

NOTES:

1. \bullet = 750HSD ACB 1200A SOLENOID.
 \star = 2000A SOLENOID.
 \ast = 1200A STORED ENERGY.
- [17] = LOCATED ON CONTROL ROOM PANEL OR RELAY CABINET.
 [27] = LOCATED IN P.C.E. BLDG. READINGS WILL BE TAKEN AS NEEDED. EQUIPMENT NOT MARKED LOCATED AT SWGR.
- 86 UT TRIP & LOCKOUT BKR'S 52/UT1 & 52/UT2 STS.
 86 UT TRIP & LOCKOUT BKR'S 52/UT2 & 52/UT2 STS.
 86 UT TRIP & LOCKOUT BKR'S 52/UT3 & 52/UT3 STS.
 86 UT TRIP & LOCKOUT BKR'S 52/UT4 & 52/UT4 STS.
 86 STS TRIP & LOCKOUT BKR'S 52/ST5, 52/UT1/ST5, 52/UT2/ST5 & 52/UT3/ST5.
- 86 ST6 TRIP & LOCKOUT BKR'S 52/ST6, 52/UT3/ST6, 52/UT4/ST6, 52/UT5/ST6, 52/UT6/ST6, 52/UT7/ST6, 52/UT8/ST6, 52/UT9/ST6, 52/UT10/ST6, 52/UT11/ST6, 52/UT12/ST6, 52/UT13/ST6, 52/UT14/ST6, 52/UT15/ST6, 52/UT16/ST6, 52/UT17/ST6, 52/UT18/ST6, 52/UT19/ST6, 52/UT20/ST6, 52/UT21/ST6, 52/UT22/ST6, 52/UT23/ST6, 52/UT24/ST6, 52/UT25/ST6, 52/UT26/ST6, 52/UT27/ST6, 52/UT28/ST6, 52/UT29/ST6, 52/UT30/ST6, 52/UT31/ST6, 52/UT32/ST6, 52/UT33/ST6, 52/UT34/ST6, 52/UT35/ST6, 52/UT36/ST6, 52/UT37/ST6, 52/UT38/ST6, 52/UT39/ST6, 52/UT40/ST6, 52/UT41/ST6, 52/UT42/ST6, 52/UT43/ST6, 52/UT44/ST6, 52/UT45/ST6, 52/UT46/ST6, 52/UT47/ST6, 52/UT48/ST6, 52/UT49/ST6, 52/UT50/ST6, 52/UT51/ST6, 52/UT52/ST6, 52/UT53/ST6, 52/UT54/ST6, 52/UT55/ST6, 52/UT56/ST6, 52/UT57/ST6, 52/UT58/ST6, 52/UT59/ST6, 52/UT60/ST6, 52/UT61/ST6, 52/UT62/ST6, 52/UT63/ST6, 52/UT64/ST6, 52/UT65/ST6, 52/UT66/ST6, 52/UT67/ST6, 52/UT68/ST6, 52/UT69/ST6, 52/UT70/ST6, 52/UT71/ST6, 52/UT72/ST6, 52/UT73/ST6, 52/UT74/ST6, 52/UT75/ST6, 52/UT76/ST6, 52/UT77/ST6, 52/UT78/ST6, 52/UT79/ST6, 52/UT80/ST6, 52/UT81/ST6, 52/UT82/ST6, 52/UT83/ST6, 52/UT84/ST6, 52/UT85/ST6, 52/UT86/ST6, 52/UT87/ST6, 52/UT88/ST6, 52/UT89/ST6, 52/UT90/ST6, 52/UT91/ST6, 52/UT92/ST6, 52/UT93/ST6, 52/UT94/ST6, 52/UT95/ST6, 52/UT96/ST6, 52/UT97/ST6, 52/UT98/ST6, 52/UT99/ST6, 52/UT100/ST6.
- 86 RELAYS FOR CIRC. WATER PPS 31-36 TRIP THEIR RESPECTIVE BKR 52/CWP-FAILURE TIMER.
- ALL WAT/VAR TRANSDUCCERS INDICATED HAVE NO PERMANENT RECORDING DEVICES. READINGS WILL BE TAKEN AS NEEDED WITH THE USE OF PORTABLE RECORDING DEVICES.
- EACH INDIVIDUAL CWP NORMAL DRIVE MOTOR CONTACTOR IS ELECTRICALLY INTERLOCKED WITH ITS RESPECTIVE STANDBY DRIVE MOTOR CONTACTOR. STANDBY DRIVE MOTOR CONTACTORS ARE ALSO INTERLOCKED TO PREVENT THE USE OF STANDBY POWER BY MORE THAN ONE PUMP AT A TIME.
- CIRC. WATER PUMPS HAVE VARIABLE A.C. DRIVES.
- FOR COMPLETE ONE LINE OF APPENDIX 19 DIESEL GENERATOR RELAY PROTECTION & 6.9KV GAS TURBINE BUS OVERALL BUS DIFFERENTIAL CKT SEE DWG. 9321-F-36033.
- FOR COMPLETE BKR 52/ST5 & 52/ST6 TRIP SIGNAL SEE W DWG. 6177645.
- FOR CONTINUATION SEE U. E. & C. DWG. 9321-H-36933.
- FOR FUSE SIZE & TYPE SEE "PEDE".
- **SEE DRAWING 9321-F-30113 SH.3 FOR EQUIPMENT I.D.'S.

THIS IS A COMPUTER AIDED DESIGN DRAWING. A RECORD OF THE REVISIONS OF THIS DOCUMENT WITH APPROVAL INITIALS/SIGNATURES, IS MAINTAINED IN THE FILES OF ENTENERGY NUCLEAR EAST.

DWN	CHK'D	INDIAN POINT NO.3 NUCLEAR POWER PLANT
DES SUPV		
DISCIPLINE ENG		
DISCIPLINE MGR.		
PROJ APPROVAL		

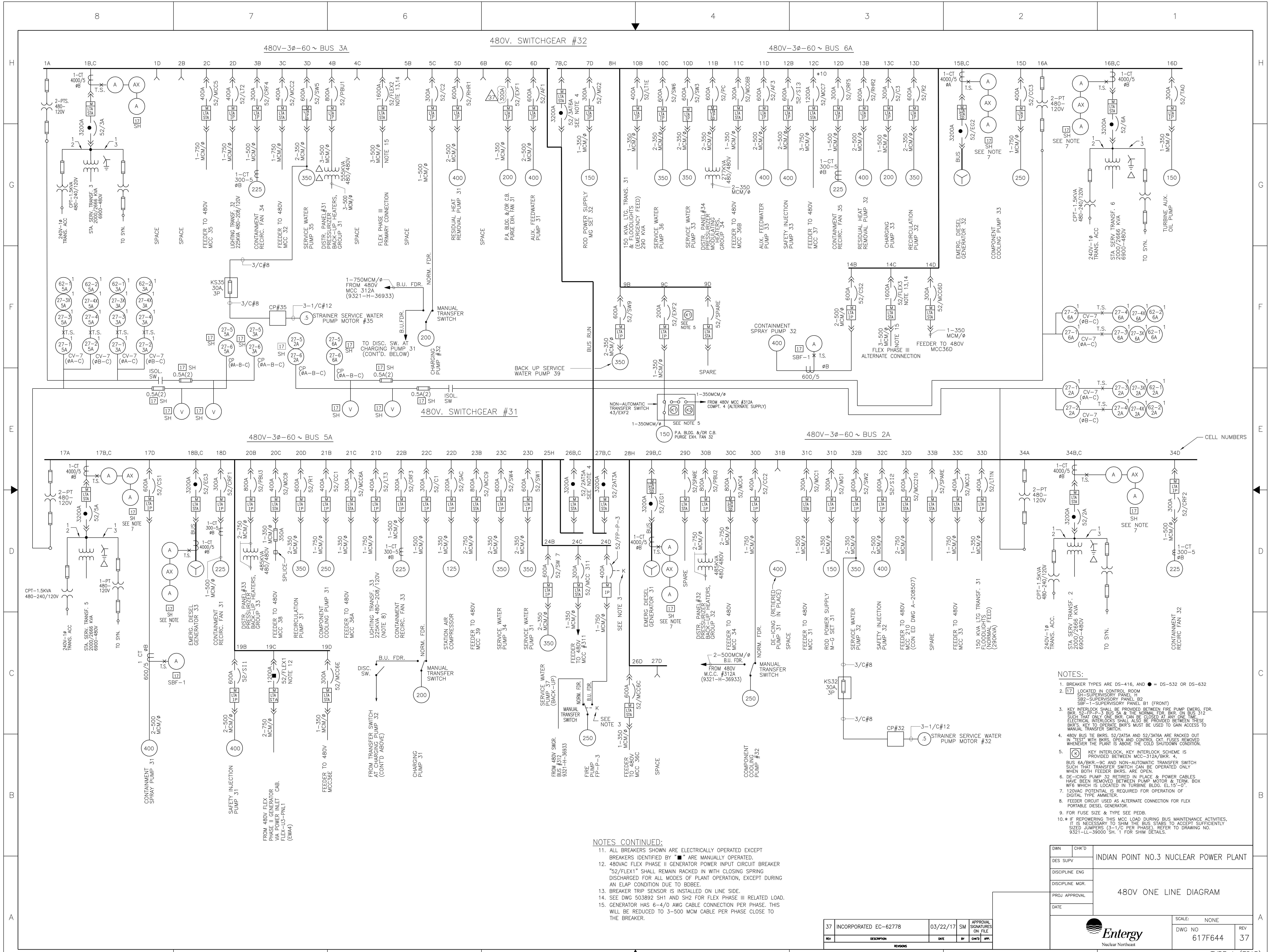
6900V ONE LINE DIAGRAM

SCALE	NONE
DWG NO	617F643
SHEET	11

TYPE A (FSAR)

11	INCORPORATED EC5908B	12/15/15	SM	APPROVAL
REV	DESCRIPTION	DATE	BY	CHK'D

Entergy Nuclear Northeast



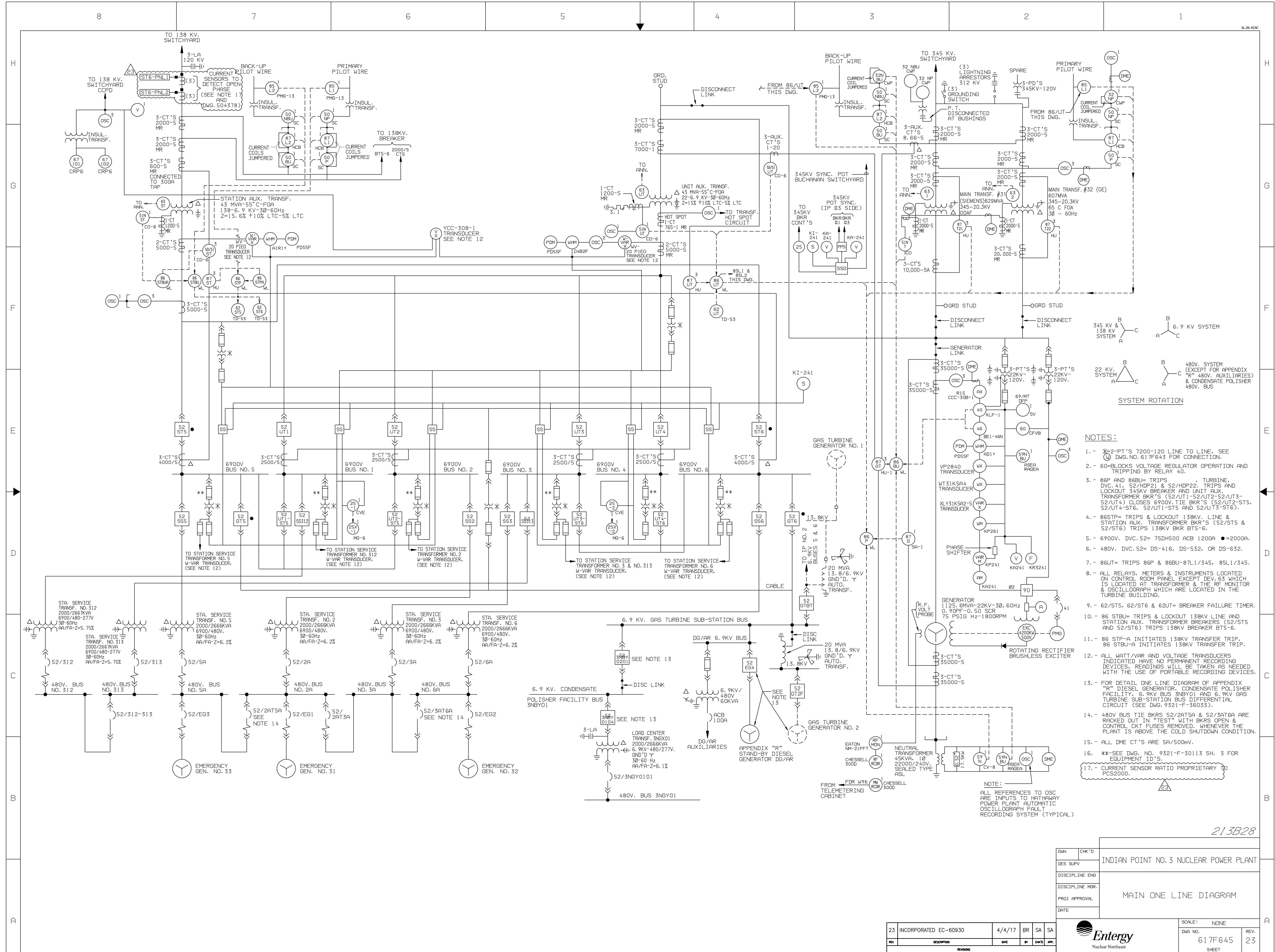
NOTES CONTINUED:

- ALL BREAKERS SHOWN ARE ELECTRICALLY OPERATED EXCEPT BREAKERS IDENTIFIED BY ■ ARE MANUALLY OPERATED.
- 480VAC FLEX PHASE II GENERATOR POWER INPUT CIRCUIT BREAKER "52/FLEX1" SHALL REMAIN RACKED IN WITH CLOSING SPRING DISCHARGED FOR ALL MODES OF PLANT OPERATION, EXCEPT DURING AN ELAP CONDITION DUE TO DBBCE.
- BREAKER TRIP SENSOR IS INSTALLED ON LINE SIDE.
- SEE DWG 503892 SH1 AND SH2 FOR FLEX PHASE III RELATED LOAD.
- GENERATOR HAS 6-4/0 AWG CABLE CONNECTION PER PHASE. THIS WILL BE REDUCED TO 3-500 MCM CABLE PER PHASE CLOSE TO THE BREAKER.

- NOTES:**
- BREAKER TYPES ARE DS-416, AND ● = DS-532 OR DS-632
 - 17 LOCATED IN CONTROL ROOM
SH-SUPERVISORY PANEL H
SBP-SUPERVISORY PANEL B2
SBF-1-SUPERVISORY PANEL B1 (FRONT)
 - KEY INTERLOCK SHALL BE PROVIDED BETWEEN FIRE PUMP EMERG. FDR. BKR 52/FP-3 & BUS 5A & THE NORMAL FDR. BKR ON BUS 12 SUCH THAT ONLY ONE BKR CAN BE CLOSED AT ANY ONE TIME. THESE BKR'S, KEY TO OPERATE BKR'S MUST BE PROVIDED BETWEEN THESE MANUAL TRANSFER SWITCHES.
 - 480V BUS TIE BKRS 52/2AT5A AND 52/3AT6A ARE RACKED OUT IN TEST WITH BKRS OPEN AND CONTROL KTY FUSES REMOVED WHENEVER THE PLANT IS ABOVE THE COOL SHUTDOWN POSITION.
 - KEY INTERLOCK, KEY INTERLOCK SCHEME IS PROVIDED BETWEEN MCC-312A/BKR. 4. BUS 6A/BKR.-9C AND NON-AUTOMATIC TRANSFER SWITCH SUCH THAT TRANSFER SWITCH CAN BE OPERATED ONLY WHEN BOTH FEEDER BKRS. ARE OPEN.
 - DE-ICING PUMP 32 RETIRED IN PLACE & POWER CABLES HAVE BEEN REMOVED BETWEEN PUMP MOTOR & TERM. BOX WF6 WHICH IS LOCATED IN TURBINE BLDG. EL.15'-0".
 - 120VAC POTENTIAL IS REQUIRED FOR OPERATION OF DIGITAL TYPE AMMETER.
 - FEEDER CIRCUIT USED AS ALTERNATE CONNECTION FOR FLEX PORTABLE DIESEL GENERATOR.
 - FOR FUSE SIZE & TYPE SEE PEDB.
 - * IF REPOWERING THIS MCC LOAD DURING BUS MAINTENANCE ACTIVITIES, IT IS NECESSARY TO SHIM THE BUS STABS TO ACCEPT SUFFICIENTLY SIZED LUMPERS (3-1/2 PER PHASE). REFER TO DRAWING NO. 9321-LL-39000 SH. 1 FOR SHIM DETAILS.

REV	DESCRIPTION	DATE	BY	CHK'D	APP.
37	INCORPORATED EC-62778	03/22/17	SM		APPROVAL SIGNATURES ON FILE

DWN	CHK'D	INDIAN POINT NO.3 NUCLEAR POWER PLANT
DES SUPV		
DISCIPLINE ENG		
DISCIPLINE MGR.		
PROJ. APPROVAL		480V ONE LINE DIAGRAM
DATE		
SCALE: NONE		
DWG NO 617F644		REV 37
TYPE A (FSAR)		



- NOTES:**
1. - 2-PT'S 7200-120 LINE TO LINE. SEE DWG. NO. 617F643 FOR CONNECTION.
 2. - 60=BLOCKS VOLTAGE REGULATOR OPERATION AND TRIPPING BY RELAY 40.
 3. - 86P AND 86BU= TRIPS TURBINE, DVC, 41, 52/ADP21 & 52/ADP22, TRIPS AND LOCKOUT 345KV BREAKER AND UNIT AUX. TRANSFORMER BKR'S (52/UT1-52/UT3-52/UT4) CLOSES 6900V TIE BKR'S (52/UT2-52/UT4-52/UT4-52/UT1-52/UT3-52/UT4-52/UT4-52/UT1-52/UT3-52/UT4).
 4. - 86STP= TRIPS & LOCKOUT 138KV. LINE & STATION AUX. TRANSFORMER BKR'S (52/ST5 & 52/ST6) TRIPS 138KV BKR BT5-6.
 5. - 6900V. DVC. 52= 75DH500 ACB 1200A. ●=2000A.
 6. - 480V. DVC. 52= DS-416, DS-532, OR DS-632.
 7. - 86UT= TRIPS 86P & 86BU-87L1/345, 85L1/345.
 8. - ALL RELAYS, METERS & INSTRUMENTS LOCATED ON CONTROL ROOM PANEL EXCEPT DEV. 65 WHICH IS LOCATED AT TRANSFORMER & THE RF MONITOR & OSCILLOGRAPH WHICH ARE LOCATED IN THE TURBINE BUILDING.
 9. - 62/ST5, 62/ST6 & 62UT= BREAKER FAILURE TIMER.
 10. - 86 STBU= TRIPS & LOCKOUT 138KV LINE AND STATION AUX. TRANSFORMER BREAKERS (52/ST5 AND 52/ST6) TRIPS 138KV BREAKER BT5-6.
 11. - 86 STP-A INITIATES 138KV TRANSFER TRIP. 86 STBU-A INITIATES 138KV TRANSFER TRIP.
 12. - ALL WATT/VAR AND VOLTAGE TRANSFORMERS INDICATED HAVE NO PERMANENT RECORDING DEVICES. READINGS WILL BE TAKEN AS NEEDED WITH THE USE OF PORTABLE RECORDING DEVICES.
 13. - FOR DETAIL ONE LINE DIAGRAM OF APPENDIX "R" DIESEL GENERATOR, CONDENSATE POLISHER FACILITY, 6.9KV BUS 3NGY01 AND 6.9KV GAS TURBINE SUB-STATION BUS DIFFERENTIAL CIRCUIT (SEE DWG. 9321-F-360333).
 14. - 480V BUS TIE BKRS 52/2AT5A & 52/3AT6A ARE RACKED OUT IN "TEST" WITH BKRS OPEN & CONTROL CKT FUSES REMOVED. WHENEVER THE PLANT IS ABOVE THE COLD SHUTDOWN CONDITION.
 15. - ALL DME CT'S ARE 5A/500mV.
 16. - **SEE DWG. NO. 9321-F-30113 SH. 3 FOR EQUIPMENT I.D'S.
 17. - CURRENT SENSOR RATIO PROPRIETARY TO PCS2000.

213B28

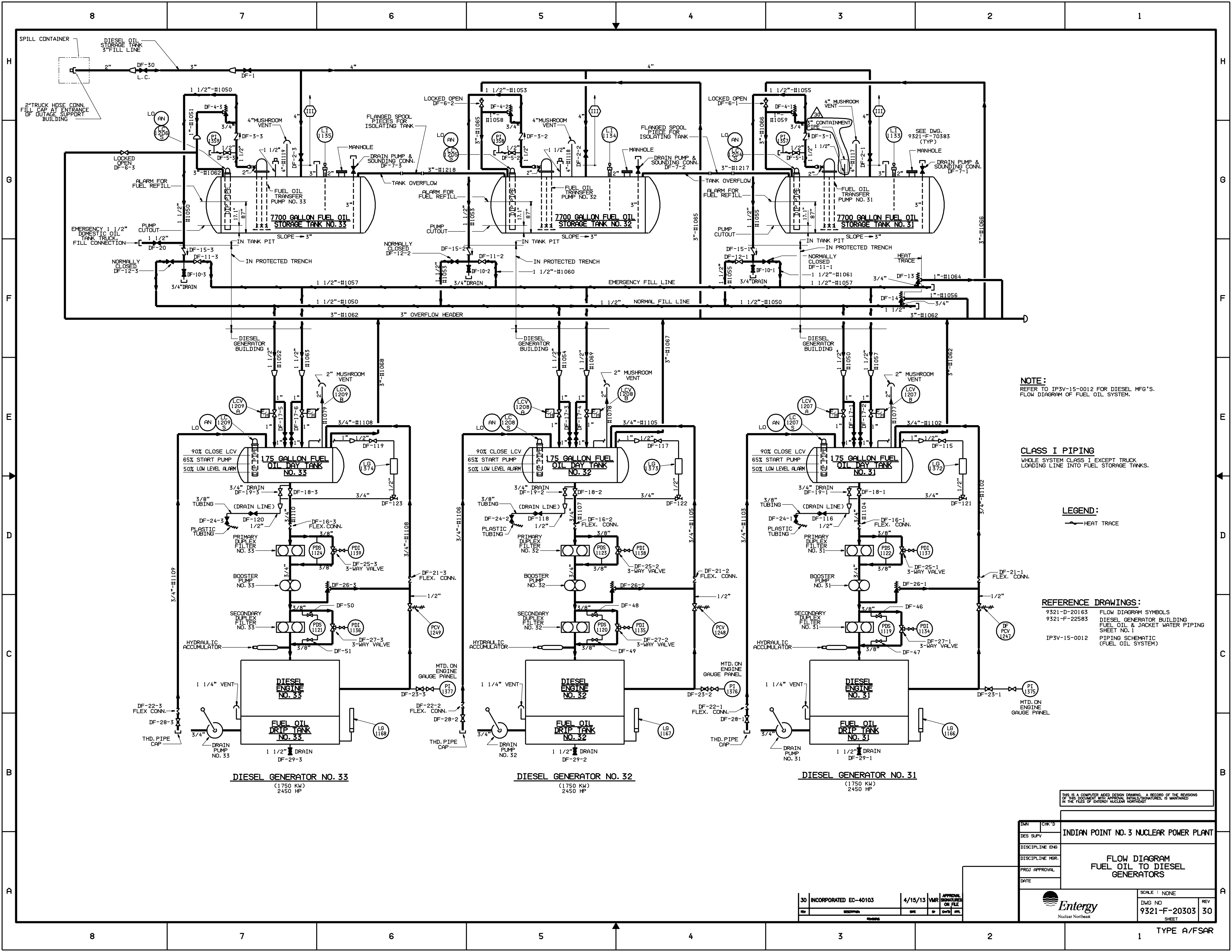
DWN	CHK'D	INDIAN POINT NO. 3 NUCLEAR POWER PLANT	
DES SUVP			
DISCIPLINE ENG			
DISCIPLINE MGR			
PROJ APPROVAL		MAIN ONE LINE DIAGRAM	
DATE			

23	INCORPORATED EC-60930	4/4/17	BR	SA	SA
REV	DESCRIPTION	DATE	BY	CHKD	APP.

SCALE: NONE
 DWG NO. 617F645
 SHEET 23

Entergy
 Nuclear Northeast

FSAR



NOTE:
REFER TO IP3V-15-0012 FOR DIESEL MFG'S.
FLOW DIAGRAM OF FUEL OIL SYSTEM.

CLASS I PIPING
WHOLE SYSTEM CLASS I EXCEPT TRUCK
LOADING LINE INTO FUEL STORAGE TANKS.

LEGEND:
— HEAT TRACE

REFERENCE DRAWINGS:
9321-D-20163 FLOW DIAGRAM SYMBOLS
9321-F-22583 DIESEL GENERATOR BUILDING
SHEET NO. 1 FUEL OIL & JACKET WATER PIPING
IP3V-15-0012 PIPING SCHEMATIC
(FUEL OIL SYSTEM)

DIESEL GENERATOR NO. 33
(1750 KW)
2450 HP

DIESEL GENERATOR NO. 32
(1750 KW)
2450 HP

DIESEL GENERATOR NO. 31
(1750 KW)
2450 HP

THIS IS A COMPUTER AIDED DESIGN DRAWING. A RECORD OF THE REVISIONS
OF THIS DOCUMENT WITH APPROVAL INITIALS/SIGNATURES, IS MAINTAINED
IN THE FILES OF ENERGY NUCLEAR NORTHWEST

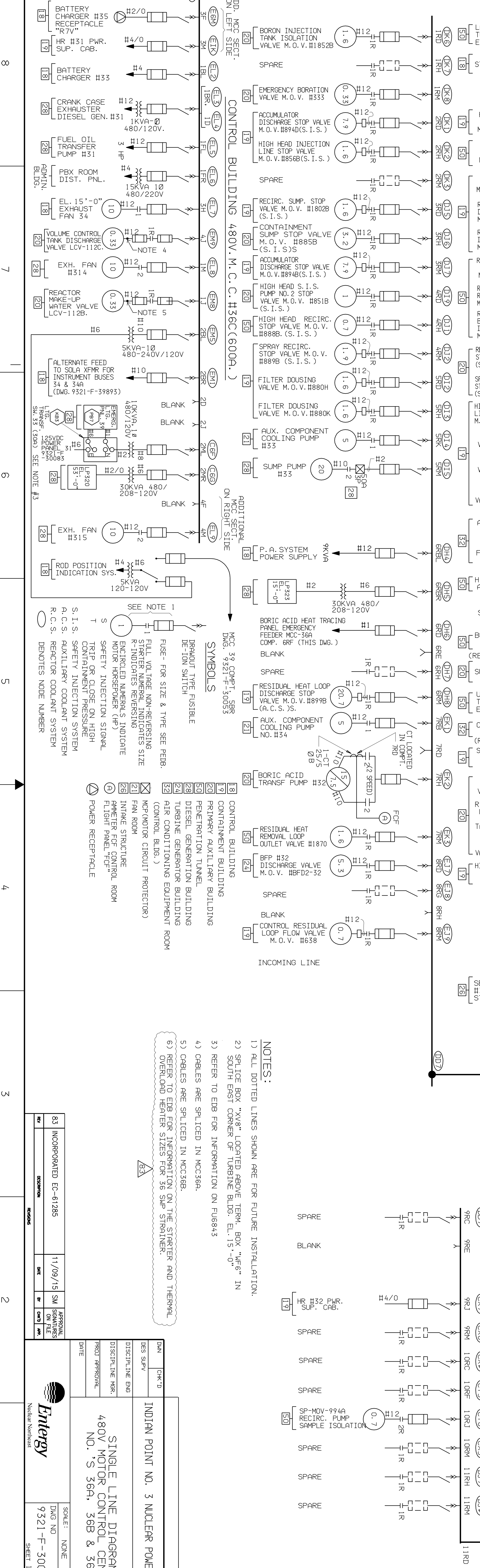
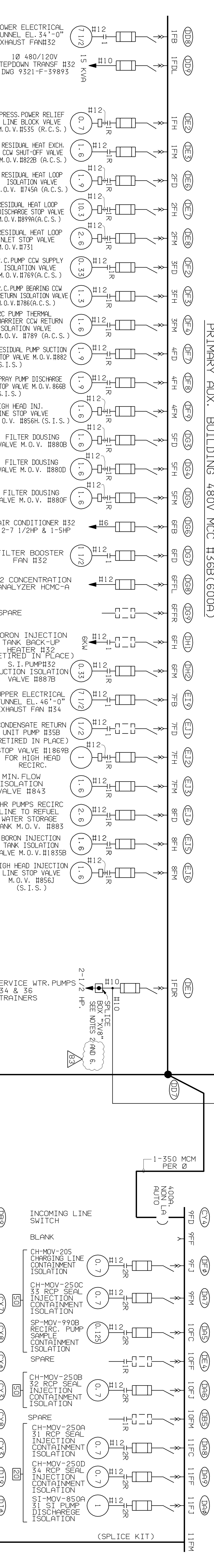
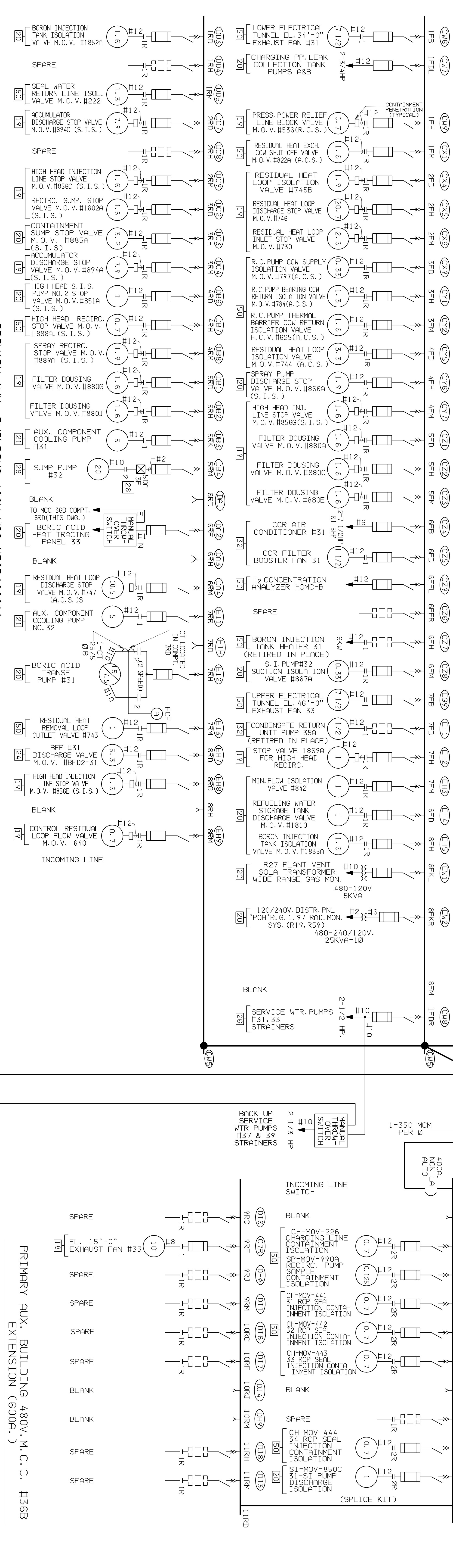
DWN	CHK'D	INDIAN POINT NO. 3 NUCLEAR POWER PLANT
DES. SUPV.		
DISCIPLINE ENG.		
DISCIPLINE MGR.		
PROJ. APPROVAL		
DATE		
		FLOW DIAGRAM FUEL OIL TO DIESEL GENERATORS
		SCALE: NONE
		DWG NO. 9321-F-20303
		SHEET 30
		TYPE A/FSAR

30 INCORPORATED EC-40103 4/15/13 VMR APPROVAL
SIGNATURES OF FILE



8
7
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480V SWITCHGEAR #31
(PARTIAL) 480V SWITCHGEAR #32
(PARTIAL)



D
C
B
A

- NOTES:**
- 1) ALL DOTTED LINES SHOWN ARE FOR FUTURE INSTALLATION.
 - 2) SPICE BOX "X8" LOCATED ABOVE TERM. BOX "X8" IN SOUTH EAST CORNER OF TURBINE BLDG. EL. 15'-0" IN
 - 3) REFER TO EMB FOR INFORMATION ON PUGS43
 - 4) CABLES ARE SPLICED IN MCC36A.
 - 5) CABLES ARE SPLICED IN MCC36B.
 - 6) REFER TO EMB FOR INFORMATION ON THE STARTER AND THERMAL OVERLOAD HEATER SIZES FOR 36 SFP STRAINER.

INDIAN POINT NO. 3 NUCLEAR POWER PLANT
SINGLE LINE DIAGRAM
480V MOTOR CONTROL CENTER
NO. S 36A, 36B & 36C

Entergy
National Grid
SCALE: NONE
DATE: 11/09/15
DWG NO: 9321-F-30063
SHEET: 1

83	INCORPORATED EC-61285	11/09/15	SM	ON FILE
REV	DATE	BY	CHK'D	APP'D

8 7 6 5 4 3 2 1

H H

G G

F F

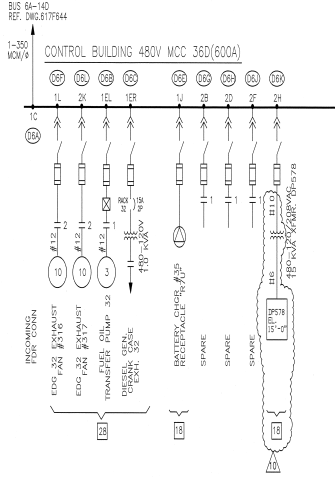
E E

D D

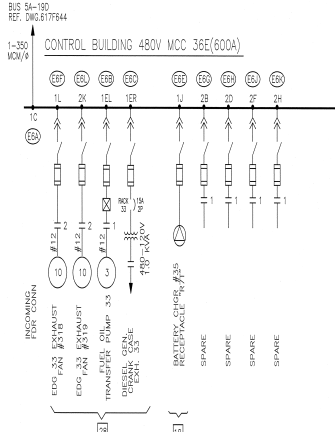
C C

B B

A A



- SYMBOLS:
- DRAWOUT TYPE FUSIBLE DE-ON SWITCH
 - FUSE, FOR SIZE & TYPE SEE REDB
 - FULL VOLTAGE NON-REVERSING STARTER, NUMERICAL INDICATES SIZE, R INDICATES REVERSING
 - ENCLOSED NUMERALS INDICATE MOTOR HORSEPOWER (HP)
 - DENOTES NODE NUMBER
 - CONTROL BUILDING
 - DIESEL BUILDING
 - MCP (MOTOR CIRCUIT PROTECTOR)
 - POWER RECEPTACLE



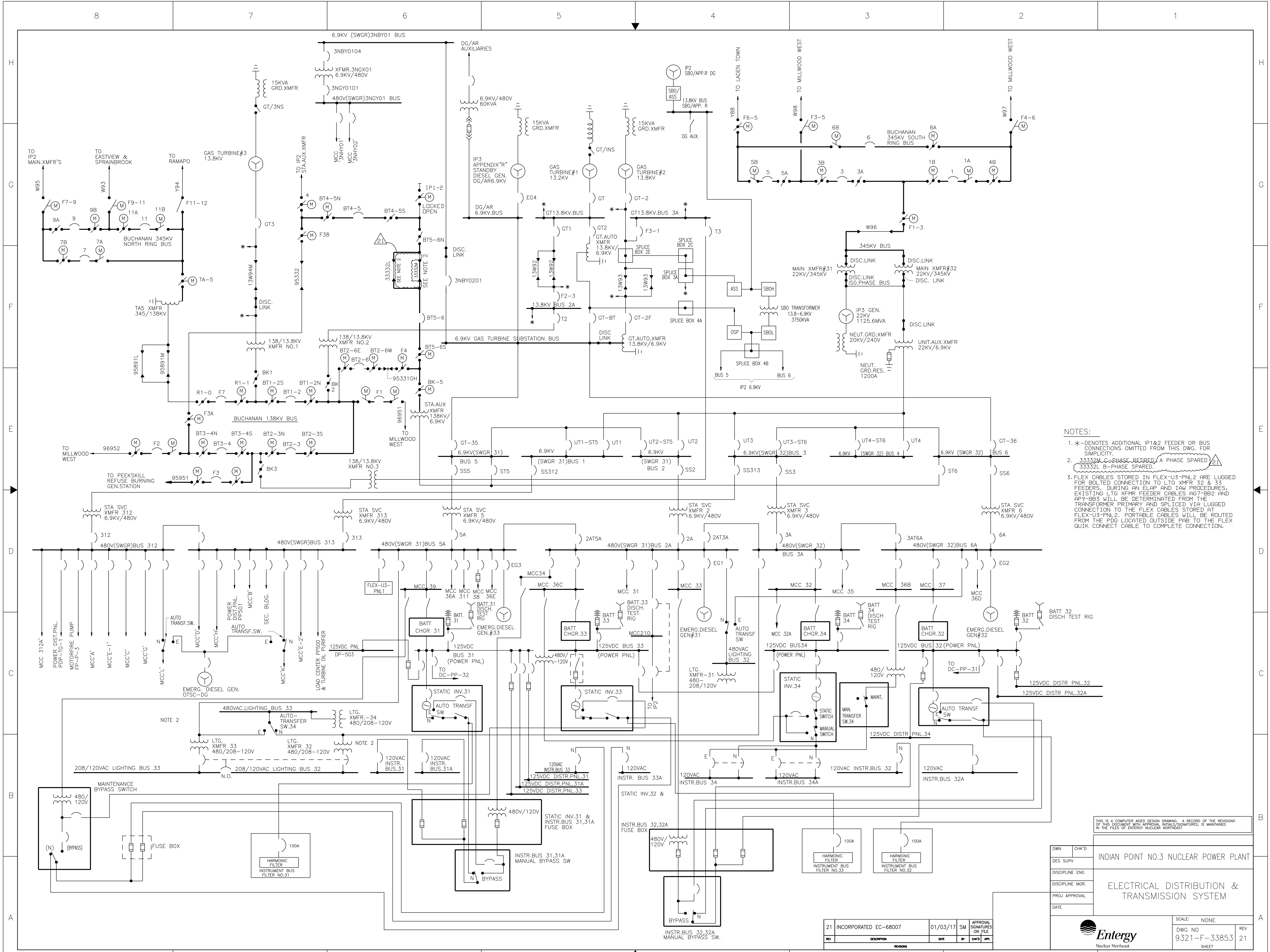
DWG NO.	INDIAN POINT NO. 3 NUCLEAR POWER PLANT
RESPONS.	
VERIFIED	SINGLE LINE DIAGRAM
APPROVAL	480V MOTOR CONTROL CENTER
DATE	NO.'S 36D & 36E

10	INCORPORATED DEW-06-00341	1/1/94	SN	1/1/94
	ER-PC-06-17938	1/1/94	1/1/94	1/1/94

BRAND	MOUSE
DWG NO.	9321-F-30063
REV	10
PAGE 2	

TYPE A (FSAR)

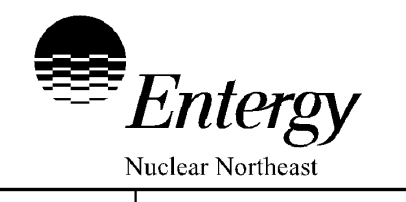
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- NOTES:
- * - DENOTES ADDITIONAL IP1&2 FEEDER OR BUS CONNECTIONS OMITTED FROM THIS DWG. FOR SIMPLICITY.
 - 33332L C-B-PHASE RETURN, A PHASE SPARED @ 21
33332L B-PHASE SPARED.
 - FLEX CABLES STORED IN FLEX-U3-PNL2 ARE LUGGED FOR BOLTED CONNECTION TO LTG XMFR 32 & 33 FEEDERS. DURING AN ELAP AND LAM PROCEDURES, EXISTING LTG XMFR FEEDER CABLES AG7-BB2 AND AP9-BB3 WILL BE DETERMINATED FROM THE TRANSFORMER PRIMARY AND SPLICED VIA LUGGED CONNECTION TO THE FLEX CABLES STORED AT FLEX-U3-PNL2. PORTABLE CABLES WILL BE ROUTED FROM THE PDG LOCATED OUTSIDE PAB TO THE FLEX QUICK CONNECT CABLE TO COMPLETE CONNECTION.

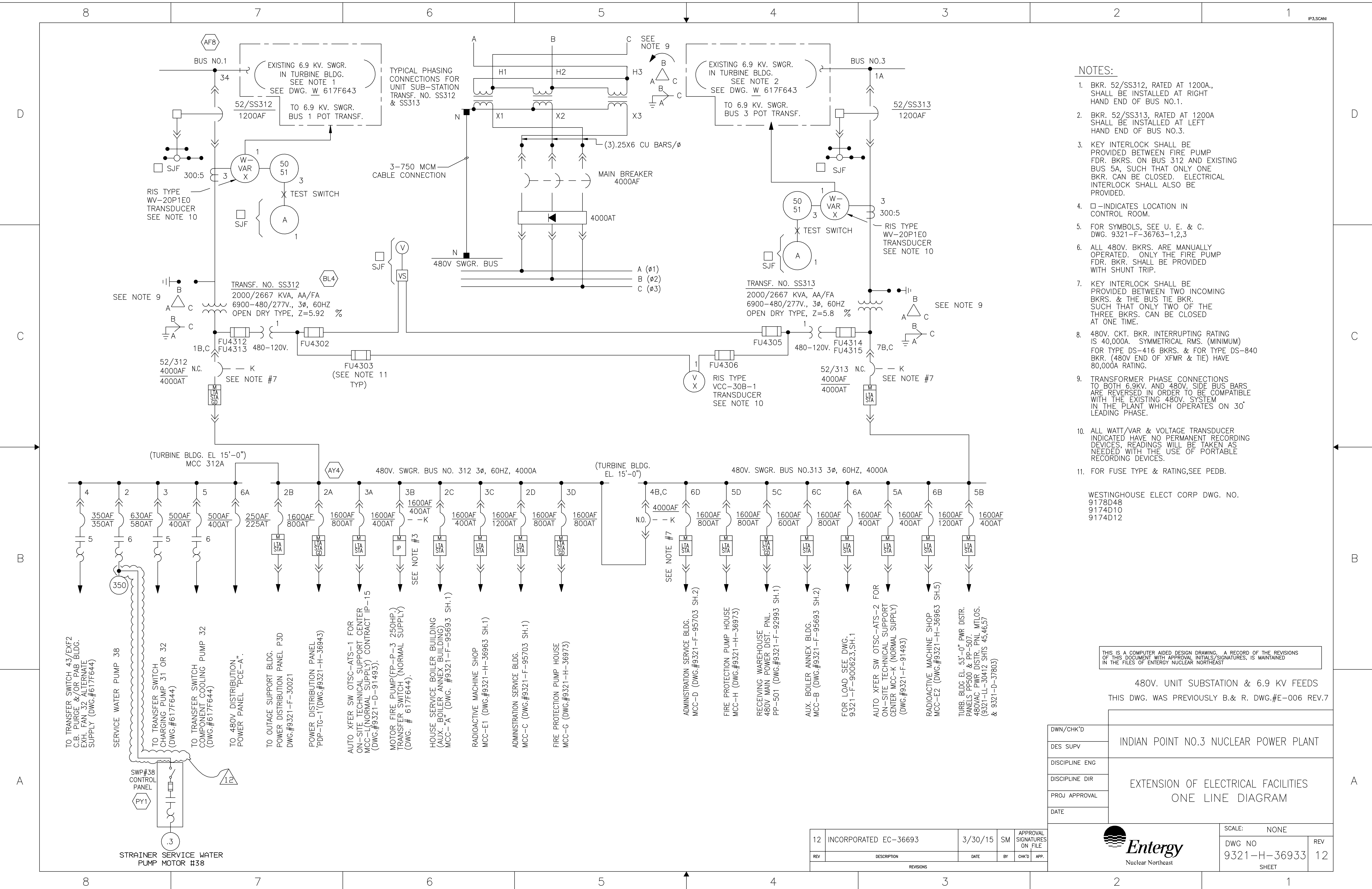
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DWN	CHK'D	INDIAN POINT NO.3 NUCLEAR POWER PLANT	
DES SUPV		ELECTRICAL DISTRIBUTION & TRANSMISSION SYSTEM	
DISCIPLINE ENG			
DISCIPLINE MGR.			
PROJ APPROVAL			
DATE			



SCALE:	NONE
DWG NO	9321-F-33853
REV	21
SHEET	

REV	DESCRIPTION	DATE	BY	CHK'D	APP.
21	INCORPORATED EC-68007	01/03/17	SM		APPROVAL SIGNATURES ON FILE



- NOTES:**
- BKR. 52/SS312, RATED AT 1200A., SHALL BE INSTALLED AT RIGHT HAND END OF BUS NO.1.
 - BKR. 52/SS313, RATED AT 1200A SHALL BE INSTALLED AT LEFT HAND END OF BUS NO.3.
 - KEY INTERLOCK SHALL BE PROVIDED BETWEEN FIRE PUMP FDR. BKRS. ON BUS 312 AND EXISTING BUS 5A, SUCH THAT ONLY ONE BKR. CAN BE CLOSED. ELECTRICAL INTERLOCK SHALL ALSO BE PROVIDED.
 - - INDICATES LOCATION IN CONTROL ROOM.
 - FOR SYMBOLS, SEE U. E. & C. DWG. 9321-F-36763-1,2,3
 - ALL 480V. BKRS. ARE MANUALLY OPERATED. ONLY THE FIRE PUMP FDR. BKR. SHALL BE PROVIDED WITH SHUNT TRIP.
 - KEY INTERLOCK SHALL BE PROVIDED BETWEEN TWO INCOMING BKRS. & THE BUS TIE BKR. SUCH THAT ONLY TWO OF THE THREE BKRS. CAN BE CLOSED AT ONE TIME.
 - 480V. CKT. BKR. INTERRUPTING RATING IS 40,000A. SYMMETRICAL RMS. (MINIMUM) FOR TYPE DS-416 BKRS. & FOR TYPE DS-840 BKR. (480V END OF XFMR & TIE) HAVE 80,000A RATING.
 - TRANSFORMER PHASE CONNECTIONS TO BOTH 6.9KV. AND 480V. SIDE BUS BARS ARE REVERSED IN ORDER TO BE COMPATIBLE WITH THE EXISTING 480V. SYSTEM IN THE PLANT WHICH OPERATES ON 30° LEADING PHASE.
 - ALL WATT/VAR & VOLTAGE TRANSDUCER INDICATED HAVE NO PERMANENT RECORDING DEVICES. READINGS WILL BE TAKEN AS NEEDED WITH THE USE OF PORTABLE RECORDING DEVICES.
 - FOR FUSE TYPE & RATING, SEE PEDB.

WESTINGHOUSE ELECT CORP. DWG. NO.
 9178D48
 9174D10
 9174D12

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480V. UNIT SUBSTATION & 6.9 KV FEEDS
 THIS DWG. WAS PREVIOUSLY B.& R. DWG.#E-006 REV.7

DWN/CHK'D	INDIAN POINT NO.3 NUCLEAR POWER PLANT		
DES SUPV	EXTENSION OF ELECTRICAL FACILITIES		
DISCIPLINE ENG	ONE LINE DIAGRAM		
DISCIPLINE DIR			
PROJ APPROVAL			
DATE			

12	INCORPORATED EC-36693	3/30/15	SM	APPROVAL SIGNATURES ON FILE
REV	DESCRIPTION	DATE	BY	CHK'D APP.
REVISIONS				

SCALE: NONE

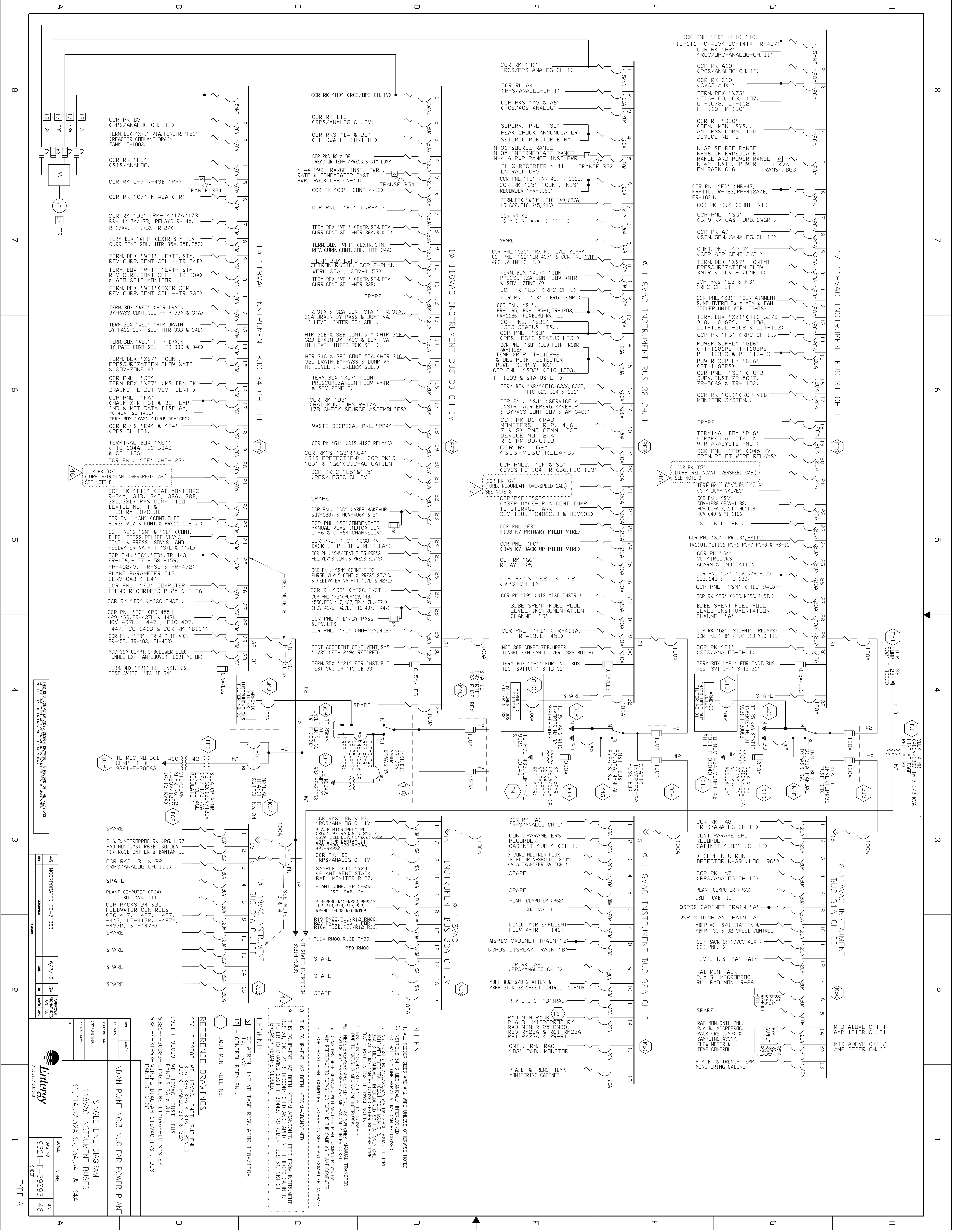
DWG NO 9321-H-36933

REV 12

SHEET

Entergy
Nuclear Northeast

- TO TRANSFER SWITCH 43/EXF2 C.B. PURGE &/OR PAB BLDG. EXH. FAN 32 ALTERNATE SUPPLY (DWG.#617F644)
- SERVICE WATER PUMP 38
- TO TRANSFER SWITCH CHARGING PUMP 31 OR 32 (DWG.#617F644)
- TO TRANSFER SWITCH COMPONENT COOLING PUMP 32 (DWG.#617F644)
- TO 480V DISTRIBUTION POWER PANEL "PCE-A".
- TO OUTAGE SUPPORT BLDG. POWER DISTRIBUTION PANEL P30 DWG.#9321-F-30021
- POWER DISTRIBUTION PANEL "PDP-TG-1"(DWG.#9321-H-36943)
- AUTO XFER SW OTSC-ATS-1 FOR ON-SITE TECHNICAL SUPPORT CENTER MCC-(NORMAL SUPPLY) CONTRACT IP-15 (DWG.#9321-D-91495).
- MOTOR FIRE PUMP(FP-P-3 250HP.) TRANSFER SWITCH (NORMAL SUPPLY) (DWG.# 617F644).
- HOUSE SERVICE BOILER BUILDING (AUX. BOILER ANNEX BUILDING) MCC-"A" (DWG.#9321-F-95693 SH.1)
- RADIOACTIVE MACHINE SHOP MCC-E1 (DWG.#9321-H-36963 SH.1)
- ADMINISTRATION SERVICE BLDG. MCC-C (DWG.#9321-F-95703 SH.1)
- FIRE PROTECTION PUMP HOUSE MCC-G (DWG.#9321-H-36973)
- ADMINISTRATION SERVICE BLDG. MCC-D (DWG.#9321-F-95703 SH.2)
- FIRE PROTECTION PUMP HOUSE MCC-H (DWG.#9321-H-36973)
- RECEIVING WAREHOUSE 480V MAIN POWER DIST. PNL. PP-501 (DWG.#9321-F-92993 SH.1)
- AUX. BOILER ANNEX BLDG. MCC-B (DWG.#9321-F-95693 SH.2)
- FOR LOAD SEE DWG. 9321-F-90062,3,SH.1
- AUTO XFER SW OTSC-ATS-2 FOR ON-SITE TECHNICAL SUPPORT CENTER MCC-K (NORMAL SUPPLY) (DWG.#9321-F-91493)
- RADIOACTIVE MACHINE SHOP MCC-E2 (DWG.#9321-H-36963 SH.5)
- TURB. BLDG. EL. 53'-0" PWR. DISTR. PANELS PP500 & PP-507. 480VAC PWR. DISTR. PNL. MTLOS. (9321-L-30412 SHIS 45,46,57 & 9321-D-37803)



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A B C D E F G H I

NO.	DESCRIPTION	DATE	BY	CHKD.	REV.
46	INCORPORATED EC-71363	6/2/12	SM	ON FILE	

INDIAN POINT NO.3 NUCLEAR POWER PLANT

SINGLE LINE DIAGRAM

118VAC INSTRUMENT BUSES

31, 31A, 32, 32A, 33, 33A, 34, & 34A

SCALE: NONE

DWG NO. 9371-F-39893

SHEET 46

TYPE A

ENTEGY

INDIAN POINT NO.3 NUCLEAR POWER PLANT

SINGLE LINE DIAGRAM

118VAC INSTRUMENT BUSES

31, 31A, 32, 32A, 33, 33A, 34, & 34A

SCALE: NONE

DWG NO. 9371-F-39893

SHEET 46

TYPE A

ENTEGY

INDIAN POINT NO.3 NUCLEAR POWER PLANT

SINGLE LINE DIAGRAM

118VAC INSTRUMENT BUSES

31, 31A, 32, 32A, 33, 33A, 34, & 34A

SCALE: NONE

DWG NO. 9371-F-39893

SHEET 46

TYPE A

ENTEGY

INDIAN POINT NO.3 NUCLEAR POWER PLANT

SINGLE LINE DIAGRAM

118VAC INSTRUMENT BUSES

31, 31A, 32, 32A, 33, 33A, 34, & 34A

SCALE: NONE

DWG NO. 9371-F-39893

SHEET 46

TYPE A

ENTEGY

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SINGLE LINE DIAGRAM

118VAC INSTRUMENT BUSES

31, 31A, 32, 32A, 33, 33A, 34, & 34A

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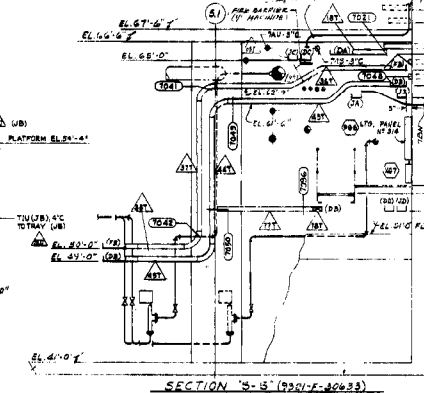
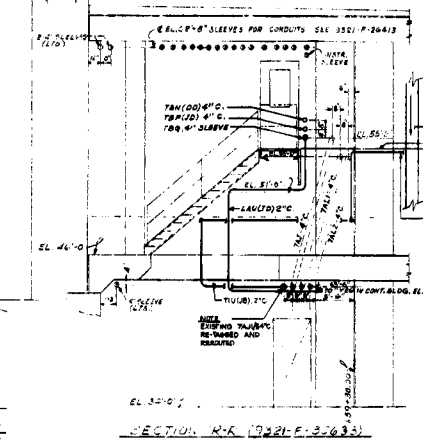
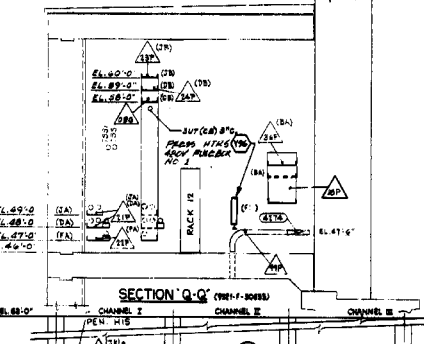
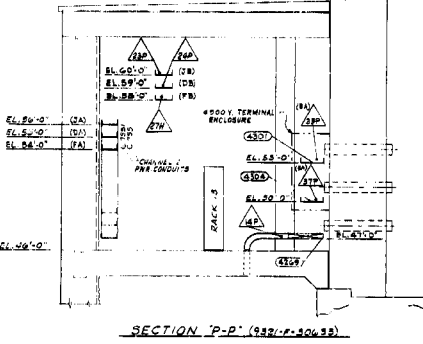
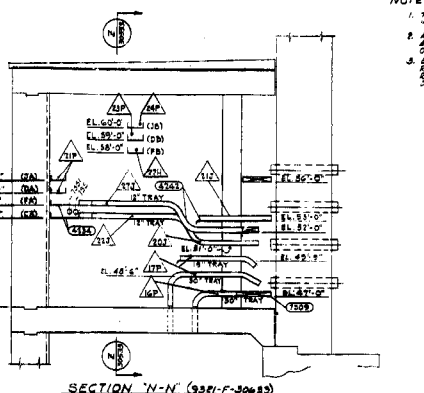
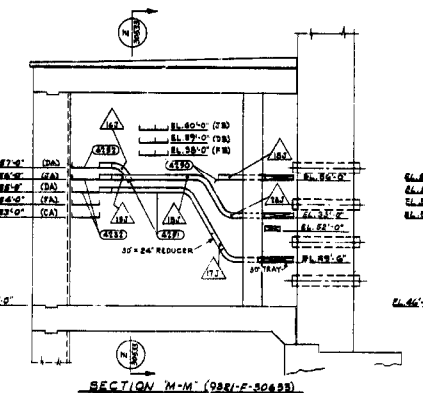
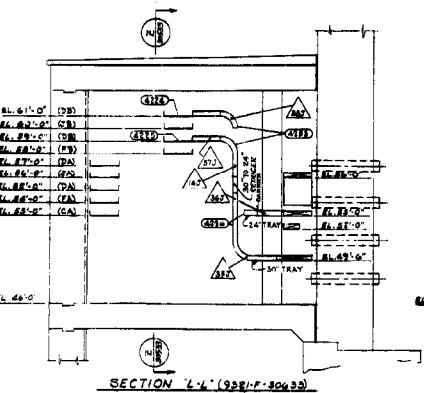
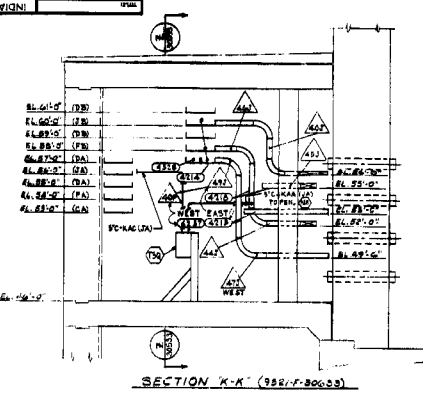
SHEET 46

TYPE A

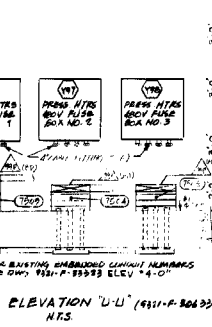
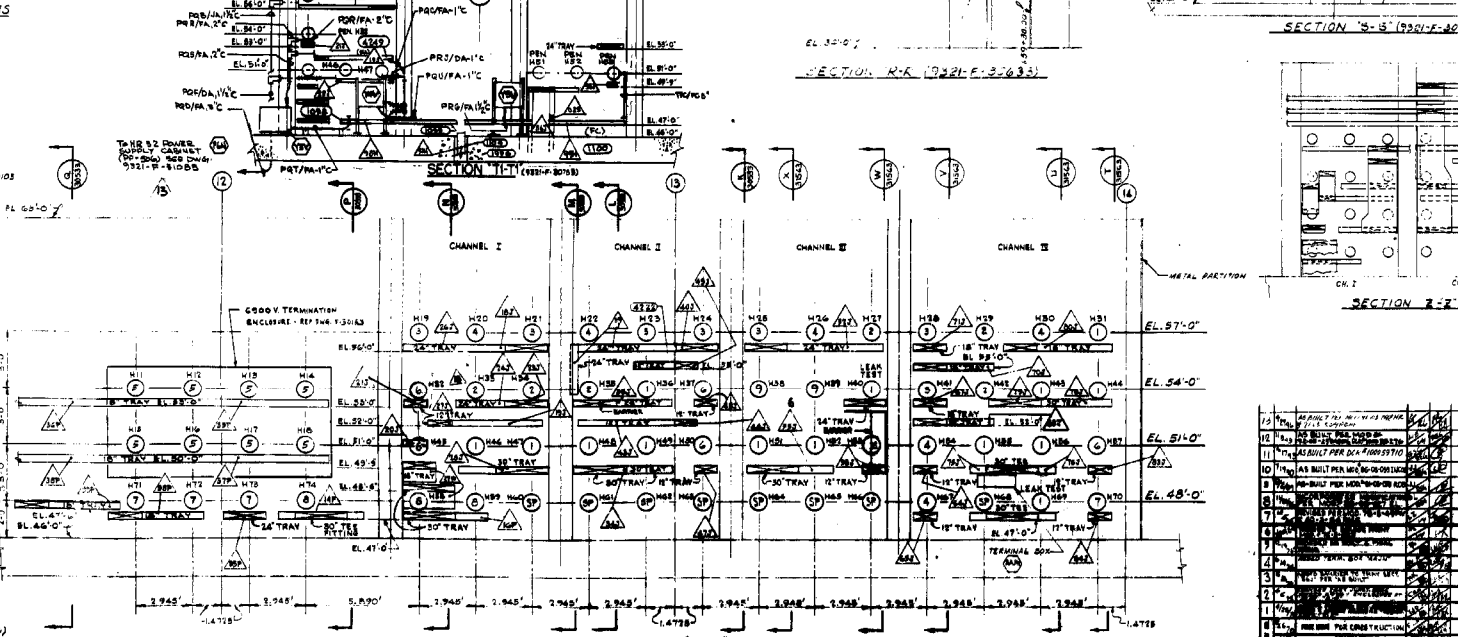
ENTEGY

INDIAN POINT NO.3 NUCLEAR POWER PLANT

NOTES:
 1. TRAY ELEVATIONS ARE TO THE BOTTOM OF TRAYS WITH 18" SPACING.
 2. ALL TRAYS ON CONTAINMENT BLDG. & PENETRATION SHALL BE PROTECTED AS INDICATED WITH ANGLE IRON OR UNIFRAC-10.
 3. ELECTRICAL SUB-CONTRACTOR TO "RAISE EDGE" TRAY BUILT UNDER CABLE ENTRY OR LEAD TRAY OVER BUILT TO PREVENT DAMAGING TO CABLE INSULATION OR JACKET.



- SYMBOL LIST PENETRATIONS**
- CONTROL
 - WELDED PIPES (SHIELDED)
 - COLUMNS (SHIELDED)
 - TRAYS
 - POWER - 500V. MOTORS
 - POWER - 480V. MOTORS
 - WOOD DECKS W/TO LEADS
 - LIGHTING AC & DC
 - ADD DDDP CONTROL
 - VARIABLE SEL DNG # 9321-F-30633
- TRAYS - SEE C&G SEWID - 3321-LL-10103
 24" EL. 51'-0" (CB)
- FIRST LETTER = VOLTAGE LEVEL
 SECOND LETTER = CHANNEL
 BOTTOM OF TRAY
 TRAY SIZE
 TRAY JUNCTION NODE
 TRAY SECTION NUMBER
 EQUIPMENT NODE NUMBER



REFERENCE DRAWINGS

SEE DWG. 9321-F-30633 FOR DWG. NUMBERS.
 FOR COMPLETE ROUTING OF CABLES, LISTING OF TRAY FUNCTION & SECTION NODE NUMBERS, SEE 9321-F-30633.

NO.	DESCRIPTION	NO.	DESCRIPTION
1	SEE DWG. 9321-F-30633 FOR DWG. NUMBERS.	1	SEE DWG. 9321-F-30633 FOR DWG. NUMBERS.
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20	SEE DWG. 9321-F-30633 FOR DWG. NUMBERS.	20	SEE DWG. 9321-F-30633 FOR DWG. NUMBERS.

WESTINGHOUSE ELECTRIC CORPORATION
 ELECTRICAL PENETRATIONS & CABLE TRAYS
 SECTIONS

FOR
 CONSOLIDATED EDISON COMPANY
 INDIAN POINT GENERATING STATION
 UNIT NO. 3

U.S. PAT. OFFICE: 2,835,472
 8321-F-30633-13
 WESTINGHOUSE & CONSOLIDATED INC. A202429