

ATTACHMENT A  
NINE MILE POINT UNIT 1  
TECHNICAL SPECIFICATIONS  
TABLE 3.6.2i

8408090081 840803  
PDR ADCK, 05000220  
P PDR

11

11

11  
11  
11

Table 3.6.2i

DIESEL GENERATOR INITIATION  
Limiting Condition for Operation

<u>Parameter</u>	<u>Total No. of Channels</u>	<u>Channels(1) to Trip</u>	<u>Minimum Channels Operable</u>	<u>Reactor Mode Switch Position in Which Function Must Be Operable</u>			
				<u>Shutdown</u>	<u>Refuel</u>	<u>Startup</u>	<u>Run</u>
Loss of Power							
a. 4.16kV PB 102/103 Emergency Bus Undervoltage (Loss of Voltage)	3 per Bus	2 per Bus	2 per Bus	X	X	X	X
b. 4.16kV PB 102/103 Emergency Bus Undervoltage (Degraded Voltage)	3 per Bus	2 per Bus	2 per Bus	X	X	X	X

(1) If one out of three channels becomes inoperable, the inoperable channel will be placed in the trip condition.



Table 3.6.2i (continued)

DIESEL GENERATOR INITIATION

Limiting Condition for Operation

<u>Parameter</u>	<u>Set Point (Inverse Time Undervoltage Relays)</u>	
	<u>Relay Dropout</u>	<u>Operating Time<sup>(a)</sup></u>
Loss of Power		
a. 4.16kV PB 102/103 Emergency Bus Undervolt (Loss of Voltage)	$\geq 3200$ volts	0 volts $\leq$ 3.2 seconds
b. 4.16kV PB 102/103 Emergency Bus Undervoltage (Degraded Voltage)	$\geq 3600$ volts	3580 volts 18.5 $\pm$ 3 seconds

(a) The operating time indicated in the table is the time required for the relay to operate its contacts when the voltage is suddenly decreased from operating voltage level values to the voltage level listed in the table above.



Handwritten marks and symbols in the top right corner.

Small handwritten mark.

Small handwritten mark.

Vertical lines of text, possibly a list or index.

Vertical lines of text, possibly a list or index.

Vertical lines of text, possibly a list or index.

Vertical lines of text, possibly a list or index.

Small handwritten mark.

Small handwritten mark at the bottom left.

## ATTACHMENT B

### Response to Staff Questions

Our January 28, 1983 submittal provided information regarding the Nine Mile Point Unit 1 electric distribution system. Item 7 of the submittal provided a voltage profile analysis, and the inverse time characteristics of the degraded grid undervoltage relays. Your letter of December 20, 1983 concluded that our electrical distribution system design was acceptable.

Our submittal of March 27, 1984 described the modification of the undervoltage protective relaying circuits for powerboards 102 and 103. We are now supplying revised figures to further clarify the modification design. This modification changed the logic used to monitor degraded voltage and loss of voltage (two out of three instead of two out of two logic). In addition, the circuits now monitor phase-to-neutral voltage instead of phase-to-phase voltage. The time characteristics previously reviewed by your staff, however, have not been significantly changed. Table 1 below shows the average time voltage characteristics of these relays. These characteristics are similar to those listed in our January 28, 1983 submittal. Therefore, the conclusions of our voltage profile analysis submitted on January 28, 1983 regarding the station electric distribution system remains essentially unchanged.

TABLE 1

Average Time Voltage Characteristics  
(Average of two powerboards)

<u>Relay Voltage</u>	<u>Primary Voltage</u>	<u>%</u>	<u>Loss of Voltage Time (seconds)</u>	<u>Degraded Voltage Time (seconds)</u>
59.5	3607	90.2	-	Dropout
59.0	3577	89.4	-	18.5
53.0	3213	80.3	Dropout	10.5
50.0	3031	75.8	19.7	9.0
40.0	2425	60.6	6.6	6.4
20.0	1212	30.3	3.6	4.2
0	0	0	3.0	3.3

SECRET

CONFIDENTIAL

1. The purpose of this document is to provide information regarding the activities of the [redacted] in the [redacted] area. This information is being provided to you for your information only and is not to be disseminated outside of your organization.

2. The information contained in this document is classified as [redacted] and is being provided to you under the provisions of [redacted]. It is the policy of the [redacted] to protect this information from unauthorized disclosure.

3. This information is being provided to you for your information only and is not to be disseminated outside of your organization. It is the policy of the [redacted] to protect this information from unauthorized disclosure.

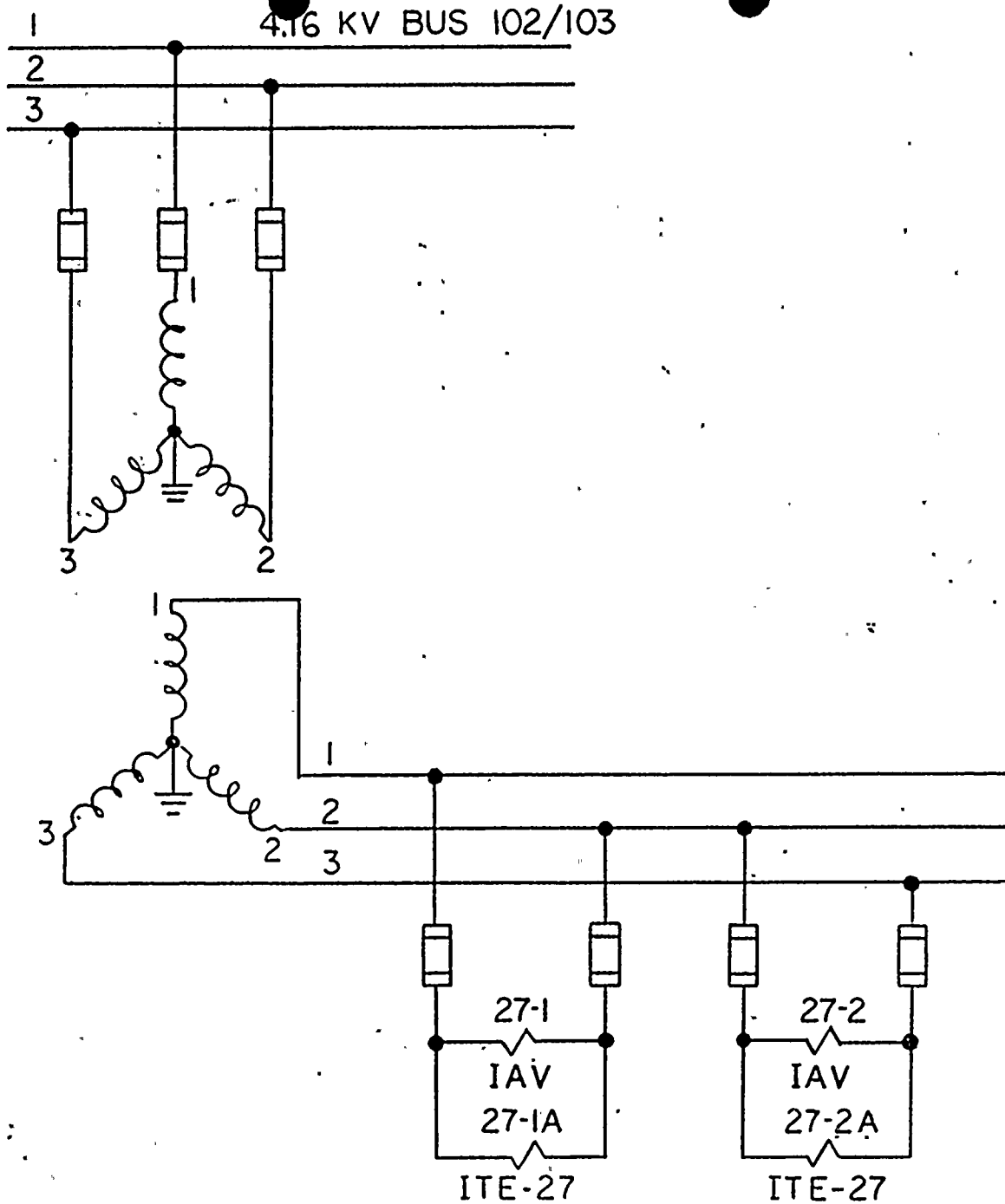
4. The information contained in this document is classified as [redacted] and is being provided to you under the provisions of [redacted]. It is the policy of the [redacted] to protect this information from unauthorized disclosure.

SECRET

CONFIDENTIAL

Item	Description	Quantity	Unit Price	Total Price
1.	[redacted]	100	1.00	100.00
2.	[redacted]	50	2.00	100.00
3.	[redacted]	200	0.50	100.00
4.	[redacted]	100	1.00	100.00
5.	[redacted]	50	2.00	100.00
6.	[redacted]	200	0.50	100.00
7.	[redacted]	100	1.00	100.00





UNDervOLTAGE RELAYS

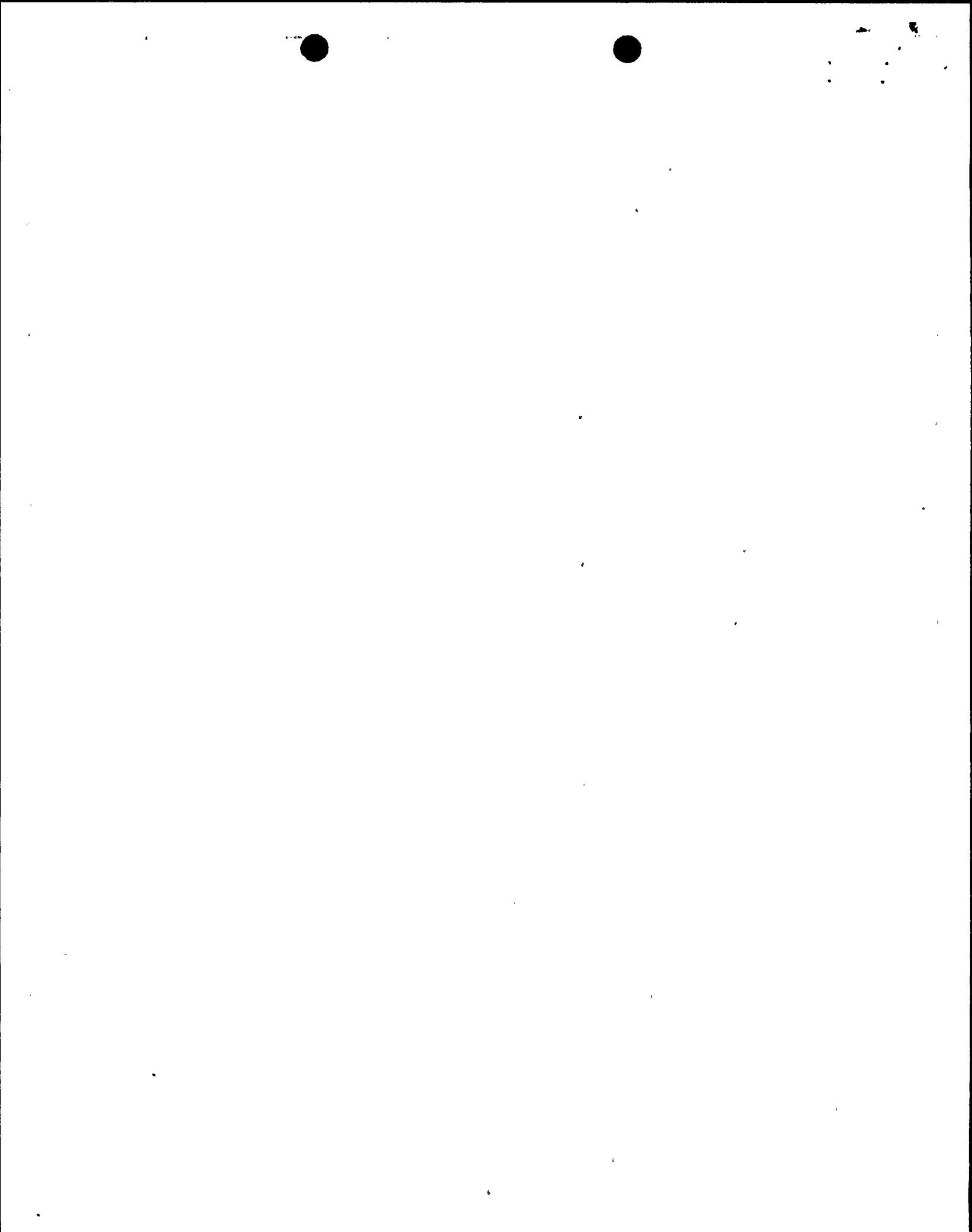
NIAGARA  MOHAWK

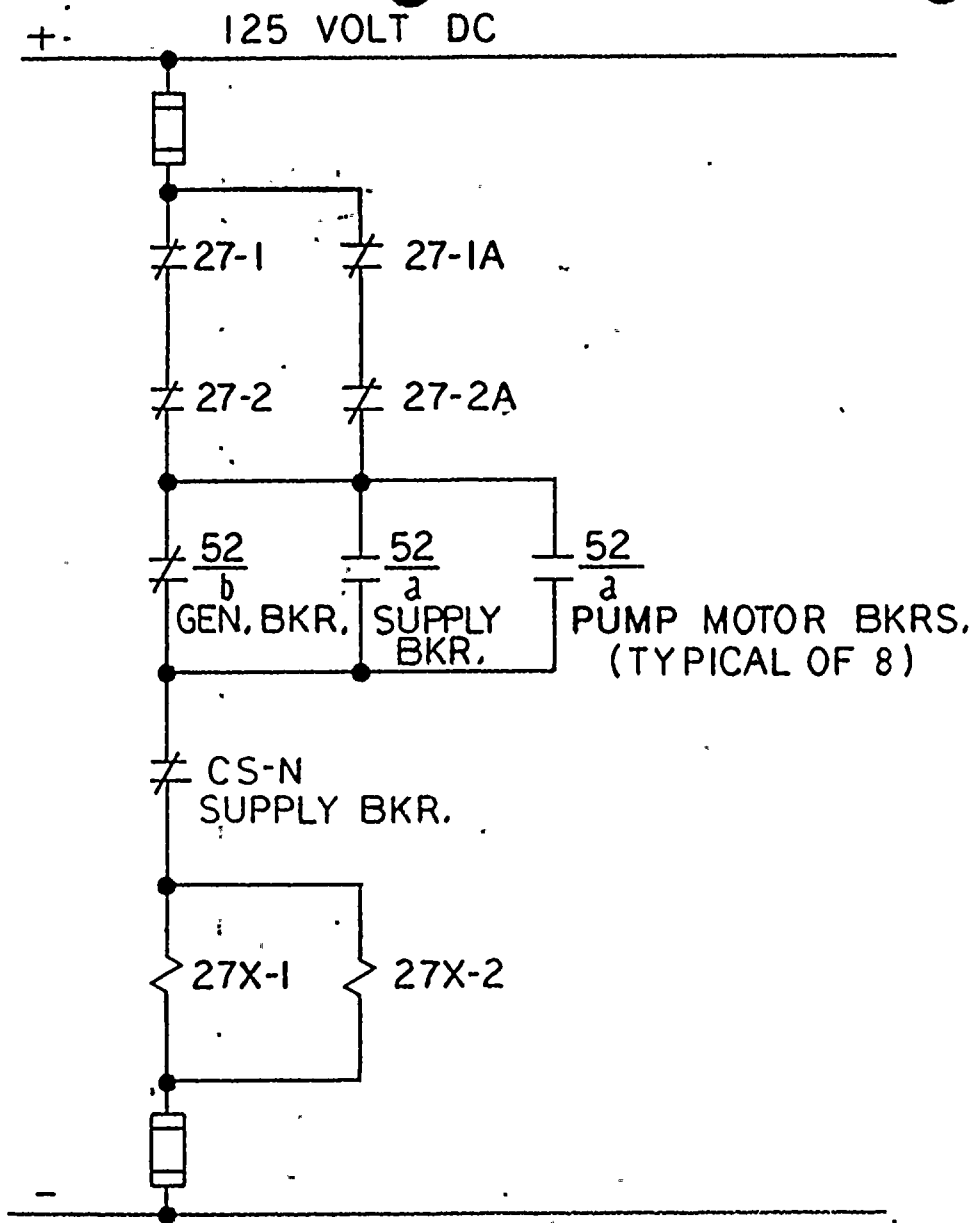
NIAGARA MOHAWK POWER CORPORATION  
SYRACUSE, N.Y.

FIGURE 1  
(ORIGINAL DESIGN)

DES.	DR.	TR.	RY.	CK.	DATE	SCALE
APPROVED <i>P. Cassidy</i>			APPROVED			INDEX
APPROVED			APPROVED			No.

No.	DATE	BY	REVISION	CK.	APP.





27X-1 AND 27X-2 INITIATE TRANSFER TO ON SITE DIESEL GENERATOR POWER AND INITIATE THE EMERGENCY POWERBOARD'S LOAD SHEDDING FEATURE.

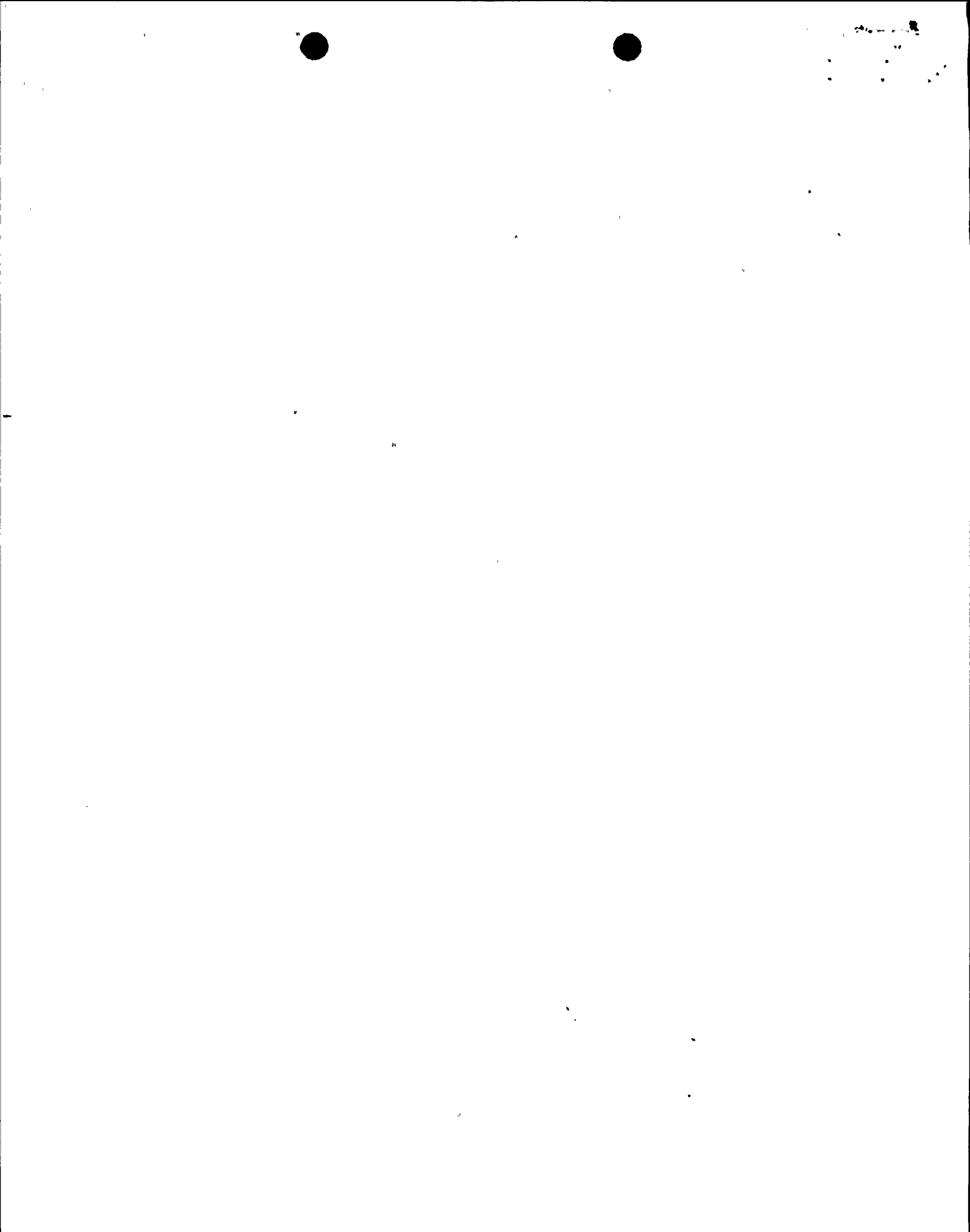
NIAGARA  MOHAWK

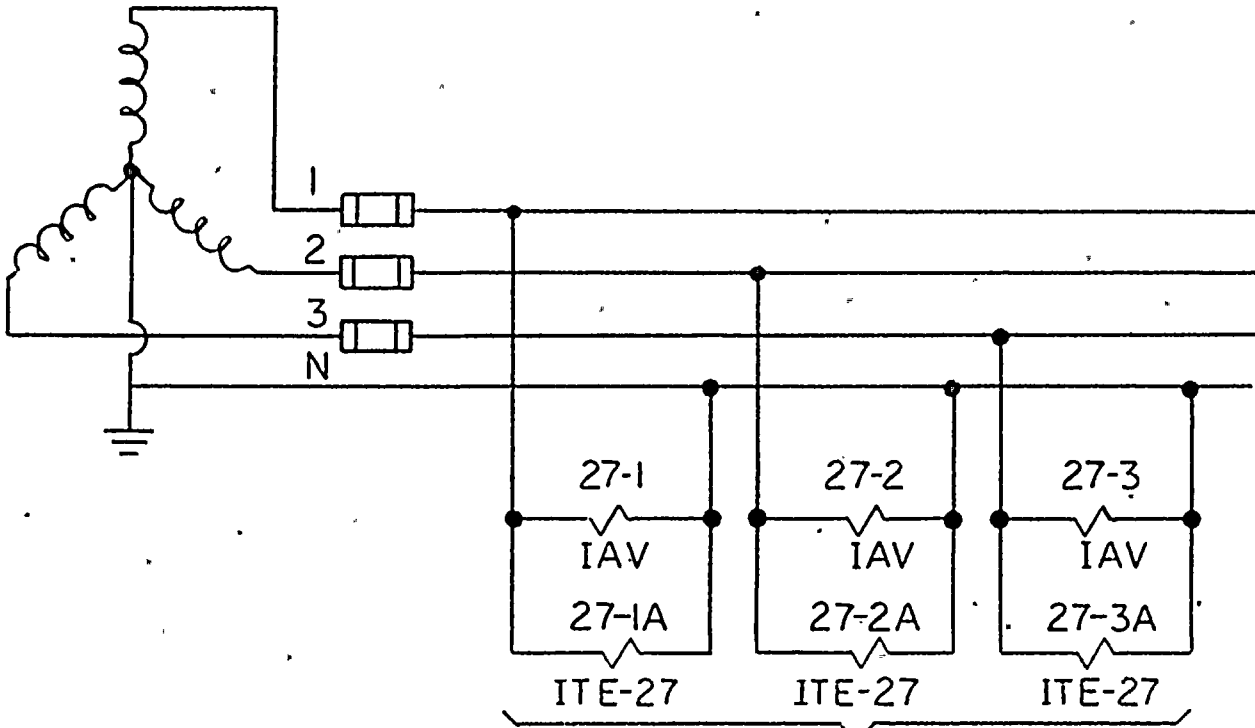
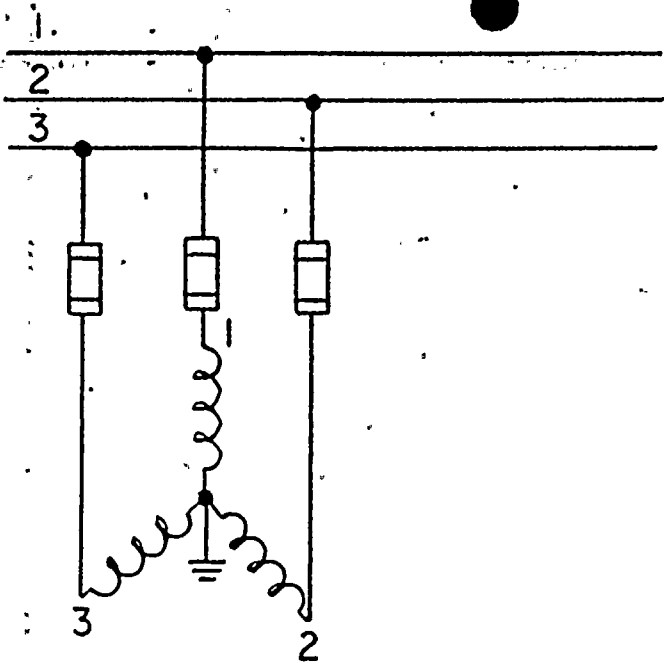
NIAGARA MOHAWK POWER CORPORATION  
SYRACUSE, N.Y.

FIGURE 2  
(ORIGINAL DESIGN)

NO.	DATE	BY	REVISION	CK.	APP.

DES.	DR.	TR.	RY	CK.	DATE	SCALE
APPROVED <i>[Signature]</i>		APPROVED			INDEX	
APPROVED		APPROVED			NO.	





CAT. NO. 211R1175  
UNDER VOLTAGE  
RELAYS

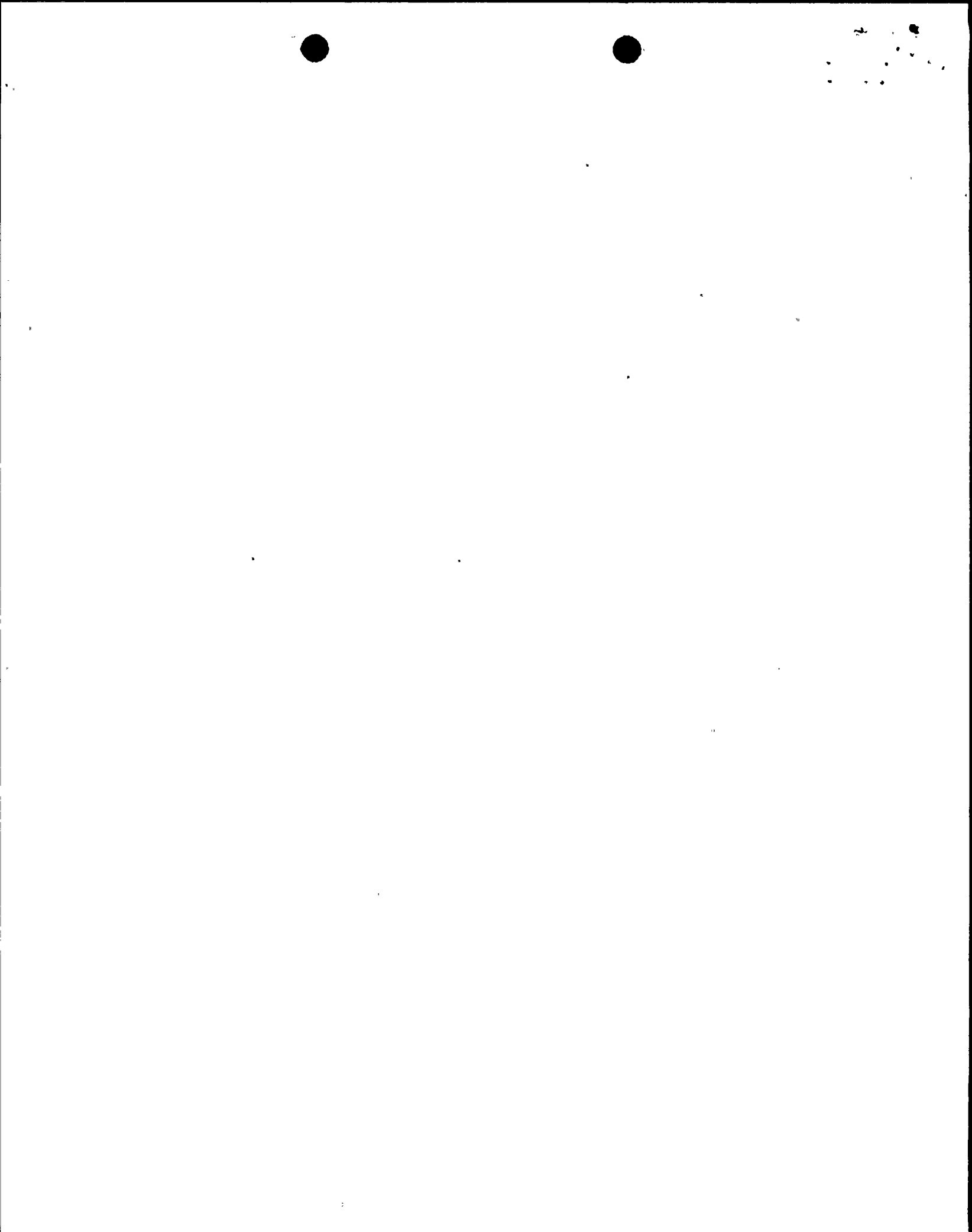
NIAGARA MOHAWK

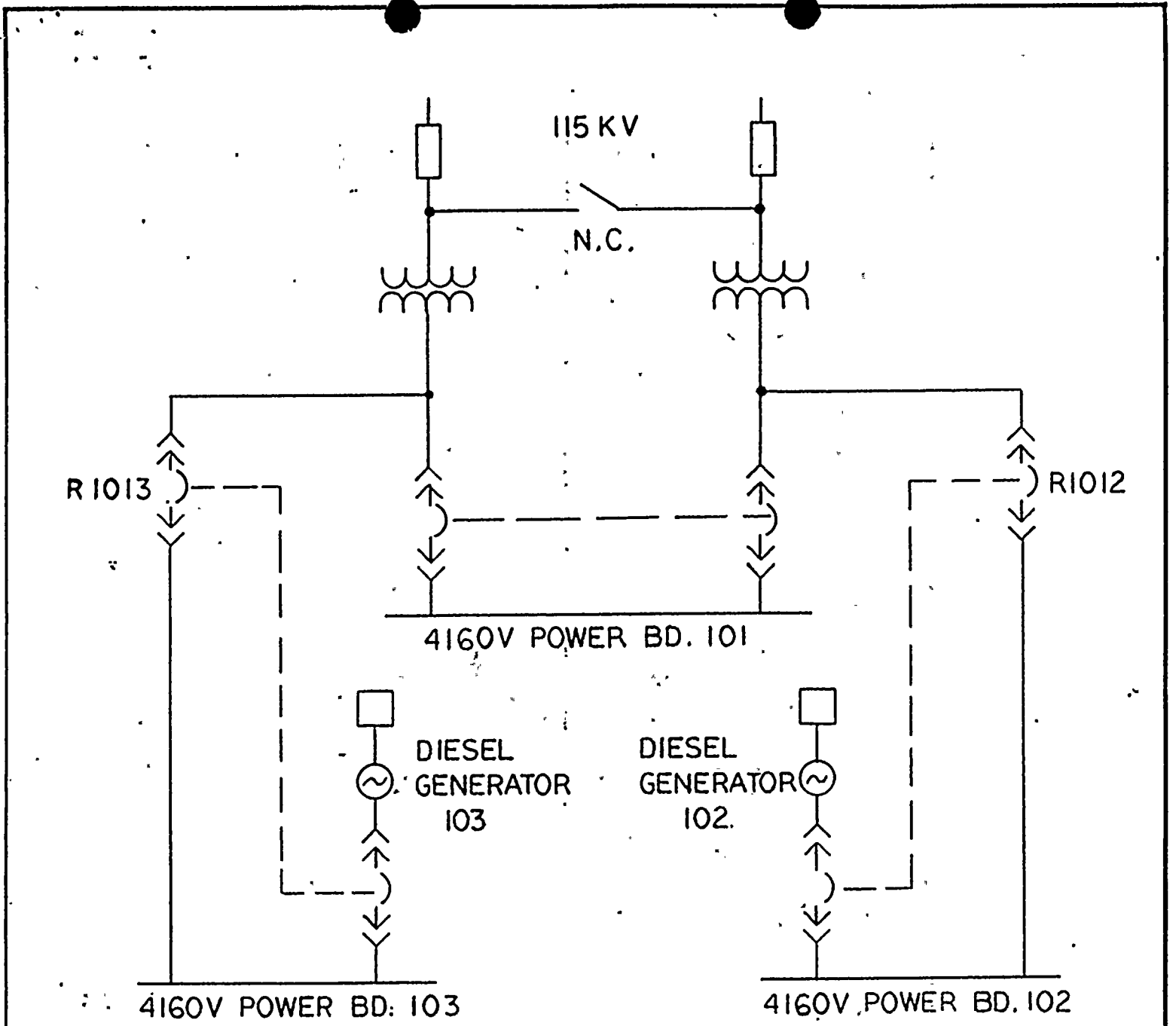
NIAGARA MOHAWK POWER CORPORATION  
SYRACUSE, N. Y.

FIGURE 3  
(REVISED DESIGN)

NO.	DATE	BY	REVISION	CK.	APP.

DES.	DR.	TR.	RY	CK.	DATE	SCALE
APPROVED <i>P. J. ...</i>		APPROVED		INDEX		
APPROVED		APPROVED		NO.		





NIAGARA  MOHAWK

NIAGARA MOHAWK POWER CORPORATION  
SYRACUSE, N. Y.

FIGURE 5  
(EXISTING DESIGN)

NO.	DATE	BY	REVISION	CK.	APP.

DES.	DR.	TR.	R.Y.	CK.	DATE	SCALE
APPROVED <i>[Signature]</i>			APPROVED			INDEX
APPROVED			APPROVED			NO.



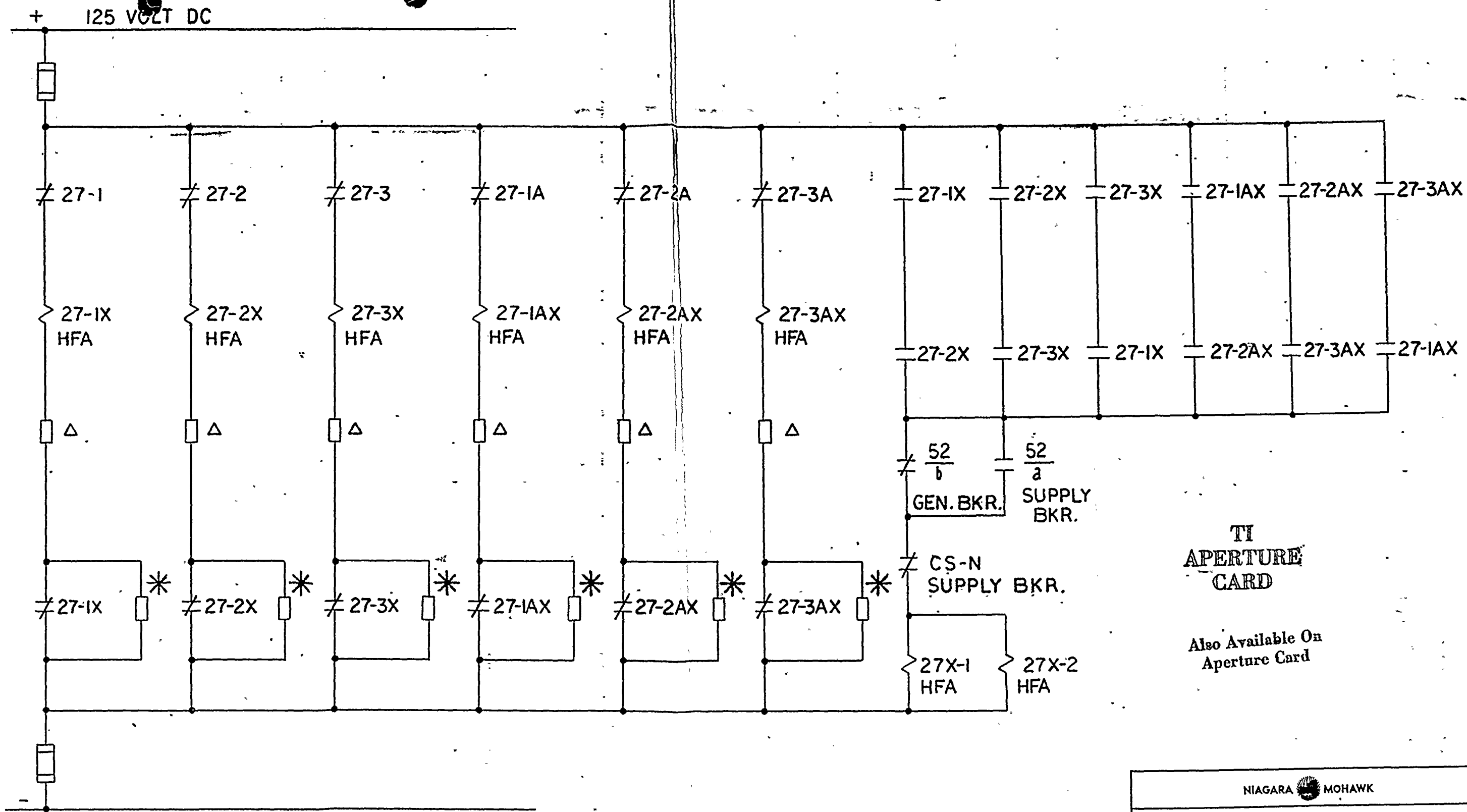
02  
1  
2  
3  
4  
5  
6  
7  
8  
9  
0

1  
2  
3  
4  
5  
6  
7  
8  
9  
0

1  
2  
3  
4  
5  
6  
7  
8  
9  
0

1  
2  
3  
4  
5  
6  
7  
8  
9  
0





TI  
APERTURE  
CARD

Also Available On  
Aperture Card

Δ 50 OHM RESISTOR  
\* 125 OHM RESISTOR

27X-1 AND 27X-2 INITIATE TRANSFER TO ON SITE DIESEL GENERATOR POWER AND INITIATE THE EMERGENCY POWERBOARD'S LOAD SHEDDING FEATURE.

No.	DATE	BY	REVISION	CK.	APP.

NIAGARA MOHAWK					
NIAGARA MOHAWK POWER CORPORATION SYRACUSE, N.Y.					
FIGURE 4 (REVISED DESIGN)					
DES.	DR.	TR.	R.Y.	CK.	DATE
APPROVED	APPROVED	APPROVED	APPROVED	APPROVED	INDEX

8408090081-01

