






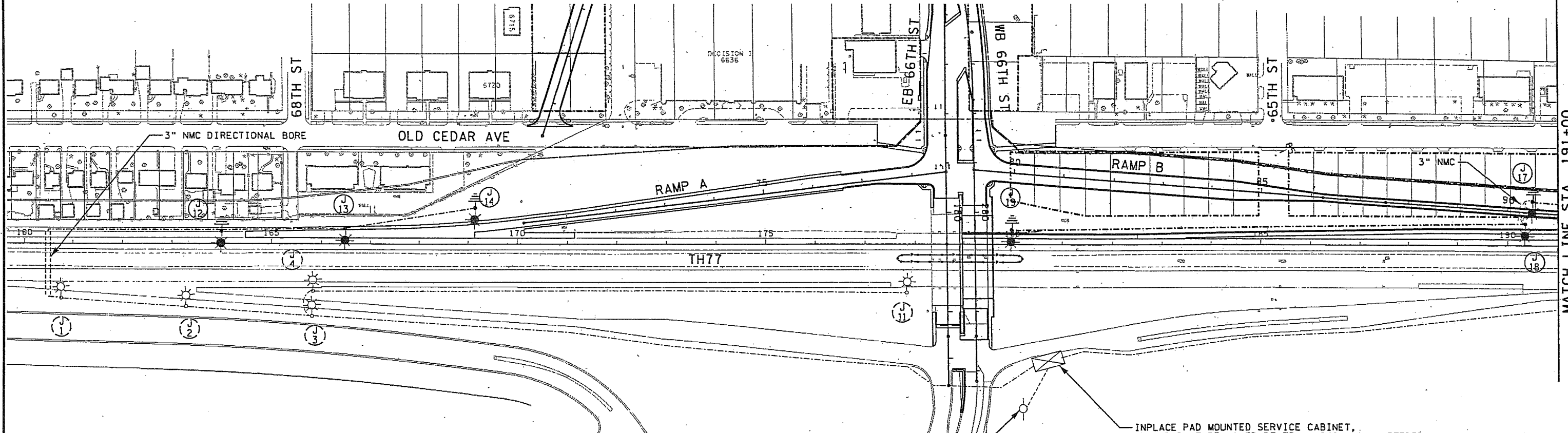
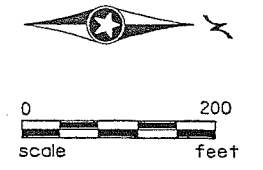
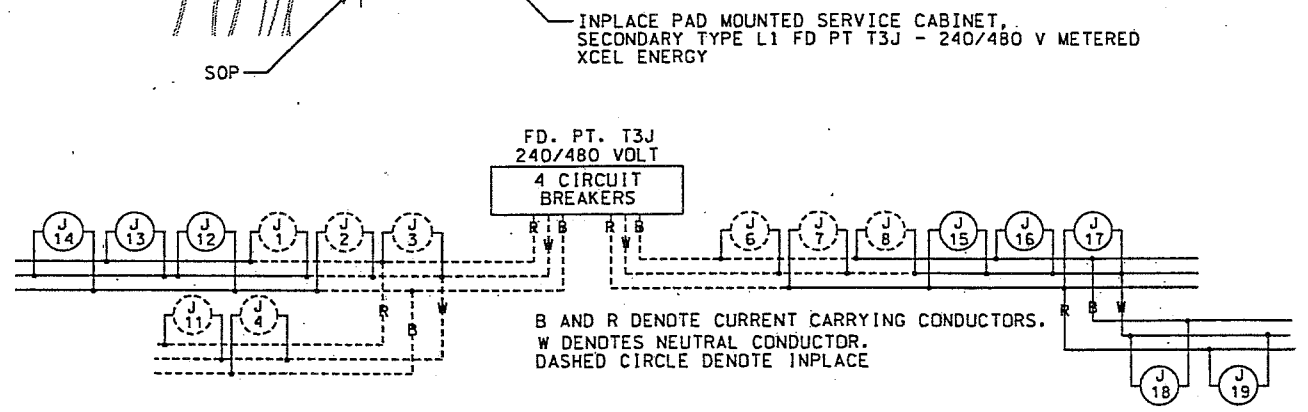


**LEGEND**

-  INPLACE PAD MOUNTED SERVICE CABINET
-  250 WATT HPS LIGHTING UNIT WITH FLAT GLASS LENS
-  DIRECT BURIED POWER CABLE 4 CONDUCTOR  
NO. 4 AWG ARMORED CABLE SPEC NO. 3815
-  PERMANENT GROUND ROD (25 OHMS OR LESS)
-  INPLACE HPS LIGHTING UNIT (WATTAGE SPECIFIED  
IN NOTES)
-  INPLACE DIRECT BURIED POWER CABLE 3 CONDUCTOR  
NO. 4 AWG ARMORED CABLE SPEC NO. 3815
-  3" NON-METALLIC CONDUIT (DIRECTIONAL BORE)



LIGHTING STANDARDS AND BASES											
NO.	STATION	LT.	RT.	LOCATION	TYPE	NO.	STATION	LT.	RT.	LOCATION	TYPE
J1	INP. 160+75		-	NB TH 77	12-40	N53	204+40		-	SB TH 77	12-40
J2	INP. 163+25		-	NB TH 77	12-40	N54	202+15		-	SB TH 77	12-40
J3	INP. 65+75		-	RAMP D	9-40	N55	199+90		-	SB TH 77	12-40
J4	INP. 65+75		-	RAMP D	12-40	N56	197+65		-	SB TH 77	12-40
J11	INP. 177+70		-	NB TH 77	10-40	J15	195+25		-	SB TH 77	12-40
J6	INP. 191+60		-	RAMP C	12-40	J16	192+75		-	SB TH 77	12-40
J7	INP. 194+10		-	RAMP C	12-40	J17	90+50		-	RAMP B	9-40
J8	INP. 196+60		-	NB TH 77	12-40	J18	90+35		-	RAMP B	12-40
N49	INP. 213+35		-	SB TH 77	10-40	J19	180+00		-	SB TH 77	12-40
N50	211+12		-	SB TH 77	12-40	J12	164+00		-	SB TH 77	12-40
N51	208+90		-	SB TH 77	12-40	J13	166+50		-	SB TH 77	12-40
N52	206+65		-	SB TH 77	12-40	J14	169+15		-	SB TH 77	12-40

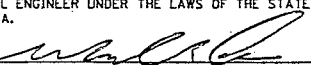



INPLACE PAD MOUNTED SERVICE CABINET,  
SECONDARY TYPE L1 FD PT T3J - 240/480 V METERED  
XCEL ENERGY

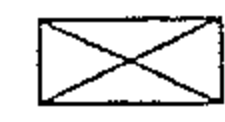



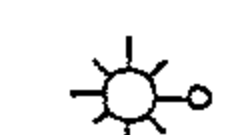

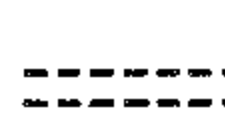
FD. PT. T3J  
240/480 VOLT  
4 CIRCUIT  
BREAKERS

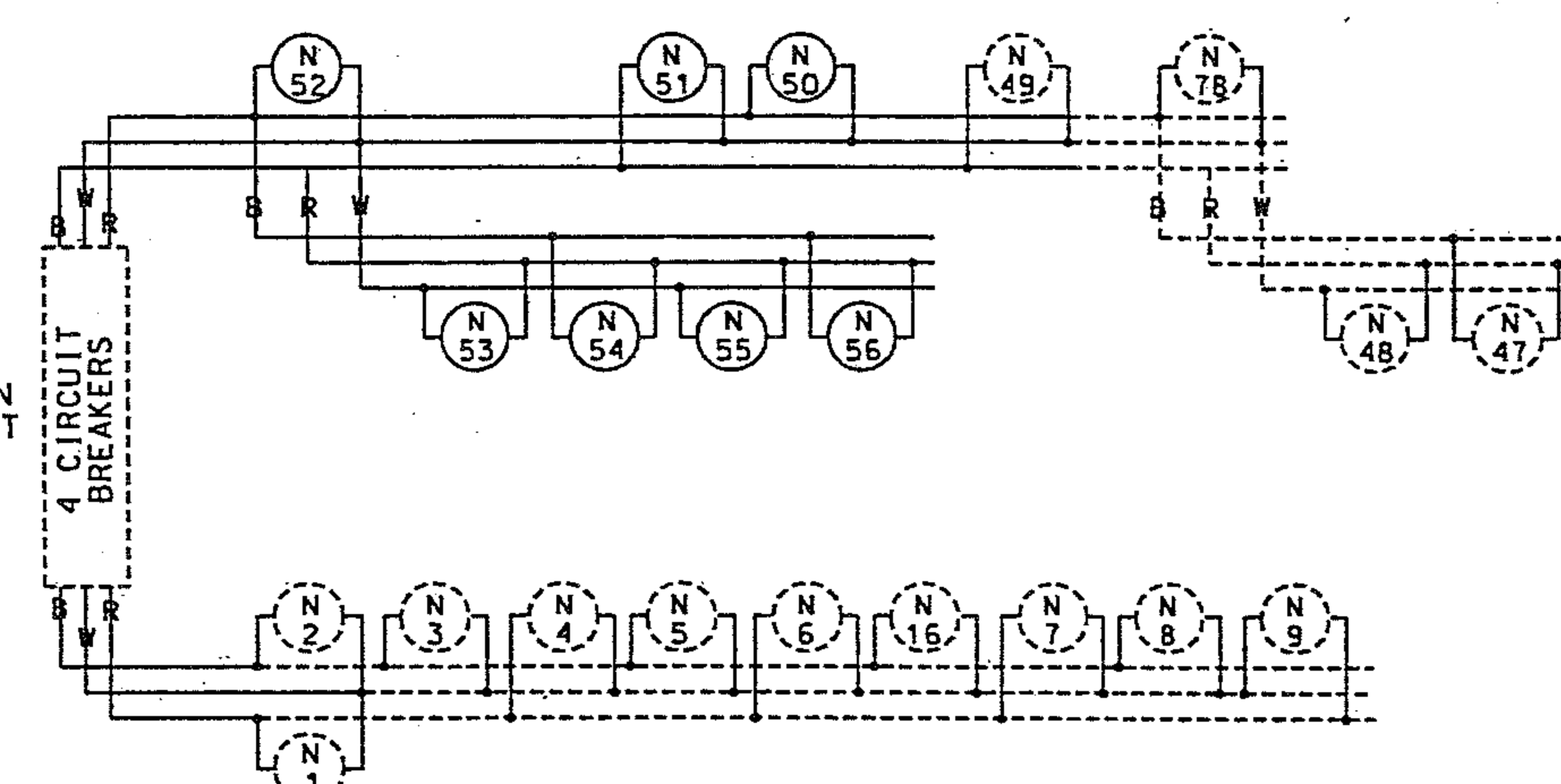
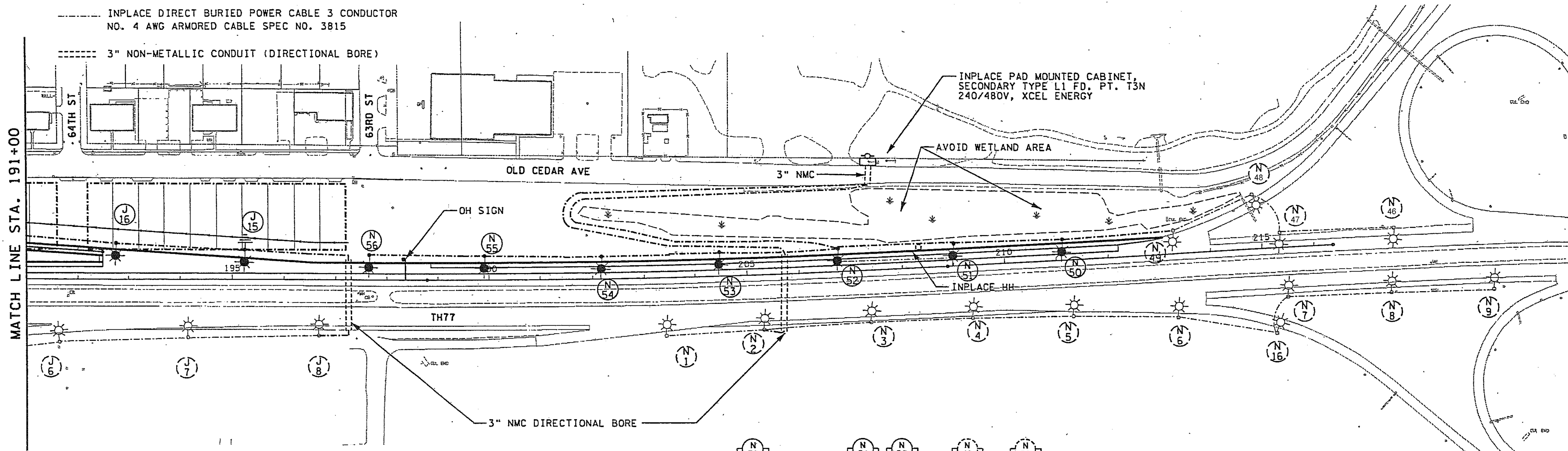
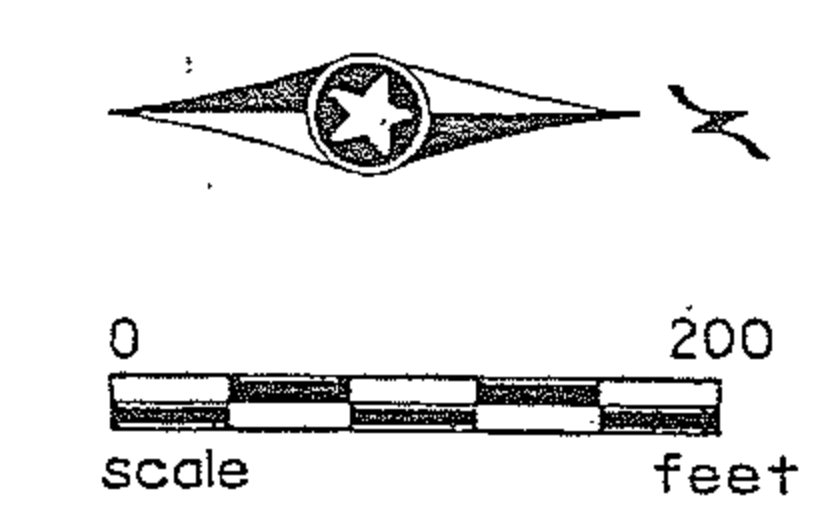
B AND R DENOTE CURRENT CARRYING CONDUCTORS.  
W DENOTES NEUTRAL CONDUCTOR.  
DASHED CIRCLE DENOTE INPLACE

02/10/2005 12:29:24 PM \\s071n09\projects\33894\33894069\lighting\plan sheets\ck33894069\_114.dgn

<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>NO</th> <th>DATE</th> <th>BY</th> <th>CKD</th> <th>APPR</th> <th>REVISION</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>	NO	DATE	BY	CKD	APPR	REVISION																			DRAWN BY JAS  DESIGNED BY TWS  CHECKED BY ASH/TWM	PROJECT NUMBERS  I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  SIGNATURE:  PRINTED NAME: MICHAEL R. ANDERSON DATE: DECEMBER 1 2004 REG. NO. 42828	 <p style="font-size: small;">Thrasher Square 700 Third Street South Minneapolis, MN 55415 612.370.0700 Tel 612.370.1378 Fax</p>	MAC CONTRACT NO. 106-7-030 S.P. NO. 2758-62 (T.H. 77)  66TH STREET - PHASE 2 LIGHTING PROPOSED RAMP A, RAMP B, AND TH77	SHEET 171 OF 235
NO	DATE	BY	CKD	APPR	REVISION																								



**LEGEND**

-  INPLACE PAD MOUNTED SERVICE CABINET
-  250 WATT HPS LIGHTING UNIT WITH FLAT GLASS LENS
-  DIRECT BURIED POWER CABLE 4 CONDUCTOR  
NO. 4 AWG ARMORED CABLE SPEC NO. 3815
-  PERMANENT GROUND ROD (25 OHMS OR LESS)
-  INPLACE HPS LIGHTING UNIT (WATTAGE SPECIFIED  
IN NOTES)
-  INPLACE DIRECT BURIED POWER CABLE 3 CONDUCTOR  
NO. 4 AWG ARMORED CABLE SPEC NO. 3815
-  3" NON-METALLIC CONDUIT (DIRECTIONAL BORE)



B AND R DENOTE CURRENT CARRYING CONDUCTORS.  
W DENOTES NEUTRAL CONDUCTOR.  
DASHED CIRCLE DENOTE INPLACE

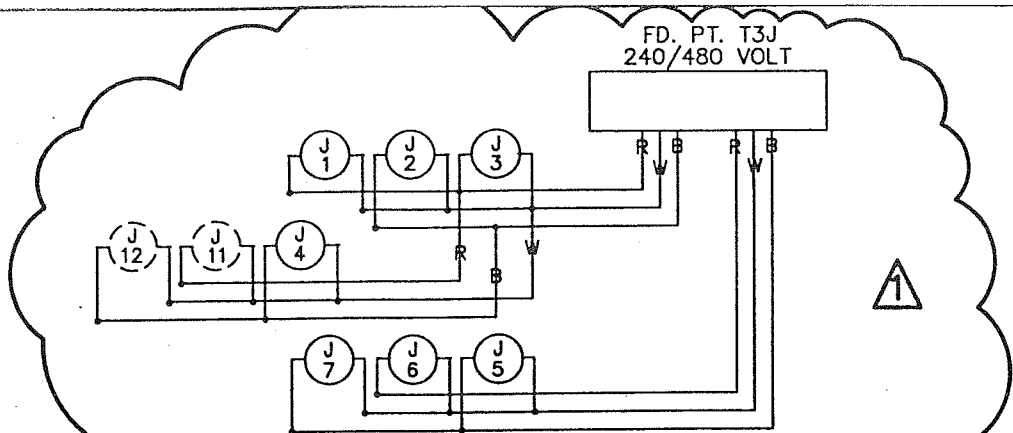
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NO	DATE	BY	CKD	APPR	REVISION	DRAWN BY JAS DESIGNED BY TWS CHECKED BY ASH/TWM	PROJECT NUMBERS	I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME, OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  SIGNATURE:  PRINTED NAME: MICHAEL R. ANDERSON DATE: DECEMBER 1 20 04 REG. NO. 42828		Thrasher Square 700 Third Street South Minneapolis, MN 55415 612.370.0700 Tel 612.370.1378 Fax	MAC CONTRACT NO. 106-7-030 S.P. NO. 2758-62 (T.H. 77)  66TH STREET - PHASE 2 LIGHTING PROPOSED TH 77	SHEET 172 OF 235
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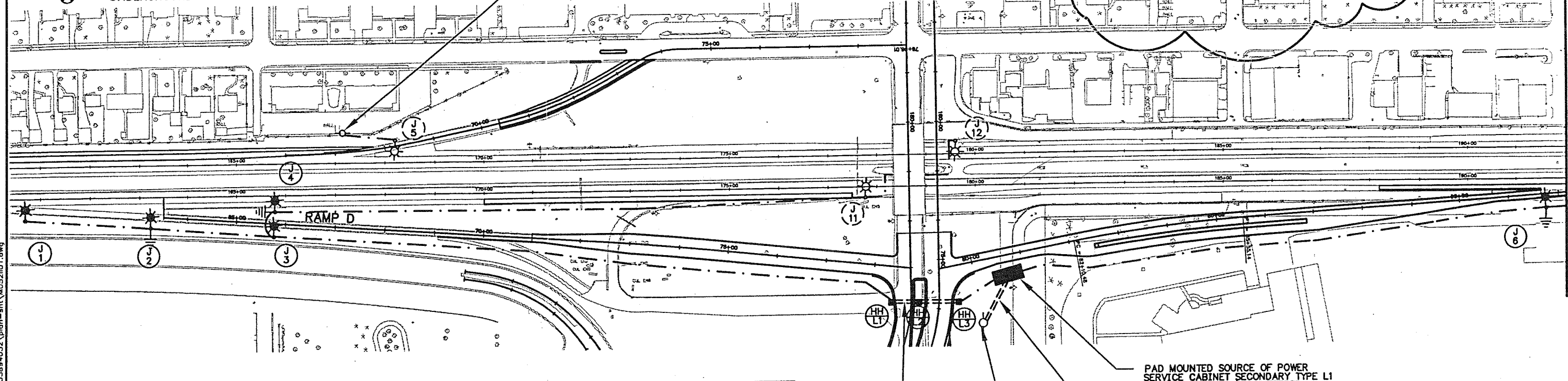
**LEGEND**

- PAD MOUNTED SOURCE OF POWER (240/480V.)
- F & I 3" RIGID STEEL CONDUIT
- HIGH PRESSURE SODIUM LIGHTING UNIT (WATTAGE SPECIFIED AT LIGHTING UNIT) WITH FLAT GLASS LENSE
- DIRECT BURIED POWER CABLE 3 CONDUCTOR NO. 4 AWG ARMORED CABLE SPEC NO. 3815
- PERMANENT GROUND ROD (25 OHMS OR LESS)
- INPLACE HIGH PRESSURE SODIUM LIGHTING UNIT (WATTAGE SPECIFIED AT LIGHTING UNIT)
- INSTALL SALVAGED LIGHTING UNIT ON NEW DESIGN E FOUNDATION (WATTAGE SPECIFIED AT LIGHTING UNIT)
- UNDERGROUND CABLE SPLICE

INPLACE POLE MOUNTED CABINET, SECONDARY TYPE L1 120/240 V - FD. PT. T3J (INPLACE UNTIL PERMANENT RAMP CONSTRUCTION)



B AND R DENOTE CURRENT CARRYING CONDUCTORS. W DENOTES NEUTRAL CONDUCTOR. DASHED CIRCLE DENOTE INPLACE



**LIGHTING STANDARDS AND BASES**

NO.	STATION	LT.	RT.	LOCATION	TYPE	NO.	STATION	LT.	RT.	LOCATION	TYPE
J1	160+75		-	NB HWY 77	12-40	N5	211+35		-	NB HWY 77	10-40
J2	163+25		-	NB HWY 77	12-40	N6	213+35		-	NB HWY 77	12-40
J3	65+75		-	RAMP D	9-40	N16	1+85		-	RAMP C-TH 62	6-40
J4	65+75		-	RAMP D	12-40	N7	215+50		-	NB HWY 77	10-40
J5	INP. 168+20		-	SB TH 77	12-40	N8	217+50		-	NB HWY 77	10-40
J11	INP. 177+70		-	NB HWY 77	10-40	N9	219+50		-	NB HWY 77	10-40
J12	INP. 180+20		-	SB HWY 77	12-40						
J6	191+60		-	RAMP C	12-40						
J7	194+10		-	RAMP C	12-40						
J8	196+60		-	RAMP C	12-40						
N1	203+45		-	FR RD CONN	10-40						
(1) N2	205+35		-	FR RD CONN	10-40						
(1) N3	207+35		-	NB HWY 77	10-40						
(1) N4	209+35		-	NB HWY 77	10-40						

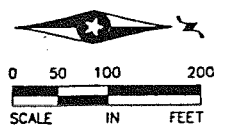
(1) INSTALL SALVAGED LIGHTING UNIT ON NEW DESIGN E FOUNDATION

- NOTE:**
- INSTALL LIGHTING HANDHOLES L1, L2 AND L3 ADJACENT TO SIGNAL HANDHOLES.
  - ALL LIGHTING UNITS ON THIS SHEET SHALL CONTAIN 250 WATT HIGH PRESSURE SODIUM LUMINAIRES

PAD MOUNTED SOURCE OF POWER SERVICE CABINET SECONDARY TYPE L1 FD PT T3J - 240/480 METERED NORTHERN STATES POWER EQUIPMENT PAD B REQUIRED

2" RSC 1-3/C #4 (ARMORED CABLE)

2" RSC 3-1/C #2 TO POLE MOUNTED TRANSFORMER



PLOT DATE: Jun 15, 2000 2:17pm DISK FILE NAME: (14.01h (Hardware Lock)) R:\33894\33894052\plan-sh\M052101.dwg

REV. NO.	BY	DATE	REVISIONS DESCRIPTION
1	TWS	06/15/00	ADD1: REVISED WIRING DIAGRAM

DESIGN FILE: 33894-052  
 DRAWN BY: JAS  
 DESIGN BY: TWS  
 CHECKED BY: ASH  
 DWG NAME: M052101  
 PLOT DATE:

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE STATE OF MINNESOTA STATUTES SECTION 326.02 TO 326.16.  
  
 DATE: 06/15/00 MINN. REG. NO. 25846

**DCM GROUP**  
**BRW**  
 A DAMES & MOORE GROUP COMPANY  
 700 THIRDS STREET SOUTH  
 MINNEAPOLIS, MN 55415  
 (612)370-0700 (TEL)  
 (612)370-1378 (FAX)

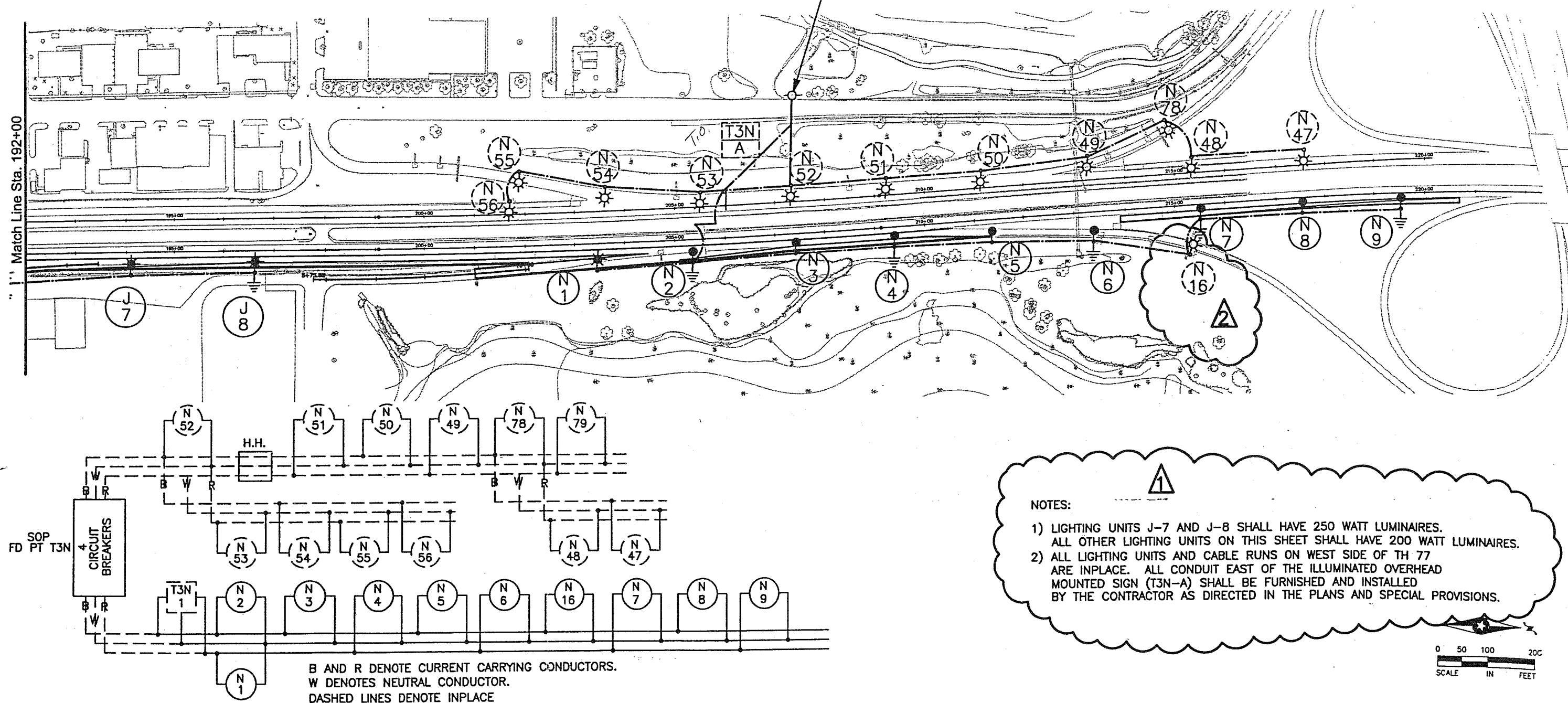


**MINNEAPOLIS-SAINT PAUL INTERNATIONAL AIRPORT**  
**66TH STREET INTERCHANGE PHASE 1:**  
**NORTH-SOUTH RUNWAY PROJECT**  
 LIGHTING PLAN  
 MAC CONTRACT NO. 106-07-029 S.P. 2758-62

SHEET NO. 98  
 154

223480R  
 W/CBBOX  
 06/15/00  
 30 2:17pm DISK FILE NAME: (14.01h (Hardware Lock)) R:\33894\33894052\plan-sh\1405 .Jwg  
 PLOT DATE: Jun 1

INPLACE POLE MOUNTED  
 CABINET, SECONDARY TYPE L1  
 FD. PT. T3N



**NOTES:**

- 1) LIGHTING UNITS J-7 AND J-8 SHALL HAVE 250 WATT LUMINAIRES. ALL OTHER LIGHTING UNITS ON THIS SHEET SHALL HAVE 200 WATT LUMINAIRES.
- 2) ALL LIGHTING UNITS AND CABLE RUNS ON WEST SIDE OF TH 77 ARE INPLACE. ALL CONDUIT EAST OF THE ILLUMINATED OVERHEAD MOUNTED SIGN (T3N-A) SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR AS DIRECTED IN THE PLANS AND SPECIAL PROVISIONS.

B AND R DENOTE CURRENT CARRYING CONDUCTORS.  
 W DENOTES NEUTRAL CONDUCTOR.  
 DASHED LINES DENOTE INPLACE

REV. NO.	BY	DATE	REVISIONS DESCRIPTION
1	TWS	06/15/00	ADD1: REVISED NOTE 1 TO MATCH PLANS
2	TWS	06/15/00	ADD1: LIGHTING UNIT N-16 IS TO REMAIN INPLACE

DESIGN FILE:  
 33894-052

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE STATE OF MINNESOTA STATUTES SECTION 326.02 TO 326.16.

DATE: 06/15/00 MINN. REG. NO. 25846

**DCM GROUP** **BRW**  
 A DAMES & MOORE GROUP COMPANY

THRESHER SQUARE  
 700 THIRD STREET SOUTH  
 MINNEAPOLIS, MN 55415  
 (612)370-0700 (TEL)  
 (612)370-1378 (FAX)



**MINNEAPOLIS-SAINT PAUL INTERNATIONAL AIRPORT**  
**66TH STREET INTERCHANGE PHASE 1:**  
**NORTH-SOUTH RUNWAY PROJECT**  
 LIGHTING PLAN

MAC CONTRACT NO. 106-07-029 S.P. 2758-62

SHEET NO.  
 99  
 154