



## City of Cleveland

Justin M. Bibb, Mayor

### Department of Finance

Division of Purchases & Supplies  
601 Lakeside Avenue, Room 128  
Cleveland, Ohio 44114-1080  
216/664-2620 • Fax: 216/664-2177  
www.cleveland-oh.gov

December 5, 2023

### ADDENDUM 1

**BID TITLE: File No. 175-23 L & M Necessary to Repair & Maintain Decorative & Special Bridge Lighting 2023**

**BID DUE: Thursday, December 14, 2023 at 12 o'clock noon (Eastern Time)**

#### **Attention Bidders:**

We have been requested to issue the addendum for the following:

Please ensure that a copy of this addendum is included and returned with the bid specifications furnished to you by this office, as it will have the same force and effect as if it were part of the specifications originally issued.

1. Extend the bid opening date from Thursday, December 7, 2023 to Thursday, December 14, 2023.
2. Provide to potential bidders, revised Bid – Schedule of Items pages, revised Sections C and D of the bid specifications, and associated drawings for this bid project.

If you have any questions regarding the attached, please contact Lisha Strickland at 216-664-2444, extension 76119. Thank you for your prompt attention and assistance in this matter.

\_\_\_\_\_  
Signature of Potential Bidder & Name of Company

\_\_\_\_\_  
Today's Date

Thank you,

Donia Patterson, Assistant Administrator  
Purchases & Supplies

CC:

Attachments

Decorative and Special Bridge Lighting  
Add. #1, Page 2.

This addendum serves to provide all potential bidders with revised Schedule of Item pages, revised Section C – Supplemental General Conditions pages & revised Section D – Detailed Specifications pages, and Exhibits A and B drawings.

The pages in this addendum will replace those pages received in the original bid package. The failure of bidders to complete and submit the revised Schedule of Items pages, and all of the other revised pages included in this addendum with their bid response, will result in the disqualification of their bid.

If you have any questions regarding the attached, please contact the Division of Purchases & Supplies at 216-664-2620. Thank you.

Attachments

**BID — SCHEDULE OF ITEMS**

City of Cleveland

Division of Purchases And Supplies

128 City Hall

Cleveland, Ohio 44114

**BIDDER MUST COMPLETE  
AND SIGN BELOW**

NAME OF FIRM

TITLE OF BID

**Labor and Materials Necessary to Repair and Maintain Decorative and Special Lighting on  
Bridges and Wyland Whale Mural Park 2023**

STREET ADDRESS

ORDINANCE NO.

Ord. No. 434-2023

PASSED

May 22, 2023

SIGNED

May 25, 2023

CITY STATE ZIP CODE

DEPARTMENT

PUBLIC UTILITIES

DIVISION

CLEVELAND PUBLIC POWER

AUTHORIZED SIGNATURE

CITY RECORD ADVERTISEMENT DATES

November 1, 2023 and November 8, 2023

STANDARD CONTRACT BID

X REQUIREMENT CONTRACT BID

DATE

BUYER: Division of Purchases &amp; Supplies 216-664-2620

BID OPENING: :

Thursday, 12-7-23

12:00 O'CLOCK NOON

OFFICIAL TIME

**For light fixture tag# descriptions see specifications in Exhibit A. For light fixture locations and quantities see Specification  
drawings in Exhibit B. Unit price is to include labor & material.**

DESCRIPTION

QUANTITY

UNIT PRICE

EXTENSION

**ITEM NO. 1: Willow Street Bridge****A. Light Fixture Tag #A-101(qty. at bridge 48):**

1A-1. Replacement of lamp

10

1A-2. Replacement of lens – clear

2

1A-3. Replacement of lens – color

2

1A-4. Replacement of ballasts

2

1A-5. Cleaning of exterior lens

100

1A-6. Cleaning of Reflectors

10

**B. Light Fixture Tag #H-100 (qty. at bridge 22):**

1B-1. Replacement of lamp

6

1B-2. Replacement of lens

2

1B-3. Replacement of ballasts

2

1B-4. Cleaning of exterior lens

44

1B-5. Cleaning of Reflectors

6

**C. Light Fixture Tag #H-101 (qty. at bridge 4):**

1C-1. Replacement of lamp

2

1C-2. Replacement of lens

2

1C-3. Replacement of ballasts

2

1C-4. Cleaning of exterior lens

8

1C-5. Cleaning of Reflectors

2

**D. Light Fixture Tag #H-102 (qty. at bridge 16):**

1D-1. Replacement of lamp

4

1D-2. Replacement of lens

2

1D-3. Replacement of ballasts

2

1D-4. Cleaning of exterior lens

32

1D-5. Cleaning of Reflectors

4

**E. Light Fixture Tag #H-103 (qty. at bridge 8):**

1E-1. Replacement of lamp

2

1E-2. Replacement of lens

2

1E-3. Replacement of ballasts

2

1E-4. Cleaning of exterior lens

16

1E-5. Cleaning of Reflectors

2

ALL QUANTITIES ARE APPROXIMATE. A CONTRACT, IF ANY, SHALL BE FOR A PERIOD OF TWO  
(2) YEARSDELIVERY  
(Days)

PAYMENT DISCOUNT

ALL OF THIS BOUND INFORMATION MUST BE KEPT INTACT AND TOGETHER WITH ANY  
ADDENDA ISSUED, MUST BE RETURNED WITH THE BID. OTHERWISE, THE BID MAY BE  
CONSIDERED INFORMAL

% Days

FOR PURCHASING USE ONLY

<b>BID — SCHEDULE OF ITEMS</b> <b>City of Cleveland</b> <b>Division of Purchases And Supplies</b> <b>128 City Hall</b> <b>Cleveland, Ohio 44114</b>			<b>BIDDER MUST COMPLETE &amp; SIGN BELOW</b> AUTHORIZED SIGNATURE  DATE	
TITLE OF BID <b>Labor and Materials Necessary to Repair and Maintain Decorative and Special Lighting on Bridges and Wyland Whale Mural Park 2023</b>				
DESCRIPTION	QUANTITY	UNIT PRICE	EXTENSION	
<b>ITEM NO. 1: Willow Street Bridge (Cont'd)</b>				
<b>F. Light Fixture Tag #H-104 (qty. at bridge 3):</b>				
1F-1. Replacement of lamp	2			
1F-2. Replacement of lens	2			
1F-3. Replacement of ballasts	2			
1F-4. Cleaning of exterior lens	6			
1F-5. Cleaning of Reflectors	2			
<b>G. Light Fixture Tag #H-105 (qty. at bridge 4):</b>				
1G-1. Replacement of lamp	2			
1G-2. Replacement of lens	2			
1G-3. Replacement of ballasts	2			
1G-4. Cleaning of exterior lens	8			
1G-5. Cleaning of Reflectors	2			
<b>H. Light Fixture Tag #H-106 (qty. at bridge 8):</b>				
1H-1. Replacement of lamp	2			
1H-2. Replacement of lens	2			
1H-3. Replacement of ballasts	2			
1H-4. Cleaning of exterior lens	16			
1H-5. Cleaning of Reflectors	2			
<b>I. Light Fixture Tag #H-107 (qty. at bridge 8):</b>				
1I-1. Replacement of lamp	2			
1I-2. Replacement of lens	2			
1I-3. Replacement of ballasts	2			
1I-4. Cleaning of exterior lens	16			
1I-5. Cleaning of Reflectors	2			
<b>J. Light Fixture Tag #H-107a (qty at bridge 4):</b>				
1J-1. Replacement of lamp	2			
1J-2. Replacement of lens	2			
1J-3. Replacement of ballasts	2			
1J-4. Cleaning of exterior lens	8			
1J-5. Cleaning of Reflectors	2			
<b>ITEM NO. 2: Main Avenue Bridge</b>				
<b>A. Light Fixture Tag #H-100 (qty. at bridge 40):</b>				
2A-1. Replacement of lamp	10			
2A-2. Replacement of lens	2			
2A-3. Replacement of ballasts	2			
2A-4. Cleaning of exterior lens	80			
2A-5. Cleaning of Reflectors	10			
<b>B. Light Fixture Tag #H-101 (qty. at bridge 12):</b>				
2B-1. Replacement of lamp	2			
2B-2. Replacement of lens	2			
2B-3. Replacement of ballasts	2			
2B-4. Cleaning of exterior lens	24			
2B-5. Cleaning of Reflectors	2			
ALL QUANTITIES ARE APPROXIMATE. A CONTRACT, IF ANY, SHALL BE FOR A PERIOD OF TWO (2) YEARS		DELIVERY (Days)	PAYMENT DISCOUNT	
ALL OF THIS BOUND INFORMATION MUST BE KEPT INTACT AND TOGETHER WITH ANY ADDENDA ISSUED, MUST BE RETURNED WITH THE BID. OTHERWISE, THE BID MAY BE CONSIDERED INFORMAL			% Days	
FOR PURCHASING USE ONLY				

<b>BID — SCHEDULE OF ITEMS</b> <b>City of Cleveland</b> <b>Division of Purchases And Supplies</b> <b>128 City Hall</b> <b>Cleveland, Ohio 44114</b>			<b>BIDDER MUST COMPLETE &amp; SIGN BELOW</b> AUTHORIZED SIGNATURE  DATE	
TITLE OF BID <b>Labor and Materials Necessary to Repair and Maintain Decorative and Special Lighting on Bridges and Wyland Whale Mural Park 2023</b>				
DESCRIPTION	QUANTITY	UNIT PRICE	EXTENSION	
<b>ITEM NO. 3: Center Street Bridge</b>				
<b>A. Light Fixture Tag #H-100 (qty. at bridge 16):</b>				
3A-1. Replacement of lamp	4			
3A-2. Replacement of lens	2			
3A-3. Replacement of ballasts	2			
3A-4. Cleaning of exterior lens	32			
3A-5. Cleaning of Reflectors	4			
<b>B. Light Fixture Tag #H-101 (qty at bridge 24):</b>				
3B-1. Replacement of lamp	6			
3B-2. Replacement of lens	2			
3B-3. Replacement of ballasts	2			
3B-4. Cleaning of exterior lens	48			
3B-5. Cleaning of Reflectors	6			
<b>ITEM NO. 4: Bascule #1 Bridge</b>				
<b>A. Light Fixture Tag #A-100 (qty. at bridge 11):</b>				
4A-1. Replacement of lamp	2			
4A-2. Replacement of lens – clear	2			
4A-3. Replacement of lens – color	2			
4A-4. Replacement of ballasts	2			
4A-5. Cleaning of exterior lens	12			
4A-6. Cleaning of Reflectors	2			
<b>B. Light Fixture Tag #A-101 (qty. at bridge 6):</b>				
4B-1. Replacement of lamp	2			
4B-2. Replacement of lens – clear	2			
4B-3. Replacement of lens – color	2			
4B-4. Replacement of ballasts	2			
4B-5. Cleaning of exterior lens	6			
4B-6. Cleaning of Reflectors	2			
<b>C. Light Fixture Tag #A-102 (qty. at bridge 5):</b>				
4C-1. Replacement of lamp	2			
4C-2. Replacement of lens – clear	2			
4C-3. Replacement of lens – color	2			
4C-4. Replacement of ballasts	2			
4C-5. Cleaning of exterior lens	6			
4C-6. Cleaning of Reflectors	2			
<b>D. Light Fixture Tag #A-102a (qty. at bridge 3)</b>				
4D-1. Replacement of lamp	2			
4D-2. Replacement of lens – clear	2			
4D-3. Replacement of lens – color	2			
4D-4. Replacement of ballasts	2			
4D-5. Cleaning of exterior lens	4			
4D-6. Cleaning of Reflectors	2			
ALL QUANTITIES ARE APPROXIMATE. A CONTRACT, IF ANY, SHALL BE FOR A PERIOD OF TWO (2) YEARS		DELIVERY (Days)	PAYMENT DISCOUNT	
ALL OF THIS BOUND INFORMATION MUST BE KEPT INTACT AND TOGETHER WITH ANY ADDENDA ISSUED, MUST BE RETURNED WITH THE BID. OTHERWISE, THE BID MAY BE CONSIDERED INFORMAL			% Days	
		FOR PURCHASING USE ONLY		

<b>BID — SCHEDULE OF ITEMS</b> <b>City of Cleveland</b> <b>Division of Purchases And Supplies</b> <b>128 City Hall</b> <b>Cleveland, Ohio 44114</b>			<b>BIDDER MUST COMPLETE &amp; SIGN BELOW</b> AUTHORIZED SIGNATURE  DATE	
TITLE OF BID <b>Labor and Materials Necessary to Repair and Maintain Decorative and Special Lighting on Bridges and Wyland Whale Mural Park 2023</b>				
DESCRIPTION	QUANTITY	UNIT PRICE	EXTENSION	
<b>ITEM NO. 4: Bascule #1 Bridge (Cont'd)</b>				
<b>E. Light Fixture Tag #A-103 (qty. at bridge 4):</b>				
4E-1. Replacement of lamp	2			
4E-2. Replacement of lens – clear	2			
4E-3. Replacement of lens – color	2			
4E-4. Replacement of ballasts	2			
4E-5. Cleaning of exterior lens	4			
4E-6. Cleaning of Reflectors	2			
<b>F. Light Fixture Tag #A-103a (qty. at bridge 2):</b>				
4F-1. Replacement of lamp	2			
4F-2. Replacement of lens – clear	2			
4F-3. Replacement of lens – color	2			
4F-4. Replacement of ballasts	2			
4F-5. Cleaning of exterior lens	2			
4F-6. Cleaning of Reflectors	2			
<b>G. Light Fixture Tag #A-104 (qty. at bridge 4):</b>				
4G-1. Replacement of lamp	6			
4G-2. Replacement of lens	2			
4G-3. Replacement of ballasts	2			
4G-4. Cleaning of exterior lens	16			
4G-5. Cleaning of Reflectors	6			
<b>H. Light Fixture Tag #A-104a (qty. at bridge 2):</b>				
4H-1. Replacement of lamp	2			
4H-2. Replacement of lens	2			
4H-3. Replacement of ballasts	2			
4H-4. Cleaning of exterior lens	2			
4H-5. Cleaning of Reflectors	2			
<b>I. Light Fixture Tag #A-105 (qty. at bridge 5):</b>				
4I-1. Replacement of lamp	2			
4I-2. Replacement of lens – clear	2			
4I-3. Replacement of lens – color	2			
4I-4. Replacement of ballasts	2			
4I-5. Cleaning of exterior lens	6			
4I-6. Cleaning of Reflectors	2			
<b>J. Light Fixture Tag #A-105a (qty. at bridge 3):</b>				
4J-1. Replacement of lamp	2			
4J-2. Replacement of lens – clear	2			
4J-3. Replacement of lens – color	2			
4J-4. Replacement of ballasts	2			
4J-5. Cleaning of exterior lens	2			
4J-6. Cleaning of Reflectors	2			
ALL QUANTITIES ARE APPROXIMATE. A CONTRACT, IF ANY, SHALL BE FOR A PERIOD OF TWO (2) YEARS		DELIVERY (Days)	PAYMENT DISCOUNT	
ALL OF THIS BOUND INFORMATION MUST BE KEPT INTACT AND TOGETHER WITH ANY ADDENDA ISSUED, MUST BE RETURNED WITH THE BID. OTHERWISE, THE BID MAY BE CONSIDERED INFORMAL			% Days	
		FOR PURCHASING USE ONLY		

<b>BID — SCHEDULE OF ITEMS</b> <b>City of Cleveland</b> <b>Division of Purchases And Supplies</b> <b>128 City Hall</b> <b>Cleveland, Ohio 44114</b>			<b>BIDDER MUST COMPLETE &amp; SIGN BELOW</b> AUTHORIZED SIGNATURE  DATE	
TITLE OF BID <b>Labor and Materials Necessary to Repair and Maintain Decorative and Special Lighting on Bridges and Wyland Whale Mural Park 2023</b>				
DESCRIPTION	QUANTITY	UNIT PRICE	EXTENSION	
<b>ITEM NO. 4: Bascule #1 Bridge (Cont'd)</b>				
<b>K. Light Fixture Tag #A-106 (qty. at bridge 4):</b>				
4K-1. Replacement of lamp	2			
4K-2. Replacement of lens – clear	2			
4K-3. Replacement of lens – color	2			
4K-4. Replacement of ballasts	2			
4K-5. Cleaning of exterior lens	4			
4K-6. Cleaning of Reflectors	2			
<b>L. Light Fixture Tag #A-106a (qty. at bridge 2):</b>				
4L-1. Replacement of lamp	2			
4L-2. Replacement of lens – clear	2			
4L-3. Replacement of lens – color	2			
4L-4. Replacement of ballasts	2			
4L-5. Cleaning of exterior lens	2			
4L-6. Cleaning of Reflectors	2			
<b>M. Light Fixture Tag #A-107 (qty. at bridge 4):</b>				
4M-1. Replacement of lamp	2			
4M-2. Replacement of lens	2			
4M-3. Replacement of ballasts	2			
4M-4. Cleaning of exterior lens	4			
4M-5. Cleaning of Reflectors	2			
<b>N. Light Fixture Tag #A-107a (qty. at bridge 2):</b>				
4N-1. Replacement of lamp	2			
4N-2. Replacement of lens	2			
4N-3. Replacement of ballasts	2			
4N-4. Cleaning of exterior lens	2			
4N-5. Cleaning of Reflectors	2			
<b>O. Light Fixture Tag #A-108 (qty. at bridge 5):</b>				
4O-1. Replacement of lamp	2			
4O-2. Replacement of lens – clear	2			
4O-3. Replacement of lens – color	2			
4O-4. Replacement of ballasts	2			
4O-5. Cleaning of exterior lens	6			
4O-6. Cleaning of Reflectors	2			
<b>P. Light Fixture Tag #A-108a (qty. at bridge 3):</b>				
4P-1. Replacement of lamp	2			
4P-2. Replacement of lens – clear	2			
4P-3. Replacement of lens – color	2			
4P-4. Replacement of ballasts	2			
4P-5. Cleaning of exterior lens	4			
4P-6. Cleaning of Reflectors	2			
ALL QUANTITIES ARE APPROXIMATE. A CONTRACT, IF ANY, SHALL BE FOR A PERIOD OF TWO (2) YEARS		DELIVERY (Days)	PAYMENT DISCOUNT	
ALL OF THIS BOUND INFORMATION MUST BE KEPT INTACT AND TOGETHER WITH ANY ADDENDA ISSUED, MUST BE RETURNED WITH THE BID. OTHERWISE, THE BID MAY BE CONSIDERED INFORMAL			% Days	
FOR PURCHASING USE ONLY				

<b>BID — SCHEDULE OF ITEMS</b> <b>City of Cleveland</b> <b>Division of Purchases And Supplies</b> <b>128 City Hall</b> <b>Cleveland, Ohio 44114</b>			<b>BIDDER MUST COMPLETE &amp; SIGN BELOW</b>	
			AUTHORIZED SIGNATURE	
TITLE OF BID <b>Labor and Materials Necessary to Repair and Maintain Decorative and Special Lighting on Bridges and Wyland Whale Mural Park 2023</b>			DATE	
DESCRIPTION	QUANTITY	UNIT PRICE	EXTENSION	
<b>ITEM NO. 4: Bascule #1 Bridge (Cont'd)</b>				
<b>Q. Light Fixture Tag #A-109 (qty. at bridge 4):</b>				
4Q-1. Replacement of lamp	2			
4Q-2. Replacement of lens – clear	2			
4Q-3. Replacement of lens – color	2			
4Q-4. Replacement of ballasts	2			
4Q-5. Cleaning of exterior lens	4			
4Q-6. Cleaning of Reflectors	2			
<b>R. Light Fixture Tag #A-109a (qty. at bridge 2):</b>				
4R-1. Replacement of lamp	2			
4R-2. Replacement of lens – clear	2			
4R-3. Replacement of lens – color	2			
4R-4. Replacement of ballasts	2			
4R-5. Cleaning of exterior lens	2			
4R-6. Cleaning of Reflectors	2			
<b>S. Light Fixture Tag #A-110 (qty. at bridge 4):</b>				
4S-1. Replacement of lamp	2			
4S-2. Replacement of lens	2			
4S-3. Replacement of ballasts	2			
4S-4. Cleaning of exterior lens	4			
4S-5. Cleaning of Reflectors	2			
<b>T. Light Fixture Tag #A-110a (qty. at bridge 2):</b>				
4T-1. Replacement of lamp	2			
4T-2. Replacement of lens	2			
4T-3. Replacement of ballasts	2			
4T-4. Cleaning of exterior lens	2			
4T-5. Cleaning of Reflectors	2			
<b>U. Light Fixture Tag #A-111 (qty. at bridge 6):</b>				
4U-1. Replacement of lamp	2			
4U-2. Replacement of lens – clear	2			
4U-3. Replacement of lens – color	2			
4U-4. Replacement of ballasts	2			
4U-5. Cleaning of exterior lens	6			
4U-6. Cleaning of Reflectors	2			
<b>V. Light Fixture Tag #A-112 (qty. at bridge 11):</b>				
4V-1. Replacement of lamp	2			
4V-2. Replacement of lens – clear	2			
4V-3. Replacement of lens – color	2			
4V-4. Replacement of ballasts	2			
4V-5. Cleaning of exterior lens	12			
4V-6. Cleaning of Reflectors	2			
ALL QUANTITIES ARE APPROXIMATE. A CONTRACT, IF ANY, SHALL BE FOR A PERIOD OF TWO (2) YEARS		DELIVERY (Days)	PAYMENT DISCOUNT	
ALL OF THIS BOUND INFORMATION MUST BE KEPT INTACT AND TOGETHER WITH ANY ADDENDA ISSUED, MUST BE RETURNED WITH THE BID. OTHERWISE, THE BID MAY BE CONSIDERED INFORMAL			% Days	
		FOR PURCHASING USE ONLY		



**BID — SCHEDULE OF ITEMS**

City of Cleveland

Division of Purchases And Supplies

128 City Hall

Cleveland, Ohio 44114

**BIDDER MUST  
COMPLETE & SIGN  
BELOW**

AUTHORIZED SIGNATURE

TITLE OF BID

**Labor and Materials Necessary to Repair and Maintain Decorative and Special Lighting on Bridges and Wyland Whale Mural Park 2023**

DATE

DESCRIPTION

QUANTITY

UNIT PRICE

EXTENSION

**ITEM NO. 4: Bascule #1 Bridge (Cont'd)****W. Light Fixture Tag #A-113 (qty. at bridge 2):**

4W-1. Replacement of lamp

2

4W-2. Replacement of lens – clear

2

4W-3. Replacement of lens – color

2

4W-4. Replacement of ballasts

2

4W-5. Cleaning of exterior lens

2

4W-6. Cleaning of Reflectors

2

**X Light Fixture Tag #H-100 (qty. at bridge 10):**

4X-1. Replacement of lamp

2

4X-2. Replacement of lens

2

4X-3. Replacement of ballasts

2

4X-4. Cleaning of exterior lens

10

4X-5. Cleaning of Reflectors

2

**Y Light Fixture Tag #H-101 (qty. at bridge 6):**

4Y-1. Replacement of lamp

2

4Y-2. Replacement of lens

2

4Y-3. Replacement of ballasts

2

4Y-4. Cleaning of exterior lens

6

4Y-5. Cleaning of Reflectors

2

**Z. Light Fixture Tag #H-102 (qty. at bridge 14):**

4Z-1. Replacement of lamp

2

4Z-2. Replacement of lens

2

4Z-3. Replacement of ballasts

2

4Z-4. Cleaning of exterior lens

14

4Z-5. Cleaning of Reflectors

2

**AA. Light Fixture Tag #H-103 (qty. at bridge 2):**

4AA-1. Replacement of lamp

2

4AA-2. Replacement of lens

2

4AA-3. Replacement of ballasts

2

4AA-4. Cleaning of exterior lens

2

4AA-5. Cleaning of Reflectors

2

**ITEM NO. 5: Bascule #2 Bridge****A. Light Fixture Tag #H-100 (qty. at bridge 12):**

5A-1. Replacement of lamp

2

5A-2. Replacement of lens – clear

2

5A-3. Replacement of lens – color

2

5A-4. Replacement of ballasts

2

5A-5. Cleaning of exterior lens

12

5A-6. Cleaning of Reflectors

2

ALL QUANTITIES ARE APPROXIMATE. A CONTRACT, IF ANY, SHALL BE FOR A PERIOD OF TWO (2) YEARS

DELIVERY  
(Days)

PAYMENT DISCOUNT

ALL OF THIS BOUND INFORMATION MUST BE KEPT INTACT AND TOGETHER WITH ANY  
ADDENDA ISSUED, MUST BE RETURNED WITH THE BID. OTHERWISE, THE BID MAY BE  
CONSIDERED INFORMAL

% Days

FOR PURCHASING USE ONLY

<b>BID — SCHEDULE OF ITEMS</b> <b>City of Cleveland</b> <b>Division of Purchases And Supplies</b> <b>128 City Hall</b> <b>Cleveland, Ohio 44114</b>			<b>BIDDER MUST COMPLETE &amp; SIGN BELOW</b>	
<b>TITLE OF BID</b> <b>Labor and Materials Necessary to Repair and Maintain Decorative and Special Lighting on Bridges and Wyland Whale Mural Park 2023</b>			<b>AUTHORIZED SIGNATURE</b>	
			<b>DATE</b>	
DESCRIPTION	QUANTITY	UNIT PRICE	EXTENSION	
<b>ITEM NO. 5: Bascule #2 Bridge (Cont'd)</b>				
<b>B. Light Fixture Tag #H-101 (qty. at bridge 12):</b>				
5B-1. Replacement of lamp	2			
5B-2. Replacement of lens – clear	2			
5B-3. Replacement of lens – color	2			
5B-4. Replacement of ballasts	2			
5B-5. Cleaning of exterior lens	12			
5B-6. Cleaning of Reflectors	2			
<b>C. Light Fixture Tag #H-101a (qty. at bridge 4):</b>				
5C-1. Replacement of lamp	2			
5C-2. Replacement of lens – clear	2			
5C-3. Replacement of lens – color	2			
5C-4. Replacement of ballasts	2			
5C-5. Cleaning of exterior lens	4			
5C-6. Cleaning of Reflectors	2			
<b>D. Light Fixture Tag #H-102 (qty. at bridge 6):</b>				
5D-1. Replacement of lamp	2			
5D-2. Replacement of lens – clear	2			
5D-3. Replacement of lens – color	2			
5D-4. Replacement of ballasts	2			
5D-5. Cleaning of exterior lens	6			
5D-6. Cleaning of Reflectors	2			
<b>E. Light Fixture Tag #H-103 (qty. at bridge 6):</b>				
5E-1. Replacement of lamp	2			
5E-2. Replacement of lens – clear	2			
5E-3. Replacement of lens – color	2			
5E-4. Replacement of ballasts	2			
5E-5. Cleaning of exterior lens	6			
5E-6. Cleaning of Reflectors	2			
<b>F. Light Fixture Tag #H-104 (qty. at bridge 4):</b>				
5F-1. Replacement of lamp	2			
5F-2. Replacement of lens – clear	2			
5F-3. Replacement of lens – color	2			
5F-4. Replacement of ballasts	2			
5F-5. Cleaning of exterior lens	4			
5F-6. Cleaning of Reflectors	2			
<b>G. Light Fixture Tag #H-105 (qty. at bridge 4):</b>				
5G-1. Replacement of lamp	2			
5G-2. Replacement of lens – clear	2			
5G-3. Replacement of lens – color	2			
5G-4. Replacement of ballasts	2			
5G-5. Cleaning of exterior lens	4			
5G-6. Cleaning of Reflectors	2			
ALL QUANTITIES ARE APPROXIMATE. A CONTRACT, IF ANY, SHALL BE FOR A PERIOD OF TWO (2) YEARS		DELIVERY (Days)	PAYMENT DISCOUNT	
ALL OF THIS BOUND INFORMATION MUST BE KEPT INTACT AND TOGETHER WITH ANY ADDENDA ISSUED, MUST BE RETURNED WITH THE BID. OTHERWISE, THE BID MAY BE CONSIDERED INFORMAL			% Days	
		FOR PURCHASING USE ONLY		

<b>BID — SCHEDULE OF ITEMS</b> <b>City of Cleveland</b> <b>Division of Purchases And Supplies</b> <b>128 City Hall</b> <b>Cleveland, Ohio 44114</b>			<b>BIDDER MUST COMPLETE &amp; SIGN BELOW</b>	
			AUTHORIZED SIGNATURE	
TITLE OF BID <b>Labor and Materials Necessary to Repair and Maintain Decorative and Special Lighting on Bridges and Wyland Whale Mural Park 2023</b>			DATE	
DESCRIPTION	QUANTITY	UNIT PRICE	EXTENSION	
<b>ITEM NO. 5: Bascule #2 Bridge (Cont'd)</b>				
<b>H. Light Fixture Tag #H-106 (qty. at bridge 1):</b>				
5H-1. Replacement of lamp	2			
5H-2. Replacement of lens	2			
5H-3. Replacement of ballasts	2			
5H-4. Cleaning of exterior lens	2			
5H-5. Cleaning of Reflectors	2			
<b>I. Light Fixture Tag #H-108 (qty. at bridge 2):</b>				
5I-1. Replacement of lamp	2			
5I-2. Replacement of lens	2			
5I-3. Replacement of ballasts	2			
5I-4. Cleaning of exterior lens	2			
5I-5. Cleaning of Reflectors	2			
<b>ITEM NO. 6: Conrail (Norfolk Southern) Bridge</b>				
<b>A. Light Fixture Tag #H-103 (qty. at bridge 6):</b>				
6A-1. Replacement of lamp	2			
6A-2. Replacement of lens	2			
6A-3. Replacement of ballasts	2			
6A-4. Cleaning of exterior lens	6			
6A-5. Cleaning of Reflectors	2			
<b>B. Light Fixture Tag #H-104 (qty. at bridge 6):</b>				
6B-1. Replacement of lamp	2			
6B-2. Replacement of lens	2			
6B-3. Replacement of ballasts	2			
6B-4. Cleaning of exterior lens	6			
6B-5. Cleaning of Reflectors	2			
<b>C. Light Fixture Tag #H-105 (qty. at bridge 2):</b>				
6C-1. Replacement of lamp	2			
6C-2. Replacement of lens – clear	2			
6C-3. Replacement of lens – color	2			
6C-4. Replacement of ballasts	2			
6C-5. Cleaning of exterior lens	2			
6C-6. Cleaning of Reflectors	2			
<b>D. Light Fixture Tag #H-106 (qty. at bridge 8):</b>				
6D-1. Replacement of lamp	2			
6D-2. Replacement of lens – clear	2			
6D-3. Replacement of lens – color	2			
6D-4. Replacement of ballasts	2			
6D-5. Cleaning of exterior lens	8			
6D-6. Cleaning of Reflectors	2			
ALL QUANTITIES ARE APPROXIMATE. A CONTRACT, IF ANY, SHALL BE FOR A PERIOD OF TWO (2) YEARS		DELIVERY (Days)	PAYMENT DISCOUNT	
ALL OF THIS BOUND INFORMATION MUST BE KEPT INTACT AND TOGETHER WITH ANY ADDENDA ISSUED, MUST BE RETURNED WITH THE BID. OTHERWISE, THE BID MAY BE CONSIDERED INFORMAL			%	Days
FOR PURCHASING USE ONLY				

<b>BID — SCHEDULE OF ITEMS</b> <b>City of Cleveland</b> <b>Division of Purchases And Supplies</b> <b>128 City Hall</b> <b>Cleveland, Ohio 44114</b>			<b>BIDDER MUST COMPLETE &amp; SIGN BELOW</b>
<b>TITLE OF BID</b> <b>Labor and Materials Necessary to Repair and Maintain Decorative and Special Lighting on Bridges and Wyland Whale Mural Park 2023</b>			AUTHORIZED SIGNATURE
			DATE
<b>DESCRIPTION</b>	<b>QUANTITY</b>	<b>UNIT PRICE</b>	<b>EXTENSION</b>
<b>ITEM NO. 7: Wyland Whale Mural Park</b>			
<b>A. Light Fixture Tag #A-1 (qty. at park 10):</b>			
7A-1. Replacement of lamp	2		
7A-2. Replacement of lens	2		
7A-3. Replacement of ballasts	2		
7A-4. Cleaning of exterior lens	10		
7A-5. Cleaning of Reflectors	2		
<b>B. Light Fixture Tag #A-2 (qty. at park 10):</b>			
7B-1. Replacement of lamp	2		
7B-2. Replacement of lens	2		
7B-3. Replacement of ballasts	2		
7B-4. Cleaning of exterior lens	10		
7B-5. Cleaning of Reflectors	2		
<b>ITEM NO. 8: THE REPAIRING AND/OR REPLACEMENT OF FAULTY LOW VOLTAGE LIGHTING SUPPLY EQUIPMENT</b>			
<b>A. LABOR :</b>			
8A-1. Monday thru Friday from 8:00am to 5:00pm	COST/HOUR	100 Hr	
8A-2. Monday thru Friday after 5:00pm, Saturday	COST/HOUR	20 Hr	
8A-3. Sunday, Holidays	COST/HOUR	20 Hr	
8A-4. Material cost (disc. Off or cost plus) line not to exceed \$14,000.00 (See Section C, Item #22 & Item #23)	Disc. Off List %	Cost Plus %	\$14,000.00
<b>TOTAL BID</b>			
ALL QUANTITIES ARE APPROXIMATE. A CONTRACT, IF ANY, SHALL BE FOR A PERIOD OF TWO (2) YEARS		DELIVERY (Days)	PAYMENT DISCOUNT
ALL OF THIS BOUND INFORMATION MUST BE KEPT INTACT AND TOGETHER WITH ANY ADDENDA ISSUED, MUST BE RETURNED WITH THE BID. OTHERWISE, THE BID MAY BE CONSIDERED INFORMAL			%      Days
		FOR PURCHASING USE ONLY	

**ADDENDUM NO. 1**

**SPECIFICATIONS/DESCRIPTIONS OF PRODUCTS AND / OR SERVICES DEPARTMENT  
OF PUBLIC UTILITIES – CLEVELAND PUBLIC POWER**

**LABOR AND MATERIALS NECESSARY TO REPAIR AND MAINTAIN DECORATIVE AND  
SPECIAL LIGHTING ON BRIDGES AND THE WYLAND WHALE MURAL PARK 2023**

**SECTION C – SUPPLEMENTAL GENERAL CONDITIONS**

**C.4. PRE-BID MEETING / LAST DAY FOR QUESTIONS:**

A Pre-Bid meeting will be held on the date and time as per the advertisement announcement. Bidders are cautioned that questions, clarifications, and information that may result from this meeting, could affect your bid. In addition, by City of Cleveland (City) policy, this is the only opportunity for potential bidders to speak directly with Cleveland Public Power (CPP) personnel prior to the award of the contract. Attendance at the pre-bid meeting is non-mandatory.

The last day for questions is five (5) business days before the bid opening date by 12:00 p.m. All questions should be reduced to writing and submitted to the Division of Purchases & Supplies via email at: [purchasing@clevelandohio.gov](mailto:purchasing@clevelandohio.gov).

**C.5. QUANTITIES**

The quantities of work to be done or material or equipment to be furnished as given for each item on the Bid Schedule of Items pages are approximate only. They are not guaranteed to be accurate statements and quantities to be performed or furnished under this contract, and any departure from them will not be considered as valid grounds for any claim for damage or for loss of profits. CPP reserves the right to procure more or less than shown under the terms of this requirement contract.

**C.6. UNIT PRICES**

All prices quoted shall be on a per unit basis as indicated on the Bid Schedule of Items pages and shall include all costs for labor and material, handling and delivery, F.O.B. point of delivery. All prices bid shall remain firm throughout the contract term.

Bidders shall quote their best/normal delivery time in weeks after receipt of order.

**C.7. EVALUATION OF BIDS**

The City will accept the lowest cost and best bid for each item called out in the specification. The City is seeking a complete bid for all items, as the intent is to award a single contract. The City will reject bids for improper submittal of documentation, incomplete submittal of documentation and/or unsubstantiated information within submittal. Performance, cost, timeliness and safety shall be considered as of the essence of the contract and/or contracts.

**ADDENDUM NO. 1**

**SPECIFICATIONS/DESCRIPTIONS OF PRODUCTS AND / OR SERVICES DEPARTMENT  
OF PUBLIC UTILITIES – CLEVELAND PUBLIC POWER**

**LABOR AND MATERIALS NECESSARY TO REPAIR AND MAINTAIN DECORATIVE AND  
SPECIAL LIGHTING ON BRIDGES AND THE WYLAND WHALE MURAL PARK 2023**

**SECTION C – SUPPLEMENTAL GENERAL CONDITIONS**

measures to locate and protect these utilities. The contractor shall be reimbursed the appropriate unit price or Force Account rates for this locating work. Cleveland Public Power makes no guarantees as to the accuracy of any utilities shown on any plans.

The contractor shall repair at its own expense and in a manner satisfactory to utility Owner(s), any above ground/underground utility damages caused by Contractor in the prosecution of the Work. No extra compensation shall be paid to Contractor for repairs to any known services or mains, whether shown or not shown on the plans, damaged by the Contractor's labor force or equipment, nor for any damage incurred through neglect or failure to provide protective barriers, lights or other devices or means required to protect such existing utilities. It shall be the Contractor's sole responsibility to identify and protect any and all utilities in his area of work.

**C.21. CONTRACTOR MANAGEMENT AND FIELD SUPERVISION**

Contractor shall provide and assign to the work covered under this contract adequate and competent Management/Supervision as detailed within this contract. Cleveland Public Power shall review resumes and/or interview proposed field Project Manager(s), Superintendent(s) and other key personnel. The contractor shall not make any field management assignments to the work covered under this contract without the concurrence and approval of Cleveland Public Power.

**C.22. REPAIRING AND/OR REPLACEMENT OF FAULTY LOW VOLTAGE LIGHTING  
SUPPLY EQUIPMENT (ITEM NO. 8A-4)**

Upon examination of the work to be completed, if the Contractor encounters faulty wiring, damaged conduit or control mechanism, Cleveland Public Power is to be notified. The Contractor shall receive approval in writing prior to pursuing work for unforeseen repairs covered as Labor and Material.

When securing items purchased under Item #9A.4 of the Bid – Schedule of Items page. Bidders must show a percentage off list prices or enter a "zero" in the space provided on the Bid – Schedule of Item page, if no discount is being offered. The City will then interpret this to mean that items will be sold to the City at "cost". If a discount is being offered, bidders are to enter the discounted amount in the space provided. Any discount not clearly stated will be disregarded in determining the lowest and best bid, and the price quoted will be considered a net price. To ensure a truly competitive bid, parts discount where applicable will always be discounted from original equipment manufacturers current list price schedules and aftermarket manufacturer's price schedules. Bidder must have access to all manufacturers'

**ADDENDUM NO. 1****SPECIFICATIONS/DESCRIPTIONS OF PRODUCTS AND / OR SERVICES DEPARTMENT  
OF PUBLIC UTILITIES – CLEVELAND PUBLIC POWER****LABOR AND MATERIALS NECESSARY TO REPAIR AND MAINTAIN DECORATIVE AND  
SPECIAL LIGHTING ON BRIDGES AND THE WYLAND WHALE MURAL PARK 2023****SECTION C – SUPPLEMENTAL GENERAL CONDITIONS**

materials immediately as needed. The bidder will provide manufacturers' price pages, so discounts can be verified, at the time of request for quotation. Bidders will not use any type of price list they have prepared for their business. All prices must be from a bona fide manufacturer of the parts, materials, equipment, service, and/or supplies. Original equipment manufacturers' product will be used in the vast majority of cases.

However, there may be some exceptions. Should a substitute manufacturer's items be of equal quality and significantly lower in cost, CPP may approve its use. However, the bidder will never make this assumption without approval. Any substitutions of OEM items must be approved by CPP. Furthermore, bidder will never attempt to provide a substitute Manufacturer's item as a means of realizing a greater profit at the expense of the City of Cleveland.

**C.23. MARKUP FROM INVOICE COST (ITEM NO. 8A-4)**

For those situations when parts, materials, equipment, services, and/or supplies for repairs are needed, and a catalog or price list is not applicable, and only an invoice cost to the bidder is available, a markup will be allowed. A copy of the quotation cost for the parts, materials, equipment, services, and/or supplies must be submitted for approval by CPP before any services can be started. The bidder will be required in those instances to document in writing that a catalog or list price is not applicable. The bidder will be allowed a maximum of fifteen (15) percent (%) markup.

**C.24. APPROVAL AND ACCEPTANCE**

Upon completion of the work as herein provided, the Contractor shall notify the Cleveland Public Power representative, in writing, that the installation has been completed and is ready for final inspection and/or any performance tests deemed necessary by Cleveland Public Power.

**C.25. NOTICE TO PROCEED**

The terms of this contract shall begin when CPP issues a Notice to Proceed to the awarded vendor. A Notice to Proceed shall not be issued until the contract has been fully executed and delivered to all parties.

**< END OF SECTION C >**

## **ADDENDUM NO. 1**

### **SPECIFICATIONS/DESCRIPTIONS OF PRODUCTS AND / OR SERVICES DEPARTMENT OF PUBLIC UTILITIES – CLEVELAND PUBLIC POWER**

### **LABOR AND MATERIALS NECESSARY TO REPAIR AND MAINTAIN DECORATIVE AND SPECIAL LIGHTING ON BRIDGES AND THE WYLAND WHALE MURAL PARK 2023**

#### **SECTION D - DETAILED SPECIFICATIONS**

##### **D.1. SCOPE OF SERVICES.**

Services will be for awarded vendors to provide all labor, materials, equipment, appurtenances, services, and insurance to complete the replacement of lenses and ballasts, cleaning of lenses & reflectors, and repairing of low voltage supply equipment at the specified locations to maintain the decorative and special lighting fixtures on bridges and the Wyland Whale Mural Park.

##### **D.2. DETAILED SPECIFICATIONS AND TECHNICAL DRAWINGS**

**See following pages Exhibits A and B**



Addendum No. 1

# EXHIBIT A

Decorative Bridge Lighting Tag # Description

Contains 24 Pages

### Lighting Fixture Schedule

**General Notes:**

**The Contractor shall verify lighting fixture clearance of all mounting conditions and compatibility with structural systems. Report any discrepancies to the lighting consultant for action prior to ordering fixtures.**

**Voltage to be verified by Electrical Engineer and Contractor prior to ordering of fixtures**

**All external fasteners on fixtures to be vandal proof and approved by lighting consultant and electrical engineer.**

## INCANDESCENT, QUARTZ AND HALOGEN FIXTURES

Tag	Description
-----	-------------

A-100 NOT USED

A-101 Pipe Clamp mounted flood light fixture for use with 250 watt Halogen spot PAR 38 lamp. Fixture shall be of die cast aluminum body with external adjustable louver and adjustable knuckle joint. Exterior finish to be custom color powdercoat finish. Fixture to be factory outfitted with standard lens holder and Convex tempered glass lens for lamp protection. All fasteners to be of stainless steel and exterior fasteners shall be tamper proof. Fixture to be U.L. Listed suitable for wet locations and be provided with minimum 36" SJO leads with Teflon jacketed silicone impregnated glass braid insulated wire cover. Fixture to be supplied with internal dichoric color lens and fasteners. Manufacturer to provide ten (10) adjustment tools for tamperproof hardware with order. Fixtures to be installed alternating lens colors.

**Manufacturer:** HYDREL Cat # 4710A-IN250/120-Custom Lens-Custom Color-Pipe Clamp  
HYDREL Control Cat# CE3269-PAR38

Lamp & Mfg: GE Q250PAR/SP11°

**Accessories:** HYDREL External Louver Cat # DLA-47, Custom Colored lens and Pipe Clamp.

**Remarks:** Ten (10) different custom colored lenses to match Roscolux #19 Fire, #20 Medium Amber, #31 Salmon Pink, #47 Light Rose Purple, #65 Daylight Blue, #71 Sea Blue, #73 Peacock Blue, #96 Lime, #312 Canary, and #343 Neon Pink. See Lighting Filter Plan details DET-100 and DET-101 for filter placement and quantities. Custom color fixture and clamp finish to match bridge color. Contact Mark McKinney, Rosco Laboratories, Inc., 1135 N. Highland Avenue, Hollywood, CA. Phone: 213-462-2233. Fax: 213-462-3338 for dichoric filters.

## HIGH INTENSITY DISCHARGE FIXTURES

Tag	Description
-----	-------------

H-100 Surface mount asymmetric bulkhead wallwasher for use in upside down position for 100 watt medium base Clear Metal Halide lamp. Fixture shall be 12 5/8" long X 12 5/8" in height with a 8 3/4" extension and made of die cast aluminum with a built-in louver. Fixture optics shall be full specular anodized aluminum reflector and linear prismatic tempered glass lens. Fixture cover and lens shall be attached with (4) captive socket head stainless steel screws. Fixture shall have custom color finish. Fixture shall have integral high power factor ballast rated for -20° F starting.

**Manufacturer:** BEGA Cat.# 2479MH - Custom Color

Lamp & Mfg: GE MXR100/U/MED

**Accessories:**

**Remarks:** Custom color finish to match bridge color.

- H-101 Bracket mounted, large scale, exterior flood light with 5° X 48° symmetrical linear photometrics at 50% maximum candlepower for 250 watt mogul base Clear Metal Halide lamp. Fixture shall be 17 3/4" diameter X 17 3/4" long and made of two piece die cast aluminum with internal heat sink finished with custom color. Fixture optics shall be full specular anodized aluminum reflector with horizontal lamp positioned with arc tube to be centered in reflector and secured with stainless steel latches. Fixture lamp enclosure shall be one piece die cast aluminum frame with internal drainage slots. Enclosure shall hold tempered glass spread lens with 14 linear prisms per inch with, one piece molded U-channel, high temperature silicone gasket and secured with (6) captive socket head stainless steel screws threaded into stainless steel inserts in the reflector housing. Fixture to be supplied with 3/16" stainless steel fully adjustable yoke/swivel with degree indicator and locking tamperproof set screw. Fixture to be factory fitted with glare shield. Fixture shall have integral high power factor ballast rated for -20° F starting.

Manufacturer: BEGA Cat.# 8394MH - Custom Color

Lamp & Mfg: GE MVR250/U/ED28

Accessories: BEGA #432 180° Glare Shield for 17 3/4" - custom color on outside

Remarks: Provide tamper proof external fasteners. Custom color finish to match bridge color.

- H-102 Bracket mounted, medium scale, exterior flood light with 5° X 32° symmetrical linear photometrics at 50% maximum candlepower for 175 watt medium base Clear Metal Halide lamp. Fixture shall be 13 3/4" diameter X 12 9/16" long and made of two piece die cast aluminum with internal heat sink finished with custom color. Fixture optics shall be full specular anodized aluminum reflector with horizontal lamp positioned with arc tube to be centered in reflector and secured with stainless steel latches. Fixture lamp enclosure shall be one piece die cast aluminum frame with internal drainage slots. Enclosure shall hold tempered glass spread lens with 14 linear prisms per inch with, one piece molded U-channel, high temperature silicone gasket and secured with (6) captive socket head stainless steel screws threaded into stainless steel inserts in the reflector housing. Fixture to be supplied with 3/16" stainless steel fully adjustable yoke/swivel with degree indicator and locking tamperproof set screw. Fixture to be factory fitted with glare shield. Fixture shall have integral high power factor ballast rated for -20° F starting.

Manufacturer: BEGA Cat.# 8339MH - Custom Color

Lamp & Mfg: GE MVR175/U/MED

Accessories: BEGA #431 180° Glare Shield for 13 3/4" - custom color on outside

Remarks: Provide tamper proof external fasteners. Custom color finish to match bridge color.

- H-103 Surface mount cutoff roadway luminaire with Type 3 distribution for 175 watt mogul base Clear Metal Halide lamp. Fixture shall be 21" long X 14" wide and 7" deep constructed from extruded aluminum with a press-formed top to interlock with the perimeter extruded frame and have custom color finish. Fixture optics shall be full specular anodized aluminum reflector with a tempered glass lens. Fixture door and lens shall be attached with stainless steel latch and hinge. Fixture shall have remote Payne Sparkman dimming ballast rated for -20° F starting.

Manufacturer: Gardco Lighting Cat# EH-14"-1-3-175MH-volts-Custom Color-options - remote  
Payne Sparkman ballast provided by contractor

Lamp & Mfg: GE MVR175/U

Accessories:

Remarks: Custom color finish to match bridge color.

Lighting Fixture Schedule

- H-104 Surface mount cutoff roadway luminaire with Type FM distribution for 100 watt medium base Clear Metal Halide lamp. Fixture shall be 21" long X 14" wide and 7" deep constructed from extruded aluminum with a press-formed top to interlock with the perimeter extruded frame and have custom color finish. Fixture optics shall be full specular anodized aluminum reflector with a tempered glass lens. Fixture door and lens shall be attached with stainless steel latch and hinge. Fixture shall have integral high power factor ballast rated for -20° F starting.

Manufacturer: Gardco Lighting Cat# EH-14"-1-3-100MH-volts-Custom Color-options

Lamp & Mfg: GE MXR100/U/MED

Accessories:

Remarks: Custom color finish to match bridge color.

- H-105 Bracket mounted, large scale, exterior flood light with 5° X 48° symmetrical linear photometrics at 50% maximum candlepower for 250 watt mogul base Clear Metal Halide lamp. Fixture shall be 17 3/4" diameter X 17 3/4" long and made of two piece die cast aluminum with internal heat sink finished with custom color. Fixture optics shall be full specular anodized aluminum reflector with horizontal lamp positioned with arc tube to be centered in reflector and secured with stainless steel latches. Fixture lamp enclosure shall be one piece die cast aluminum frame with internal drainage slots. Enclosure shall hold tempered glass spread lens with 14 linear prisms per inch with, one piece molded U-channel, high temperature silicone gasket and secured with (6) captive socket head stainless steel screws threaded into stainless steel inserts in the reflector housing. Fixture to be supplied with 3/16" stainless steel fully adjustable yoke/swivel with degree indicator and locking tamperproof set screw. Fixture to be factory fitted with glare shield. Fixture shall have integral high power factor ballast rated for -20° F starting.

Manufacturer: BEGA Cat.# 8394MH - Custom Color

Lamp & Mfg: GE MVR250/U/ED28

Accessories: BEGA #432 180° Glare Shield for 17 3/4" - custom color on outside

Remarks: Provide tamper proof external fasteners. Custom color finish to match bridge color.

- H-106 Pole rack mounted, large scale, exterior flood light with 4° symmetrical spot photometrics at 50% maximum candlepower for 250 watt mogul base Clear Metal Halide lamp. Fixture shall be 17 3/4" diameter X 17 3/4" long and made of two piece die cast aluminum with internal heat sink finished to standard factory specifications. Fixture optics shall be full specular anodized aluminum reflector with horizontal lamp positioned with arc tube to be centered in reflector and secured with stainless steel latches. Fixture lamp enclosure shall be one piece die cast aluminum frame with internal drainage slots. Enclosure shall hold tempered lens with, one piece molded U-channel, high temperature silicone gasket and secured with (6) captive socket head stainless steel screws threaded into stainless steel inserts in the reflector housing. Fixture to be supplied with 3/16" stainless steel fully adjustable yoke/swivel with degree indicator and locking tamperproof set screw. Fixture to be factory fitted with glare shield. Fixture shall have integral high power factor ballast rated for -20° F starting.

Manufacturer: BEGA Cat.# 8393MH

Lamp & Mfg: GE MVR250/U/ED28

Accessories: BEGA #432 180° Glare Shield for 17 3/4"

Remarks: Provide tamper proof external fasteners.

Lighting Fixture Schedule

- H-107 Pole rack mounted, large scale, exterior flood light with 5" X 48° symmetrical linear photometrics at 50% maximum candlepower for 250 watt mogul base Clear Metal Halide lamp. Fixture shall be 17 3/4" diameter X 17 3/4" long and made of two piece die cast aluminum with internal heat sink finished to standard factory specifications. Fixture optics shall be full specular anodized aluminum reflector with horizontal lamp positioned with arc tube to be centered in reflector and secured with stainless steel latches. Fixture lamp enclosure shall be one piece die cast aluminum frame with internal drainage slots. Enclosure shall hold tempered glass spread lens with 14 linear prisms per inch with one piece molded U-channel, high temperature silicone gasket and secured with (6) captive socket head stainless steel screws threaded into stainless steel inserts in the reflector housing. Fixture to be supplied with 3/16" stainless steel fully adjustable yoke/swivel with degree indicator and locking tamperproof set screw. Fixture to be factory fitted with glare shield. Fixture shall have integral high power factor ballast rated for -20° F starting.

Manufacturer: BEGA Cat.# 8394MH

Lamp & Mfg: GE MVR250/U/ED28

Accessories: BEGA #432 180° Glare Shield for 17 3/4"

Remarks: Provide tamper proof external fasteners.

- H-107a Same as H-107 except lamp is a 400 watt metal halide .

## Lighting Fixture Schedule

## General Notes:

The Contractor shall verify lighting fixture clearance of all mounting conditions and compatibility with structural systems. Report any discrepancies to the lighting consultant for action prior to ordering fixtures.

Voltage to be verified by Electrical Engineer and Contractor prior to ordering of fixtures

All external fasteners on fixtures to be vandal proof and approved by lighting consultant.

HIGH INTENSITY DISCHARGE FIXTURES

## Tag      Description

H-100 Rack mounted, large scale, exterior flood light with 5° symmetrical spot photometrics at 50% maximum candlepower for 400 watt mogul base Clear Metal Halide lamp. Fixture shall be 17 3/4" diameter X 17 3/4" long and made of two piece die cast aluminum with internal heat sink finished to standard factory specifications. Fixture optics shall be full specular anodized aluminum reflector with horizontal lamp positioned with arc tube to be centered in reflector and secured with stainless steel latches. Fixture lamp enclosure shall be one piece die cast aluminum frame with internal drainage slots. Enclosure shall hold tempered lens with, one piece molded U-channel, high temperature silicone gasket and secured with (6) captive socket head stainless steel screws threaded into stainless steel inserts in the reflector housing. Fixture to be supplied with 3/16" stainless steel fully adjustable yoke/swivel with degree indicator and locking tamperproof set screw. Fixture to be factory fitted with louver, dichroic color filter and bug screen. Fixture shall have remote high power factor ballast rated for -20° F starting. Color filter to match Roscolux #65 Daylight Blue.

Manufacturer: BEGA Cat.# 8374MH-custom lens attachment and bug screen

Lamp & Mfg: GE MVR400/U/ED28

Accessories: Outfit with #662 Concentric ring louver for 17 3/4"Ø, Custom lens attachment and bug screen. (See Detail 9, Sheet LTG-104). and remote high power factor ballast with enclosure.

Remarks: Provide tamper proof external fasteners. Contact Mark McKinney, Rosco Laboratories, Inc., 1135 N. Highland Avenue, Hollywood, CA. Phone: 213-462-2233, Fax: 213-462-3338 for dichoric filters.

**Lighting Fixture Schedule**

- H-101 Rack mounted, large scale, exterior flood light with 7° X 46° symmetrical linear photometrics at 50% maximum candlepower for 400 watt mogul base Clear Metal Halide lamp. Fixture shall be 17 3/4" diameter X 17 3/4" long and made of two piece die cast aluminum with internal heat sink finished to standard factory specifications. Fixture optics shall be full specular anodized aluminum reflector with horizontal lamp positioned with arc tube to be centered in reflector and secured with stainless steel latches. Fixture lamp enclosure shall be one piece die cast aluminum frame with internal drainage slots. Enclosure shall hold tempered glass spread lens with 14 linear prisms per inch with, one piece molded U-channel, high temperature silicone gasket and secured with (6) captive socket head stainless steel screws threaded into stainless steel inserts in the reflector housing. Fixture to be supplied with 3/16" stainless steel fully adjustable yoke/swivel with degree indicator and locking tamperproof set screw. Fixture to be factory fitted with dichroic color filter and bug screen. Fixture shall have remote high power factor ballast rated for - 20° F starting. Color filter to match Roscolux #65 Daylight Blue.

Manufacturer: BEGA Cat.# 8373MH -custom lens attachment and bug screen

Lamp & Mfg: GE MVR400/U/ED28

Accessories: Linear spread lens, Custom lens attachment and bug screen (See Detail 9, Sheet LTG-104), and remote high power factor ballast with enclosure.

Remarks: Provide tamper proof external fasteners. Contact Mark McKinney, Rosco Laboratories, Inc., 1135 N. Highland Avenue, Hollywood, CA. Phone: 213-462-2233, Fax: 213-462-3338 for dichoric filters.

## Lighting Fixture Schedule

## General Notes:

The Contractor shall verify lighting fixture clearance of all mounting conditions and compatibility with structural systems. Report any discrepancies to the lighting consultant for action prior to ordering fixtures.

Voltage to be verified by Electrical Engineer and Contractor prior to ordering of fixtures

All external fasteners on fixtures to be vandal proof and approved by lighting consultant.

## HIGH INTENSITY DISCHARGE FIXTURES

Tag Description

H-100 Stanchion mounted, small scale, exterior flood light with 7° X 35° symmetrical linear photometrics at 50% maximum candlepower for 70 watt medium base Clear High Pressure Sodium Deluxe Lucalox lamp. Fixture shall be 11" diameter X 12" long and made of two piece die cast aluminum with internal heat sink finished to standard factory specifications. Fixture optics shall be full specular anodized aluminum reflector with horizontal lamp positioned with arc tube to be centered in reflector and secured with stainless steel latches. Fixture lamp enclosure shall be one piece die cast aluminum frame with internal drainage slots. Enclosure shall hold tempered glass spread lens with 14 linear prisms per inch with, one piece molded U-channel, high temperature silicone gasket and secured with (6) captive socket head stainless steel screws threaded into stainless steel inserts in the reflector housing. Fixture to be supplied with 3/16" stainless steel fully adjustable yoke/swivel with degree indicator and locking tamperproof set screw. Fixture shall have integral high power factor ballast rated for -20° F starting and glare shield.

Manufacturer: BEGA Cat.# 8331S-MOD to 70 watt E-17 HPS for volts

Lamp & Mfg: GE LU70/DX/MED

Accessories: Outfit with BEGA #430 180° Glare shield for 11"Ø and #435 Mounting bracket w/ splice box for 3" dia. pole top.

Remarks: Modify for 70 watt HPS

H-101 Rack mounted, large scale, exterior flood light with symmetrical 4° spot photometrics at 50% maximum candlepower for 400 watt mogul base Clear High Pressure Sodium Deluxe Lucalox. Fixture shall be 17 3/4" diameter X 17 3/4" long and made of two piece die cast aluminum with internal heat sink finished to standard factory specifications with custom color. Fixture optics shall be full specular anodized aluminum reflector with horizontal lamp positioned with arc tube to be centered in reflector and secured with stainless steel latches. Fixture lamp enclosure shall be one piece die cast aluminum frame with internal drainage slots. Enclosure shall hold tempered lens with, one piece molded U-channel, high temperature silicone gasket and secured with (6) captive socket head stainless steel screws threaded into stainless steel inserts in the reflector housing. Fixture to be supplied with 3/16" stainless steel fully adjustable yoke/swivel with degree indicator and locking tamperproof set screw. Fixture to be factory fitted with louver and custom glare shield. Fixture shall have remote Payne Sparkman dimming ballast rated for -20° F starting.

Manufacturer: BEGA Cat.# 8374S - custom color - volts - remote Payne Sparkman provided by contractor

Lamp & Mfg: GE LU400/DX

Accessories: Outfit with #662 Concentric ring louver for 17 3/4"Ø and custom 360° 18" snoot with 1/2" x 1/2" hexcell louver regressed 6" from end.

Remarks: Fixture to be mounted to underside on upper deck of Detroit Superior. Custom color fixture and snoot to match gray - Federal Spec. No. 36320. Submit shop drawings for approval prior to fabrication. Provide fixture with 1/2" Seal-tite coupling connection and 6' THHN/THWN Copper #12 AWG wire leads.



**General Notes:**

The Contractor shall verify lighting fixture clearance in all exterior mounting conditions and compatibility with structural systems. Report any discrepancies to the lighting consultant for action prior to ordering fixtures.

Voltage to be verified by Electrical Engineer and Contractor prior to ordering of fixtures.

All external fasteners on fixtures to be temper proof and approved by lighting consultant.

Contractor to provide lock and chain for each fixture mounted under 10'-0".

**INCANDESCENT, QUARTZ AND HALOGEN FIXTURES**

**Tag      Description**

A-100    Pipe Clamp mounted flood light fixture for use with 500 watt Halogen wide flood PAR 56 lamp. Fixture shall be of die cast aluminum body with external adjustable louver and adjustable knuckle joint. Exterior finish to be standard powdercoat factory finish. Fixture to be factory outfitted with standard lens holder and Convex tempered glass lens for lamp protection. All fasteners to be of stainless steel and exterior fasteners shall be tamper proof. Fixture to be U.L. Listed suitable for wet locations and be provided with minimum 36" SJO leads with Teflon jacketed silicone impregnated glass braid insulated wire cover. Fixture to be supplied with internal red lens to match Roscolux #25 Orange Red and fasteners. Manufacture to provide tamper proof adjustment tool with each fixture.

Manufacturer:    HYDREL Cat # 4710A-IN300MOD/120-Custom Lens-Pipe Clamp  
HYDREL Control Cat.# CE3269-PAR56

Lamp & Mfg:      GE Q500PAR56WFL

Accessories:    HYDREL External Louver Cat # DLA-47, Custom Colored lens and Pipe Clamp.

Remarks:        Custom colored lens to match Roscolux #25 Orange Red.

A-101    Stanchion mounted flood light fixture for use with 500 watt Halogen wide flood PAR 56 lamp. Fixture shall be of die cast aluminum body with external adjustable louver and adjustable knuckle joint. Exterior finish to be standard powdercoat factory finish. Fixture to be factory outfitted with standard lens holder and Convex tempered glass lens for lamp protection. All fasteners to be of stainless steel and exterior fasteners shall be tamper proof. Fixture to be U.L. Listed suitable for wet locations and be provided with minimum 12" SJO leads with Teflon jacketed silicone impregnated glass braid insulated wire cover. Fixture to be supplied with internal red lens to match Roscolux #25 Orange Red and fasteners. Manufacture to provide tamper proof adjustment tool with each fixture.

Manufacturer:    HYDREL Cat # 4710A-IN300MOD/120-Custom Lens  
HYDREL Control Cat.# CE3269-PAR56

Lamp & Mfg:      GE Q500PAR56WFL

Accessories:    HYDREL External Louver Cat # DLA-47, Custom Colored lens and outfit with BEGA #342 Pole cap for 3" Ø pole top for stanchion mounting.

Remarks:        Custom colored lens to match Roscolux #25 Orange Red.

- A-102 Pipe Clamp mounted flood light fixture for use with 1000 watt Halogen narrow spot PAR 64 lamp. Fixture shall be of die cast aluminum body with Borosilicate glass lens, stainless steel latches, and standard factory finish. Fixture to allow for servicing without disrupting aiming. Fixture to be U.L. Listed suitable for wet locations and be provided with minimum 24" leads. Provide masking head / filter hood with expanded metal snoot and factory fitted custom color lens to match Roscolux #25 Orange Red.

**Manufacturer:** Northstar Lighting Cat# OQ1000C-Q/volts/custom lens/pipe clamp  
**Lamp & Mfg:** GE Q1000PAR64NSP  
**Accessories:** Masking Head / Filter Hood Cat# OQFH , Pipe Clamp and Custom Color Lens.  
**Remarks:** Custom colored lens to match Roscolux #25 Orange Red.

- A-102a Pipe Clamp mounted flood light fixture for use with 1000 watt Halogen medium flood PAR 64 lamp. Fixture shall be of die cast aluminum body with Borosilicate glass lens, stainless steel latches, and standard factory finish. Fixture to allow for servicing without disrupting aiming. Fixture to be U.L. Listed suitable for wet locations and be provided with minimum 24" leads. Provide masking head / filter hood with expanded metal snoot and factory fitted custom color lens to match Roscolux #25 Orange Red.

**Manufacturer:** Northstar Lighting Cat# OQ1000C-Q/volts/custom lens/pipe clamp  
**Lamp & Mfg:** GE Q1000PAR64MFL  
**Accessories:** Masking Head / Filter Hood Cat# OQFH , Pipe Clamp and Custom Color Lens.  
**Remarks:** Custom colored lens to match Roscolux #25 Orange Red.

- A-103 Pipe Clamp mounted flood light fixture for use with 1000 watt Halogen narrow spot PAR 64 lamp. Fixture shall be of die cast aluminum body with Borosilicate glass lens, stainless steel latches, and standard factory finish. Fixture to allow for servicing without disrupting aiming. Fixture to be U.L. Listed suitable for wet locations and be provided with minimum 24" leads. Provide masking head / filter hood with expanded metal snoot and factory fitted custom color lens to match Roscolux #20 Medium Amber.

**Manufacturer:** Northstar Lighting Cat# OQ1000C-Q/volts/custom lens/pipe clamp  
**Lamp & Mfg:** GE Q1000PAR64NSP  
**Accessories:** Masking Head / Filter Hood Cat# OQFH , Pipe Clamp and Custom Color Lens.  
**Remarks:** Custom colored lens to match Roscolux #20 Medium Amber.

A-103a Pipe Clamp mounted flood light fixture for use with 1000 watt Halogen medium flood PAR 64 lamp. Fixture shall be of die cast aluminum body with Borosilicate glass lens, stainless steel latches, and standard factory finish. Fixture to allow for servicing without disrupting aiming. Fixture to be U.L. Listed suitable for wet locations and be provided with minimum 24" leads. Provide masking head / filter hood with expanded metal snoot and factory fitted custom color lens to match Roscolux #20 Medium Amber.

**Manufacturer:** Northstar Lighting Cat# OQ1000C-Q/volts/custom lens/pipe clamp  
**Lamp & Mfg:** GE Q1000PAR64MFL  
**Accessories:** Masking Head / Filter Hood Cat# OQFH , Pipe Clamp and Custom Color Lens.  
**Remarks:** Custom colored lens to match Roscolux #20 Medium Amber.

A-104 Pipe Clamp mounted flood light fixture for use with 1000 watt Halogen narrow spot PAR 64 lamp. Fixture shall be of die cast aluminum body with Borosilicate glass lens, stainless steel latches, and standard factory finish. Fixture to allow for servicing without disrupting aiming. Fixture to be U.L. Listed suitable for wet locations and be provided with minimum 24" leads. Provide masking head / filter hood with expanded metal snoot.

**Manufacturer:** Northstar Lighting Cat# OQ1000C-Q/volts/custom lens/pipe clamp  
**Lamp & Mfg:** GE Q1000PAR64NSP  
**Accessories:** Masking Head / Filter Hood Cat# OQFH and Pipe Clamp.  
**Remarks:**

A-104a Pipe Clamp mounted flood light fixture for use with 1000 watt Halogen medium flood PAR 64 lamp. Fixture shall be of die cast aluminum body with Borosilicate glass lens, stainless steel latches, and standard factory finish. Fixture to allow for servicing without disrupting aiming. Fixture to be U.L. Listed suitable for wet locations and be provided with minimum 24" leads. Provide masking head / filter hood with expanded metal snoot.

**Manufacturer:** Northstar Lighting Cat# OQ1000C-Q/volts/custom lens/pipe clamp  
**Lamp & Mfg:** GE Q1000PAR64MFL  
**Accessories:** Masking Head / Filter Hood Cat# OQFH and Pipe Clamp.  
**Remarks:**

A-105 Surface mounted flood light fixture for use with 1000 watt Halogen narrow spot PAR 64 lamp. Fixture shall be of die cast aluminum body with Borosilicate glass lens, stainless steel latches, and standard factory finish. Fixture to allow for servicing without disrupting aiming. Fixture to be U.L. Listed suitable for wet locations and be provided with minimum 24" leads. Provide masking head / filter hood with expanded metal snoot and factory fitted custom color lens to match Roscolux #25 Orange Red.

**Manufacturer:** Northstar Lighting Cat# OQ1000C-Q/volts/custom lens  
**Lamp & Mfg:** GE Q1000PAR64NSP  
**Accessories:** Masking Head / Filter Hood Cat# OQFH and Custom Color Lens.  
**Remarks:** Custom colored lens to match Roscolux #25 Orange Red.

- A-105a Surface mounted flood light fixture for use with 1000 watt Halogen medium flood PAR 64 lamp. Fixture shall be of die cast aluminum body with Borosilicate glass lens, stainless steel latches, and standard factory finish. Fixture to allow for servicing without disrupting aiming. Fixture to be U.L. Listed suitable for wet locations and be provided with minimum 24" leads. Provide masking head / filter hood with expanded metal snoot and factory fitted custom color lens to match Roscolux #25 Orange Red.

**Manufacturer:** Northstar Lighting Cat# OQ1000C-Q/volts/custom lens  
**Lamp & Mfg:** GE Q1000PAR64MFL  
**Accessories:** Masking Head / Filter Hood Cat# OQFH and Custom Color Lens.  
**Remarks:** Custom colored lens to match Roscolux #25 Orange Red.

- A-106 Surface mounted flood light fixture for use with 1000 watt Halogen narrow spot PAR 64 lamp. Fixture shall be of die cast aluminum body with Borosilicate glass lens, stainless steel latches, and standard factory finish. Fixture to allow for servicing without disrupting aiming. Fixture to be U.L. Listed suitable for wet locations and be provided with minimum 24" leads. Provide masking head / filter hood with expanded metal snoot and factory fitted custom color lens to match Roscolux #20 Medium Amber.

**Manufacturer:** Northstar Lighting Cat# OQ1000C-Q/volts/custom lens  
**Lamp & Mfg:** GE Q1000PAR64NSP  
**Accessories:** Masking Head / Filter Hood Cat# OQFH and Custom Color Lens.  
**Remarks:** Custom colored lens to match Roscolux #20 Medium Amber.

- A-106a Surface mounted flood light fixture for use with 1000 watt Halogen medium flood PAR 64 lamp. Fixture shall be of die cast aluminum body with Borosilicate glass lens, stainless steel latches, and standard factory finish. Fixture to allow for servicing without disrupting aiming. Fixture to be U.L. Listed suitable for wet locations and be provided with minimum 24" leads. Provide masking head / filter hood with expanded metal snoot and factory fitted custom color lens to match Roscolux #20 Medium Amber.

**Manufacturer:** Northstar Lighting Cat# OQ1000C-Q/volts/custom lens  
**Lamp & Mfg:** GE Q1000PAR64MFL  
**Accessories:** Masking Head / Filter Hood Cat# OQFH and Custom Color Lens.  
**Remarks:** Custom colored lens to match Roscolux #20 Medium Amber.

- A-107 Surface mounted flood light fixture for use with 1000 watt Halogen narrow spot PAR 64 lamp. Fixture shall be of die cast aluminum body with Borosilicate glass lens, stainless steel latches, and standard factory finish. Fixture to allow for servicing without disrupting aiming. Fixture to be U.L. Listed suitable for wet locations and be provided with minimum 24" leads. Provide masking head / filter hood with expanded metal snoot.

**Manufacturer:** Northstar Lighting Cat# OQ1000C-Q/volts/custom lens  
**Lamp & Mfg:** GE Q1000PAR64NSP  
**Accessories:** Masking Head / Filter Hood Cat# OQFH  
**Remarks:**

- A-107a Surface mounted flood light fixture for use with 1000 watt Halogen medium flood PAR 64 lamp. Fixture shall be of die cast aluminum body with Borosilicate glass lens, stainless steel latches, and standard factory finish. Fixture to allow for servicing without disrupting aiming. Fixture to be U.L. Listed suitable for wet locations and be provided with minimum 24" leads. Provide masking head / filter hood with expanded metal snoot.

**Manufacturer:** Northstar Lighting Cat# OQ1000C-Q/volts/custom lens  
**Lamp & Mfg:** GE Q1000PAR64MFL  
**Accessories:** Masking Head / Filter Hood Cat# OQFH  
**Remarks:**

- A-108 Pole mounted flood light fixture for use with 1000 watt Halogen narrow spot PAR 64 lamp. Fixture shall be of die cast aluminum body with Borosilicate glass lens, stainless steel latches, and standard factory finish. Fixture to allow for servicing without disrupting aiming. Fixture to be U.L. Listed suitable for wet locations and be provided with minimum 24" leads. Provide masking head / filter hood with expanded metal snoot and factory fitted custom color lens to match Roscolux #25 Orange Red.

**Manufacturer:** Northstar Lighting Cat# OQ1000C-Q/volts/custom lens  
**Lamp & Mfg:** GE Q1000PAR64NSP  
**Accessories:** Masking Head / Filter Hood Cat# OQFH and Custom Color Lens.  
**Remarks:** Custom colored lens to match Roscolux #25 Orange Red.

- A-108a Pole mounted flood light fixture for use with 1000 watt Halogen medium flood PAR 64 lamp. Fixture shall be of die cast aluminum body with Borosilicate glass lens, stainless steel latches, and standard factory finish. Fixture to allow for servicing without disrupting aiming. Fixture to be U.L. Listed suitable for wet locations and be provided with minimum 24" leads. Provide masking head / filter hood with expanded metal snoot and factory fitted custom color lens to match Roscolux #25 Orange Red.

**Manufacturer:** Northstar Lighting Cat# OQ1000C-Q/volts/custom lens  
**Lamp & Mfg:** GE Q1000PAR64MFL  
**Accessories:** Masking Head / Filter Hood Cat# OQFH and Custom Color Lens.  
**Remarks:** Custom colored lens to match Roscolux #25 Orange Red.

- A-109 Pole mounted flood light fixture for use with 1000 watt Halogen narrow spot PAR 64 lamp. Fixture shall be of die cast aluminum body with Borosilicate glass lens, stainless steel latches, and standard factory finish. Fixture to allow for servicing without disrupting aiming. Fixture to be U.L. Listed suitable for wet locations and be provided with minimum 24" leads. Provide masking head / filter hood with expanded metal snoot and factory fitted custom color lens to match Roscolux #20 Medium Amber.

**Manufacturer:** Northstar Lighting Cat# OQ1000C-Q/volts/custom lens  
**Lamp & Mfg:** GE Q1000PAR64NSP  
**Accessories:** Masking Head / Filter Hood Cat# OQFH and Custom Color Lens.  
**Remarks:** Custom colored lens to match Roscolux #20 Medium Amber.

- A-109a Pole mounted flood light fixture for use with 1000 watt Halogen medium flood PAR 64 lamp. Fixture shall be of die cast aluminum body with Borosilicate glass lens, stainless steel latches, and standard factory finish. Fixture to allow for servicing without disrupting aiming. Fixture to be U.L. Listed suitable for wet locations and be provided with minimum 24" leads. Provide masking head / filter hood with expanded metal snoot and factory fitted custom color lens to match Roscolux #20 Medium Amber.

**Manufacturer:** Northstar Lighting Cat# OQ1000C-Q/volts/custom lens  
**Lamp & Mfg:** GE Q1000PAR64MFL  
**Accessories:** Masking Head / Filter Hood Cat# OQFH and Custom Color Lens.  
**Remarks:** Custom colored lens to match Roscolux #20 Medium Amber.

- A-110 Pole mounted flood light fixture for use with 1000 watt Halogen narrow spot PAR 64 lamp. Fixture shall be of die cast aluminum body with Borosilicate glass lens, stainless steel latches, and standard factory finish. Fixture to allow for servicing without disrupting aiming. Fixture to be U.L. Listed suitable for wet locations and be provided with minimum 24" leads. Provide masking head / filter hood with expanded metal snoot.

**Manufacturer:** Northstar Lighting Cat# OQ1000C-Q/volts/custom lens  
**Lamp & Mfg:** GE Q1000PAR64NSP  
**Accessories:** Masking Head / Filter Hood Cat# OQFH  
**Remarks:**

- A-110a Pole mounted flood light fixture for use with 1000 watt Halogen medium flood PAR 64 lamp. Fixture shall be of die cast aluminum body with Borosilicate glass lens, stainless steel latches, and standard factory finish. Fixture to allow for servicing without disrupting aiming. Fixture to be U.L. Listed suitable for wet locations and be provided with minimum 24" leads. Provide masking head / filter hood with expanded metal snoot.

**Manufacturer:** Northstar Lighting Cat# OQ1000C-Q/volts/custom lens  
**Lamp & Mfg:** GE Q1000PAR64MFL  
**Accessories:** Masking Head / Filter Hood Cat# OQFH  
**Remarks:**

- A-111 Pipe Clamp mounted flood light fixture for use with 150 watt Halogen medium flood PAR 38 lamp. Fixture shall be of die cast aluminum body with external adjustable louver and adjustable knuckle joint. Exterior finish to be custom color powdercoat finish. Fixture to be factory outfitted with standard lens holder and Convex tempered glass lens for lamp protection. All fasteners to be of stainless steel and exterior fasteners shall be tamper proof. Fixture to be U.L. Listed suitable for wet locations and be provided with minimum 36" SJO leads with Teflon jacketed silicone impregnated glass braid insulated wire cover. Fixture to be supplied with internal magenta lens to match Roscolux #46 Magenta and fasteners. Manufacturer to provide tamper proof adjustment tool with each fixture.

Manufacturer: HYDREL Cat # 4710A-IN250/120-Custom Lens-Custom Color-Pipe Clamp  
HYDREL Control Cat.# CE3269-PAR38

Lamp & Mfg: GE Q150PAR/FL°

Accessories: HYDREL External Louver Cat # DLA-47, Custom Colored lens and Pipe Clamp.

Remarks: Custom colored lens to match Roscolux #46 Magenta. Custom color fixture and clamp finish to match bridge color.

- A-112 Pipe Clamp mounted flood light fixture for use with 500 watt Halogen wide flood PAR 56 lamp. Fixture shall be of die cast aluminum body with external adjustable louver and adjustable knuckle joint. Exterior finish to be standard powdercoat factory finish. Fixture to be factory outfitted with standard lens holder and Convex tempered glass lens for lamp protection. All fasteners to be of stainless steel and exterior fasteners shall be tamper proof. Fixture to be U.L. Listed suitable for wet locations and be provided with minimum 36" SJO leads with Teflon jacketed silicone impregnated glass braid insulated wire cover. Fixture to be supplied with internal red lens to match Roscolux #20 Medium Amber and fasteners. Manufacturer to provide tamper proof adjustment tool with each fixture.

Manufacturer: HYDREL Cat # 4710A-IN300MOD/120-Custom Lens-Pipe Clamp  
HYDREL Control Cat.# CE3269-PAR56

Lamp & Mfg: GE Q500PAR56WFL

Accessories: HYDREL External Louver Cat # DLA-47, Custom Colored lens and Pipe Clamp.

Remarks: Custom colored lens to match Roscolux #20 Medium Amber.

- A-113 Stanchion mounted flood light fixture for use with 500 watt Halogen wide flood PAR 56 lamp. Fixture shall be of die cast aluminum body with external adjustable louver and adjustable knuckle joint. Exterior finish to be standard powdercoat factory finish. Fixture to be factory outfitted with standard lens holder and Convex tempered glass lens for lamp protection. All fasteners to be of stainless steel and exterior fasteners shall be tamper proof. Fixture to be U.L. Listed suitable for wet locations and be provided with minimum 12" SJO leads with Teflon jacketed silicone impregnated glass braid insulated wire cover. Fixture to be supplied with internal red lens to match Roscolux #20 Medium Amber and fasteners. Manufacturer to provide tamper proof adjustment tool with each fixture.

Manufacturer: HYDREL Cat # 4710A-IN300MOD/120-Custom Lens  
HYDREL Control Cat.# CE3269-PAR56

Lamp & Mfg: GE Q500PAR56WFL

Accessories: HYDREL External Louver Cat # DLA-47, Custom Colored lens and outfit with BEGA #342 Pole cap for 3" Ø pole top for stanchion mounting.

Remarks: Custom colored lens to match Roscolux #20 Medium Amber.

**HIGH INTENSITY DISCHARGE FIXTURES**

**Tag      Description**

H-100    Pipe Clamp mounted, small scale, exterior flood light with symmetrical flood photometrics for 70 watt medium base diffuse High Pressure Sodium Deluxe Lucalox lamp. Fixture shall be 11" diameter X 12" long and made of two piece die cast aluminum with internal heat sink finished to standard factory specifications. Fixture optics shall be full specular anodized aluminum reflector with horizontal lamp positioned with arc tube to be centered in reflector and secured with stainless steel latches. Fixture lamp enclosure shall be one piece die cast aluminum frame with internal drainage slots. Enclosure shall hold tempered glass lens with, one piece molded U-channel, high temperature silicone gasket and secured with (6) captive socket head stainless steel screws threaded into stainless steel inserts in the reflector housing. Fixture to be supplied with 3/16" stainless steel fully adjustable yoke/swivel with degree indicator and locking tamperproof set screw. Fixture shall have integral high power factor ballast rated for -20° F starting and glare shield.

Manufacturer: BEGA Cat.# 8329S-MOD to 70 watt E-17 HPS for volts

Lamp & Mfg: GE LU70/DX/D/MED

Accessories: Outfit with BEGA #430 180° Glare shield, and #280 tube clamp mount

Remarks: Modify for 70 watt HPS.

H-101    Stanchion mounted, small scale, exterior flood light with symmetrical flood photometrics for 70 watt medium base diffuse High Pressure Sodium Deluxe Lucalox lamp. Fixture shall be 11" diameter X 12" long and made of two piece die cast aluminum with internal heat sink finished to standard factory specifications. Fixture optics shall be full specular anodized aluminum reflector with horizontal lamp positioned with arc tube to be centered in reflector and secured with stainless steel latches. Fixture lamp enclosure shall be one piece die cast aluminum frame with internal drainage slots. Enclosure shall hold tempered glass lens with, one piece molded U-channel, high temperature silicone gasket and secured with (6) captive socket head stainless steel screws threaded into stainless steel inserts in the reflector housing. Fixture to be supplied with 3/16" stainless steel fully adjustable yoke/swivel with degree indicator and locking tamperproof set screw. Fixture shall have integral high power factor ballast rated for -20° F starting and glare shield.

Manufacturer: BEGA Cat.# 8329S-MOD to 70 watt E-17 HPS for volts

Lamp & Mfg: GE LU70/DX/D/MED

Accessories: Outfit with BEGA #430 180° Glare shield for 11"Ø, and #341 Pole cap for 2 3/8" dia. pole top.

Remarks: Modify for 70 watt HPS.



- H-102 Stanchion mounted, medium scale, exterior flood light with symmetrical linear photometrics for 150 watt medium base clear High Pressure Sodium Deluxe Lucalox lamp. Fixture shall be 13 3/4" diameter X 12 9/16" long and made of two piece die cast aluminum with internal heat sink finished to standard factory specifications. Fixture optics shall be full specular anodized aluminum reflector with horizontal lamp positioned with arc tube to be centered in reflector and secured with stainless steel latches. Fixture lamp enclosure shall be one piece die cast aluminum frame with internal drainage slots. Enclosure shall hold tempered glass spread lens with 14 linear prisms per inch with, one piece molded U-channel, high temperature silicone gasket and secured with (6) captive socket head stainless steel screws threaded into stainless steel inserts in the reflector housing. Fixture to be supplied with 3/16" stainless steel fully adjustable yoke/swivel with degree indicator and locking tamperproof set screw. Fixture shall have integral high power factor ballast rated for -20° F starting and glare shield.

**Manufacturer:** BEGA Cat.# 8337S - volts

**Lamp & Mfg:** GE LU150/DX/MED

**Accessories:** Outfit with BEGA #431 180° Glare shield for 13 3/4"Ø, and #341 Pole cap for 2 3/8" dia. pole top.

**Remarks:**

- H-103 Stanchion mounted, small scale, exterior flood light with symmetrical linear photometrics for 70 watt medium base clear High Pressure Sodium Deluxe Lucalox lamp. Fixture shall be 11" diameter X 12" long and made of two piece die cast aluminum with internal heat sink finished to standard factory specifications. Fixture optics shall be full specular anodized aluminum reflector with horizontal lamp positioned with arc tube to be centered in reflector and secured with stainless steel latches. Fixture lamp enclosure shall be one piece die cast aluminum frame with internal drainage slots. Enclosure shall hold tempered glass spread lens with 14 linear prisms per inch with, one piece molded U-channel, high temperature silicone gasket and secured with (6) captive socket head stainless steel screws threaded into stainless steel inserts in the reflector housing. Fixture to be supplied with 3/16" stainless steel fully adjustable yoke/swivel with degree indicator and locking tamperproof set screw. Fixture shall have integral high power factor ballast rated for -20° F starting and glare shield.

**Manufacturer:** BEGA Cat.# 8331S-MOD to 70 watt E-17 HPS for volts

**Lamp & Mfg:** GE LU70/DX/MED

**Accessories:** Outfit with BEGA #430 180° Glare shield for 11"Ø, and #341 Pole cap for 2 3/8" dia. pole top.

**Remarks:** Modify for 70 watt HPS.

**END OF SCHEDULE**

**General Notes:**

The Contractor shall verify lighting fixture clearance in all interior and exterior mounting conditions and compatibility with structural systems. Report any discrepancies to the lighting consultant for action prior to ordering fixtures.

**INCANDESCENT, QUARTZ AND HALOGEN FIXTURES**

Tag	Description
-----	-------------

A-100	DELETED
-------	---------

**HIGH INTENSITY DISCHARGE FIXTURES**

Tag	Description
-----	-------------

H-100	Pole mounted large flood light with spot distribution for 1000 watt Metal Halide Par Lamp. Fixture shall be two piece die cast aluminum with Borosilicate glass linear lens with 9° x 9° beam spread at 50% of maximum candlepower, stainless steel latches, and standard factory finish. Fixture shall have remote high power factor ballast rated for -20° F and U.L. Listed for wet location. Fixture to allow for servicing without disrupting aiming. Provide masking head / filter hood with expanded metal snoot and factory fitted custom medium blue dichroic color filter to match Roscolux #80.
-------	--

Manufacturer: North Star Lighting Cat # OQ1000C/volts/OQFH/custom color filter  
Lamp & Mfg: GE CSI1000/SB/G38  
Accessories: Masking Head / Filter Hood Cat # OQFH  
Remarks: Provide extra Type "S" lens.

H-101	Pole mounted large flood light with spot distribution for 1000 watt Metal Halide Par Lamp. Fixture shall be two piece die cast aluminum with Borosilicate glass linear lens with 9° x 9° beam spread at 50% of maximum candlepower, stainless steel latches, and standard factory finish. Fixture shall have remote high power factor ballast rated for -20° F and U.L. Listed for wet location. Fixture to allow for servicing without disrupting aiming. Provide masking head / filter hood with expanded metal snoot and factory fitted custom purple dichroic color filter to match Roscolux #358.
-------	--

Manufacturer: North Star Lighting Cat # OQ1000C/volts/OQFH/custom color filter  
Lamp & Mfg: GE CSI1000/SB/G38  
Accessories: Masking Head / Filter Hood Cat # OQFH  
Remarks:

H-101a Pole mounted large flood light with linear distribution for 1000 watt Metal Halide Par Lamp. Fixture shall be two piece die cast aluminum with Borosilicate glass linear lens with 23° x 14° beam spread at 50% of maximum candlepower, stainless steel latches, and standard factory finish. Fixture shall have remote high power factor ballast rated for -20° F and U.L. Listed for wet location. Fixture to allow for servicing without disrupting aiming. Provide masking head / filter hood with expanded metal snoot and factory fitted custom purple dichroic color filter to match Roscolux #358.

**Manufacturer:** North Star Lighting Cat # OQ1000P/volts/OQFH/custom color filter  
**Lamp & Mfg:** GE CSI1000/SB/G38  
**Accessories:** Masking Head / Filter Hood Cat # OQFH  
**Remarks:** Provide extra Type "C" lens.

H-102 Surface Tenon mounted large vertical flood light for 400 watt High Pressure Sodium Lucalox lamp. Fixture shall be two piece die cast aluminum with specular Alzak optics, tempered glass lens and standard powdercoat finish. Fixture shall have U.L. Listing for wet location and integral high power factor ballast rated for -20° F starting and formed 1/16" thick aluminum Grid Louver with matching powdercoat finish and dichroic color lens to match Roscolux #23 Orange.

**Manufacturer:** KIM Cat # AFL7/400HPSvolts-BL-P  
**Lamp & Mfg:** GE LU400  
**Accessories:** Surface Mount Tenon Cat. # SMT/BL-P, Grid Louver for AFL8 Cat.# GL8/BL-P-MOD  
**Remarks:** Provide tamper proof external fasteners. Contact Mark McKinney, Rosco Laboratories, Inc., 1135 N. Highland Avenue, Hollywood, CA, Phone: 213-462-2233, Fax: 213-462-3338 for dichoric filters.

H-103 Pipe Clamp mounted large flood light with linear distribution for 1000 watt Metal Halide Par Lamp. Fixture shall be two piece die cast aluminum with Borosilicate glass linear lens with 23° x 14° beam spread at 50% of maximum candlepower, stainless steel latches, and standard factory finish. Fixture shall have remote high power factor ballast rated for -20° F and U.L. Listed for wet location. Fixture to allow for servicing without disrupting aiming. Provide masking head / filter hood with expanded metal snoot and factory fitted custom medium blue dichroic color filter to match Roscolux #80.

**Manufacturer:** North Star Lighting Cat # OQ1000P/volts/OQFH/custom color filter  
**Lamp & Mfg:** GE CSI1000/SB/G38  
**Accessories:** Masking Head / Filter Hood Cat # OQFH and Pipe Clamp  
**Remarks:**

- H-104 Pipe Clamp mounted large flood light with linear distribution for 1000 watt Metal Halide Par Lamp. Fixture shall be two piece die cast aluminum with Borosilicate glass linear lens with 23° x 14° beam spread at 50% of maximum candlepower, stainless steel latches, and standard factory finish. Fixture shall have remote high power factor ballast rated for -20° F and U.L. Listed for wet location. Fixture to allow for servicing without disrupting aiming. Provide masking head / filter hood with expanded metal snoot and factory fitted custom purple dichroic color filter to match Roscolux #358.

**Manufacturer:** North Star Lighting Cat # OQ1000P/volts/OQFH/custom color filter  
**Lamp & Mfg:** GE CSI1000/SB/G38  
**Accessories:** Masking Head / Filter Hood Cat # OQFH and Pipe Clamp  
**Remarks:**

- H-105 Surface mounted large flood light with linear distribution for 1000 watt Metal Halide Par Lamp. Fixture shall be two piece die cast aluminum with custom Borosilicate glass linear lens with 4° x 20° beam spread at 50% of maximum candlepower, stainless steel latches, and standard factory finish. Fixture shall have remote high power factor ballast rated for -20° F and U.L. Listed for wet location. Fixture to allow for servicing without disrupting aiming. Provide masking head / filter hood with expanded metal snoot and factory fitted custom purple dichroic color filter to match Roscolux #358.

**Manufacturer:** North Star Lighting Cat # OQ1000custom lens/volts/OQFH/custom color filter  
**Lamp & Mfg:** GE CSI1000/SB/G38  
**Accessories:** Masking Head / Filter Hood Cat # OQFH  
**Remarks:**

- H-106 Yoke mounted medium search light with 24 1/2" dia. X 24" in length dimensions for 1000 watt Xenon lamp with color temperature of 6000° Kelvin. Fixture to have standard base constructed of corrosion resistant aluminum with sliding stop allow fixture to have 360° rotation without damaging power supply wires. Fixture body to be constructed of marine grade corrosion resistant material with a hinged front door and removable rear dome for servicing. Reflector shall be precision, parabolic, and constructed of nickel with rhodium finish for a 1° beam spread, the capability of opening to a 4° beam spread with lamp adjustment and 65 million candle power with 1000 watt Xenon lamp. Fixture lens to be made of heat treated tempered glass and sealed high temperature gasketing. Fixture finish shall be heat resistant matte black paint on the interior and white enamel paint on the exterior including base parts. Fixture to be supplied with required DC ballasted power supply with "Auto-Ignition" from timer switch. Fixture to be supplied with means to lock fixture in position after aiming.

**Manufacturer:** The Carlisle & Finch Co. Cat# XE9663  
**Lamp & Mfg:** 1000 watt 1000TRC Xenon lamp with 1500 hours warranted life.  
**Accessories:** # IPS1/T-ER - DC Power Supply "modified for Auto-Ignition capability", and C7544 - Control Station.  
**Remarks:** Fixture to be controlled by Tracker Application software on standard lighting console with DMX 512 Protocol.

- H-107 DELETED

- H-108 Yoke mounted large flood light with stadium oval distribution for 2000 watt double ended Metal Halide Lamp. Fixture shall be two piece die cast aluminum with high reflectance coated glass primary reflector, Alglas finished aluminum secondary front reflector and standard factory finish. Fixture shall be equipped with shutdown circuiting for lens breakage, integral high power factor ballast rated for -20° F and U.L. Listed for wet location. Fixture to allow for servicing without disrupting aiming.

**Manufacturer:** GE Lighting Systems Cat.# ULTS-02-M-volts-A-S01-Options

**Lamp & Mfg:** GE MQI2000/T9/40

**Accessories:**

**Remarks:**

**END OF SCHEDULE**

**CONRAIL (NORFOLK SOUTHERN) BRIDGE**  
**Lighting Fixture Schedule**

- H-103, H-104 & H-105

Floodlight stile fixture with 400 watt, 240 volts high pressure sodium lamps.

- H-106

Light fixture with 70 watt, 240 volts high pressure sodium lamps.

WYLAND WHALE MURAL PARK  
at Cleveland Public Power Lake Road Plant  
North Marginal Road, Cleveland, Ohio

Lighting Fixture Schedule

Tag    Description

A-1

FLOODLIGHTS

The die-cast aluminum housing shall be heavy-duty (NEMA) weatherproof manufacture. Ballast shall be integral type. Seals and gaskets shall be provided for complete unit to prevent the entry of contaminants. Lens shall be of high-impact, thermal shock resistant glass. Multi-volt floodlights shall be furnished with twist lock type receptacles.

Vandal Shield

Vandal shields for floodlights shall be of impact resistant polycarbonate to be bolted to the cover or lens frame.

Mounting Assembly

Mounting assembly shall be of cast aluminum construction in two sections. Top section attached to floodlight housing shall be of serrated knuckle design with positive lock position/stop capability, lower section shall have matching serrations and shall be attached to the upper section and shall be a slipfitter capable of fitting over a 2-3/8" pipe. Lower section shall be marked in 10° segments. Cable entry to the fixture shall be made through an external wireway, entering through a weatherproof strain relief bushing.

Exterior Coating

Floodlights shall be coated with a powder coat thermoset acrylic baked enamel formulated to provide no appreciable fading over a period of five (5) years. Coating shall be two to four mils in thickness, and be applied after the surface has been thoroughly cleaned to assure proper adhesion. The coating shall be light gray in color.

Lamp:        1000 watt Metal Halide

WYLAND WHALE MURAL PARK  
at Cleveland Public Power Lake Road Plant  
North Marginal Road, Cleveland, Ohio

Lighting Fixture Schedule

Tag    Description

A-2

Luminaires

Ornamental lighting luminaires shall be glare free, energy efficient and UV stabilized for color clarity. The luminaires shall be integrally ballasted for 240V operation of High Pressure Sodium or Metal Halide lamps of various wattages with button type photocontrol, as designated on the bid sheet. Post top fitter shall be of fluted design, be black in color and shall accept a standard 3" diameter tenon.

Acorn style luminaire shall be similar in design and appearance to the W. J. Whatley, Inc. model 1004.

Lamp:    175 watt Metal Halide

Voltage supply is 240 volts.



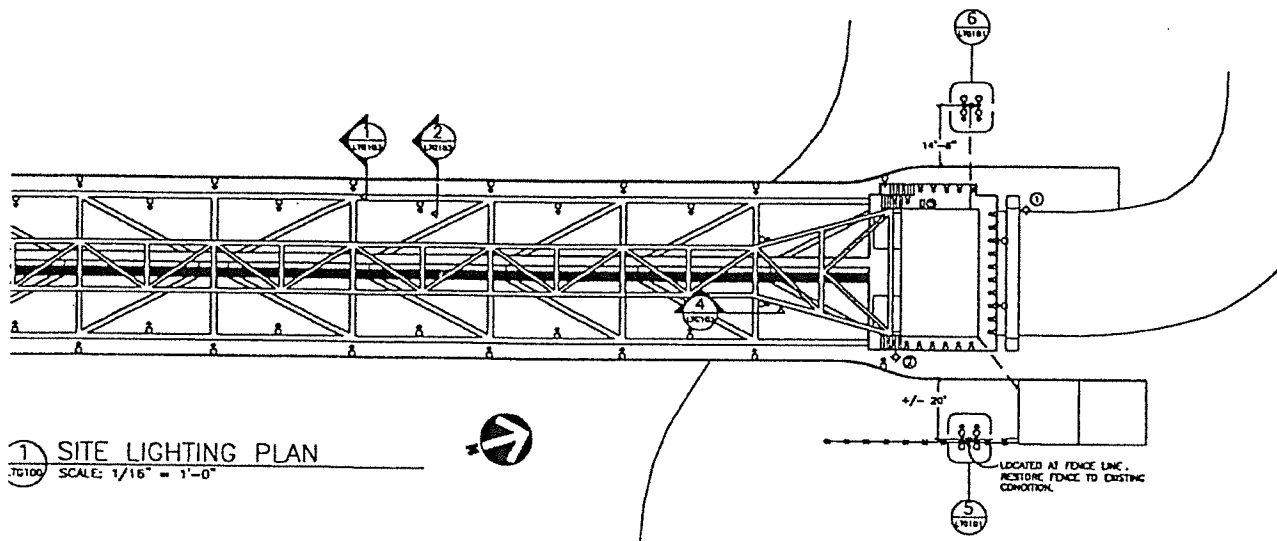
Addendum No. 1

# EXHIBIT B

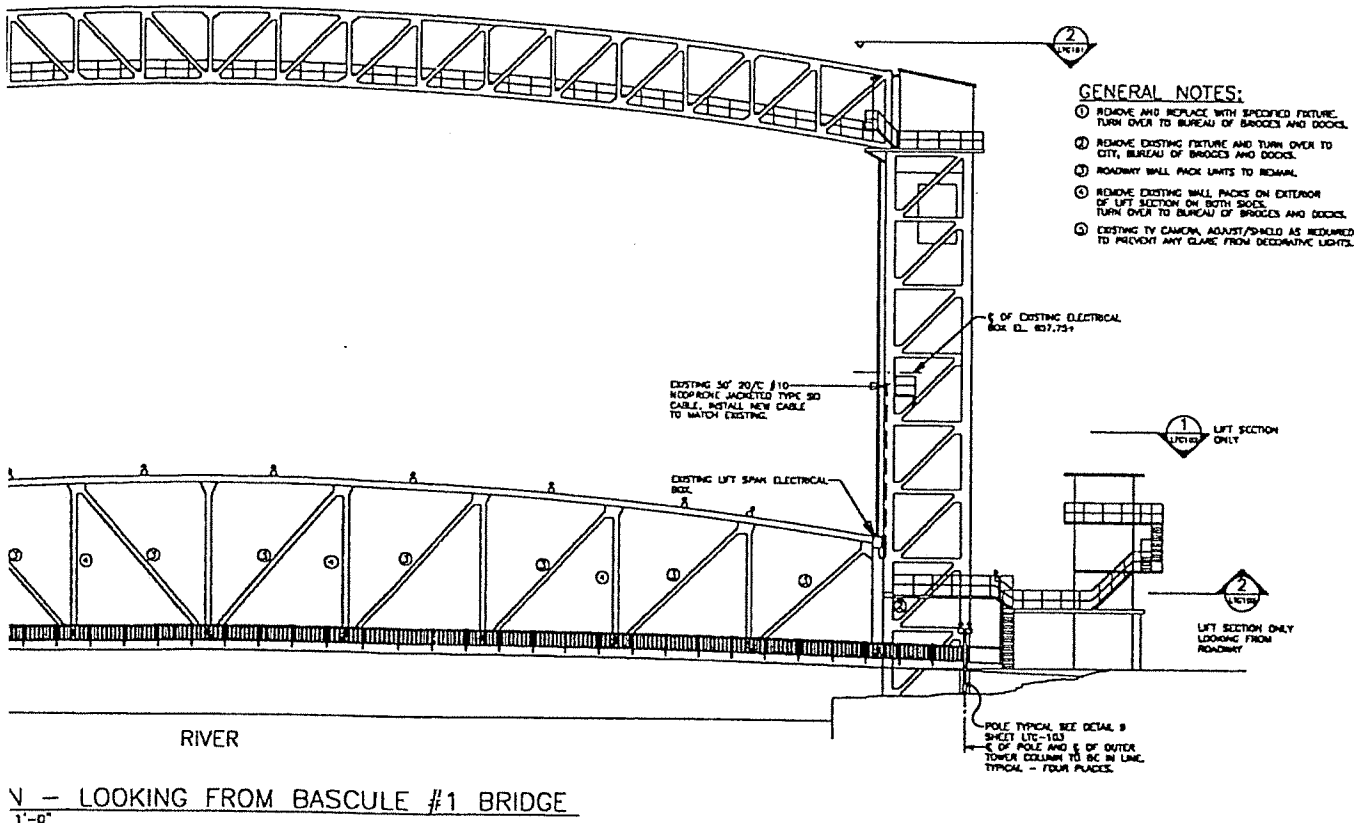
Decorative Bridge Lighting Tag # Description

Contains 70 Pages

LOT 192:1



1 SITE LIGHTING PLAN  
SCALE: 1/16" = 1'-0"



GENERAL NOTES:

- 1 REMOVE AND REPLACE WITH SPECIFIED FIXTURE. TURN OVER TO BUREAU OF BRIDGES AND DOCKS.
- 2 REMOVE EXISTING FIXTURE AND TURN OVER TO CITY, BUREAU OF BRIDGES AND DOCKS.
- 3 REMOVE EXISTING WALL PACK LIGHTS TO REMAIN.
- 4 REMOVE EXISTING WALL PACKS ON EXTERIOR OF LIFT SECTION ON BOTH SIDES. TURN OVER TO BUREAU OF BRIDGES AND DOCKS.
- 5 EXISTING TV CAMERA ADJUST/SHIELD AS NECESSARY TO PREVENT ANY GLARE FROM DECORATIVE LIGHTS.

8' OF EXISTING ELECTRICAL BOX CL. 457.75'

EXISTING 30' 20/10 WIRELESS JACKETED TYPE 90 CABLE. INSTALL NEW CABLE TO MATCH EXISTING.

EXISTING LIFT SPAN ELECTRICAL BOX

1 LIFT SECTION ONLY

2 LIFT SECTION ONLY LOOKING FROM ROADWAY

POLE TYPICAL SEE DETAIL 9 SHEET LTC-103 8' OF POLE AND 8' OF OUTER TOWER COLUMN TO BE IN LINE TYPICAL - FOUR PLACES

Ross De Alessi  
Lighting Design  
2015-Bureau Avenue Suite 200  
Boulder, Washington 98721  
PHONE 411-0870  
CELL 411-8828 Fax

WILLOW AVENUE BRIDGE  
ELEVATION AND LIGHTING PLAN

REVISIONS

DATE	DESCRIPTION
2/12/98	COMMUNITY ADDRESS

DRAWN BY: B.K.L.  
DATE: 2/20/98  
SCALE: 1/16" = 1'-0"

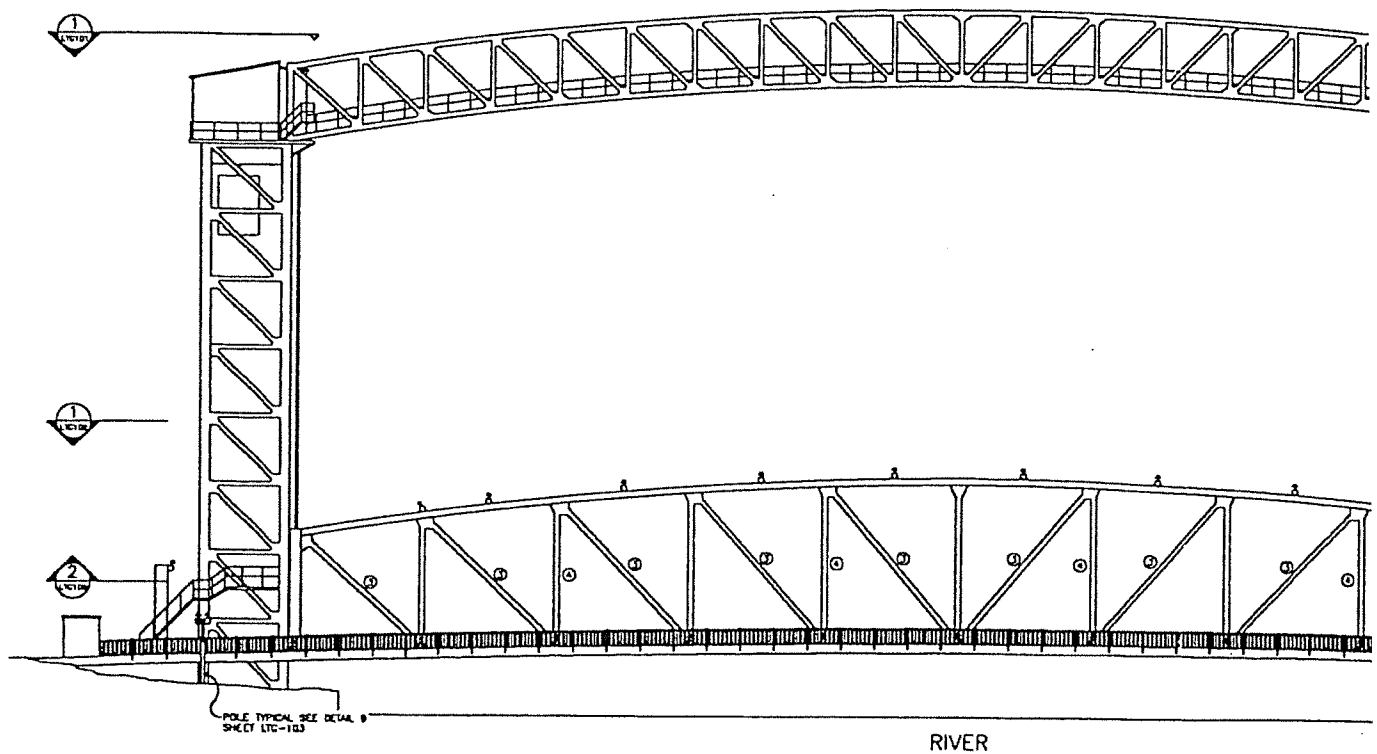
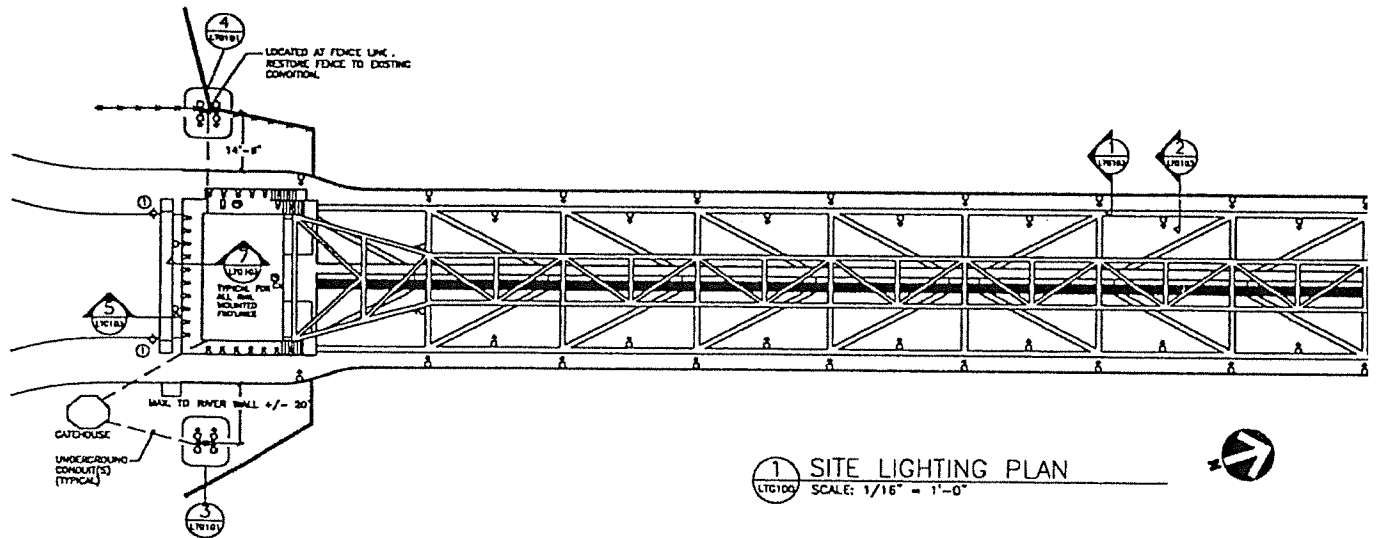
FILE NAME:  
Wltg-100.dwg

SHEET

LTC-100

PAGES: 14

# PLOT 192:1



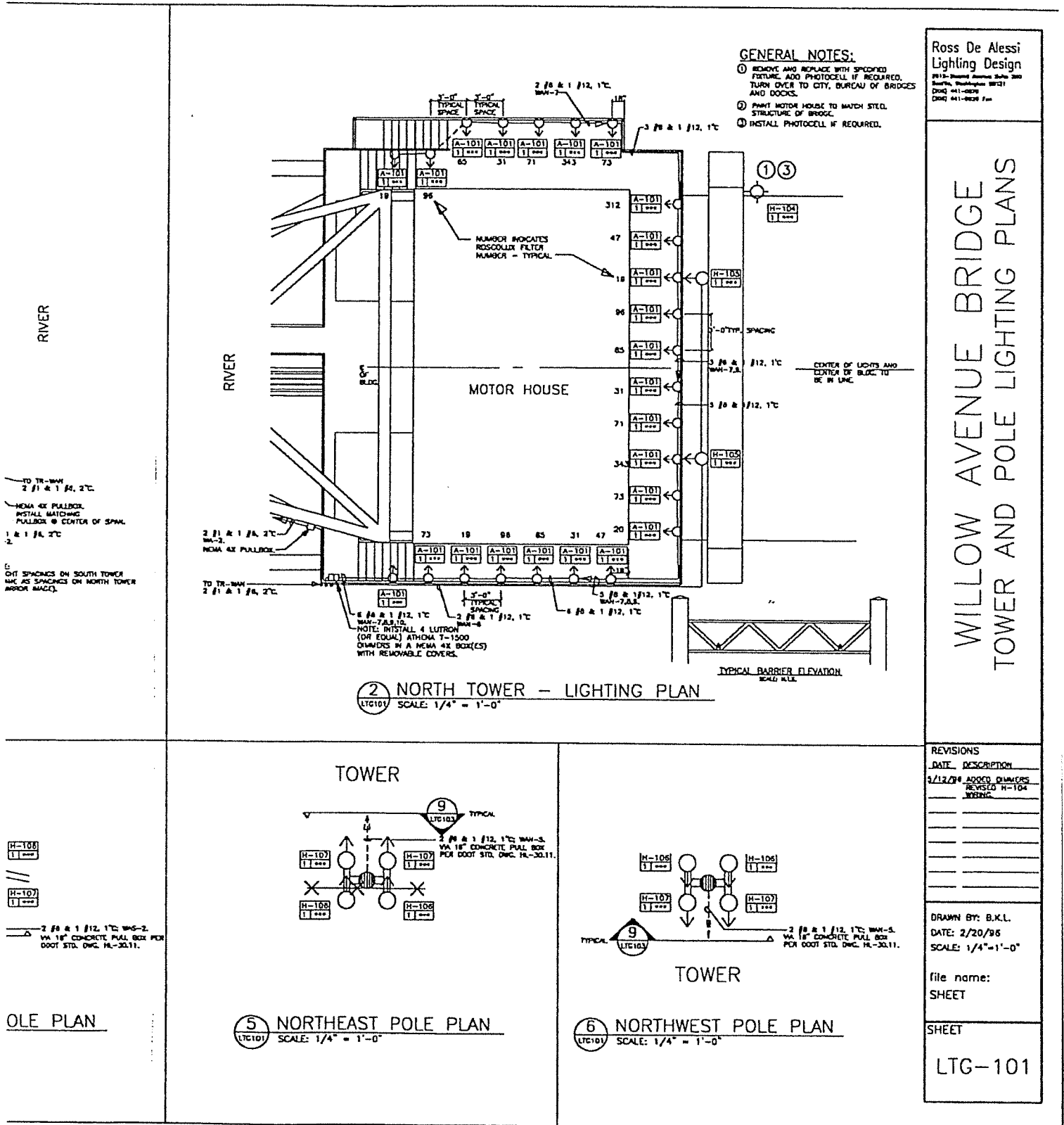
HOWARD NEEDLES TAMMEN & BERGENOFF  
ARCHITECTS ENGINEERS PLANNERS

**HNTB**

MADE BY: REC DATE: 2-21-98  
DRAWN BY: REC DATE: 2-11-98  
CHECKED BY: REC DATE: 2-11-98  
SCALE: 1/16" = 1'-0"

P:\PROJECTS\BROCK\23318\MILLOW\MILTS-100

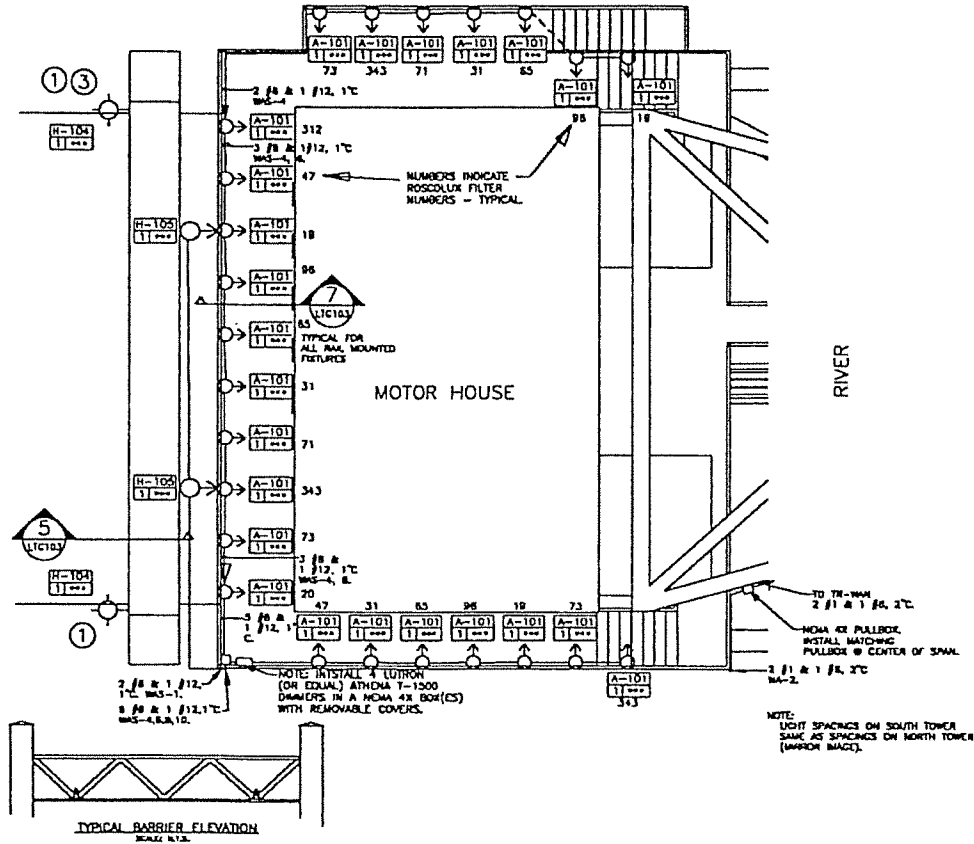
# PLOT 1:48



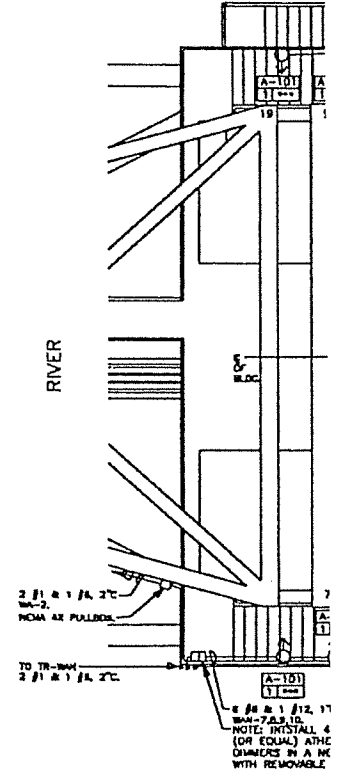
Willow Avenue Bridge  
Tower and Pole Lighting Plans

Ross De Alessi  
Lighting Design  
2015 - Second Avenue Bridge 200  
Seattle, Washington WA 98101  
Phone: 415-400-7070  
Fax: 415-400-7070

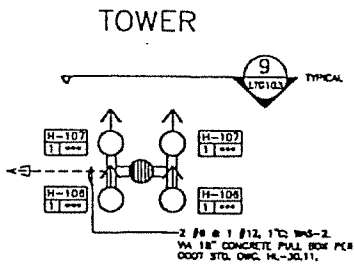
PLOT 1:4



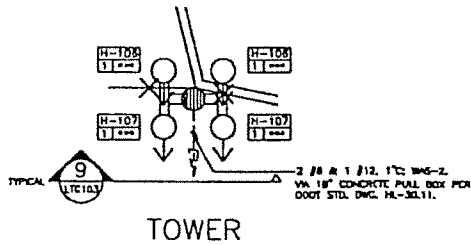
1 SOUTH TOWER - LIGHTING PLAN  
LTC101 SCALE: 1/4" = 1'-0"



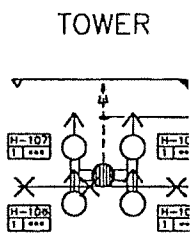
2 NOI  
LTG101 SCALE



3 SOUTHEAST POLE PLAN  
LYC101 SCALE: 1/4" = 1'-0"



4 SOUTHWEST POLE PLAN  
LTC101 SCALE: 1/4" = 1'-0"



5 NORTH EAST POLI  
SCALE: 1/4" = 1'-0"

# Ross De Alessi Lighting Design

2815 Second Avenue Suite 280  
Seattle, Washington 98121  
(206) 441-0870  
(206) 441-9826 Fax

## WILLOW AVENUE BRIDGE LIFT SECTION LIGHTING PLANS

### REVISIONS

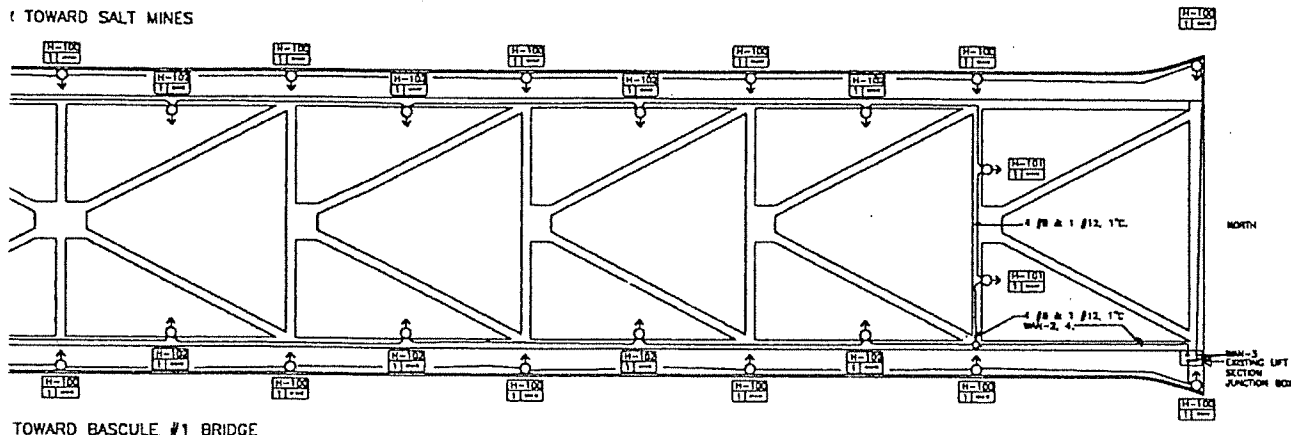
DATE	DESCRIPTION
5/12/96	ADDED BALANCING NOTE


B.K.L.  
DATE: 2/26/96  
SCALE: 1/16"=1'-0"  
FILE NAME:  
Ltg-02r1.dwg

SHEET

LTG-102

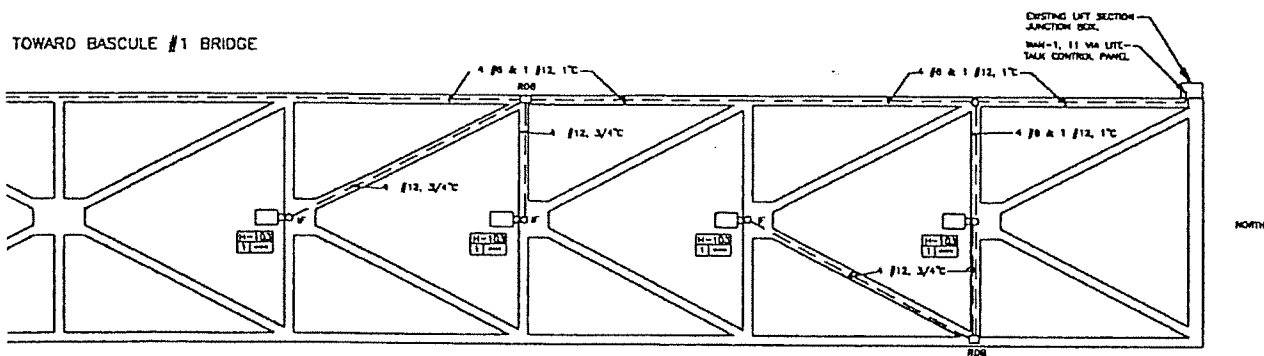
TOWARD SALT MINES



TOWARD BASCULE #1 BRIDGE

SECTION LIGHTING PLAN  
1'-0"

TOWARD BASCULE #1 BRIDGE



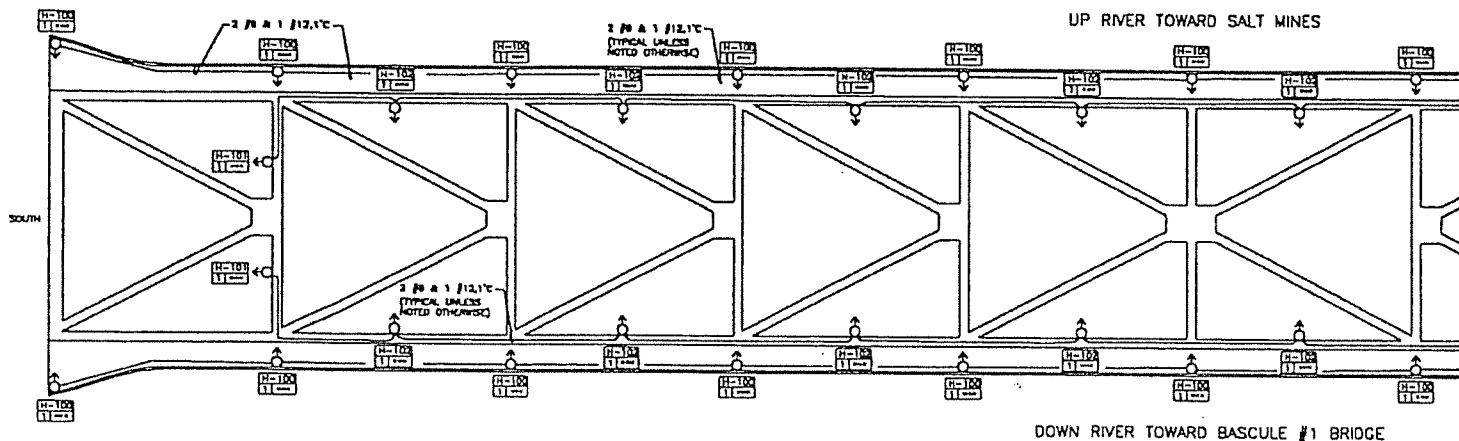
TOWARD SALT MINES

□ REMOTE DRIVING BALLAST - TYPICAL FOR A.  
H-100 H-101  
H-102 H-103

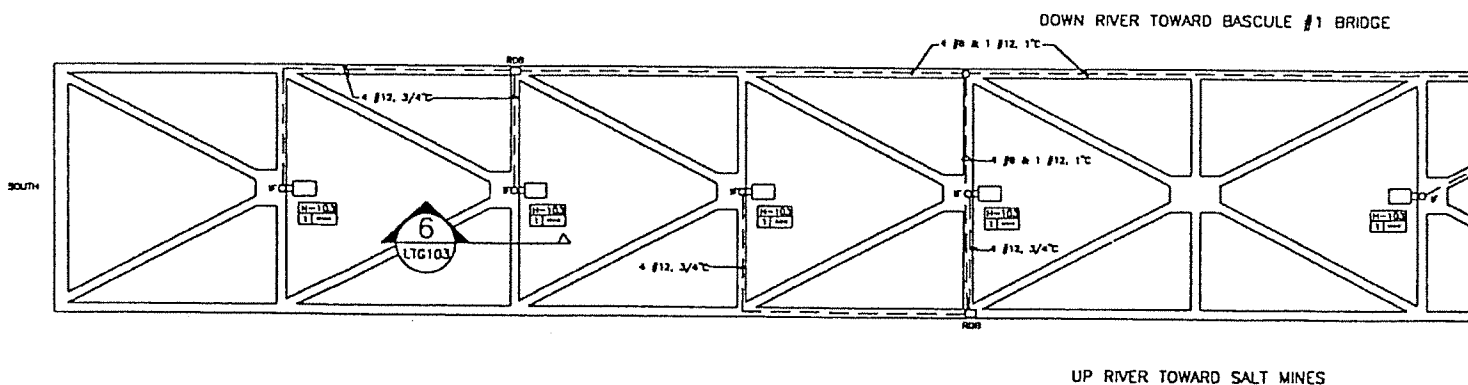
NOTE: ALL WEIGHT ADDED TO THE LIFT SECTION OF THE BRIDGE SHALL BE BALANCED ABOUT THE CENTER OF GRAVITY OF THE LIFT SECTION. CONDUIT, WIRE, LIGHT FIXTURES, FITTINGS, JUNCTION BOXES, ETC. SHALL BE WEIGHTED BEFORE INSTALLATION AND THE APPROPRIATE WEIGHT ADDED TO THE COUNTERWEIGHTS.

MANAGEMENT LIGHTING SHALL REMAIN ON AND IN PLACE AT ALL TIMES.

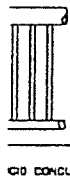
LOOKING UP FROM ROADWAY



① LIFT SECTION LIGHTING PLAN  
 LTG102 SCALE: 3/32" = 1'-0"

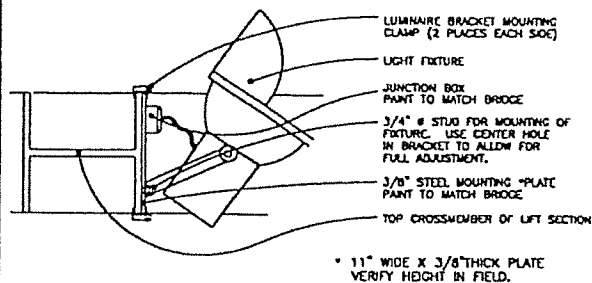


② LIFT SECTION - LOOKING UP FROM ROA  
 LTG102 SCALE: 3/32" = 1'-0"



CONDUIT

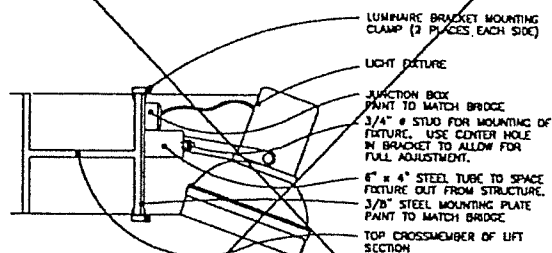
UP.



\* 11" WIDE X 3/8" THICK PLATE  
VERIFY HEIGHT IN FIELD.

CONTRACTOR TO VERIFY DIMENSIONS

2 SECTION - CONNECTION SPAN UPLIGHTING  
ATOP LIFT SECTION  
SCALE: 1" = 1'-0"

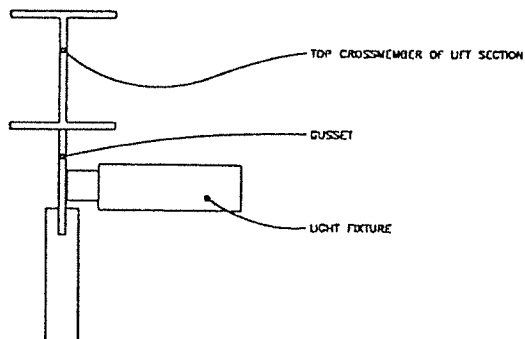


DELETED

CONTRACTOR TO VERIFY DIMENSIONS

3 SECTION - LIGHT CURTAIN DOWNLIGHTING  
ATOP LIFT SECTION  
SCALE: N.T.S.

NG PLATE  
RBER  
MOUNTING  
MOUNTING OF  
TER HOLE  
DW FOR



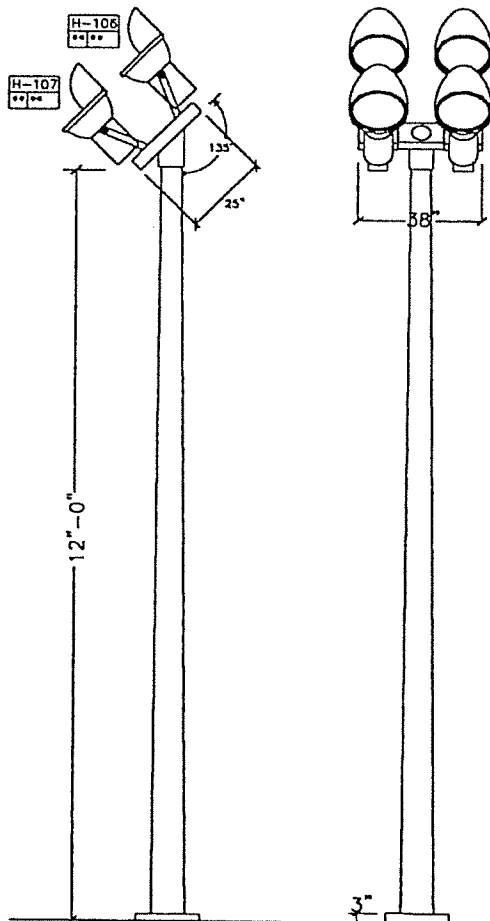
6 SECTION - ROADWAY LIGHTING @ GUSSET AT  
CROSSMEMBER ATOP LIFT SECTION  
SCALE: 1" = 1'-0"

SIONS  
BARRIER



IS AT LENS

ED



9 POLE ELEVATION - TYPICAL  
SCALE: 1/2" = 1'-0"

Ross De Alessi  
Lighting Design

2815 Second Avenue Suite 200  
Seattle, Washington 98121  
(206) 441-0870  
(206) 441-9928 Fax

WILLOW AVENUE BRIDGE  
SECTIONS AND DETAILS

REVISIONS  
DATE DESCRIPTION  
3/12/95 ADDED DIMENSIONS

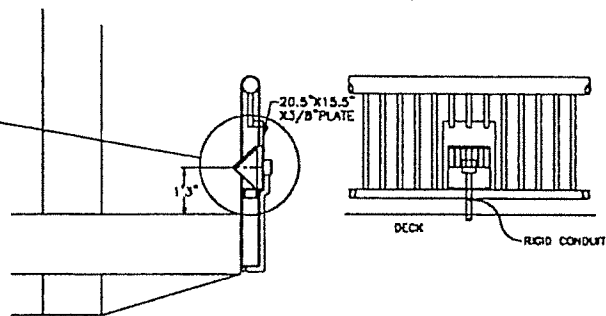
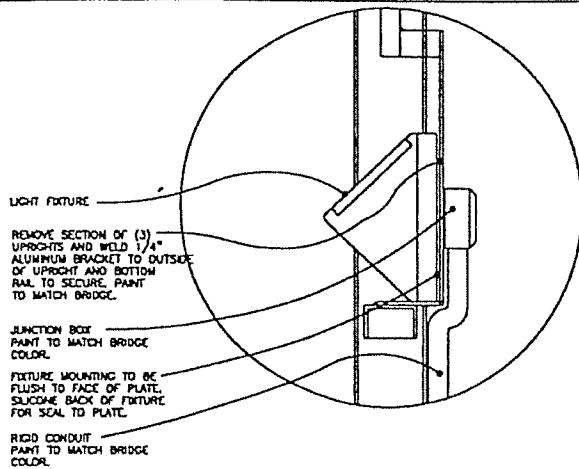
DRAWN BY: B.K.L.  
DATE: 2/26/96  
SCALE: 1/2" = 1'-0"

FILE NAME:  
Ltg103r1.dwg

SHEET

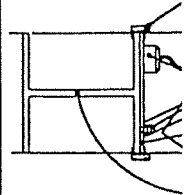
LTG-103



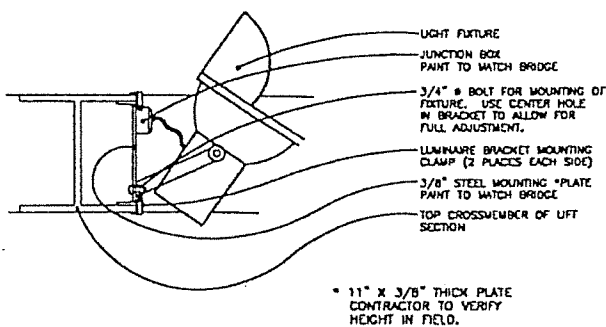


NOTE: FIXTURE MOUNTS WITH LENS UP.

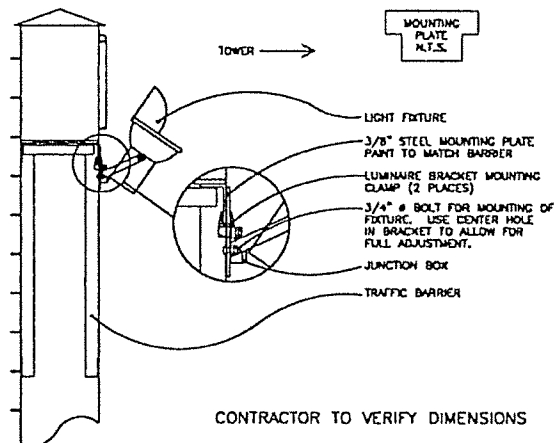
1 SECTION - LIFT SECTION TYPICAL UPLIGHT AT HANDRAIL  
LTC-103 SCALE: 1/2\"/>



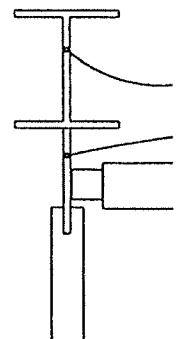
2 SECTION - ATOP LIFT  
LTC-103 SCALE: 1\"/>



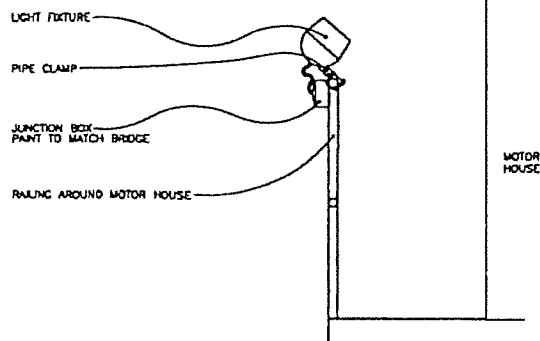
4 SECTION - INSIDE TOWER UPLIGHTING ATOP LIFT SECTION  
LTC-103 SCALE: 1\"/>



5 SECTION - TOWER UPLIGHT MOUNTING @ TRAFFIC BARRIER  
LTC-103 SCALE: 1/2\"/>

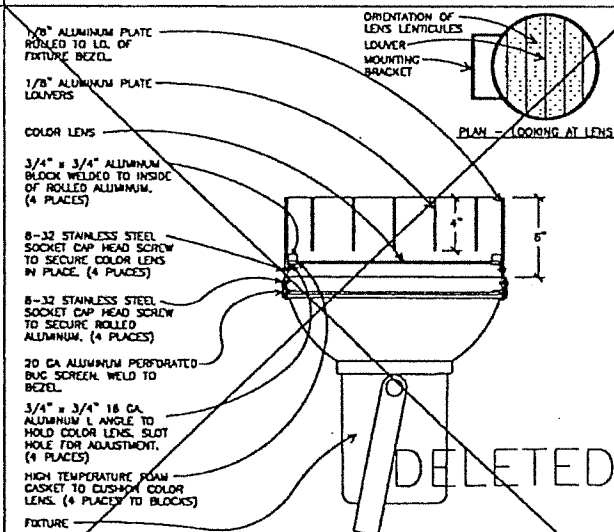


6 SECTION - CROSSMEMB  
LTC-103 SCALE: 1\"/>



NOTE: PAINT MOTOR HOUSE TO MATCH STEEL STRUCTURE OF BRIDGE

7 SECTION - UPLIGHTING OF MOTOR HOUSE TOP RAILING AROUND MOTOR HOUSE  
LTC-103 SCALE: 1\"/>



8 CUSTOM LENS ATTACHMENT (TYPICAL RAIN LIGHTING)  
LTC-103 SCALE: N.T.S.

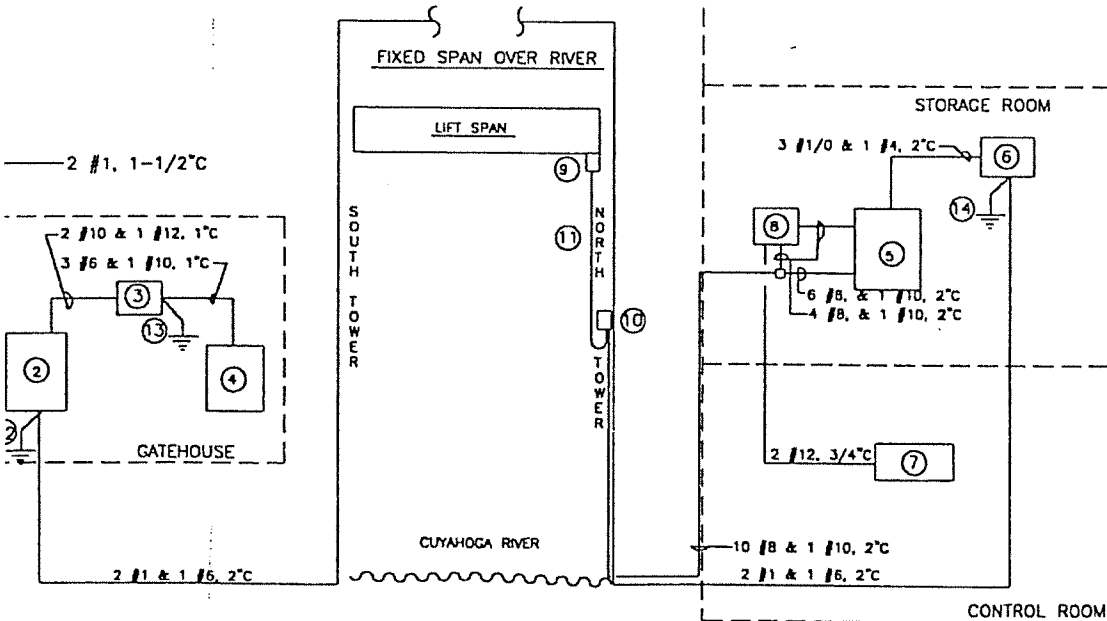
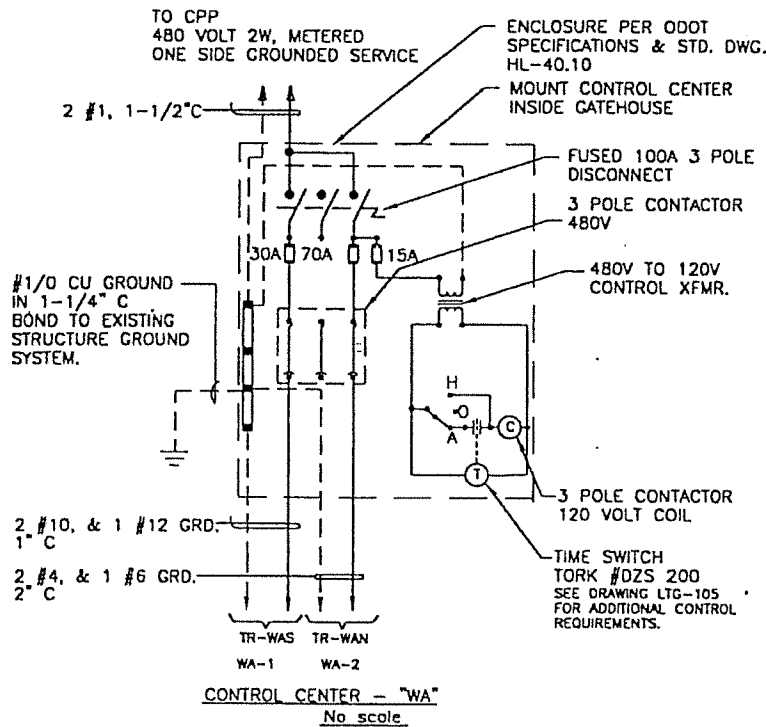
## BRIDGE

W000		AMPERE RATING		200A WCB		PANEL NO.		W44	
			%	END	DCT	WA	DESCRIPTION		
		2	12			1176	UPLIGHTS 8-H102		
		1	10		②	1176	2-H101		
		6	12			1176	UPLIGHTS 8-H102		
		0	10		①	1176	2-H101		
		10	12			312	NORTH BARRIER		
		12	10		③	312	2-H105 (2-250W MH)		
		14	10		④	900	N. MOTOR MSE. 6-A101		
		16	10		⑤	900	N. MOTOR MSE. 6-A101		
		18	12				SPACE		
		20	12		⑬		SPACE		
		22	10				SPACE		
		24	10		⑮		SPACE		
		26	10				SPACE		

<u>E.W.D.</u>	<u>SUMMARY</u>		
<u>8.750</u>	<u>7-2</u>	P OCTS. CALIB. <input checked="" type="checkbox"/>	<u>2GA</u>
<u>8.875</u>	<u>5-1</u>	P OCTS. CALIB. <input checked="" type="checkbox"/>	<u>2GA</u>
<u>          </u>		P OCTS. CALIB. <input checked="" type="checkbox"/>	
<u>17.635</u>		P OCTS. CALIB. <input checked="" type="checkbox"/>	
<u>          </u>		P OCTS. CALIB. <input checked="" type="checkbox"/>	
<u>17.635</u>		P OCTS. CALIB. <input checked="" type="checkbox"/>	
<u>          </u>	<u>3-2</u>	P SPACES	<u>          </u>
<u>          </u>		TOTAL NUMBER OF POLES	<u>25</u>

MOOD		AMPERE RATING		SEA WCB		PANEL NO.		WAS	
		C	END	DXT	VA	DESCRIPTION			
2	2				1248	SOUTH POLES			
4	0			②	1248	4-H-16 4-H-117			
6	20			③	1200	S. MOTOR HSE. R-A101			
8	20			④	1200	S. MOTOR HSE. R-A101			
10	20			⑤	1200	S. MOTOR HSE. R-A101			
12						SPACE			
14						SPACE			
16						SPACE			
18						SPACE			

E.M.D.	SUMMARY	
3850	2-2	P CCTS. CAULB. ● 204
3850	2-1	P CCTS. CAULB. ● 204
		P CCTS. CAULB. ●
7920		P CCTS. CAULB. ●
		P CCTS. CAULB. ●
7920		P CCTS. CAULB. ●
		P CCTS. CAULB. ●
	11- 1P SPACES	
	TOTAL NUMBER OF POLES	18



SINGLE LINE DIAGRAM - 480V 1Ø - 120/240V 1Ø - 3W

# WILLOW AVENUE BRIDGE NOTES AND SCHEDULES

REVISIONS	
<u>DATE</u>	<u>DESCRIPTION</u>
5/12/96	ADDRESSED COMMENTS.
	REVISED CATS
	WAN-6,WAS-1

FILE NAME  
Ltg-104.dwg

SHEET

LTG-104

## DECORATIVE LIGHTING NOTES—WILLOW AVENUE BRIDGE

## SPECIFICATIONS

THESE NOTES ARE SUPPLEMENTAL TO ITEMS 825 AND 713 OF THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS AND TO ATTACHED DIVISION 18 SPECIFICATIONS. IN CASE OF ANY CONFLICT THE MORE STRINGENT REQUIREMENT WILL APPLY.

## GENERAL

THIS PROJECT WILL RECEIVE NEW 240/120 VOLT, SINGLE PHASE 3 WIRE, SECONDARY SERVICE. FROM:

CLEVELAND PUBLIC POWER (C.P.P.)  
LAKESIDE AVENUE  
CLEVELAND, OHIO 44114

THE CONTRACTOR WILL NOT BE REQUIRED TO FURNISH OR INSTALL THE PRIMARY DISTRIBUTION LINES, TRANSFORMERS OR TRANSFORMER POLES. THE CONTRACTOR SHALL PROVIDE SECONDARY CONNECTIONS, FEEDERS, CONNECTION TO BRANCH CIRCUITS AND GROUNDING AS HEREINAFTER SPECIFIED AND SHOWN ON THE PLANS AND ASSURE THAT ALL POWER SERVICE REQUIREMENTS WITH CPP ARE PROVIDED.

## LUMINAIRES

LUMINAIRES SHALL BE AS SPECIFIED ON THE ATTACHED LIGHTING FIXTURE SCHEDULE.  
H.I.D. LUMINAIRES ON WILLOW AVE. BRIDGE SHALL HAVE 240V BALLASTS.  
INCANDESCENT LUMINAIRES ON WILLOW AVE. BRIDGE SHALL OPERATE AT 120V.

## FIXTURE MOUNTING

FIXTURE MOUNTING SHALL BE AS DETAILED ON THE PLANS.

## CONNECTOR KITS

CABLE CONNECTIONS IN JUNCTION BOXES SHALL BE ACCOMPLISHED BY THE USE OF APPROVED FACTORY PREASSEMBLED CABLE CONNECTOR KITS.

UNTIL CABLE CONNECTIONS HAVE BEEN COMPLETED, ALL CABLE CONNECTOR KITS AND EXPOSED CABLE ENDS SHALL BE ADEQUATELY PROTECTED BY ENCLOSING IN PLASTIC BAGS, TAPING OR OTHER APPROVED MEANS.

### CONDUIT ON STRUCTURE

EXPANSION FITTINGS FOR LIGHTING CIRCUIT CONDUIT ON BRIDGE (PVC SCH. 80)  
SHALL BE CARLON TYPE E945 OR E955 AS REQUIRED OR EQUAL  
APPROVED BY THE ENGINEER.

## CONTROL CENTERS

CONTRACTOR SHALL FURNISH CONTROL CENTER(S) "WA" AS SHOWN ON THE PLANS TO SERVE THE DECORATIVE LIGHTING.

THE CONTROL CENTER(S) SHALL BE A COMPLETE PACKAGE CONTAINING ALL THAT IS NECESSARY TO FUNCTION AS AN INDEPENDENT CONTROL UNIT, INCLUDING ALL INTERNAL WIRING CONNECTIONS.

THE CONTRACTOR SHALL PROVIDE ELECTRICAL SERVICE FROM THE CONTROL CENTER(S) TO THE LIGHTING CIRCUITS, INSTALLED IN THE MANNER SHOWN ON THE PLANS. THIS SHALL INCLUDE FURNISHING AND INSTALLING CONDUITS, LIGHTNING ARRESTOR, AND GROUNDING, ALL WIRING OF THE SIZE INDICATED ON THE PLANS, AND ALL OTHER MATERIALS AND INCIDENTALS AS MAY BE REQUIRED TO COMPLETE THE WORK.

PADLOCK AND KEYS

THE ENCLOSURES SHALL BE FURNISHED WITH A PADLOCK. THE PADLOCK SHALL BE EITHER BRASS OR BRONZE EQUAL TO MASTER NO. 4 BKA OR WILSON BOHANNON 660A AND SHALL BE KEYED IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION SECTION 844.10(4). PARAGRAPH 3. PROVIDE TWO (2) SETS OF KEYS TO THE CITY, BUREAU OF BRIDGES AND DOCKS.

KEYED NOTES:

- (1) 480V - 1 PHASE SERVICE WITH METERING BY CPP.
- (2) CONTROL CENTER "WA" - SEE DETAIL.
- (3) TR-WAS; 480V TO 240/120V 1 PHASE 3W; 10 KVA ACWE #T-2-53516-3S OR EQUAL
- (4) PANEL "WAS" - SEE SCHEDULE.
- (5) PANEL "WAN" - SEE SCHEDULE.
- (6) TR-WAN; 480V TO 240/120V 1 PHASE 3W; 25 KVA ACWE #T-2-53518-3S OR EQUAL
- (7) EXISTING CONTROL RELAY CABINET. INSTALL AUXILIARY CONTACT (NO) AT NORTH BARRIER GATE CONTROL RELAY. RUN CONTROL WIRES 2 #12, 3/4" TO LITE-TALK CONTROL CABINET IN STORAGE ROOM ABOVE.
- (8) LITE-TALK CONTROL PANEL - SEE SPECIFICATIONS.
- (9) EXISTING LIFT SPAN JUNCTION/TERMINAL BOX.
- (10) EXISTING NORTH TOWER JUNCTION/TERMINAL BOX.
- (11) INSTALL 50' 20/C #10 TYPE "SO" CABLE TO MATCH EXISTING CABLE INSTALLATION. CABLE WILL BE FURNISHED BY THE CITY. OBTAIN CABLE AT THE CITY GARAGE ON E. 67TH & CENTRAL AVENUE. COORDINATE INSTALLATION WITH CITY. CALL 432-6040.
- (12) #8 GROUND, 1" TO 10' x 3/4" DIA. COPPER CLAD DRIVEN STEEL GROUND ROD, MINIMUM 2' BELOW GRADE.
- (13) #8 GROUND, 1" C, CONNECT TO SERVICE GROUND.
- (14) #8 GROUND, 1" C, CONNECT TO BUILDING SERVICE GROUND SYSTEM.

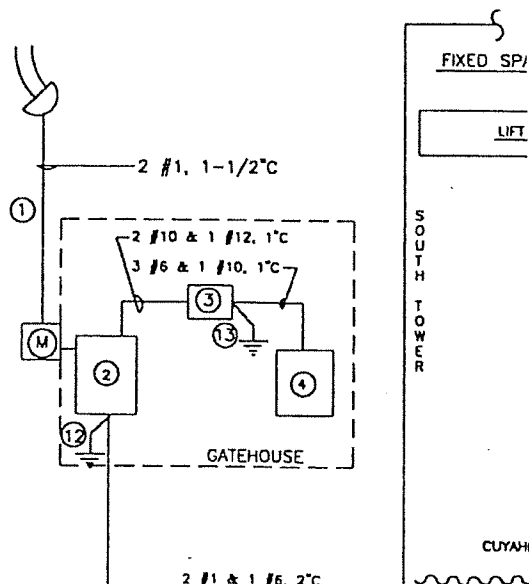
120/240		Y	1	W	TYPE 302 0 MOOD		AMPERE RATING		200A MCB		PANEL NO.	WCH
DESCRIPTION	VA	CKT	END	Y	Y	Y	END	CKT	VA	DESCRIPTION		
ROADWAY LIGHTING	1536			2	1		2					
8-H103 (175W MH)	1536	①		2	1		2	①	1178	UPLIGHTS 8-H102		
SIDEWALK UPLIGHTS	1440			2	1		2					
20-H-100 (100W MH)	1440	②		2	1		2	②	1178	2-H101		
NORTH POLES 4-H106	1248			2	1		2					
4-H107 (250W MH)	1248	③		2	1		2	③	1178	UPLIGHTS 8-H102		
N. MOTOR HSE. 6-A101	900	④		2	1		2	④	1178	2-H101		
N. MOTOR HSE. 6-A101	900	⑤		2	1		2	⑤	312	NORTH BARRIER		
METALK CONTROL PANEL	300	⑥		2	1		2	⑥	312	2-H105 (2-250W MH)		
SPARE		⑦		2	1		2	⑦	900	N. MOTOR HSE. 6-A101		
SPACE		⑧		2	1		2	⑧	900	N. MOTOR HSE. 6-A101		
SPACE		⑨		2	1		2	⑨		SPARE		
SPACE		⑩		2	1		2	⑩		SPACE		

LOADS	TR-WAN	480V	WATTS	AMPS	E.M.D.	SUMMARY	
L1	TO 120/240V		8588		8.760	7-2	P CETS. CAUB. @ 20A
L2	25 KVA		8804		8.878	8-1	P CETS. CAUB. @ 20A
TOTAL CONNECTED			17492	72.9	17.638		P CETS. CAUB. @
SPACES @ .50% CAL.							P CETS. CAUB. @
TOTAL			23,000	104.2/77.9	17.638		P CETS. CAUB. @
FEEDER AND CONDUIT SIZE						3-2	P SPACES
							TOTAL NUMBER OF SPACES
							26

FEEDER AND CONDUIT SIZE 3 #1/0 &amp; 1 #4, 2"

120/240		V 1		W 3		TYPE SQ D H000		AMPERE RATING		SCA MCB		PANEL NO.		WAS	
DESCRIPTION	VA	CKT	END	1/2	2/2	1/2	END	CKT	VA	DESCRIPTION					
SOUTH BARRIER 2-H105	112	①	2	1	2	①	1248		1248	SOUTH POLES					
(2-250MH)	312		3	1	2	①	1248		1248	4-H116, 4-H117					
SPACE		②	4	1	2	①	1200		1200	S. MOTOR HSE, 8-A101					
			5	1	2	①	1200		1200	S. MOTOR HSE, 8-A101					
SPACE			6	1	2	①	1200		1200	S. MOTOR HSE, 8-A101					
SPACE			7	1	2	①	1200		1200	S. MOTOR HSE, 8-A101					
SPACE			8	1	2	①	1200		1200	S. MOTOR HSE, 8-A101					
SPACE			9	1	2	①	1200		1200	S. MOTOR HSE, 8-A101					
SPACE			10	1	2	①	1200		1200	S. MOTOR HSE, 8-A101					
SPACE			11	1	2	①	1200		1200	S. MOTOR HSE, 8-A101					
SPACE			12	1	2	①	1200		1200	S. MOTOR HSE, 8-A101					
SPACE			13	1	2	①	1200		1200	S. MOTOR HSE, 8-A101					
SPACE			14	1	2	①	1200		1200	S. MOTOR HSE, 8-A101					
SPACE			15	1	2	①	1200		1200	S. MOTOR HSE, 8-A101					
SPACE			16	1	2	①	1200		1200	S. MOTOR HSE, 8-A101					
SPACE			17	1	2	①	1200		1200	S. MOTOR HSE, 8-A101					
SPACE			18	1	2	①	1200		1200	S. MOTOR HSE, 8-A101					

LOADS	TR-WAS	480V	WATTS	AMPS	E.M.D.	SUMMARY	SPACES
L1	TO	120/240V	3960		3960	2-2	P CCTS. CAUB. ● 20A
L2	10	KVA	2760		3960	3-1	P CCTS. CAUB. ● 20A
TOTAL CONNECTED			6720	29.2/33	7920		P CCTS. CAUB. ●
SPACES @ 50% CAL.							P CCTS. CAUB. ●
TOTAL			10,000	41.7/33	7920		P CCTS. CAUB. ●
FEEDER AND CONDUIT SIZE 3 #8 +1 NO. 10, IN 1" C						11-	1P SPACES
						TOTAL NUMBER OF POLES	10

FEEDER AND CONDUIT SIZE 3/8 + 1 NO. 10, IN 1

HOWARD NEEDLES TAMMEN & BERGENOFF  
ARCHITECTS ENGINEERS PLANNERS

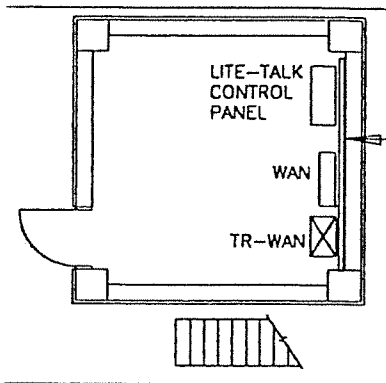
## HINTS

MADE BY: FLC DATE: 2-20-99  
DRAWN BY: FLC DATE: 2-20-99  
CHECKED BY: FLC DATE: 2-20-99

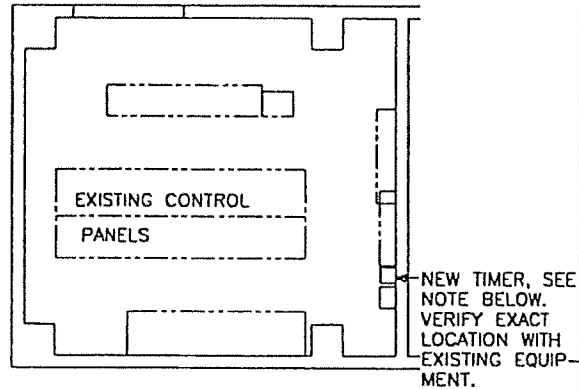
SECRET/NOFORN

SINGLE LINE DIAGRAM -

---



RAGE ROOM-2ND FLOOR  
| SIDE



EXISTING EQUIPMENT ROOM-1ST FLOOR  
NORTH SIDE

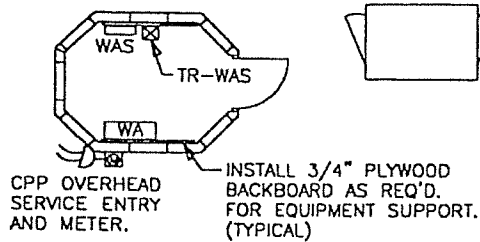
NOTE: INSTALL NEW YORK TIME SWITCH (OR EQUAL) MODEL #DZS 200-2 IN EXISTING EQUIPMENT ROOM, WITH 2-TORK #TRP 5 RELAYS. WIRE TIMER/RELAYS TO INTERCEPT EXISTING ROADWAY LIGHTING CIRCUITS (2-240V-20A) BETWEEN EXISTING PHOTO-CELL CONTROL AND ROADWAY LIGHTS. SET TIMER TO TURN ROADWAY LIGHTING CIRCUIT OFF 5-10 MINUTES AFTER DECORATIVE LIGHTING GOES ON, AND TO TURN ON 5-10 MINUTES BEFORE DECORATIVE LIGHTING GOES OFF. SYNCHRONIZE TIMER WITH TIME SWITCH FOR CONTROL CENTER "WA". SEE ROSS DE ALESSI LIGHTING DESIGN TIME SCHEDULE.

WILLOW AVENUE BRIDGE  
PARTIAL PLANS

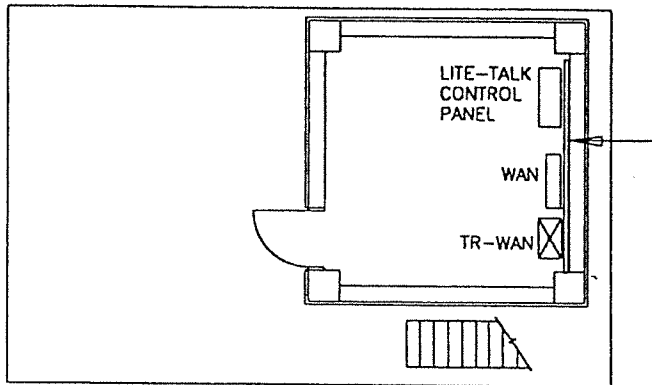
[illegible]

PLOT 1:48

NOTE:  
SEE DRAWING LTG-104  
FOR EQUIPMENT DETAILS.

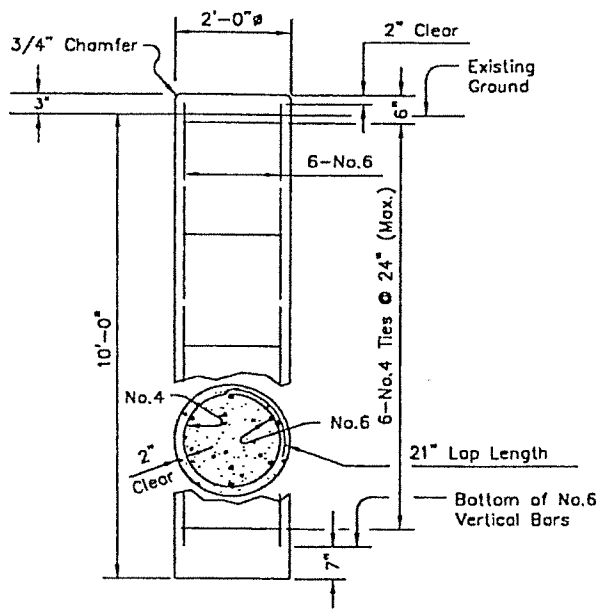


EXISTING  
GATEKEEPER HOUSE  
SOUTH SIDE



EXISTING STORAGE ROOM-2ND FLOOR  
NORTH SIDE

# WILLOW AVENUE BRIDGE STRUCTURAL DETAILS



DRILLED SHAFT ELEVATION  
(Four required)

## GENERAL NOTES:

- 1) Refer to Lighting Plan Sheets LTG-100 thru LTG-103 for Willow Avenue Bridge for additional details.

## DRILLED SHAFT NOTES:

- 1) For location of pole foundations, see Sht. LTG-100.
- 2) The drilled shaft design was based on an assumed anchor bolt diameter of 1" and a maximum anchor bolt circle of 18". If the anchor bolt diameter exceeds 1" or the anchor bolt circle exceeds 18", then a larger diameter shaft with same depth and similar reinforcing can be used.
- 3) For additional drilled shaft notes, see Sht. STR-101.
- 4) Use Grade 60 Epoxy coated rebars.  $f_c = 4,000$  psi.

## REVISIONS

DATE DESCRIPTION

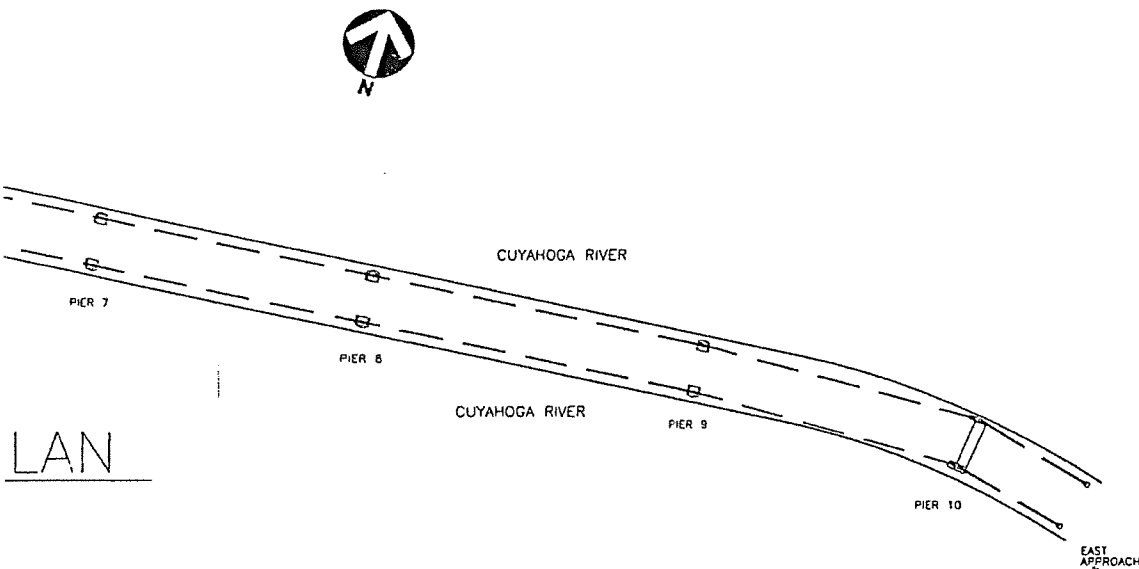

FILE NAME:  
Str-100.dwg

SHEET

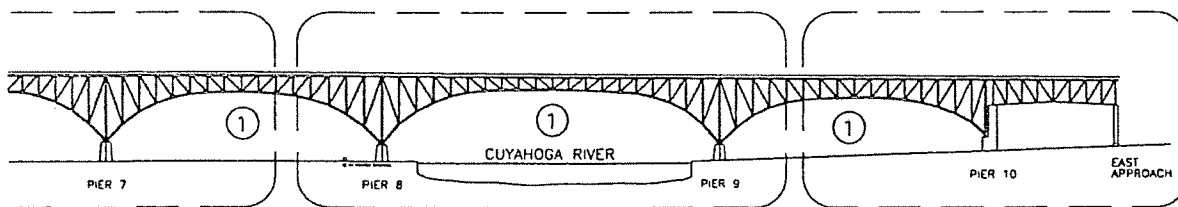
STR-100



DRILLED SHAFT ELEVATION  
(Four required)



LAN



LTG-101

SHEET LTG-102

SHEET LTG-103

ION

# MAIN AVENUE BRIDGE PIER AND ARCH - LIGHTING PLAN

## REVISIONS

DATE DESCRIPTION


DRAWN BY: WJV

DATE: 3/18/98

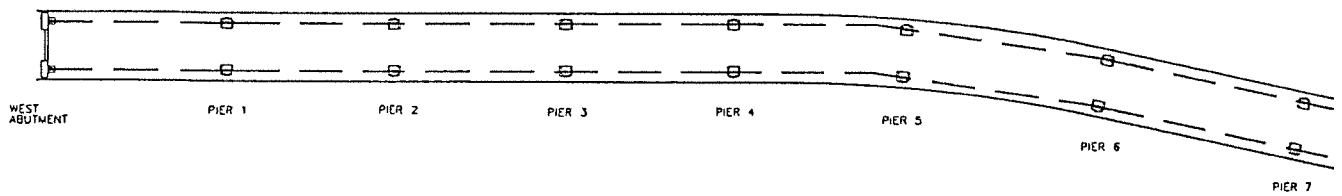
SCALE: 1" = 100'

SHEET

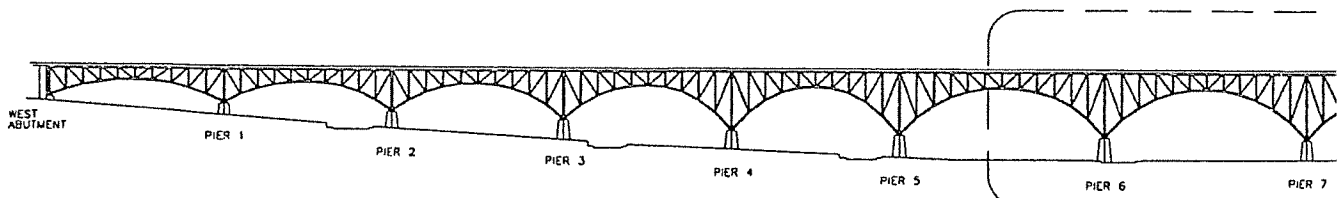
LTG-100

PAGES: 14





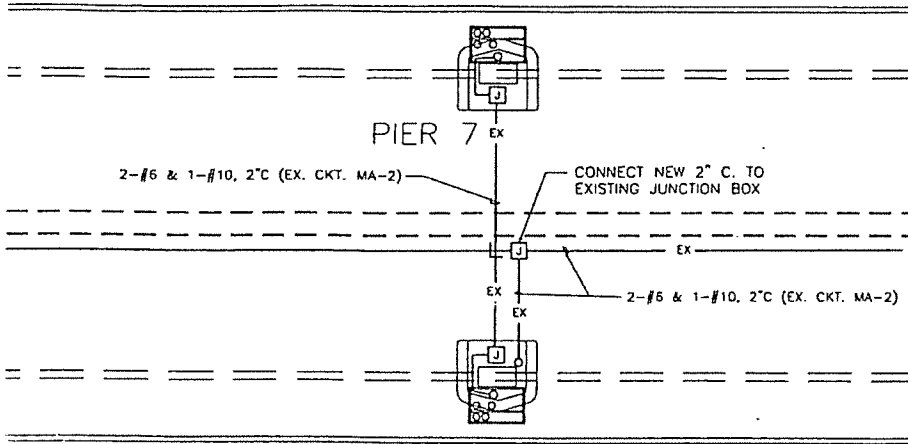
SITE PLAN



SHEET LTG-10

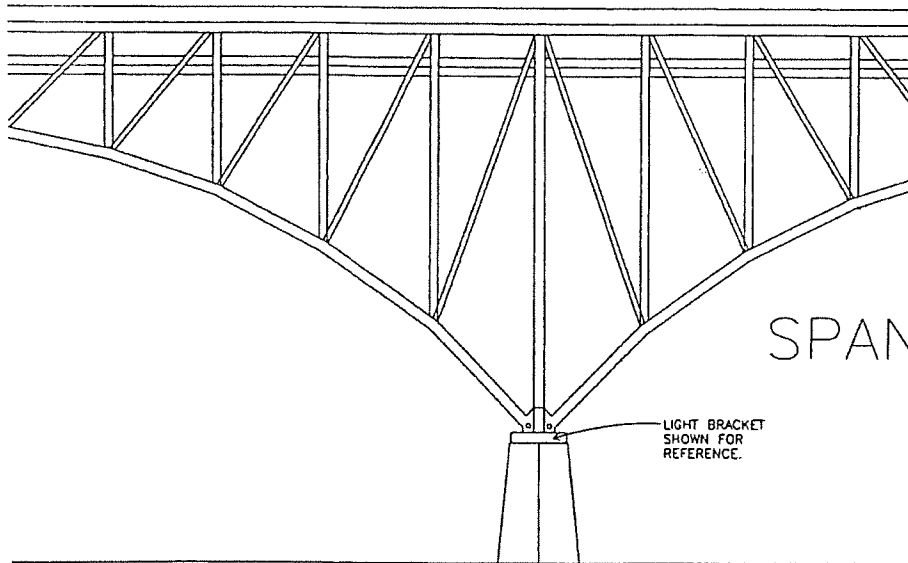
ELEVATION

TYPE "C" SEE DETAIL 3 - SHEET LTG-104



TYPE "D" SEE DETAIL 4 - SHEET LTG-104

NOTE: (10) NEW LIGHTING FIXTURES AT PIER 7  
SHALL BE CONNECTED TO EXISTING CKT. MA-2.  
CKT. MA-2 SHALL BE EXTENDED FOR (8) NEW  
LIGHTING FIXTURES AT PIER 6.



ELEVATION

MAIN AVENUE BRIDGE  
PIER AND ARCH - LIGHTING PLAN

REVISIONS

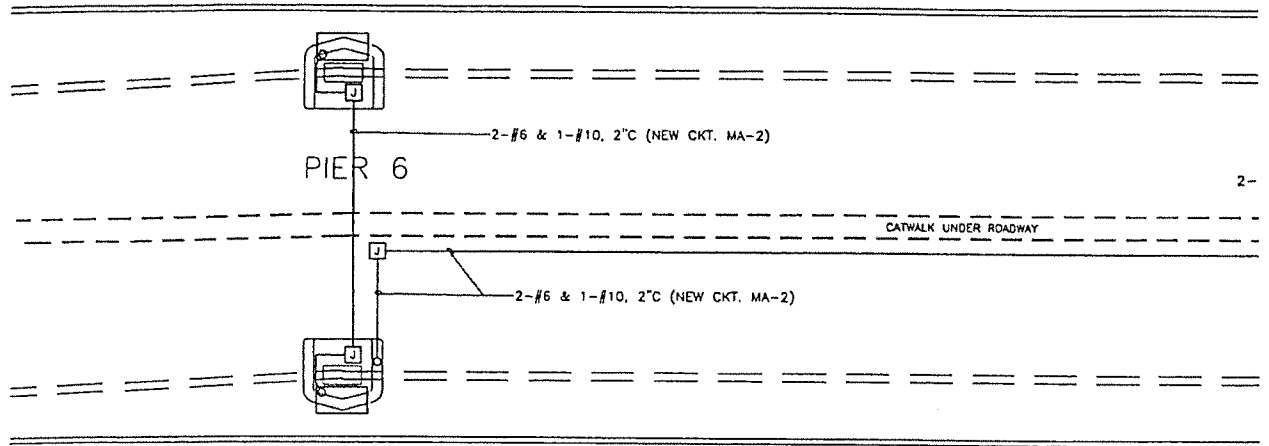
DATE	DESCRIPTION

DATE: 3/18/98  
SCALE: 1/16"=1'-0"

SHEET

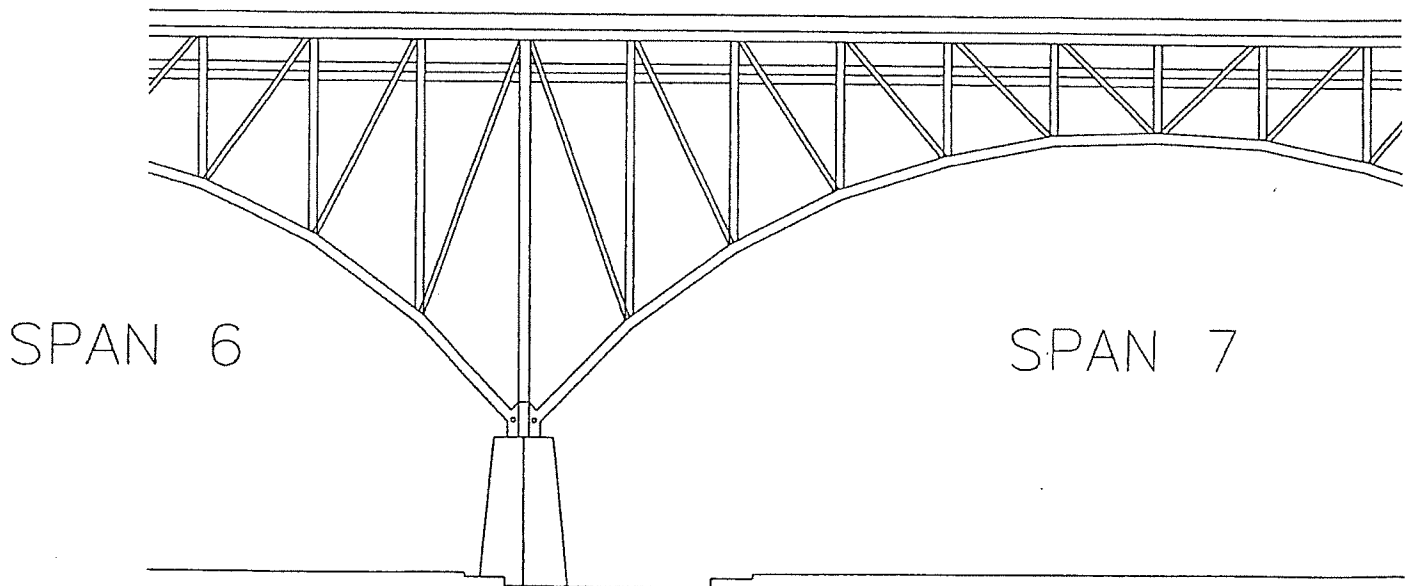
LTG-101

TYPE "B" SEE DETAIL 2 - SHEET LTG-104



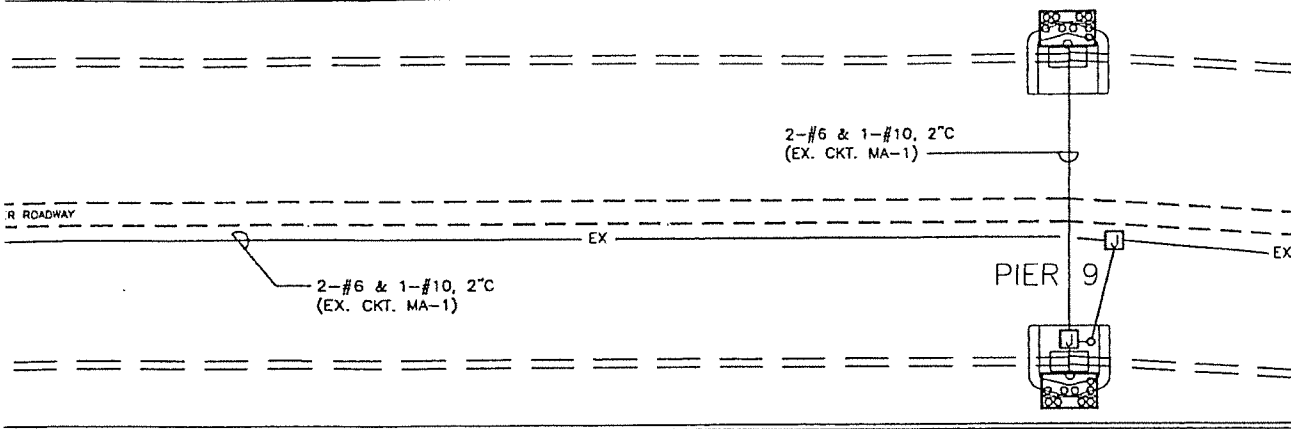
TYPE "A" SEE DETAIL 1 - SHEET LTG-104

PLAN

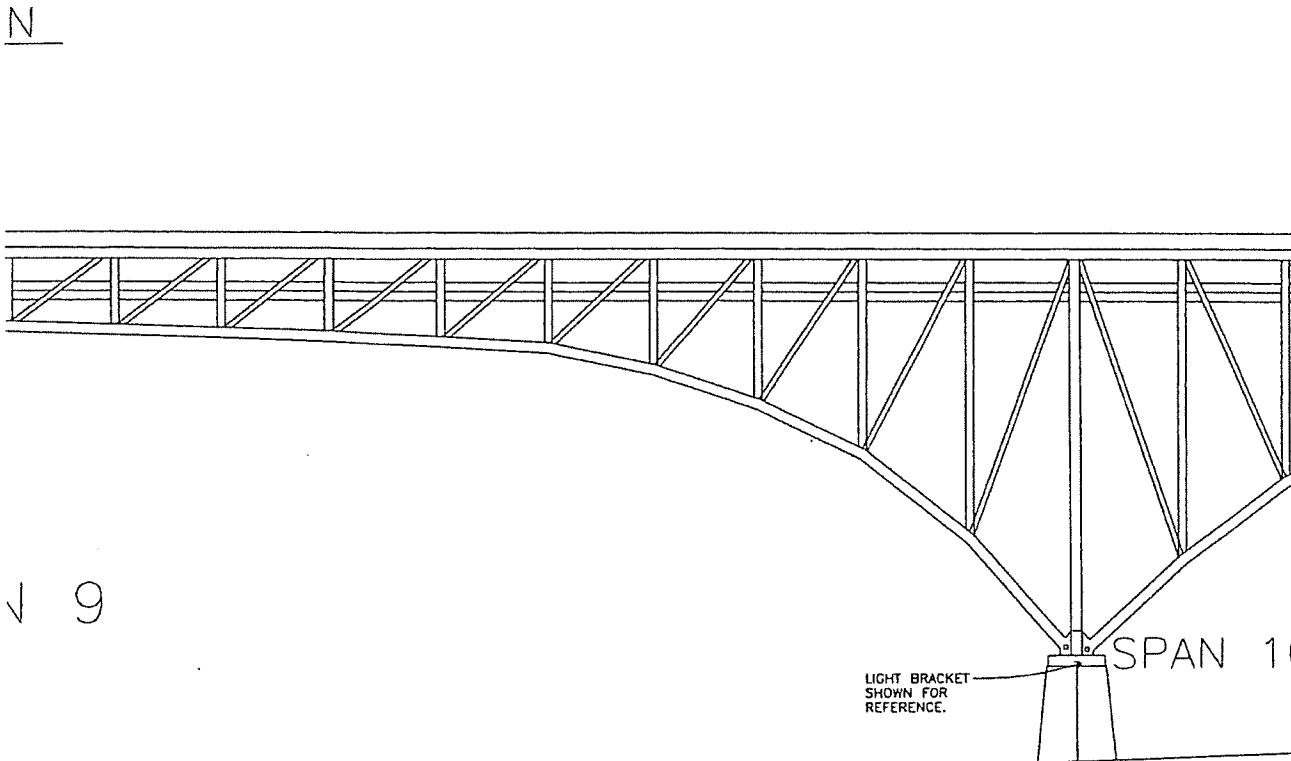


ELEV

TYPE "C" SEE DETAIL 3 - SHEET LTG-104



TYPE "D" SEE DETAIL 4 - SHEET LTG-104



A RIVER

ATION

MAIN AVENUE BRIDGE  
PIER AND ARCH - LIGHTING PLAN

REVISIONS	
DATE	DESCRIPTION

DATE: 3/18/98  
SCALE: 1/16"=1'-0"

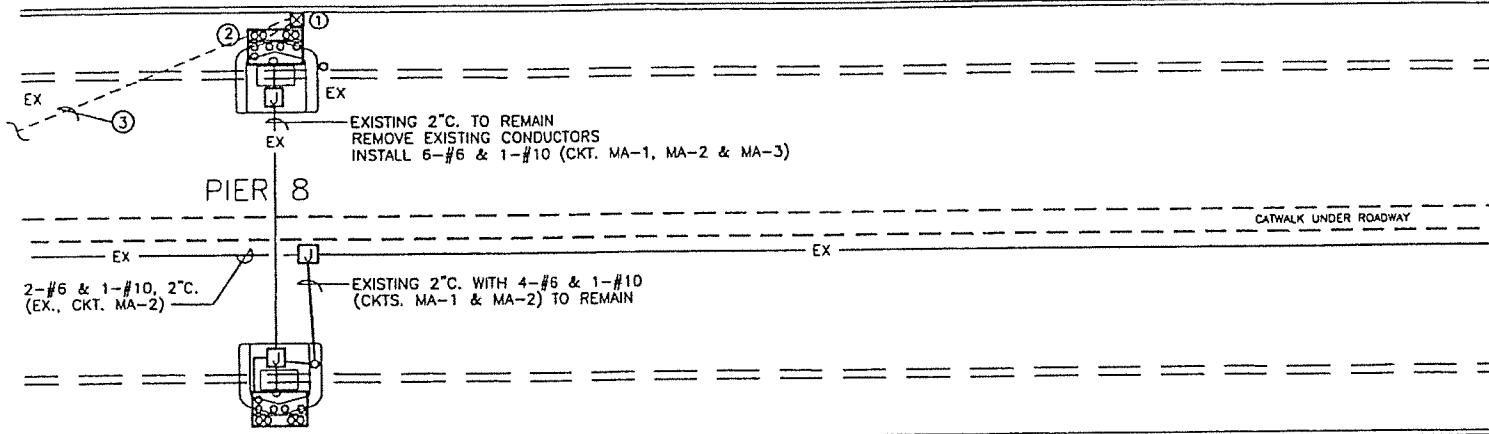
KEYED NOTES

- ① CPP PAD MOUNT TRANSFORMER.
- ② CONTROL CENTER "MA". LOCATE ON NORTH SIDE OF PIER 8N.
- ③ CPP EXISTING.

SHEET

LTG-102

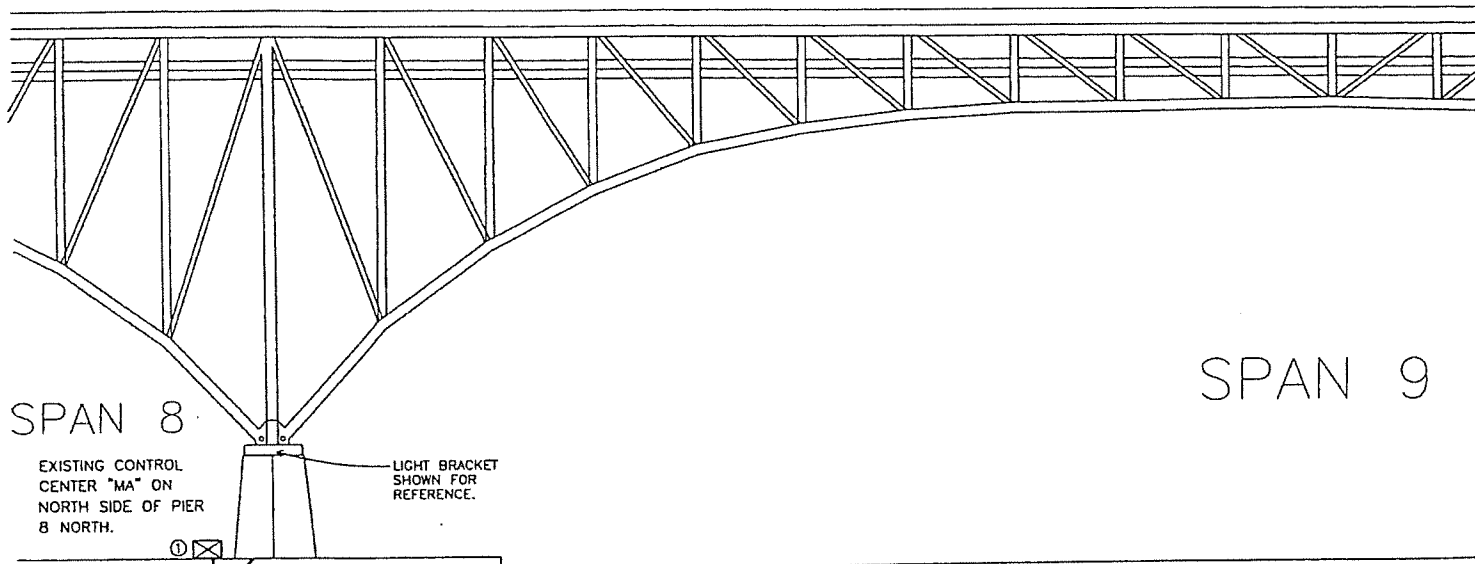
TYPE "D" SEE DETAIL 4 - SHEET LTG-104



TYPE "C" SEE DETAIL 3 - SHEET LTG-104

PLAN

NOTE: (18) EXISTING LIGHTING FIXTURES ON PIER 8  
SHALL BE REMOVED FROM CKT. MA-2  
AND CONNECTED TO CKT. MA-3.



CUYAHOGA RIVER

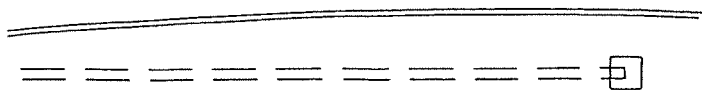
ELEVATION

HOWARD NEEDLES TAMMEN & BERGENDOFF  
ARCHITECTS ENGINEERS PLANNERS

**HNTB**

MADE BY: WJV DATE: 3-18-98  
DRAWN BY: WJV DATE: 3-18-98  
CHECKED BY: KQ DATE: 3-18-98  
SCALE: 1/16" = 1'-0"

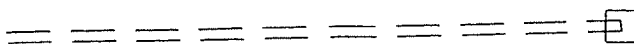
\\J005\29131\TECH\PROG\DRAWINGS\LTG-102



1-#10, 2"C.  
MA-1)

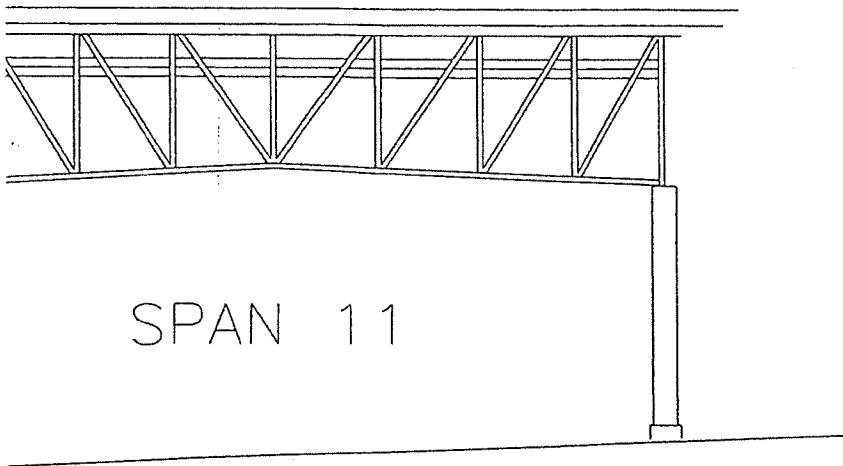
EAST APPROACH

ATWALK UNDER ROADWAY



LTC-104

PLAN



SPAN 11

ELEVATION

MAIN AVENUE BRIDGE  
PIER AND ARCH - LIGHTING PLAN

REVISIONS

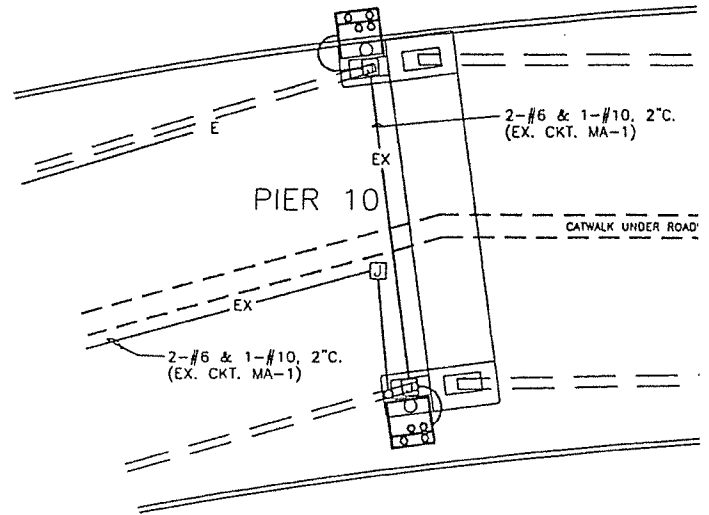
DATE DESCRIPTION


DRAWN BY: WJV  
DATE: 3/18/98  
SCALE: 1/16"=1'-0"

SHEET

LTC-103

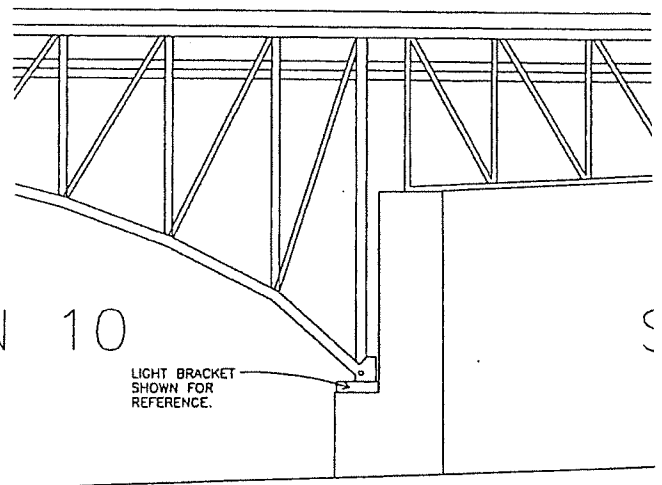
TYPE "E" SEE DETAIL 5 - SHEET LTG-104



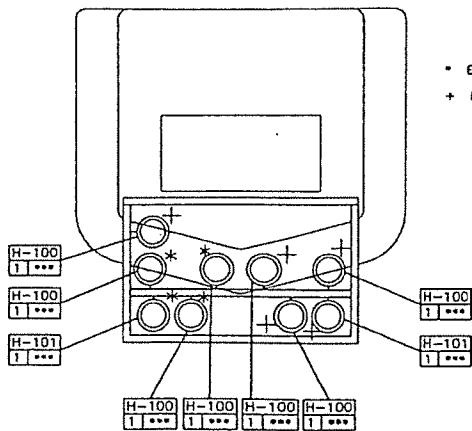
TYPE "F" SEE DETAIL 6 - SHEET LTG-104

PLAN

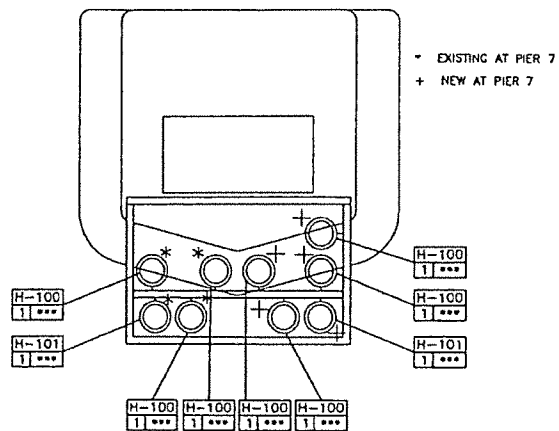
SPAN 10



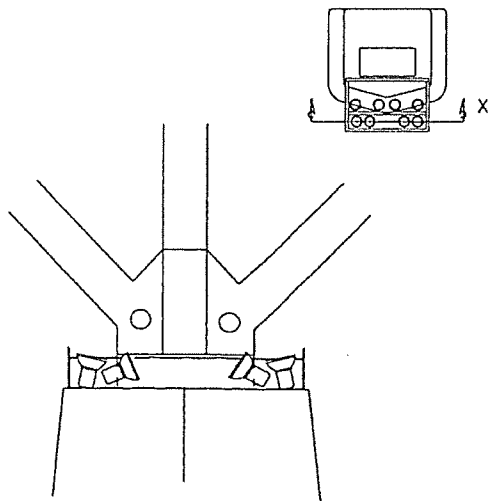
ELEVATION



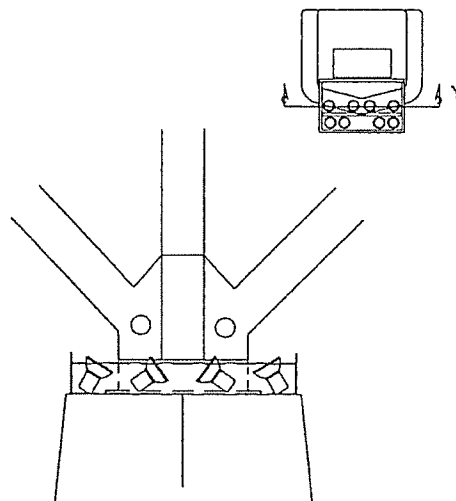
3 PIER TYPE "C" LIGHTING PLAN  
LTC-104 SCALE: 1/4"=1'-0" (EXISTING AT PIERS 8 & 9)



4 PIER TYPE "D" LIGHTING PLAN  
LTC-104 SCALE: 1/4"=1'-0" (EXISTING AT PIERS 8 & 9)



7 TYPICAL BRACKET SECTION "X"  
LTC-104 SCALE: 1/4"=1'-0"



8 TYPICAL BRACKET SECTION "Y"  
LTC-104 SCALE: 1/4"=1'-0"

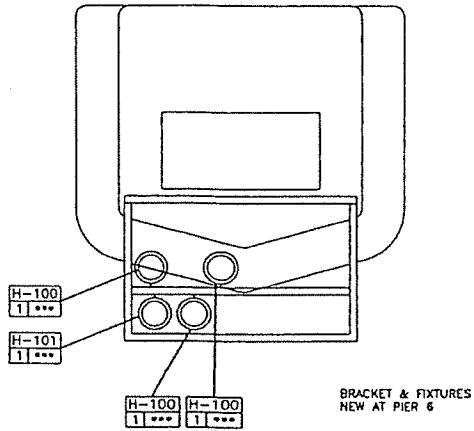
# MAIN AVENUE BRIDGE PIER AND ARCH - DETAILS

REVISIONS	
DATE	DESCRIPTION

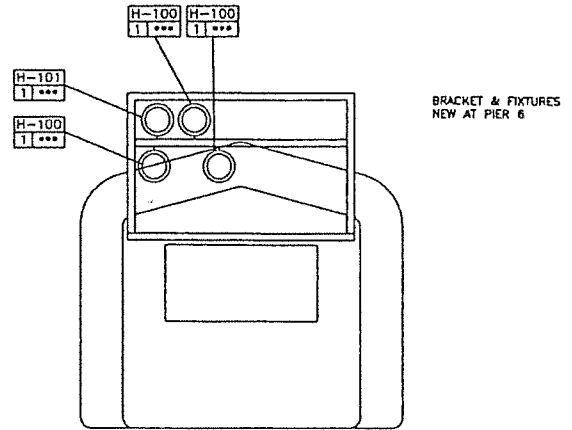
DRAWN BY: WJV  
DATE: 3/18/98  
SCALE: 1/4"=1'-0"

SHEET  
LTC-104





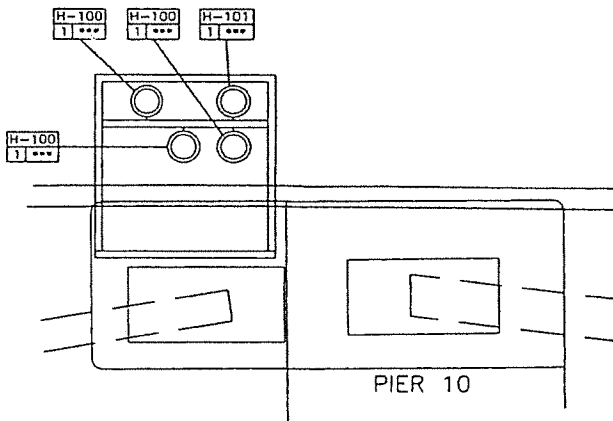
1 PIER TYPE "A" LIGHTING PLAN  
LTC-104 SCALE: 1/4"=1'-0"



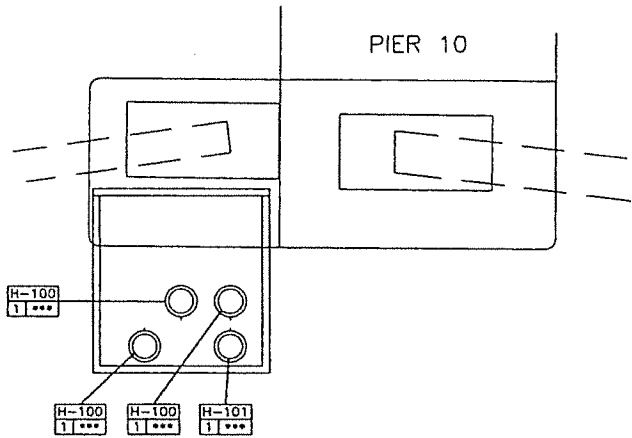
2 PIER TYPE "B" LIGHTING PLAN  
LTC-104 SCALE: 1/4"=1'-0"

H-1  
11  
H-1  
11  
H-1  
11

3 P  
LTC-104 SC



5 PIER TYPE "E" LIGHTING PLAN  
LTC-104 SCALE: 1/4"=1'-0"  
(EXISTING)



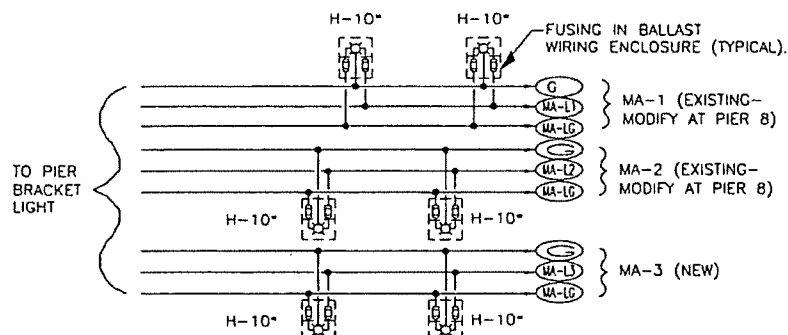
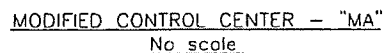
6 PIER TYPE "F" LIGHTING PLAN  
LTC-104 SCALE: 1/4"=1'-0"  
(EXISTING)

7  
LTC-104

PIER 85

3  
L  
AM

EXIST #1/0  
IN 1  
BOND  
STRU  
SYSTEM



FIXTURE WIRING DIAGRAM - TYPICAL  
No scale

# MAIN AVENUE BRIDGE SCHEDULE & DETAILS

REVISIONS	
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

DATE: 3/17/96

SHEET

LTG-105

# DECORATIVE LIGHTING NOTES—MAIN AVENUE

## SPECIFICATIONS

THESE NOTES ARE SUPPLEMENTAL TO ITEMS 625 AND 713 OF THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS.

## GENERAL

THIS PROJECT IS SERVED BY A 480 VOLT, SINGLE PHASE 2 WIRE, SECONDARY SERVICE, WITH ONE SIDE GROUNDED FROM:

CLEVELAND PUBLIC POWER (C.P.P.)  
LAKESIDE AVENUE  
CLEVELAND, OHIO 44114

THE CONTRACTOR WILL NOT BE REQUIRED TO FURNISH OR INSTALL THE PRIMARY DISTRIBUTION LINES, TRANSFORMERS OR TRANSFORMER POLES. THE CONTRACTOR SHALL PROVIDE SECONDARY CONNECTIONS, FEEDERS, CONNECTION TO BRANCH CIRCUITS AND GROUNDS AS HEREINAFTER SHOWN ON THE PLANS AND ASSURE THAT ALL POWER SERVICE REQUIREMENTS WITH CPP ARE PROVIDED.

## LUMINAIRES

LUMINAIRES SHALL BE AS REQUIRED TO MATCH THE EXISTING INSTALLATION. LUMINAIRES ON THE NEW 480V 1 PHASE SERVICE SHALL HAVE 480V BALLASTS AND BE INDIVIDUALLY FUSED WITH FUSE KITS IN BALLAST WIRING ENCLOSURES. FUSES SHALL BE GOULD SHAWMUT TYPE ATQ (3 AMPERES) IN A CEB-11-11 IN LINE FUSEHOLDER OR EQUAL BY BUSMANN OR LITTLE FUSE.

## FIXTURE MOUNTING BRACKETS

MOUNTING BRACKETS SHALL BE AS DETAILED ON SHT. STR-100.

## ATTACHMENT OF ENCLOSURES TO CONCRETE

ENCLOSURES SHALL BE MOUNTED IN SAME MANNER AS BRACKETS EXCEPT USE APPROPRIATE SIZE BOLTS AND ANCHORS FOR MOUNTING HOLES. ANCHOR BOLTS SHALL HAVE A MINIMUM PULL OUT CAPACITY OF 2,000 POUNDS.

## CONNECTOR KITS

CABLE CONNECTIONS IN ENCLOSURES SHALL BE ACCOMPLISHED BY THE USE OF APPROVED FACTORY PREASSEMBLED CABLE CONNECTOR KITS.

UNTIL CABLE CONNECTIONS HAVE BEEN COMPLETED, ALL CABLE CONNECTOR KITS AND EXPOSED CABLE ENDS SHALL BE ADEQUATELY PROTECTED BY ENCLOSING IN PLASTIC BAGS, TAPING OR OTHER APPROVED MEANS.

## CONDUIT ON STRUCTURE

EXPANSION FITTINGS FOR DECORATIVE LIGHTING CIRCUIT CONDUIT ON STRUCTURES SHALL BE OZ TYPE AX, CROUSE HINDS TYPE XJ-4, APPLETON TYPE XJ-4 OR EQUAL APPROVED BY THE ENGINEER, FOR EXPANSIONS NOT EXCEEDING 4 INCHES AND OZ TYPE AX-8 OR EQUAL APPROVED BY THE ENGINEER, FOR EXPANSIONS EXCEEDING 4 INCHES.

## CABLE AND WIRE

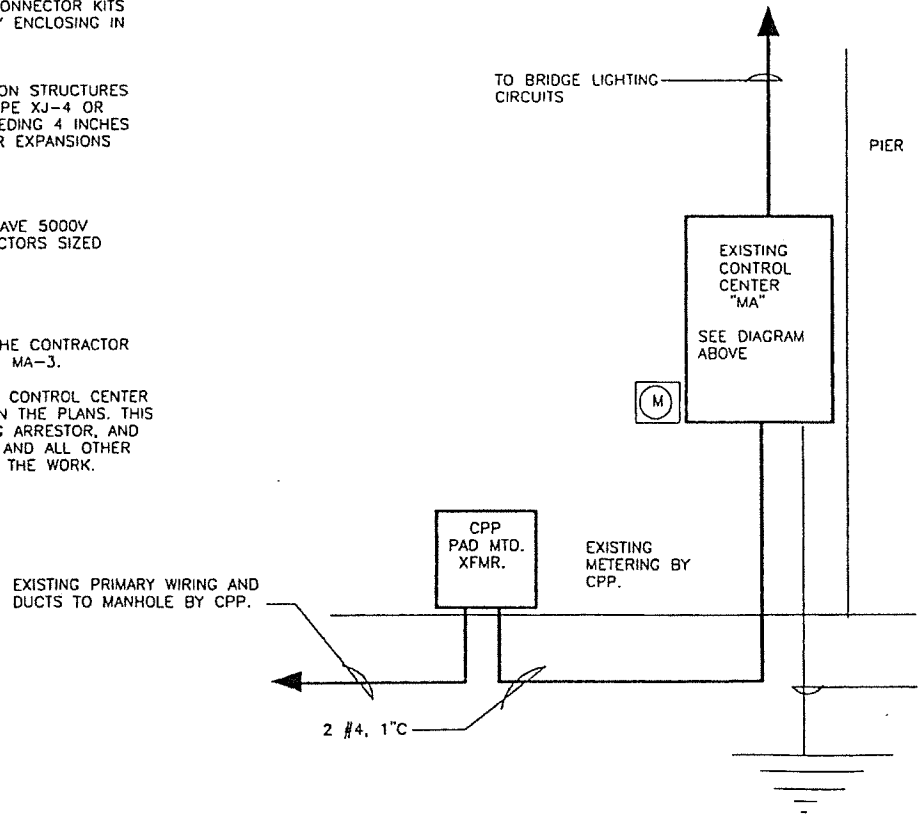
ALL CONDUCTORS SIZED #8 OR LARGER ON THE BRIDGE SHALL HAVE 5000V INSULATION MEETING THE REQUIREMENTS OF TYPE MV-90. CONDUCTORS SIZED #10 OR SMALLER SHALL BE TYPE XHHW.

## CONTROL CENTER

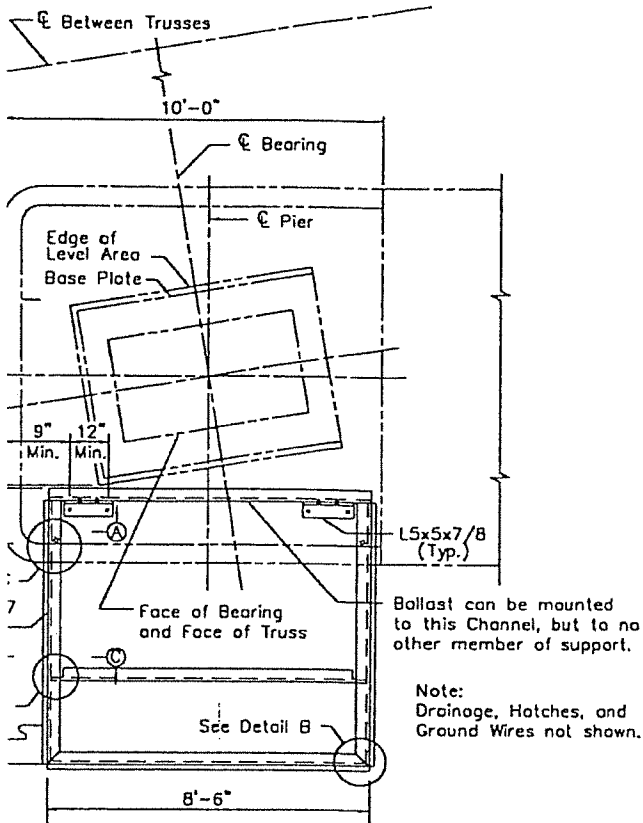
THE CONTROL CENTER AND FUSED DISCONNECT ARE EXISTING. THE CONTRACTOR SHALL INSTALL A NEW 40 A. FUSE IN THE DISCONNECT FOR CKT. MA-3.

THE CONTRACTOR SHALL PROVIDE ELECTRICAL SERVICE FROM THE CONTROL CENTER TO THE LIGHTING CIRCUITS, INSTALLED IN THE MANNER SHOWN ON THE PLANS. THIS SHALL INCLUDE FURNISHING AND INSTALLING CONDUITS, LIGHTNING ARRESTOR, AND GROUNDING, ALL WIRING OF THE SIZE INDICATED ON THE PLANS, AND ALL OTHER MATERIALS AND INCIDENTALS AS MAY BE REQUIRED TO COMPLETE THE WORK.

CONTROL CENTER "MA" 480V - 1Ø				
CIRCUIT	FUSE SIZE	VA	400W MH	COMMENTS
MA-1	40A	13,416	26	PIERS 9 &
MA-2	40A	13,416	26	PIERS 6 &
MA-3	40A	9,288	18	PIER 8
TOTAL		36,120	70	

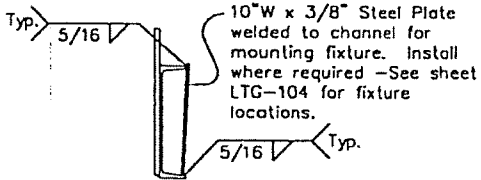


T 1:1

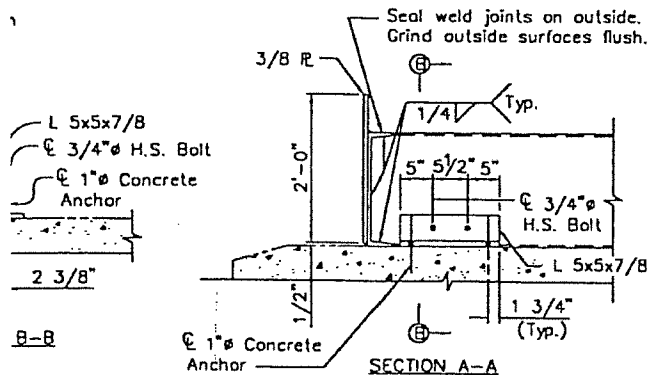


TOP OF PIER  
PLAN-PIER 10  
SPAN 10 SIDE

1" Concrete anchor with leveled Washer



DETAIL-FIXTURE MOUNTING PLATE



#### SUGGESTED CONSTRUCTION SEQUENCE

- Contractor shall non-destructively locate reinforcement on top of pier cap at L's 5x5x7/8. The angle may be moved in the North South direction to clear reinforcing, but should be kept as close as possible to the East West MC18x42.7's. The bracket may be moved about an inch in the East or West direction to clear reinforcing.
- Drill holes for concrete anchors.
- Drill holes in L5x5x7/8 for the concrete anchors and the high strength bolts. The holes for the high strength bolts shall be centered between the concrete anchors.
- Bolt the L5x5x7/8 to the pier top.
- Set the support bracket adjacent to the angles and drill holes in the channel and fasten it to the angle.
- Since the 12" minimum spacing cannot be guaranteed to clear reinforcing, the Contractor may wish to have angles longer than 1'-3 1/2". The following guidelines shall be followed if the anchor bolt spacing is greater than 12 in. :
  - The angle shall be cut to provide a 1 3/4" edge distance from the E of the concrete anchors.
  - For 3/4" high strength bolts fastening the L5x5x7/8 to the channel:
    - Maximum edge distance = 5 in.
    - Minimum spacing = 2 1/2 in.
    - Maximum spacing = 5 3/4 in.
    - High strength bolts shall be centered between and shall clear the concrete anchors.
    - Three high strength bolts may be needed to meet the above requirements.
- Install concrete anchors shown in Detail C.
- The Contractor may submit an alternate procedure to the engineer for approval.

#### NOTES

- The 1" Concrete anchors shall have a safe-working load of 6.0 kips in tension in concrete with an  $f'_c=3000$  psi. The anchors shall be placed to meet the manufacturer's minimum edge distance and spacing criteria, if longer than that shown in the plans. Embedment length shall meet the manufacturer's criteria.
- Prior to fabrication, the Contractor shall verify that the brackets will not be installed on the chamfers and that the distance from the base plate to the pier corners on the side of the bracket is 1'-6 7/8" feet minimum. If this criteria is not met, adjustments to the design may be required. Payment for these field measurements shall be made under "MAIN AVENUE-LIGHTING SYSTEM, INSTALLED."
- Refer to lighting plan sheets LTG-100 thru LTG-104 for the Main Avenue bridge for additional details.
- All structural steel shall be ASTM A36.
- All bolts shall be 3/4" ASTM A325 high strength bolts.
- All steel shall be painted to match the color of the piers. Paint system shall be ODOT's IZEU system. Final color selection shall be approved by the Engineer. Payment for painting shall be included under "MAIN AVENUE-LIGHTING SYSTEM, INSTALLED."
- All welding shall conform to current AWS specifications.
- Contractor may have to relocate ground wires. Payment for the relocations shall be made under "MAIN AVENUE-LIGHTING SYSTEM, INSTALLED."

## MAIN AVENUE STRUCTURAL DETAILS

#### REVISIONS

DATE DESCRIPTION

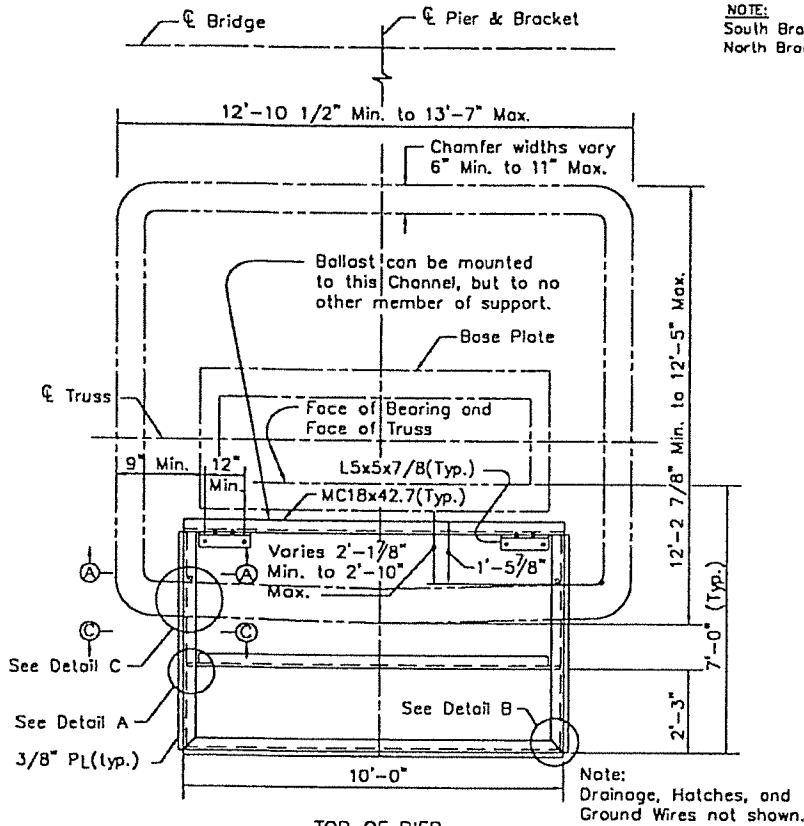

DATE: 3/05/96

FILE NAME:  
Decollgm.dwg

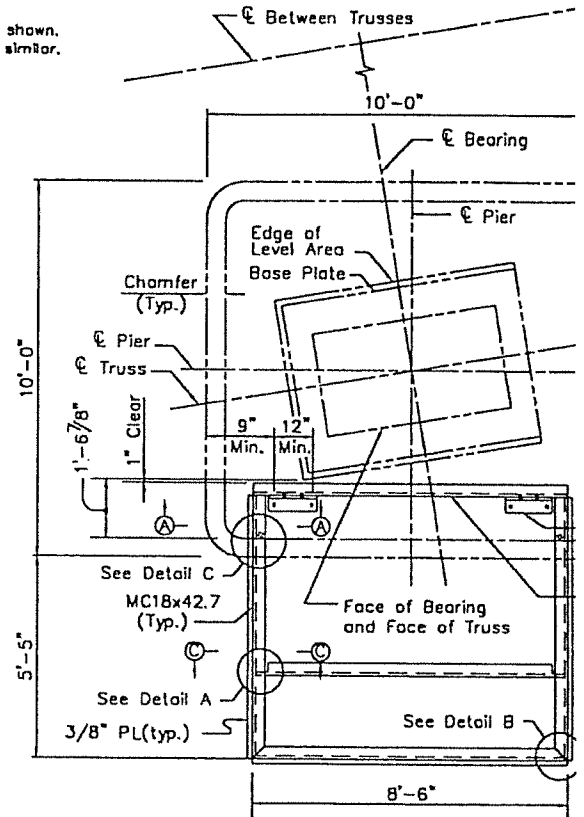
SHEET

STR-100

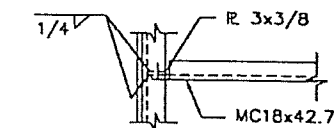
# PLOT 1:1



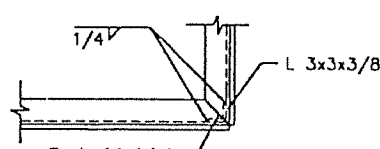
TOP OF PIER  
PLAN-PIERS 7, 8, & 9



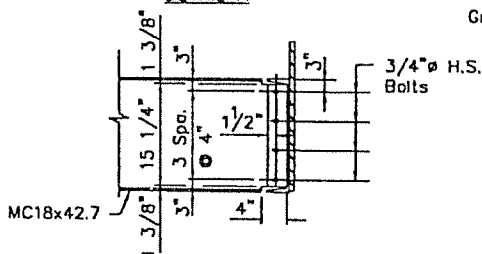
TOP OF PIER  
PLAN-PIER 10  
SPAN 10 SIDE



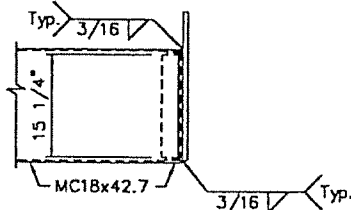
DETAIL A



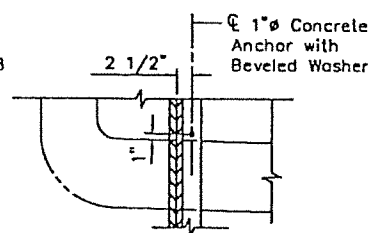
PLAN



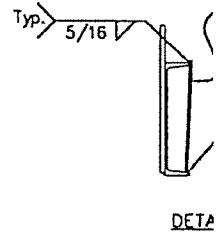
SECTION C-C



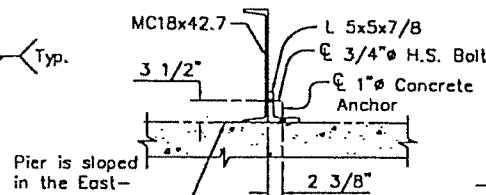
ELEVATION  
DETAIL B



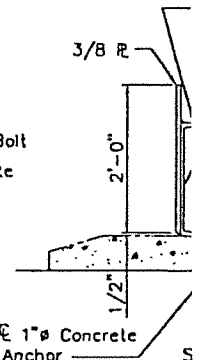
DETAIL C  
(Typ. at each  
bracket arm)



DETAIL D



SECTION B-B



DETAIL E

HOWARD NEEDLES TAMMEN & BERGENDOFF  
ARCHITECTS ENGINEERS PLANNERS

**HNTB**

MADE BY: JAL DATE: 11/22/00  
DRAWN BY: JAL DATE: 11/22/00  
CHECKED BY: JAL DATE: 11/22/00  
SCALE: 1/8" = 1'-0"

FILE: PROJECT/PROJECT/2231/PIER/P10/PIER10.DWG

Ross De Alessi  
Lighting Design  
2013-Second Avenue Suite 200  
Seattle, Washington 98121  
(206) 441-0870  
(206) 441-9928 Fax

CENTER STREET BRIDGE  
DECORATIVE LIGHTING ELEVATION

GENERAL NOTES:

1. REMOVE ALL CHRISTMAS LIGHTS ON MOVING SECTION.

REVISIONS

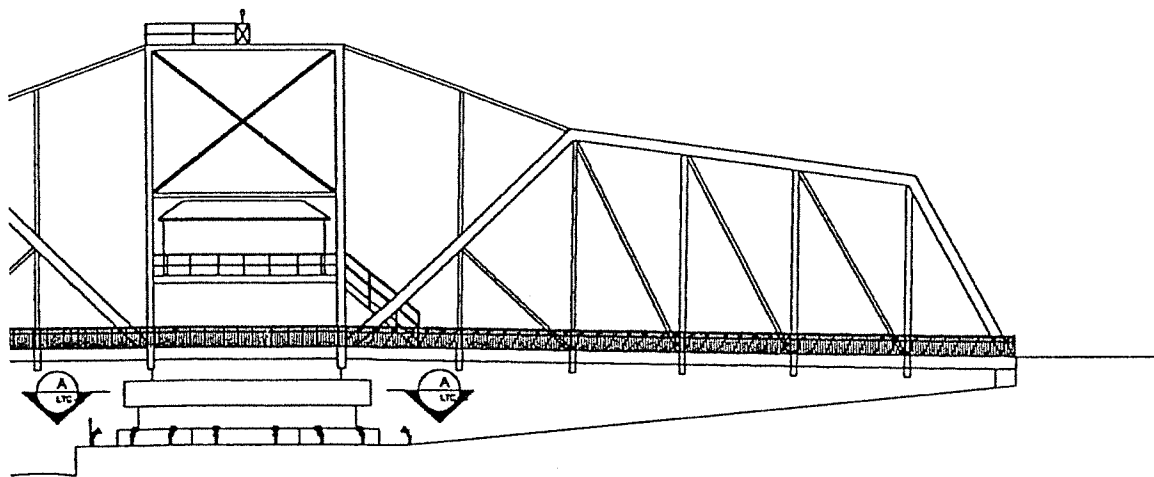
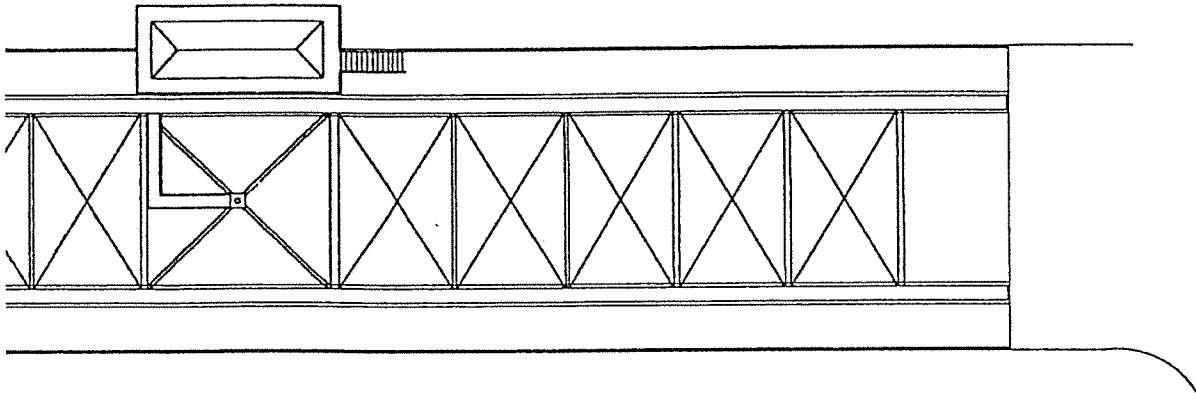
DATE	DESCRIPTION
3/1/93	DESIGN DEVELOPMENT

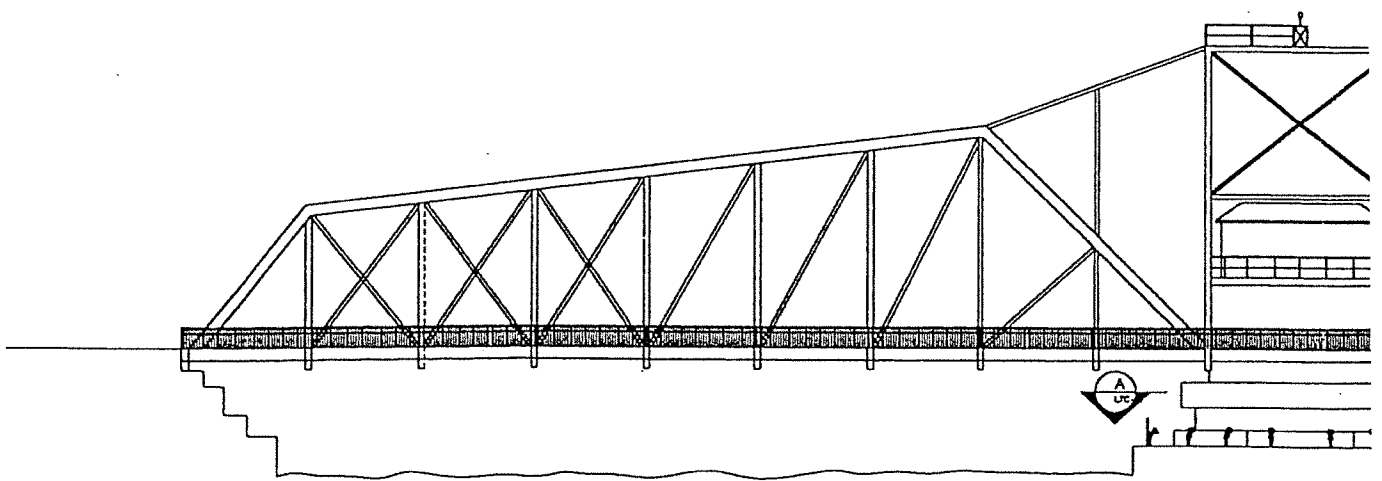
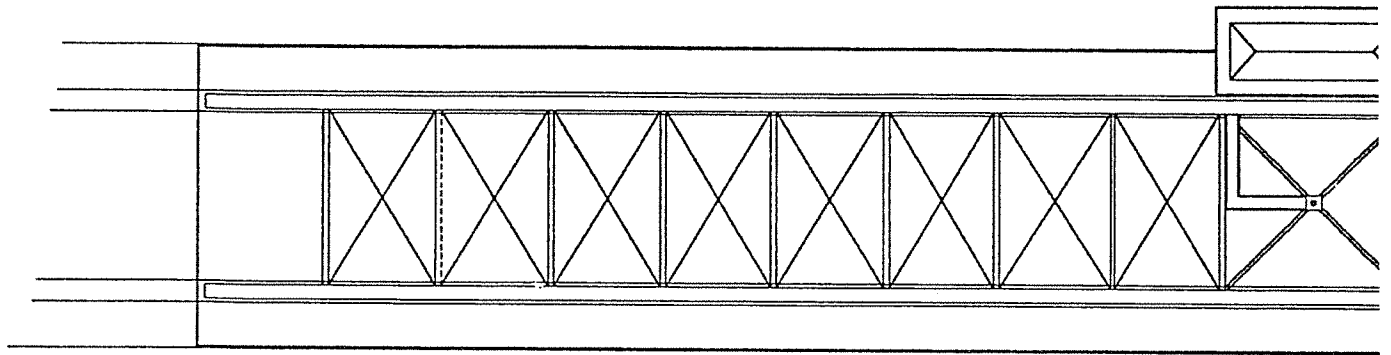
DRAWN BY: B.K.L.  
DATE: 11/1/95  
SCALE: 3/32"=1'-0"

FILE NAME:  
Ltg-1.dwg

SHEET

LTG-1





Ross De Aless  
Lighting Design  
2613-Seward Avenue Suite 2  
Seattle, Washington 98121  
(206) 461-0870  
(206) 461-8828 Fax

# CENTER STREET BRIDGE DECORATIVE LIGHTING DETAILS

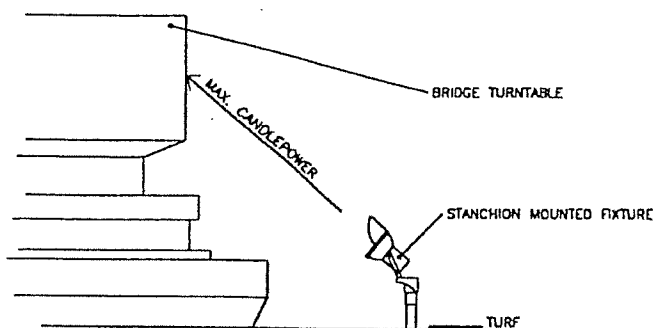
REVISIONS	
DATE	DESCRIPTION
3/2/93	DESIGN DEVELOPMENT

DRAWN BY: B.K.L.  
DATE: 11/1/93  
SCALE:

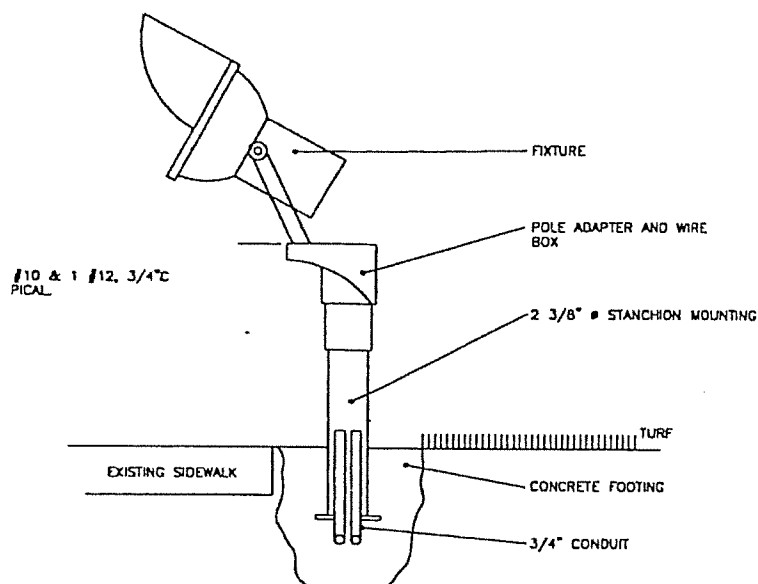
FILE NAME:  
ltg-2.dwg

SHEET

LTG-2



**B** DETAIL - FIXTURE ELEVATION  
LTG-2 SCALE: 1/4" = 1'-0"



**C** DETAIL - FIXTURE MOUNTING  
LTG-2 SCALE: 1" = 1'-0"

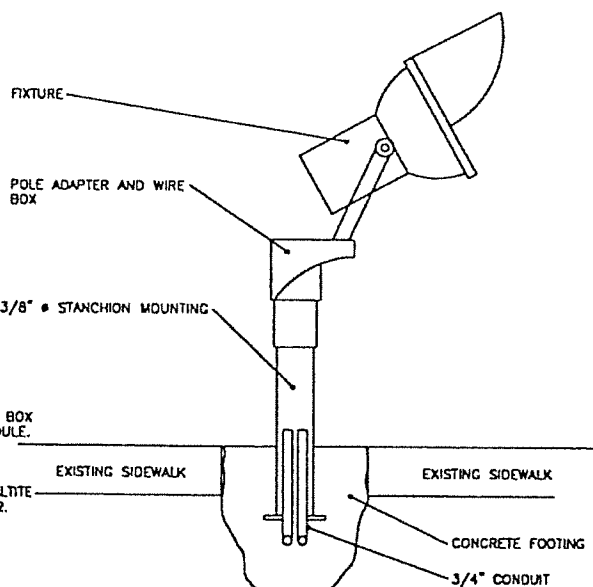
G  
2, 1" C

DDOT  
30.11.

-HS UNISTRUT CHANNEL  
ON UPPER DECK  
IN FLOOR BEAMS  
TO MATCH EXISTING  
URE, "UNISTRUT"  
UFACTURED BY  
UT CORP., TO HAVE  
GREEN B FINISH.

FIXTURE

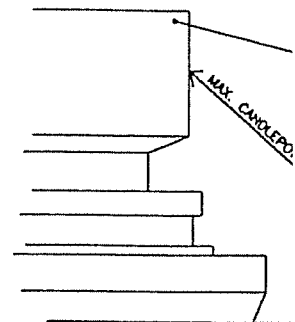
**D** DETAIL - FIXTURE MOUNTING ON  
DETROIT SUPERIOR  
LTG-2 SCALE: 1/4" = 1'-0"



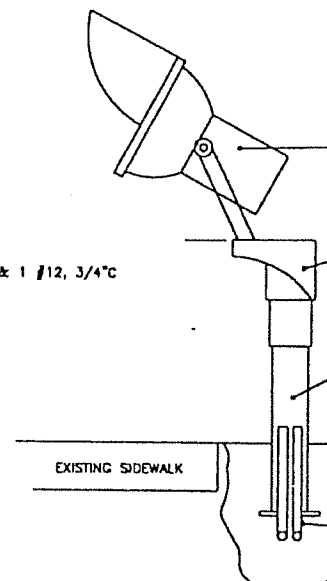
**E** DETAIL - FIXTURE MOUNTING  
LTG-2 SCALE: 1" = 1'-0"

ON HAS BEEN SCALED BY 2

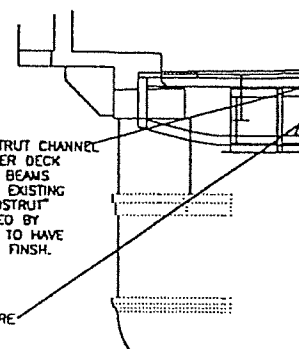




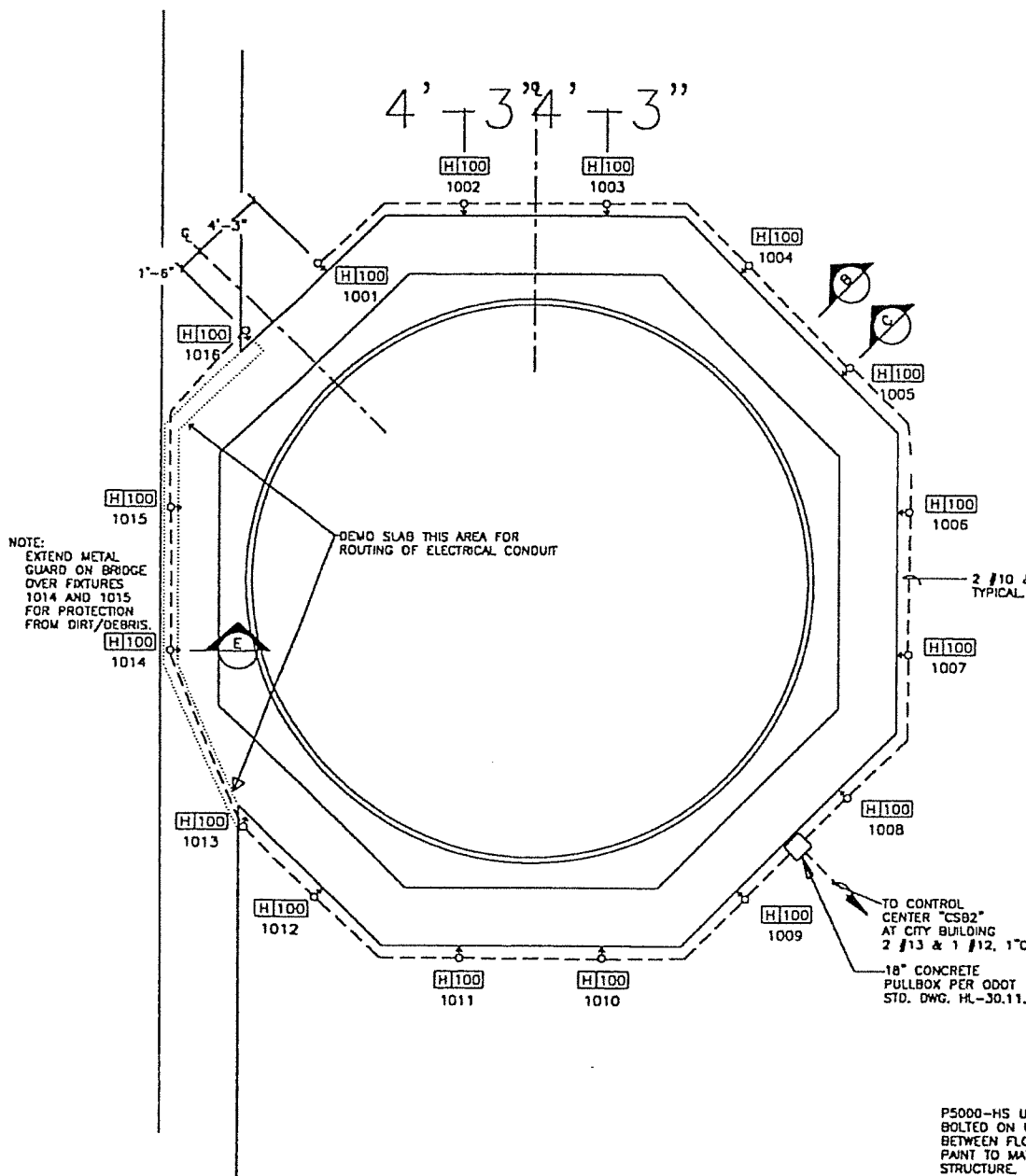
**(B) DETAIL - FIXTURE**  
 SCALE: 1/4" = 1'-0"



**(C) DETAIL - FIXTURE**  
 SCALE: 1" = 1'-0"



**(D) DETAIL - FIXTURE**  
 DETROIT SUPERIOR  
 SCALE: 1/4" = 1'-0"



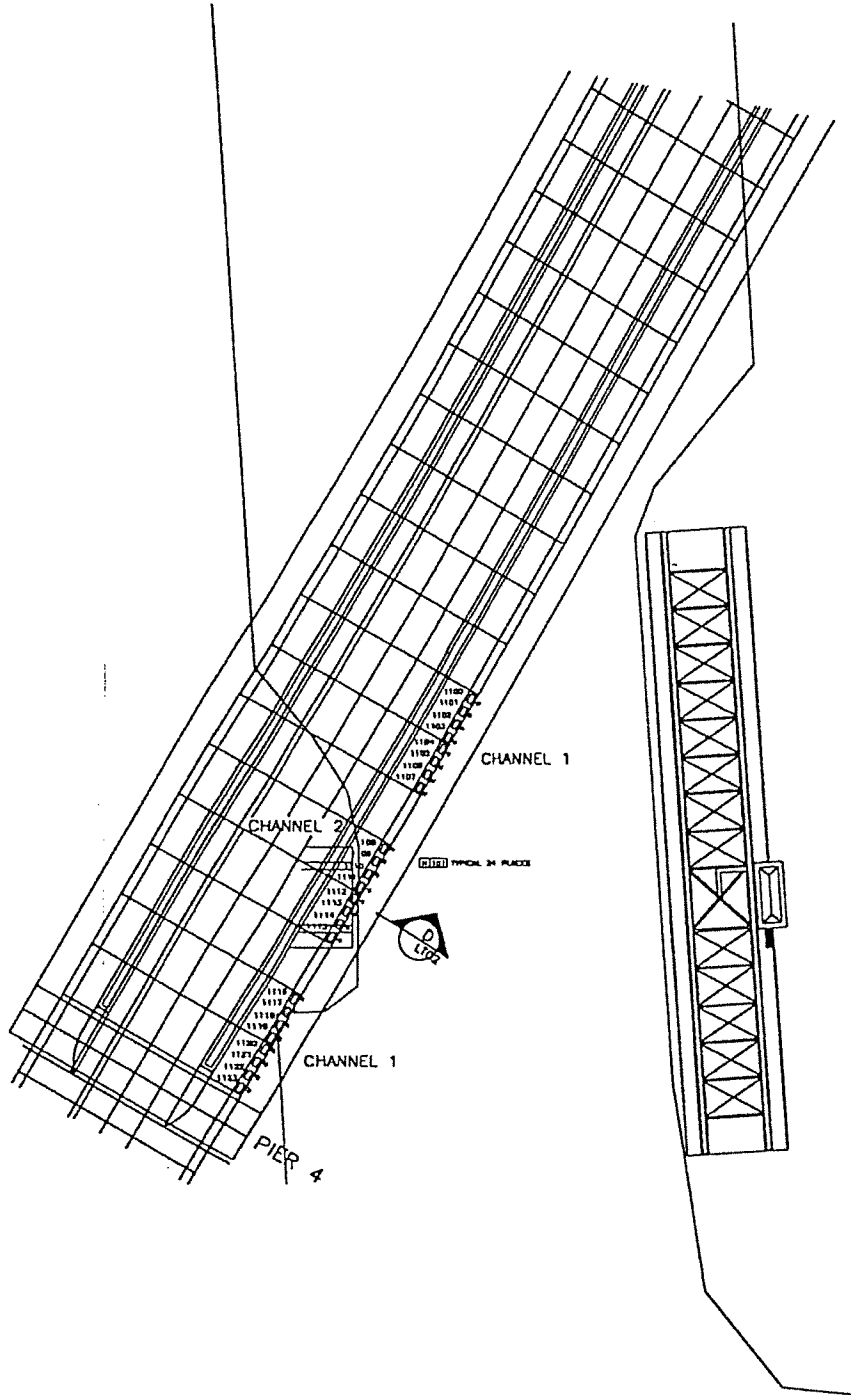
**(A) DETAIL - TURNTABLE LIGHTING PLAN**  
 SCALE: 1/4" = 1'-0"

HOWARD NEEDLES TAMMEN & BERGENDOFF  
 ARCHITECTS ENGINEERS PLANNERS

**HNTB**

MADE BY: [blank] FILE DATE: 2-3-98  
 DRAWN BY: [blank] FILE DATE: 2-3-98  
 CHECKED BY: [blank] FILE DATE: 2-3-98  
 SCALE: 1/4" = 1'-0"  
 2 / p:\proj\city\bridge\23318\external\11g-2

SECTION HAS BEE



CENTER STREET BRIDGE  
DOWN LIGHTING FROM DETROIT SUPERIOR

LTG-3



TO CPP  
120/240 VOLT 3W,  
METERED SERVICE

3 #10, 1°C

- FUSED 30A 2 POLE  
DISCONNECT

#10 CU GROUND —  
IN 3/4" C  
BOND TO 3/4"X10'CU  
PLATED GROUND ROD

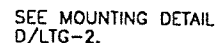
MOUNT CONTROL CENTER  
ON CITY CONTROL BLDG.  
SEE SHEET LTG-3.

ENCLOSURE PER ODOT  
SPECIFICATIONS & STD. DWG.  
HL-40.10

TIME SWITCH  
TORK #7200ZL

TO TURNABLE LIGHTING  
CIRCUIT. 1500VA CONNECTED.

CONTROL CENTER - "CSB2"  
No scale



2 IF MODULES AND LIGHT FIXTURES PER DIMMING BALLAST. TYPICAL FOR EACH BALLAST. SEE DETAILS IN SPECIFICATIONS.

3 1/8 CU SKY INS., 2" C  
TYPICAL FOR LIGHTING  
CIRCUITS ON WM BRIDGE.  
NOTE: IF REMOTE BALLASTS  
ARE MOUNTED ON  
BRIDGE BETWEEN  
LUMINAIRES, #10 AWG  
CU XHHW MAY BE  
USED BETWEEN  
BALLASTS AND IF  
MODULES.

REVISIONS	
5/12/96	ADDRESSED
	COMMENTS:
	ADDED NOTES
	REVISED
	CONTROL
	CIRCUIT CSB2

DATE: 1/19/96

FILE NAME:  
ltg-4.dwg

SHEET

LTC-4

# CENTER STREET BRIDGE SCHEDULE & DETAILS

### SPECIFICATIONS

## GENERAL

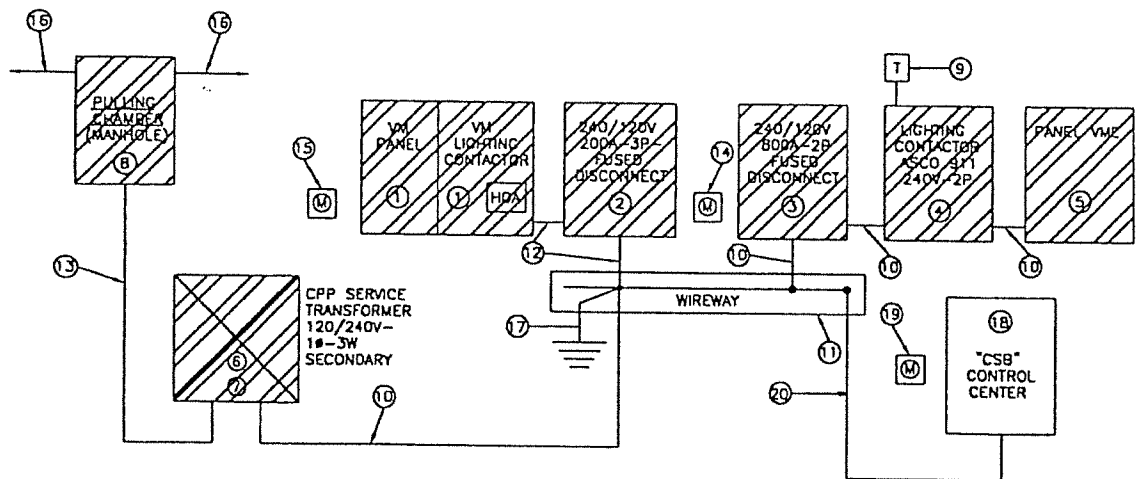
## LUMINAIRES

SCALE \_\_\_\_\_  
F: VOLUME OF PRODUCTION IN CONTAINERS IS \_\_\_\_\_

# REFERENCE ONLY - THIS WORK NOT IN CONTRACT (NIC)

## KEY NOTES

- (1) VMV VETERAN'S MEMORIAL BRIDGE ROADWAY LIGHTING CONTROL CENTER. SEE SHEET 95 "LIGHTING DETAILS".
- (2) 240V-200A-3P FUSED DISCONNECT SWITCH W/ 200A CL FUSES-NEMA 4X ENCLOSURE.
- (3) 240V-800A-2P-3W FUSED DISCONNECT SWITCH W/800A CL FUSES-NEMA 12 ENCLOSURE.
- (4) 240V-800A-2P MECHANICALLY HELD LIGHTING CONTACTOR, ASCO Q11-2-B00-6-1 OR EQUAL NEMA 4X ENCLOSURE.
- (5) VMV VETERAN'S MEMORIAL BRIDGE DECORATIVE LIGHTING POWER DISTRIBUTION PANEL 240V-2P-3W-800A SEE PANEL SCHEDULE ON SHEET 130A FOR DETAILS.
- (6) PAD MOUNTED SERVICE TRANSFORMER BY CPP.
- (7) SUPPORT STRUCTURE FOR TRANSFORMER TO MAINTAIN TRANSFORMER 4'-0" ABOVE LOWER DECK.
- (8) CPP PULLING CHAMBER SEE DETAILS ON SHEETS 130C THRU 130J.
- (9) TIME SWITCH. SEE SHEET 130A FOR DETAILS.
- (10) 2-SETS OF 2-BROWDER (XHHW CU) AND 1 #3/0 IN 3" CONDUIT.
- (11) 12" X 12" X 6" BREWERY NEMA 4X.
- (12) 3 #3/0, 1" C.
- (13) 2-5" PRIMARY DUCTS-GRC.
- (14) METERING FOR DECORATIVE LIGHTING PER CPP STANDARDS.
- (15) METERING FOR ROADWAY LIGHTING PER CPP STANDARDS.
- (16) CPP PRIMARY DUCT BANK (11KV). SEE DETAILS ON SHEETS 130C THRU 130J.
- (17) #4/0 COPPER GROUND IN 2" DRC - CONNECT TO BRIDGE GROUND SYSTEM.
- (18) CONTROL CENTER "CSB". SEE DETAILS ON SHEET LTG-4.
- (19) METERING FOR CENTER STREET BRIDGE LIGHTING PER CPP STANDARDS.
- (20) 2 250 KCMIL & 1 #3/0 & 1 #1/0 G, 2"C.
- (21) FOR LOCATION OF LIGHT FIXTURES BELOW LOWER DECK, SEE SHEETS LTG-2 & LTG-3.



SINGLE LINE DIAGRAM  
Not to Scale

SHEET

LTG-5

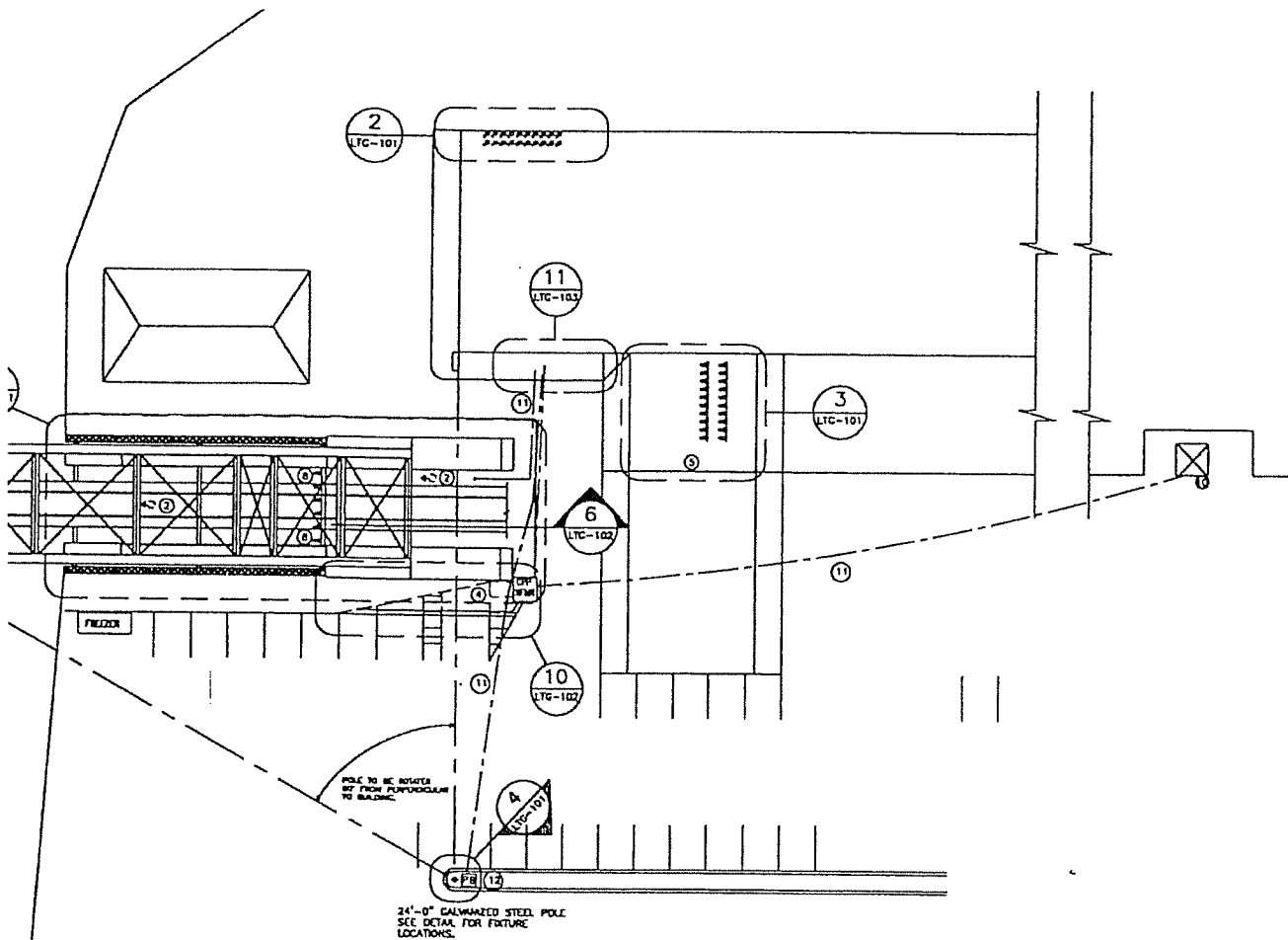
FILE NAME:  
Ltg-5.dwg

NEW CONTROL CENTER "CSB" AND REFERENCE FOR CENTER STREET BRIDGE



Ross De Alessi  
Lighting Design  
2815 Second Avenue Suite 280  
Seattle, Washington 98121  
(206) 441-0870  
(206) 441-9826 Fax

BASCULE #1 BRIDGE  
ELEVATION AND SITE - LIGHTING PLAN  
BASIS 11.0 DWG



SITE LIGHTING PLAN  
SCALE 1/18" = 1'-0"

GENERAL NOTES:

- ① PROVIDE CLEAR, INDIVIDUALLY MARKED AND CODED-BY-FIXTURE TYPE STAKES FOR FINAL LOCATION OF THE LANDSCAPE LUMINAIRES BY LIGHTING CONSULTANT; ONE PER FIXTURE. ROUGH WIRE TO LOCATIONS SHOWN ON PLAN. PROVIDE MINIMUM TWO WEEK NOTICE TO LIGHTING CONSULTANT FOR ON SITE ATTENDANCE TO LOCATE LANDSCAPE LUMINAIRES AFTER UPPER STORY, TREES ETC. ARE PLANTED AND PRIOR TO UNDERSTORY, SHRUBS, ETC. ARE PLANTED.
- ② DEMO AND TRASH ALL EXISTING FIXTURES ON BRIDGE.
- ③ OWNER TO REMOVE ALL CHRISTMAS LIGHTING FROM LIFT SECTION OF THE BRIDGE.
- ④ NEW PLANTER, CONTRACTOR TO MATCH EXISTING BORDER AND COORDINATE WITH LIGHTING CONSULTANT AND OWNER.
- ⑤ PROVIDE ZIPPER IN UPRIGHT SECTION OF CANVAS CANOPY FOR ACCESS TO ROOF FOR MAINTENANCE OF LIGHTING FIXTURES.
- ⑥ PROPOSED LOCATION OF DIMMING AND CONTROL PANEL.
- ⑦ PROVIDE JUNCTION BOX FOR POWER AND CONTROL OF NATURAL GAS TRENCH, ELECTRICAL ENGINEER TO CONSULT WITH FABRICATOR FOR POWER AND CONTROL REQUIREMENTS.
- ⑧ PROVIDE CLEAR, INDIVIDUALLY MARKED AND CODED-BY-FIXTURE TYPE WIRE STAKES FOR FINAL LOCATIONS OF GEAR LUMINAIRES. LOCATIONS TO BE MARKED AT TIME OF LANDSCAPE LUMINAIRE LOCATIONS. PROVIDE LADDER FOR ACCESS TO PLATFORM.
- ⑨ PROVIDE JUNCTION BOX FOR POWER AND CONTROL OF SOUND SYSTEM. ELECTRICAL ENGINEER TO CONSULT WITH SOUND INSTALLER FOR POWER AND CONTROL REQUIREMENTS.
- ⑩ EXISTING 4" TRANSFORMER
- ⑪ UNDERGROUND DUCT BANK
- ⑫ 24" X 24" CONCRETE PULLBOX PER D00T HL-30.11

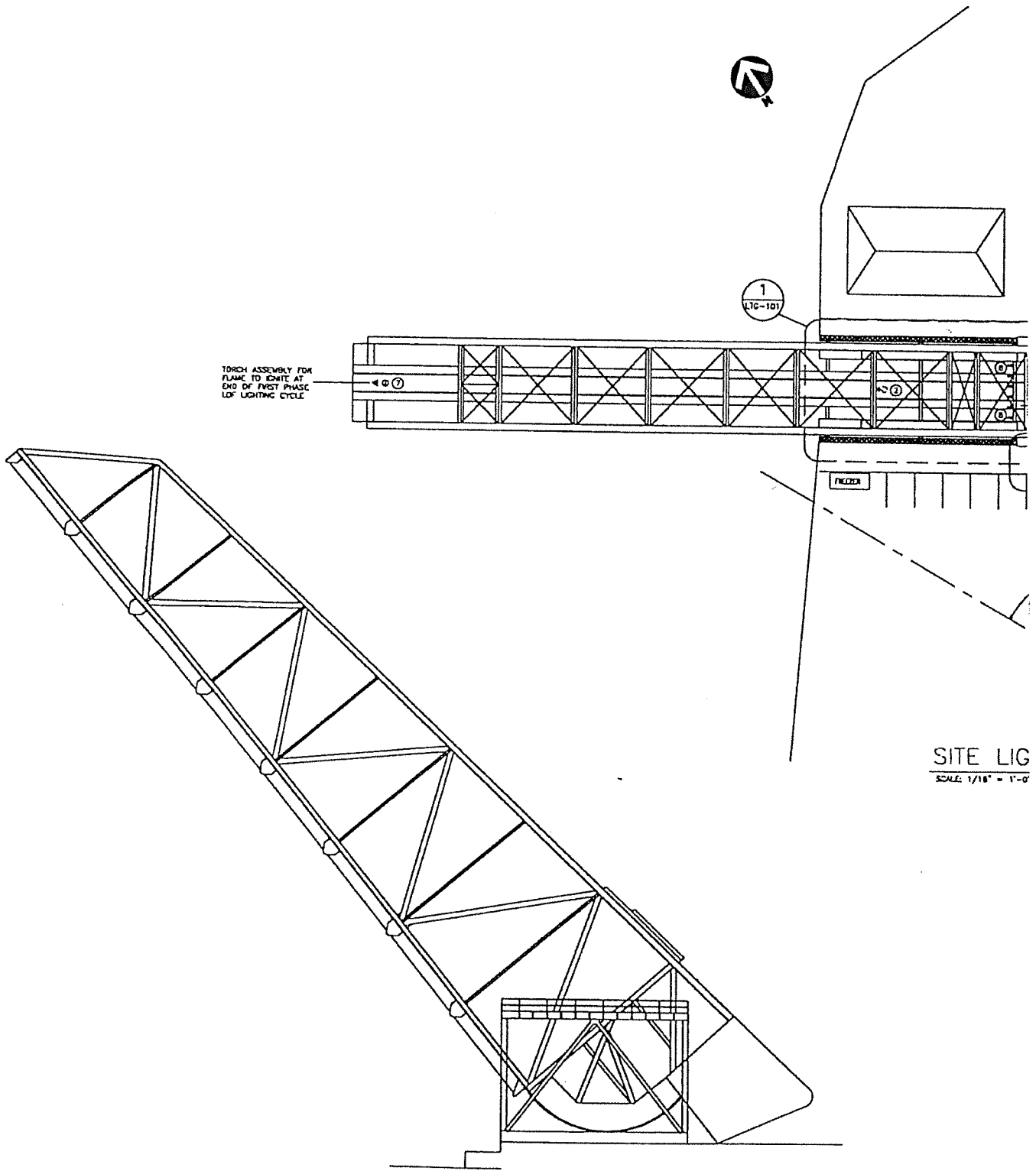
REVISIONS  
DATE DESCRIPTION


DATE 1/18/96

SHEET

LTG-100





ELEVATION LOOKING EAST

SCALE: 1/16" = 1'-0"

HOWARD NEEDLES TAMMEN & BERGENDOFF  
ARCHITECTS ENGINEERS PLANNERS



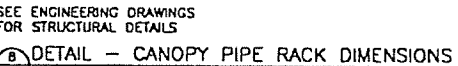
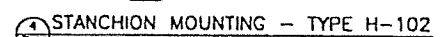
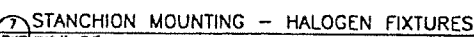
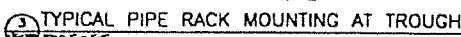
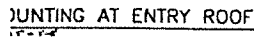
MADE BY: JES DAVIS-10-12  
DRAWN BY: JES DAVIS-11-12  
CHECKED BY: JES DAVIS-11-12  
SCALE: 1/16" = 1'-0"

P:\PROJECTS\BROOKLYN BRIDGE\BROOKLYN BRIDGE 1





PLOT: 1:12

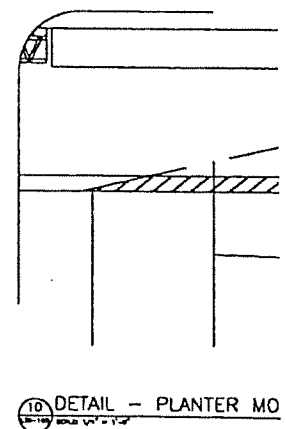
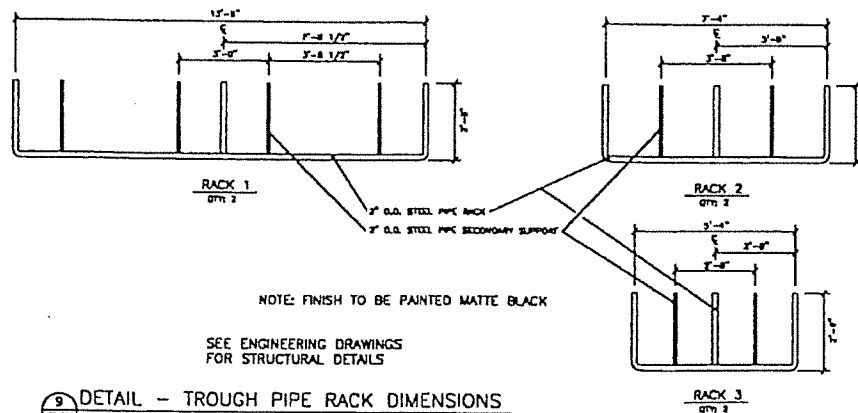
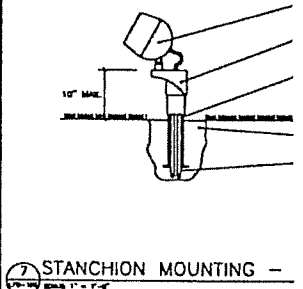
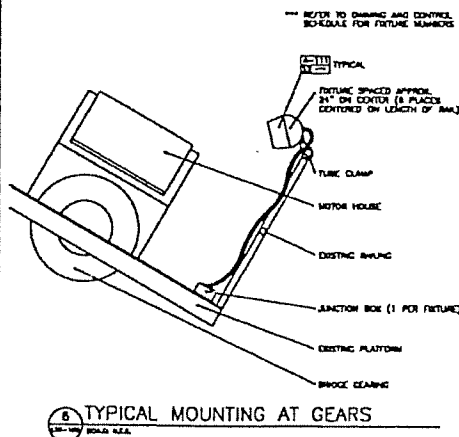
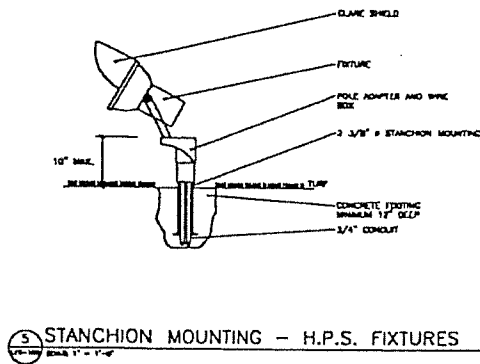
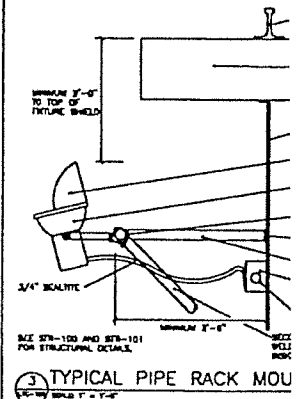
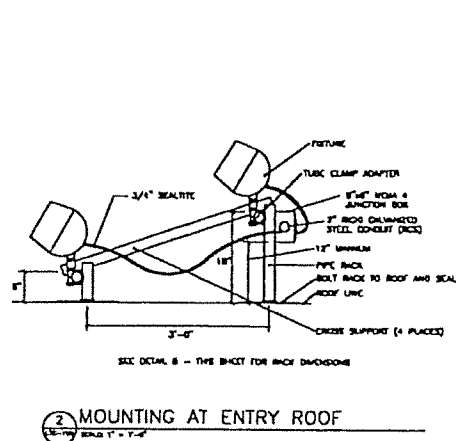
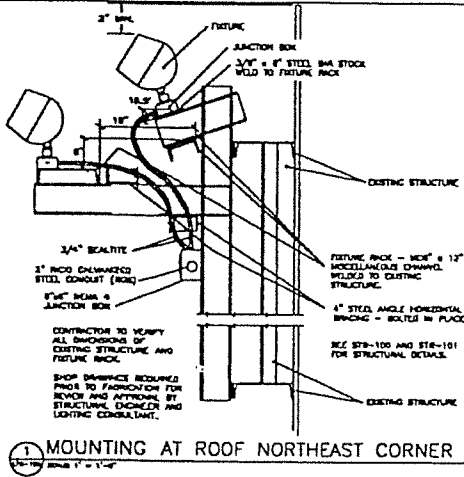


BASCULE #1 BRIDGE  
LIGHTING DETAILS

DATE: 1/12/79

SHEET

LTG-102



2615-Second Avenue Suite 200  
Seattle, Washington 98121  
(206) 441-0570  
(206) 441-8826 Fax

# BASCULE #1 BRIDGE SCHEDULES AND DETAILS

DATE	DESCRIPTION
------	-------------

\_\_\_\_\_

DATE: 1/19/96

FILE:  
Details1.dwg

SHEET

LTG-103

11 CONTROL ROOM  
LTS-102  
No Scale

## KEYED NOTES

- ① Fused disconnect switch normal duty, 120/208V, 3 Phase, 4W, 400A, w/ 400A current limiting fuses.
- ② Flame F/X Control Panel Mount above F/SW.
- ③ CD 80 Dimmer Rack.
- ④ DMX/AUDIO Rack with CD player.
- ⑤ Chromalox #LUH-02-81 2.6KW Unit Heater, 208V, 1 Phase, w/ integral Thermostat, Ceiling mtd. w/ slope ceiling adapter.
- ⑥ Audio Power Outlets as required for (4) 1.8KW circuits.
- ⑦ Misting System Control panel.
- ⑧ Mist pump unit (mount on shelf) brine tank and water treatment below. Provide disconnect at pump.
- ⑨ DMX/SWC Control Outlet

# DECORATIVE LIGHTING NOTES-BASCULE 1

## SPECIFICATIONS

THESE NOTES ARE SUPPLEMENTAL TO ITEMS 625 AND 713 OF THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS AND TO ATTACHED DIVISION 16 SPECIFICATIONS. IN CASE OF ANY CONFLICT THE MORE STRINGENT REQUIREMENT WILL APPLY.

## GENERAL

THIS PROJECT WILL RECEIVE 208/120 VOLT, THREE PHASE 4 WIRE, SECONDARY SERVICE, WITH GROUNDED NEUTRAL FROM:

CLEVELAND PUBLIC POWER (C.P.P.)  
LAKESIDE AVENUE  
CLEVELAND, OHIO 44114

THE CONTRACTOR WILL NOT BE REQUIRED TO FURNISH OR INSTALL THE PRIMARY DISTRIBUTION LINES, TRANSFORMERS OR TRANSFORMER POLES. THE CONTRACTOR SHALL PROVIDE EXCAVATION, TRANSFORMER PAD PER CPP SPECIFICATIONS, PRIMARY DUCT BANK, SECONDARY CONNECTIONS, FEEDERS, CONNECTION TO BRANCH CIRCUITS AND GROUNDS AS HEREINAFTER SPECIFIED AND SHOWN ON THE PLANS AND ASSURE THAT ALL POWER SERVICE REQUIREMENTS OF CPP ARE PROVIDED. CONTRACTOR SHALL PROVIDE PROTECTIVE BOLLARDS AROUND THE CPP TRANSFORMER PER CPP STANDARDS.

## LUMINAIRES

LUMINAIRES SHALL BE AS SPECIFIED ON THE ATTACHED LIGHTING FIXTURE SCHEDULE.

## FIXTURE MOUNTING BRACKETS

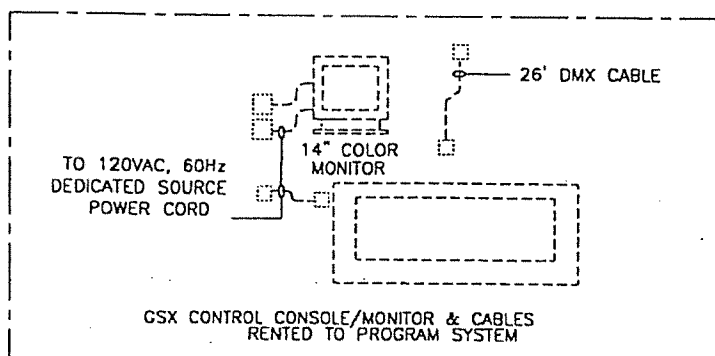
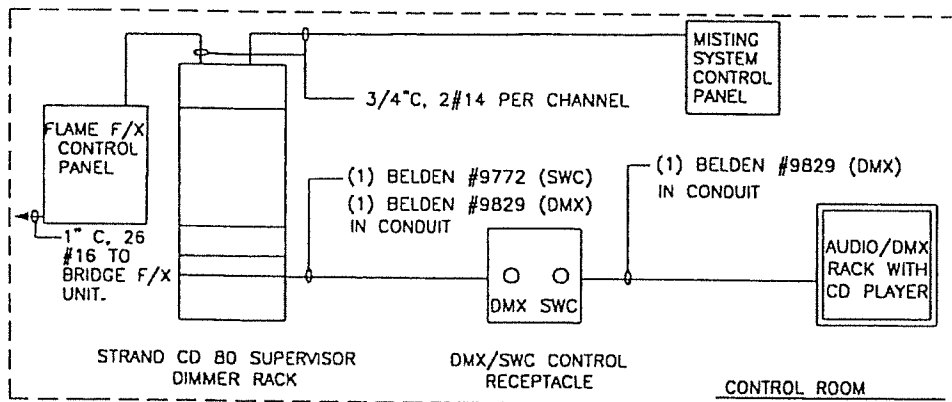
MOUNTING BRACKETS SHALL BE AS DETAILED IN THE PLANS.

## UNDERGROUND DUCT BANK

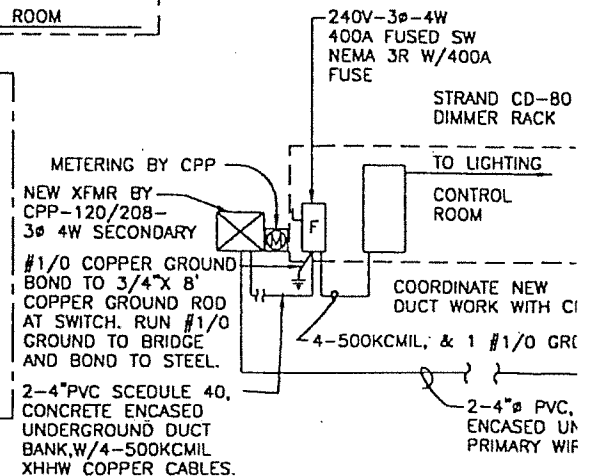
CONTRACTOR SHALL REPAIR PARKING LOT PAVEMENT TO MATCH EXISTING PAVEMENT AFTER EXCAVATING & INSTALLING THE DUCT BANK(S). RESTORE ALL AREAS TO MATCH EXISTING CONTIGUOUS AREA(S). CONTRACTOR SHALL COORDINATE ALL TRENCHING WITH OWNER TO MINIMIZE ANY INCONVENIENCE TO OWNER'S OPERATIONS.

CD-80  
TOTAL CONNECTED LOAD VA  
A-32,516  
B-31,360  
C-32,980  
96,856 = 269 A

LINE NUMBER	DESCRIPTION
1	2.4 KW DIM W/20A C/B D1
2	2.4 KW DIM W/20A C/B D2
3	2.4 KW DIM W/20A C/B D3
4	2.4 KW DIM W/20A C/B D4
5	2.4 KW DIM W/20A C/B D5
6	2.4 KW DIM W/20A C/B D6
7	2.4 KW DIM W/20A C/B D7
8	2.4 KW DIM W/20A C/B D8
9	2.4 KW DIM W/20A C/B D9
10	2.4 KW DIM W/20A C/B D1
11	2.4 KW DIM W/20A C/B D1
12	2.4 KW DIM W/20A C/B D1
13	2.4 KW DIM W/20A C/B D1
14	2.4 KW DIM W/20A C/B D1
15	2.4 KW DIM W/20A C/B D1
16	2.4 KW DIM W/20A C/B D1
17	2.4 KW DIM W/20A C/B D1
18	2.4 KW DIM W/20A C/B D1
19	2.4 KW DIM W/20A C/B D1
20	2.4 KW DIM W/20A C/B D2
21	2.4 KW DIM W/20A C/B D2
22	2.4 KW DIM W/20A C/B D2
23	2.4 KW DIM W/20A C/B D2
24	2.4 KW DIM W/20A C/B D2
25	2.4 KW DIM W/20A C/B D2
26	2.4 KW DIM W/20A C/B D2
27	2.4 KW DIM W/20A C/B D2
28	2.4 KW DIM W/20A C/B D2
29	2.4 KW DIM W/20A C/B D2
30	2.4 KW DIM W/20A C/B D3
31	2.4 KW DIM W/20A C/B D3
32	2.4 KW DIM W/20A C/B D3
33	2.4 KW DIM W/20A C/B D3
34	2.4 KW DIM W/20A C/B D3
35	2.4 KW DIM W/20A C/B D3
36	2.4 KW DIM W/20A C/B D7
37	2.4 KW DIM W/20A C/B D1
38	2.4 KW DIM W/20A C/B D2
39	2.4 KW DIM W/20A C/B D8
40	2.4 KW DIM W/20A C/B D1
41	2.4 KW DIM W/20A C/B D2
42	SW2BA W/20A C/B
43	SW2BB W/20A C/B
44	SW2BC W/20A C/B
45	SW2BD W/20A C/B
46	2.4 KW DIM W/20A C/B D3
47	SW34 W/20A C/B
48	SW35 W/20A C/B
49	SW36 W/20A C/B
50	SW37 W/20A C/B
51	20A C/B
52	20A 2P C/B
53	SW38 W/20A C/B
54	SW39 W/20A C/B
55	SW40 W/20A C/B
56	20A 3P C/B
57	2.4 KW DIM W/20A C/B



CONTROL WIRING DIAGRAM  
No scale



SINGLE LINE DIAGRAM - 120/  
No scale

# CD-80 DIMMER RACK LOADING SCHEDULE

LINE NUMBER	DESCRIPTION	CH #	FIXTURE TYPE AND NUMBER	LOAD VA	Ø	CONDUIT & WIRE	REMARKS	LINE NUMBER
1	2.4 KW DIM W/20A C/B D1	1	2-A105a	2000	A	2", 2/8 & 1/12 GRD	ROOF	1
2	2.4 KW DIM W/20A C/B D2	2	2-A105	2000	A	2", 2/8 & 1/12 GRD	ROOF	2
3	2.4 KW DIM W/20A C/B D3	3	2-A106	2000	B	2", 2/8 & 1/12 GRD	ROOF	3
4	2.4 KW DIM W/20A C/B D4	4	2-A107a	2000	B	2", 2/8 & 1/12 GRD	ROOF	4
5	2.4 KW DIM W/20A C/B D5	5	2-A107	2000	C	2", 2/8 & 1/12 GRD	ROOF	5
6	2.4 KW DIM W/20A C/B D6	6	2-A107	2000	C	2", 2/8 & 1/12 GRD	ROOF	6
7	2.4 KW DIM W/20A C/B D7	7	2-A105a	2000	A	2", 2/8 & 1/12 GRD	ROOF	7
8	2.4 KW DIM W/20A C/B D8	8	2-A105	2000	A	2", 2/8 & 1/12 GRD	ROOF	8
9	2.4 KW DIM W/20A C/B D9	9	2-A105	2000	B	2", 2/8 & 1/12 GRD	ROOF	9
10	2.4 KW DIM W/20A C/B D10	1	2-A103a	2000	B	2", 2/8 & 1/12 GRD	ROOF	10
11	2.4 KW DIM W/20A C/B D11	2	2-A103	2000	C	2", 2/8 & 1/12 GRD	ENTRY	11
12	2.4 KW DIM W/20A C/B D12	3	2-A103	2000	C	2", 2/8 & 1/12 GRD	ENTRY	12
13	2.4 KW DIM W/20A C/B D13	4	2-A104a	2000	A	2", 2/8 & 1/12 GRD	ENTRY	13
14	2.4 KW DIM W/20A C/B D14	5	2-A104	2000	A	2", 2/8 & 1/12 GRD	ENTRY	14
15	2.4 KW DIM W/20A C/B D15	6	2-A104	2000	B	2", 2/8 & 1/12 GRD	ENTRY	15
16	2.4 KW DIM W/20A C/B D16	7	2-A102a	2000	B	2", 2/8 & 1/12 GRD	ENTRY	16
17	2.4 KW DIM W/20A C/B D17	8	2-A102	2000	C	2", 2/8 & 1/12 GRD	ENTRY	17
18	2.4 KW DIM W/20A C/B D18	9	2-A102	2000	C	2", 2/8 & 1/12 GRD	ENTRY	18
19	2.4 KW DIM W/20A C/B D19	1	2-A109a	2000	A	2", 2/8 & 1/12 GRD	POLE	19
20	2.4 KW DIM W/20A C/B D20	2	2-A109	2000	A	2", 2/8 & 1/12 GRD	POLE	20
21	2.4 KW DIM W/20A C/B D21	3	2-A109	2000	B	2", 2/8 & 1/12 GRD	POLE	21
22	2.4 KW DIM W/20A C/B D22	4	2-A110a	2000	B	2", 2/8 & 1/12 GRD	POLE	22
23	2.4 KW DIM W/20A C/B D23	5	2-A110	2000	C	2", 2/8 & 1/12 GRD	POLE	23
24	2.4 KW DIM W/20A C/B D24	6	2-A110	2000	C	2", 2/8 & 1/12 GRD	POLE	24
25	2.4 KW DIM W/20A C/B D25	7	2-A108a	2000	A	2", 2/8 & 1/12 GRD	POLE	25
26	2.4 KW DIM W/20A C/B D26	8	2-A108	2000	A	2", 2/8 & 1/12 GRD	POLE	26
27	2.4 KW DIM W/20A C/B D27	9	2-A108	2000	B	2", 2/8 & 1/12 GRD	POLE	27
28	2.4 KW DIM W/20A C/B D29	11	1-A101, 3-A-112	2000	B	3/4", 3/12	INTERIOR FLAME	28
29	2.4 KW DIM W/20A C/B D29A	11	1-A101, 3-A-112	2000	C	3/4", 3/12	INTERIOR FLAME	29
30	2.4 KW DIM W/20A C/B D30	12	4-A100	2000	C	3/4", 3/12	INTERIOR FLAME	30
31	2.4 KW DIM W/20A C/B D30A	12	1-A100, 1-A101, 1-A-113	1500	A	3/4", 3/12	INTERIOR FLAME	31
32	2.4 KW DIM W/20A C/B D31	13	4-A112	2000	A	3/4", 3/12	INTERIOR FLAME	32
33	2.4 KW DIM W/20A C/B D31A	13	1-A101, 1-A112, 1-A113	1500	B	3/4", 3/12	INTERIOR FLAME	33
34	2.4 KW DIM W/20A C/B D32	14	3-A-100, 1-A101	2000	B	3/4", 3/12	INTERIOR FLAME	34
35	2.4 KW DIM W/20A C/B D32A	14	3-A-400, 1-A101	2000	C	2", 2/8 & 1/12 GRD	INTERIOR FLAME	35
36	2.4 KW DIM W/20A C/B D33	7	1-A-105a, 1-A102a	2000	C	2", 2/8 & 1/12 GRD	ROOF/ENTRY	36
37	2.4 KW DIM W/20A C/B D34	7	1-A-108a	1000	A	2", 2/8 & 1/12 GRD	POLE	37
38	2.4 KW DIM W/20A C/B D35	8	1-A-105, 1-A102	2000	A	2", 2/8 & 1/12 GRD	ROOF/ENTRY	38
39	2.4 KW DIM W/20A C/B D36	8	1-A108	1000	B	2", 2/8 & 1/12 GRD	POLE	39
40	SW28A W/20A C/B	10	3-H-101, 3-H-102, 1-H-103	960	B	3/4", 3/12	EXTERIOR/INTERIOR BASE	40
41	SW28B W/20A C/B	10	3-H-101, 3-H-102, 1-H-103	960	C	3/4", 3/12	EXTERIOR/INTERIOR BASE	41
42	SW28C W/20A C/B	10	8-H-102	1536	C	3/4", 3/12	EXTERIOR/INTERIOR BASE	42
43	SW28D W/20A C/B	10	10-H-100	960	A	3/4", 3/12	EXTERIOR/INTERIOR BASE	43
44	2.4 KW DIM W/20A C/B D37	15	6-A111	900	A	3/4", 3/12	GEAR FEATURE	44
45	SW41 W/20A C/B	16			B	3/4", 3/12	GAS FLAME	45
46	SW42 W/20A C/B	17			B	3/4", 3/12	MISTING DEVICE	46
47	SW43 W/20A C/B	18			C	3/4", 3/12	STATIC SOUND	47
48	SW44 W/20A C/B	19			C	3/4", 3/12	EVENT SOUND	48
49	20A C/B	NA	120V DUPLEX RECEPT	500	A	3/4", 3/12	AUDIO/DMX RACK POWER	49
50	20A C/B	NA	MECH. EQUIP.	1750	B	3/4", 3/12	HEATING & VENTILATING	50
51								51
52								52
53								53
54								54
55								55

Ross De Alessi  
Lighting Design  
2015-Seward Avenue Suite 200  
Seattle, Washington 98121  
(206) 441-0870  
(206) 441-9824 Fax

## BASCULE #1 BRIDGE SCHEDULES AND DETAILS

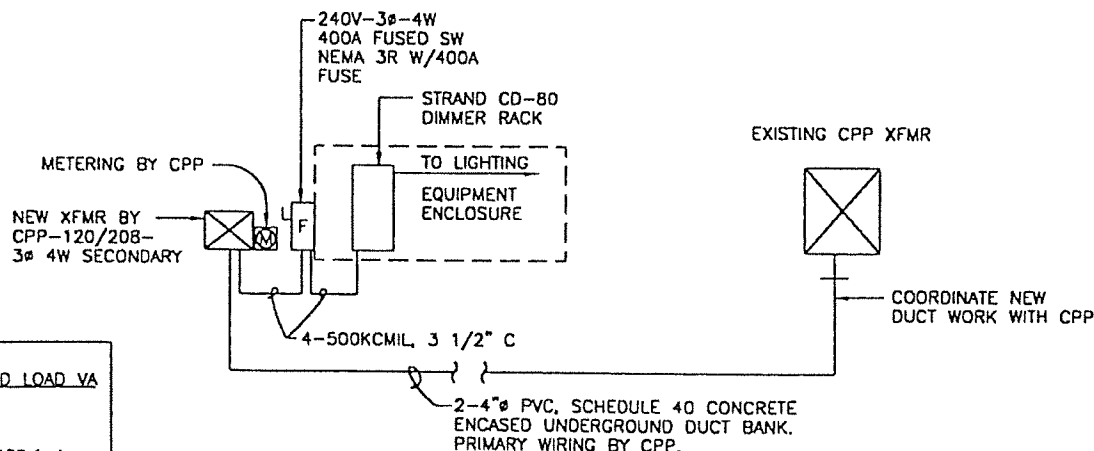
REVISIONS  
DATE DESCRIPTION

FILE NAME:  
Ltg-105.dwg  
4  
DETAIL.DWG

SHEET

LTG-103

-80  
AL CONNECTED LOAD VA  
-29,108  
1-28,118  
1-26,326  
83,552 = 232.1 A



SINGLE LINE DIAGRAM - 120/208-3Ø-4W  
No scale



# DECORATIVE LIGHTING NOTES-BASCULE 1

## SPECIFICATIONS

THESE NOTES ARE SUPPLEMENTAL TO ITEMS 625 AND 713 OF THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS AND TO ATTACHED DIVISION 16 SPECIFICATIONS. IN CASE OF ANY CONFLICT THE MORE STRINGENT REQUIREMENT WILL APPLY.

## GENERAL

THIS PROJECT WILL RECEIVE 208/120 VOLT, THREE PHASE 4 WIRE, SECONDARY SERVICE, WITH GROUNDING NEUTRAL FROM:

CLEVELAND PUBLIC POWER (C.P.P.)  
LAKESIDE AVENUE  
CLEVELAND, OHIO 44114

THE CONTRACTOR WILL NOT BE REQUIRED TO FURNISH OR INSTALL THE PRIMARY DISTRIBUTION LINES, TRANSFORMERS OR TRANSFORMER POLES. THE CONTRACTOR SHALL PROVIDE EXCAVATION, TRANSFORMER PAD PER CPP SPECIFICATIONS, PRIMARY DUCT BANK, SECONDARY CONNECTIONS, FEEDERS, CONNECTION TO BRANCH CIRCUITS AND GROUNDS AS HEREINAFTER SPECIFIED AND SHOWN ON THE PLANS AND ASSURE THAT ALL POWER SERVICE REQUIREMENTS OF CPP ARE PROVIDED. CONTRACTOR SHALL PROVIDE PROTECTIVE BOLLARDS AROUND THE CPP TRANSFORMER PER CPP STANDARDS

## LUMINAIRES

LUMINAIRES SHALL BE AS SPECIFIED ON THE ATTACHED LIGHTING FIXTURE SCHEDULE.

## FIXTURE MOUNTING BRACKETS

MOUNTING BRACKETS SHALL BE AS DETAILED IN THE PLANS.

## EQUIPMENT ENCLOSURE

ENCLOSURE SHALL BE AS MANUFACTURED BY A-MEZZ INDUSTRIAL STRUCTURES, INC. HUDSON, OHIO.

BUILDING SIZE SHALL BE 9'-0"x3'-0"x8'-0" HIGH, (INTERIOR DIMENSIONS) FACTORY ASSEMBLED AND PREFINISHED.

FRAME SHALL BE WELDED TUBULAR STEEL 2"x3"x14GA. AND 3"x3"x14GA.

ROOF JOISTS SHALL BE 2"x3"x14GA. STEEL TUBING.

EXTERIOR WALLS AND ROOF SHALL BE 11GA. (FLAT) GALVANIZED STEEL WELDED TO FRAME.

FLOOR SHALL BE 3/16" STEEL PLATE W/NO SKID FINISH.

(3) DOORS 3'-0"x7'-0"x11GA. INDUSTRIAL STEEL DOOR WITH TAMPER RESISTANT LOCK(S).

HVAC (6000 BTUH) WITH HEAT AND AUTO CHANGE OVER.

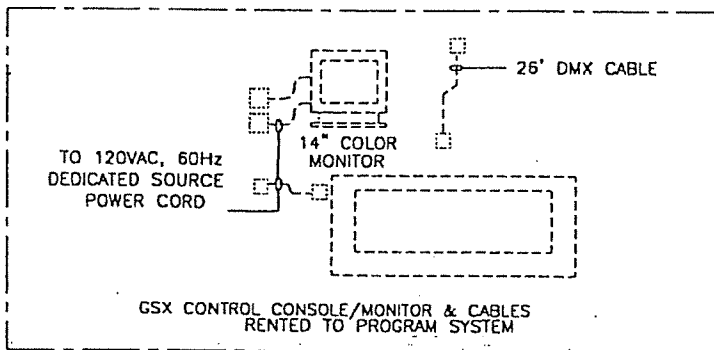
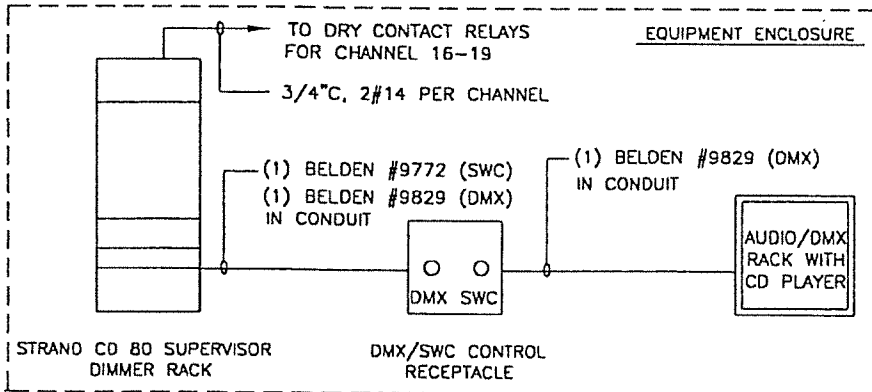
INSULATION: R11 ISO-CYANURATE FIBERGLASS FACED.

PROVIDE 4" HIGH CONCRETE PAD/FOUNDATION AND PROTECTIVE BOLLARDS.

PAINT-INDUSTRIAL ENAMEL- EXTERIOR AND INTERIOR. COLOR TO BE SELECTED BY OWNER.

## UNDERGROUND DUCT BANK

CONTRACTOR SHALL REPAIR PARKING LOT PAVEMENT TO MATCH EXISTING PAVEMENT AFTER EXCAVATING & INSTALLING THE DUCT BANK(S). RESTORE ALL AREAS TO MATCH EXISTING CONTIGUOUS AREA(S).



CONTROL WIRING DIAGRAM

No scale

HOWARD NEEDLES TAMMEN & BERGENDOFF  
ARCHITECTS ENGINEERS PLANNERS

**HNTB**

MADE BY: J.E. DATE: 11-1-92  
DRAWN BY: J.E. DATE: 11-1-92  
CHECKED BY: J.E. DATE: 11-1-92  
SCALE: 1/8"=1'-0"

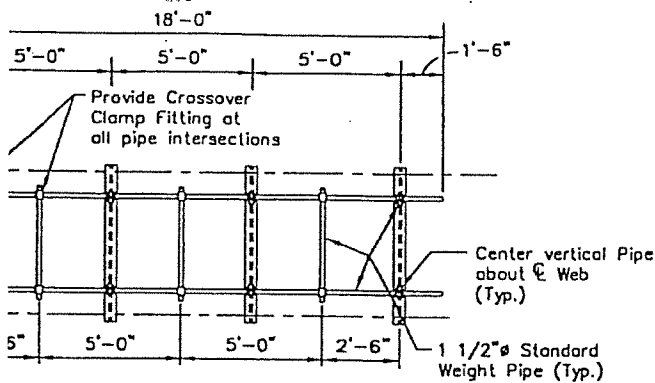
FILE: V:\PROJECTS\PROJECTS\11\BASCULE\1\BASCULE.DWG

LUMI NUMBER	DESCRIPTION
1	2.4 KW DIM W/20A C/B 01
2	2.4 KW DIM W/20A C/B 02
3	2.4 KW DIM W/20A C/B 03
4	2.4 KW DIM W/20A C/B 04
5	2.4 KW DIM W/20A C/B 05
6	2.4 KW DIM W/20A C/B 06
7	2.4 KW DIM W/20A C/B 07
8	2.4 KW DIM W/20A C/B 08
9	2.4 KW DIM W/20A C/B 09
10	2.4 KW DIM W/20A C/B 010
11	2.4 KW DIM W/20A C/B 011
12	2.4 KW DIM W/20A C/B 012
13	2.4 KW DIM W/20A C/B 013
14	2.4 KW DIM W/20A C/B 014
15	2.4 KW DIM W/20A C/B 015
16	2.4 KW DIM W/20A C/B 016
17	2.4 KW DIM W/20A C/B 017
18	2.4 KW DIM W/20A C/B 018
19	2.4 KW DIM W/20A C/B 019
20	2.4 KW DIM W/20A C/B 020
21	2.4 KW DIM W/20A C/B 021
22	2.4 KW DIM W/20A C/B 022
23	2.4 KW DIM W/20A C/B 023
24	2.4 KW DIM W/20A C/B 024
25	2.4 KW DIM W/20A C/B 025
26	2.4 KW DIM W/20A C/B 026
27	2.4 KW DIM W/20A C/B 027
28	2.4 KW DIM W/20A C/B 029
29	2.4 KW DIM W/20A C/B 029A
30	2.4 KW DIM W/20A C/B 030
31	2.4 KW DIM W/20A C/B 030A
32	2.4 KW DIM W/20A C/B 031
33	2.4 KW DIM W/20A C/B 031A
34	2.4 KW DIM W/20A C/B 032
35	2.4 KW DIM W/20A C/B 032A
36	2.4 KW DIM W/20A C/B 033
37	2.4 KW DIM W/20A C/B 034
38	2.4 KW DIM W/20A C/B 035
39	2.4 KW DIM W/20A C/B 036
40	SW28A W/20A C/B
41	SW28B W/20A C/B
42	SW28C W/20A C/B
43	SW28D W/20A C/B
44	2.4 KW DIM W/20A C/B 037
45	SW41 W/20A C/B
46	SW42 W/20A C/B
47	SW43 W/20A C/B
48	SW44 W/20A C/B
49	20A C/B
50	20A C/B
51	
52	
53	
54	
55	

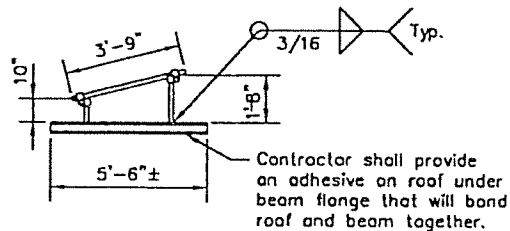
METERING BY CFI

NEW XFMR BY  
CPP-120/208-  
3Ø 4W SECONDARY

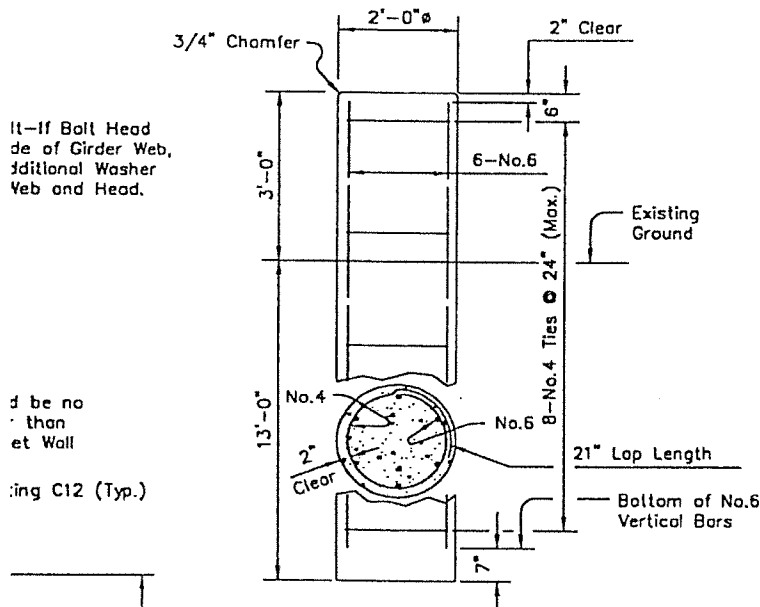
CD-80  
TOTAL CONNECTED LOAD VA  
Ø A-29,108  
Ø B-28,118  
Ø C-26,326  
83,552 = 232.1 A



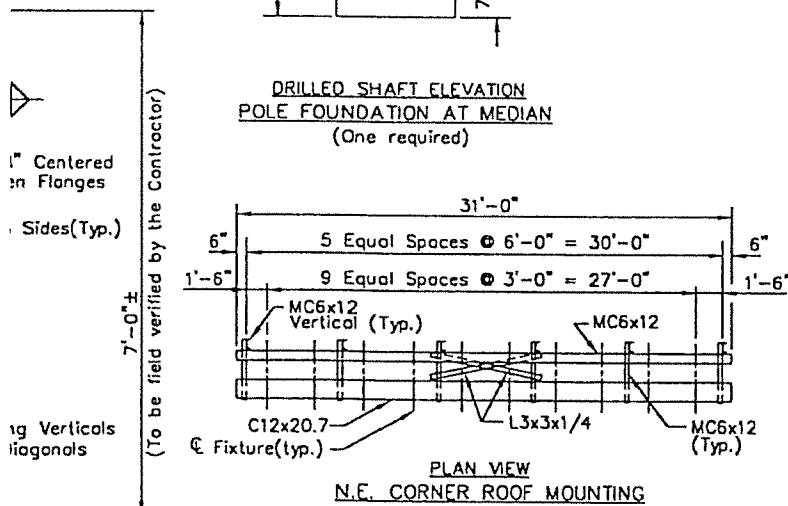
PLAN  
CANOPY PIPE RACK AT ENTRY ROOF



END ELEVATION  
CANOPY PIPE RACK AT ENTRY ROOF



DRILLED SHAFT ELEVATION  
POLE FOUNDATION AT MEDIAN  
(One required)



PLAN VIEW  
N.E. CORNER ROOF MOUNTING

#### GENERAL NOTES:

- 1) Refer to Lighting Plan Sheets LTG-100 thru LTG-102 for Bascule #1 Bridge for additional details.
- 2) All structural steel shall be ASTM A36.
- 3) All piping shall be ASTM A53, Grade B or ASTM A501.
- 4) All bolts shall be 3/4" ASTM A325 High Strength Bolts.
- 5) All new steel shall be painted.
- 6) All welding shall conform to current AWS Specifications.

#### ROOF MOUNTING NOTES:

- 1) Prior to fabrication the Contractor shall field measure the distance between existing channels, the flange widths of existing channels, and the height of the parapet wall above the upper existing channel. The contractor shall verify that the mounting bracket does not interfere with the existing diagonal lateral supports. Payment for these field measurements shall be made under "BASCULE 1 - LIGHTING SYSTEM, INSTALLED."

#### CANOPY PIPE RACK AT ENTRY ROOF NOTES:

- 1) Prior to fabrication the Contractor shall field measure the distance between existing roof supports. Payment for these field measurements shall be made under "BASCULE 1 - LIGHTING SYSTEM, INSTALLED."
- 2) Crossover Clamp fittings shall be "KEE KLAMP SLIP-ON PIPE FITTINGS" as manufactured by Kee Klamp, "HOLLAENDER SLIP-ON FITTINGS" as manufactured by Hollaender Manufacturing Co., or approved equal. Fitting shall allow the frame to slide up or down on the upright.

#### TROUGH RACK NOTES:

- 1) Prior to fabrication the Contractor shall field verify that the rack connections do not interfere with the girder flange angles or stiffeners. Payment for these field measurements shall be made under "BASCULE 1 - LIGHTING SYSTEM, INSTALLED."
- 2) All surfaces of racks shall be painted matte black.
- 3) The contractor shall remove and dispose of the existing timber platforms in each trough after approval by the owners of Shooters.
- 4) Single Socket Tee fittings shall be "KEE KLAMP SLIP-ON PIPE FITTINGS" as manufactured by Kee Klamp, "HOLLAENDER SLIP-ON FITTINGS" as manufactured by Hollaender Manufacturing Co., or approved equal.

#### DRILLED SHAFT NOTES:

- 1) For location of pole foundation, see Sht. LTG-100.
- 2) The drilled shaft design was based on an assumed anchor bolt diameter of 1" and a maximum anchor bolt circle of 18". If the anchor bolt diameter exceeds 1" or the anchor bolt circle exceeds 18", then a revised design shall be submitted to HNTB for review.
- 3) For additional drilled shaft notes, see Sht. STR-101.

# BASCULE #1 BRIDGE STRUCTURAL DETAILS

#### REVISIONS

DATE	DESCRIPTION

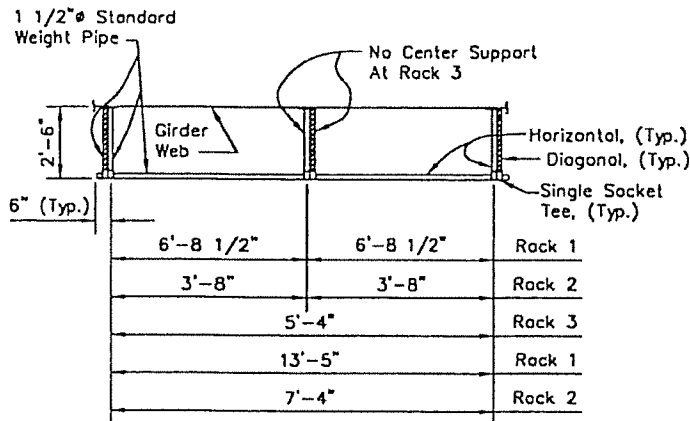
DATE: 1/19/96

FILE:  
DECOLTGB1.DWG

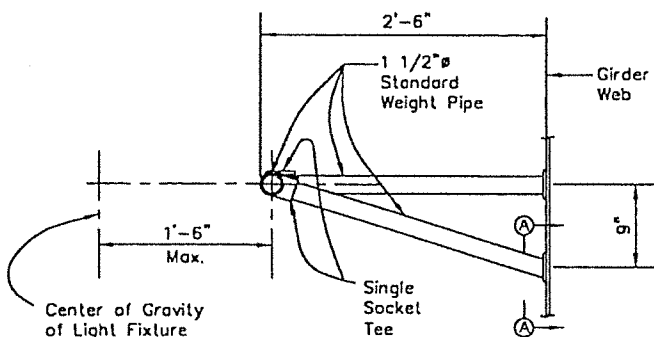
SHEET

STR-100

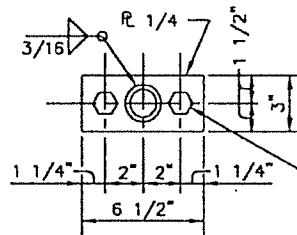
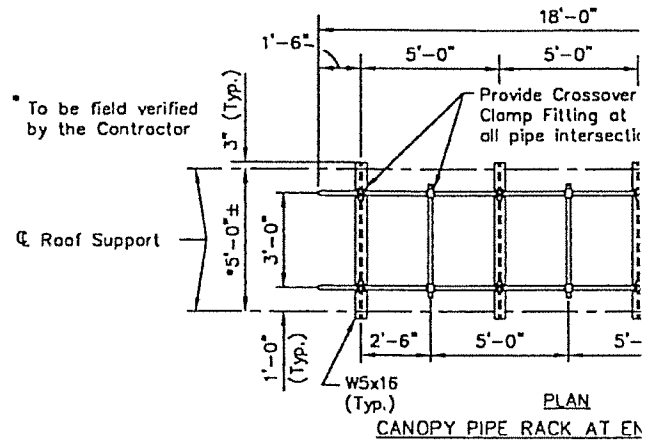
Note: Parapet Wall  
attached to existing  
channels not shown.



**PLAN  
TROUGH RACK**  
(Two of each rack required)

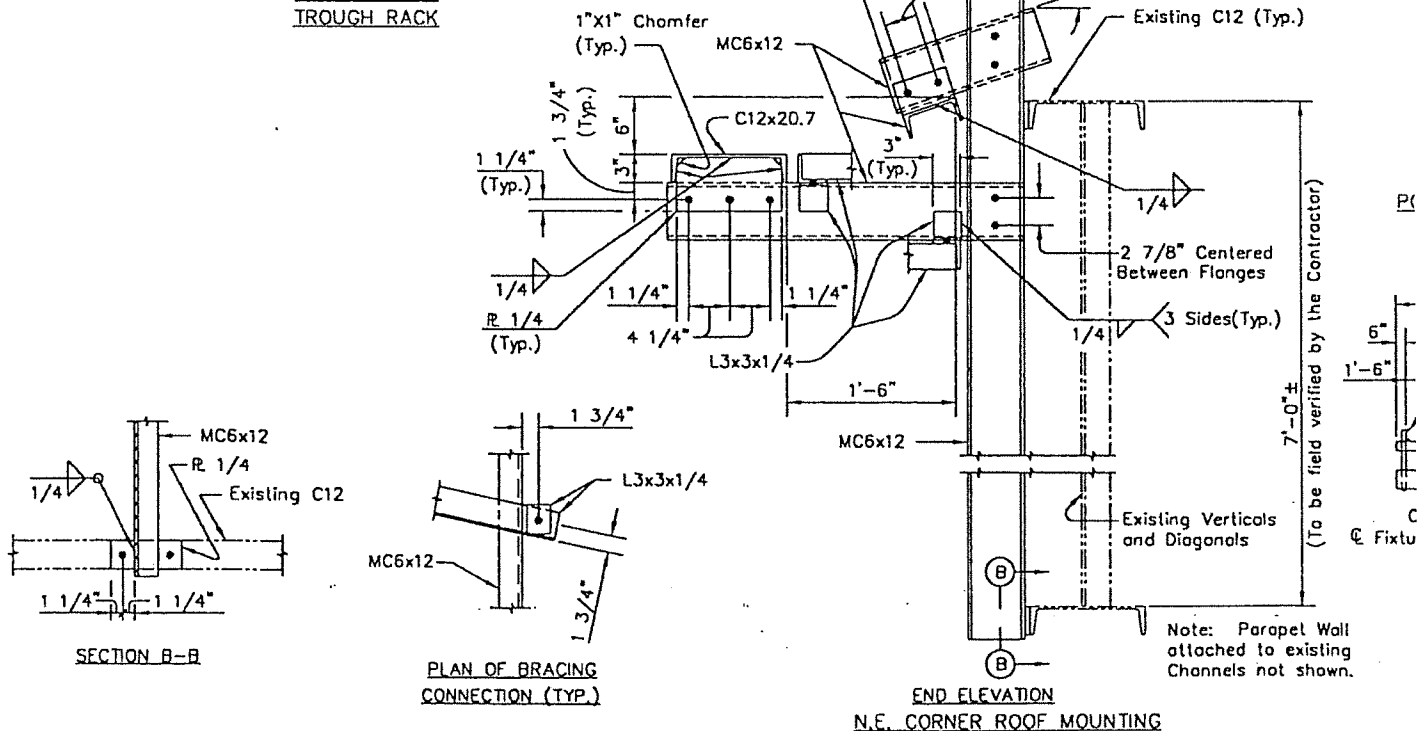


**END ELEVATION  
TROUGH RACK**



**SECTION A-A**  
(Top Connection similar)

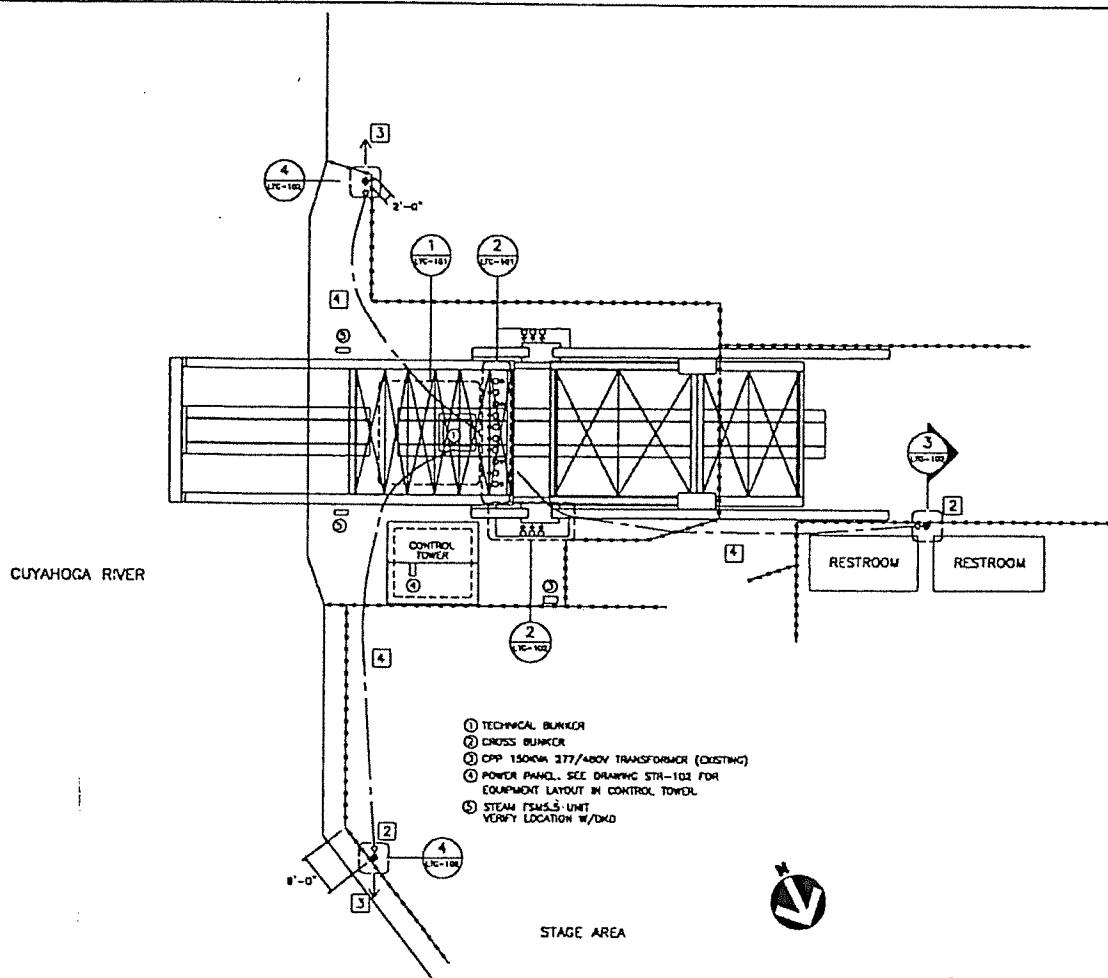
3/4" Cho



Ross De Alessi  
Lighting Design  
2815 Second Avenue S.W. 280  
Seattle, Washington 98121  
(206) 441-0870  
(206) 441-8826 Fax

BASCULE #2 BRIDGE  
ELEVATION AND SITE - LIGHTING PLAN

BAS021.DWG



SITE LIGHTING PLAN

SCALE: NONE, FOR REFERENCE ONLY

GENERAL NOTES:

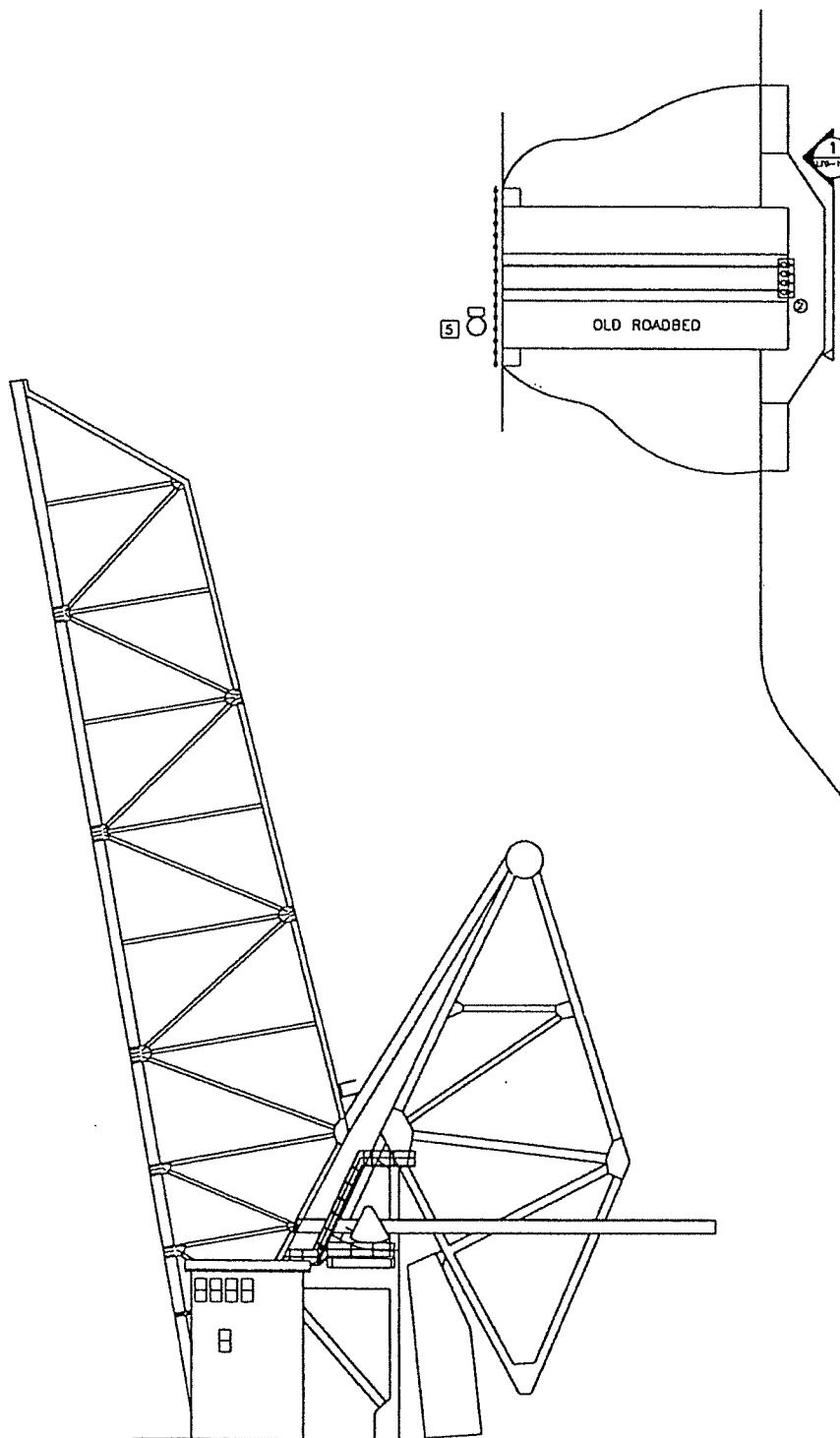
- 1 SEE DETAIL SHEETS AND DIMMING & CONTROL SCHEDULES FOR FIXTURE TYPE, LOCATIONS, DIMMING AND LOAD INFORMATION.
- 2 MOUNT POLE AGAINST FENCE THIS LOCATION.
- 3 DIRECTION OF POLE LEAN.
- 4 UNDERGROUND CONCRETE ENCASED DUCT BANK. SEE DRAWING LTG-101 FOR CONDUIT AND WIRE FILL.
- 5 CPP SERVICE POLE WITH CONTROL CENTER AND METERING. SEE DRAWING LTG-104.

REVISIONS	
DATE	DESCRIPTION

DATE: 1/19/96

SHEET

LTG-100



ELEVATION LOOKING WEST  
SCALE: FOR REFERENCE ONLY

Ross De Alessi  
Lighting Design

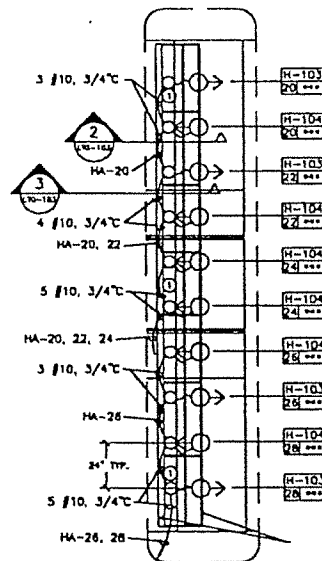
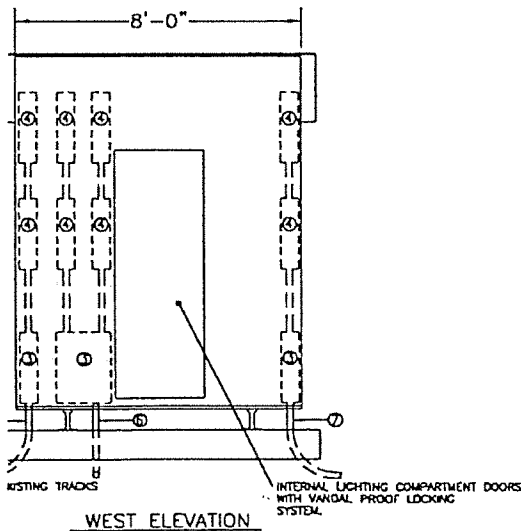
3815-Second Avenue Suite 200  
Seattle, Washington 98121  
(206) 441-0870  
(206) 441-9528 Fax

BASCULE #2 BRIDGE  
DETAILS - LIGHTING PLAN

FILE  
BNSC 21.DWG

GENERAL NOTES:

- ① INSTALL NEW CRATING ON TOP OF LOWER RM. OF EXISTING  
DETAILS AND FINISH. STRUCTURAL, DIMENSION AND  
CONTRACTOR TO VERIFY STRENGTH OF EXISTING RAILING FOR CATWALK AND  
LIGHT FIXTURES AND DETERMINE IF ADDITIONAL SUPPORTING IS REQUIRED.  
CRATING IS TO SERVE AS WORK AREA FOR SOMEONE LIGHTING SYSTEM.
- ② TO SUPPORT A-100, H-106, H-107. SEE DETAILS ON DWG. STR-102
- ③ PULLBOX
- ④ REMOVE BALLASTS FOR N, E, & WEST POLES
- ⑤ 2-2" 1/2" 1/8 THRU/THIN CU TO NORTH POLE
- ⑥ 2-2" 1/2" 1/8 THRU/THIN CU TO WEST POLE
- ⑦ 2-2" 1/2" 1/8 THRU/THIN CU TO SOUTH POLE
- ⑧ H-106 POWER SUPPLY
- ⑨ HEATING/VENTILATING EQUIPMENT
- ⑩ RONALD MODEL NO. 343M 1/100W INCANDESCENT LAMP



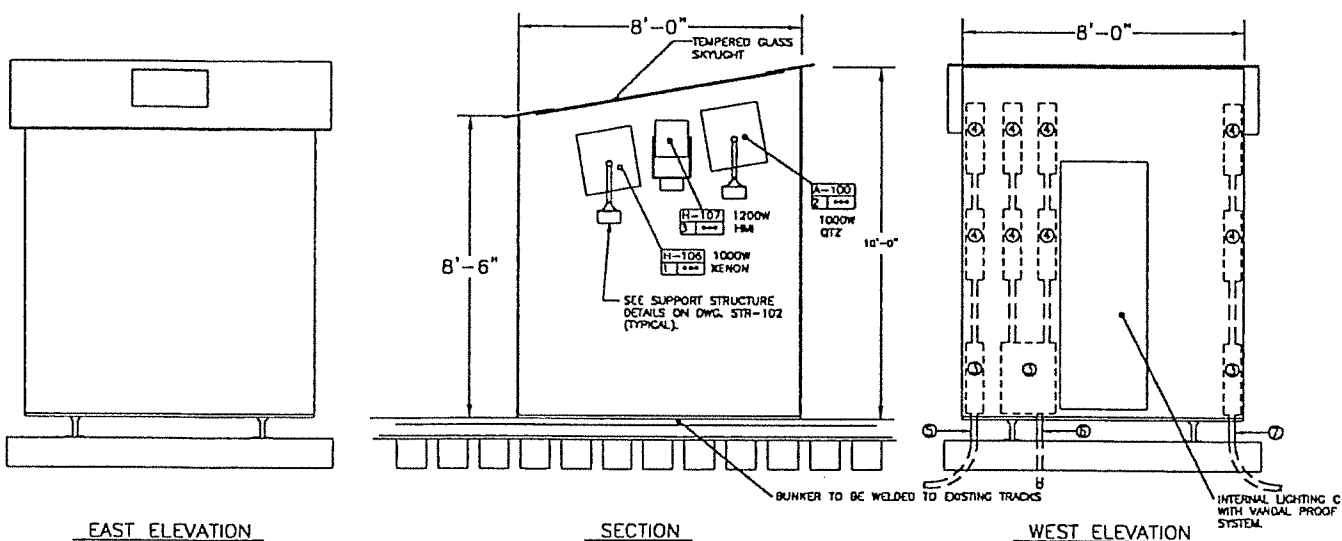
② UPPER CATWALK UPLIGHTING  
SCALE: 1/4" = 1'-0"

REVISIONS	
DATE	DESCRIPTION

DATE: 1/19/96

SHEET

LTG-101



1 TECHNICAL BUNKER AND REMOTE BALLAST VAULT  
 LTC-101 SCALE: 1/2" = 1'-0"

Ross De Alessi  
Lighting Design  
2815 Second Avenue Suite 200  
Seattle, Washington 98121  
(206) 441-0870  
(206) 441-0828 Fax

# BASCULE #2 BRIDGE DETAILS - LIGHTING PLAN

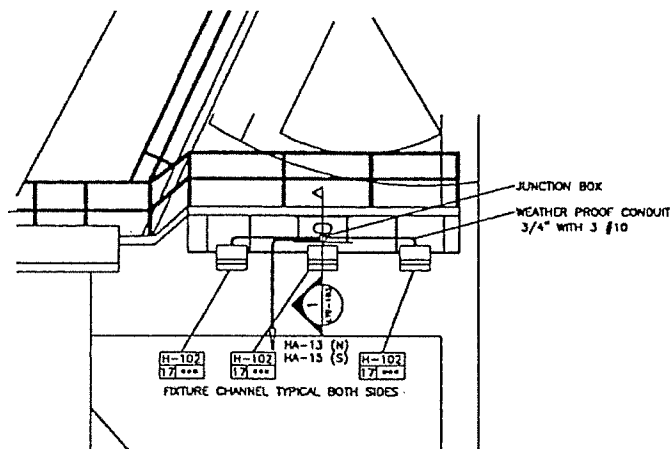
FILED  
BASED ON Dwg

REVISIONS  
DATE DESCRIPTION


DATE: 1/19/95

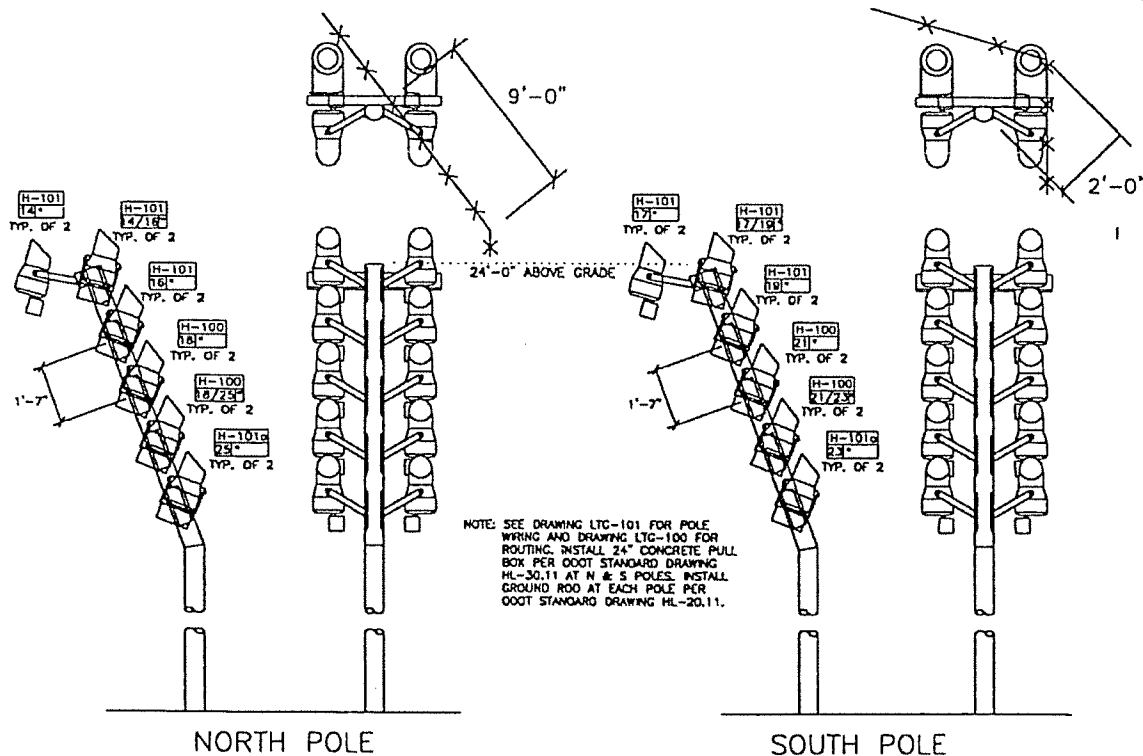
SHEET

LTG-102



## 2 LANDING DOWNLIGHTING

LTG-102 SCALE: 1/4\" = 1'-0"



NORTH POLE

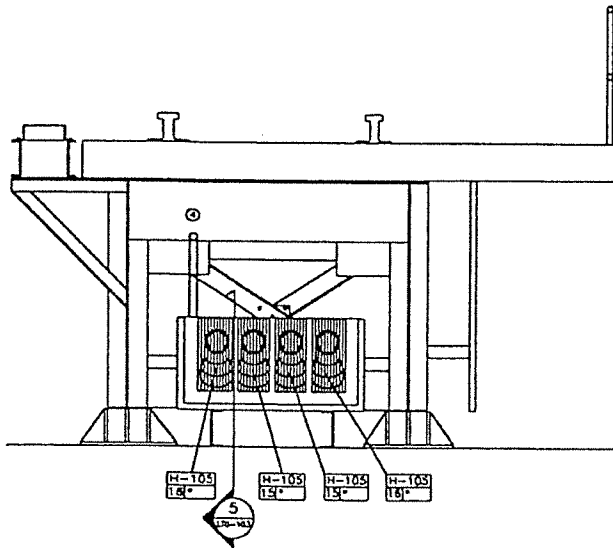
SOUTH POLE

## 4 POLE MOUNTING AT NORTH AND SOUTH SIDE

LTG-102 SCALE: 1/2\" = 1'-0"

NOTE: SEE DRAWING LTC-101 FOR POLE WIRING AND DRAWING LTC-100 FOR ROUTING. INSTALL 24\" CONCRETE PULL BOX PER ODOT STANDARD DRAWING HL-30.11 AT N & S POLES. INSTALL GROUND ROD AT EACH POLE PER ODOT STANDARD DRAWING HL-20.11.



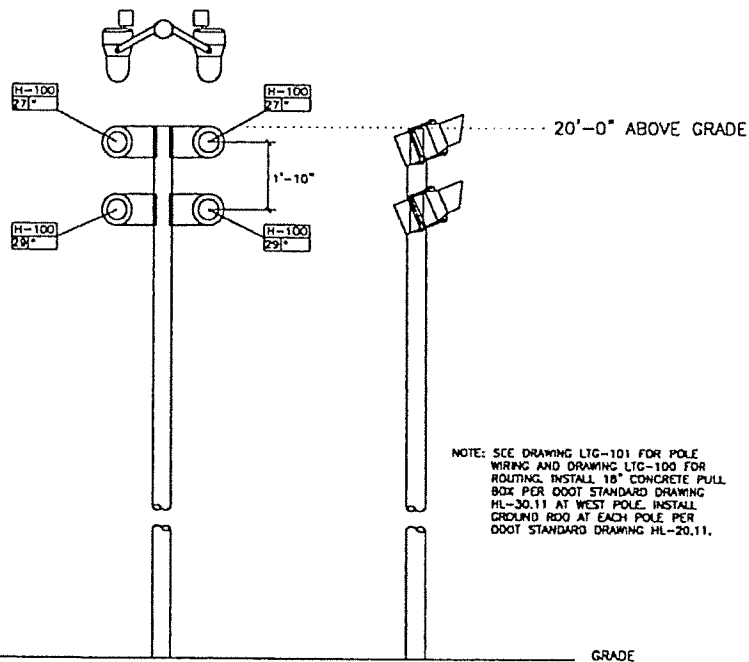


#### GENERAL NOTES:

- ① BUNKER TO BE SECURED TO FOUNDATION WITH MINIMUM 3/4" MOUNTING BOLTS AS SPECIFIED BY STRUCTURAL ENGINEER.
- ② CONTRACTOR TO PROVIDE (6) LOCKS FOR SECURING ACCESS DOOR.
- ③ ALL JUNCTION BOXES TO BE INSIDE BUNKER.
- ④ 3 #10 1" CONDUIT TO CONTROL CENTER, SEE SITE PLAN.

### ① CROSS BUNKER AIMING AT UNDERSIDE OF BRIDGE

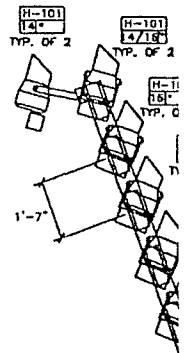
LTC-102 SCALE: 1/2" = 1'-0"



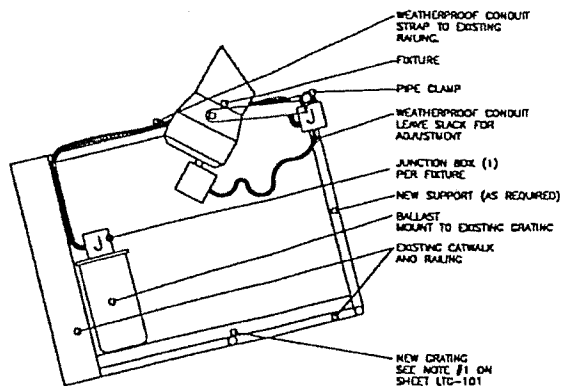
NOTE: SEE DRAWING LTC-101 FOR POLE WIRING AND DRAWING LTC-100 FOR ROUTING. INSTALL 18" CONCRETE PULL BOX PER DOT STANDARD DRAWING HL-30.11 AT WEST POLE. INSTALL GROUND ROD AT EACH POLE PER DOT STANDARD DRAWING HL-20.11.

### ③ POLE MOUNTING AT WEST SIDE

LTC-102 SCALE: 1/2" = 1'-0"

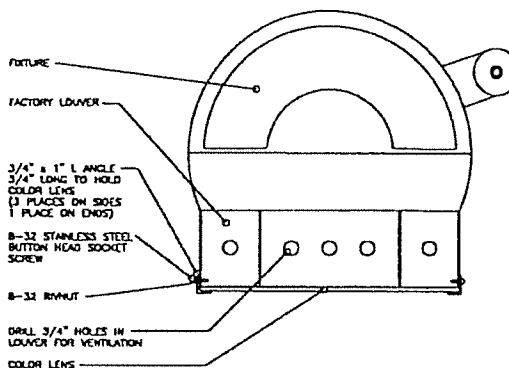


ROOF CONDUIT  
EXISTING  
IP  
ROOF CONDUIT  
OK FOR  
IT  
(2)  
COVERED)  
GRATING



REMOVE RAILING WHERE CONFLICTS WITH LIGHT FIXTURE

③ PIPE MOUNTING FOR COUNTER BALANCE  
LTG-101 SCALE 1" = 1'-0"



NOTE: ALL METAL PARTS TO BE FINISHED TO MATCH FIXTURE

④ LENS EXTENSION FOR TYPE H-102  
LTG-102 SCALE 1" = 1'-0"

Ross De Alessi  
Lighting Design  
2815 Second Avenue S.W. 280  
Seattle, Washington 98121  
(206) 441-0870  
(206) 441-8826 Fax

BASCULE #2 BRIDGE  
LIGHTING DETAILS

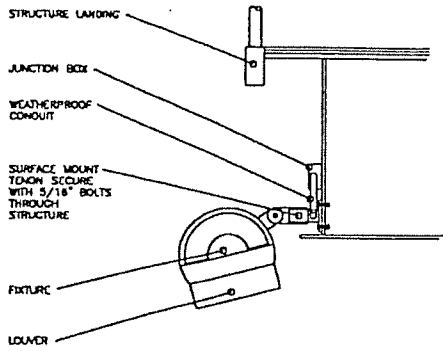
FILE:  
BASCULE.DWG

REVISIONS	
DATE	DESCRIPTION

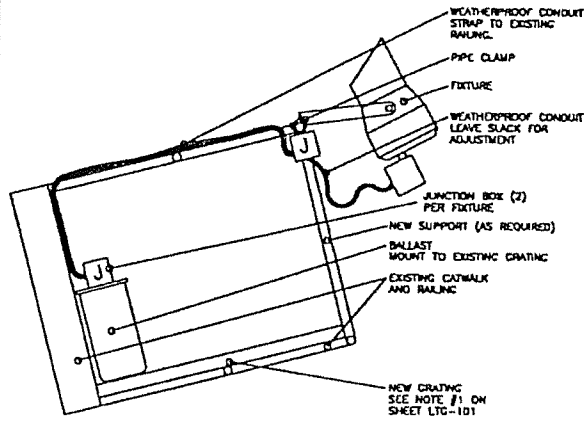
DATE: 1/19/98

SHEET

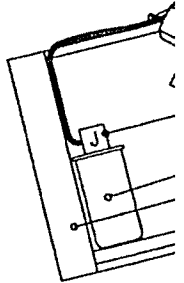
LTG-103



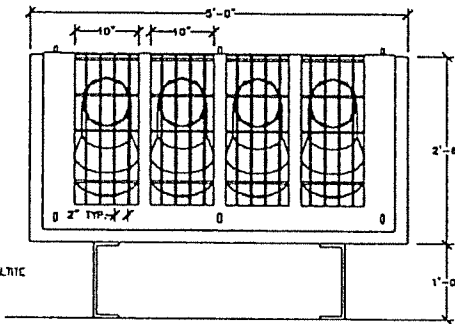
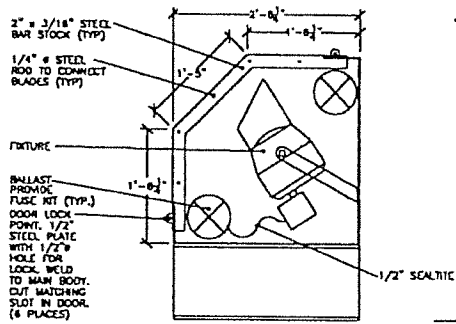
① MOUNTING AT LOWER LANDING TYPICAL  
LTC-161 SCALE 1" = 1'-0"



② PIPE MOUNTING FOR LIFT SECTION  
LTC-162 SCALE 1" = 1'-0"



③ PIPE MOUNTING DETAIL  
LTC-163 SCALE 1" = 1'-0"



NOTE: CONTRACTOR TO PROVIDE LOCKS PER SPECIFICATION.

⑤ CROSS BUNKER SECTIONS  
LTC-165 SCALE 1" = 1'-0"

# Ross De Alessi Lighting Design

2615 Second Avenue Suite 200  
Seattle, Washington 98121  
(206) 441-0870  
(206) 441-9828 Fax

## BASCULE #2 BRIDGE SCHEDULE & DETAILS

FILE: DETAIL.DWG

REVISIONS

DATE: 1/19/96

SHEET

LTG-104

277/480 V 3 4 W TYPE 500 NHB AMPERE RATING 225A MLD PANEL NO. HA

DESCRIPTION	VA	AMPS	EMO	NO.	EMO	AMPS	VA	DESCRIPTION
UH-1	5000	18	2.5	1	2.45	7710	10000	XFMR - RA 30KVA
STEAM FSM5.5 UNIT	5000		3	3	4	8900	10000	
7.5HP	3043		20	7	8	8000	10000	
	3043		9	9	10		3043	STEAM FSM5.5 UNIT
	3043		11	11	12		3043	7.5HP
100A - 3P								480V CONTACTOR
LANONIC -H- 3-H102	1500	5.4	201.3	142C			3825	NORTH POLE-3-H-101 BALLASTS
LANONIC -S- 3-H102	1500		201.3	142C			3825	NORTH POLE-3-H-101 BALLASTS
SOUTH POLE-3-H-101 BALLASTS	3625		201.7	142C			3825	NORTH POLE-3-H-101 BALLASTS
SOUTH POLE-3-H-101 BALLASTS	3625		201.9	202C			2550	UPPER CATWALK-1-H103, 1-H-104
SOUTH POLE-3-H-101 BALLASTS	3625		202.1	222C			2550	UPPER CATWALK-1-H103, 1-H-104
SOUTH POLE-3-H-101 BALLASTS	3625		202.3	242C			2550	UPPER CATWALK-2-H-104
NORTH POLE-3-H-101 BALLASTS	3625		202.4	262C			2550	UPPER CATWALK-1-H103, 1-H-104
WESTPOLE 2-H100	2550		202.7	282C			2550	UPPER CATWALK-1-H103, 1-H-104
WESTPOLE 2-H100	2550		202.8	302C				SPARE
SPACE			31	32				SPACE
SPACE			33	34				SPACE

LOADS	VA	AMPS	E.M.O.
PHASE A	33,845		
PHASE B	33,120		
PHASE C	33,845		
TOTAL CONNECTED	102,800	124	
SPACES @ 50% CAL.			
TOTAL			

FEEDER AND CONDUIT SIZE 4 #1/0, 2" TO 200A F/SW W/150A FUSES

SUMMARY	TOP FEED LUGS
1 - 3	P OCTS. CALIB. @ 25A
18 - 1	P OCTS. CALIB. @ 20A
1 - 3	P OCTS. CALIB. @ 45A
2 - 3	P OCTS. CALIB. @ 20A
	P OCTS. CALIB. @
2 - 1	P SPACES CONSTANT SECTION (NOT SHOWN)
4 - 1	P SPACES CONTACTOR SECTION
TOTAL NUMBER OF POLES	38

120/208 V 3 4 W TYPE 500 OOB AMPERE RATING 80A MCS PANEL NO. RA

DESCRIPTION	VA	AMPS	EMO	NO.	EMO	AMPS	VA	DESCRIPTION
1000W REMON-H108 SW24	2160		2.5	1	2.2C		1000	A-100 DM23
SW25-H-107	1500		20.3	3	4.2C		1000	STEAM SW 25
SW27 SOUND	1000		20.5	5	6.2C		1000	RELAY (ONCE) POWER
SW1 CONTACTOR CONTROL	50		20.7	7	8.2C		500	MONITOR-OUTLET-COMPUTER
BUNKER HVAC UNIT	2000		20.9	9	10.2C		400	CONTROL RM. LTC/BUNKER LTC
SPARE			20.11	11	12.2C			1-CO
SOUND SYSTEM	2000		20.13	13	14.2C		2000	SOUND SYSTEM
SOUND SYSTEM	2000		20.15	15	16.2C		2000	SOUND SYSTEM
SOUND SYSTEM	2000		20.17	17	18.2C		2000	SOUND SYSTEM

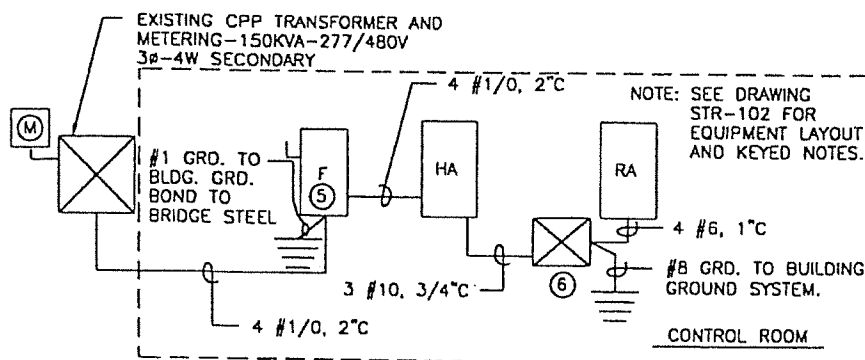
LOADS	VA	AMPS	E.M.O.
PHASE A	7,710		
PHASE B	8,900		
PHASE C	6,000		
TOTAL CONNECTED	22,610	82.8	
SPACES @ 50% CAL.			
TOTAL	30,000	83.3	

FEEDER AND CONDUIT SIZE 4 #2, 2"

SUMMARY	TOP FEED LUGS
17 - 1	P OCTS. CALIB. @ 20A
1 - 1	P OCTS. CALIB. @ 25A
	P OCTS. CALIB. @
	P OCTS. CALIB. @
	P OCTS. CALIB. @
8 - 1	P SPACES (NOT SHOWN)
TOTAL NUMBER OF POLES	24

- FUSED 60A 3 POLE DISCONNECT
- 3 POLE CONTACTOR 120VOLT COIL
- MOUNT CONTROL CENTER ON SERVICE POLE. POLE BY CPP.
- ENCLOSURE PER ODOT SPECIFICATIONS & STD. DWG. HL-40.10

TIME SWITCH  
TORK #7200ZL



SINGLE LINE DIAGRAM - 277/480-3Ø-4W + 120/208V-3Ø-4W  
No scale

## SPECIFICATIONS

## GENERAL

LUMINAIRES

### FIXTURE MOUNTING BRACKETS

EQUIPMENT ENCLOSURE

UNDERGROUND DUCT BANK

SCALE: 400X

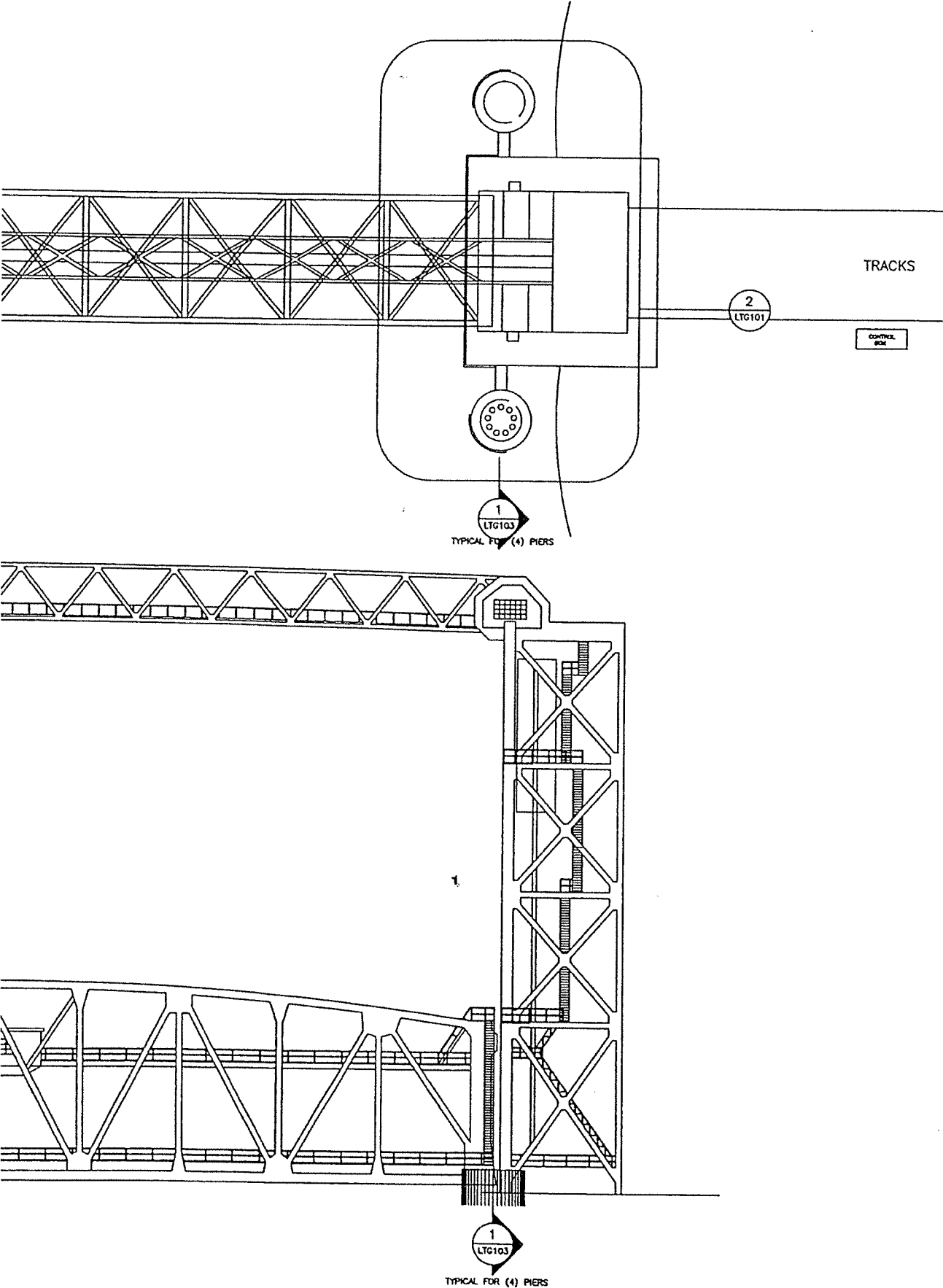
Ross De Alessi  
Lighting Design  
2815-Second Avenue Suite 200  
Seattle, Washington 98121  
(206) 441-0670  
(206) 441-9925 Fax

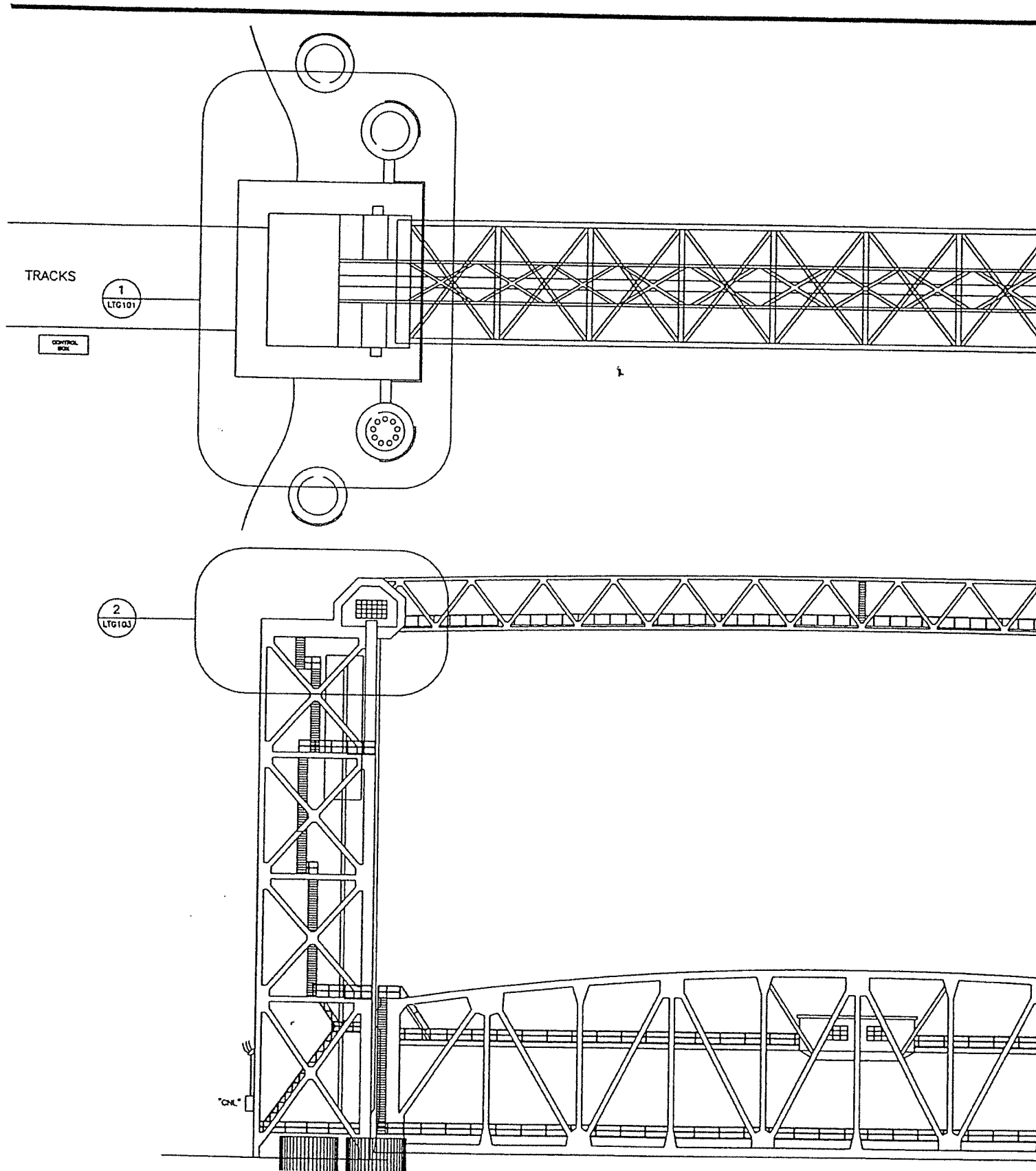
CONRAIL #1 BRIDGE  
PLAN AND ELEVATION - LIGHTING PLAN

REVISIONS	
DATE	DESCRIPTION

DRAWN BY: B.K.L.  
DATE: 4/1/96  
SCALE: 1/16"=1'-0"

SHEET  
LTG-100





Ross De Alessi  
Lighting Design  
2815 Second Avenue Suite 280  
Seattle, Washington 98121  
(206) 441-0670  
(206) 441-9925 Fax

# CONRAIL #1 BRIDGE DETAILS - LIGHTING PLAN

## REVISIONS

DATE DESCRIPTION


DRAWN BY: B.K.L.

DATE: 4/1/96

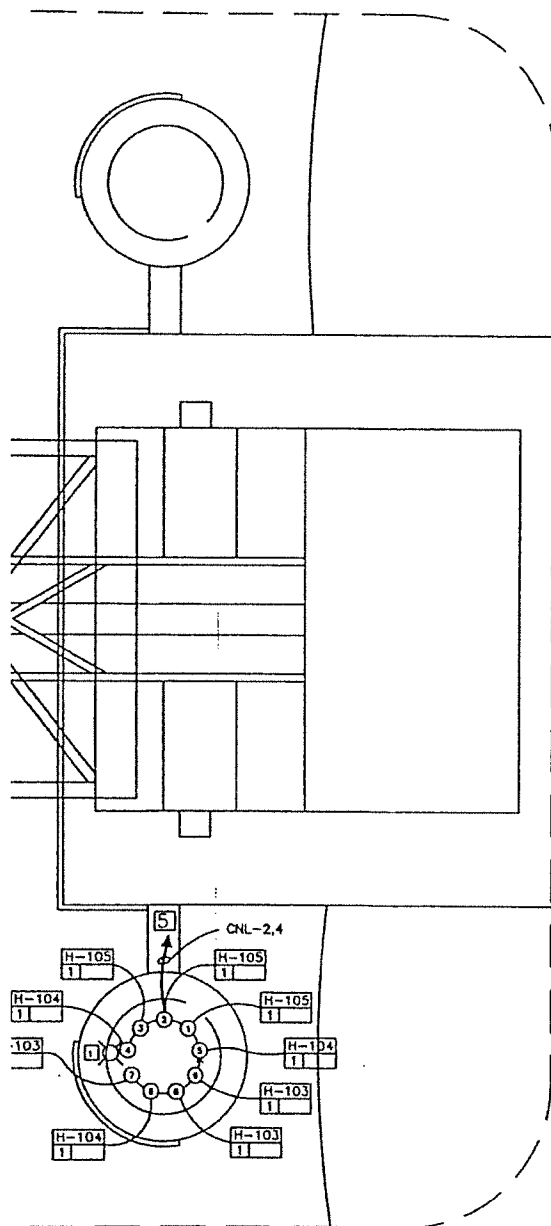
SCALE: 1/8"=1'-0"

SHEET

LTG-101

## FIXTURE AIMING AND TYPE

- ① TOWER BOTTOM (FLOOD)
- ② TOWER BOTTOM (FLOOD)
- ③ TOWER BOTTOM (FLOOD)
- ④ TOWER MIDDLE (LINEAR)
- ⑤ TOWER MIDDLE (LINEAR)
- ⑥ TOWER MIDDLE (LINEAR)
- ⑦ TOWER TOP (SPOT)
- ⑧ TOWER TOP (SPOT)
- ⑨ TOWER TOP (SPOT)



WAGON LIGHT  
& ACROSS FIXED

1/2"=1'-0"

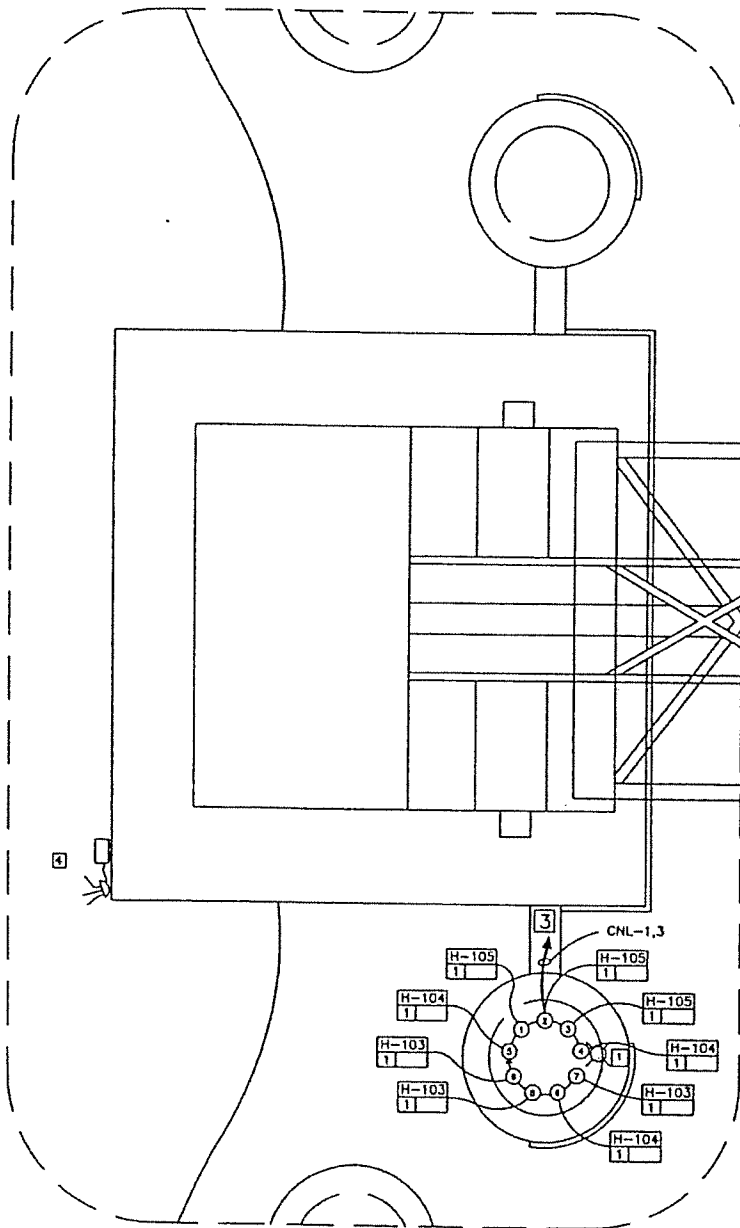
"CNL" VERIFY LOCATION W/CB

1/2"=1'-0"

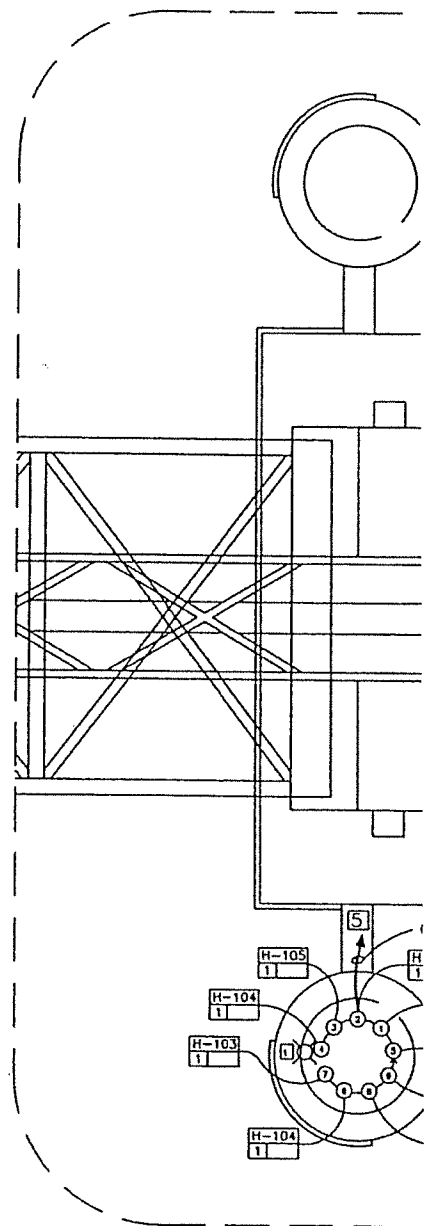
## PIER LIGHTING PLAN

1"=1'-0"





1 WEST PIER LIGHTING PLAN  
LTC101 SCALE: 1/8" = 1'-0"



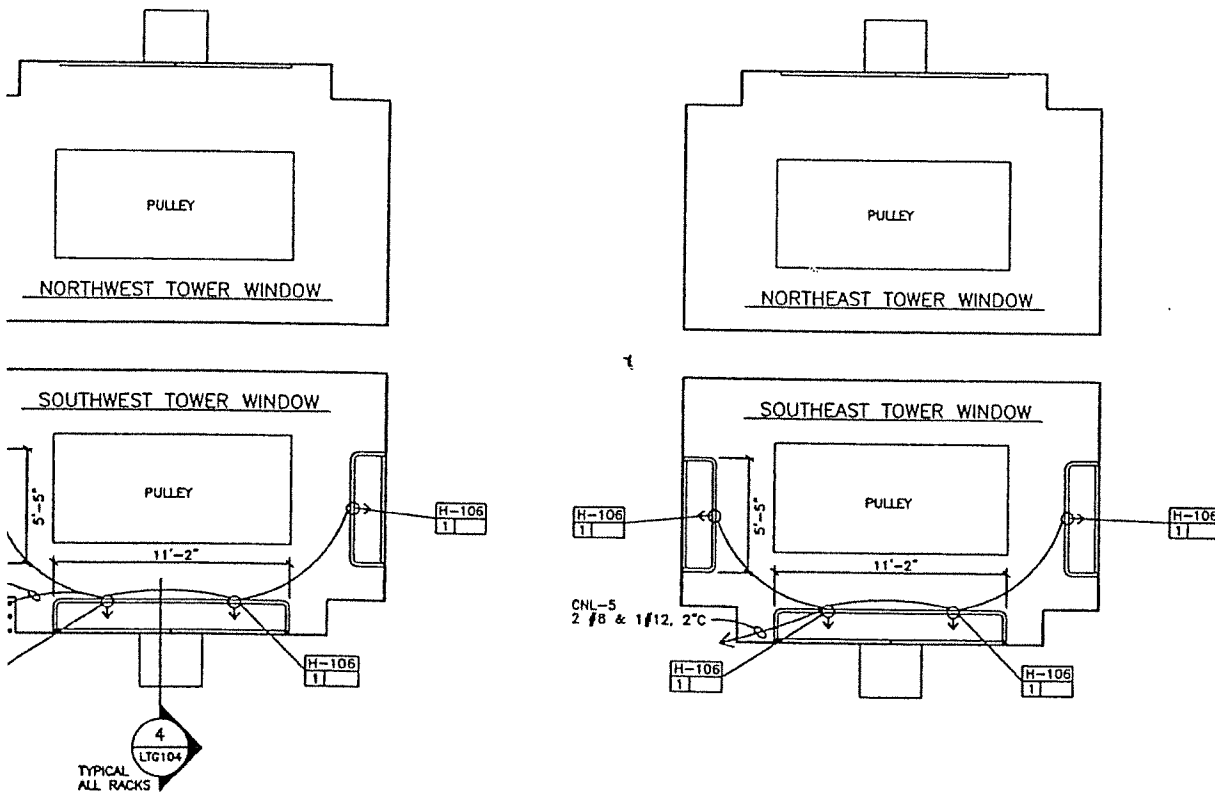
NOTES:

- 1 - EXISTING NAVIGATION LIGHT
- 2 - ROUTE UP TOWER & ACROSS FIXED SPAN TO "CNL"
- 3 - 4 #10 & 1#12, 1 1/2" C TO "CNL"
- 4 - CONTROL CENTER "CNL". VERIFY LOCATION W/CE
- 5 - 4 #6 & 1#12, 1 1/2" C TO "CNL"

2 EAST PIER LIGHTING PLAN  
LTC101 SCALE: 1/8" = 1'-0"

Ross De Alessi  
Lighting Design  
2815-Second Avenue Suite 280  
Seattle, Washington 98121  
(206) 441-0870  
(206) 441-0926 Fax

CONRAIL #1 BRIDGE  
SECTIONS AND DETAILS - LIGHTING PLAN



SECTION A-A (TYPICAL)

SCALE: 1/4" = 1'-0"

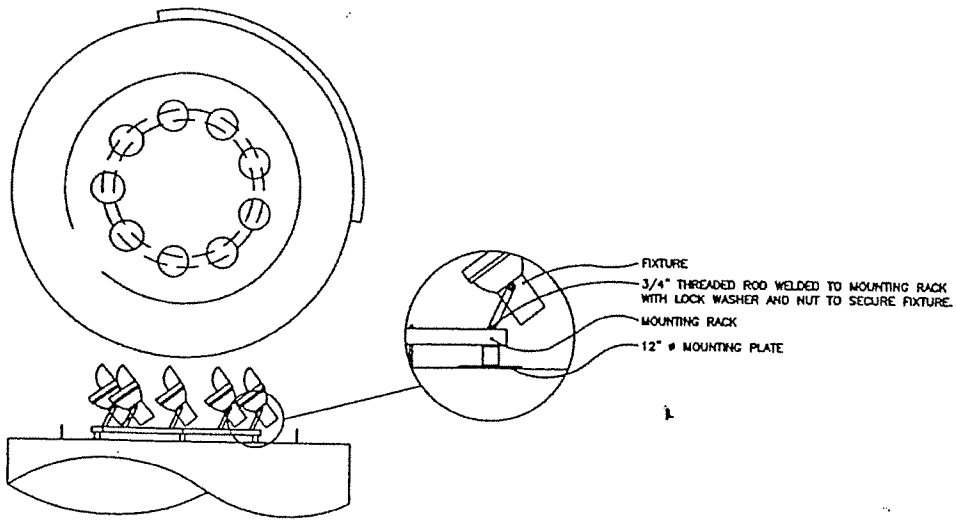
L HOUSE LIGHTING TYPICAL

REVISIONS	
DATE	DESCRIPTION

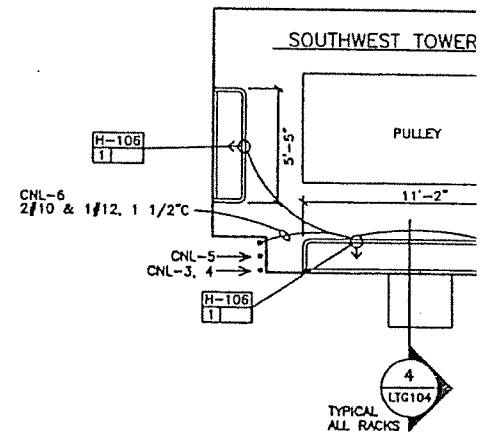
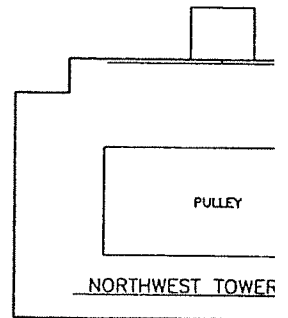
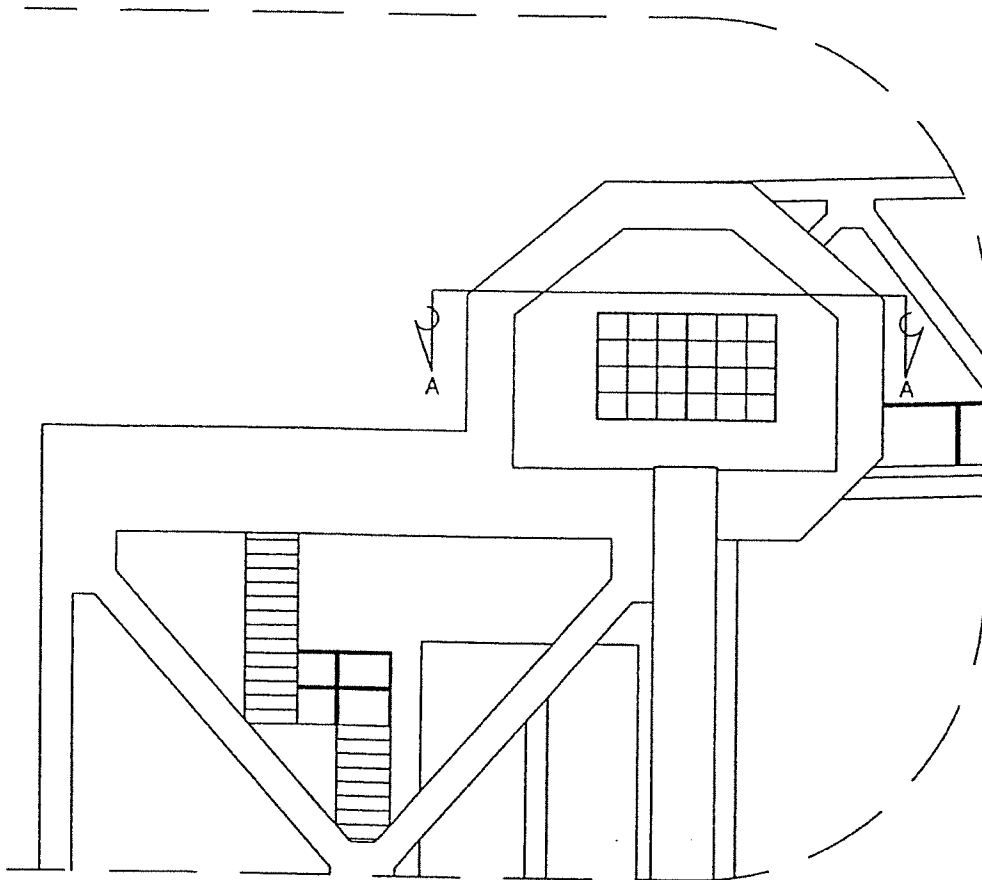
DRAWN BY: B.K.L.  
DATE: 4/1/96  
SCALE: 1/4"=1'-0"

SHEET

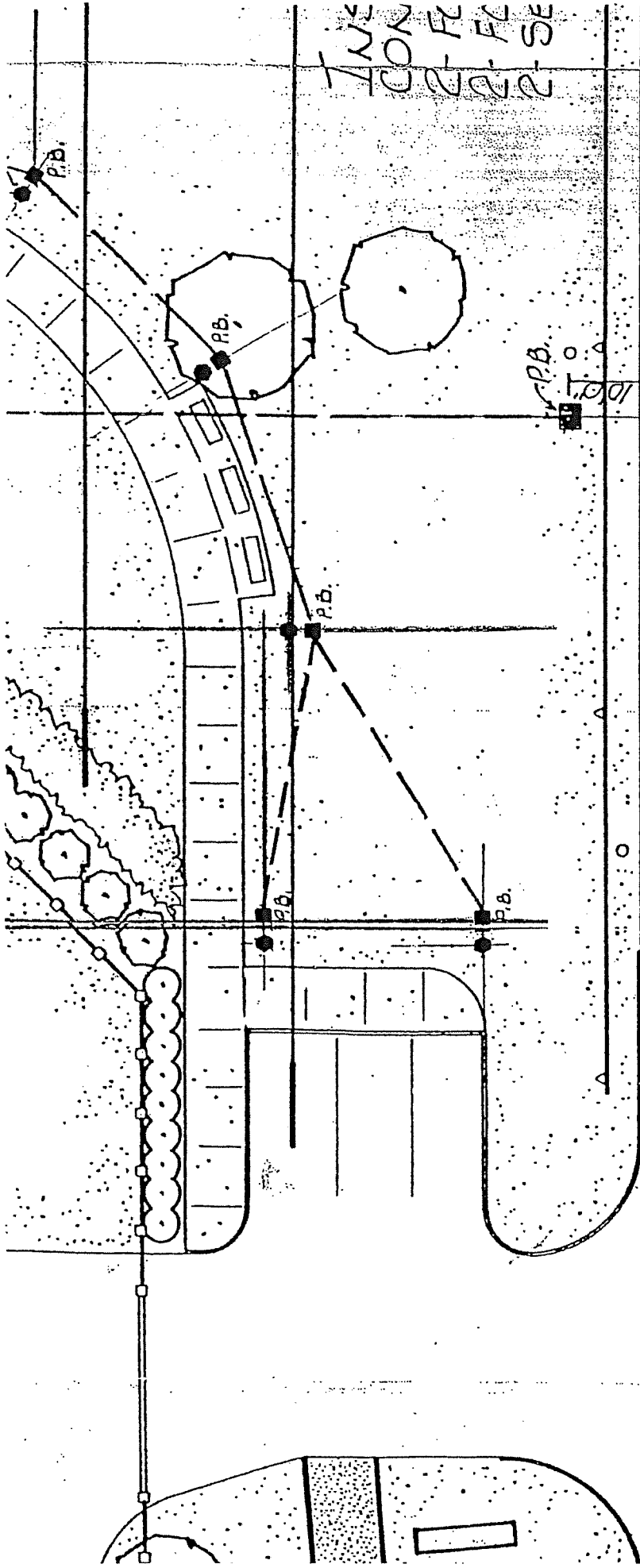
LTG-103



1 SECTION - TYPICAL PIER LIGHTING  
LTC103 SCALE: 1/2" = 1'-0"



2 DETAILS - WHEEL HOUSE LIGHT  
LTC103 SCALE: 1/4" = 1'-0"



M A R G I N A L — R O A D — — —

27025

WYLAND WHALE MUR

CITY OF CLEVELAND

DEPARTMENT

[illegible]

# PUBLIC POWER ROAD PLANT

