

CUDDY FAMILY MIDTOWN PARK
SPEED SKATING OVAL LIGHTING



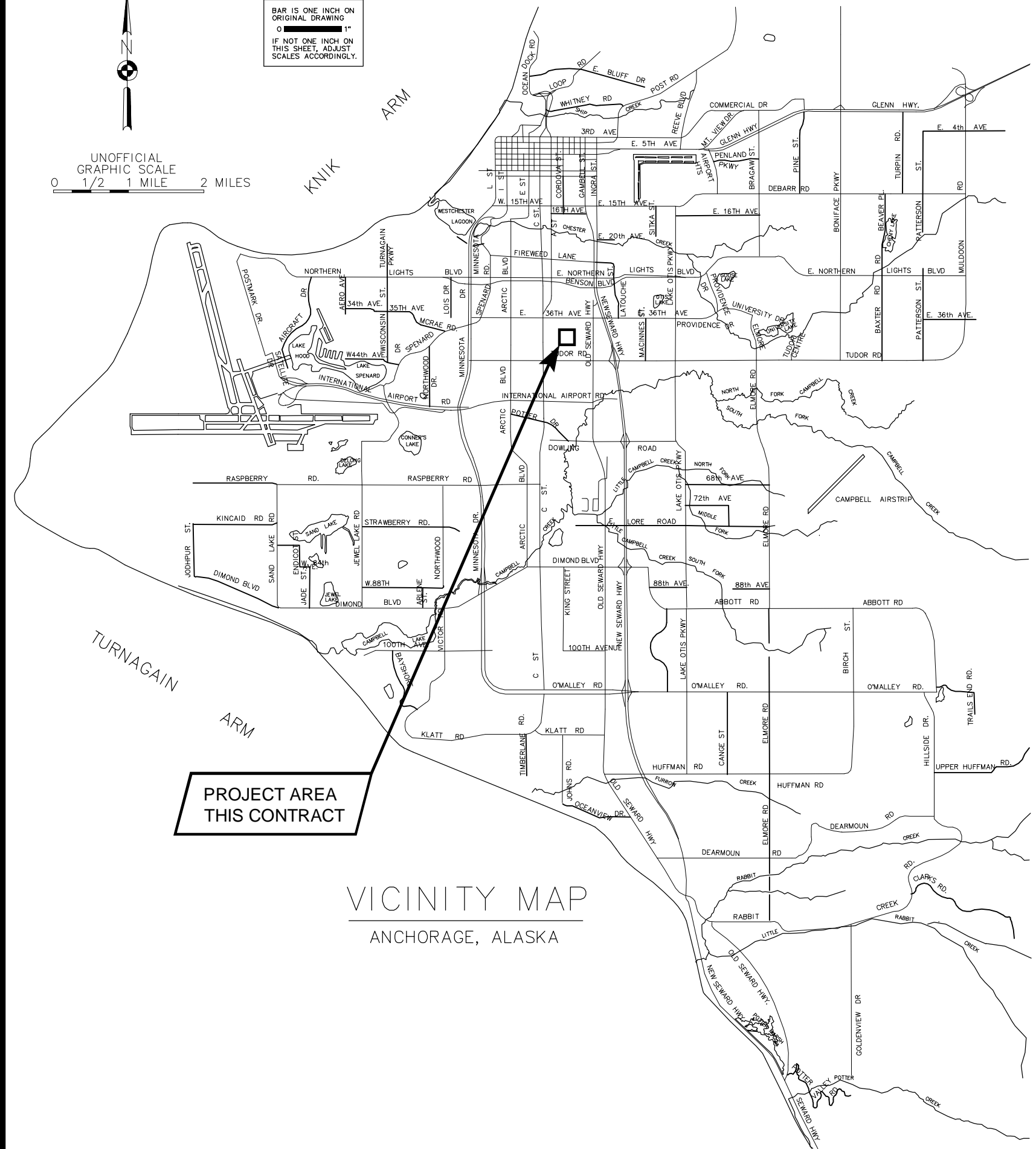
Healthy Parks, Healthy People

Anchorage Skates - www.anchorageskates.org



VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING
 0 ————— 1"
 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

UNOFFICIAL GRAPHIC SCALE
 0 — 1/2 — 1 MILE — 2 MILES



VICINITY MAP
 ANCHORAGE, ALASKA



**MUNICIPALITY OF ANCHORAGE
 PROJECT MANAGEMENT AND
 ENGINEERING DEPARTMENT**

**Cuddy Family Midtown Park
 Speed Skating Oval Lighting
 10-034**

**SEPTEMBER 2010
 FINAL DESIGN**

PREPARED BY:



APPROVED BY:

Daniel A. Sullivan
 DAN SULLIVAN
 MAYOR

JERRY HANSEN
 ACTING DIRECTOR

LEGEND

Existing	Proposed	
—	—	Underground Electrical
— uc —	— ugpa —	Underground PA
□		Existing device / structure as noted.
◻	◻	Underground MOA Type II junction box. As shown on plans.
◻	◻	MOA Type 1A u/g junction box.
⊙	⊙	Speed Skating Electrolier
⊗		Load Center
	⊗	Conduit, HDPE (except for sweeps and risers). X = size
	—	Normally open contacts
	⊖	Circuit breaker
	⊗	Disconnect switch
	⊗	3-way switch, 20A rated
	XX	Sheet Note

LIGHTING DESIGN CRITERIA

- IES RPS-6-01
Chapter 6.17 Ice Skating (Speed)
Chapter 6.13 Specialty Sports (Ice Rink)
- Class III - Competition play with some spectator facilities:
Minimum Average Illumination = 30 fc
Uniformity ≤ 0.25
- Class VI - Competition or recreational play only (no spectator provisions):
Minimum Average Illumination = 20 fc
Uniformity ≤ 0.3
- Municipal Skating Rink:
Minimum Average Illumination = 1 fc
Uniformity ≤ 0.3

ABBREVIATIONS

A	AMPERE
AFF	ABOVE FINISH FLOOR
bcu, BCU	BARE COPPER
c, C	CONDUCTOR CONDUIT
DWG	DRAWING
DDC	DIRECT DIGITAL CONTROL
EMT (E)	ELECTRICAL MECHANICAL TUBING EXISTING
FIO	FOR INFORMATION ONLY
G	GROUND CONDUCTOR
GF1	GROUND FAULT INTERRUPTING
GRC	GALVANIZED RIGID (STEEL) CONDUIT
H	HOT CONDUCTOR
HOA	HAND OFF AUTO
HP	HORSEPOWER
HPS	HIGH PRESSURE SODIUM
IMC	INTERMEDIATE METAL CONDUIT
KVA	KILO-VOLT-AMPERES
LCP	LOCAL CONTROL PANEL
LTF	LIQUID TIGHT FLEXIBLE CONDUIT (METALLIC)
LTG	LIGHTING
LUM	LUMINAIRE
LV	LOW VOLTAGE
MDP	MAIN DISTRIBUTION PANEL
MECH	MECHANICAL
N	NEUTRAL CONDUCTOR
NEC	NATIONAL ELECTRICAL-NORTH CODE
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
P	POLE
RM	ROOM
RCP	RECEPTACLE
RVSS	REDUCED VOLTAGE SOLID STATE
TWSH	TWISTED/SHIELDED PAIR
TYP	TYPICAL
S	SOUTH
UON	UNLESS OTHERWISE NOTED
V	VOLTS
WTP	WATER TREATMENT PLANT
XFMR	TRANSFORMER

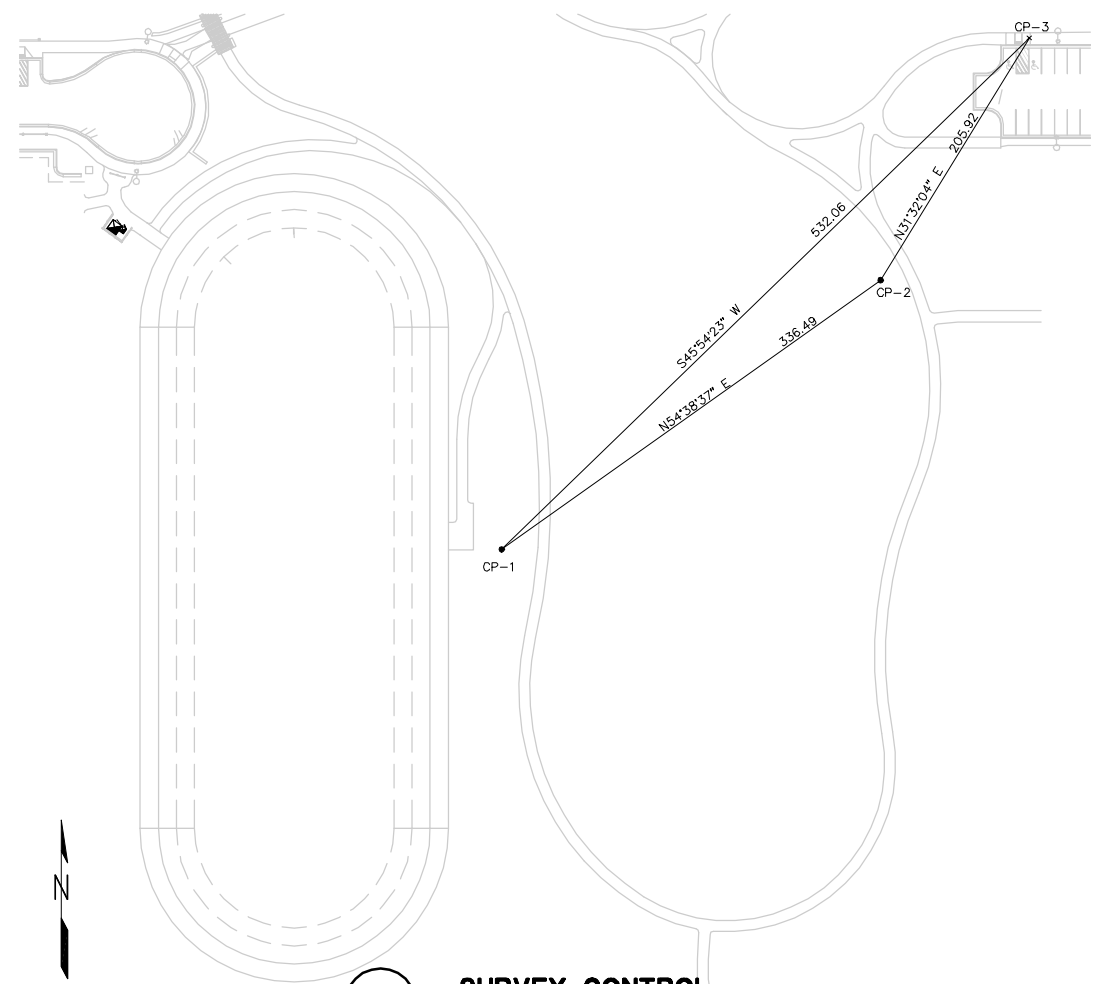
CALCULATION SUMMARY

BASE BID (CLASS IV LIGHTING)	AVERAGE		UNIFORMITY	
	IES	DESIGN	IES	DESIGN
WARMUP TRACK	N/A	17.9	≤ 0.30	0.04
INNER RACE LANE	20.0	22.6	≤ 0.30	0.04
OUTER RACE LANE	20.0	22.0	≤ 0.30	0.08
RINK LIGHTING	1.0	1.5	≤ 0.30	0.26
ADDITIVE ALTERNATE (CLASS III LIGHTING)	IES	DESIGN	IES	DESIGN
WARMUP TRACK	N/A	28.6	≤ 0.25	0.06
INNER RACE LANE	30.0	32.6	≤ 0.25	0.03
OUTER RACE LANE	30.0	26.7	≤ 0.25	0.05
RINK LIGHTING	1.0	1.5	≤ 0.30	0.26

SURVEY CONTROL COORDINATE TABLE

POINT	N(y)	E(x)	Z(z)	DESCRIPTION
CP-1	10339.673	9640.506	114.08	REBAR WITH CAP
CP-2	10534.385	9914.933	110.33	REBAR WITH CAP
CP-3	10709.899	10022.632	106.66	PK NAIL

NOTE - CONTROL INFORMATION ON THIS SHEET WAS OBTAINED FROM CUDDY FAMILY MIDTOWN PARK IMPROVEMENTS PROJECT, SHEET G4, DATED MAY 2007.



1 SURVEY CONTROL

SCHEDULE ALL

File: I:\Jebadota\10116.07_Cuddy Park Skating Oval Illumination\00_CADD\01_Working_Sht\03_Electrical\10116.07_Legend.dwg

RECORD DRAWING

1. DATA PROVIDED BY: _____ TITLE: _____
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CONTRACTOR: _____
BY: _____ TITLE: _____ DATE: _____

2. DATA TRANSFERRED BY: _____ TITLE: _____
COMPANY: _____ DATE: _____

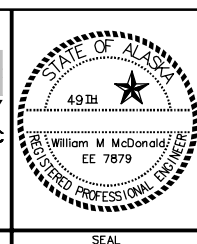
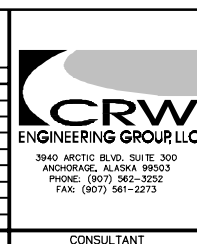
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DATA TRANSFER CHECKED BY: _____ TITLE: _____
COMPANY: _____ DATE: _____
BY: _____

DATA	DRAWN BY	CHECKED BY
BASE		
TOPOGRAPHY		
PROFILE		
STORM SEWER		
WATER/SANITARY SEWER		
GAS		
TELEPHONE		
ELECTRIC		
DESIGN		
QUANTITIES		
PRELIMINARY/FINAL		
MUNICIPAL/STATE		

FIELD BOOKS	TBM NO.	LOCATION	ELEV.	REV	DATE	DESCRIPTION	BY

DESIGN	ASBUILT	CONTRACTOR	INSPECTOR

PLAN CHECK	CONSTRUCTION RECORD	VERTICAL DATUM	REVISIONS	CONSULTANT	SEAL



PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT

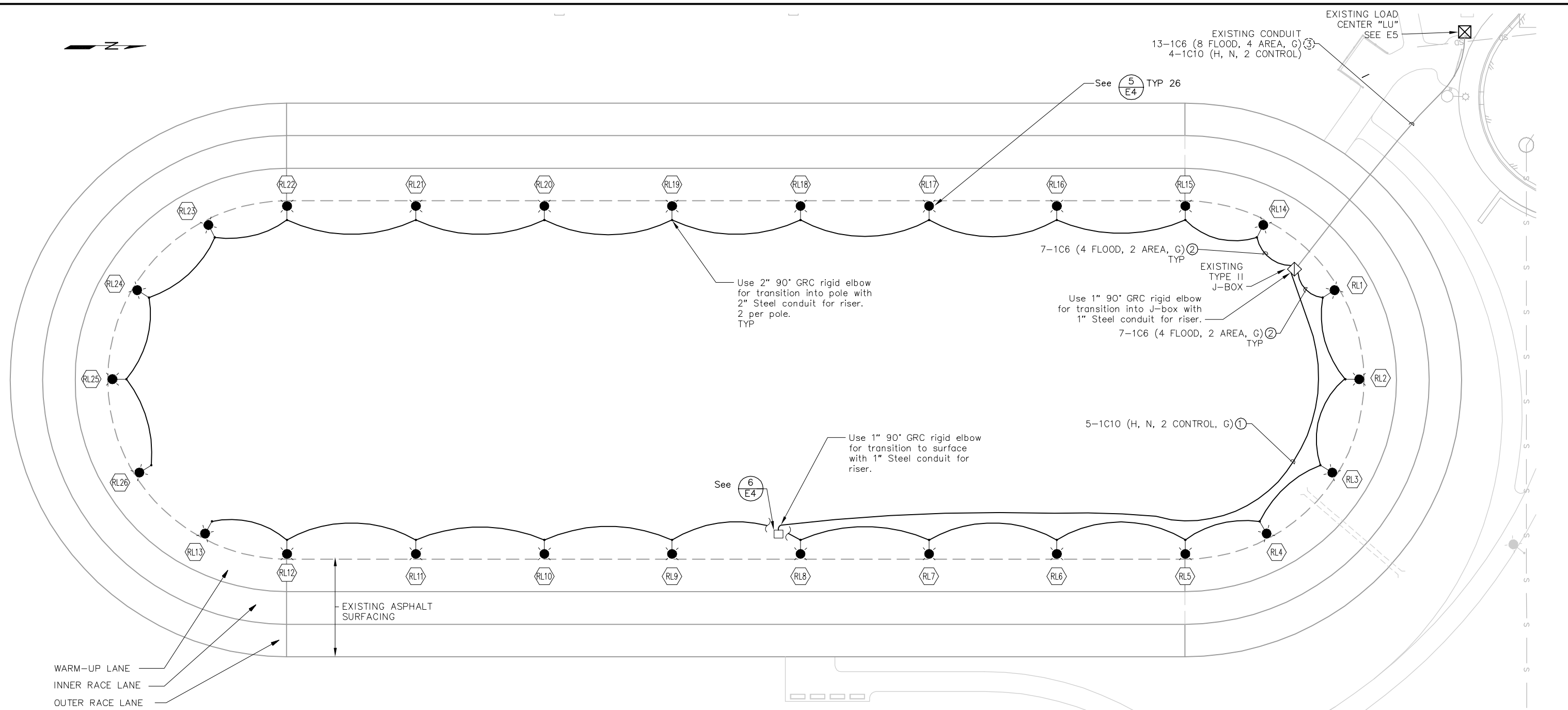
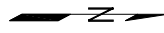
PM&E Project No. 10-034

CUDDY FAMILY MIDTOWN PARK SPEED SKATING OVAL LIGHTING

LEGEND

SCALE	HOR. N/A VER. N/A	DATE	SEPT 2010	GRID	1731
		STATUS	FINAL		

SHEET **E2** of **8**



1 **CUDDY FAMILY MIDTOWN PARK
SPEED SKATING OVAL LIGHTING PLAN**

SCHEDULE ALL

File: I:\Jedabata\10116.07_Cuddy Park Skating Oval Illumination\00_CADD\01_Working Set\03_Electrical\10116.07_Site Plan.dwg

RECORD DRAWING
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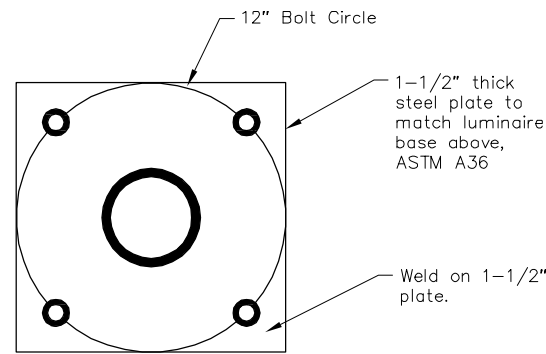
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TOPOGRAPHY			DESIGN							
PROFILE			STAKING							
STORM SEWER			ASBUILT							
WATER/SANITARY SEWER			CONTRACTOR							
GAS			INSPECTOR							
TELEPHONE										
ELECTRIC										
DESIGN										
QUANTITIES										
PRELIMINARY/FINAL										
MUNICIPAL/STATE										
PLAN CHECK			CONSTRUCTION RECORD		VERTICAL DATUM				REVISIONS	CONSULTANT

CRW ENGINEERING GROUP, LLC
 3940 ARCTIC BLVD, SUITE 300
 ANCHORAGE, ALASKA 99503
 PHONE: (907) 562-2252
 FAX: (907) 561-2273

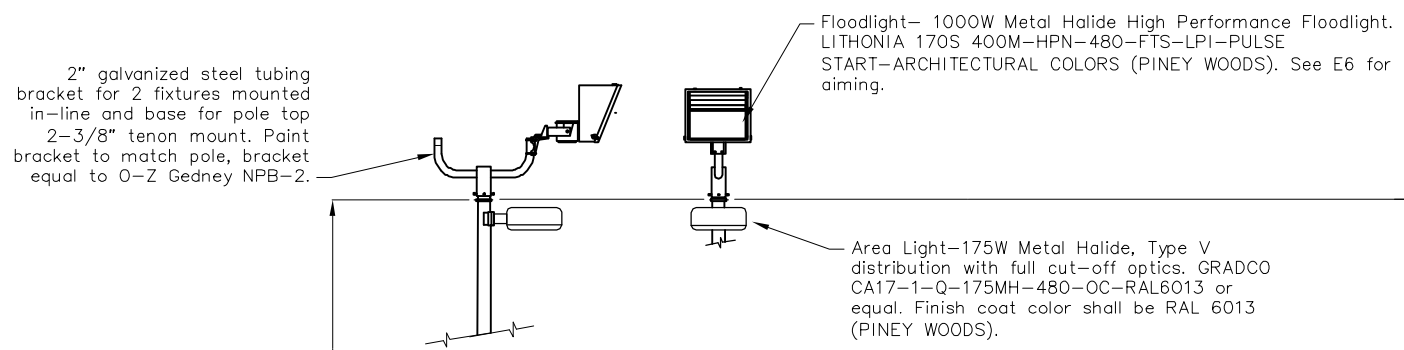
STATE OF ALASKA
 49th
 William M McDonald
 EE 7879
 REGISTERED PROFESSIONAL ENGINEER



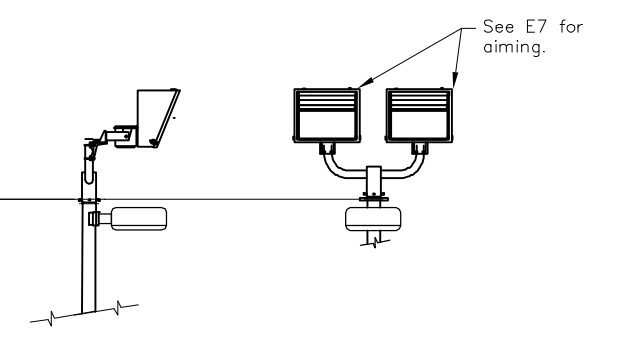
PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT
 PM&E Project No. 10-034
**CUDDY FAMILY MIDTOWN PARK
SPEED SKATING OVAL LIGHTING**
 SITE PLAN
 SCALE: HOR. N/A VER. N/A
 DATE: SEPT 2010
 STATUS: FINAL
 GRID: 1731
 SHEET: E3 of 8



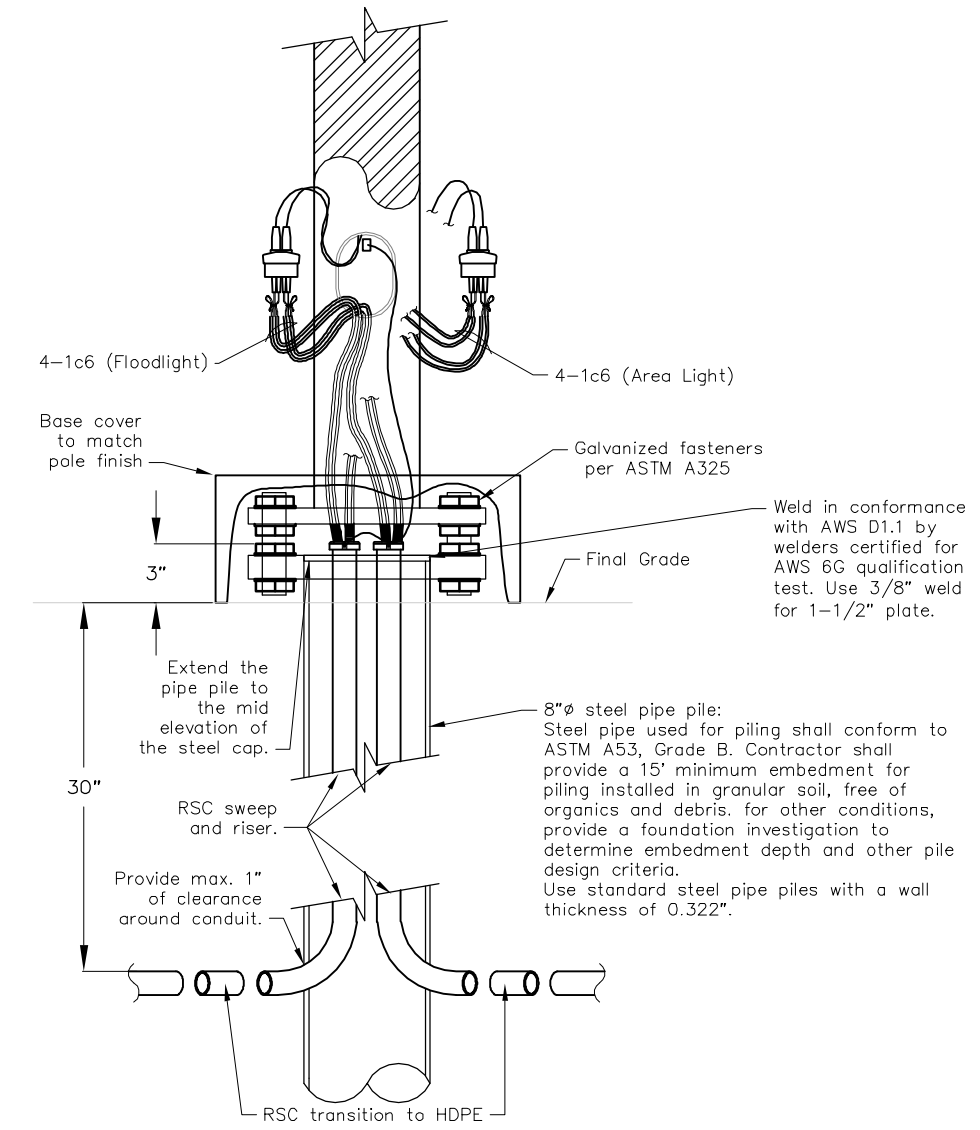
1 PILING BASE PLATE PLAN (SCHEDULE A)
SCALE: NTS



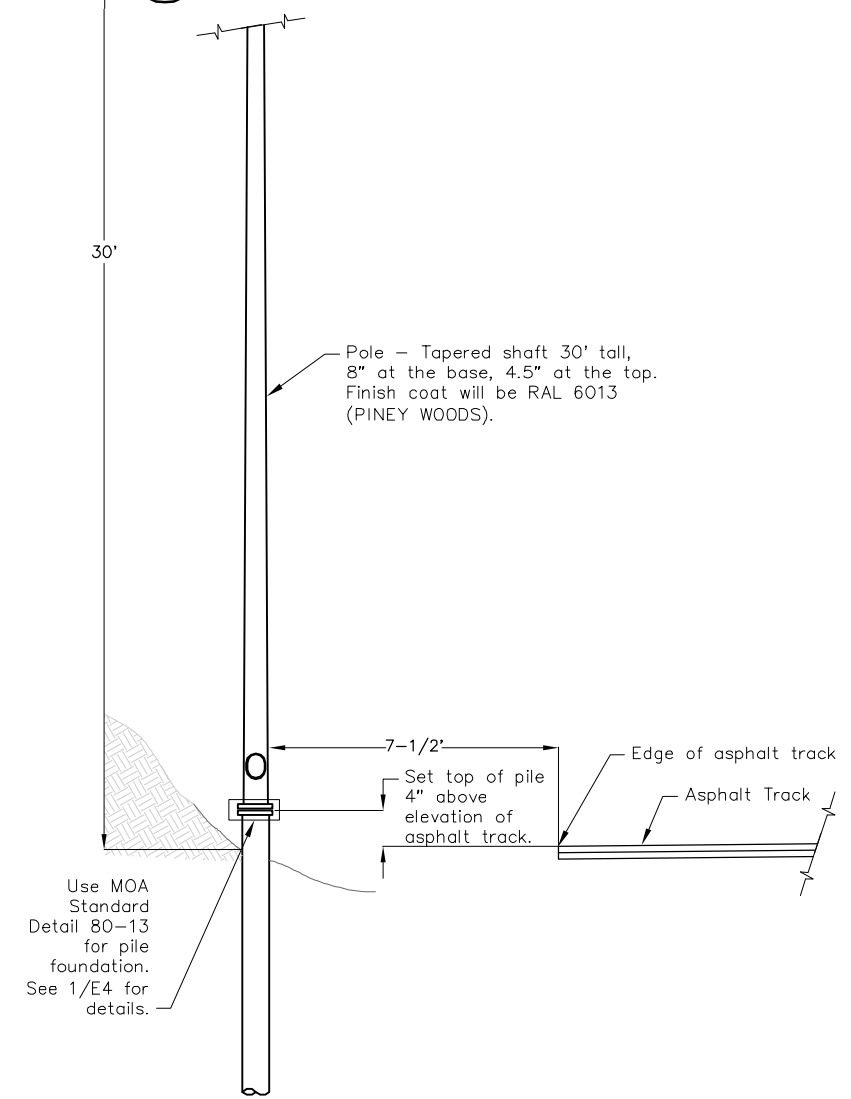
2 SINGLE FLOOD (SCHEDULE B, C, D, E)
SCALE: NTS



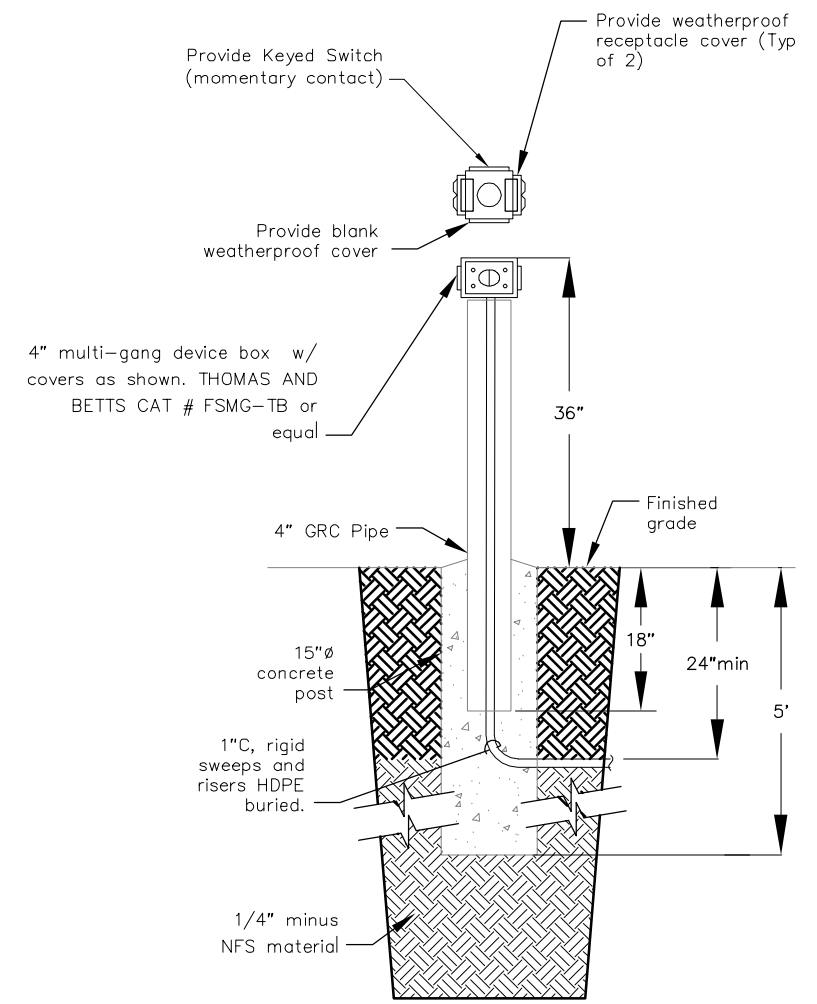
3 DUAL FLOOD (SCHEDULE F, G)
SCALE: NTS



4 POLE FOUNDATION DETAIL (SCHEDULE A, B, C)
SCALE: NTS



5 ELECTROLIER ELEVATION (SCHEDULE A, B, C)
SCALE: NTS



6 RECEPTACLE AND FLOODLIGHT CONTROL (SCHEDULE A, H)
SCALE: NTS

File: s:\jebadota\10116.07_Cuddy Park Skating Oval Illumination\00_CADD\01_Working_Sk\03_Electrical\10116.07_Details.dwg

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TELEPHONE		
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DESIGN		
QUANTITIES		
PRELIMINARY/FINAL		
MUNICIPAL/STATE		

FIELD BOOKS	TBM NO.	LOCATION	ELEV.	REV	DATE	DESCRIPTION	BY

DESIGN	ASBUILT	CONTRACTOR	INSPECTOR

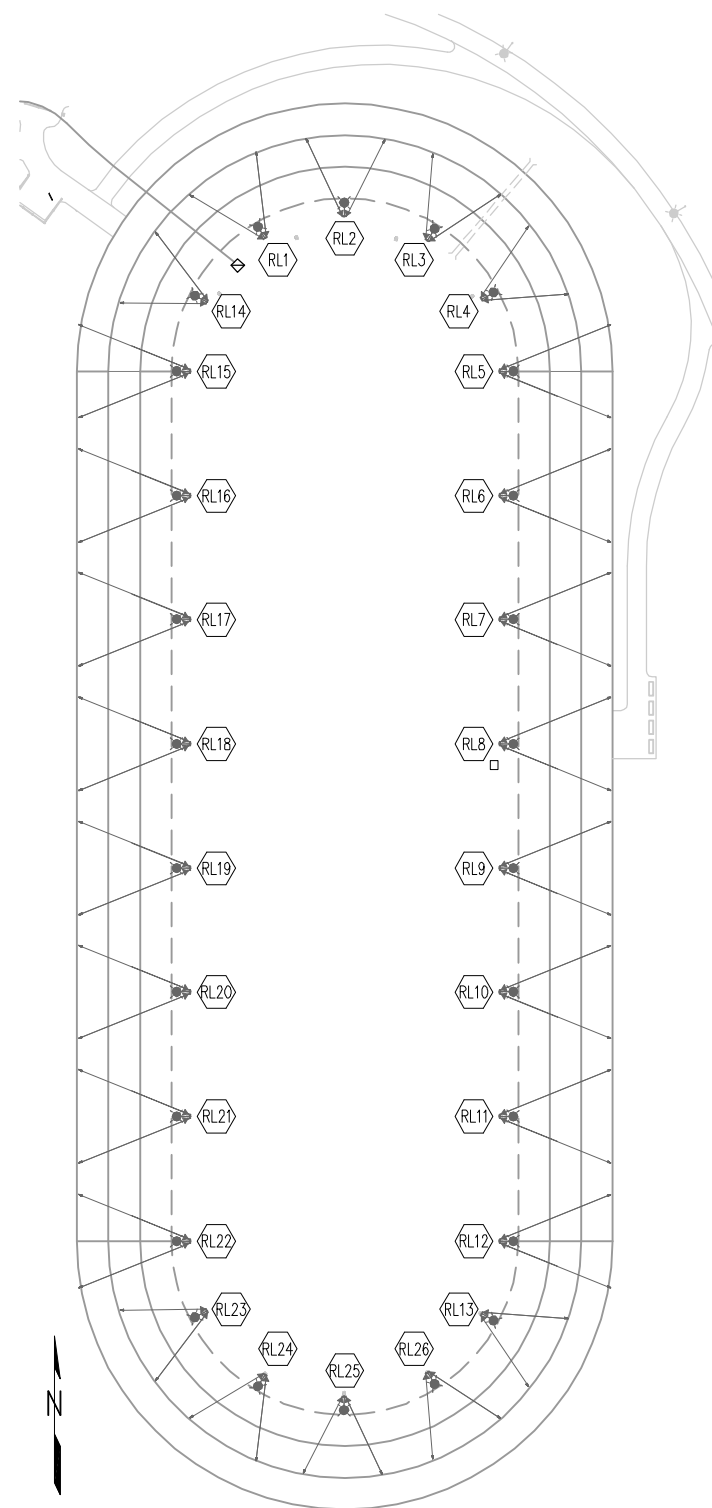
PLAN CHECK	CONSTRUCTION RECORD	VERTICAL DATUM	REVISIONS	CONSULTANT	SEAL

CRW ENGINEERING GROUP, LLC
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EE 7879

MUNICIPALITY OF ANCHORAGE

PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT
PM&E Project No. 10-034
CUDDY FAMILY MIDTOWN PARK SPEED SKATING OVAL LIGHTING
DETAILS
SCALE: HOR. N/A VER. N/A DATE: SEPT 2010 GRID: 1731 STATUS: FINAL SHEET: E4 of 8



1 LUMINAIRE AIMING PLAN

POLE SCHEDULE							
POLE	NORTHING	EASTING	SHAFT LENGTH	FLOOD LIGHT AIMING		CIRCUIT	COMMENT
				AZIMUTH	ELEVATION		
RL1	10555	9457	30'	25°	50'	B-5,7	Provide Area Light Circuit B-18,20
				333°	50'		
RL2	10565	9490	30'	25°	50'	B-5,7	Provide Area Light Circuit B-18,20
				333°	50'		
RL3	10555	9525	30'	25°	50'	B-5,7	Provide Area Light Circuit B-18,20
				333°	50'		
RL4	10530	9547	30'	25°	50'	B-5,7	Provide Area Light Circuit B-18,20
				333°	50'		
RL5	10500	9555	30'	22°	59'	B-5,7	Provide Area Light Circuit B-18,20
				338°	59'		
RL6	10449	9555	30'	22°	59'	B-5,7	Provide Area Light Circuit B-18,20
				338°	59'		
RL7	10397	9555	30'	22°	59'	B-5,7	Provide Area Light Circuit B-18,20
				338°	59'		
RL8	10345	9555	30'	22°	59'	B-9,11	Provide Area Light Circuit B-18,20
				338°	59'		
RL9	10293	9555	30'	22°	59'	B-9,11	Provide Area Light Circuit B-18,20
				338°	59'		
RL10	10242	9555	30'	22°	59'	B-9,11	Provide Area Light Circuit B-18,20
				338°	59'		
RL11	10190	9555	30'	22°	59'	B-9,11	Provide Area Light Circuit B-18,20
				338°	59'		
RL12	10138	9555	30'	22°	59'	B-9,11	Provide Area Light Circuit B-18,20
				338°	59'		
RL13	10108	9547	30'	25°	50'	B-9,11	Provide Area Light Circuit B-18,20
				333°	50'		
RL14	10530	9433	30'	25°	50'	B-6,8	Provide Area Light Circuit B-18,20
				333°	50'		
RL15	10500	9426	30'	22°	59'	B-6,8	Provide Area Light Circuit B-18,20
				338°	59'		
RL16	10449	9426	30'	22°	59'	B-6,8	Provide Area Light Circuit B-18,20
				338°	59'		
RL17	10397	9426	30'	22°	59'	B-6,8	Provide Area Light Circuit B-18,20
				338°	59'		
RL18	10345	9426	30'	22°	59'	B-6,8	Provide Area Light Circuit B-18,20
				338°	59'		
RL19	10293	9426	30'	22°	59'	B-6,8	Provide Area Light Circuit B-18,20
				338°	59'		
RL20	10242	9426	30'	22°	59'	B-6,8	Provide Area Light Circuit B-18,20
				338°	59'		
RL21	10191	9426	30'	22°	59'	B-10,12	Provide Area Light Circuit B-18,20
				338°	59'		
RL22	10138	9426	30'	22°	59'	B-10,12	Provide Area Light Circuit B-18,20
				338°	59'		
RL23	10108	9433	30'	25°	50'	B-10,12	Provide Area Light Circuit B-18,20
				333°	50'		
RL24	10082	9457	30'	25°	50'	B-10,12	Provide Area Light Circuit B-18,20
				333°	50'		
RL25	10073	9490	30'	25°	50'	B-10,12	Provide Area Light Circuit B-18,20
				333°	50'		
RL26	10082	9525	30'	25°	50'	B-10,12	Provide Area Light Circuit B-18,20
				333°	50'		

SEE 3 FOR AZIMUTH DETAIL SEE 2 FOR ELEVATION DETAIL

SCHEDULE G

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BASE	DRAWN BY	CHECKED BY	FIELD BOOKS	TBM NO.	LOCATION	ELEV.	REV	DATE	DESCRIPTION	BY
TOPOGRAPHY										
PROFILE										
STORM SEWER										
WATER/SANITARY SEWER										
GAS										
TELEPHONE										
ELECTRIC										
DESIGN										
QUANTITIES										
PRELIMINARY/FINAL										
MUNICIPAL/STATE										



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CUDDY FAMILY MIDTOWN PARK SPEED SKATING OVAL LIGHTING
 LUMINAIRE SCHEDULE & DUAL FLOOD AIMING PLAN
 SCALE: HOR. N/A VER. N/A
 DATE: SEPT 2010
 GRID: 1731
 STATUS: FINAL
 SHEET: E7 of 8

File: J:\Jebadota\10116.07_Cuddy Park_Skating Oval_Illumination\00_CADD\01_Working_Sk\03_Electrical\10116.07_Luminaire Schedule Add_Alt.dwg

