements. Payment is measured and made at the price per lineal foot for CLIN No. 0032, "FURNISH AND INSTALL NEW CABLE TRAYS", which price and payment is full compensation for all work required to furnish and install new cable trays, complete, as specified and approved.

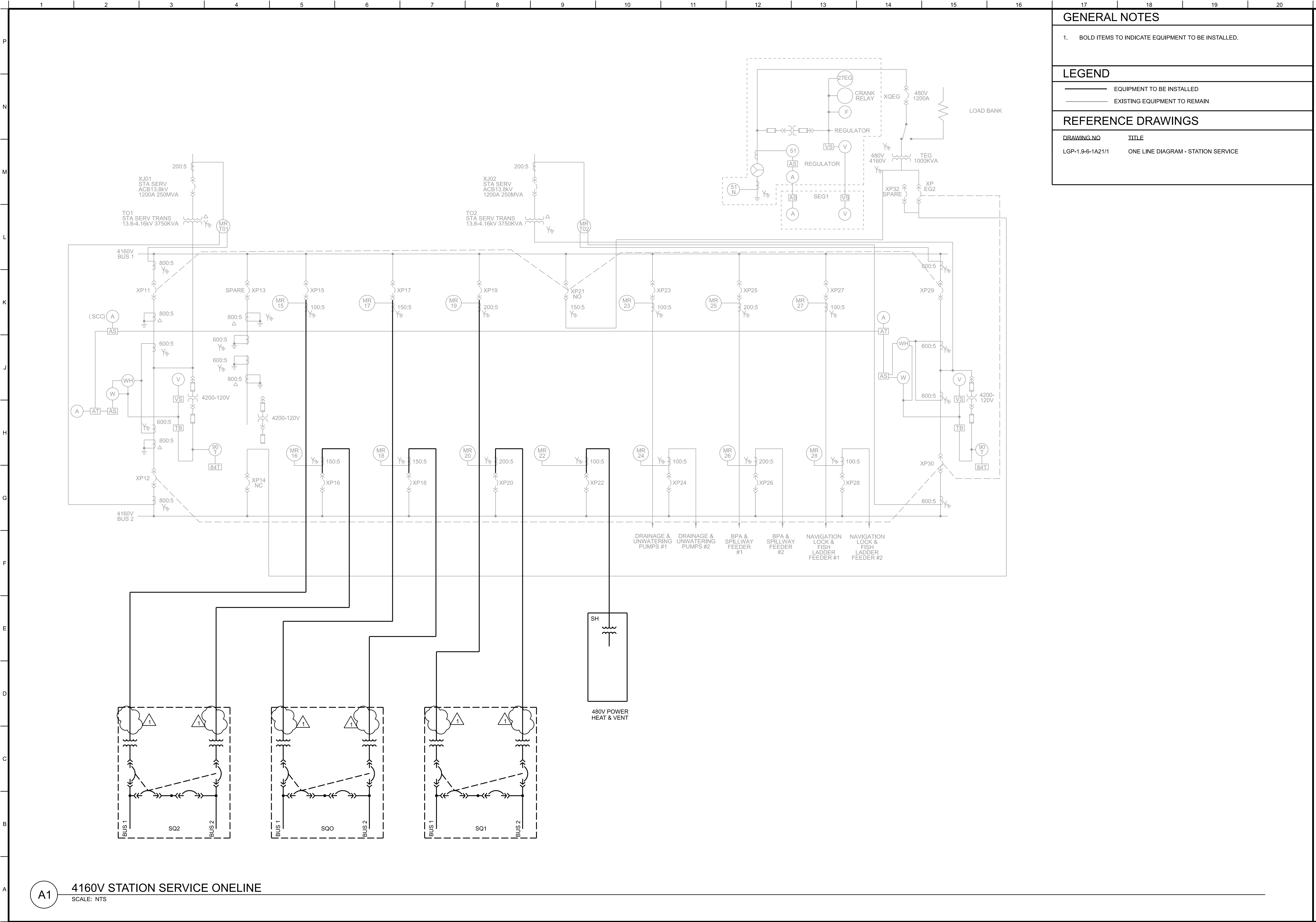
PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION (NOT APPLICABLE)

-- End of Section --

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GENERAL NOTES

1. BOLD ITEMS TO INDICATE EQUIPMENT TO BE INSTALLED.

LEGEND

- EQUIPMENT TO BE INSTALLED  
**---** EXISTING EQUIPMENT TO REMAIN

REFERENCE DRAWINGS

DRAWING NO	TITLE
LGP-1.9-6-1A21/1	ONE LINE DIAGRAM - STATION SERVICE

US Army Corps of Engineers®

**OFFICE COPY - DRAFT**

**09/22/2022**

REVIEWED BY: [Signature] DATE: 09/15/2022

MARK DESCRIPTION

DESIGNED BY: S. SCHEIFF	ISSUE DATE: AUGUST 2022
DRAWN BY: K. SELLERS	SOLICITATION NO: W91CEZF001
CHECKED BY: K. SELLERS	CONTRACT NO.:
SUBMITTED BY: L. VAN STEDUM, P.E.	DRAWING NUMBER: LGP-1.002-6-1D21/2
SIZE: ANSI D	FILENAME: VZ-LGP1.002-E-601.dgn

U.S. ARMY CORPS OF ENGINEERS  
WALLA WALLA DISTRICT  
201 NORTH 3RD AVENUE  
SEATTLE, WASHINGTON

U.S. ARMY CORPS OF ENGINEERS  
HYDROELECTRIC DESIGN CENTER  
PORTLAND, OREGON

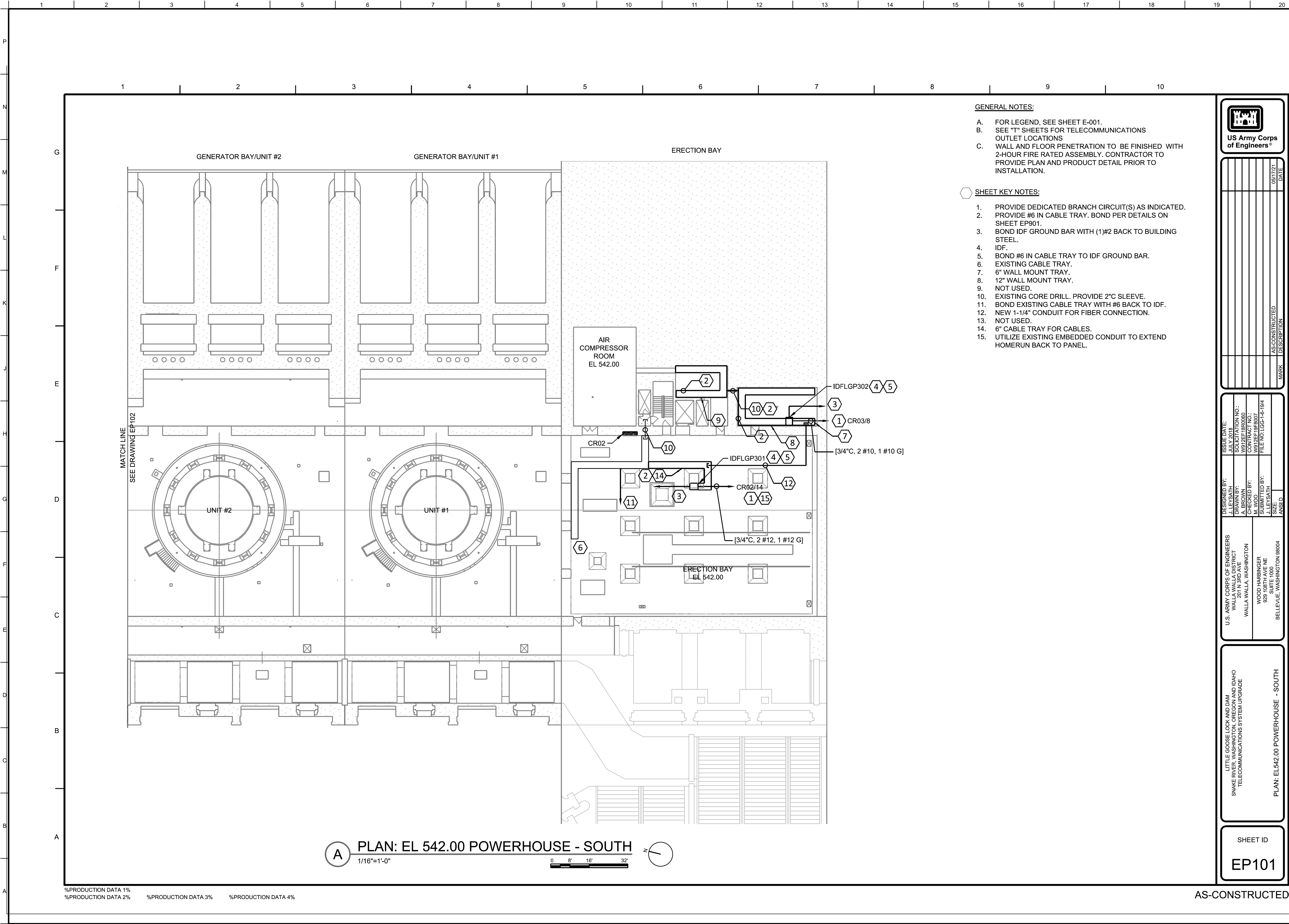
LITTLE GOOSE LOCK AND DAM  
SNAKE RIVER  
DC SYSTEM AND  
LOW VOLTAGE SWITCH GEAR

STATION SERVICE - SP  
ONE LINE DIAGRAM  
INSTALL

SHEET ID  
VOLUME 2  
E-601

FINAL

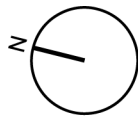
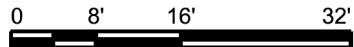




- GENERAL NOTES:
- A. FOR LEGEND, SEE SHEET E-001.
  - B. SEE "T" SHEETS FOR TELECOMMUNICATIONS OUTLET LOCATIONS
  - C. WALL AND FLOOR PENETRATION TO BE FINISHED WITH 2-HOUR FIRE RATED ASSEMBLY. CONTRACTOR TO PROVIDE PLAN AND PRODUCT DETAIL PRIOR TO INSTALLATION.

- SHEET KEY NOTES:
- 1. PROVIDE DEDICATED BRANCH CIRCUIT(S) AS INDICATED.
  - 2. PROVIDE #6 IN CABLE TRAY. BOND PER DETAILS ON SHEET EP901.
  - 3. BOND IDF GROUND BAR WITH (1)#2 BACK TO BUILDING STEEL.
  - 4. IDF.
  - 5. BOND #6 IN CABLE TRAY TO IDF GROUND BAR.
  - 6. EXISTING CABLE TRAY.
  - 7. 6" WALL MOUNT TRAY.
  - 8. 12" WALL MOUNT TRAY.
  - 9. NOT USED.
  - 10. EXISTING CORE DRILL. PROVIDE 2"C SLEEVE.
  - 11. BOND EXISTING CABLE TRAY WITH #6 BACK TO IDF.
  - 12. NEW 1-1/4" CONDUIT FOR FIBER CONNECTION.
  - 13. NOT USED.
  - 14. 6" CABLE TRAY FOR CABLES.
  - 15. UTILIZE EXISTING EMBEDDED CONDUIT TO EXTEND HOMERUN BACK TO PANEL.

A PLAN: EL 542.00 POWERHOUSE - SOUTH  
1/16"=1'-0"



%PRODUCTION DATA 1%  
%PRODUCTION DATA 2%  
%PRODUCTION DATA 3%  
%PRODUCTION DATA 4%

AS-CONSTRUCTED

US Army Corps of Engineers®

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09/22/2022

ISSUE DATE: AUGUST 2022  
SOLICITATION NO.: W91Z2ZCR001  
CONTRACT NO.: W91Z2ZCR001

DESIGNED BY: JORDAN S. FINK, P.E.  
DRAWN BY: JORDAN S. FINK, P.E.  
CHECKED BY: JORDAN S. FINK, P.E.  
SUBMITTED BY: JORDAN S. FINK, P.E.

FILE NO.: LGG-14-16/4  
FILE NO.: LGG-14-16/4  
FILE NO.: LGG-14-16/4

ANSI D R-143.000

U.S. ARMY CORPS OF ENGINEERS  
WALLA WALLA DISTRICT  
201 NORTH 3RD AVENUE  
SEATTLE, WASHINGTON

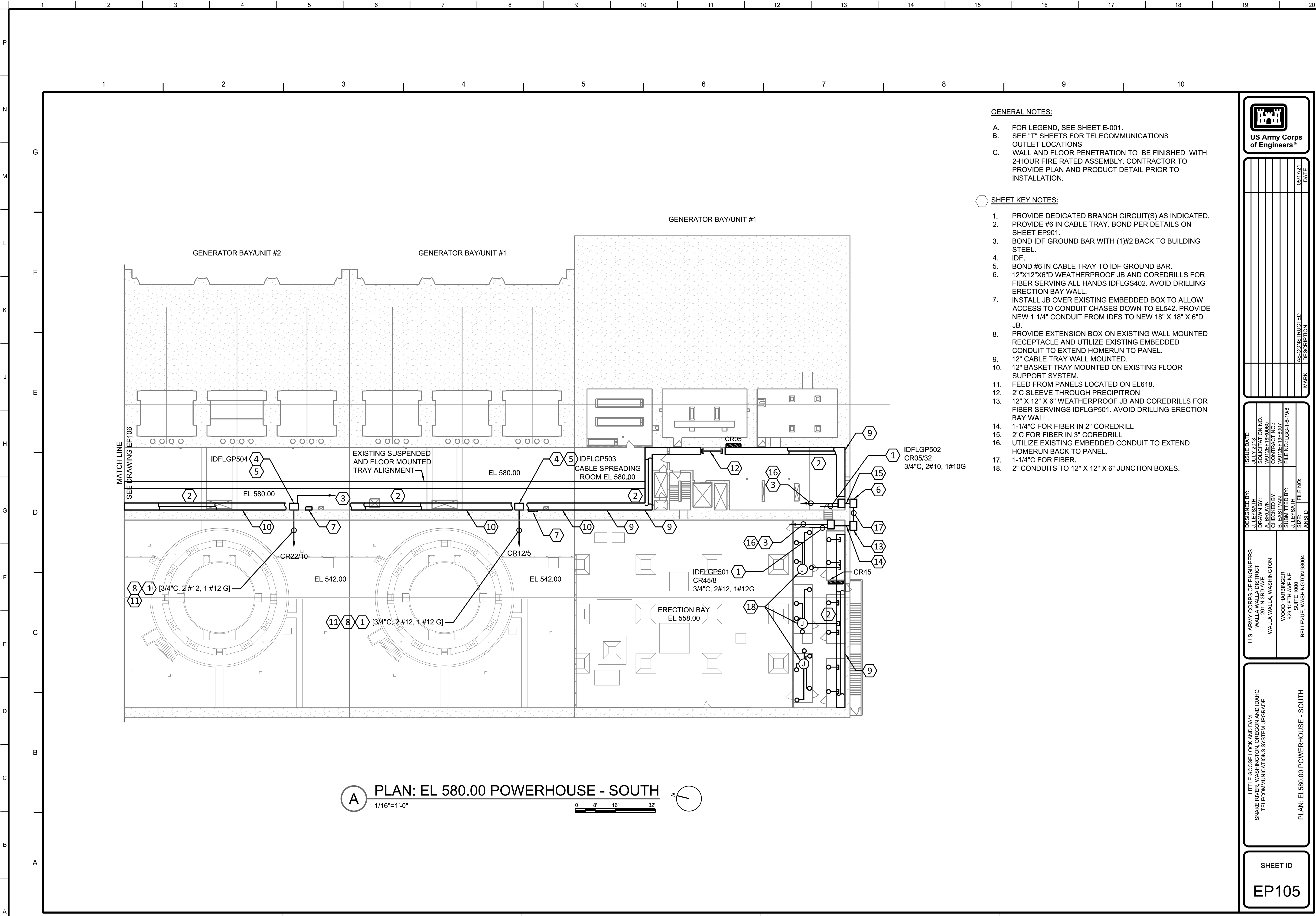
U.S. ARMY CORPS OF ENGINEERS  
WALLA WALLA DISTRICT  
201 NORTH 3RD AVENUE  
SEATTLE, WASHINGTON

PLAN: EL 542.00 POWERHOUSE - SOUTH

PLAN: EL 542.00 POWERHOUSE - SOUTH

SHEET ID  
EP101

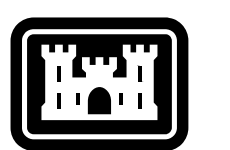
SHEET ID  
R-143



**A PLAN: EL 580.00 POWERHOUSE - SOUTH**  
1/16"=1'-0"

- GENERAL NOTES:**
- A. FOR LEGEND, SEE SHEET E-001.
  - B. SEE "T" SHEETS FOR TELECOMMUNICATIONS OUTLET LOCATIONS
  - C. WALL AND FLOOR PENETRATION TO BE FINISHED WITH 2-HOUR FIRE RATED ASSEMBLY. CONTRACTOR TO PROVIDE PLAN AND PRODUCT DETAIL PRIOR TO INSTALLATION.

- SHEET KEY NOTES:**
- 1. PROVIDE DEDICATED BRANCH CIRCUIT(S) AS INDICATED.
  - 2. PROVIDE #6 IN CABLE TRAY. BOND PER DETAILS ON SHEET EP901.
  - 3. BOND IDF GROUND BAR WITH (1)#2 BACK TO BUILDING STEEL.
  - 4. IDF.
  - 5. BOND #6 IN CABLE TRAY TO IDF GROUND BAR.
  - 6. 12"x12"x6"D WEATHERPROOF JB AND COREDRILLS FOR FIBER SERVING ALL HANDS IDFLGS402. AVOID DRILLING ERECTION BAY WALL.
  - 7. INSTALL JB OVER EXISTING EMBEDDED BOX TO ALLOW ACCESS TO CONDUIT CHASES DOWN TO EL542. PROVIDE NEW 1 1/4" CONDUIT FROM IDFS TO NEW 18" X 18" X 6"D JB.
  - 8. PROVIDE EXTENSION BOX ON EXISTING WALL MOUNTED RECEPTACLE AND UTILIZE EXISTING EMBEDDED CONDUIT TO EXTEND HOMERUN TO PANEL.
  - 9. 12" CABLE TRAY WALL MOUNTED.
  - 10. 12" BASKET TRAY MOUNTED ON EXISTING FLOOR SUPPORT SYSTEM.
  - 11. FEED FROM PANELS LOCATED ON EL618.
  - 12. 2"C SLEEVE THROUGH PRECIPITRON
  - 13. 12" X 12" X 6" WEATHERPROOF JB AND COREDRILLS FOR FIBER SERVINGS IDFLGP501. AVOID DRILLING ERECTION BAY WALL.
  - 14. 1-1/4"C FOR FIBER IN 2" COREDRILL
  - 15. 2"C FOR FIBER IN 3" COREDRILL
  - 16. UTILIZE EXISTING EMBEDDED CONDUIT TO EXTEND HOMERUN BACK TO PANEL.
  - 17. 1-1/4"C FOR FIBER.
  - 18. 2" CONDUITS TO 12" X 12" X 6" JUNCTION BOXES.



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ISSUE DATE: AUGUST 2022  
SOLICITATION NO: W91ZEEZ0001  
CONTRACT NO: W91ZEEZ0001

DESIGNED BY: J. LEYSATH  
DRAWN BY: A. BROGAN  
CHECKED BY: B. EASTMAN  
SUBMITTED BY: J. LEYSATH

FILE NO: 16G-1-6-198  
AS CONSTRUCTED DATE: 09/17/21

U.S. ARMY CORPS OF ENGINEERS  
WALLA WALLA DISTRICT  
201 N 3RD AVE  
SEATTLE, WASHINGTON

DESIGNED BY: J. LEYSATH  
DRAWN BY: A. BROGAN  
CHECKED BY: B. EASTMAN  
SUBMITTED BY: J. LEYSATH

FILE NO: 16G-1-6-198  
AS CONSTRUCTED DATE: 09/17/21

LITTLE GOOSE LOCK AND DAM  
SNAKE RIVER, WASHINGTON, OREGON AND IDAHO  
TELECOMMUNICATIONS SYSTEM UPGRADE

PLAN: EL 580.00 POWERHOUSE - SOUTH

SHEET ID  
EP105

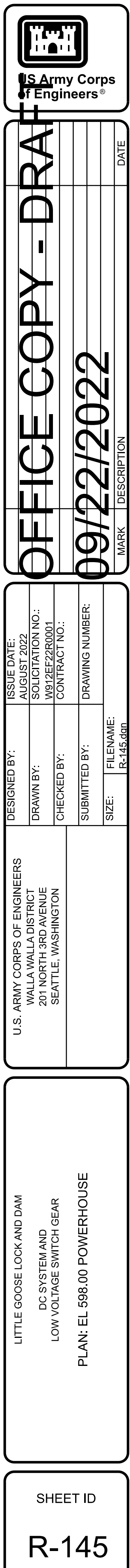
AS-CONSTRUCTED

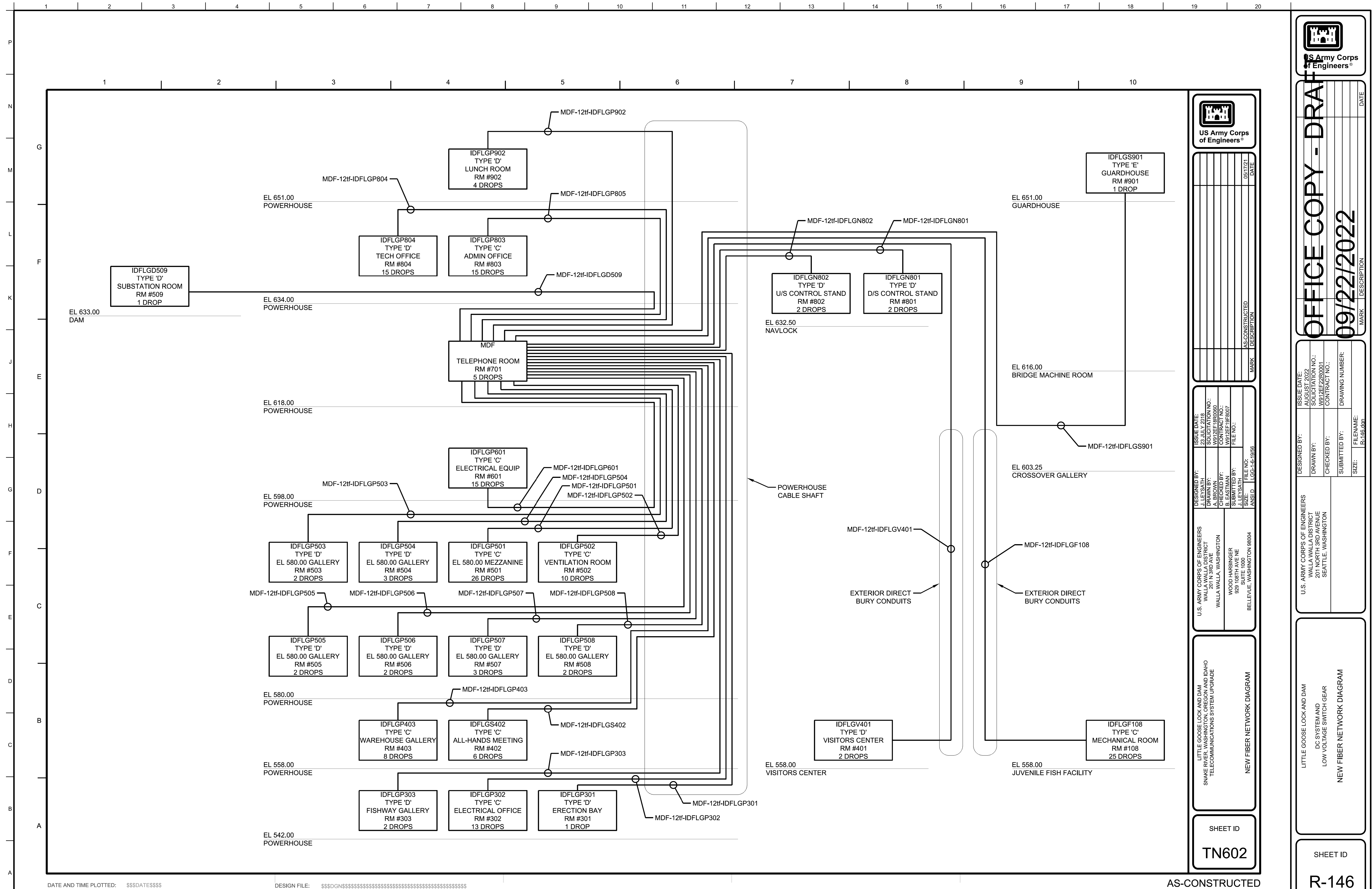
LITTLE GOOSE LOCK AND DAM  
DC SYSTEM AND  
LOW VOLTAGE SWITCH GEAR

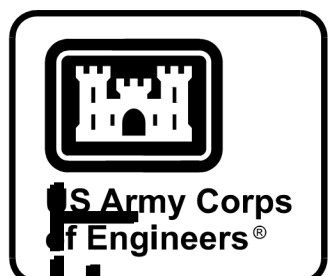
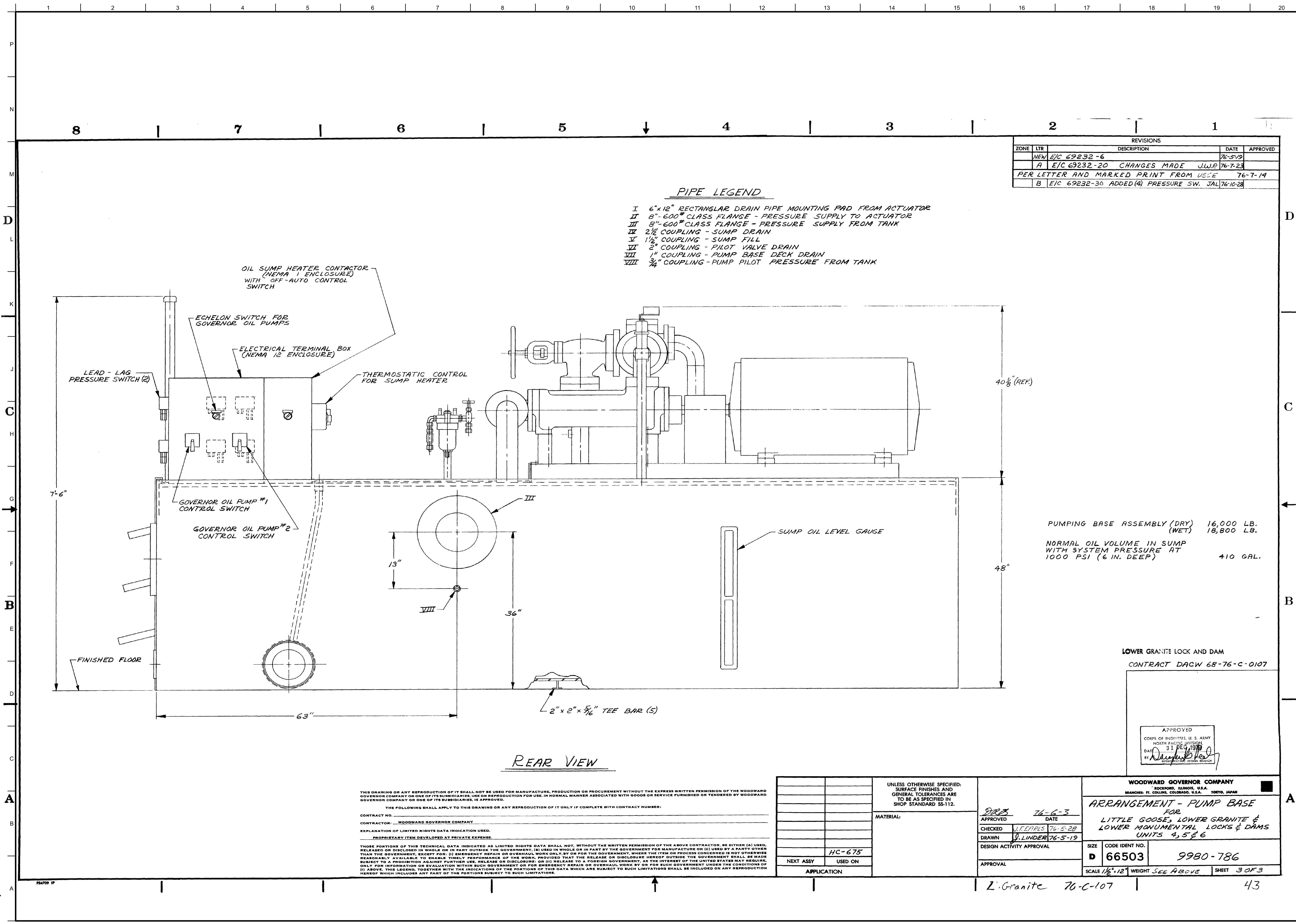
PLAN: EL 580.00 POWERHOUSE - SOUTH

SHEET ID  
R-144

FINAL







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09/22/2022

DESIGNED BY:	U.S. ARMY CORPS OF ENGINEERS
DRAWN BY:	WALLA WALLA DISTRICT
CHECKED BY:	201 NORTH 3RD AVENUE
SUBMITTED BY:	SEATTLE, WASHINGTON
FILE NAME:	
SIZE:	R-147.dwg

LITTLE GOOSE LOCK AND DAM  
DC SYSTEM AND  
LOW VOLTAGE SWITCH GEAR  
ARRANGEMENT - PUMP BASE UNITS 4, 5, & 6

SHEET ID  
R-147

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED
	NEW	E/C 69232-6	76-5-19	
	A	E/C 69232-20 CHANGES MADE	JUL 76-7-23	
PER LETTER AND MARKED PRINT FROM USCE			76-7-14	
	B	E/C 69232-30 ADDED (4) PRESSURE SW.	JAL 76-10-28	

- PIPE LEGEND**
- I 6"x12" RECTANGULAR DRAIN PIPE MOUNTING PAD FROM ACTUATOR
  - II 8"-600" CLASS FLANGE - PRESSURE SUPPLY TO ACTUATOR
  - III 8"-600" CLASS FLANGE - PRESSURE SUPPLY FROM TANK
  - IV 2 1/2" COUPLING - SUMP DRAIN
  - V 1 1/2" COUPLING - SUMP FILL
  - VI 2" COUPLING - PILOT VALVE DRAIN
  - VII 1" COUPLING - PUMP BASE DECK DRAIN
  - VIII 3/4" COUPLING - PUMP PILOT PRESSURE FROM TANK

PUMPING BASE ASSEMBLY (DRY) 16,000 LB.  
(WET) 18,800 LB.  
NORMAL OIL VOLUME IN SUMP  
WITH SYSTEM PRESSURE AT  
1000 PSI (6 IN. DEEP) 410 GAL.

LOWER GRANITE LOCK AND DAM  
CONTRACT DACW 68-76-C-0107

APPROVED  
CORPS OF ENGINEERS, U.S. ARMY  
NORTH PACIFIC DIVISION  
DATE: 31 DEC 1976  
BY: [Signature]

UNLESS OTHERWISE SPECIFIED: SURFACE FINISHES AND GENERAL TOLERANCES ARE TO BE AS SPECIFIED IN SHOP STANDARD SS-112.		WOODWARD GOVERNOR COMPANY ROCKFORD, ILLINOIS, U.S.A. BRANCHES: FT. COLLINS, COLORADO, U.S.A. TOKYO, JAPAN	
MATERIAL:		ARRANGEMENT - PUMP BASE FOR LITTLE GOOSE, LOWER GRANITE & LOWER MONUMENTAL LOCKS & DAMS UNITS 4, 5 & 6	
DESIGN ACTIVITY APPROVAL		SIZE	CODE IDENT NO.
APPROVAL		D 66503	9980-786
SCALE 1/8"=12"		WEIGHT SEE ABOVE	SHEET 3 OF 3

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2. Granite 76-C-107 43



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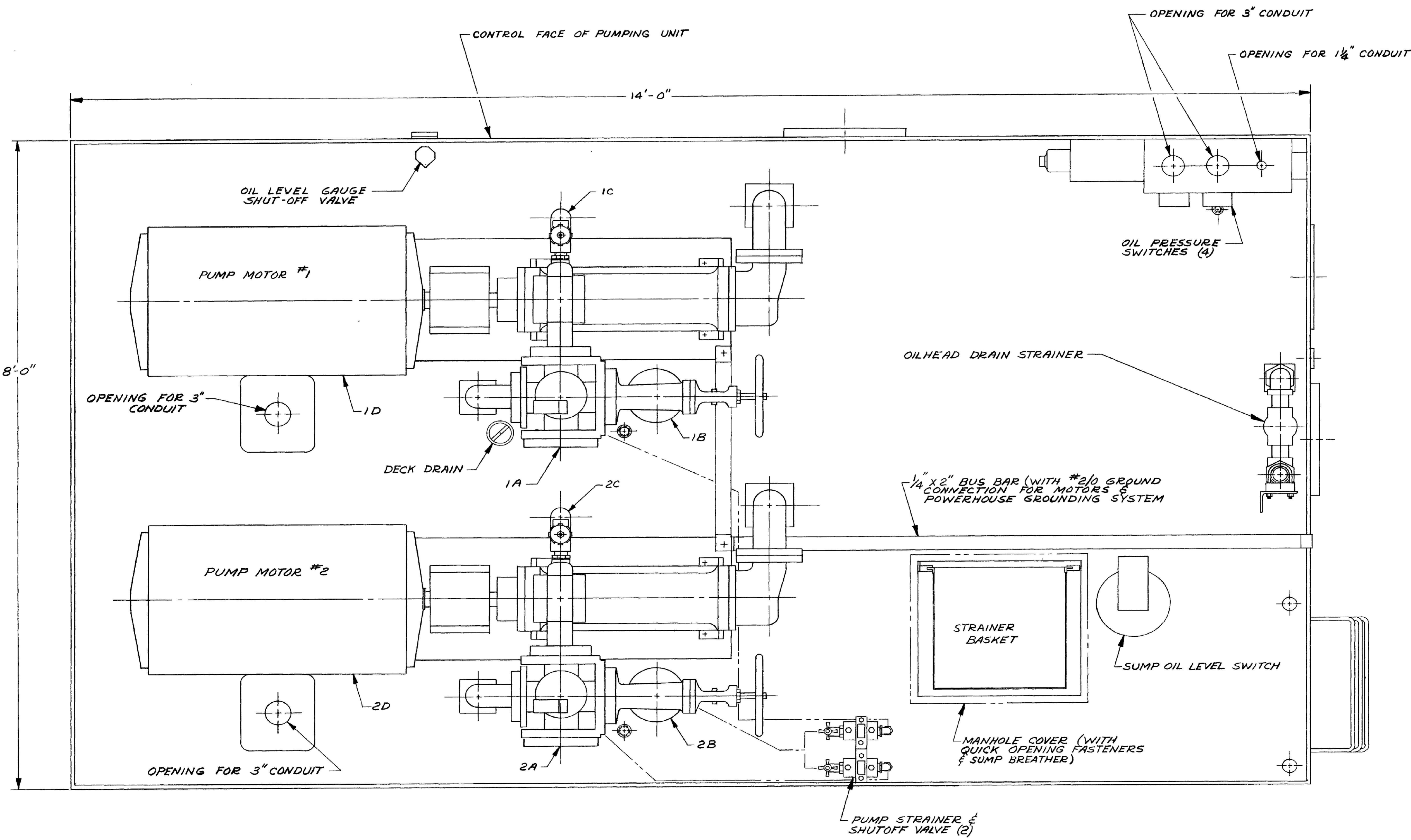
ISSUE DATE: AUGUST 2022  
SOLICITATION NO.: W91CEZ23R0001  
CONTRACT NO.:  
DESIGNED BY: U.S. ARMY CORPS OF ENGINEERS  
DRAWN BY: WALLA WALLA DISTRICT  
CHECKED BY: 201 NORTH 3RD AVENUE  
SUBMITTED BY: SEATTLE, WASHINGTON  
FILE NAME: R-148.dgn  
SIZE: R-148.dgn

LITTLE GOOSE LOCK AND DAM  
DC SYSTEM AND  
LOW VOLTAGE SWITCH GEAR  
ARRANGEMENT - PUMP BASE UNITS 4, 5, & 6

SHEET ID

R-148

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED
NEW	E/C 69232-6		76-5-19	
A	E/C 69232-20	NO CHANGE	JUL 76	
B	E/C 69232-30	DELETED "PRESSURE TANK OIL LEVEL CHECKING SOLENOID VALVE" & ADDED (1) PRESSURE SWITCH	JAL 76-10-28	



INSTALLATION NOTE

TO INSURE PROPER INSTALLATION OF THE GOVERNOR CABINETS, PIPING AND TANKS, IT IS ABSOLUTELY NECESSARY THE MAJOR PIECES BE CAPABLE OF BOTH VERTICAL AND HORIZONTAL ADJUSTMENT. REFER TO WOODWARD GOVERNOR CO. BULLETIN 07070 FOR SPECIFIC REQUIREMENTS FOR FOUNDATION PREPARATION AND EQUIPMENT INSTALLATION.

LOWER GRANITE LOCK AND DAM

CONTRACT DACW68-76-C-0107

APPROVED  
CORPS OF ENGINEERS, U. S. ARMY  
NORTH PACIFIC DIVISION  
DATE: 131 DEC 1979  
BY: [Signature]  
MECHANICAL DESIGN BRANCH

PUMP #1 & #2 IDENTIFICATION  
175 GPM (OIL TEMP. AT 115° F) @ 1000 PSI PUMP ASSY WITH:  
192 GPM (OIL TEMP. AT 50° F)  
A. UNLOADER WITH SWITCH  
B. PRESSURE SHUTOFF VALVE & CHECK VALVE  
C. SAFETY VALVE @ 1080 PSI  
D. MOTOR - 150 HP, 1800 RPM, 4160 V, 60 HZ, 3 PH.

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CONTRACTOR: WOODWARD GOVERNOR COMPANY  
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TOTAL WEIGHT (DRY) 16,000 lb  
TOTAL WEIGHT (+6" OIL) 18,800 lb

UNLESS OTHERWISE SPECIFIED: SURFACE FINISHES AND GENERAL TOLERANCES ARE TO BE AS SPECIFIED IN SHOP STANDARD SS-112.		APPROVED DATE 76-6-3 CHECKED J. FEHRLS 76-5-28 DRAWN J. LINDER 76-5-19 DESIGN ACTIVITY APPROVAL		WOODWARD GOVERNOR COMPANY ROCKFORD, ILLINOIS, U.S.A. BRANCHES: FT. COLLINS, COLORADO, U.S.A. TOKYO, JAPAN	
MATERIAL:		SIZE D 66503		CODE IDENT NO. 9980-786	
NEXT ASSY HC-675 USED ON		APPROVAL		SCALE 1/8" = 12" WEIGHT SEE SHEET 3 SHEET 1 OF 3	
APPLICATION		LITTLE GOOSE 76-C-107		41	



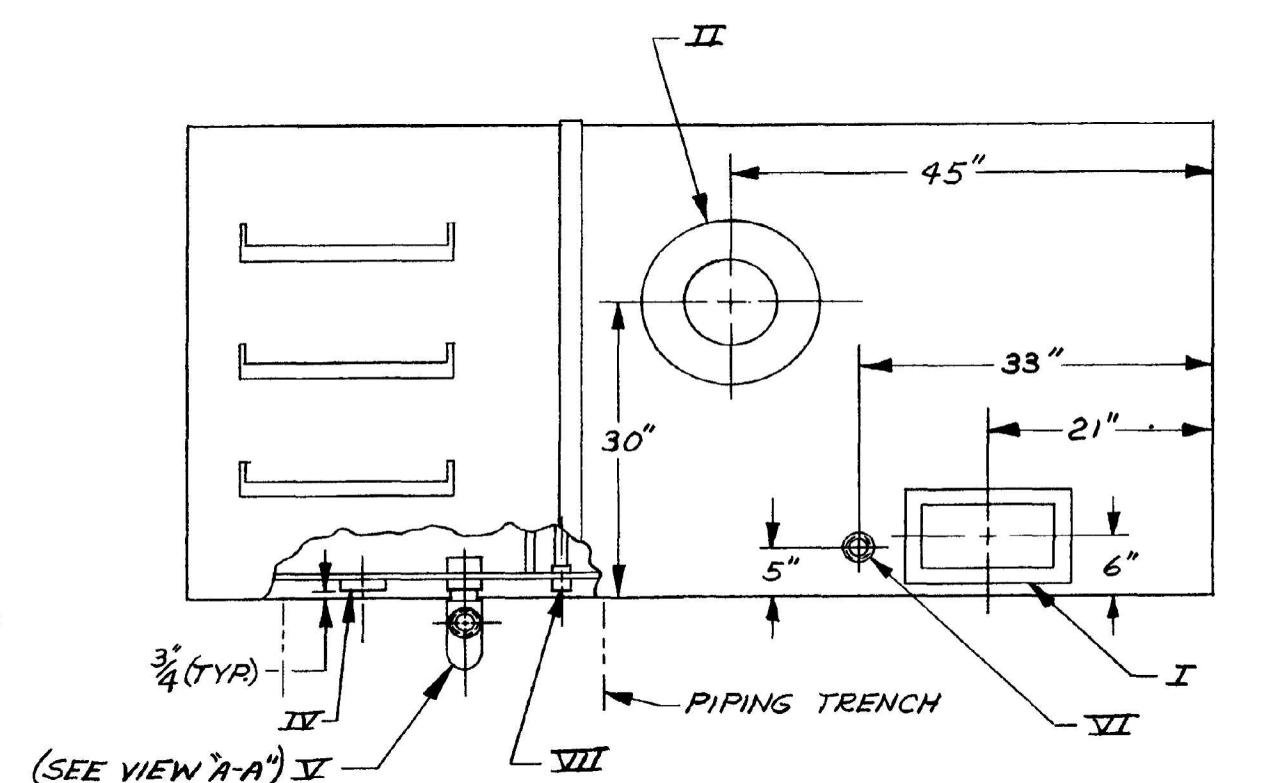
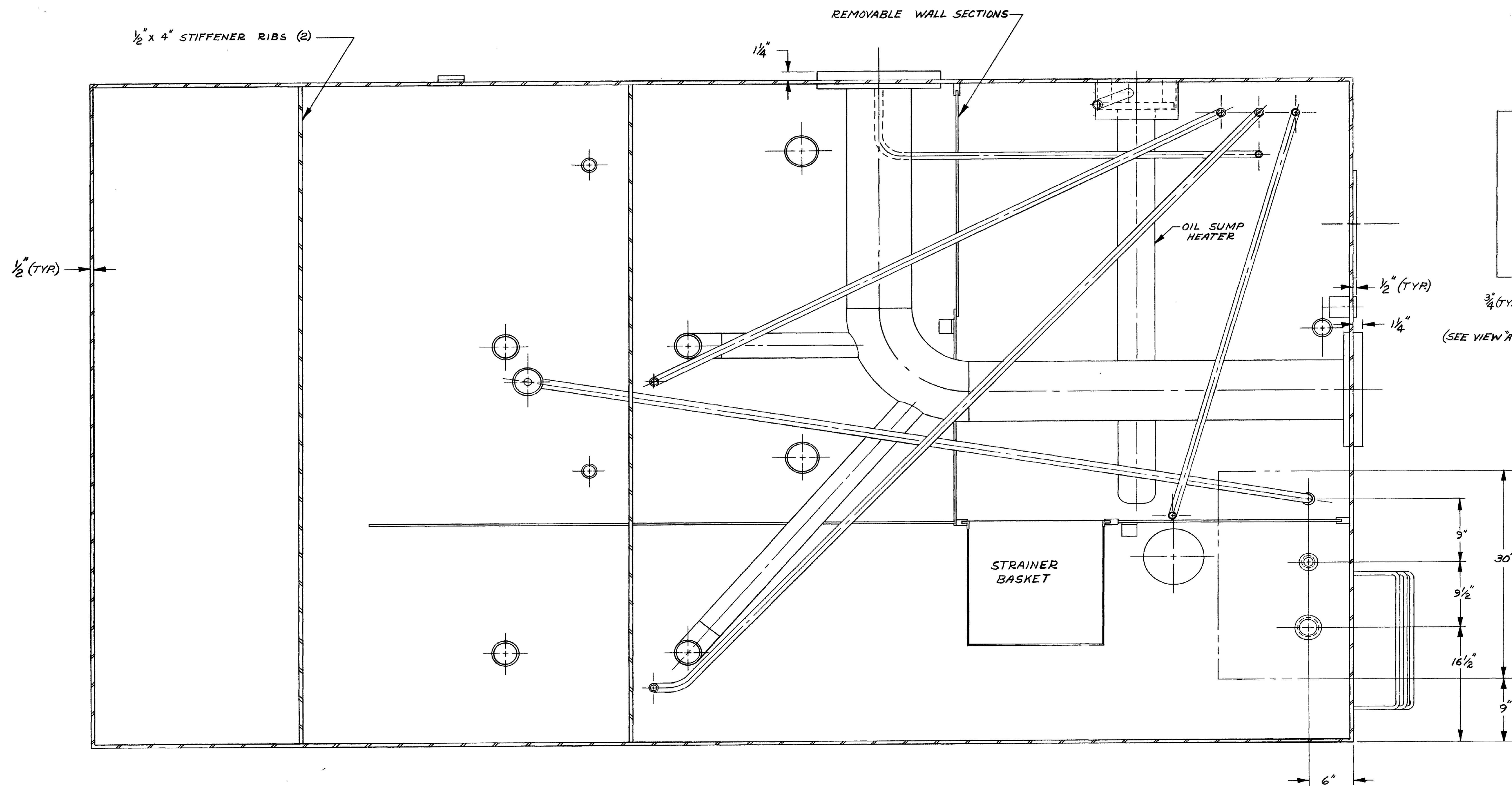
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09/22/2022

ISSUE DATE: AUGUST 2022  
SOLICITATION NO.: W912Z23R001  
CONTRACT NO.:  
DESIGNED BY: U.S. ARMY CORPS OF ENGINEERS  
DRAWN BY: WALLA WALLA DISTRICT  
CHECKED BY: 201 NORTH 3RD AVENUE  
SUBMITTED BY: SEATTLE, WASHINGTON  
FILE NAME: R-149.dgn  
SIZE: R-149.dgn

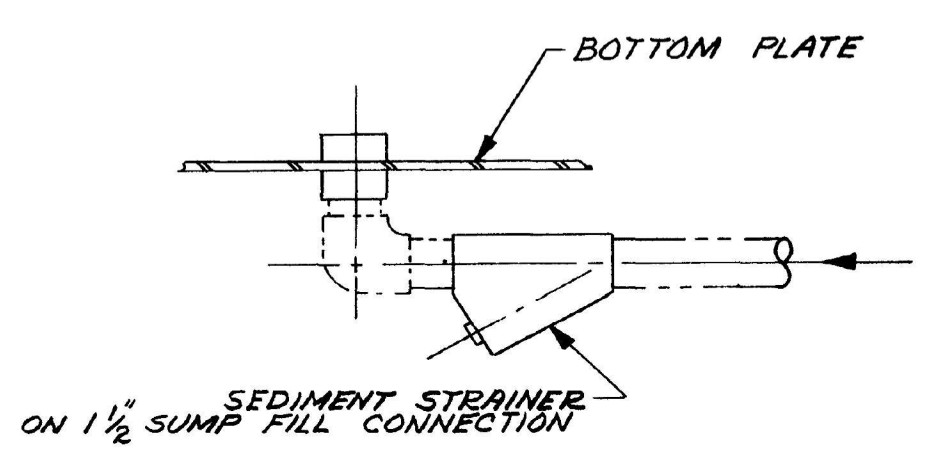
LITTLE GOOSE LOCK AND DAM  
DC SYSTEM AND  
LOW VOLTAGE SWITCH GEAR  
ARRANGEMENT - PUMP BASE UNITS 4, 5, & 6

SHEET ID  
R-149

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED
NEW	E/C 69232-6		76-5-19	
A	E/C 69232-20	CHANGES MADE	JUL 76-7-22	
PER LETTER AND MARKED PRINT FROM USCE			76-7-19	
B	E/C 69232-30	NO CHANGE THIS SHEET	JUL 76-10-28	



PARTIAL RIGHT SIDE VIEW  
SCALE: 3/4" = 12"



VIEW "A-A"

LOWER GRANITE LOCK AND DAM  
CONTRACT DACW 68-76-C-0107

APPROVED  
CORPS OF ENGINEERS, U.S. ARMY  
NORTH PACIFIC DIVISION  
DATE: 21 DEC 1976  
BY: [Signature]  
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UNLESS OTHERWISE SPECIFIED, SURFACE FINISHES AND GENERAL TOLERANCES ARE TO BE AS SPECIFIED IN SHOP STANDARD SS-112.		WOODWARD GOVERNOR COMPANY ROCKFORD, ILLINOIS, U.S.A. BRANCHES: FT. COLLINS, COLORADO, U.S.A. TOKYO, JAPAN	
MATERIAL:		ARRANGEMENT - PUMP BASE FOR LITTLE GOOSE, LOWER GRANITE & LOWER MONUMENTAL LOCKS & DAMS UNITS 4, 5 & 6	
APPROVED [Signature] DATE 76-6-3	CHECKED J. F. E. [Signature] DATE 76-5-28	SIZE D 66503	CODE IDENT NO. 9980-786
DRAWN J. LINDER DATE 76-5-19		DESIGN ACTIVITY APPROVAL	
APPROVAL		SCALE 1 1/2" = 12" WEIGHT SEE SHEET 3 SHEET 2 OF 3	
NEXT ASSY HC-675		USED ON	
APPLICATION			

Li Granite 76-C-107 42

[illegible]

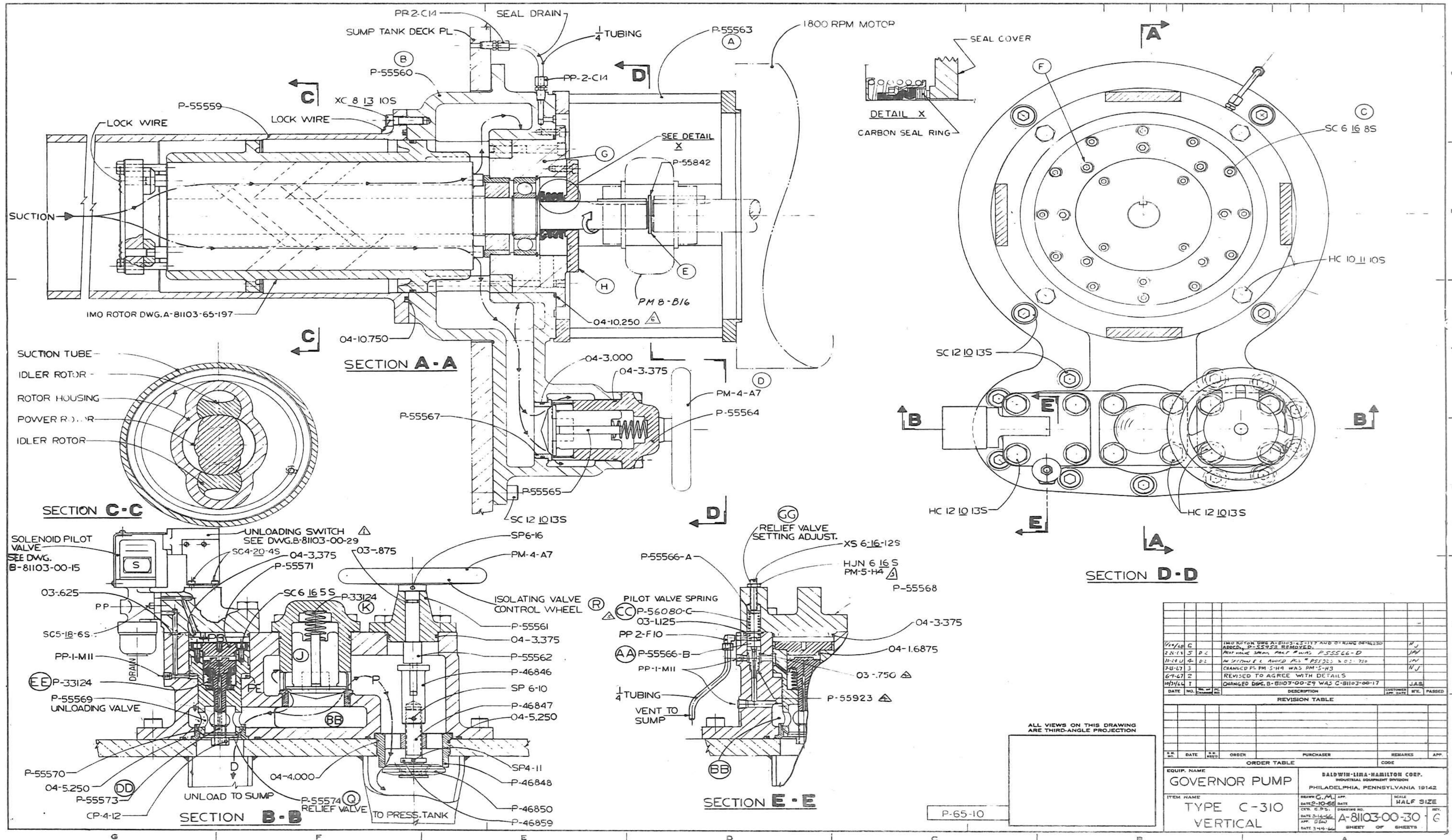
DRAWN BY:		SOLICITATION NO.:	W912EE22R0001
CHECKED BY:		CONTRACT NO.:	
SUBMITTED BY:		DRAWING NUMBER:	
SIZE:	FILENAME:		
	R-150.dgn		

201 NORTH 3RD AVENUE  
SEATTLE, WASHINGTON

DC SYSTEM AND  
LOW VOLTAGE SWITCH GEAR

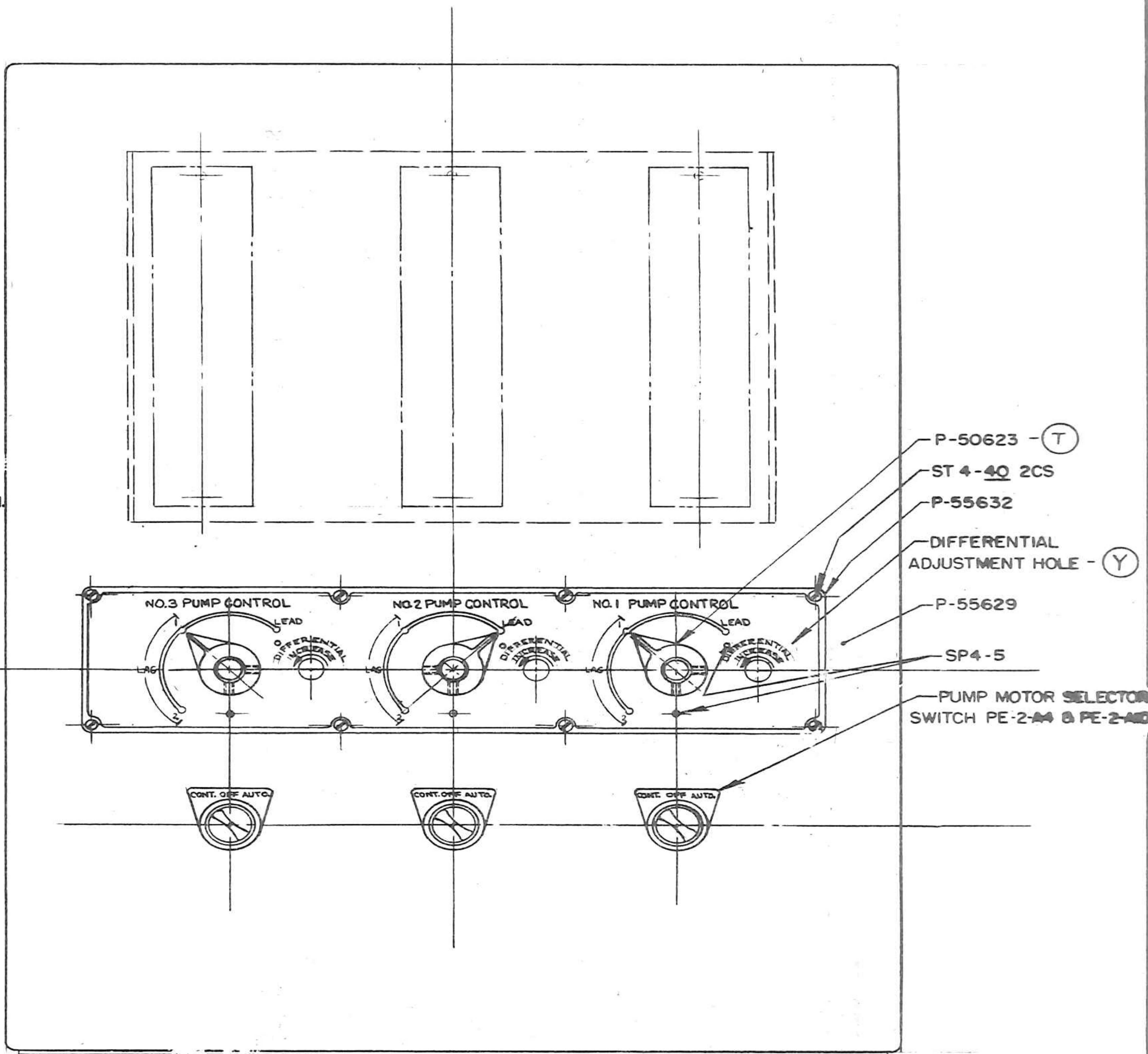
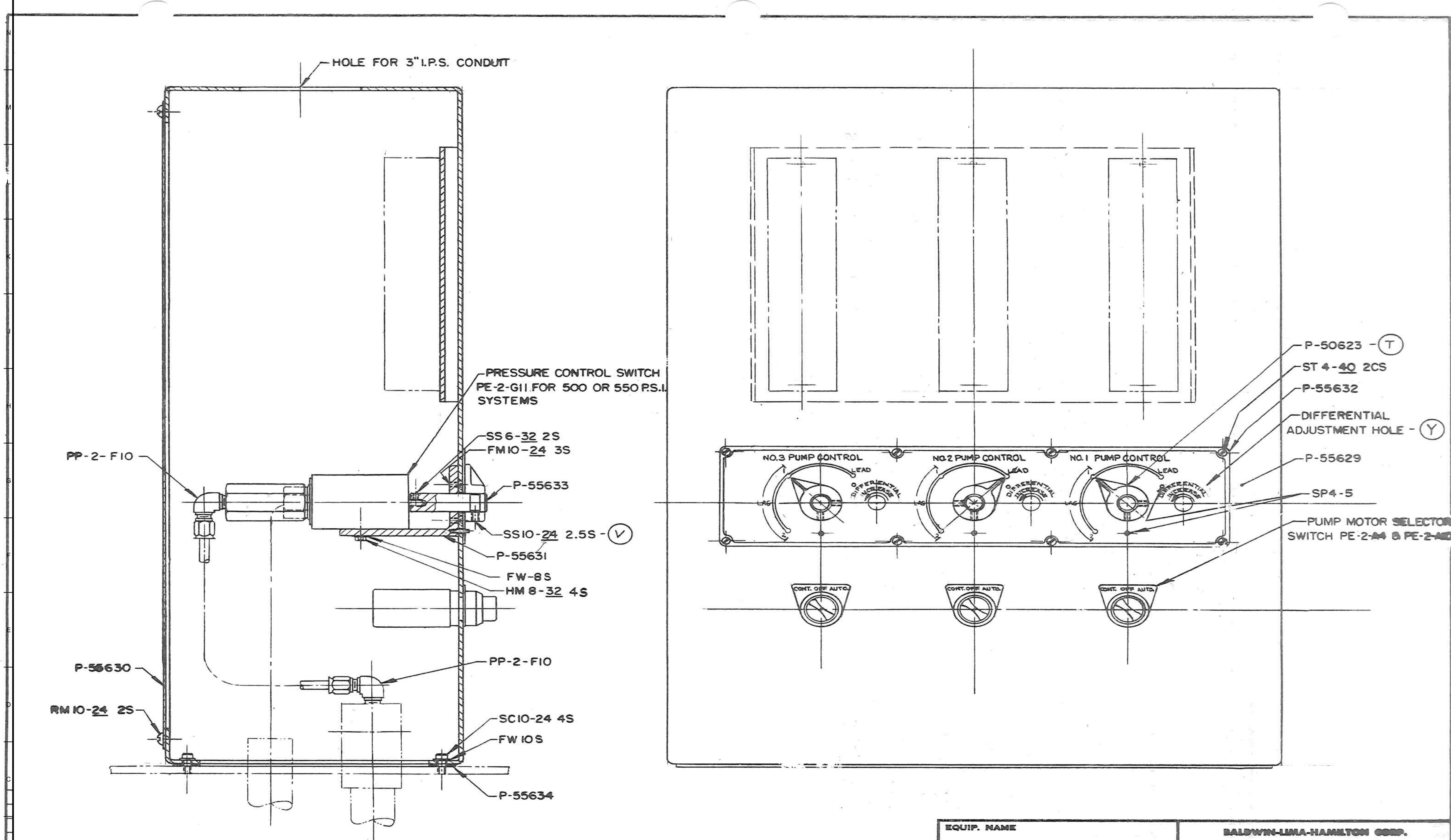
GOVERNOR PUMP TYPE C-310 VERTICAL

HEET ID  
-150





P  
N  
M  
K  
U  
H  
S  
F  
E  
D  
C  
B



TL	10-25-67	JPV		ADDED STOP PIN SP4-5 IN LEAD POSITION
I	10-26-66	RJS	WCS	SECOND "LAG" POSITION ADDED
SYM.	DATE	SIGN.	CKD	REVISION

EQUIP. NAME PUMP CONTROL UNIT		BALDWIN-LIMA-HAMILTON CORP. INDUSTRIAL EQUIPMENT DIVISION PHILADELPHIA 42, PENNSYLVANIA	
ITEM NAME ASSEMBLY		DRAWN R. HOFFMAN DATE 3-23-66 CHK'D. <i>[Signature]</i> DATE 4-28-66 APP. <i>[Signature]</i> DATE 4-28-66	APP. DATE SCALE 6" = 1'-0" DRAWING NO. B-81103-00-32 REV. II

U.S. Army Corps of Engineers

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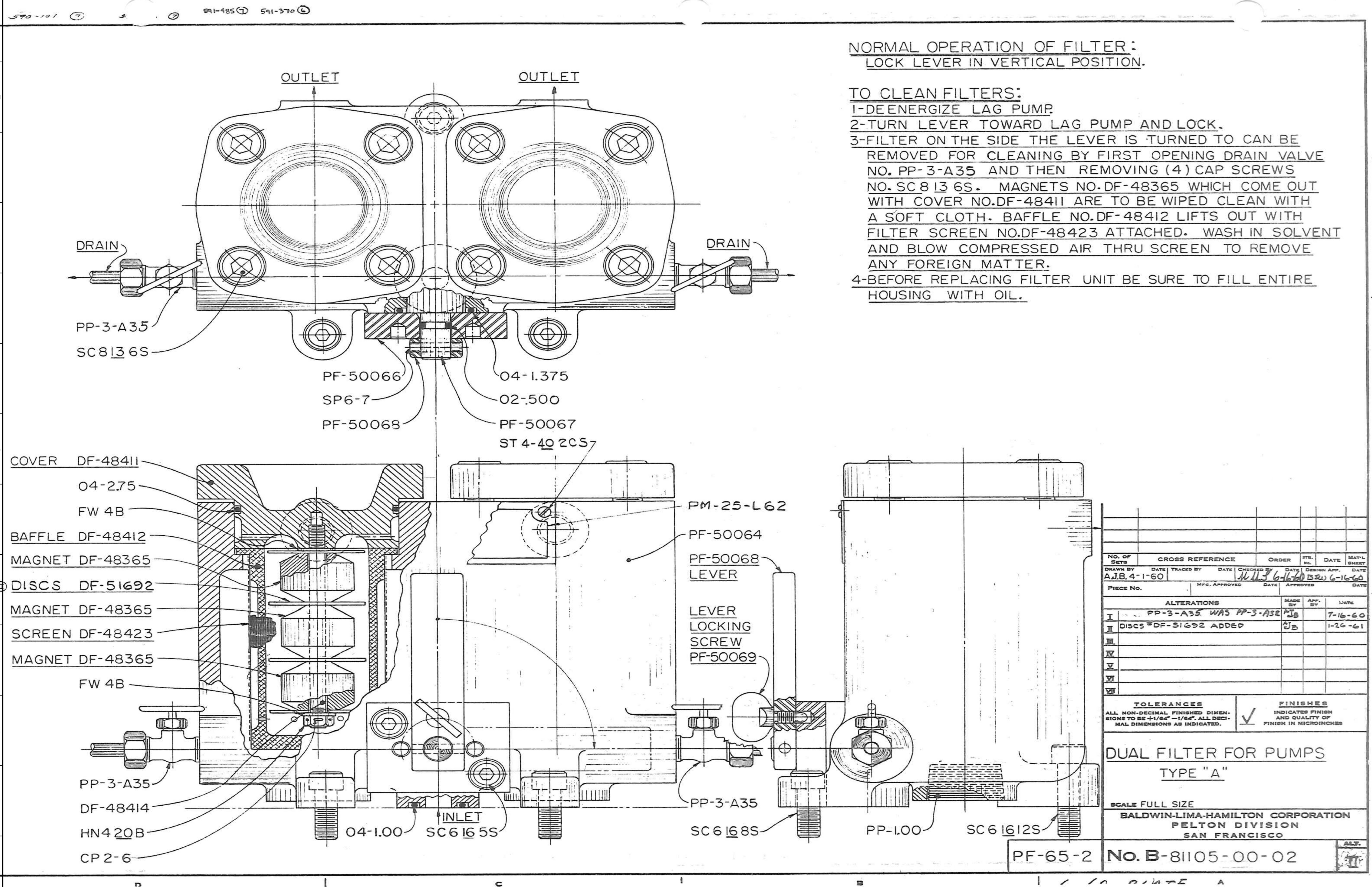
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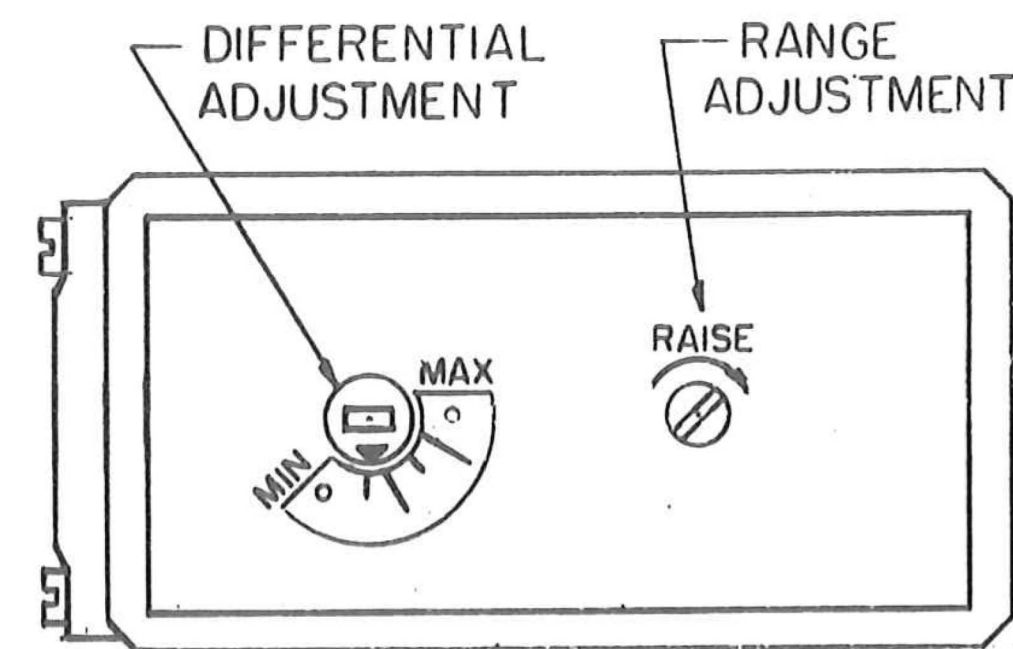
ISSUE DATE: AUGUST 2022  
SOLICITATION NO.: W91CEZ23R001  
CONTRACT NO.:  
DESIGNED BY:  
DRAWN BY:  
CHECKED BY:  
SUBMITTED BY:  
FILE NAME: R-152.dwg  
SIZE: R-152.dwg

U.S. ARMY CORPS OF ENGINEERS  
WALLA WALLA DISTRICT  
201 NORTH 3RD AVENUE  
SEATTLE, WASHINGTON

LITTLE GOOSE LOCK AND DAM  
DC SYSTEM AND  
LOW VOLTAGE SWITCH GEAR  
PUMP CONTROL UNIT ASSEMBLY

SHEET ID  
R-152

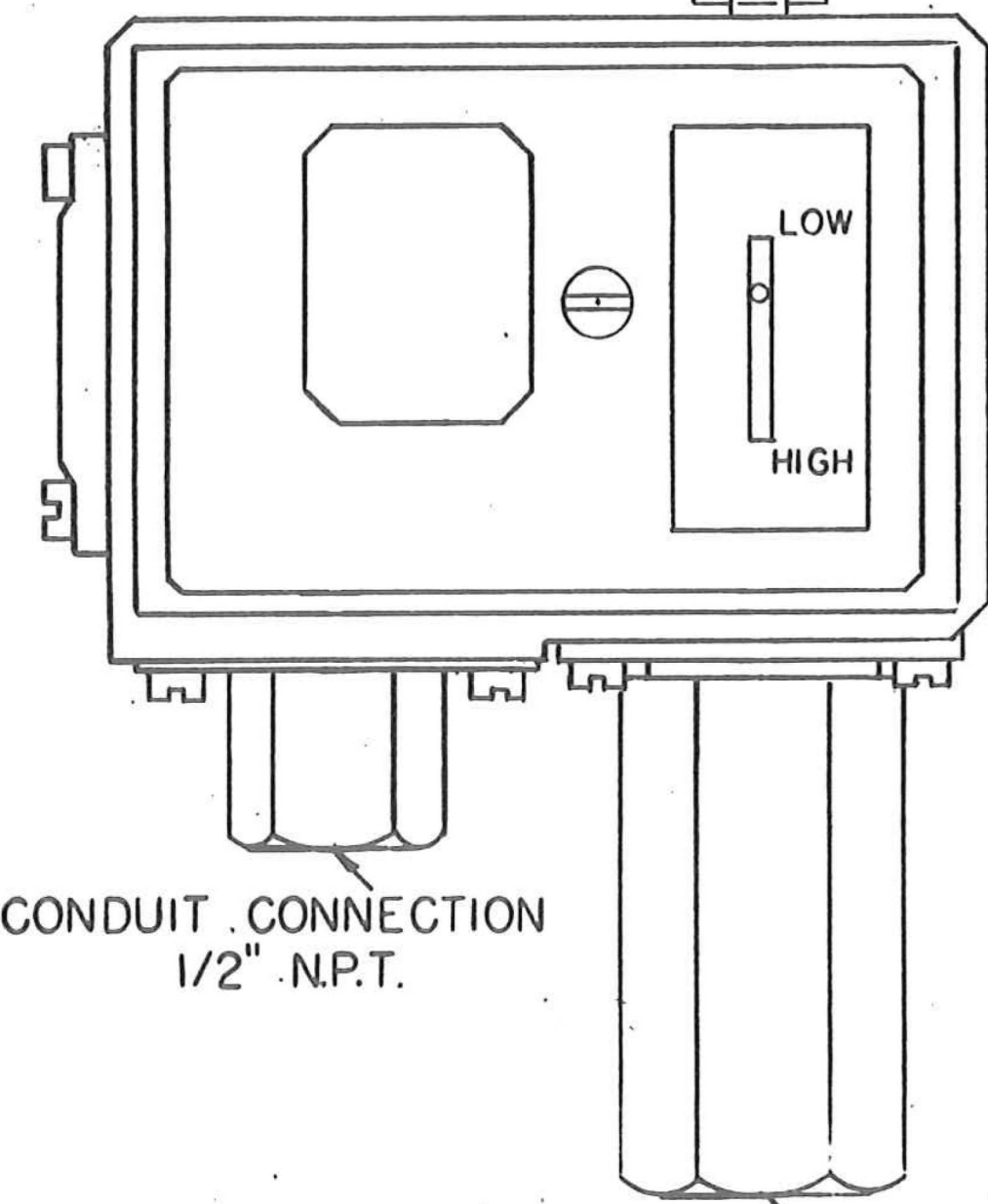




### FOR GOVERNOR PUMP CONTROL

SWITCH SUPPLIED WITH  
PROJECTING RANGE ADJUST  
SCREW-SHOWN DOTTED  
B-L-H PART N° PE-2-G11  
SQUARE "D" INDUSTRIAL  
CLASS 9012 TYPE F.H.G.  
FORM K CONTACTS N.O.

SEE PUMP CONTROL  
DWG FOR PART  
NUMBER



TRIP PRESSURE  
CONTROLLED BY  
DIFFERENTIAL ADJUST.  
CHANGES TRIP PRESSURE  
BUT DOES NOT AFFECT  
RESET PRESSURE  
CONTROLLED BY RANGE  
ADJUSTMENT SCREW  
RAISING RESET PRESSURE  
WILL ALSO RAISE TRIP  
PRESSURE  
"O" PRESSURE

### OIL PRESSURE SWITCH

B-L-H PART N° PE-12-G12 CONTACTS N.C.  
B-L-H PART N° PE-13-G13 CONTACTS N.O.

SQUARE "D" INDUSTRIAL CLASS 9012  
TYPE FHG-3 S.P.S.T. CONTACTS

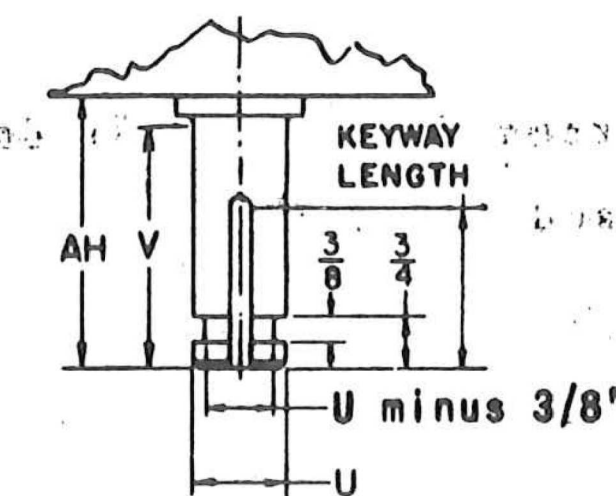
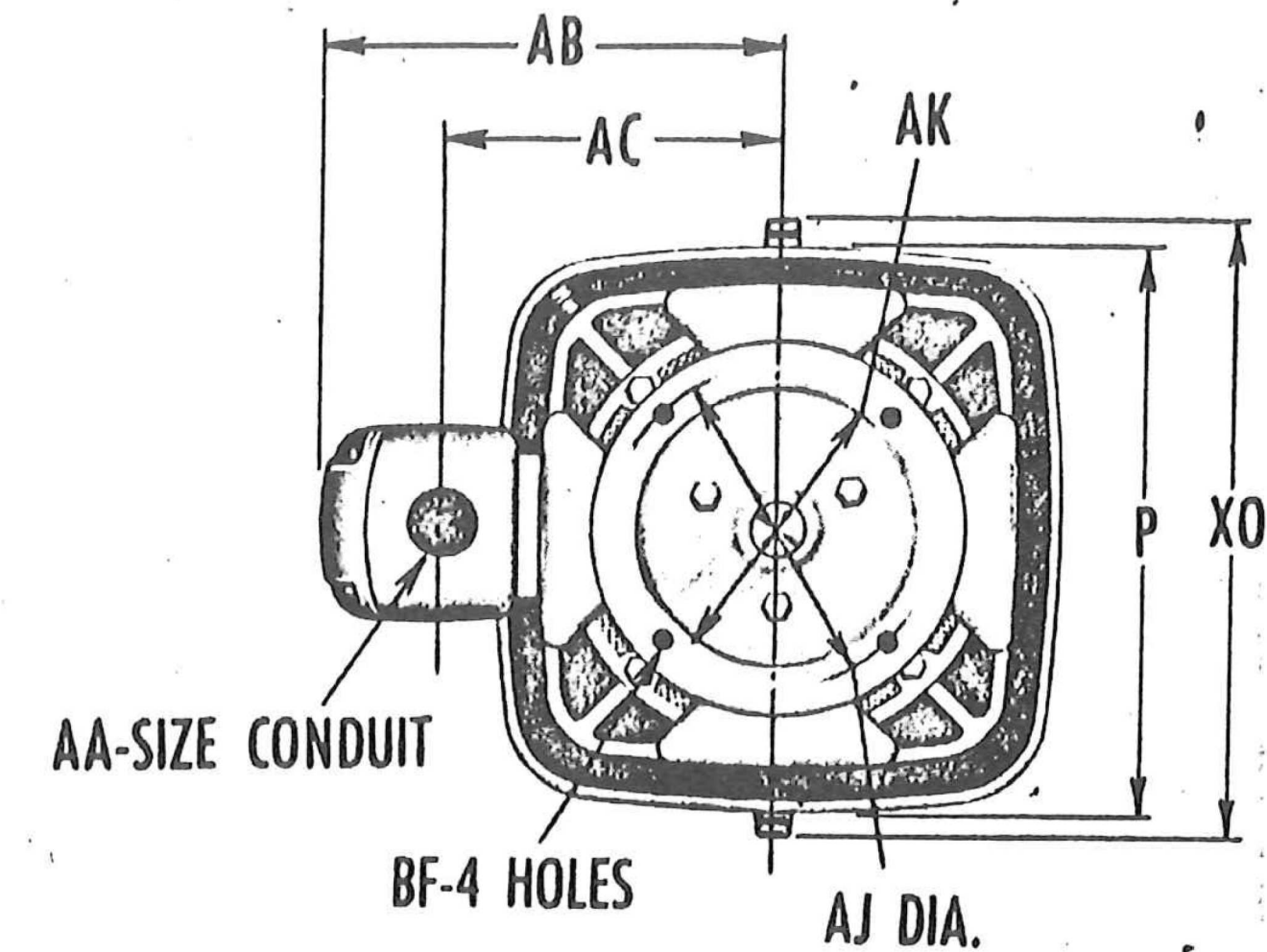
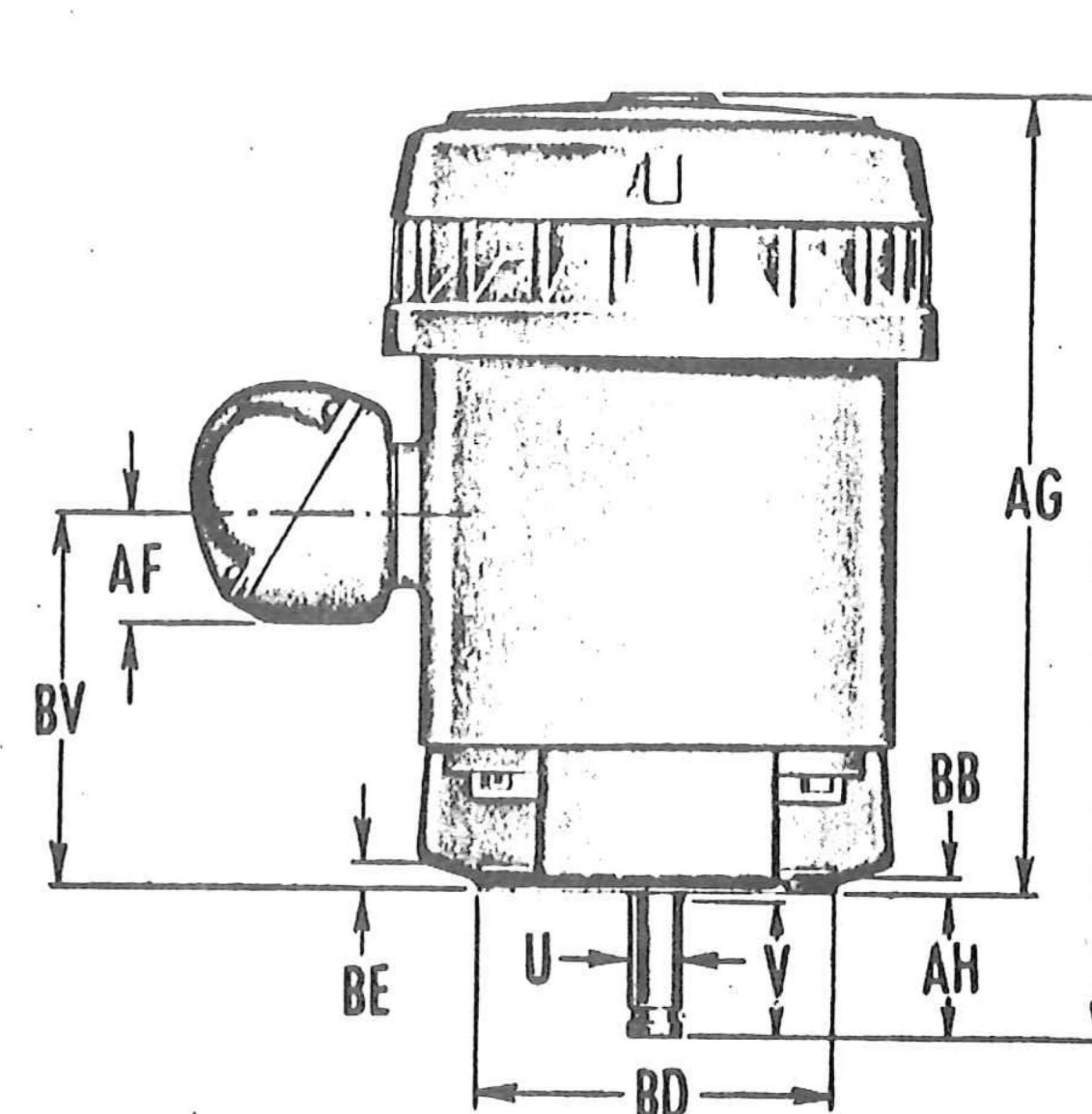
SUPPLEMENT N° 22 A SHT. I

## U. S. Vertical Solid Shaft Motors

Unclosed  
DRIP-PROOF

NEMA P BASE  
NORMAL THRUST  
TYPE RV

Section 245  
Page 43.5  
Effective  
September 17, 1963  
New Sheet



ALL DIMENSIONS ARE IN INCHES

FRAME NO.	TYPE	C	P DIA. STATOR	U	V MIN.	AA	AB	AC	AF	AG	AH	AJ DIA.	AK	BB	BD BASE DIA.	BE	BF HOLE DIA.	BF-4 HOLES	XO	SO. KEY	KEY LENGTH	BASIC BRKT. PART NO.
A286UP	RV	27-1/4	16-1/8	1-5/8	4-1/2	2	13-1/2	10-1/8	3-1/4	22-3/4	4-1/2	14-3/4	13-1/2	1/4	16-1/2	11/16	10-7/8	18-1/2	3/8	3-3/8	132762	
A286UPY	RV	27-1/4	16-1/8	1-5/8	4-1/2	2	13-1/2	10-1/8	3-1/4	22-3/4	4-1/2	9-1/8	8-1/4	1/4	12	11/16	7/16	10-7/8	18-1/2	3/8	3-3/8	132808
A324UP, A326UP	RV	27-1/4	16-1/8	1-5/8	4-1/2	2	13-1/2	10-1/8	3-1/4	22-3/4	4-1/2	14-3/4	13-1/2	1/4	16-1/2	11/16	11/16	10-7/8	18-1/2	3/8	3-3/8	132762
A324UPY, A326UPY	RV	27-1/4	16-1/8	1-5/8	4-1/2	2	13-1/2	10-1/8	3-1/4	22-3/4	4-1/2	9-1/8	8-1/4	1/4	12	11/16	7/16	10-7/8	18-1/2	3/8	3-3/8	132808
326UP	RV	28-1/8	18-1/2	1-5/8	4-5/8	3	16-9/16	12-9/16	4-5/8	23-5/8	4-1/2	14-3/4	13-1/2	1/4	16-1/2	11/16	11/16	11-1/8	21-1/8	3/8	3-3/8	132402
326UPH	RV	28-1/8	18-1/2	1-5/8	4-5/8	3	16-9/16	12-9/16	4-5/8	23-5/8	4-1/2	9-1/8	8-1/4	3/16	12	11/16	7/16	11-1/8	21-1/8	3/8	3-3/8	132587
A364UP, A365UP	RV	28-1/8	18-1/2	1-5/8	4-5/8	3	16-9/16	12-9/16	4-5/8	23-5/8	4-1/2	14-3/4	13-1/2	1/4	16-1/2	11/16	11/16	11-1/8	21-1/8	3/8	3-3/8	132402
A364UPH, A365UPH	RV	28-1/8	18-1/2	1-5/8	4-5/8	3	16-9/16	12-9/16	4-5/8	23-5/8	4-1/2	9-1/8	8-1/4	3/16	12	11/16	7/16	11-1/8	21-1/8	3/8	3-3/8	132587
365UP	RV	32-5/16	20-1/2	2-1/8	4-5/8	3	17-3/4	13-7/8	4-5/8	27-13/16	4-1/2	14-3/4	13-1/2	1/4	16-1/2	3/4	11/16	14-1/4	23-3/8	1/2	3-3/8	132015
365UPH	RV	32-5/16	20-1/2	2-1/8	4-5/8	3	17-3/4	13-7/8	4-5/8	27-13/16	4-1/2	14-3/4	13-1/2	1/4	20	3/4	11/16	14-1/4	23-3/8	1/2	3-3/8	132011
A404UP, A405UP	RV	32-5/16	20-1/2	2-1/8	4-5/8	3	17-3/4	13-7/8	4-5/8	27-13/16	4-1/2	14-3/4	13-1/2	1/4	16-1/2	3/4	11/16	14-1/4	23-3/8	1/2	3-1/4	132015
A404UPH, A405UPH	RV	32-5/16	20-1/2	2-1/8	4-5/8	3	17-3/4	13-7/8	4-5/8	27-13/16	4-1/2	14-3/4	13-1/2	1/4	20	3/4	11/16	14-1/4	23-3/8	1/2	3-1/4	132011
404UP, 405UP	RV	35-5/8	23-1/8	2-1/8	4-1/2	3	18-1/8	13-15/16	4-7/8	31-1/8	4-1/2	14-3/4	13-1/2	1/4	20	3/4	11/16	15-1/2	25-1/4	1/2	3-1/4	132562
404UPH, 405UPH	RV	35-5/8	23-1/8	2-1/8	4-1/2	3	18-1/8	13-15/16	4-7/8	31-1/8	4-1/2	14-3/4	13-1/2	1/4	16-1/2	3/4	11/16	15-1/2	25-1/4	1/2	3-1/4	132566
A444UP, A445UP	RV	35-5/8	23-1/8	2-1/8	4-1/2	3	18-1/8	13-15/16	4-7/8	31-1/8	4-1/2	14-3/4	13-1/2	1/4	16-1/2	3/4	11/16	15-1/2	25-1/4	1/2	3-1/4	132566
A444UPH, A445UPH	RV	35-5/8	23-1/8	2-1/8	4-1/2	3	18-1/8	13-15/16	4-7/8	31-1/8	4-1/2	14-3/4	13-1/2	1/4	20	3/4	11/16	15-1/2	25-1/4	1/2	3-1/4	132562
1445P	RV	35-5/8	23-1/8	2-1/8	4-1/2	3	18-1/8	13-15/16	4-7/8	31-1/8	4-1/2	14-3/4	13-1/2	1/4	16-1/2	3/4	11/16	15-1/2	25-1/4	1/2	3-1/4	132562
1445PH	RV	35-5/8	23-1/8	2-1/8	4-1/2	3	18-1/8	13-15/16	4-7/8	31-1/8	4-1/2	14-3/4	13-1/2	1/4	16-1/2	3/4	11/16	15-1/2	25-1/4	1/2	3-1/4	132566

All rough casting dimensions may vary by 1/4" due to casting variations.

Dimension "AK" female registered fit is machined with 4.003" tolerance on motors with 8-1/4" AK dimension and 4.005" tolerance on motors with 18-1/2" AK dimension.

Tolerance of shaft extension diameter is 4.000" ± .001".

Conduit box opening may be rotated in steps of 90°. Standard as shown with conduit down. Standard conduit opening is listed above. When specified on the order, a smaller conduit opening will be provided.

Do not use for construction unless certified on reverse.

U.S. ELECTRICAL MOTORS

DIVISION OF UNION ELECTRIC MFG. CO.  
LOS ANGELES, CALIF. MILFORD, CONN.

Printed in U.S.A.

9 7 5 6



U.S. Army Corps  
of Engineers®

OFFICE COPY - DRAFT

09/22/2022

ISSUE DATE: AUGUST 2022  
SOLICITATION NO: W31Z22R001  
CONTRACT NO:  
DESIGNED BY:  
DRAWN BY:  
CHECKED BY:  
SUBMITTED BY:  
FILE NAME: R-154.dwg  
SIZE:

LITTLE GOOSE LOCK AND DAM  
DC SYSTEM AND  
LOW VOLTAGE SWITCH GEAR  
OIL PRESSURE SWITCH / VERTICAL SOLID SHAFT MOTORS

SHEET ID

R-154

U.S. Army Corps of Engineers®

DATE

2702/27/60

MARK

DESCRIPTION

OFFICE COPY - DRAFT

ISSUE DATE:  
AUGUST 2002

SOLICITATION NO:  
W31ZEE230001

CONTRACT NO.:

DESIGNED BY:

DRAWN BY:

CHECKED BY:

SUBMITTED BY:

FILE NAME:  
R-155.dwg

SIZE:

U.S. ARMY CORPS OF ENGINEERS  
WALLA WALLA DISTRICT  
201 NORTH 3RD AVENUE  
SEATTLE, WASHINGTON

LITTLE GOOSE LOCK AND DAM  
DC SYSTEM AND  
LOW VOLTAGE SWITCH GEAR

VERTICAL SOLID SHAFT MOTORS / BILLING

SHEET ID  
R-155

CERTIFIED PRINTS  
PHILA  
SHIP SAME.  
GOVERNOR SHOP  
SAME  
U.S. ELECTRICAL MOTORS  
DIVISION OF EMERSON ELECTRIC CO.

CUSTOMER  
BALDWIN-LIMA-HAMILTON CORP  
INDUSTRIAL EQUIPMENT DIV  
PHILADELPHIA, PENNA 19142

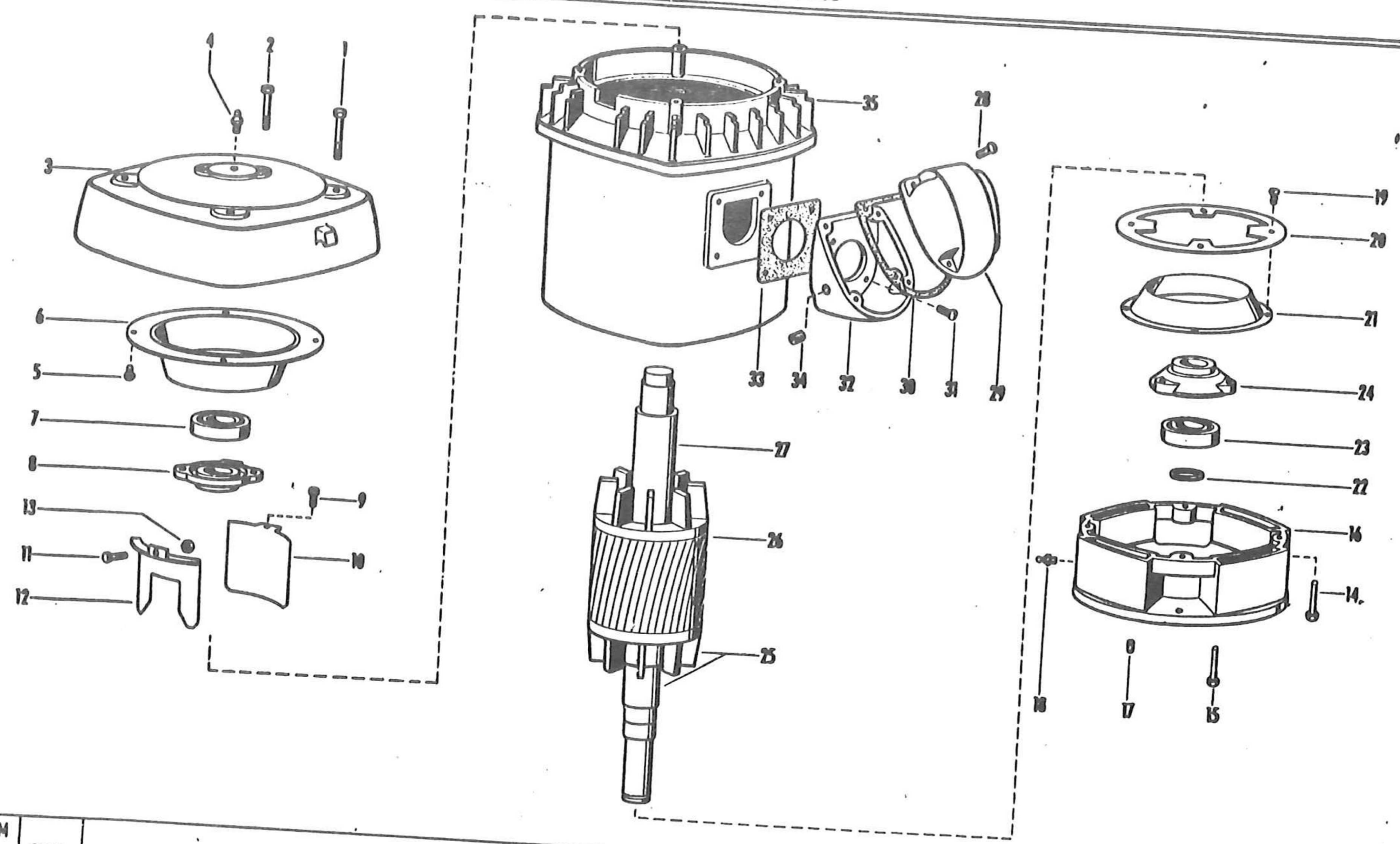
OUR ORDER NO.	DATE OF ORDER	MARKS	ITEM 1							
33-50220-00-880-1	917770-2	6-22-66								
QUANTITY	H.P.	F.R.A.M.E.	SPEED	P	TYPE	TYPE AND DESCRIPTION	PHASE/ CYCLES	VOLTS	ALT. SPEED	
50	125	445TPY	28	1800	4	1341	RV - NORMAL THRUST VERT SOLID SHAFT MTR 1) BEARINGS FOR 50,000 HRS AVERAGE LIFE 2) MOISTURE & OIL RESISTANT 3) 1.0 S.F. 4) 20 " PEASE # 5) Code G	3/60	4160	3534
FREE BY	MAIL	AIR	15	COPIES CERTIFIED PRINTS TO: & INSTR BKS & P/L TO BILLING ATTN B. WHEELER						
PRINT NO.	769-15.5	102								

This data is sent to you as requested.  
For assistance with this data or the application of the motors, please call your nearest U. S. MOTORS office or distributor.  
Thank you for your order and this opportunity of serving you.  
U.S. ELECTRICAL MOTORS  
Order Department

U.S. ELECTRICAL MOTORS  
200 EAST STANSON AVE. LOS ANGELES, CALIFORNIA 90054  
By W. E. Smith 3/9/66 WES

Parts List  
U. S. Vertical Solid Shaft Motors  
Unclosed  
DRIP-PROOF  
TYPE RV  
NORMAL THRUST  
FRAMES A286U-1445

Section Page 7 1  
Effective April 20, 1964  
New Sheet



ITEM NO.	QTY.	NAME OF PART
1	4	Screw (Upper Bracket to Stator)
2	2	Screw (Upper Bearing Cap)
3	1	Upper Bracket
4	1	Grease Fitting
5	4	Sem (Upper Air Deflector)
6	1	Air Deflector
7	1	Ball Bearing
8	1	Bearing Cap
Items 9 through 13 used with Frames A286U through A405U		
9	3	Screw (Air Baffle)
10	3	Air Baffle
11	1	Screw (Lead Air Baffle)
12	1	Lead Air Baffle
13	1	Hex. Nut & Washer
14	4	Screw or Stud & Nut (Lower Bracket to Stator)
15	3	Screw (Lower Bearing Cap) (With Qty. 3 Lockwasher on Frames 404U through 1445)
16	1	Lower Bracket (Style "P", "PH" or "PY")
16A	1	UNIMOUNT Bracket (Lower) (Style "C") (Not illus.)
17	1	Pipe Plug (Drain)(Style "P", "PH" & "PY" Base Only)
18	1	Grease Fitting (Fill)
19	4	Screw & Lockwasher or Sem (Lower Air Deflector) (Without Lockwasher on Frames 405U through 1445)
20	1	Air Deflector Ring (Used with 12" diameter base on Frames 326U through A365U)
21	1	Air Deflector

ITEM NO.	QTY.	NAME OF PART
22	1	Retaining Ring
23	1	Ball Bearing
24	1	Lower Bearing Cap
25	1	Rotor Assembly (Includes Items 26 and 27)
26	1	Rotor Core
27	1	Motor Shaft
28	4	Screw (Outlet Box Cover) (With Lockwasher on Frames 404U and Larger)
29	1	Outlet Box Cover
30	1	Gasket (Outlet Box Cover) (Not used on Frames A286U through Frames A326U)
31	4	Screw (Outlet Box Base) (With Lockwasher on Frames 365U through 1445)
32	1	Outlet Box Base
33	1	Gasket (Outlet Box Base)
34	1	Pipe Plug
35	1	Wound Stator Assembly

Motor Serial No.		Type	
Frame No.		Spec. No.	
When ordering parts, specify motor serial number, complete frame number, name of part and complete part number. The complete part number consists of the Parts List Section and Page Number as well as the Item Number as follows: Quantity 1, Bearing Cap, Part Number 769 - 15.5 - 8 Section Number Page No. Item Number			

U.S. ELECTRICAL MOTORS  
DIVISION OF EMERSON ELECTRIC CO.  
LOS ANGELES, CALIF.

## R-156