FileJuicer

FOR CONTINUATION SEE DWG.# E-A-90

ELECTRIC CLOS. 'N'
FOR LAYOUT DETAIL SEE DRAWING Nº E-A-85.

CLOS 'C'
FOR LAYOUT DETAIL SEE DWG. Nº E-A-86.

ELECTRIC CLOS. 'S'
FOR LAYOUT DETAIL SEE DRAWING Nº E-A-85.

ELECTRIC CLOS. 'S'
ELECTRIC CLOS 'N' SAME EXCEPT OPPOSITE HAND FOR LAYOUT DETAIL SEE DWG Nº. E-A-85.

25TH FL.
24TH FL.
23RD FL.
22ND FL.
21ST FL.
20TH FL.
19TH FL.
18TH FL.
17TH FL.
16TH FL.
15TH FL.
14TH FL.
13TH FL.
12TH FL.
11TH FL.
10TH FL.
9TH FL.
8TH FL.
7TH FL.
6TH FL.
5TH FL.
4TH FL.
3RD FL.
2ND FL. (PLAZA)
1ST FL. (CONCOURSE)
SERVICE LEVEL
SUB-LEVEL 1
SUB-LEVEL 2
SUB-LEVEL 3
SUB-LEVEL 4
SUB-LEVEL 5

END BOX
LP 24N
LP 23N
LP 22N
LP 21N
LP 20N
LP 19N
LP 18N
LP 17N
LP 16N
LP 15N
LP 14N
LP 13N
LP 12N
LP 11N
LP 10N
LP 9N
RP 24N
RP 23N
RP 22N
RP 21N
RP 20N
RP 19N
RP 18N
RP 17N
RP 16N
RP 15N
RP 14N
RP 13N
RP 12N
RP 11N
RP 10N
RP 9N

4" SLEEVES (TYPICAL)

4-500 MCM & 1#2(GRD)-4"C. (TYPICAL FOR ALL UNLESS OTHERWISE NOTED)

400A. 3P. 250V SWITCH FUSED 400A. (TYPICAL FOR ALL UNLESS OTHERWISE NOTED)

4-500 MCM & 1#2(GRD)-4"C. (TYPICAL FOR ALL UNLESS OTHERWISE NOTED)

4-500 MCM & 1#2 (GRD)-4"C. WIREWAY (TYPICAL FOR ALL UNLESS OTHERWISE NOTED)

CABLE TAP BOX (TYPICAL FOR ALL)

1600A. 3Ø, 4W, 208/120V BUS DUCT
1600A. 3Ø, 3W, 480/277V BUS DUCT

500KVA. 3Ø, 60~VENT. DRY TYPE TRANSFORMER 480V.Δ PRIMARY 208/120V.Y SECONDARY

800A. 3P. 600V. UNFUSED DISC. SW.

F-SN7L-6

F-SN72-1

SUBSTATION "SS 7N"
FOR LAYOUT DETAIL SEE DWG. Nº E-A-75.

F-SN7L-7 F-SN72-8T F-SN72-4 4-3 1/2" EMPTY CONDUITS

F-SN7L-1 F-SN7L-8T

1 1/2" EMPTY CONDUIT

P.B.

F-125 PUMP CONTROLLER (F.B.O.)

5" EMPTY CONDUIT

250HP FIRE PUMP (F.B.O.)

4#6&1#8(GRD)-2"C.

3#10&1#12 (GRD)-3/4"C.

15KVA. 3Ø, 60~VENT. DRY TYPE TRANSF. 480V.-Δ PRIMARY 208/120V.-Y SECONDARY

(SEE NOTE #6)

MOTOR CONTROL CENTER "MN7L" (F.B.O.)
(SEE NOTE #2)

SUBSTATION SWITCHBOARD "SN7L" (SEE NOTE #3)

SUBSTATION SWITCHBOARD "SN7R" (SEE NOTE #3)

CONT. TERM STRIP CAB.

MEP 7TH FL.

4" EMPTY CONDUIT (THIS POSITION ONLY)

4-500MCM & 1#2 (GRD)-4"C

100A. 3P. 600V. FUSED 100A. DISC. SW. CABLE TAP BOX

500KVA. 3Ø, 60~ VENT. DRY TYPE TRANSFORMER 480V. Δ PRIMARY 208/120V. Y SECONDARY

F-SN72-2

SUBSTATION "SS 7S"
FOR LAYOUT DETAIL SEE DWG Nº E-A-74

F-SN72-8T

F-SN72-1

F-557L-6

F-557L-2

F-557L-7

F-557L-1

1 1/2" EMPTY CONDUIT

5" EMPTY CONDUIT

MOTOR CONTROL CENTER "MN7L-1" (F.B.O.)
(SEE NOTE #2)

SUBSTATION SWITCHBOARD "557L-1" (SEE NOTE #3)

SUBSTATION SWITCHBOARD "557R" (SEE NOTE #3)

MOTOR CONTROL CENTER "MN7R" (F.B.O.)
(SEE NOTE #2)

3#8&1#12 (GRD)-3/4"C.

4#6&1#8(GRD)-1 1/4"C.

15KVA. 3Ø, 60~VENT. DRY TYPE TRANSF. 480V.-Δ PRIMARY 208/120V.-Y SECONDARY

CONT. TERM STRIP CAB.

LP 7S
RP 8S

4" SLEEVES (TYPICAL)

4-#8(#6GRD)-1" C. (TYPICAL FOR ALL UNLESS OTHERWISE NOTED)

200A. 3P. 600V SWITCH FUSED 125 A. (TYPICAL FOR ALL UNLESS OTHERWISE NOTED)

200A. 3P. 250 V SWITCH FUSED 125 A. (TYPICAL FOR ALL UNLESS OTHERWISE NOTED).

4-#16 (#8GRD)- 1"C (TYPICAL FOR ALL UNLESS OTHERWISE NOTED).

4-500 MCM & 1#2(GRD)-4"C (TYPICAL FOR ALL UNLESS OTHERWISE NOTED)

400A. 3P. 250V SWITCH FUSED 400A. (TYPICAL FOR ALL UNLESS OTHERWISE NOTED)

4-500 MCM & 1#2 (GRD)-4"C WIREWAY (TYPICAL FOR ALL UNLESS OTHERWISE NOTED)

CABLE TAP BOX (TYPICAL FOR ALL)

ALTERNATE "4 BUS DUCT" DISTRIBUTION SYSTEM (TYPICAL)

225 KVA. 3Ø, 60~VENT. DRY TYPE TRANSFORMER 480V.Δ PRIMARY 208/120V.Y SECONDARY

400A. 3P. 600V. UNFUSED DISC. SW.

500KVA. 3Ø, 60~VENT. DRY TYPE TRANSFORMER 480V.Δ PRIMARY 208/120V.Y SECONDARY

800A. 3P. 600V. UNFUSED DISC. SW.

MEP 8TH FL.

F-ESB-S
F-ESB-10
F-ESB-11

F-ESB-12
F-ESB-13

2 SETS OF 3-250MCM & 1#6(GRD) IN 2-5"C.

2 SETS OF 4-350MCM & 1#4 (GRD) IN 2-5"C.

F-EPC7A-9

C.S.B. E.P.B.

C.S.B.

F-5N41R-10
F-5N41R-10

BANK "A" ELEVATORS

ELEV. DIST. PNL. "EL-A1R"
FOR LAYOUT DETAIL SEE DWG Nº E-A-100 (SEE NOTE #8)

SECT 'A' SECT 'B'

4-500MCM & 1#2(GRD)-4"C (TYPICAL FOR ALL UNLESS OTHERWISE NOTED)

400A. 3P. 600V SWITCH FUSED 400A. (TYPICAL FOR ALL UNLESS OTHERWISE NOTED)

4-500 MCM & 1#2 (GRD)-4"C WIREWAY (TYPICAL FOR ALL UNLESS OTHERWISE NOTED)

CABLE TAP BOX (TYPICAL FOR ALL)

1600A. 3Ø, 4W, 208/120V BUS DUCT
1600A. 3Ø, 3W, 480/277V BUS DUCT

F-557L-2

F-557L-6

F-557L-1

MEP 8TH FL.

F-557L-7

F-557L-1

1 1/2" EMPTY CONDUIT

5" EMPTY CONDUIT

MOTOR CONTROL CENTER "MN7L-1" (F.B.O.)
(SEE NOTE #2)

SUBSTATION SWITCHBOARD "557L-1" (SEE NOTE #3)

SUBSTATION SWITCHBOARD "557R" (SEE NOTE #3)

MOTOR CONTROL CENTER "MN7R" (F.B.O.)
(SEE NOTE #2)

3#8&1#12 (GRD)-3/4"C.

4#6&1#8(GRD)-1 1/4"C.

15KVA. 3Ø, 60~VENT. DRY TYPE TRANSF. 480V.-Δ PRIMARY 208/120V.-Y SECONDARY

CONT. TERM STRIP CAB.

LP 7S
RP 8S

4" SLEEVES (TYPICAL)

4-#8(#6GRD)-1" C. (TYPICAL FOR ALL UNLESS OTHERWISE NOTED)

200A. 3P. 600V SWITCH FUSED 125 A. (TYPICAL FOR ALL UNLESS OTHERWISE NOTED)

200A. 3P. 250 V SWITCH FUSED 125 A. (TYPICAL FOR ALL UNLESS OTHERWISE NOTED).

4-#16 (#8GRD)- 1"C (TYPICAL FOR ALL UNLESS OTHERWISE NOTED).

4-500 MCM & 1#2(GRD)-4"C (TYPICAL FOR ALL UNLESS OTHERWISE NOTED)

400A. 3P. 250V SWITCH FUSED 400A. (TYPICAL FOR ALL UNLESS OTHERWISE NOTED)

4-500 MCM & 1#2 (GRD)-4"C WIREWAY (TYPICAL FOR ALL UNLESS OTHERWISE NOTED)

CABLE TAP BOX (TYPICAL FOR ALL)

ALTERNATE "4 BUS DUCT" DISTRIBUTION SYSTEM (TYPICAL)

225 KVA. 3Ø, 60~VENT. DRY TYPE TRANSFORMER 480V.Δ PRIMARY 208/120V.Y SECONDARY

400A. 3P. 600V. UNFUSED DISC. SW.

500KVA. 3Ø, 60~VENT. DRY TYPE TRANSFORMER 480V.Δ PRIMARY 208/120V.Y SECONDARY

800A. 3P. 600V. UNFUSED DISC. SW.

MEP 8TH FL.

1600A. 3Ø, 4W, 208/120V BUS DUCT
1600A. 3Ø, 3W, 480/277V BUS DUCT

SUBSTATION "SS-PA"
FOR LAYOUT DETAILS SEE DWG. Nº E-A-72

F-SPAL-8T
F-SPAR-8T(N.I.C)
F-SPAR-7(N.I.C)
F-SPAL-6
F-SPAR-6
F-SPAL-7(N.I.C)

F-SPAR-1
F-SPAL-1 (N.I.C)
F-SPAR-5 (N.I.C)
F-SPAR-2
F-SPAL-5 (N.I.C)
F-SPAL-2 (N.I.C)

F-SPAL-3
F-SPAL-4 (N.I.C)

FROM TOWER "B" F-SPBC-8T

F-LCAL-3
F-LCAL-15
F-LCAL-16
F-LCAL-6

F-ESB-13

F-SPAR-8

4-500MCM & 1#2 (GRD)-4"C

100A. 3P. 250V. FUSED (100A) DISC. SW. (FOR UNDERSIDE OF BALCONY EVERG. LTG)

4#6&1#8(GRD)-2 1/2"C.

CABLE TAP BOX

F-SPAL-7 (N.I.C)
F-SPAL-2 (N.I.C)

F-SPBC8LA-2(N.I.C)

F-SPAL-8T

200HP FIRE PUMP (F.B.O.)

WATER PUMP CONTROL PANEL (F.B.O.)

SECT 'A' SECT 'B' SECT 'A' SECT 'B' SECT 'A' SECT 'B'

SUBSTATION SWITCHBOARD "SPAL" (SEE NOTE #3)

SUBSTATION SWITCHBOARD "SPAR" (SEE NOTE #3)

LOAD CENTER "LCAL"

FUTURE LOAD CENTER "LCAS"

SPBC 8LA

(SEE NOTE #5)

TRANSFER SWITCH "TS- SLA"

FIRE PUMP CONTROLLER (F.B.O.)

F-SPAL-7 (NORTH PROTECTION PAN RM.) N.I.C.

FUTURE AUTOMATIC TRANSFER SWITCH "ATS-SLRA" (N.I.C)

F-SPAR-8T2 TO "ESC-SLB" (IN TOWER "B" SUBSTATION RM.)

FUTURE AUTOMATIC TRANSFER SWITCH "ATS-SLLA" (N.I.C)

FUTURE ELEV. DIST. PNL. "EL-ASL" (N.I.C.)

FUTURE DISTRIBUTION PANEL FOR "SNOW MELTING & EXTERIOR LIGHTING (N.I.C.)

FUTURE DISTRIBUTION PANEL FOR "CONCOURSE TENANTS" (N.I.C.)

F-LCAL-5
F-LCAL-8
F-ESB-14

F-SPBC8LA-8

"ATG-SLA" (IN PUMP ROOM) SEE NOTE #5

F-SPAR-8 (#12)

750 KVA. 3Ø, 60~ VENT. DRY TYPE TRANSFORMER 480V. Δ PRIMARY 208/120V.Y SECONDARY

F-ESB-3
F-ESB-6
F-ESB-9
F-ESB-11
F-ESB-13
F-ESB-14

PULL & SPLICE BOX AT WEST WALL OF TOWER SEE DWG.# E-A-1.

F-SPAR-1

MOTOR CONTROL CENTER "MN5S" (F.B.O.)
(SEE NOTE #2)

C.S.B. & E.P.B. FULL BOX

F-SPAL-3

F-ESB-11
F-ESB-10
F-ESB-6

F-LCAL-9
F-LCAL-11
F-LCAL-12

F-ESB-3
F-ESB-18
F-ESB-14

600A. 3P. 250V. UNFUSED DISC. SW.

100A. 3P. 250V. UNFUSED DISC. SW.

SERVICE LEVEL
SUB-LEVEL 1
SUB-LEVEL 2
SUB-LEVEL 3
SUB-LEVEL 4
SUB-LEVEL 5

11'-0"

LPC 5LA
RPC 5LA
LPC 5LA-1
RPC 5LA-1
LPC 5LA-2
RPC 5LA-2
LPC 5LA-3
RPC 5LA-3
LPC 5LA-4
RPC 5LA-4
LPC 5LA-5
RPC 5LA-5
LPC 6A
RPC 6A
LPC 5A
RPC 5A
LPC 4A
RPC 4A
LPC 3A
RPC 3A
LPC 2A
RPC 2A
LPC 1A
RPC 1A

SPBC 7A
SPBC 12A
SPBC 17A
SPBC 11A
SPBC 16A
SPBC 4A
SPBC 1A

C.S.B.

NOTES

1. FOR EMERGENCY POWER CENTER LAYOUT DETAILS SEE DWG.# E-A-99
2. FOR MOTOR CONTROL CENTER SCHEDULES SEE DWG.# E-A-104 THRU E-A-106.
3. FOR LIGHTING AND/OR RECEPTACLE PANEL SCHEDULES SEE DWG.# E-A-109 - E-A-116.
4. FOR EMERGENCY PANEL SCHEDULES SEE DWG.# E-A-118.
5. FOR AUTOMATIC TRANSFER SWITCH SCHEDULE SEE DWG.# E-A-99.
6. ALL PULL BOXES ARE NOT SHOWN FOR LOCATION OF ADDITIONAL PULL BOXES SEE 1/8" SCALE FLOOR PLANS DWG.# E-A-2 THRU E-A-19
7. FOR TEMPORARY AND PERMANENT FACILITIES REQUIRED FOR CONSTRUCTION POWER SEE TEMPORARY LIGHT & POWER RISER DIAGRAMS AND SERVICE DISTRIBUTION ON DWG.# E-A-132 THRU E-A-135, E-A-16 & E-A-2.
8. FOR ELEVATOR DISTRIBUTION PANEL SCHEDULE SEE DWG.# E-A-100.
9. FOR FIRE COMMUNICATION SYSTEMS RISER DIAGRAM SEE DWG.# E-A-98.
10. FOR EMERGENCY CONTROL RISER DIAGRAM SEE DWG.# E-A-11.
11. FOR ELECTRIC CLOSET DETAIL SEE DWG.# E-A-83 THRU E-A-86.
12. FOR EMERGENCY SINGLE LINE DIAGRAM SEE DWG. E-A-13.
13. FOR SUBSTATION SWITCHBOARD SCHEDULES SEE DWG.# E-A-72, E-A-73 & E-A-76.
14. FOR FDNS. EMANATING FROM WATER SUPPLY PUMP CONTROL PANEL SEE DWG.# E-A-7.
15. FOR LOAD CENTER SCHEDULE SEE DWG.# E-A-72.
16. ALL CENTER ELECTRIC CLOSETS (CLOSETS 'C') WILL CONTAIN 4-4" THROUGH THE WALL SLEEVES (SLUSHED & CAPPED BOTH ENDS) INTO HUNG CEILING. ⚠1

DRAWING Nº E-A-87 AND E-A-88 NOT PART OF THIS CONTRACT.

CONTRACT BID DRAWING date OCT. 16, 1967

⚠1 10-18-67
NO. DATE SUB. NO. BY — REVISIONS

NO. DATE SUB. NO. BY — REVISIONS

APPROVED

CHIEF, PLANNING DIVISION
DATE

THE WORLD TRADE CENTER
THE PORT OF NEW YORK AUTHORITY

MINORU YAMASAKI & ASSOCIATES
MINORU YAMASAKI, ARCHITECT

WORTHINGTON, SKILLING, HELLE & JACKSON
STRUCTURAL ENGINEERS

JOSEPH R. LORING & ASSOCIATES
ELECTRICAL ENGINEERS

EMERY ROTH & SONS
RICHARD ROTH, ARCHITECT

JAROS, BAUM & BOLLES
MECHANICAL ENGINEERS

THE PORT OF NEW YORK AUTHORITY
PAVING, UTILITIES, FOUNDATIONS

TITLE
LIGHT AND POWER RISER DIAGRAM
SUB-LEVEL NO 5-24TH FLOORS

DRAWN	R.F.H.	CHECKED	J.R.L.
SCALE	NONE	DATE	OCT. 16, 1967
PROJECT NUMBER	---	SHEET 76	OF 114
DRAWING NUMBER	E-A-89		