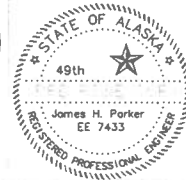


KEY PLAN

SCALE: 1" = 30'-0"

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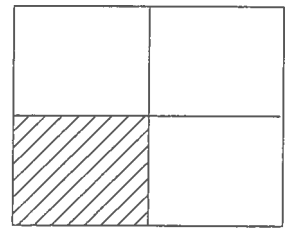


ARLENE DRIVE/PELICAN DRIVE/PELICAN COURT/KINGFISHER DRIVER
ROAD RECONSTRUCTION R/D
ELECTRICAL & ILLUMINATION IMPROVEMENTS
ILLUMINATION PLAN



CAMPBELL LAKE ADDITION
BLOCK 2
PLAT 76-3

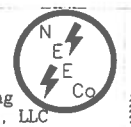
CAMPBELL LAKE HEIGHTS
ADDITION NO. 10



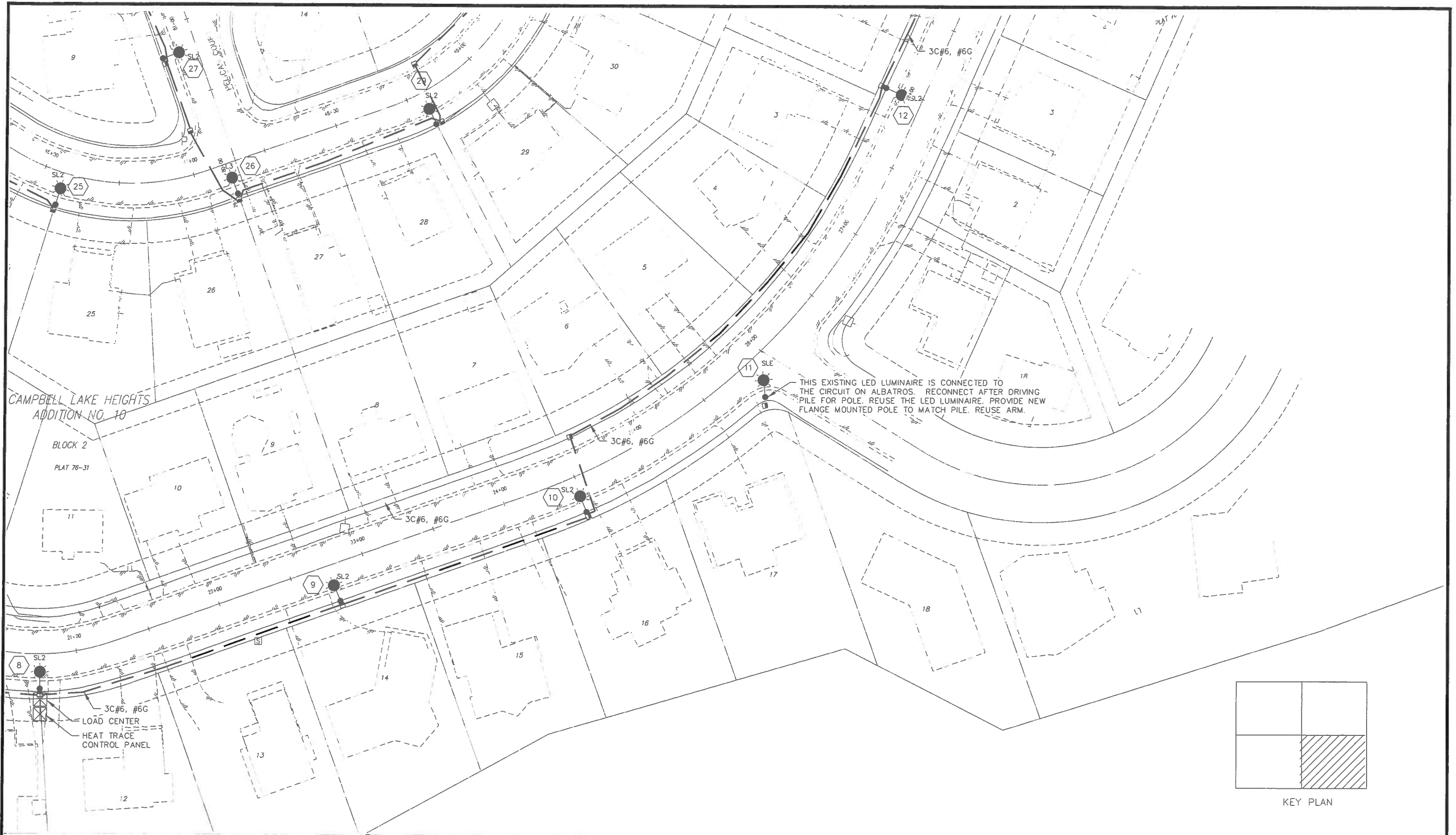
KEY PLAN



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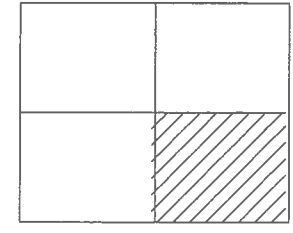


CAMPBELL LAKE HEIGHTS
ADDITION NO. 10

BLOCK 2
PLAT 76-31

THIS EXISTING LED LUMINAIRE IS CONNECTED TO THE CIRCUIT ON ALBATROS. RECONNECT AFTER DRIVING PILE FOR POLE. REUSE THE LED LUMINAIRE. PROVIDE NEW FLANGE MOUNTED POLE TO MATCH PILE. REUSE ARM.

LOAD CENTER
HEAT TRACE
CONTROL PANEL



KEY PLAN

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ILLUMINATION PLAN

General Photometric Schedule

AVERAGE FOOTCANDLES	0.74
MAXIMUM FOOTCANDLES	1.57
MINIMUM FOOTCANDLES	0.14
MINIMUM TO MAXIMUM FC RATIO	0.091
MAXIMUM TO MINIMUM FC RATIO	10.964
AVERAGE TO MINIMUM FC RATIO	5.176

LUMINAIRE SCHEDULE

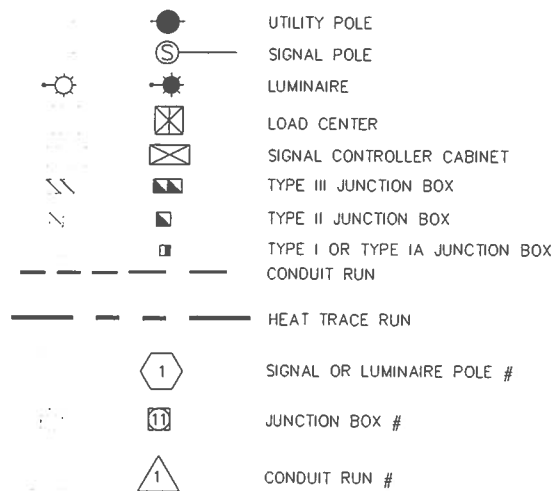
CALLOUT	SYMBOL	LAMP	DESCRIPTION	BALLAST	MOUNTING	MODEL	MODEL 1	INPUT WATTS	VOLTS	NOTE 1	QUANTITY
SL2		(1) 140W LED	80 LED, 525MA DRIVER IES TYPE 2 OPTICS	DRIVER	POLE	BETA "LEADWAY" STR 2M-HT-08 C UL SV	BETA "LEADWAY" STR 2M-HT-08 C UL SV	140	240V 2P 2W	8' ARM	27
SL3		(1) 140W LED	80 LED, 525MA DRIVER IES TYPE 3 OPTICS	DRIVER	POLE	BETA "LEADWAY" STR-3M-HT-08 C UL SV	BETA "LEADWAY" STR-3M-HT-08 C UL SV	140	240V 2P 2W	8' ARM	5
SLE		(1) 140W LED	EXISTING LED	DRIVER	POLE			140	240V 2P 2W		1

CONTRACTOR TO VERIFY FIXTURE COUNT

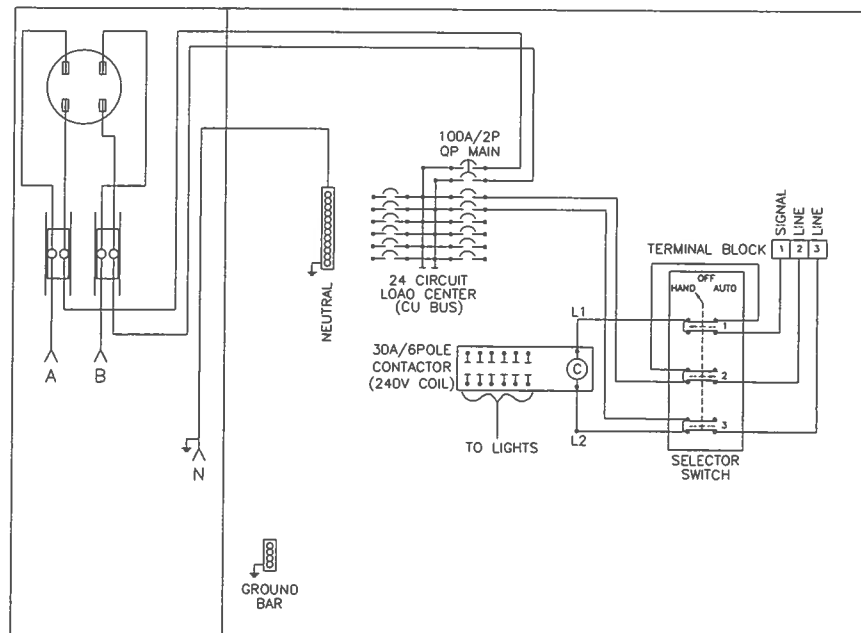
ILLUMINATION NOTES:

- STREET LIGHT POLES: DECORATIVE PEDESTRIAN POLES AS PER FIXTURE SCHEDULE. MAST ARM LENGTH AS PER SCHEDULE. POLES SHALL BE DESIGNED FOR 100 MPH WINDS AND 130 MPH GUSTS IN CONFORMANCE WITH AASHTO 'STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS'. A COPY OF THE DESIGN COMPUTATIONS SHALL BE SUPPLIED BY THE MANUFACTURER IN ADDITION TO THE STANDARD SHOP DRAWINGS AND MATERIALS SUBMITTALS PRIOR TO INCORPORATION OF ANY LUMINAIRE, POLE OR MAST ARM INTO THE PROJECT. REFER TO MOA STANDARD SPECIFICATIONS SECTION 80.05 ARTICLE 5.1 AND SECTION 80.06 ARTICLE 5.1.
- BRANCH CIRCUIT WIRE: 3C#2, 3C/#4, 3C#6 AND 3C/#8 XHHW UNLESS NOTED OTHERWISE. STRANDED COPPER WITH OVERALL POLYETHYLENE JACKET. ALL TAPS AND SPLICES SHALL BE DIRECT BURIAL RATED. PROVIDE A GROUND WIRE IN ALL CONDUITS. SIZE AS INDICATED.
- CONDUIT SCHEDULE: 2" RSC.
- BURIAL SCHEDULE: BURIED 30".
- JUNCTION BOXES: TYPE 1-A WITH "LIGHTING" ON COVER.
- COMPLY WITH 2008 EDITION OF THE NEC. ALL WORK TO BE PERFORMED BY ALASKA LICENSED ELECTRICIANS.
- JUNCTION BOXES ARE TO BE LOCATED BEHIND THE LUMINAIRE POLES OR ON THE DOWNSTREAM SIDE OF TRAFFIC.
- COMPLY WITH 2009 MOA STANDARD SPECIFICATIONS AND DETAILS.
- DUE TO PROXIMITY OF UNDERGROUND UTILITIES, ALL PILES ARE TO BE VACUUMED OR AIR KNIFE TO A DEPTH EQUAL TO OR GREATER THAN THE DEPTH OF THE ADJACENT UTILITY. ALL CARE SHALL BE TAKEN TO AVOID DAMAGING NEARBY WATER AND SEWER LINES DUE TO PILE DRIVING IMPACTS.
- SEE CIVIL DRAWINGS FOR HEATED DRIVEWAY LOCATIONS. ROUTE CONDUIT AROUND THESE DRIVEWAYS.
- REFER TO ASSOCIATED M.A.S.S. DETAILS: 80-2, 80-19, 80-20, 80-31 AND 80-36.

EXISTING PROPOSED



TRAFFIC & LIGHTING LEGEND



LOAD CENTER NO. 1 TYPE: 1A

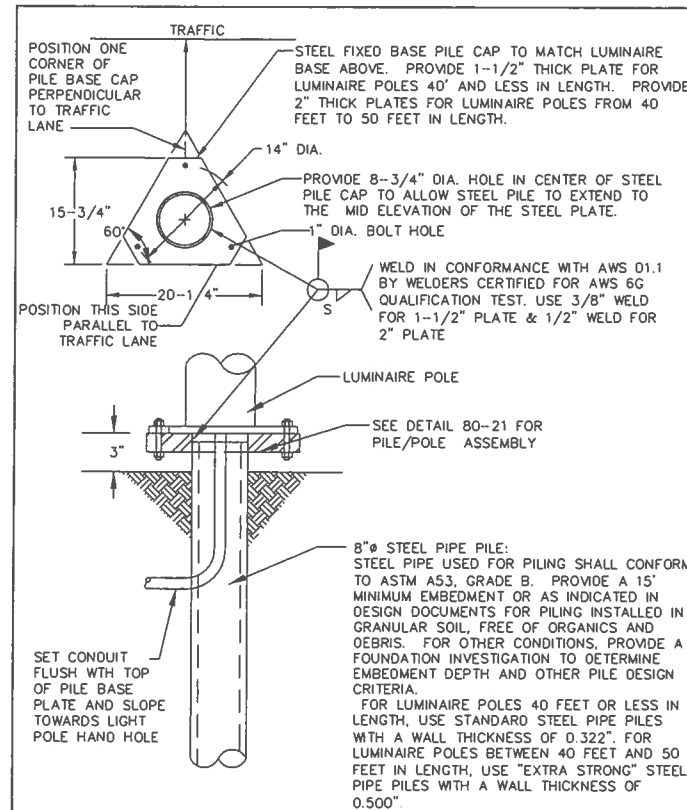
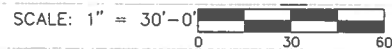
LOCATION: X+X RT

2 POLE, 100 AMP CONTACTOR

PANEL 1 120/240 VOLTS SINGLE PHASE 3 WIRE

100/2 MAIN AMP MAIN BREAKER, 10,000 AMPS INTERRUPT CAPACITY

CKT. DESCRIPTION	KVA	AMP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
20/2 LIGHTING CIRCUIT, EAST LUMINAIRES 1 THRU 11	X	X	1	2																						
20/2 LIGHTING CIRCUIT, WEST LUMINAIRES 12 THRU 18	X	X	3	4																						
30/2 WEST HEAT TRACE 1, GFCI	X	X	5	6	0.1	0.01	20/1 CONTROLS																			
30/2 WEST HEAT TRACE 2, GFCI	X	X	7	8	0.1	0.01	20/1 HEAT TRACE PANEL																			
30/2 WEST HEAT TRACE 3, GFCI	X	X	9	10	X	X	30/2 EAST HEAT TRACE 3, GFCI																			
30/2 WEST HEAT TRACE 4, GFCI	X	X	11	12																						
30/2 WEST HEAT TRACE 5, GFCI	X	X	13	14	X	X	30/2 SOUTH HEAT TRACE 4, GFCI																			
30/2 WEST HEAT TRACE 6, GFCI	X	X	15	16																						
30/2 WEST HEAT TRACE 7, GFCI	X	X	17	18	X	X	30/2 SOUTH HEAT TRACE 4, GFCI																			
30/2 WEST HEAT TRACE 8, GFCI	X	X	19	20			SPACE																			
30/2 WEST HEAT TRACE 9, GFCI	X	X	21	22			SPACE																			
30/2 WEST HEAT TRACE 10, GFCI	X	X	23	24			SPACE																			



SCALE: NTS APPROVED: REVISED: 08-14-09

DRIVEN STEEL PILE LIGHT POLE FOUNDATION

SECTION: 80.04 DETAIL # 80-13A

ELECTROLIER STATIONING

ELECTROLIER	STATION	CL. OFFSET	NOTE
1	STA +0	.RT	
2	STA +0	.RT	
3	STA +0	.RT	
4	STA +0	.RT	
5	STA +0	.RT	
6	STA +0	.RT	
7	STA +0	.RT	
8	STA +0	.RT	
9	STA +0	.RT	
10	STA +0	.RT	
11	STA +0	.RT	
12	STA +0	.RT	
13	STA +0	.RT	
14	STA +0	.RT	
15	STA +0	.RT	
16	STA +0	.RT	
17	STA +0	.RT	
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23	STA +0	.RT	
24	STA +0	.RT	
25	STA +0	.RT	
26	STA +0	.RT	
27	STA +0	.RT	
28	STA +0	.RT	
29	STA +0	.RT	
30	STA +0	.RT	
31	STA +0	.RT	
32	STA +0	.RT	
33	STA +0	.RT	
LOAD CENTER HT CONTROL PANEL	STA +0	.RT	

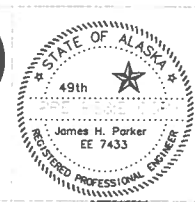
ELECTROLIERS ARE TYPICALLY 7' BEHIND EDGE OF TRAVELED WAY, BUT SOME HAVE BEEN ADJUSTED TO AVOID OTHER UTILITIES.

ILLUMINATION JBOX STATIONING

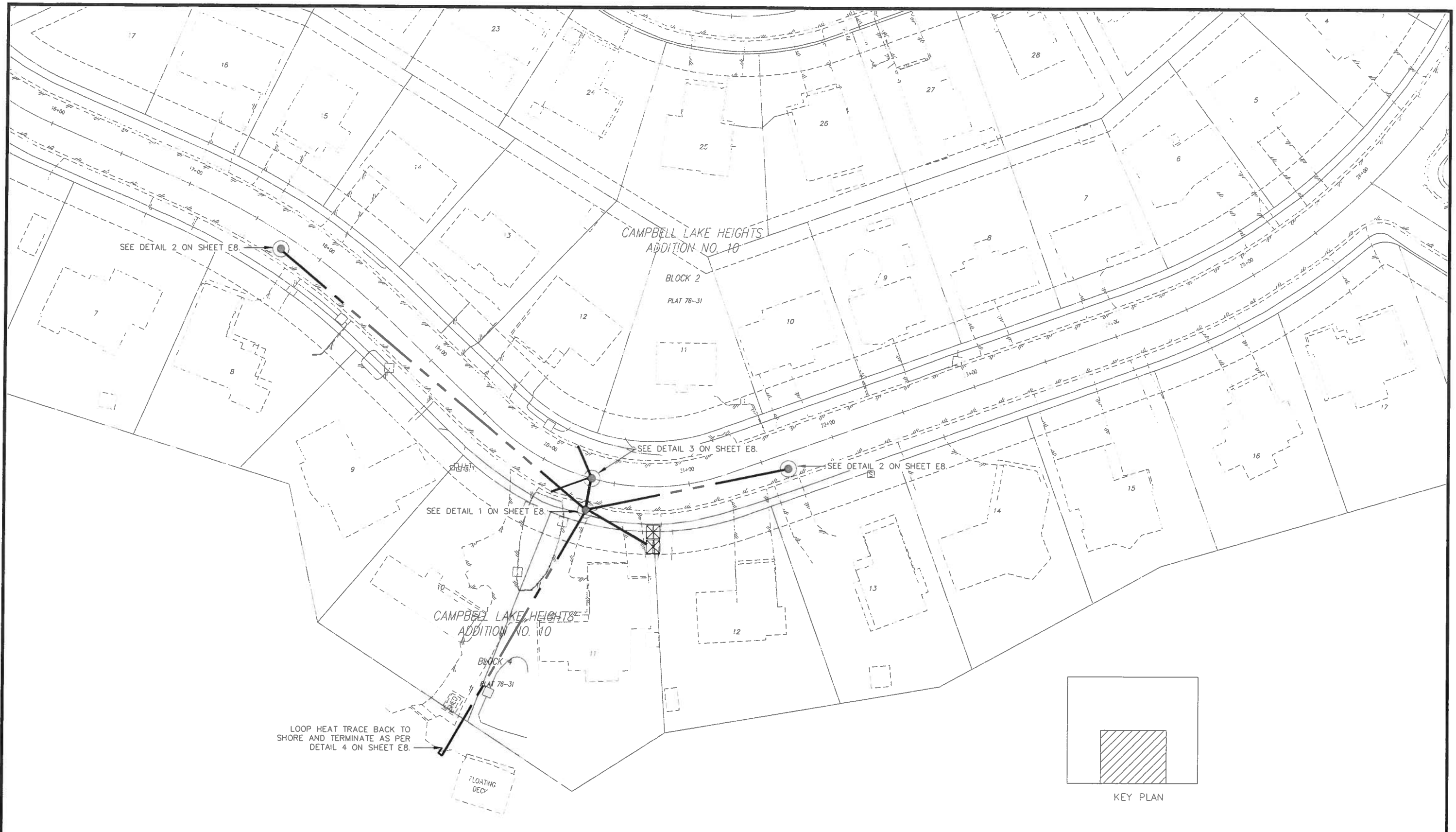
JBOX	STATION	CL. OFFSET *
1	STA +0	.RT
2	STA +0	.RT
3	STA +0	.RT
4	STA +0	.RT
5	STA +0	.RT
6	STA +0	.RT
7	STA +0	.RT
8	STA +0	.RT
9	STA +0	.RT
10	STA +0	.RT
11	STA +0	.RT
12	STA +0	.RT
13	STA +0	.RT
14	STA +0	.RT
15	STA +0	.RT
16	STA +0	.RT
17	STA +0	.RT
18	STA +0	.RT
19	STA +0	.RT
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21	STA +0	.RT
22	STA +0	.RT
23	STA +0	.RT
24	STA +0	.RT
25	STA +0	.RT
26	STA +0	.RT
27	STA +0	.RT
28	STA +0	.RT
29	STA +0	.RT
30	STA +0	.RT
31	STA +0	.RT
32	STA +0	.RT
33	STA +0	.RT
	STA +0	.RT

* ADJUST JBOX LOCATION AS REQUIRED TO AVOID EXISTING UTILITIES.

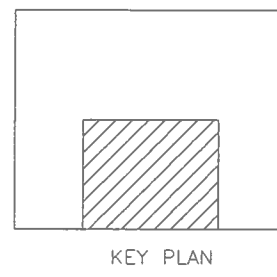
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 ILLUMINATION DETAILS

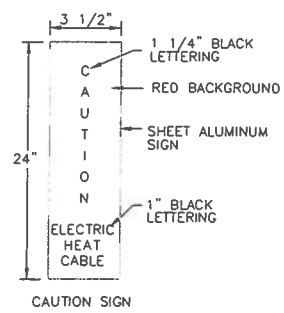


LOOP HEAT TRACE BACK TO SHORE AND TERMINATE AS PER DETAIL 4 ON SHEET E8.

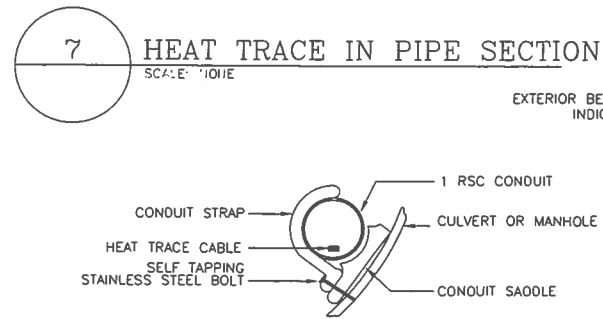


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ARLENE DRIVE/PELICAN DRIVE/PELICAN COURT/KINGFISHER DRIVER
ROAD RECONSTRUCTION R1D
ELECTRICAL & ILLUMINATION IMPROVEMENTS
HEAT TRACE PLAN



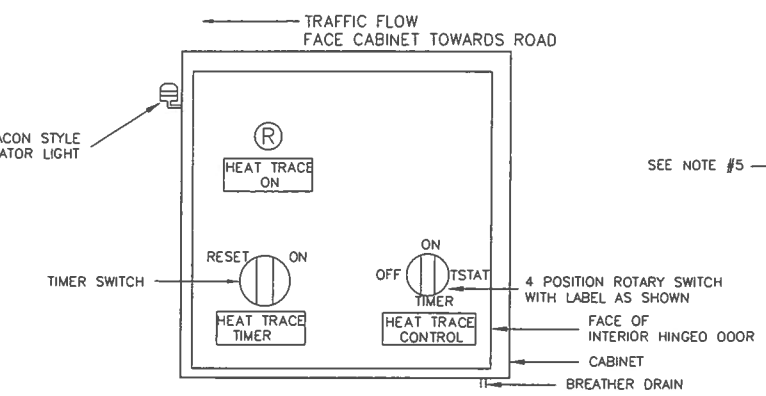
5 CAUTION SIGN DETAIL



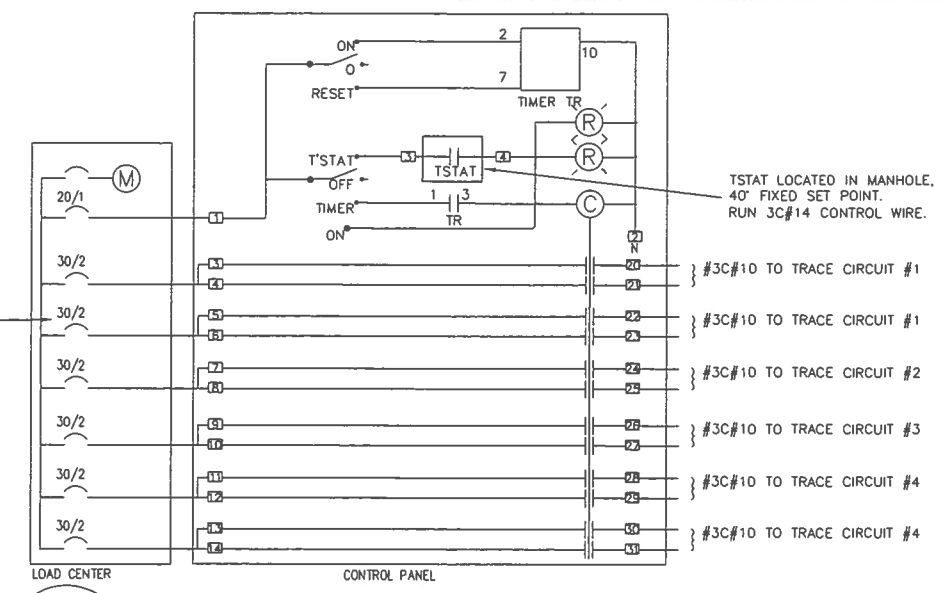
7 HEAT TRACE IN PIPE SECTION



6 CONDUIT SUPPORT DETAIL



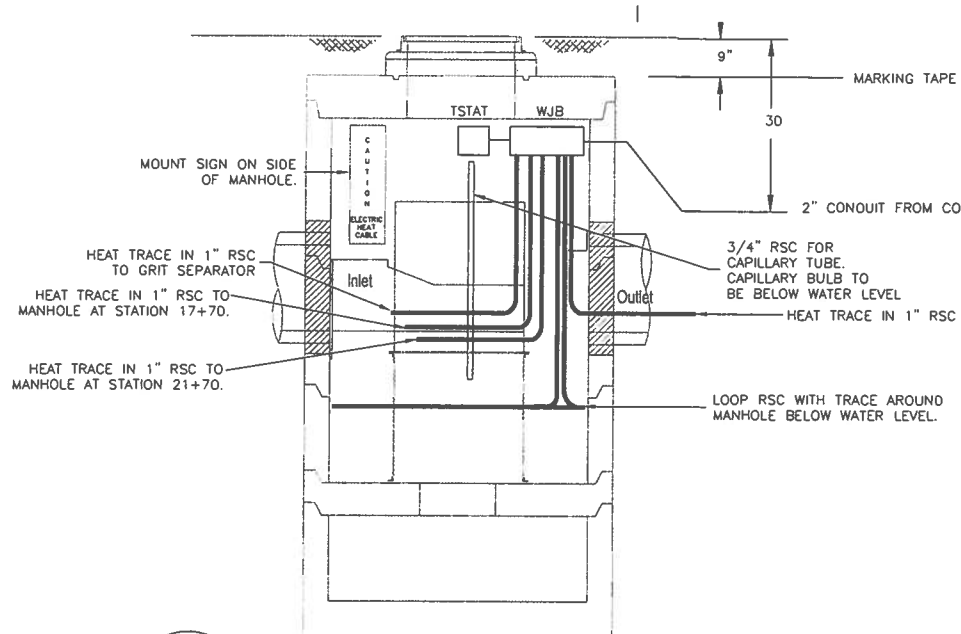
8 FRONT OF HEAT TRACE CONTROL PANEL



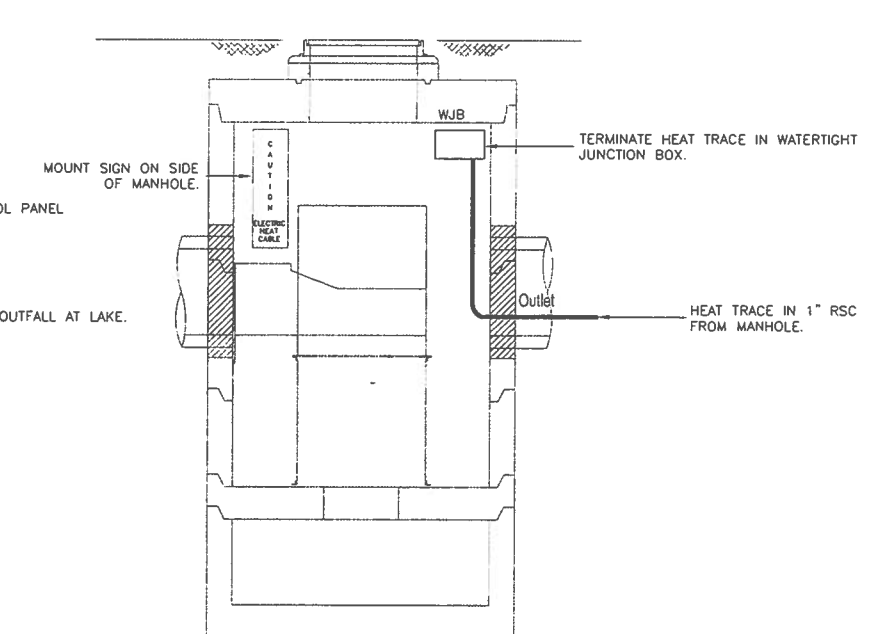
9 HEAT TRACE CONTROL DIAGRAM

- HEAT TRACE NOTES:**
1. MOUNT CONTROL PANEL ON STEEL POST.
 2. PROVIDE UL LABEL FOR CONTROL PANEL.
 3. BRANCH CIRCUIT WIRE: 3 CONDUCTOR (ONE AS SPARE) XHHW CABLE, STRANDED COPPER WITH OVERALL POLYETHYLENE JACKET.
 4. HEAT TRACE - 8W/FT 240V, SELF LIMITING, METAL BRAID AND OUTER JACKET. RAYCHEM TYPE GM-2X OR THERMON 8-FLX-FQJ.
 5. BRANCH CIRCUIT BREAKERS - GFCI 30MA TRIP (CLASS B)
 6. CONTACTOR - HEAT TRACE PANEL #1 - 30 AMP 8 POLE ELECTRICALLY HELD.
 7. TIMER - 0-999 HOUR TIMER, POTTER&BRUMFIELD CNT-35-76, SET TO 999 HOURS.
 8. THERMOSTAT - THERMON N-7-HD-040
 9. TIMER SWITCH - 2 N.O. CONTACTS, SPRING RETURN TO CENTER OFF POSITION.
 10. HEAT TRACE CONTROL SWITCH - SOD CLASS 9003 K2 4 POSITION ROTARY SWITCH, WITH LABEL AS SHOWN.
 11. COMPLY WITH M.A.S.S. SECTION 55.23. SEE SPECIAL PROVISIONS FOR PAYMENT MEASUREMENTS.
 12. CONTROL PANEL ENCLOSURE TO BE TYPE 4X 304 STAINLESS STEEL. PROVIDE A HINGED DOOR FOR THE FRONT OF THE CABINET WITH THE CONTROLS MOUNTED ON A HINGED PANEL INSIDE OF THE ENCLOSURE.
 13. THE HEAT TRACE CONSISTS OF FOUR RUNS. CIRCUITS 1, 3 AND 4 PASS THRU THE MANHOLE AND OUT TO THE EAST AND WEST MANHOLES AND TO THE LAKE. CIRCUIT 2 LOOPS AROUND THE MANHOLE, BACK TO THE WJB AND OUT TO THE GRIT SEPARATOR AND CATCH BASINS. USE "C" CONDULETS AS REQUIRED FOR PULLING.
 14. BEACON LIGHT: SOD XVBL34, MOUNTED ON DOWNSTREAM OF TRAFFIC SIDE.

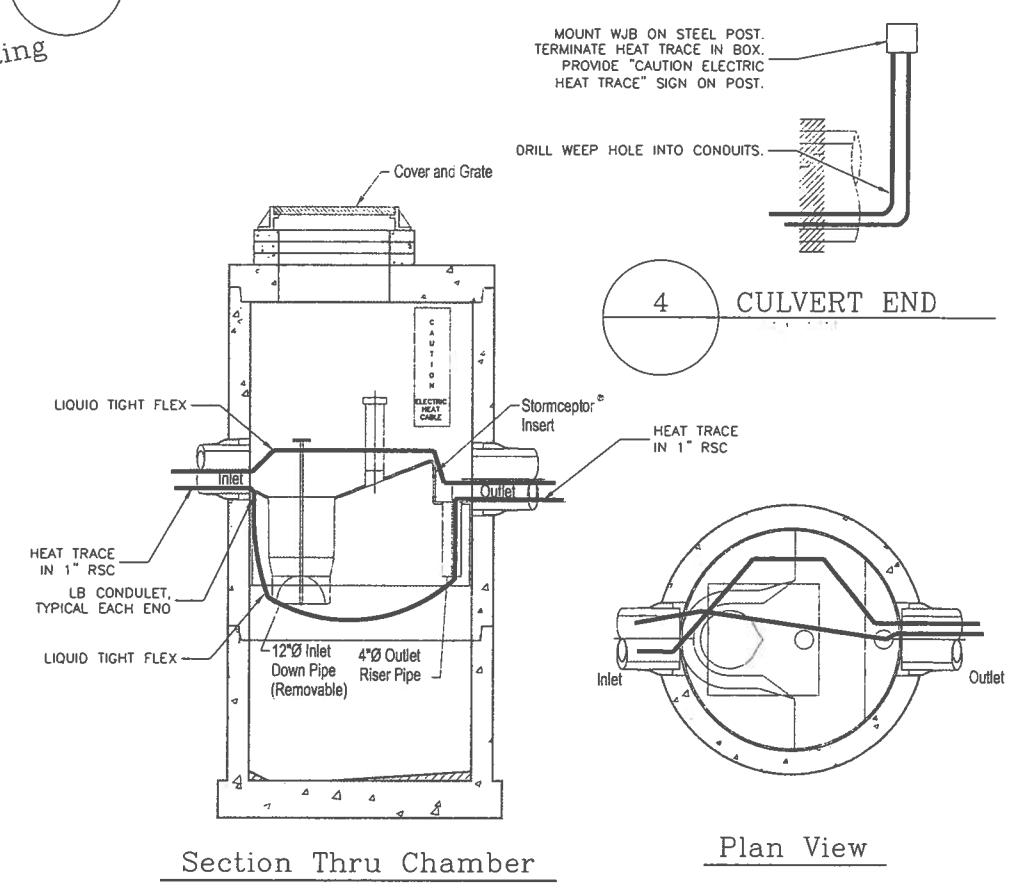
to do: heat trace diagram showing physical routing for HT circuits



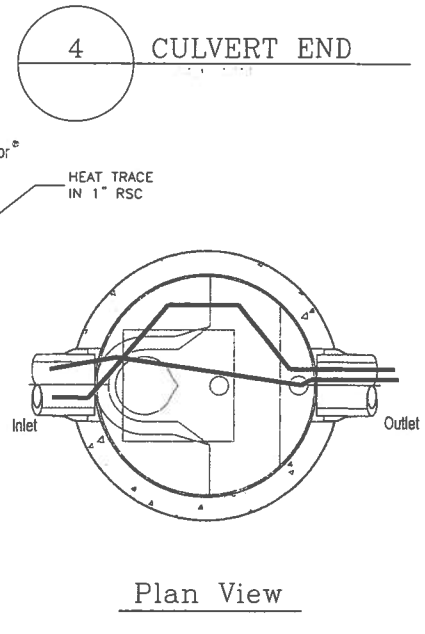
1 PIPE HEAT TRACE FEED MANHOLE ELEVATION



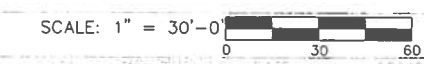
2 PIPE HEAT TRACE TERMINATION ELEVATION



3 SEPARATOR ELEVATION & PLAN



4 CULVERT END



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