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**FPL**

OCT 27 1998

L-98-255

10 CFR Part 50 Appendix R

U. S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
Washington, D. C. 20555

Subject: Turkey Point Units 3 and 4  
Docket Nos. 50-250 and 50-251  
Supplemental Information-  
Request for Exemption - Fire Rating of  
Raceway Fire Barriers in Outdoor Fire Areas

By letter L-96-318 dated December 12, 1996, Florida Power & Light Company (FPL) submitted a request for exemption from certain requirements of 10 CFR 50 Appendix R for raceway fire barriers in the outdoor areas excluding the open turbine building at Turkey Point Units 3 and 4. By letter L-97-181 dated July 31, 1997, FPL submitted a request for exemption from certain requirements of 10 CFR 50 Appendix R for raceway fire barriers in the open turbine building at Turkey Point Units 3 and 4.

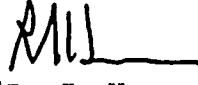
Based on discussions with the NRC staff during the September 14, 1998, meeting at the Turkey Point plant, it was determined that the above referenced exemption requests should be limited to those fire zones that contain protected safe shutdown circuits. As requested by the NRC staff, enclosed are the drawings (Figures A, B, C and D) showing the fire zones that are included in the above referenced requests for exemption for the outdoor areas. The attached drawings also indicate fire zones in the open turbine building that contain safe shutdown circuits. Attachment 1 provides the marked-up pages from the FPL letter L-97-181 submittal, modified to exclude fire zones in the open turbine building that do not contain protected raceways. Accordingly, the request for exemption in the open turbine building is being withdrawn for Fire Zones 66, 69, 78, 83 and 87.

Attachment 2 lists the safe shutdown functions for Fire Zones 105 and 117. This listing was not included in the listing for the open turbine building, submitted by FPL letter L-98-153 dated July 2, 1998.

Based on discussions with the NRC staff during the September 14, 1998, meeting, the proposed scope of 1-hour fire rated barriers for protected raceways is expanded eastward from column line E inside the open turbine building. This expanded scope provides added protection in the zone of influence from a postulated fire in the condensate pump pits. Additional details are provided in the attached Turkey Point Drawing PTN-M-97-052-004, Sheets 1, 4 and 5, and the Raceway/Cable Function Matrix (Attachment 3).

This supplemental documentation, provided to the NRC staff during the September 14, 1998 meeting, is hereby formally submitted.

Very truly yours,

  
R. J. Hovey  
Vice President  
Turkey Point Plant

OIH

9811030303 981027  
PDR ADOCK 05000250  
P PDR

Attachments

cc: Regional Administrator, Region II, USNRC  
Senior Resident Inspector, USNRC, Turkey Point Plant

an FPL Group company

11  
A006

~~L-97-181.~~~~Page 6 of 83~~**C. Fire Zones Associated with the Exemption**

The fire zones within the scope of the exemption request are listed below with respect to the exemption sections to which they apply:

- II.B.1 ~~Fire Zones 66, 69, 78 West of column line 'E', 80 between column lines 'A' and 'E', 82, 83 West of column line 'E', 85 between column lines 'A' and 'E', 87, 91, 92, 105 West of column line 'E', and 117 West of column line 'E' and 92.~~
- II.B.2 ~~Fire Zones 78 East West of column line 'E', 79 West of column line J<sub>c</sub>, 80 East of column line 'E', 83 East West of column line 'E', 84 West of column line J<sub>c</sub>, 85 East of column line 'E', 88, 89 West of column line J<sub>c</sub>, 105 East of column line 'E', 117 East of column line 'E'.~~
- II.B.3 ~~Fire Zones 78 East West of column line 'E', 79 West of column line J<sub>c</sub>, 80 East of column line 'E', 83 East West of column line 'E', 84 West of column line J<sub>c</sub>, 85 East of column line 'E', 88, 89 West of column line J<sub>c</sub>, 105 East of column line 'E', 117 East of column line 'E'.~~

**D. Exemption Fire Zone Descriptions**

<u>Fire Zone</u>	<u>Description</u>
<del>66</del>	<del>Unit 4 Steam Generator Feed Pump Area</del>
<del>69</del>	<del>Unit 3 Steam Generator Feed Pump Area</del>
<del>78 (partial)</del>	<del>Unit 4 Instrument Air Equipment Area</del>
79 (partial)	Area West of Unit 4 Containment
80 (partial)	Unit 4 Main Condenser Area
82	Unit 4 Auxiliary Transformer Area
<del>83</del>	<del>Unit 3 Instrument Air Equipment Area</del>
84 (partial)	Unit 3 and 4 Auxiliary Feedwater Pump Area
85 (partial)	Unit 3 Main Condenser Area
<del>87</del>	<del>Unit 3 Auxiliary Transformer Area</del>
88 (partial)	Unit 3 Switchgear/Emergency Diesel Generator Vestibule
89 (partial)	Unit 3 Condensate Storage Tank Area
91	Unit 4 Condensate Pump Area
92	Unit 3 Condensate Pump Area
105	Units 3 and 4 Turbine Building Mezzanine Deck
117	Units 3 and 4 Turbine Deck

A detailed description of the combustible loading, installed essential equipment and fire detection and suppression features for the fire zones included in the exemption request is provided in Section IV.

Turkey Point Units 3 and 4  
Safe Shutdown Circuits for Selected Outdoor Fire Zones  
(Supplement to FPL Letter L-98-153)

FIRE ZONE	SAFE SHUTDOWN FUNCTION
105	NCC Fan 3B Power
105	NCC Fan 3B Control
105	NCC Fan 3B Ammeter
105	120V AC to 3B Load Sequencer
105	125V DC to 4160V Bus 3D
105	EDG 4B Breaker Control
105	Startup Transformer Breaker Control - 4KV Bus 4B
105	Auxiliary Transformer Breaker Control - 4KV Bus 4B
105	4160V Bus 4B Lockout
105	Heater Drain Pump 4B Control
105	Condensate Pump 4B Control
105	125V DC for Unit 4 Feedwater Bypass Valve
117	Unit 3 Main Steam Isolation Valve Control
117	Unit 4 Main Steam Isolation Valve Control
117	Unit 4 Steam Generator Pressure Instrumentation

ATTACHMENT 3 TO L-98-255    Page 1 of 4  
**RACEWAY/CABLE FUNCTION MATRIX**  
 TURBINE BUILDING RACEWAYS REQUIRING 1-HOUR RATED FIRE BARRIERS

RACEWAY	CABLE FUNCTION	FIRE ZONE(S)	DRAWING REFERENCE (Location)	EXTENT OF 1-HR COVERAGE: (See Note on Page 1.)
3J2040	120v AC to Sequencer 3B	092, 105	PTN-M-97-052-004, Sheet 5	1-hour upgrade complete from 4160v Switchgear Rm. South Wall to column E. 1-hour coverage to be extended to support @ ~9'-6" west of column J.
3K1966	MCC 3K Power Feeder	085, 092	PTN-M-97-052-004, Sheet 5	1-hour upgrade complete from 4160v Switchgear Rm. South Wall to column E. 1-hour protection to be extended to support located ~7'-0" west of column J.
4A1353	Normal Cont Cooler Fan 4B Control Normal Cont Cooler Fan 4D Control Normal Cont Cooler Fan 4D Power Normal Cont Cooler Fan 4D Ammeter	082	PTN-M-97-052-004, Sheet 4	4160v Switchgear Rm. South Wall to PB4864
4A1354	Normal Cont Cooler Fan 4B Control Normal Cont Cooler Fan 4D Control Normal Cont Cooler Fan 4D Power Normal Cont Cooler Fan 4D Ammeter	082	PTN-M-97-052-004, Sheet 4	PB4864 to PB4865
4A1357	Normal Cont Cooler Fan 4B Control Normal Cont Cooler Fan 4D Control Normal Cont Cooler Fan 4D Power Normal Cont Cooler Fan 4D Ammeter	082, 091	PTN-M-97-052-004, Sheets 1 & 4	PB4865 to PB4866
4A1417	Auxiliary Transformer Breaker Control – 4Kv Bus 4B	082, 091, 105	PTN-M-97-052-004, Sheets 1 & 4	4160v Switchgear Rm. South Wall to support @ 10' west of column J
4J1838	Normal Containment Cooler Fan 4D Control	082, 091, 105	PTN-M-97-052-004, Sheets 1 & 4	4160v Switchgear Rm. South Wall to support @ 10' west of column J

Note: Conduits that exit the condensate pit at the E-1 boundary are protected with 25-minute rated Thermo-Lag fire barriers outside the pit area.

## RACEWAY/CABLE FUNCTION MATRIX

## TURBINE BUILDING RACEWAYS REQUIRING 1-HOUR RATED FIRE BARRIERS

RACEWAY	CABLE FUNCTION	FIRE ZONE(S)	DRAWING REFERENCE (Location)	EXTENT OF 1-HR COVERAGE: (See Note on Page 1)
4K1441	Auxiliary Transformer Breaker Control – 4160v Bus 4B Startup Transformer Breaker Control – 4160v Bus 4B Heater Drain Pump 4B Condensate Pump 4B 125v DC for Feedwater Bypass Control Valves 4160v Bus 4B Lockout Relay	082, 091, 105	PTN-M-97-052-004, Sheets 1 & 4	4160v Switchgear Rm. South Wall to support @ 10' west of column J
PB4864	NCC Fan 4B Control NCC Fan 4D Control NCC Fan 4D Power NCC Fan 4D Ammeter	082	PTN-M-97-052-004, Sheet 4	All
PB4865	NCC Fan 4B Control NCC Fan 4D Control NCC Fan 4D Power NCC Fan 4D Ammeter	082	PTN-M-97-052-004, Sheet 4	All
4A1369	Unit 4 Train 2 AFW Flow Control Valves Unit 4 Instrument Air Header Pressure Instrumentation Unit 4 Pressurizer Level Instrumentation Unit 4 SG Level (wide range) Instrumentation Unit 4 Hot/Cold Leg Temp Instrumentation Unit 4 RCS Pressure Instrumentation Unit 4 Atmospheric Steam Dump Valve Circuit	091	PTN-M-97-052-004, Sheet 4	4160v Switchgear Rm. South Wall to PB4874
4A1370	125v DC to Alternate Shutdown Panel 4C264 120v AC to Power Panel 4P93	091	PTN-M-97-052-004, Sheet 4	4160v Switchgear Rm. South Wall to PB4875
4A1371	SG Blowdown Flow Control Valve Indication at ASP 4C264 Instrumentation Air Iso Valve Position Indication Unit 4 AFW Turbine Steam Supply Valve Control Unit 4 Atmospheric Steam Dump Valve Control Unit 4 SG Blowdown Flow Control Valve Control Instrument Air Header Pressure Valve Control Unit 4 Backup AFW to SG Valve Power Unit 4 Main Steam Isolation Valve Control	091	PTN-M-97-052-004, Sheet 4	4160v Switchgear Rm. South Wall to PB4875
4A1372	Unit 4 Train 2 AFW Flow Control Valve Control Unit 4 SG Level (wide range) Instrumentation	091	PTN-M-97-052-004, Sheet 4	4160v Switchgear Rm. South Wall to PB4874
4J1775	Unit 4 Pressurizer Relief Iso Valve Power 125v DC Control Power to LC 4B, 4D 125v DC Control Power to Sequencer 4B Unit 4 AFW Turbine Steam Supply Valve Control	079	PTN-M-97-052-004, Sheets 1 & 4	From PB4713 to column J

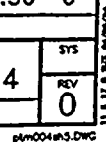
ATTACHMENT 3 TO L-98-255    Page 3 of 4  
**RACEWAY/CABLE FUNCTION MATRIX**  
**TURBINE BUILDING RACEWAYS REQUIRING 1-HOUR RATED FIRE BARRIERS**

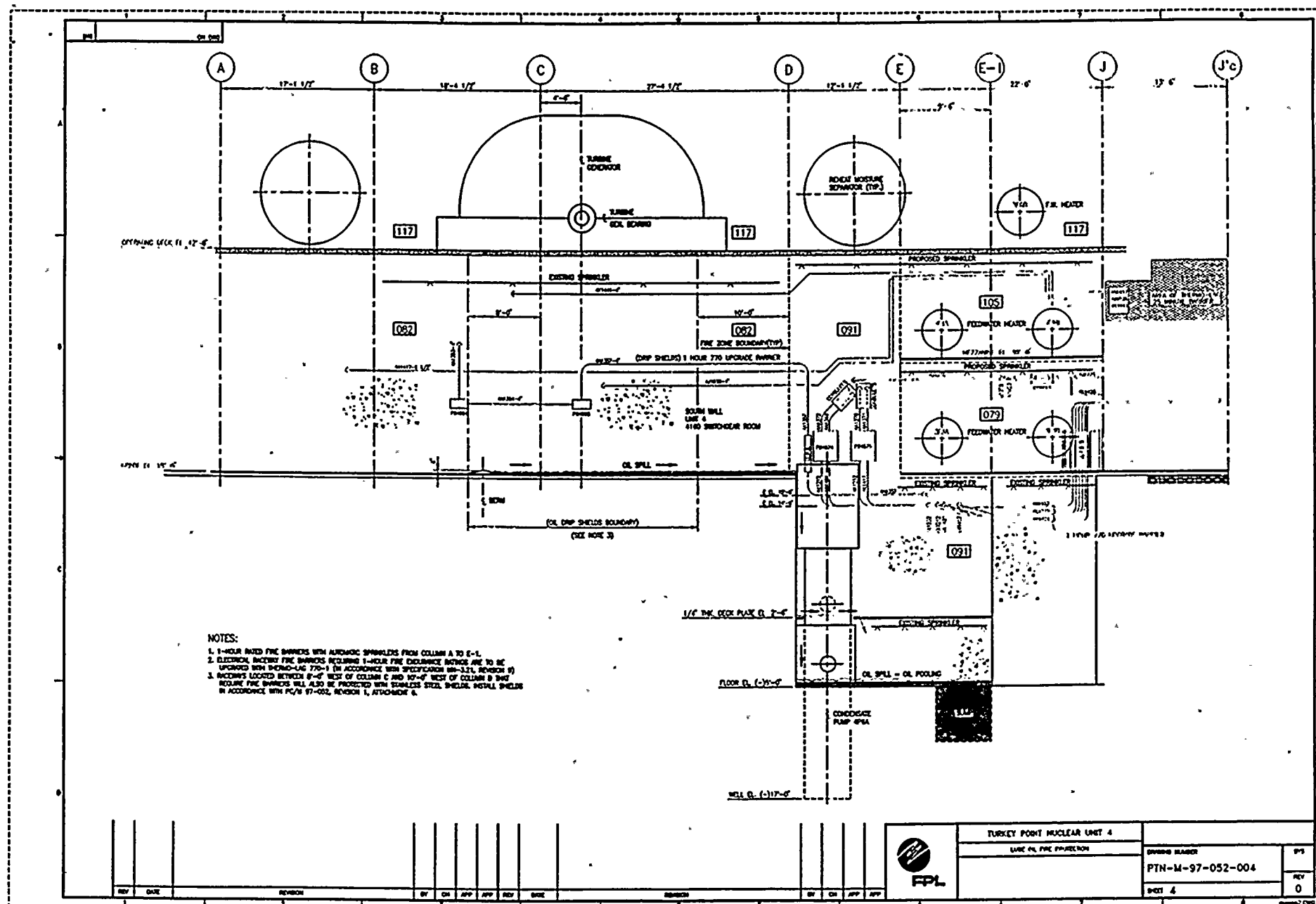
RACEWAY	CABLE FUNCTION	FIRE ZONE(S)	DRAWING REFERENCE (Location)	EXTENT OF 1-HR COVERAGE: (See Note on Page 1)
4J1776	125v DC Control Power to LC 4B, 4D 125v DC Control Power to Sequencer 4B	079, 091	PTN- 97-052-004, Sheets 1 & 4	4160v Switchgear Rm. South Wall to PB4713
4K1212	Unit 4 Train 2 AFW Flow Control Valve Control Unit 4 Instrument Air Header Pressure Instrumentation Unit 4 Pressurizer Level Instrumentation Unit 4 SG Level (narrow range) Instrumentation Unit 4 SG Level (wide range) Instrumentation Unit 4 Hot/Cold Leg Temp Instrumentation Unit 4 RCS Pressurizer Instrumentation Unit 4 Atmospheric Steam Dump Valve	080, 091	PTN-M-97-052-004, Sheets 1 & 4	From PB4874 to raceway support @ ~ column J
4K1232	Unit 4 SG Blowdown Flow Control Valve Unit 4 Instrument Air Supply Header Isolation Valve Control Unit 4 AFW Turbine Steam Supply Valve Control Unit 4 Atmospheric Steam Dump Valve Control Unit 4 SG Blowdown Flow Control Valve Unit 4 Backup AFW to SG Control Valve Power Unit 4 Main Steam Isolation Valve Control	080, 091	PTN-M-97-052-004, Sheets 1 & 4	From PB4875 to raceway support @ ~ column J
4K1411	Normal Cont. Cooler Fan 4B Control Normal Cont. Cooler Fan 4D Control Normal Cont. Cooler Fan 4D Ammeter	080, 091	PTN-M-97-052-004, Sheets 1 & 4	From PB4866 to raceway support @ ~ column J
4K1412	Normal Cont. Cooler Fan 4D Control Normal Cont. Cooler Fan 4D Power	080, 091	PTN-M-97-052-004, Sheets 1 & 4	From PB4866 to raceway support @ ~ column J
4K1417	125V DC to Alternate Shutdown Panel 4C264 120V AC to Power Panel 4P93	080, 091	PTN-M-97-052-004, Sheets 1 & 4	From PB4875 to raceway support @ ~ column J
4K1421	Unit 4 Train 2 AFW Flow Control Valve Cntrl	080, 091	PTN-M-97-052-004, Sheets 1 & 4	From PB4874 to raceway support @ ~ column J
3K1724	AFW Turbine Trip & Throttle Valve Control	079	PTN-M-97-052-004, Sheet 1	From east wall of Unit 4 4160 Switchgear to column line 30
4K1426	Unit 4 Pressurizer Relief Isolation Valve Power AFW Turbine Steam Supply (Unit 4) Valve Power	079	PTN-M-97-052-004, Sheets 1 & 4	From PB4713 to raceway support @ ~ column J
PB4866	NCC Fan 4B Control NCC Fan 4D Control NCC Fan 4D Power NCC Fan 4D Ammeter	091	PTN-M-97-052-004, Sheet 1	All

ATTACHMENT 3 TO L-98-255 Page 4 of 4  
RACEWAY/CABLE FUNCTION MATRIX  
TURBINE BUILDING RACEWAYS REQUIRING 1-HOUR RATED FIRE BARRIERS

RACEWAY	CABLE FUNCTION	FIRE ZONE(S)	DRAWING REFERENCE (Location)	EXTENT OF 1-HR COVERAGE: (See Note on Page 1)
PB4874	Unit 4 Train 2 AFW Flow Control Valve Control Unit 4 Instrument Air Header Pressure Instrumentation Unit 4 Pressurizer Level Instrumentation Unit 4 SG Level (wide range) Instrumentation Unit 4 Hot/Cold Leg Temperature Instrumentation Unit 4 RCS Pressure Instrumentation Unit 4 Atmospheric Steam Dump Valve	091	PTN-M-97-052-004, Sheet 4	All
PB4875	125v DC to Alternate Shutdown Panel 4C264 Unit 4 SG Blowdown Flow Control Valve Unit 4 Instrument Air Iso valve AFW Turbine Unit 4 Steam Supply Valve Control 120v AC to Power Panel 4P93 Unit 4 Atmospheric Steam Dump Valve Control Unit 4 SG Blowdown Flow Control Valve Control Unit 4 Instrument Air Supply Header Valve Control Unit 4 Backup AFW to SG Control Valve Power Unit 4 Main Steam Isolation Valve Control	091	PTN-M-97-052-004, Sheet 4	All
3A1354	125v DC Control Power to LC 3B, 3D 125v DC Control Power to 4160v Bus 3B (Normal) EDG 3B Control	105	PTN-M-97-052-004, Sheet 5	Support ~1' North of column 23 (East Wall of 4160v Switchgear) to Support @ ~9'-6" west of column J
4A1345	125v DC to 4160v Bus 4B (Normal) 125v DC to 4160v Bus 4B (Alternate)	105	PTN-M-97-052-004, Sheet 1	East wall of 4160v Switchgear to support @ 8'-2" west of column J
3K2020	EDG 3B Lockout Relay EDG 3B Relaying and Metering EDG 3B Control	88	PTN-M-97-052-004, Sheet 5	From box enclosure @ ~ column 24 south to support ~2' west of column J
3K2021	4160v Bus 3D Feeder Breaker Control	88	PTN-M-97-052-004, Sheet 5	From box enclosure @ ~ column 24 south to support ~2' west of column J
3K2022	125v DC to 4160v Bus 3D	88	PTN-M-97-052-004, Sheet 5	From box enclosure @ ~ column 24 south to support ~2' west of column J







# NOTES:

1. 1-HOUR RATED FIRE SHIELDS WITH AUTOMATIC SPRINKLERS FROM COLUMN A TO E-1.
2. ELECTRIC, BATTERY FIRE SHIELDS INCLUDING 1-HOUR FIRE EXTINGUISHING SYSTEMS ARE TO BE UPGRADED WITH BURNING-LAG 770-1 (IN ACCORDANCE WITH SPECIFICATION 88-3.1.1, REVISION 1)
3. BATTERIES LOCATED BETWEEN 8'-0" WEST OF COLUMN C AND 10'-0" WEST OF COLUMN D SHAL REQUIRE FIRE SHIELDS WILL ALSO BE PROTECTED WITH THERMALITE STEEL SHIELDS. INSTALL SHIELDS IN ACCORDANCE WITH PG/M 97-002, REVISION 1, ATTACHMENT 6.



TURKEY POINT NUCLEAR UNIT 4

LAKE PL. FIRE PROTECTION

DRAWING NUMBER

PTN-M-97-052-004

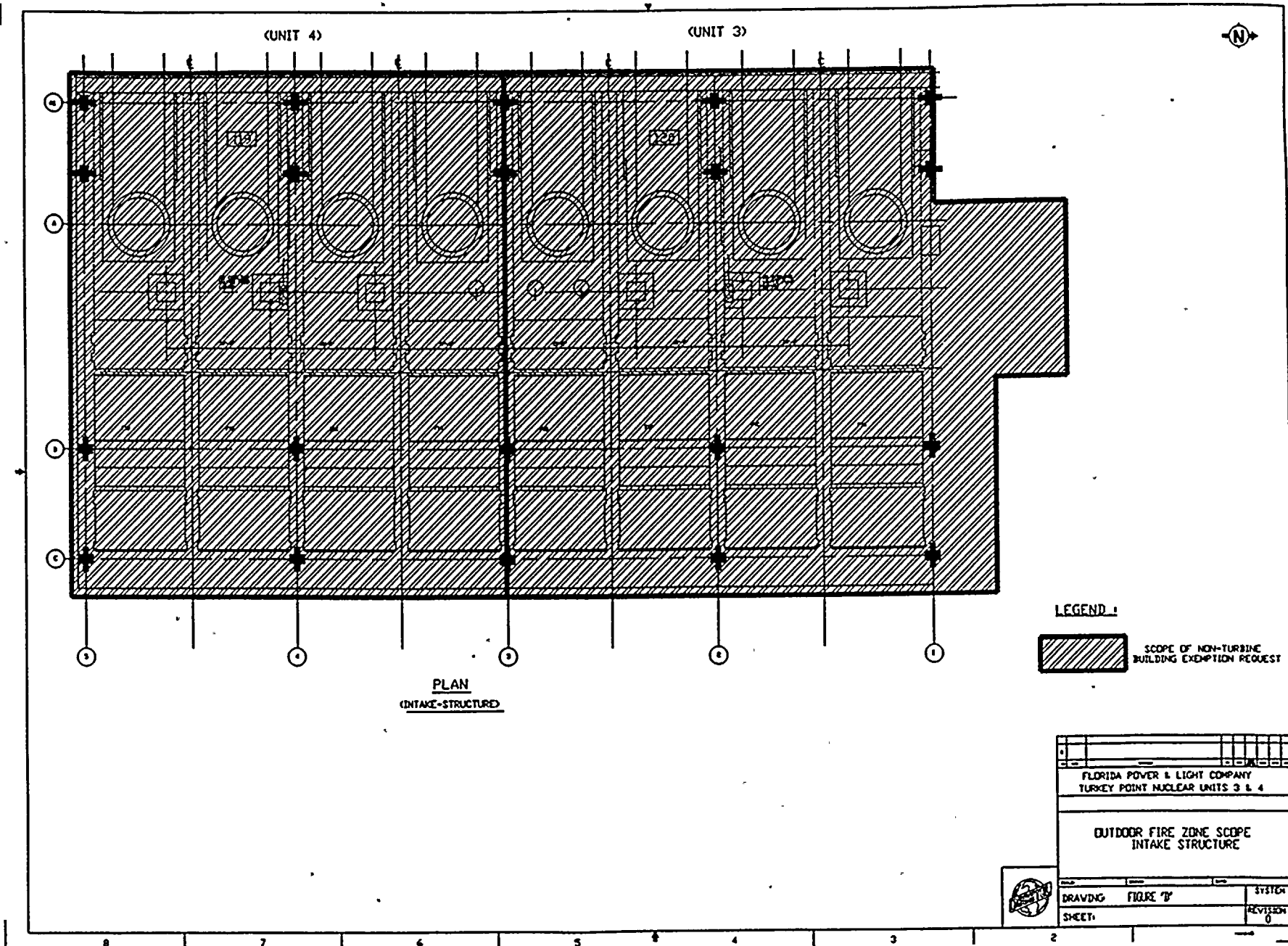
SHEET 4

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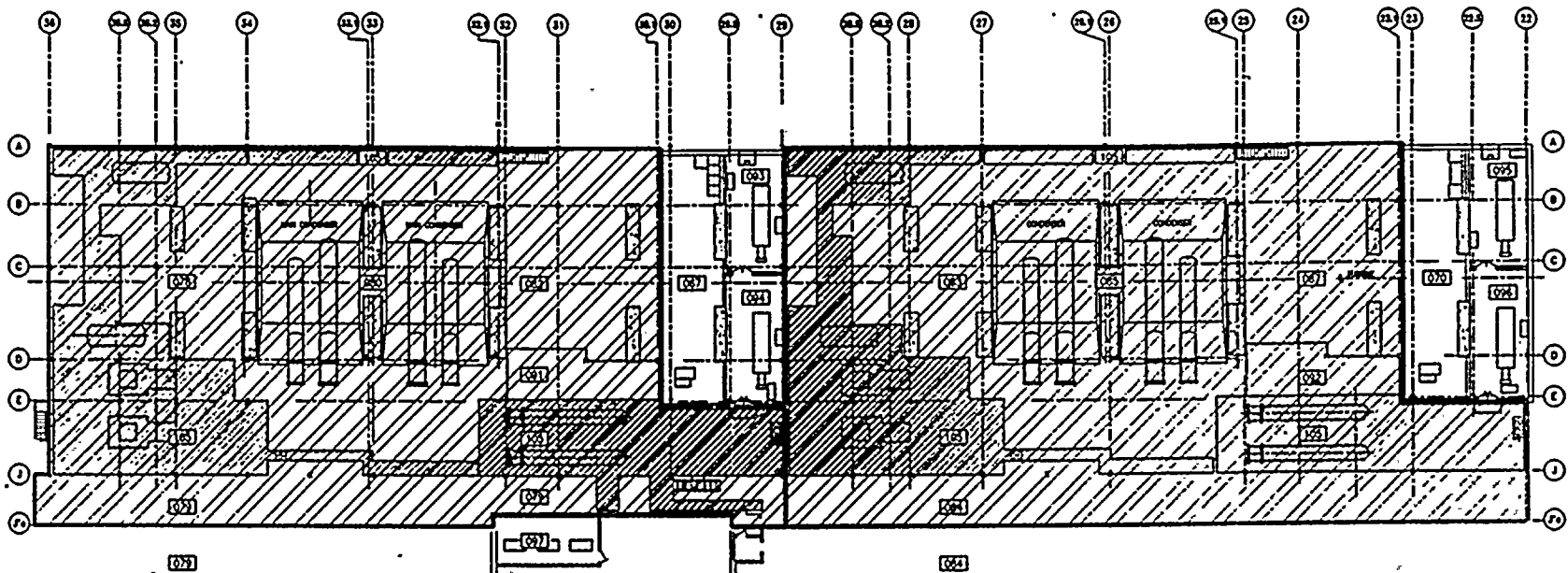
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








**LEGEND :**

-  SCOPE OF TURBINE BUILDING EXEMPTION REQUEST.
-  FIRE ZONES IN TURBINE BUILDING EXEMPTION REQUEST CONTAINING PROTECTED RACEWAYS.

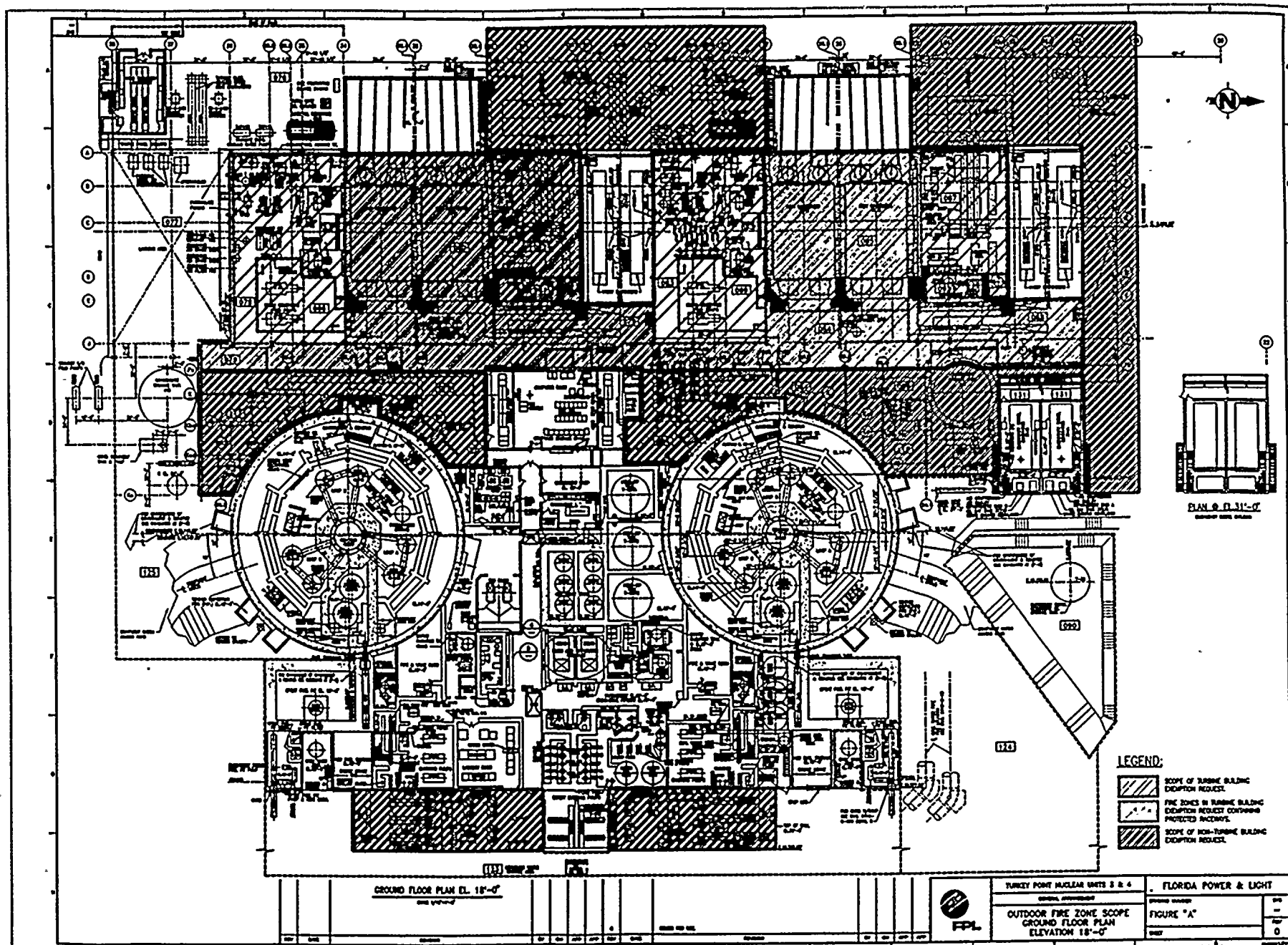
PLAN  
MEZZANINE LEVEL EL. 30'-0"

ISSUED FOR USE

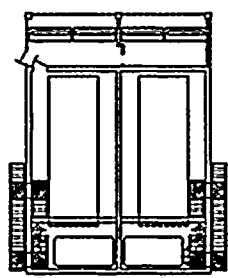
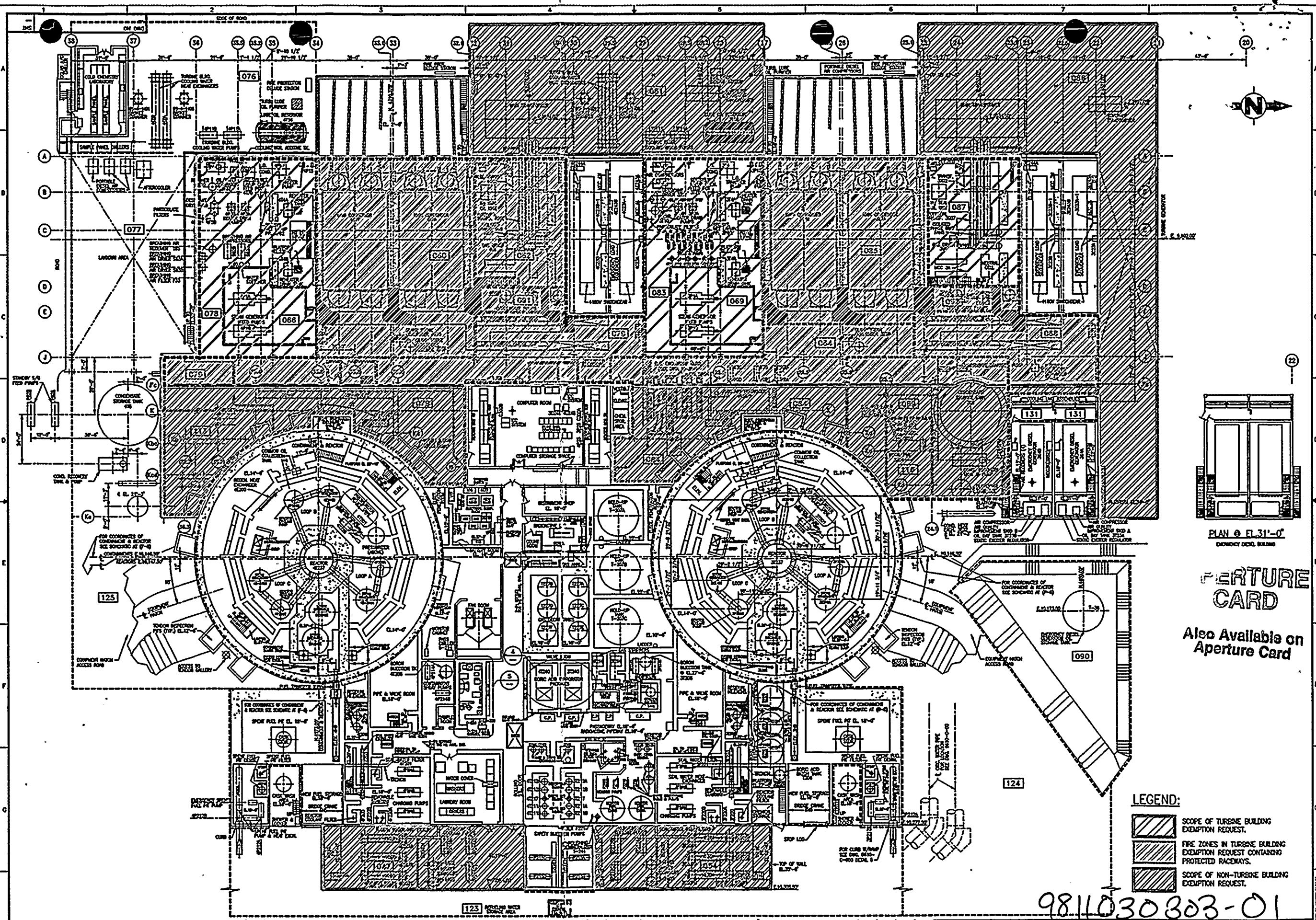


TURKEY POINT NUCLEAR UNITS 3 & 4  
OUTDOOR FIRE ZONE SCOPE  
TURBINE BUILDING MEZZANINE  
ELEVATION 30'-0"

FLORIDA POWER & LIGHT  
FIGURE "B"  
DATE







PLAN @ EL. 31'-0"  
EMERGENCY DIESEL BUILDING

# FEATURE CARD


Also Available on Aperture Card

## LEGEND:

- SCOPE OF TURBINE BUILDING EXEMPTION REQUEST.
- FIRE ZONES IN TURBINE BUILDING EXEMPTION REQUEST CONTAINING PROTECTED RACETRAYS.
- SCOPE OF NON-TURBINE BUILDING EXEMPTION REQUEST.

9811030303-01

GROUND FLOOR PLAN EL. 18'-0"									
SCALE 1/8"=1'-0"									
REV	DATE	REVISION	BY	CH	APP	APP	REV	DATE	REVISION



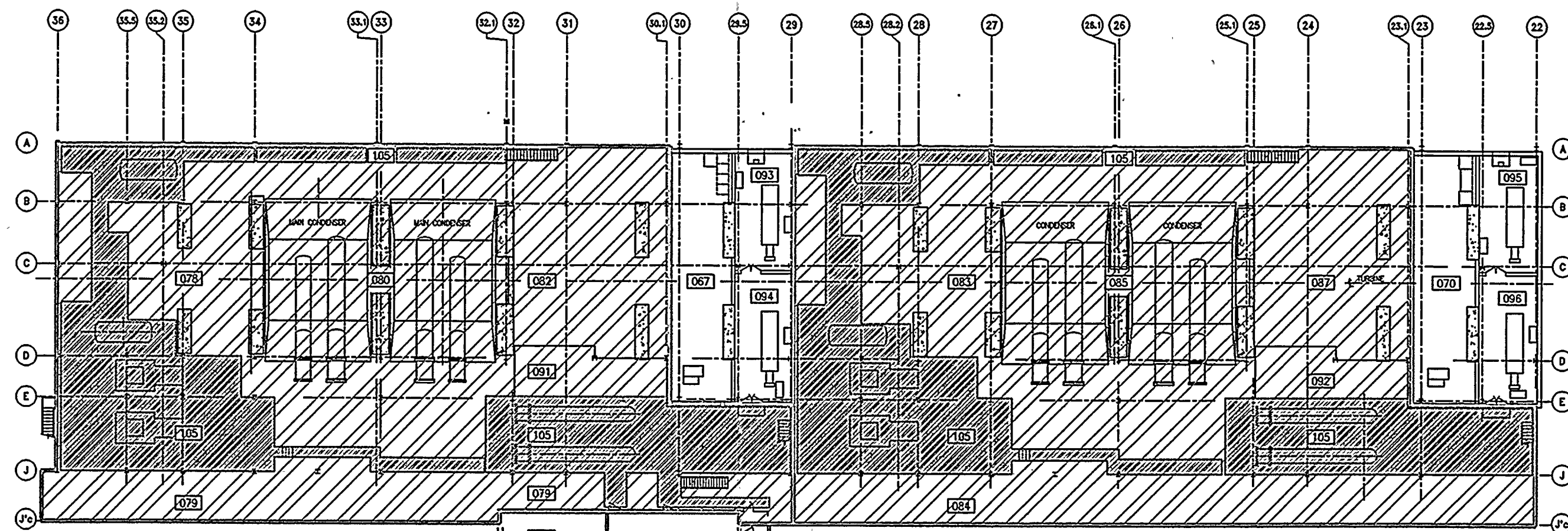
TURKEY POINT NUCLEAR UNITS 3 & 4  
GENERAL ARRANGEMENT  
OUTDOOR FIRE ZONE SCOPE  
GROUND FLOOR PLAN  
ELEVATION 18'-0"

FLORIDA POWER & LIGHT



DRAWING NUMBER	SYS
FIGURE "A"	—
SHEET	REV 0







**LEGEND :**

-  SCOPE OF TURBINE BUILDING EXEMPTION REQUEST.
-  FIRE ZONES IN TURBINE BUILDING EXEMPTION REQUEST CONTAINING PROTECTED RACEWAYS.

**PLAN**  
**MEZZANINE LEVEL EL. 30'-0"**

**APERTURE CARD**

Also Available on  
Aperture Card

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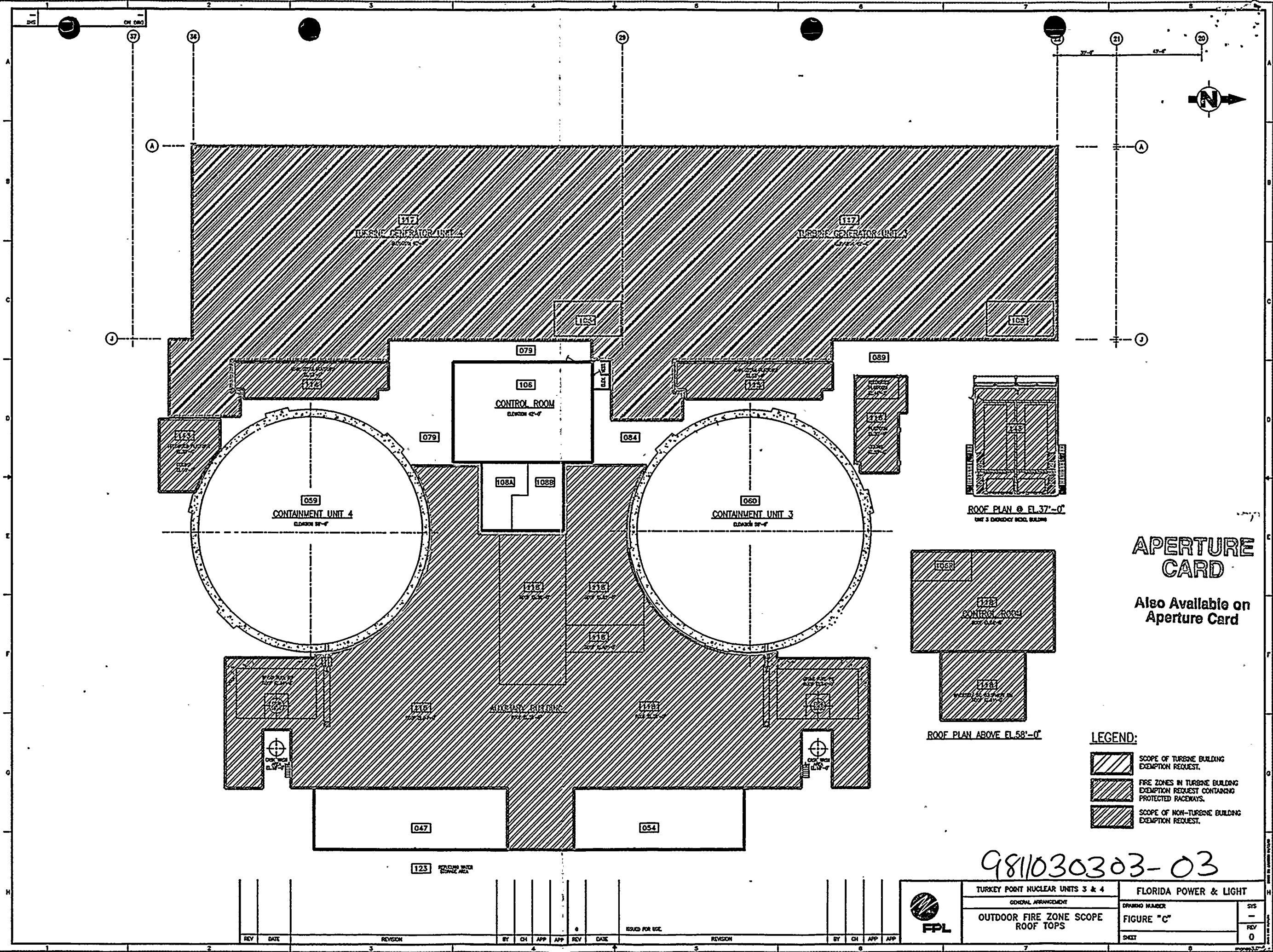
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ISSUED FOR USE



TURKEY POINT NUCLEAR UNITS 3 & 4		FLORIDA POWER & LIGHT	
GENERAL ARRANGEMENT		DRAWING NUMBER	
OUTDOOR FIRE ZONE SCOPE		FIGURE "B"	
TURBINE BUILDING MEZZANINE		SHEET	
ELEVATION 30'-0"		SYS	
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APERTURE  
CARD

Also Available on  
Aperture Card

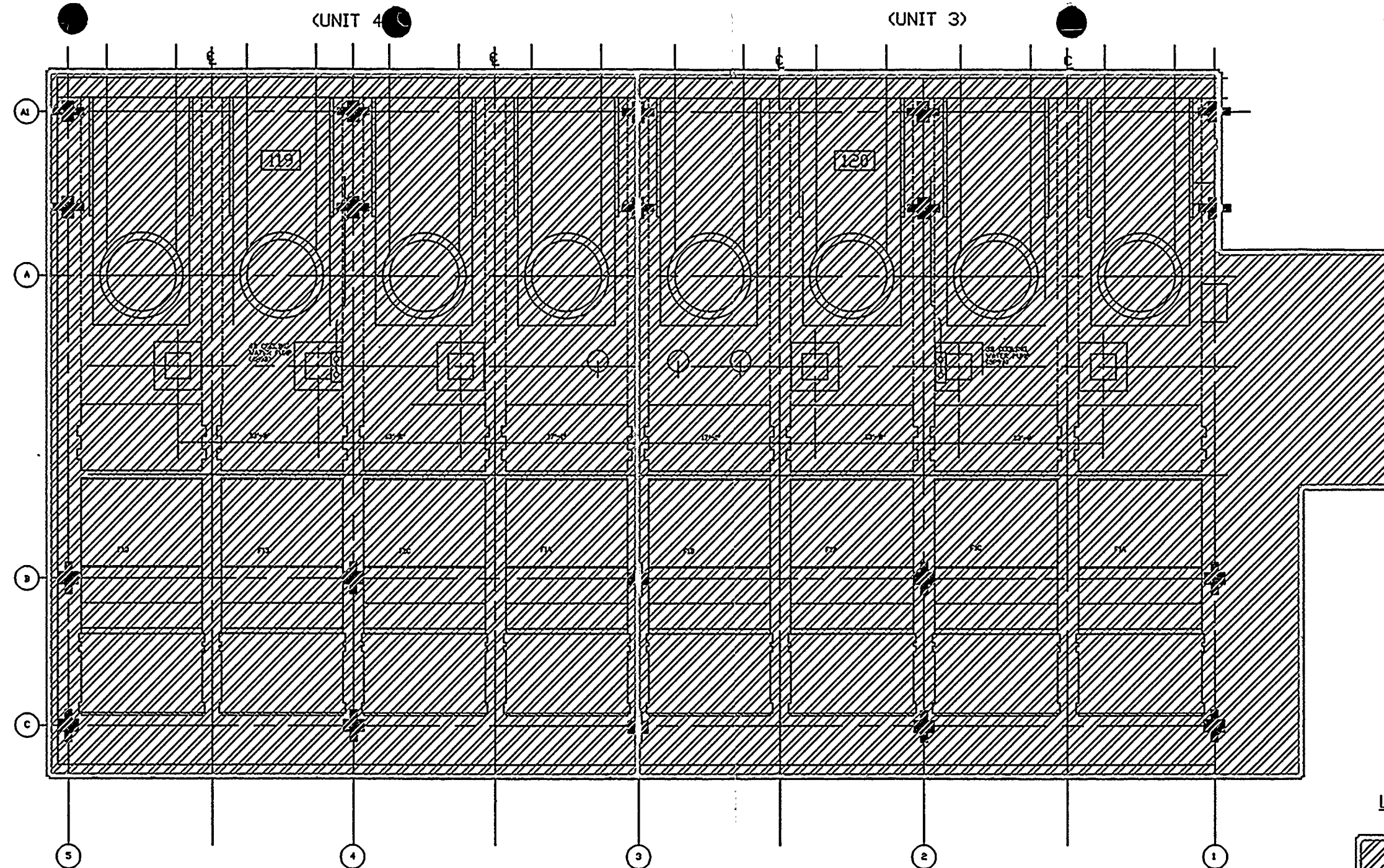
- LEGEND:
- SCOPE OF TURBINE BUILDING EXEMPTION REQUEST.
  - FIRE ZONES IN TURBINE BUILDING EXEMPTION REQUEST CONTAINING PROTECTED RACEMAYS.
  - SCOPE OF NON-TURBINE BUILDING EXEMPTION REQUEST.

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TURKEY POINT NUCLEAR UNITS 3 & 4		FLORIDA POWER & LIGHT	
GENERAL ARRANGEMENT		DRAWING NUMBER	
OUTDOOR FIRE ZONE SCOPE		FIGURE "C"	
ROOF TOPS		SHEET	
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		REV	
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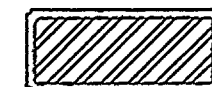


PLAN  
(INTAKE-STRUCTURE)

APERTURE  
CARD

Also Available on  
Aperture Card

LEGEND 1



SCOPE OF NON-TURBINE  
BUILDING EXEMPTION REQUEST

9811030303-04

FLORIDA POWER & LIGHT COMPANY TURKEY POINT NUCLEAR UNITS 3 & 4											
OUTDOOR FIRE ZONE SCOPE INTAKE STRUCTURE											
DRAWING				FIGURE 'D'				SYSTEM			
SHEET				REVISION				0			

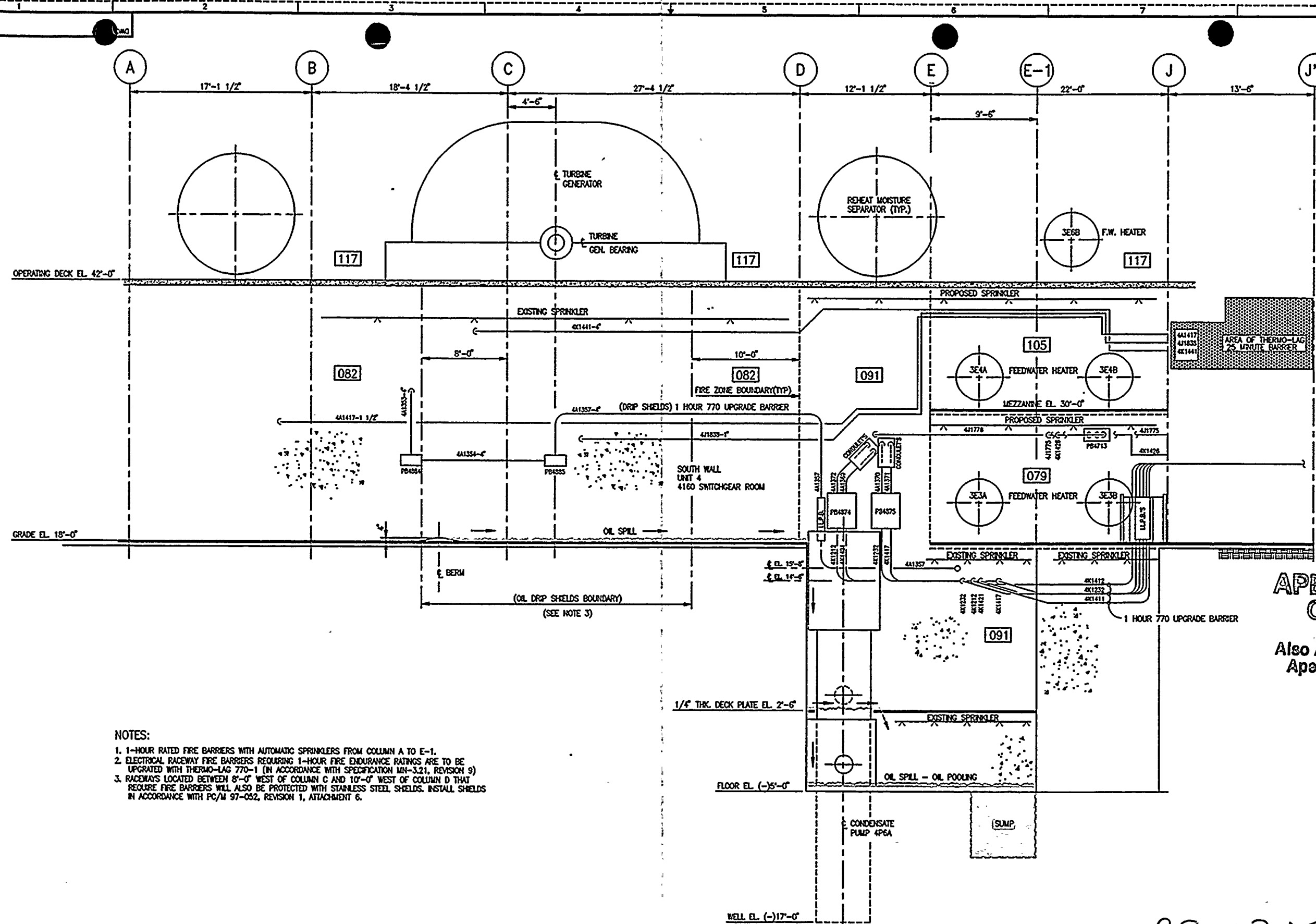












- NOTES:
- 1-HOUR RATED FIRE BARRIERS WITH AUTOMATIC SPRINKLERS FROM COLUMN A TO E-1.
  - ELECTRICAL RACEWAY FIRE BARRIERS REQUIRING 1-HOUR FIRE ENDURANCE RATINGS ARE TO BE UPGRADED WITH THERMO-LAG 770-1 (IN ACCORDANCE WITH SPECIFICATION MH-3.21, REVISION 9)
  - RACEWAYS LOCATED BETWEEN 8'-0" WEST OF COLUMN C AND 10'-0" WEST OF COLUMN D THAT REQUIRE FIRE BARRIERS WILL ALSO BE PROTECTED WITH STAINLESS STEEL SHIELDS. INSTALL SHIELDS IN ACCORDANCE WITH PC/M 97-052, REVISION 1, ATTACHMENT 6.

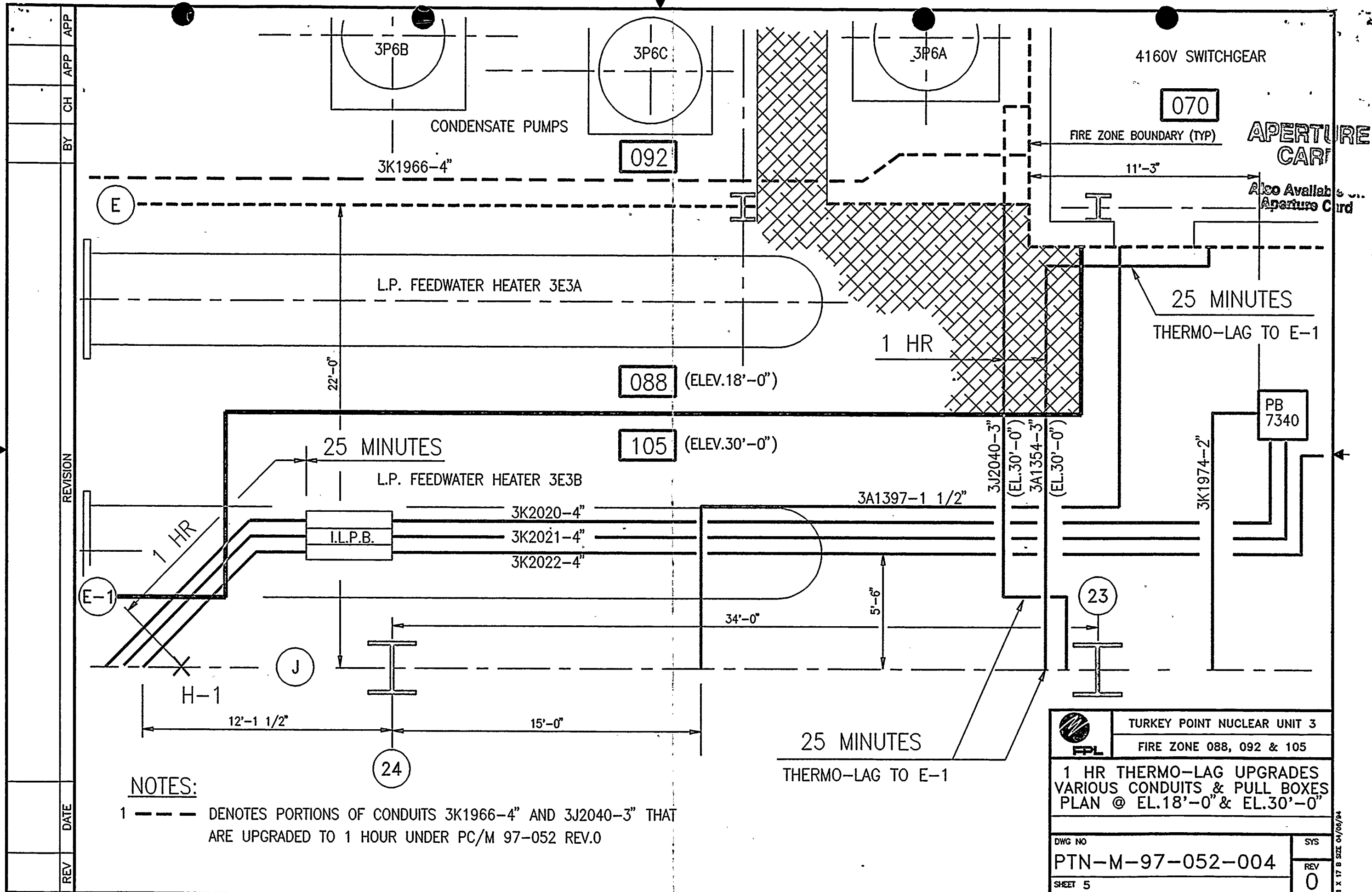
**APERTURE CARD**  
Also Available on Aperture Card

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8													

		TURKEY POINT NUCLEAR UNIT 4	
		LUBE OIL FIRE PROTECTION	
DRAWING NUMBER		SYS	
PTN-M-97-052-004		REV	
SHEET 4		0	





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