

CONSTRUCTION PLANS

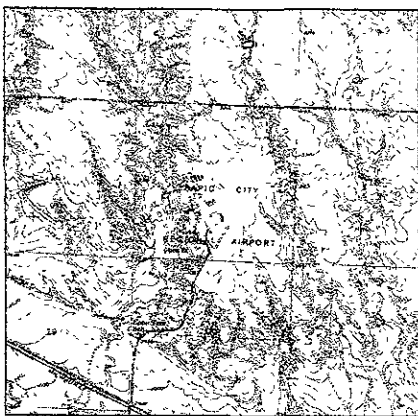
FOR

**RAPID CITY
REGIONAL AIRPORT**

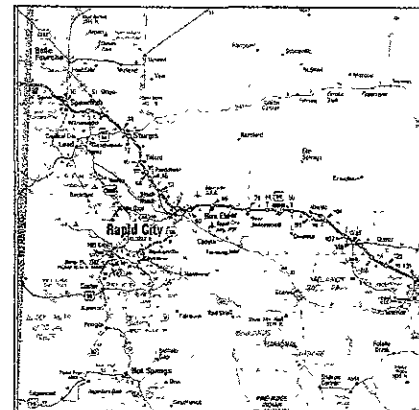
RAPID CITY, PENNINGTON COUNTY, SOUTH DAKOTA

RAPID CITY REGIONAL AIRPORT BOARD (OWNER)

March 2007



LOCATION MAP



VICINITY MAP

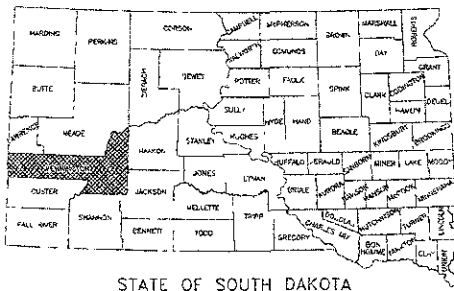
AIP NO. 3-46-0048-034-2007

G.A. AREA SECURITY LIGHTING, SECURITY GATES UPGRADE & MISCELLANEOUS ITEMS

prepared for
RAPID CITY REGIONAL AIRPORT BOARD

prepared by
KADRNAS, LEE & JACKSON, INC
330 Knollwood Drive
P O Box 3416
Rapid City, SD 57701
Ph (605) 721-5553

128 Soo Line Drive
P.O. Box 1157
Bismarck, ND 58502
Ph. (701) 355-8400



STATE OF SOUTH DAKOTA

SPONSORS APPROVAL

I HEREBY APPROVE THESE PROJECT PLANS AND SPECIFICATIONS, CERTIFIED BY A LICENSED PROFESSIONAL ENGINEER THAT THEY HAVE BEEN DEVELOPED TO THE BEST OF HIS PROFESSIONAL ABILITY IN ACCORDANCE WITH FEDERAL STANDARDS AS SET FORTH IN THE FAA ADVISORY CIRCULARS AND THAT NO DEVIATIONS WILL BE NECESSARY OTHER THAN THOSE PREVIOUSLY APPROVED BY THE FAA.

CITY OF _____
DATE _____

ACCEPTED

SOUTH DAKOTA DEPARTMENT OF TRANSPORTATION

BRUCE LINDHOLM, P.E.
PROGRAM MANAGER
OFFICE OF AERONAUTICS

DATE _____

ENGINEER CERTIFICATION

I HEREBY CERTIFY THAT TO THE BEST OF MY PROFESSIONAL ABILITY THESE PLANS AND SPECIFICATIONS WERE DEVELOPED UNDER MY DIRECT SUPERVISION IN ACCORDANCE WITH ALL APPLICABLE FEDERAL STANDARDS AND REQUIREMENTS AND THAT NO DEVIATION FROM OR ADDITIONS TO STANDARDS AS SET FORTH IN THE FEDERAL AVIATION ADMINISTRATION ADVISORY CIRCULARS WILL BE NECESSARY OTHER THAN THOSE PREVIOUSLY APPROVED BY THE FAA.

P E _____
DATE _____

Drawn	Date	Description	Rev	Chg	Appr

RAPID CITY REGIONAL AIRPORT
RAPID CITY REGIONAL AIRPORT BOARD
RAPID CITY, SOUTH DAKOTA

**Kadmas
Lee &
Jackson**
Engineers, Surveyors
and Planners

TITLE
SHEET

Proj No	Sheet No	Total Sheets	Date

APPROVED

RAPID CITY REGIONAL AIRPORT PROJ #10506105

SHEET INDEX

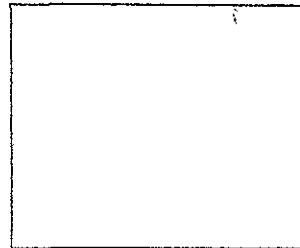
ELECTRICAL CONSTRUCTION

	TITLE SHEET
1	INDEX OF PLAN SHEETS
2	PROJECT WORK DESCRIPTION & BASIS OF ESTIMATE
3	CONSTRUCTION SAFETY PLAN - GENERAL LAYOUT
4	CONSTRUCTION SAFETY PLAN - PHASING
5	CONSTRUCTION SAFETY PLAN - DETAILS
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E-2	ELECTRICAL LIGHTING LAYOUT
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E-4	ELECTRICAL LIGHTING DETAIL - SOUTH
E-5	SECURITY GATE LAYOUT PLAN
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E-7	SECURITY GATE LAYOUT - SOUTH
E-8	SECURITY GATE LAYOUT - HOVE RUN
E-9	SECURITY GATE LAYOUT - CONTROL TOWER
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E-22	FEEDPOINT CONTROL & PANELBOARD DETAILS
E-23	SLIDE GATE & JUNCTION BOX DETAILS

FOR INFORMATION ON THIS PROJECT CONTACT THE FOLLOWING:

GENERAL INFORMATION AND CIVIL CONSTRUCTION ITEMS
TOM NEWMY 701-355-8415

ELECTRICAL CONSTRUCTION ITEMS
CHRIS HOPNER 701-355-8400



Rapid City Regional Airport Rapid City Regional Airport Board (Owner) Rapid City, South Dakota			Sheet No. 7
Kadmas Lee & Jackson		INDEX OF PLAN SHEETS	
Equipment, Structures and Paving	CAS	Contract No. VE08105	Issue No. 03/28/200

RECEIVED

APR

Rapid C

NOTE

SEE SHEET #2 (GENERAL CONSTRUCTION SAFETY PLAN, FOR GENERAL CONSTRUCTION SAFETY PROJECT NOTES AND LIMITATION OF SAFETY PLAN.

WORK PHASING

THE CONTRACTOR WILL PHASE THE CONSTRUCTION WORK TO COMPLETE THE INSTALLATION OF THE SECURITY UPDATES (SPRON/HANGAR LIGHTING AND ACCESS ROAD LIGHTING). ALL WORK SHALL BE PERFORMED WITH ALL AREAS OF THE AIRPORT OPEN FOR USE. NO WORK SHALL BE PERFORMED WITHIN 250 FEET OF AN ACTIVE RUNWAY OR WITHIN 100 FEET OF AN ACTIVE TAXIWAY.

THE CONTRACTOR WILL NOTIFY THE ENGINEER AND AIRPORT A MINIMUM OF 7 CALENDAR DAYS IN ADVANCE OF BEGINNING CONSTRUCTION OPERATIONS. NOTIFICATION SHALL INCLUDE A PROPOSED CONSTRUCTION SCHEDULE WHICH INDICATE THE CONTRACTOR'S PROPOSED WORK SEQUENCING AND ANTICIPATED IMPACTS TO THE AIRCRAFT GROUND MOVEMENTS. ALL EFFORTS SHALL BE MADE BY THE CONTRACTOR TO MINIMIZE THE IMPACTS TO AIRCRAFT GROUND MOVEMENTS AND MAINTAIN OPEN TAXIWAYS. ANY IMPACTS TO AIRCRAFT GROUND MOVEMENT WILL NEED TO BE PROPERLY DELINEATED WITH SAFETY BARRICADES. LAYOUT OF THE PLACEMENT OF THE BARRICADES MUST BE APPROVED BY THE ENGINEER. A MINIMUM OF 72 HOURS PRIOR TO THE PLACEMENT OF THE SAFETY BARRICADES, IN THE EVENT THAT CLOSURE OF A TAXIWAY CANNOT BE AVOIDED, THE CONTRACTOR SHALL ALLOW THE AIRPORT 7 CALENDAR DAYS TO NOTIFY AIRCRAFT AND HANGAR OWNERS OF THE PROPOSED CLOSURE. NO TAXIWAY SHALL BE CLOSED FOR MORE THAN 48 HOURS.

THE EXPECTED MAXIMUM HEIGHT OF CONSTRUCTION EQUIPMENT IS 25 FEET WITH THE EXCEPTION OF WHEN LIGHTING STANDARDS ARE BEING INSTALLED. DURING THE INSTALLATION OF THE LIGHTING STANDARDS A CRANE WILL BE REQUIRED WITH AN ANTICIPATED MAXIMUM HEIGHT OF 80 FEET. THE CONTRACTOR SHALL NOTIFY THE AIRPORT A MINIMUM OF 72 HOURS PRIOR TO THE USE OF THE CRANE TO ALLOW THE AIRPORT TO ISSUE THE APPROPRIATE NOTICES. THE CRANE BOOM SHALL BE LOWERED DURING PERIODS OF INACTIVITY AT THE END OF EACH WORKING DAY AND AT NIGHT. THE CONTRACTOR SHALL VERIFY ANY EQUIPMENT HEIGHT MORE THAN 60 FEET AND SUBMIT ALL THE DATA TO THE ENGINEER AND AIRPORT FOR REVIEW AND REVISIONS TO THE SAFETY PLAN.

ALL WORK COMPLETED ON THE ACCESS ROAD SHALL BE COMPLETED IN A MANNER WHICH ALLOWS A MINIMUM OF ONE LANE OF VEHICLE TRAFFIC. CONSTRUCTION SIGNING AND TRAFFIC OPERATIONS SHALL BE IN ACCORDANCE WITH THE 2003 EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL CONSTRUCTION SIGNS FOR THIS WORK SHALL BE BLACK LETTERING ON AN ORANGE BACKGROUND. WHEN FLAGGERS ARE EMPLOYED, A "FLAGGER AHEAD" SIGN SHALL BE PLACED 500 FEET IN ADVANCE OF THE FLAGGER WITH OTHER REQUIRED ADVISORY SIGNS PLACED IN ACCORDANCE TO THE LATEST EDITION OF MUTCD. HIGH REFLECTIVE SHEETING SHALL BE USED ON ALL CONSTRUCTION SIGNING. ALL COSTS ASSOCIATED WITH THE SIGNAGE AND FLAGGING SHALL BE INCIDENTAL TO THE WORK BEING COMPLETED.

LEGEND

--- LIMITS OF CONSTRUCTION AREA

⇨ TRAFFIC FLOW PATTERN

COORDINATE DATA TABLE

LETTER	DESCRIPTION	LATITUDE	LONGITUDE	ELEVATION
(1)	CLAMP 4 END	44 03' 13.762"	107 03' 34.053"	3769.00
(2)	CLAMP 32 END	44 03' 38.362"	107 03' 31.890"	3740.31
(3)	CLAMP 5 END	44 03' 24.217"	107 03' 30.947"	3771.02
(4)	CLAMP 23 END	44 03' 09.336"	107 03' 28.751"	3802.42
(5)	SPRINGS/STAGING AREA	44 02' 28.662"	107 03' 48.676"	3770.02
(6)	SPRINGS/STAGING AREA	44 02' 28.677"	107 03' 41.578"	3770.00
(7)	STORAGE/STAGING AREA	44 02' 28.214"	107 03' 42.207"	3770.00
(8)	SPRINGS/STAGING AREA	44 02' 27.364"	107 03' 44.931"	3760.05

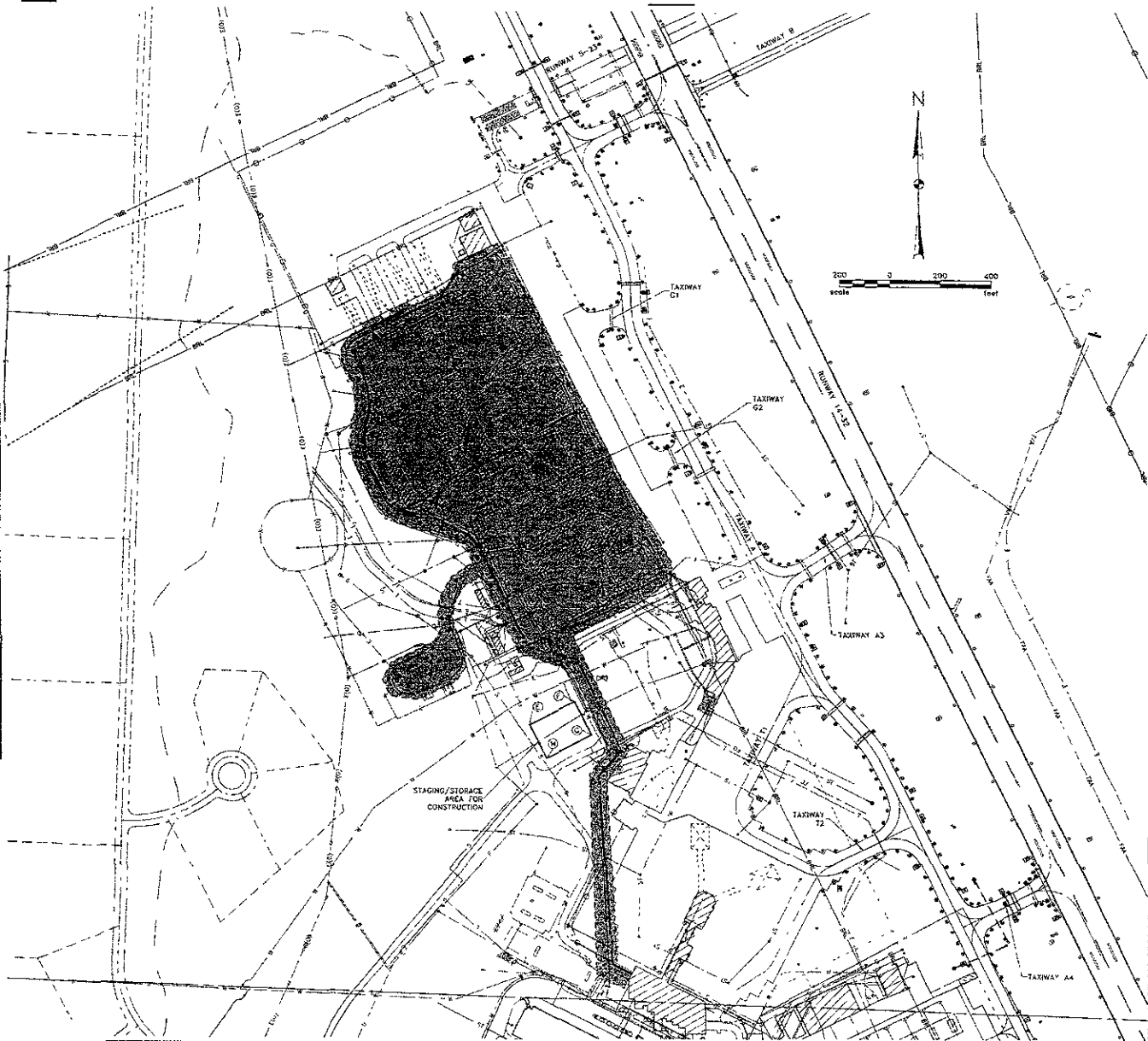
PRELIMINARY

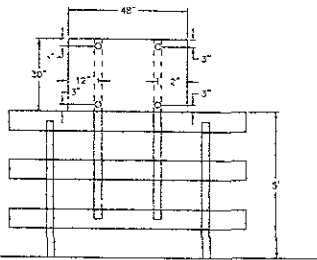
RAPID CITY REGIONAL AIRPORT
 RAPID CITY REGIONAL AIRPORT BOARD (OWNER)
 2400 CITY SOUTH GARDEN

Kadrmas
 Lee &
 Jackson
 Engineers, Surveyors
 and Planners
 CAS

CONSTRUCTION
 SAFETY PLAN
 WORK PHASING

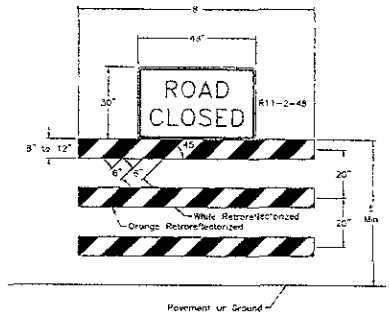
SHEET NO. 4
 DATE: 10/08/10
 03/23/2007





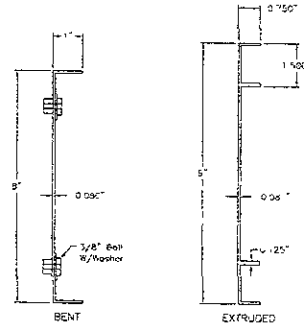
TYPE III BARRICADE MOUNTING

SCALE 1"=4'



TYPE III BARRICADE

SCALE 1"=4'



ALUMINUM BARRICADE BAR DETAIL

SCALE 1"=1/2'

NOTE

BARRICADE AND SIGN SUPPORTS: WOODEN SUPPORTS SHALL BE PAINTED WHITE. STEEL SUPPORTS SHALL BE GALVANIZED OR PAINTED.

BARRICADE MOUNTING SIGNS: THE BOTTOM OF THE SIGN SHALL BE FLUSH WITH THE TOP OF THE TOP RAIL. WOOD SIGN POSTS SHALL BE 4"x4" MIN. SFS OR EQUIVALENT. STEEL POSTS ALL BARRICADES AND BARRICADE MOUNTED SIGNS SHALL BE ASSEMBLED WITH 3/8" BOLTS.

SIGN SUPPORTS: SIGN SUPPORTS SHALL BE 4"x4" MIN. SFS OR EQUIVALENT. STEEL POST THE ANCHOR FOR STEEL SUPPORTS SHALL HAVE A STUB HEIGHT OR 4" OR LESS. WOOD POSTS MORE THAN 4"x4" SHALL BE BREAKAWAY. SIGN SUPPORTS SHALL BE IMBEDDED TO A SUFFICIENT DEPTH SO THAT SIGNS WILL REMAIN PLUMB. IT IS SUGGESTED THAT WOOD POSTS HAVE A MIN. DEPTH OF EMBEDMENT OF 5' AND STEEL POSTS BE EMBEDDED A MIN. 3'-6".

MATERIAL: ALL SIGNS SHALL BE 0.100" ALUMINUM OR OTHER APPROVED MATERIAL.

HOLES: ALL HOLES TO BE PUNCHED ROUND FOR 3/8" BOLTS.

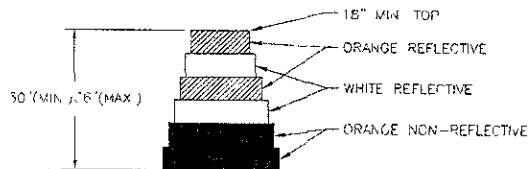
TYPE III BARRICADES

NUMBER OF RETROREFLECTORIZED RAILS - 6 (FACING IN TWO DIRECTIONS)

BARRICADE RAIL MATERIAL MAY BE 1" NOMINAL THICKNESS STANDARD LUMBER OR 3/4" PLYWOOD AND PREPARED AS RECOMMENDED BY THE SHEETING MANUFACTURER BEFORE RETROREFLECTIVE SHEETING IS APPLIED.

DELINEATOR DRUMS

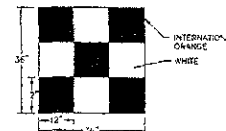
THE MARKINGS ON DRUMS SHALL BE ORANGE AND WHITE STRIPES 4 TO 8 INCHES WIDE. THERE SHALL BE AT LEAST TWO ORANGE AND TWO WHITE STRIPES. WHERE DRUMS HAVE RIGS OR IDENTIFICATION THERE SHALL BE NO REFLECTORIZED SHEETING IN THIS AREA. THIS SPACE SHALL BE NO MORE THAN 2 INCHES WIDE. THE DRUM SURFACE SHALL BE PREPARED AS RECOMMENDED BY THE SHEETING MANUFACTURER BEFORE REFLECTIVE SHEETING IS APPLIED.



DELINEATOR DRUM

NOTES

- ALL WARNING DEVICES SHALL MEET THE REQUIREMENTS OF PART 6 OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- ALL WARNING LIGHTS SHALL BE KEPT IN OPERATIONAL ORDER BY CONTRACTOR.
- THE LAYOUTS ARE A MINIMUM REQUIREMENT NECESSARY TO ASSIST CONTRACTOR IN DETERMINING COST FOR PROVIDING NECESSARY TRAFFIC CONTROL. THE CONTRACTOR MAY ADD ADDITIONAL WARNING DEVICES UPON APPROVAL OF THE ENGINEER.



VEHICLE WARNING FLAG
NO SCALE

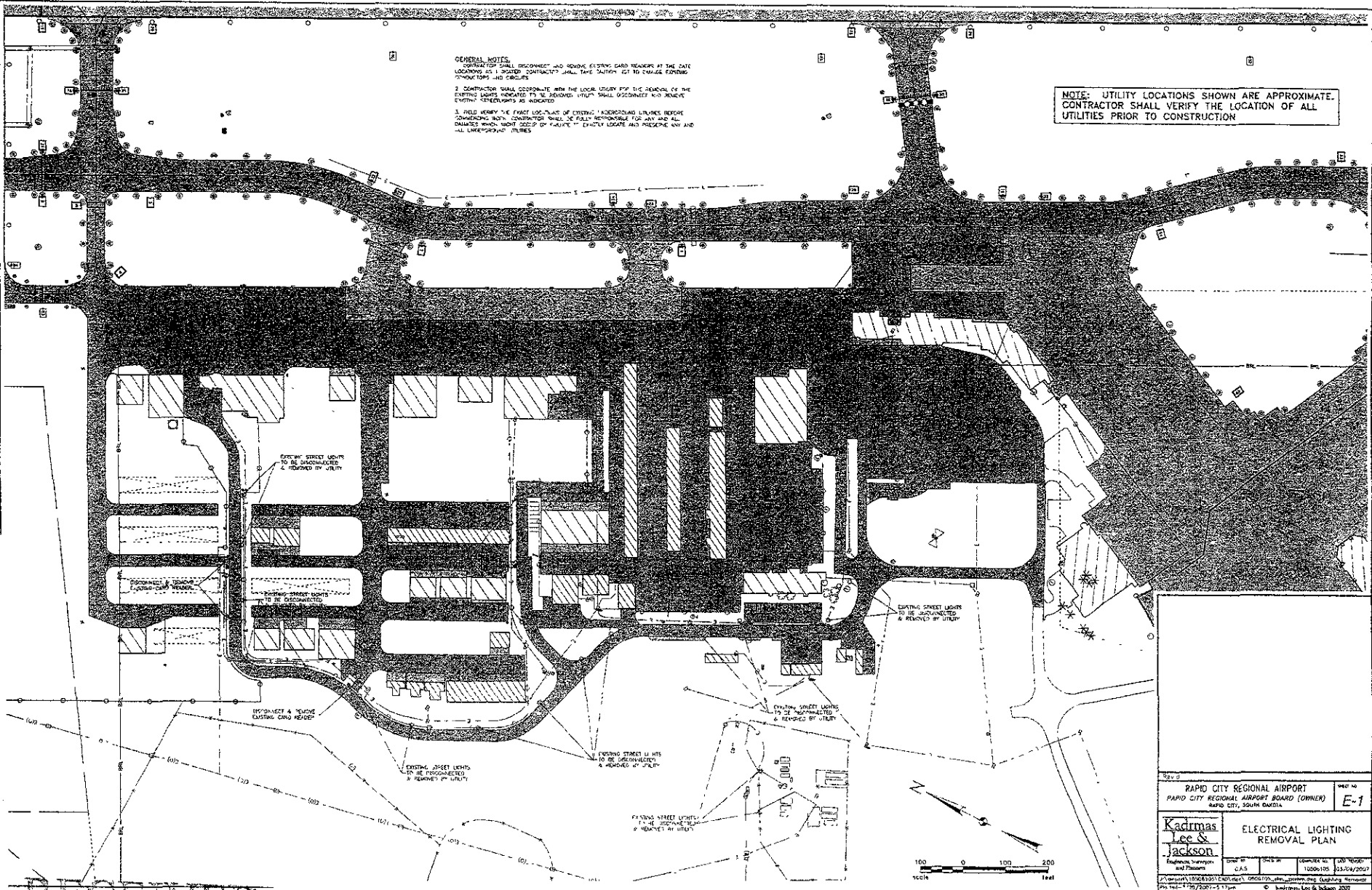
PRELIMINARY

Rev'd	RAPID CITY REGIONAL AIRPORT RAPID CITY REGIONAL AIRPORT BOARD (OWNER) RAPID CITY SOUTH GARDIA	DATE	5
Kadmas Lee & Jackson		CONSTRUCTION SAFETY PLAN DETAILS	
Engineer, Surveyor and Planner	Scale: 1"=4'	Sheet No. 10000100	DATE 10-21-2010

GENERAL NOTES:

1. CONTRACTOR SHALL DISCONNECT AND REMOVE EXISTING CARB READERS AT THE DATE LOCATIONS AS INDICATED. CONTRACTOR SHALL TAKE CAUTION NOT TO DAMAGE EXISTING FIBER OPTIC AND CABLES.
2. CONTRACTOR SHALL COORDINATE WITH THE LOCAL UTILITY FOR THE REMOVAL OF THE EXISTING LAMPS INDICATED TO BE REMOVED. UTILITY SHALL DISCONNECT AND REMOVE EXISTING REPERCUSSIONS AS INDICATED.
3. FIELD VERIFY THE EXACT LOCATION OF EXISTING UNDERGROUND UTILITIES BEFORE COMMENCING WORK. CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR BY FAILURE TO EXACTLY LOCATE AND PROTECT ANY AND ALL UNDERGROUND UTILITIES.

NOTE: UTILITY LOCATIONS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

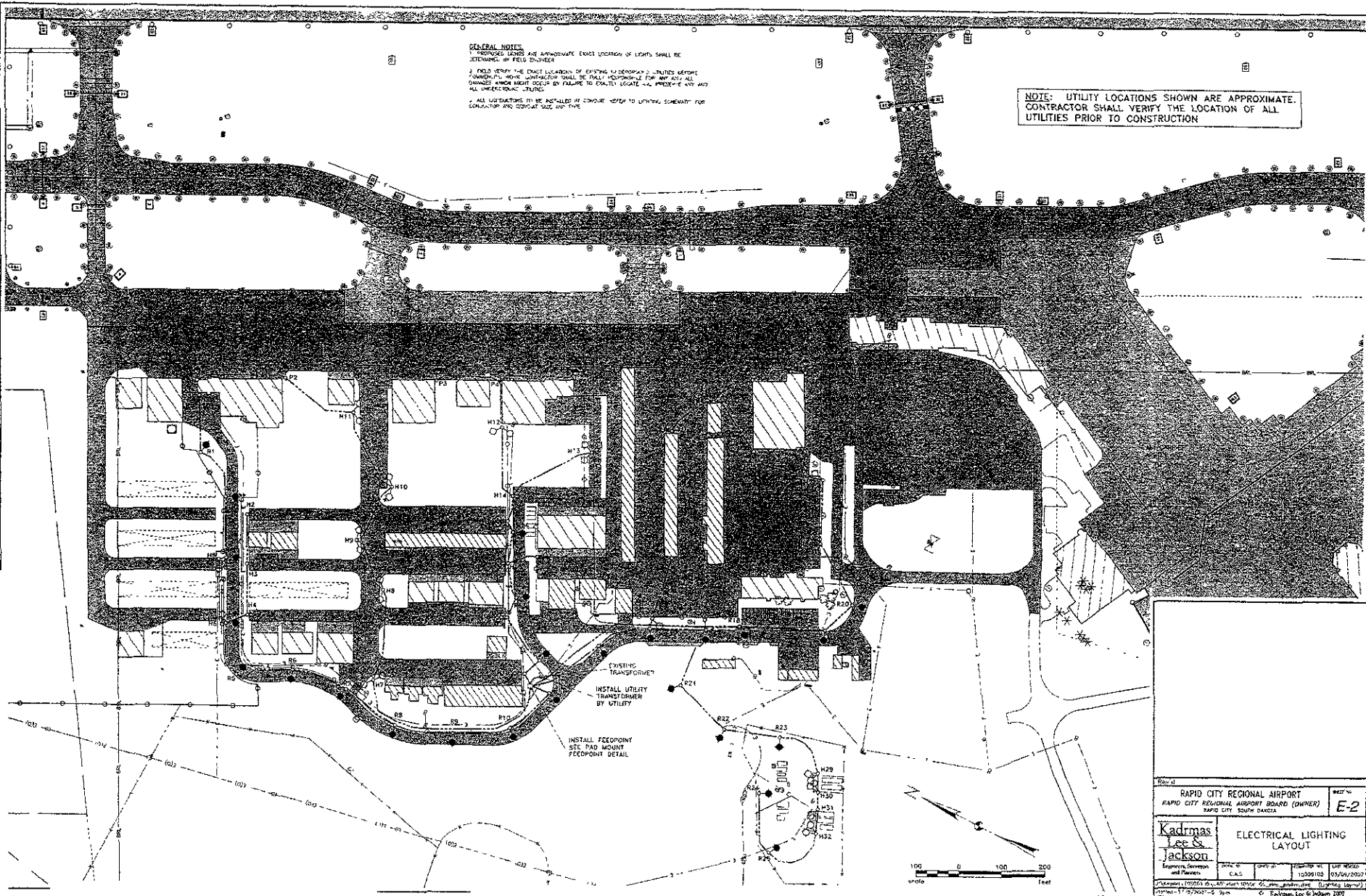


RAPID CITY REGIONAL AIRPORT RAPID CITY REGIONAL AIRPORT BOARD (OWNER) RAPID CITY, SOUTH DAKOTA		SHEET NO. E-1
Kadmas Lee & Jackson Electrical Engineers and Planners		PROJECT NO. 10000-100
DATE 11/14/2017		DRAWING NO. 11/14/2017
© Kadmas Lee & Jackson 2017		

GENERAL NOTES

1. PROPOSED LIGHTS ARE APPROXIMATE EXACT LOCATION OF LIGHTS SHALL BE DETERMINED BY FIELD ENGINEER
2. FIELD VERIFY THE EXIST LOCATION OF EXISTING UTILITIES. UTILITIES NOT SHOWN ON THIS DRAWING CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR BY FAILURE TO EXACTLY LOCATE ALL PROPOSED ANY AND ALL UNDERGROUND UTILITIES.
3. ALL SUBSTATIONS TO BE INSTALLED IN CONFORMANCE WITH LIGHTING SCHEDULE FOR CONTRACTOR AND VERIFY SIZE AND TYPE.

NOTE: UTILITY LOCATIONS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION



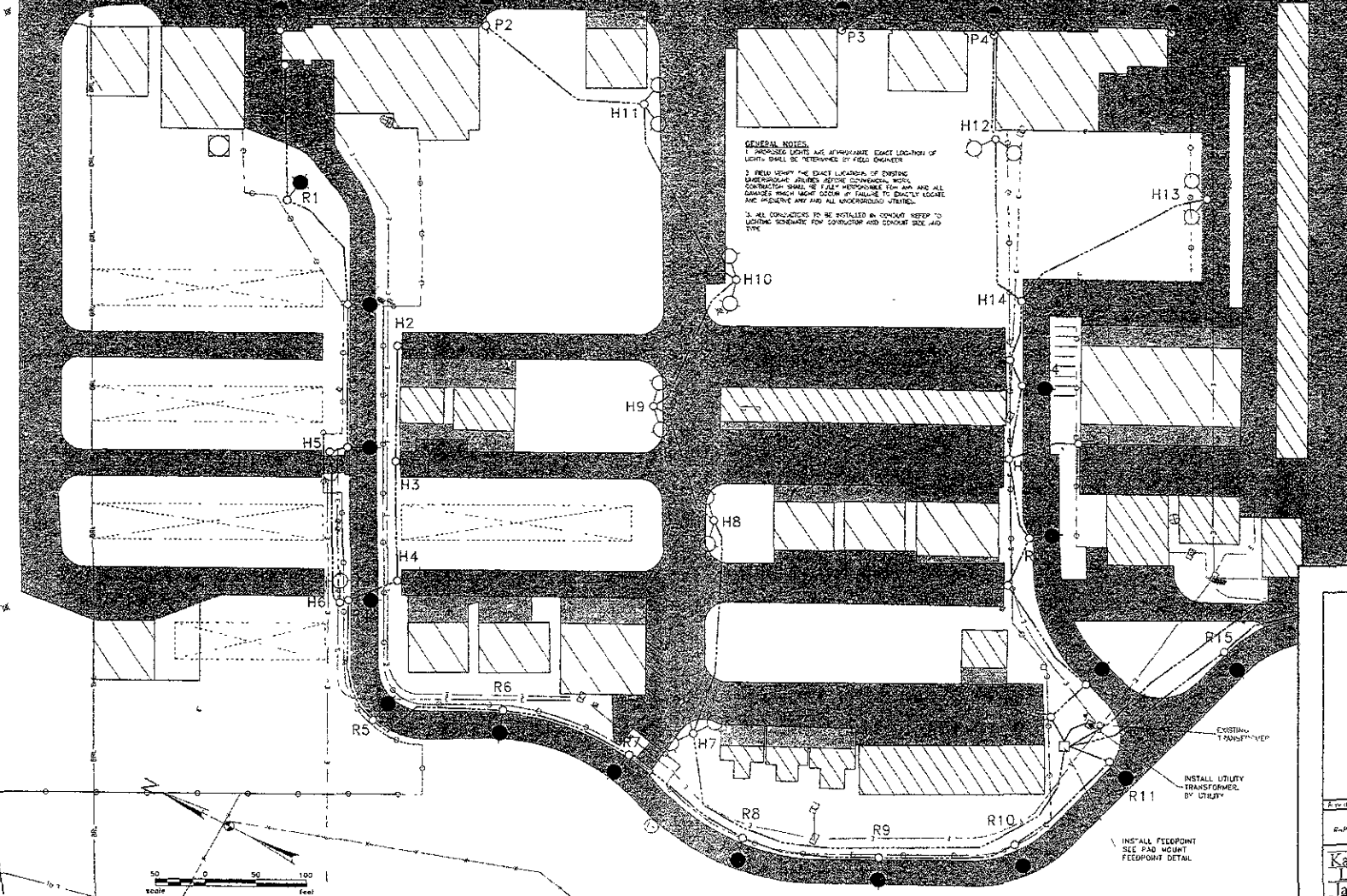
Project: RAPID CITY REGIONAL AIRPORT
 Owner: RAPID CITY REGIONAL AIRPORT BOARD (OWNER)
 Location: RAPID CITY, SOUTH DAKOTA

Contractor: **Kadmas Lee & Jackson**
 Engineer: **Lee & Jackson**

Scale: 1/4" = 1'-0"
 Date: 10/29/10
 Project No: 1029102
 Drawing No: E-2

ELECTRICAL LIGHTING LAYOUT

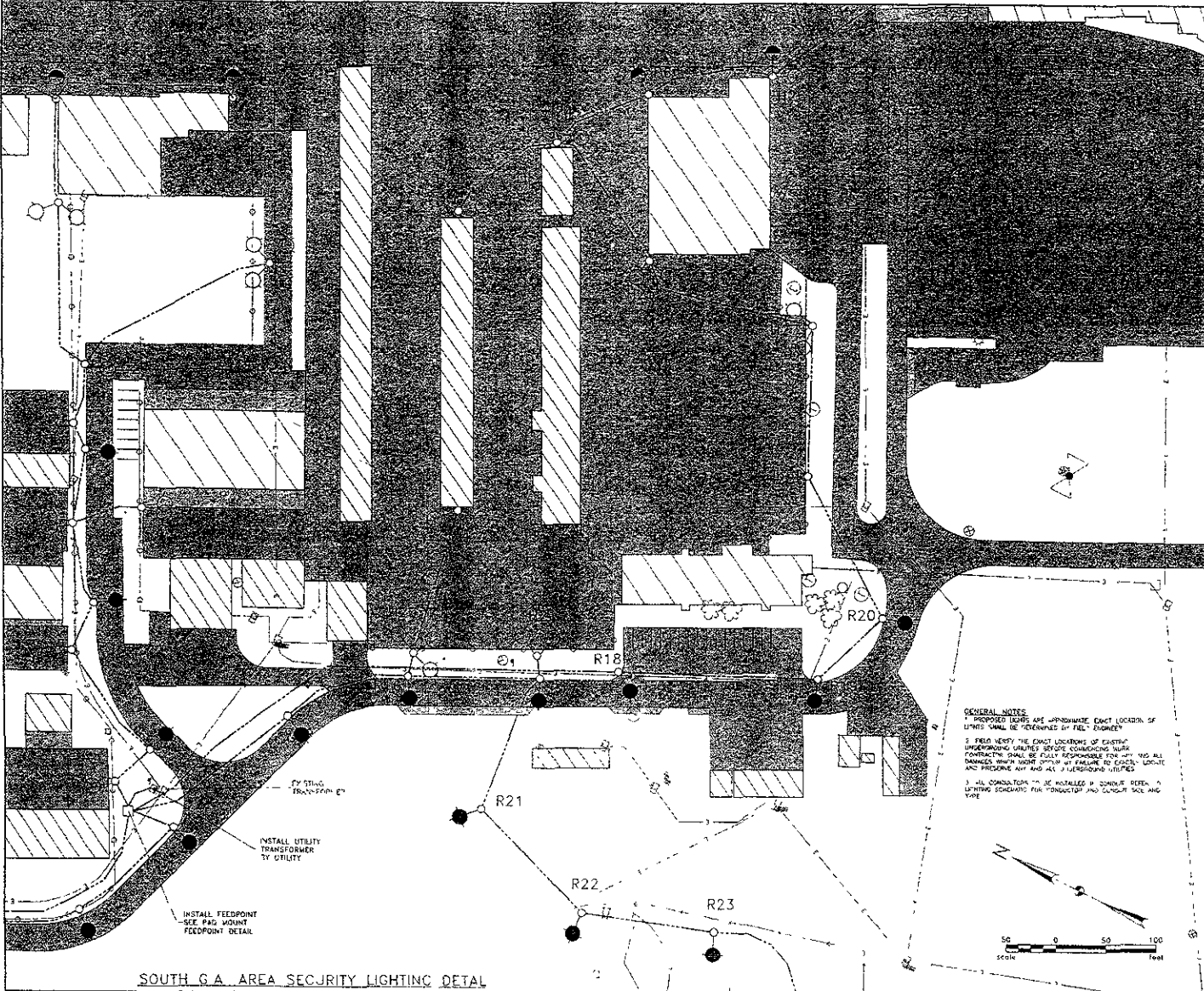
GENERAL NOTES:
 1. APPROVED LIGHTS AND APPROXIMATE EXACT LOCATION OF LIGHTS SHALL BE DETERMINED BY FIELD ENGINEER.
 2. FIELD VERIFY THE EXACT LOCATION OF EXISTING UNDERGROUND UTILITIES BEFORE COMMENCING WORK. CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR BY FAILURE TO EXACTLY LOCATE AND PROTECT ANY AND ALL UNDERGROUND UTILITIES.
 3. ALL CONDUITS TO BE INSTALLED IN CONDUIT KEEP TO LIGHTING SCHEMATIC FOR CONDUIT AND CONDUIT SIZE AND TYPE.



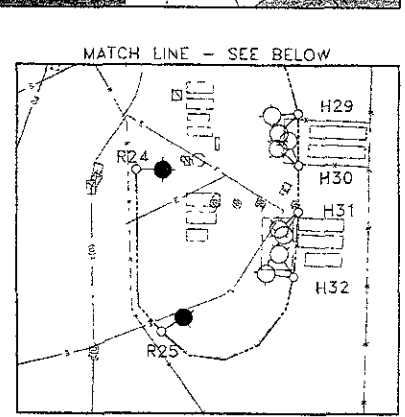
R-11-1		R-11-2	
RAPID CITY REGIONAL AIRPORT			
RAPID CITY REGIONAL AIRPORT BOARD (OWNER)			
RAPID CITY, SOUTH DAKOTA			
			E-3
Kadmas Lee & Jackson		ELECTRICAL LIGHTING DETAIL - NORTH	
DATE OF FIELD SURVEY	DATE OF C.A.S.	PROJECT NO.	DATE OF ISSUE
11/15/2011	1/26/2012	1100-0000	03/24/2012
DRAWN BY: [Signature]		CHECKED BY: [Signature]	
SCALE: 1" = 20'		SHEET NO. 1 OF 2	

NORTH G.A. AREA SECURITY LIGHTING DETAIL

NOTE: ALL LOCATIONS SHOWN ARE APPROXIMATE. CONTRACTORS SHALL VERIFY LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.



MATCH LINE - SEE ABOVE

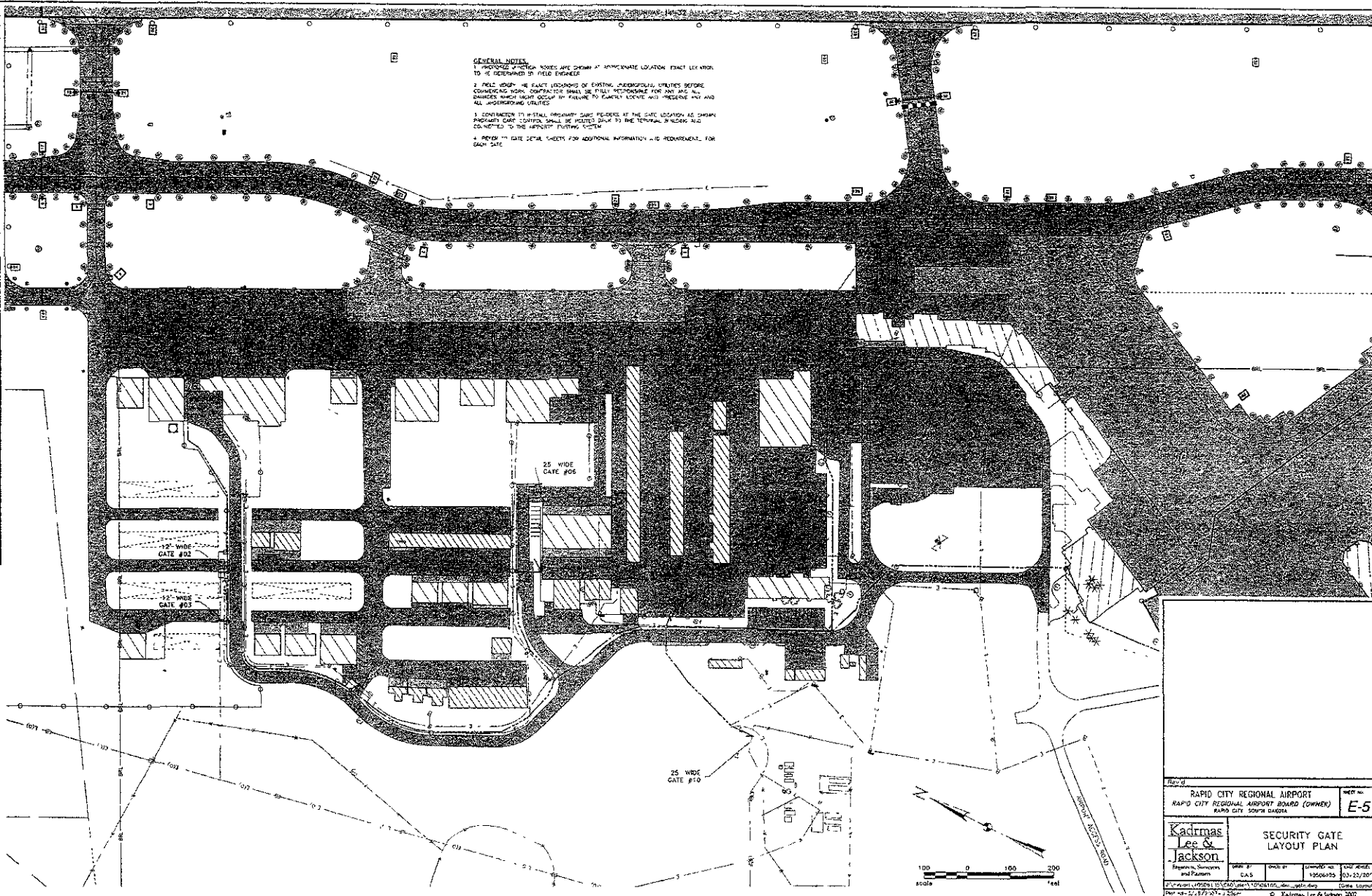


MATCH LINE - SEE BELOW

GENERAL NOTES
 1. PROPOSED LINES ARE APPROXIMATE. EXACT LOCATION OF LINES SHALL BE DETERMINED BY FIELD ENGINEER.
 2. FIELD VERIFY THE EXACT LOCATIONS OF EXISTING UNDERGROUND UTILITIES BEFORE COMMENCING WORK. CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR BY FAILURE TO EXIST, LOCATE AND PROTECT ANY AND ALL SURROUNDING UTILITIES.
 3. ALL CONDUCTORS TO BE INSTALLED IN CONDUIT REFER TO LIGHTING SCHEDULE FOR PRODUCTIVITY AND CIRCULAR SIZE AND TYPE.

Rapid City Regional Airport		Sheet No.
Rapid City Regional Airport Board (Owner)		E-4
Rapid City, South Dakota		
Kadmas Lee & Jackson	ELECTRICAL LIGHTING DETAIL - SOUTH	
	Engineer, Surveyor, and Plumber	
Drawn by	CAS	Checked by
12/20/10		12/20/10
12/20/10		12/20/10

- GENERAL NOTES**
1. PROPOSED AIRCRAFT MOVES ARE SHOWN AT APPROXIMATE LOCATION. EXACT LOCATION TO BE DETERMINED BY FIELD ENGINEER.
 2. FIELD WORK TO BE EXACT RECONSTRUCTION OF EXISTING UNDERGROUND UTILITIES BEFORE COMMENCING WORK. CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR BY FAILURE TO EXACTLY LOCATE AND PRESERVE ALL AND ALL UNDERGROUND UTILITIES.
 3. CONTRACTOR TO INSTALL TEMPORARY GROUND PLEDGERS AT THE GATE LOCATION AS SHOWN. PROGRAM'S GATE CONTROL SHALL BE ROUTED BACK TO THE TERMINAL IN DESIGN AND CONNECTED TO THE AIRPORT EXISTING SYSTEM.
 4. REFER TO GATE DETAIL SHEETS FOR ADDITIONAL INFORMATION AND REQUIREMENTS FOR EACH GATE.



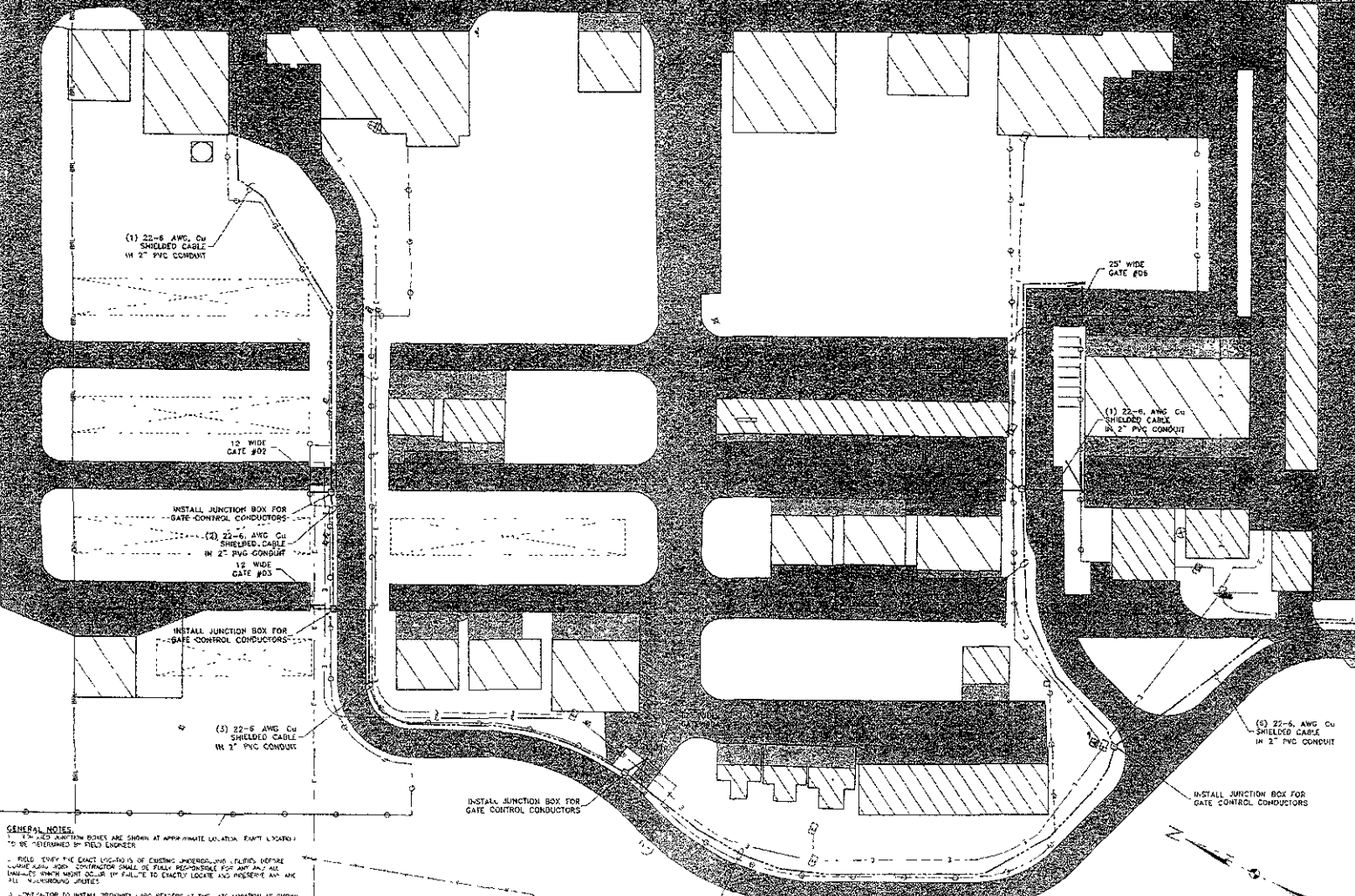
Sheet No. **E-5**

RAPID CITY REGIONAL AIRPORT
 RAPID CITY REGIONAL AIRPORT BOARD (OWNER)
 RAPID CITY, SOUTH DAKOTA

Kadmas Lee & Jackson
 Engineers, Planners and Architects
 12504 W 55th Street, Suite 200
 Omaha, NE 68148-3507
 Phone: 402-426-1234

SECURITY GATE LAYOUT PLAN

DATE:	DATE:	DATE:	DATE:
CAS	CAS	12/26/05	03/25/07



(1) 22-6 AWG Cu
SHIELDED CABLE
IN 2" PVC CONDUIT

12' WIDE
GATE #97

INSTALL JUNCTION BOX FOR
GATE CONTROL CONDUCTORS

(2) 22-6 AWG Cu
SHIELDED CABLE
IN 2" PVC CONDUIT

12' WIDE
GATE #98

INSTALL JUNCTION BOX FOR
GATE CONTROL CONDUCTORS

(3) 22-6 AWG Cu
SHIELDED CABLE
IN 2" PVC CONDUIT

INSTALL JUNCTION BOX FOR
GATE CONTROL CONDUCTORS

25' WIDE
GATE #98

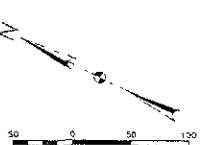
(1) 22-6 AWG Cu
SHIELDED CABLE
IN 2" PVC CONDUIT

(3) 22-6 AWG Cu
SHIELDED CABLE
IN 2" PVC CONDUIT

INSTALL JUNCTION BOX FOR
GATE CONTROL CONDUCTORS

(4) 22-6 AWG Cu
SHIELDED CABLE
IN 2" PVC CONDUIT

- GENERAL NOTES:**
1. DIM AND LOCATION DIMENSIONS ARE SHOWN AT APPROXIMATE LOCATIONS. EXACT LOCATIONS TO BE DETERMINED BY FIELD ENGINEER.
 2. FIELD VERIFY THE EXACT LOCATION OF EXISTING UNDERGROUND UTILITIES BEFORE COMMENCING WORK. CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ALL UTILITIES WHICH MIGHT OCCUR BY FAILURE TO CHECKLY LOCATE AND PRESERVE AND THE FIELD ENGINEERING OFFICES.
 3. THE CONTRACTOR IS TO INSTALL WEATHER-RESISTANT WIRE READERS AT THE SITE LOCATION AS SHOWN. POWER SUPPLY POINTS SHALL BE ROUTED BACK TO THE TERMINAL BUILDING AND TRANSMITTED BY THE AIRPORT'S EXISTING SYSTEM.
 4. REFER TO GATE METAL SHEETS FOR ADDITIONAL INFORMATION AND REQUIREMENTS FOR EACH GATE.



RAPID CITY REGIONAL AIRPORT RAPID CITY REGIONAL AIRPORT BOARD (OWNER) RAPID CITY SOUTH GATE		SHEET NO. E-6
Kadmas Lee S. Jackson Electrical Contractor and Plumber		SECURITY GATE LAYOUT - NCRTH
DATE 11-17-17	REV. NO. 1.000-17	SHEET NO. 1214

25 WIDE GATE #06

(1) 22-6 AWC CU SHIELDED CABLE IN 2" PVC CONDUIT

CONNECT TO EXISTING MANHOLE AND ROUTE GATE CONTROL CONDUCTORS IN THE EXISTING 4" SPARE CONDUIT

(3) 22-6 AWC CU SHIELDED CABLE IN EXISTING 4" SPARE CONDUIT

(9) 22-6 AWC CU SHIELDED CABLE IN 2" PVC CONDUIT

INSTALL JUNCTION BOX FOR GATE CONTROL CONDUCTORS

(6) 22-6 AWC CU SHIELDED CABLE IN 2" PVC CONDUIT

(1) 22-6 AWC CU SHIELDED CABLE IN 2" PVC CONDUIT

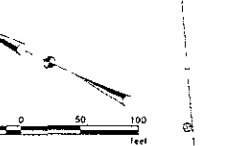
INSTALL JUNCTION BOX FOR GATE CONTROL CONDUCTORS

INSTALL JUNCTION BOX FOR GATE CONTROL CONDUCTORS

GENERAL NOTES

- PROPOSED CONDUIT EDGES ARE SHOWN AT APPROXIMATE LOCATIONS. EXACT LOCATIONS TO BE DETERMINED BY FIELD SURVEY.
- FIELD VERIFY THE EXACT LOCATION OF EXISTING UNDERGROUND UTILITIES BEARING CLIMATE BOND NUMBER CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR OBTAINING ALL UTILITIES WHICH MIGHT CROSS BY PASSAGE TO EXACTLY LOCATE AND IDENTIFY ALL UNDERGROUND UTILITIES.
- CONTRACTOR TO INSTALL APPROXIMATE CABLE HEADERS AT THE GATE EDGE TO 4" 5" DIA. FIBER OPTIC CABLE CONDUIT SHALL BE INSTALLED TO THE TERMINAL IF SUB- AND CONNECTED TO THE AIRPORTS EXISTING SYSTEM.
- REFER TO GATE DETAIL SHEETS FOR ADDITIONAL INFORMATION AND SECURITY AGENTS FOR EACH GATE.
- CONTRACTOR SHALL RUN 1 CONDUIT TO EXISTING MANHOLE IN 25 WIDE GATE #10 CONNECT TO EXISTING 4" SPARE CONDUIT AND ROUTE CONDUCTORS TO 4" 5" DIA. FIBER OPTIC CABLE CONDUIT TO THE AIRPORTS EXISTING SYSTEM.

25 WIDE GATE #10

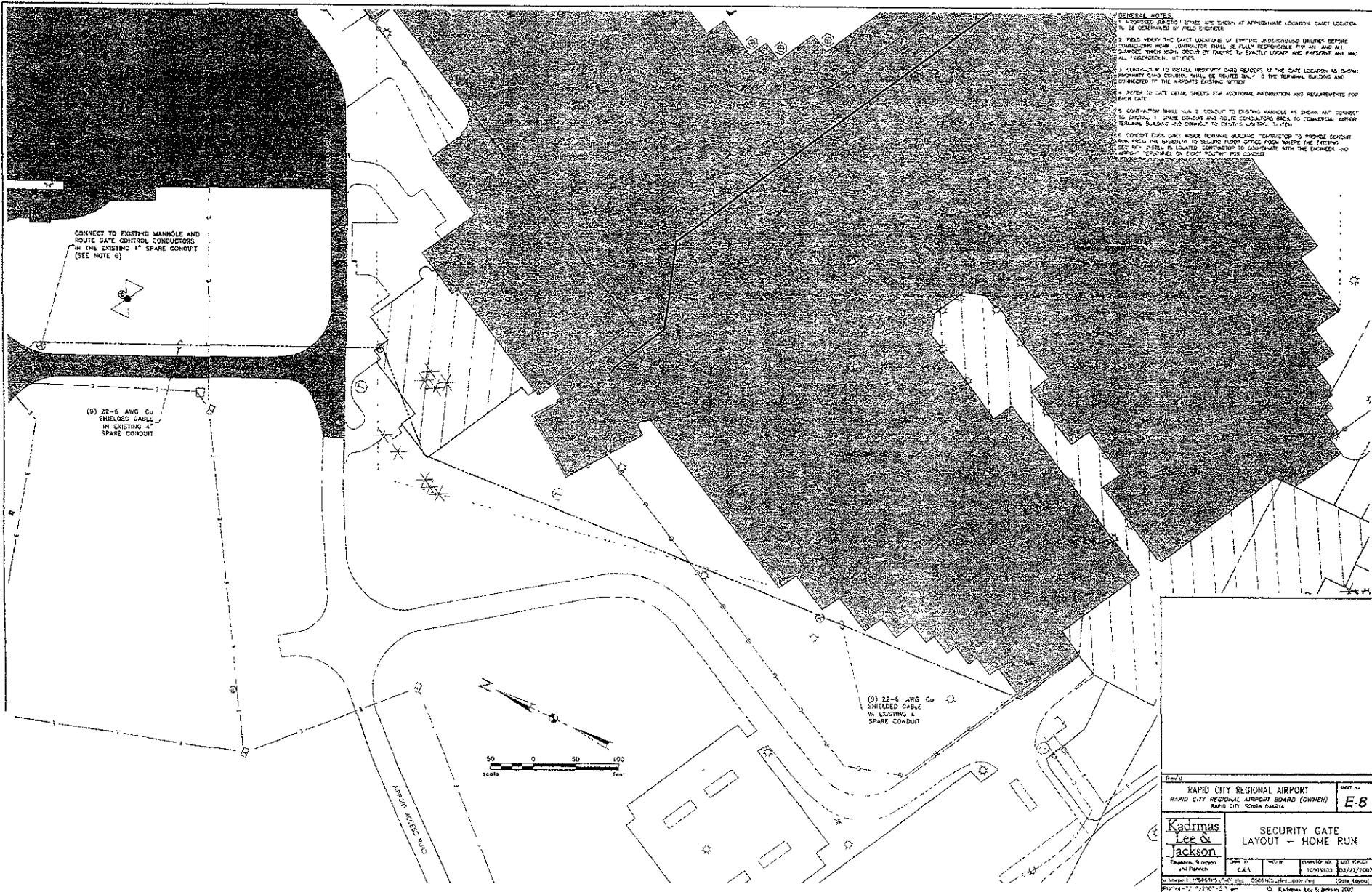


RAPID CITY REGIONAL AIRPORT
RAPID CITY REGIONAL AIRPORT BOARD (OWNER)
RAPID CITY, SOUTH DAKOTA

SECURITY GATE LAYOUT - SOUTH

Kadmas Lee & Jackson

DATE	BY	DESCRIPTION
03/22/2011	JLS	ISSUED FOR CONSTRUCTION
03/22/2011	JLS	ISSUED FOR CONSTRUCTION

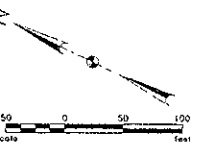


- GENERAL NOTES:
1. DIMENSIONS SHOWN ON SHEETS ARE SHOWN AT APPROPRIATE LOCATIONS. GATE LOCATIONS TO BE DETERMINED BY FIELD ENGINEER.
 2. FIELD VERIFY THE GATE LOCATIONS OF EXISTING JURISDICTIONS UNLESS BEFORE CONSTRUCTION. OWNER CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ALL DAMAGE WHICH RESULTS FROM EXACTLY LOCATE AND PRESERVE ALL AND ALL DIMENSIONS UTILITIES.
 3. CONTRACTOR TO INSTALL INDIVIDUAL GATE READERS AT THE GATE LOCATION AS SHOWN. PROTECTIVE CONDUIT SHALL BE ROUTED BELOW THE TERMINAL BUILDING AND CONNECTED TO THE AIRPORTS EXISTING SYSTEM.
 4. REFER TO GATE DETAIL SHEETS FOR ADDITIONAL INFORMATION AND REQUIREMENTS FOR EACH GATE.
 5. CONTRACTOR SHALL RUN A CONDUIT TO EXISTING MANHOLE AS SHOWN AND CONNECT TO EXISTING 4" SPARE CONDUIT AND RUN THE CONDUIT BACK TO COMMERCIAL AIRPORT TERMINAL BUILDING AND CONNECT TO EXISTING CONTROL SYSTEM.
 6. CONTRACTOR SHALL RUN A CONDUIT TO EXISTING MANHOLE AS SHOWN AND CONNECT TO EXISTING 4" SPARE CONDUIT AND RUN THE CONDUIT BACK TO COMMERCIAL AIRPORT TERMINAL BUILDING AND CONNECT TO EXISTING CONTROL SYSTEM.
 7. CONTRACTOR SHALL RUN A CONDUIT TO EXISTING MANHOLE AS SHOWN AND CONNECT TO EXISTING 4" SPARE CONDUIT AND RUN THE CONDUIT BACK TO COMMERCIAL AIRPORT TERMINAL BUILDING AND CONNECT TO EXISTING CONTROL SYSTEM.

CONNECT TO EXISTING MANHOLE AND ROUTE GATE CONTROL CONDUCTORS IN THE EXISTING 4" SPARE CONDUIT (SEE NOTE 6)

(9) 22-G AWG Cu SHIELDED CABLE IN EXISTING 4" SPARE CONDUIT

(9) 22-G AWG Cu SHIELDED CABLE IN EXISTING 4" SPARE CONDUIT



AIRPORT ACCESS ROAD

Sheet No. **E-8**
 RAPID CITY REGIONAL AIRPORT BOARD (OWNER)
 RAPID CITY, SOUTH DAKOTA

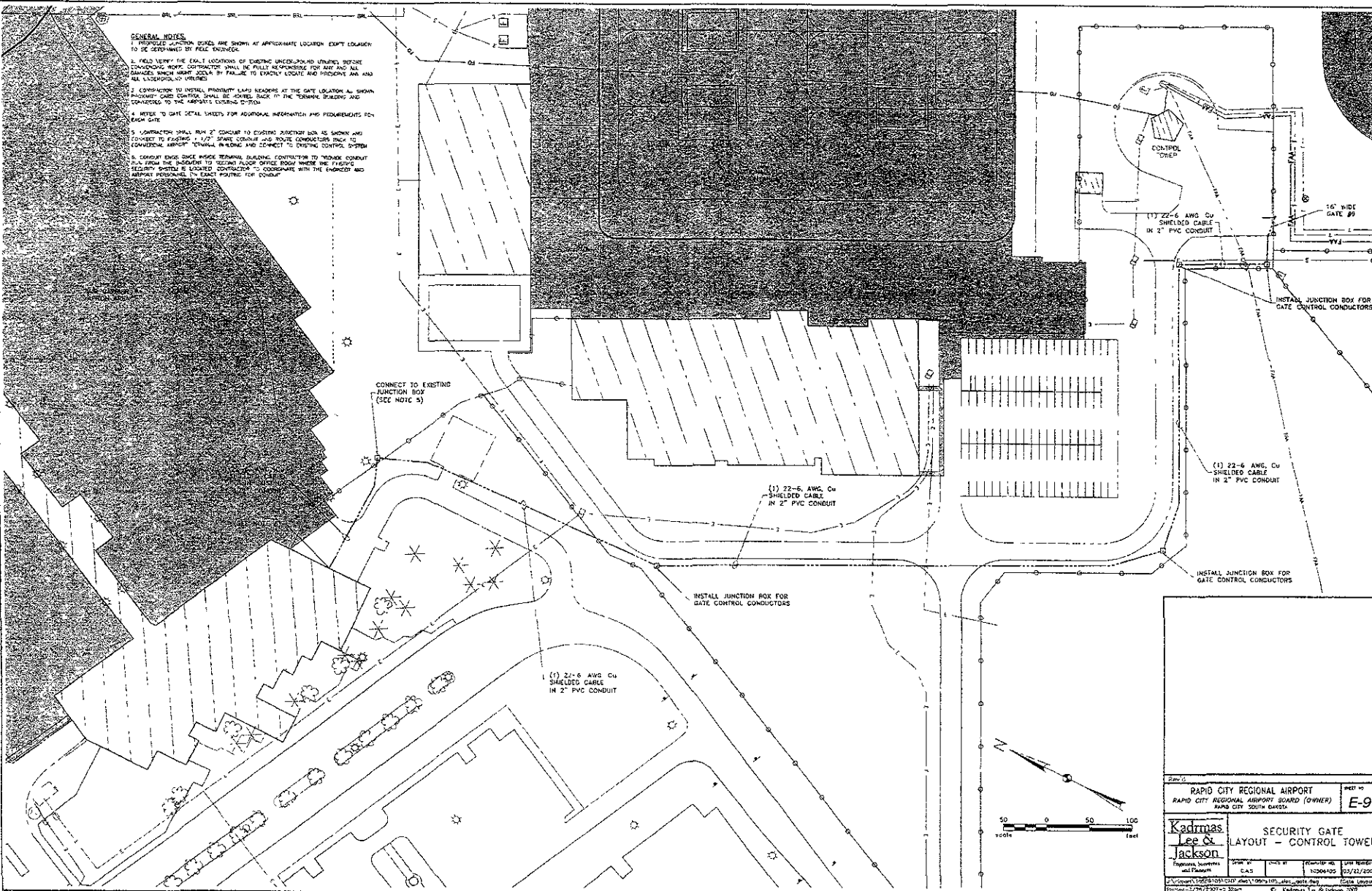
Kadmas Lee & Jackson
 SECURITY GATE LAYOUT - HOME RUN

DATE	BY	REVISED BY	DATE
10/20/10	G.A.J.	10/20/10	10/22/2007

© Kadmas Lee & Jackson, 2007

GENERAL NOTES:

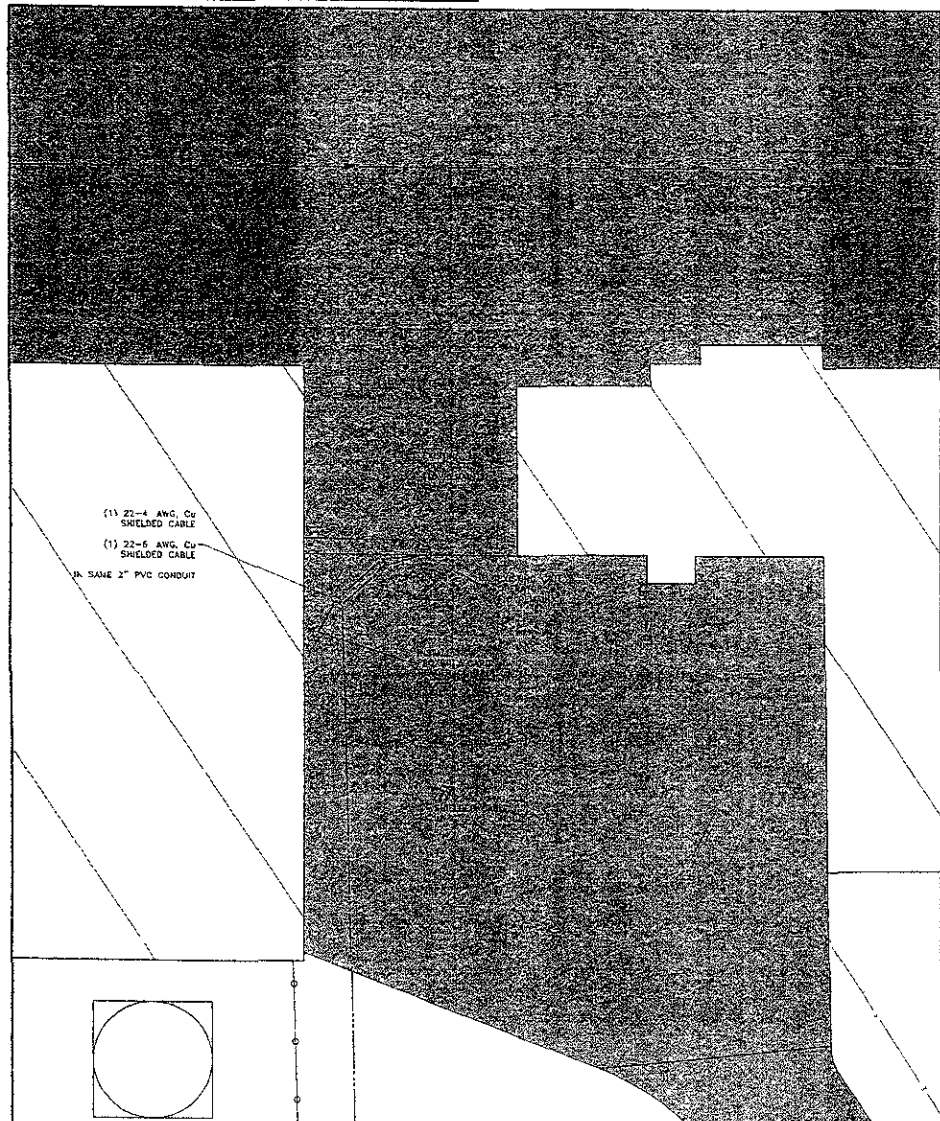
1. PROPOSED JUNCTION BOXES ARE SHOWN AT APPROXIMATE LOCATION EXACT LOCATION TO BE DETERMINED BY FIELD ENGINEER.
2. FIELD VERIFY THE EXACT LOCATION OF EXISTING UNDERGROUND UTILITIES BEFORE CONSTRUCTION. THESE CONTRACTORS SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR BY FAILURE TO EXACTLY LOCATE AND PROTECTIVE AND ALL AT RISK OF CONTRACTOR.
3. CONTRACTOR TO INSTALL PROTECTIVE LAMP READERS AT THE GATE LOCATION AS SHOWN. EXISTING GATE CONTROL SHALL BE "TAPPED BACK" IN THE TERMINAL BUILDING AND CONNECTED TO THE AIRPORT'S EXISTING SYSTEM.
4. REFER TO GATE DETAIL SHEETS FOR ADDITIONAL INFORMATION AND REQUIREMENTS FOR EACH GATE.
5. CONTRACTOR SHALL RUN 2" CONDUIT TO EXISTING JUNCTION BOX AS SHOWN AND CONNECT TO EXISTING 1/2" PANEL CONDUIT AND ROUTE CONDUCTORS FROM TO COMMERCIAL AIRPORT TERMINAL BUILDING AND CONNECT TO EXISTING CONTROL SYSTEM.
6. CONDUIT SHALL BE RUN INSIDE TERMINAL BUILDING CONTROLLER TO "TAP" CONDUIT FROM THE BUILDING TO SECOND FLOOR OFFICE ROOM WHERE THE EXISTING SECURITY SYSTEM IS LOCATED. CONTRACTOR TO COORDINATE WITH THE ENGINEER AND AIRPORT PERSONNEL TO EXACT LOCATIONS FOR CONDUIT.



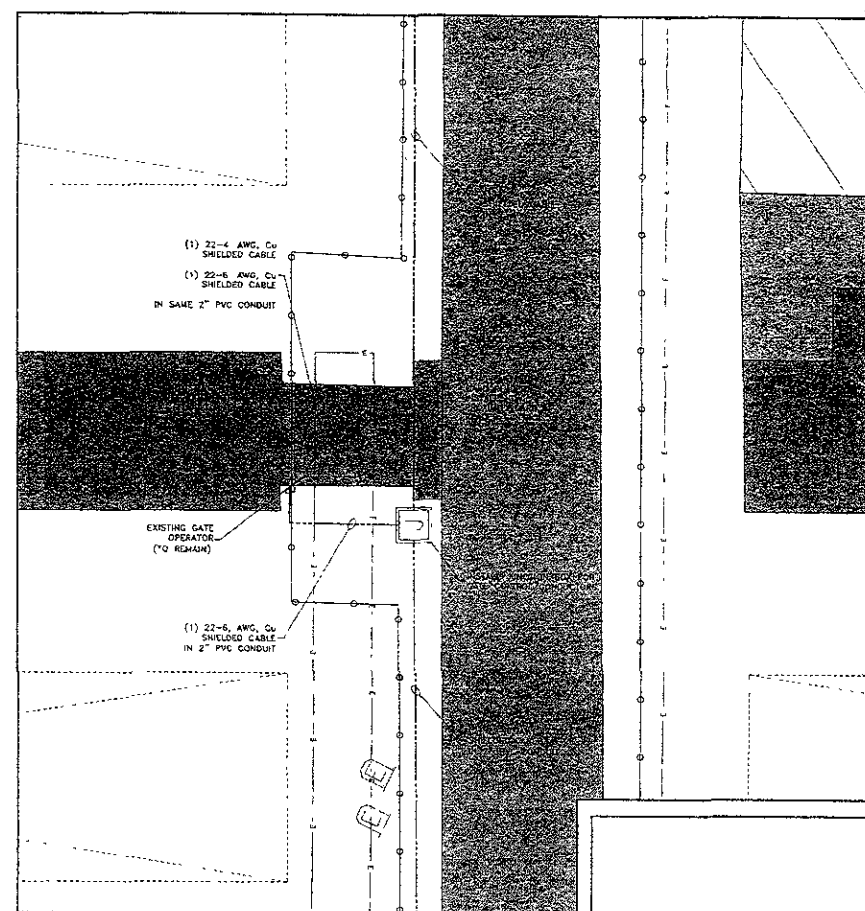
RAPID CITY REGIONAL AIRPORT
 RAPID CITY REGIONAL AIRPORT BOARD (OWNER)
 RAPID CITY, SOUTH DAKOTA

Kadmas Lee & Jackson
 ENGINEERS, ARCHITECTS AND PLANNERS

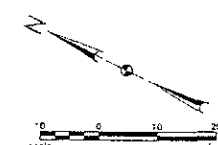
PROJECT: SECURITY GATE LAYOUT - CONTROL TOWER
 SHEET NO: E-9
 DATE: 03/02/2007
 DRAWN BY: CAS
 CHECKED BY: [Signature]
 PROJECT NO: 10304103



GATE #01 DETAIL



GATE #02 DETAIL



11-11-13
RAPID CITY REGIONAL AIRPORT
RAPID CITY REGIONAL AIRPORT BOARD (OWNER)
RAPID CITY SOUTH GARDEN

1087 10
E-10

**Kadmas
Lee &
Jackson**

Engineers, Surveyors
and Planners

SECURITY GATE
DETAIL LAYOUT

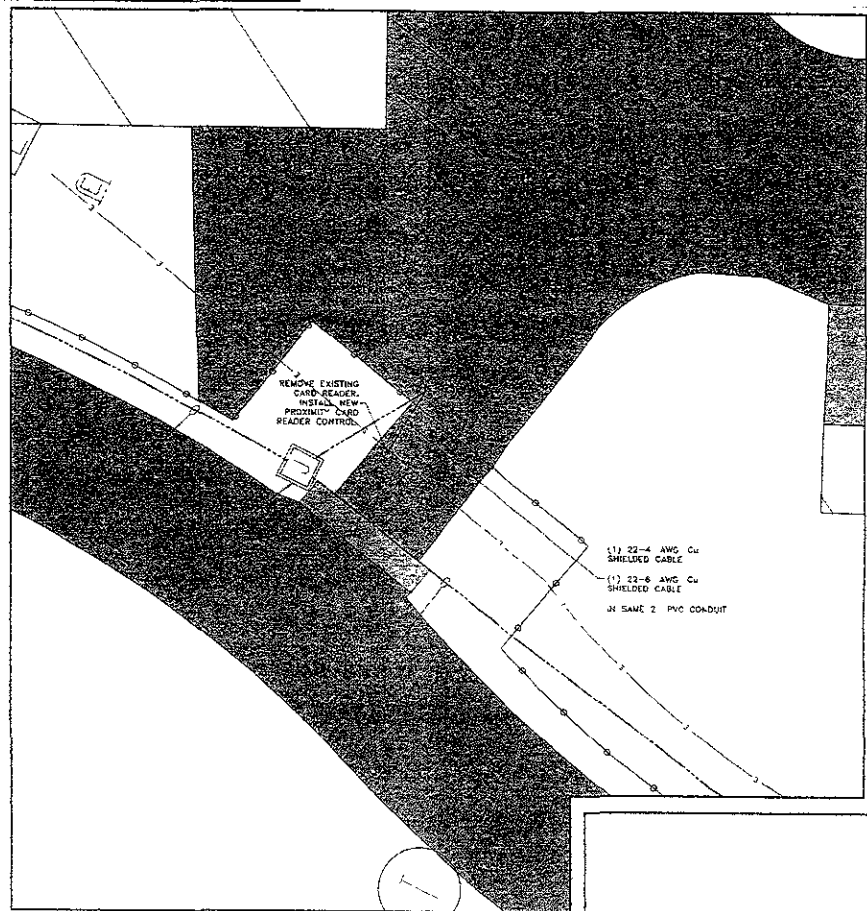
DATE	10/27/2010
BY	10/27/2010
PROJECT	10/27/2010
SCALE	10/27/2010

(1) 22-4 AWG Cu SHIELDED CABLE
 (1) 22-6 AWG Cu SHIELDED CABLE
 IN SAME 2" PVC CONDUIT

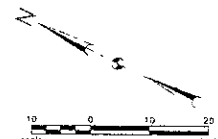
EXISTING GATE OPERATOR (TO REMAIN)

(1) 22-6 AWG Cu SHIELDED CABLE IN 2" PVC CONDUIT

GATE #03 DETAIL



GATE #04 DETAIL



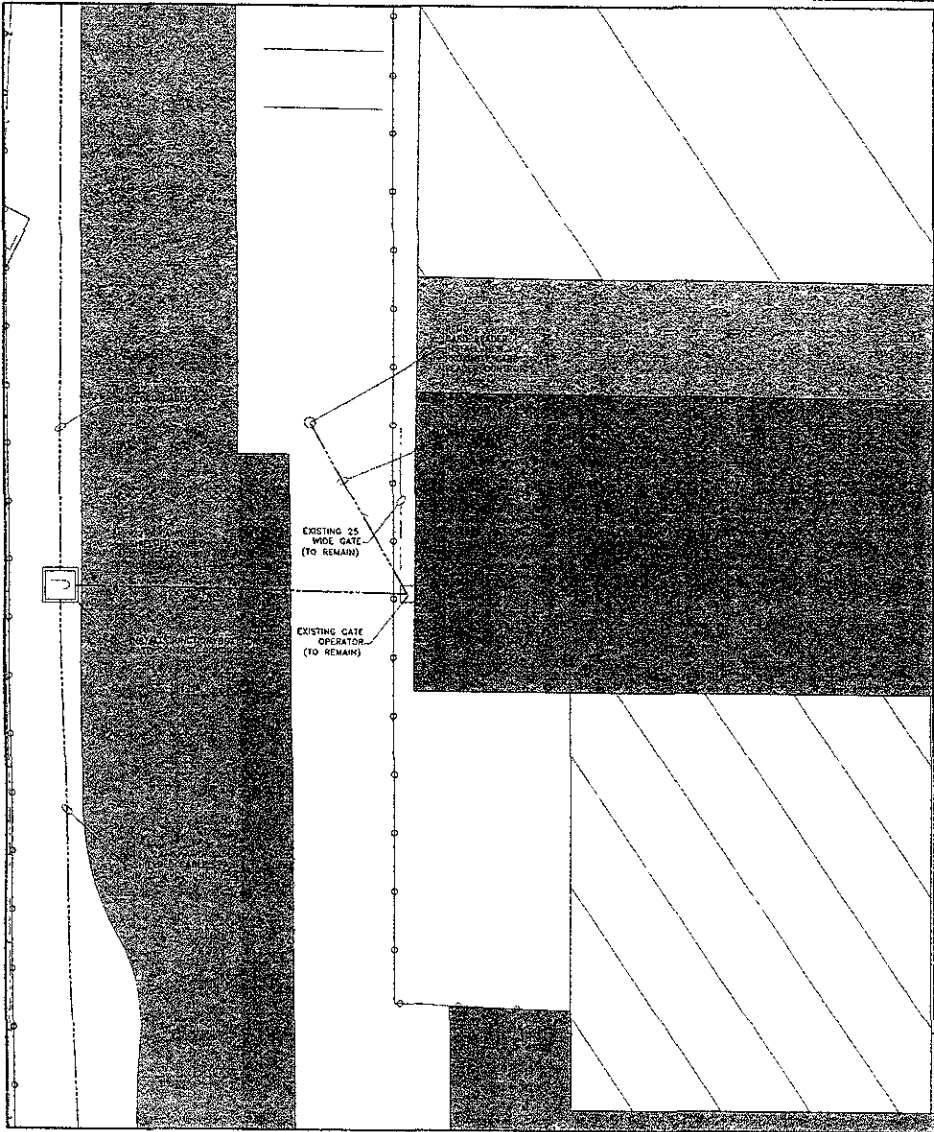
PROJECT: RAPID CITY REGIONAL AIRPORT
 RAPID CITY REGIONAL AIRPORT BOARD (OWNER)
 RAPID CITY SOUTH DAKOTA

E-11

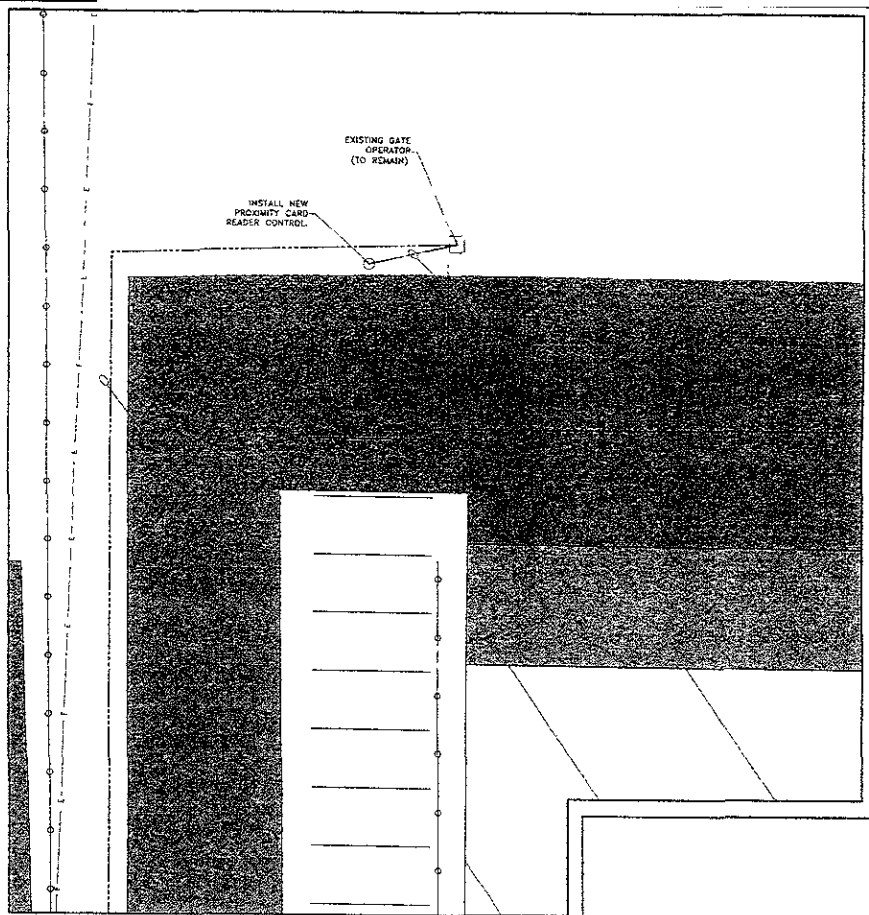
Kadmas
 Lee &
 Jackson

SECURITY GATE
 DETAIL LAYOUT

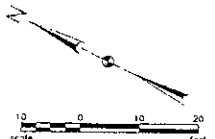
ENGINEER, ARCHITECT, AND PLANNER
 1000 W. 10TH ST. SPOKANE, IDAHO 83402
 PHONE: (208) 325-1111 FAX: (208) 325-1112



GATE #05 DETAIL



GATE #06 DETAIL



Doc. No. E-12

RAPID CITY REGIONAL AIRPORT
 RAPID CITY REGIONAL AIRPORT BOARD (OWNER)
 RAPID CITY, SOUTH DAKOTA

Kadmas Lee & Jackson
 Engineers, Surveyors and Planners

PROJECT: SECURITY GATE DETAIL LAYOUT

DATE: 10/22/2008

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

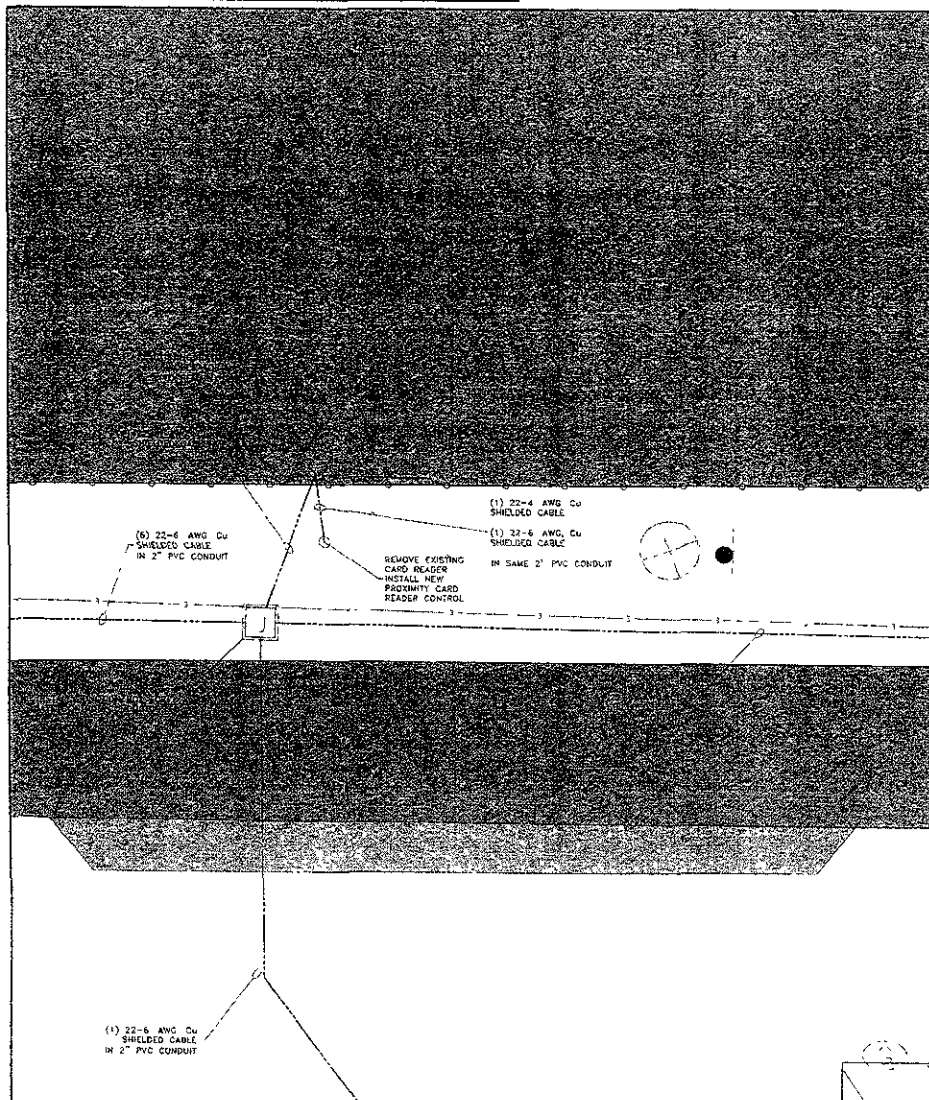
DATE PLOTTED: 11/22/2008

PROJECT NO: 10026105

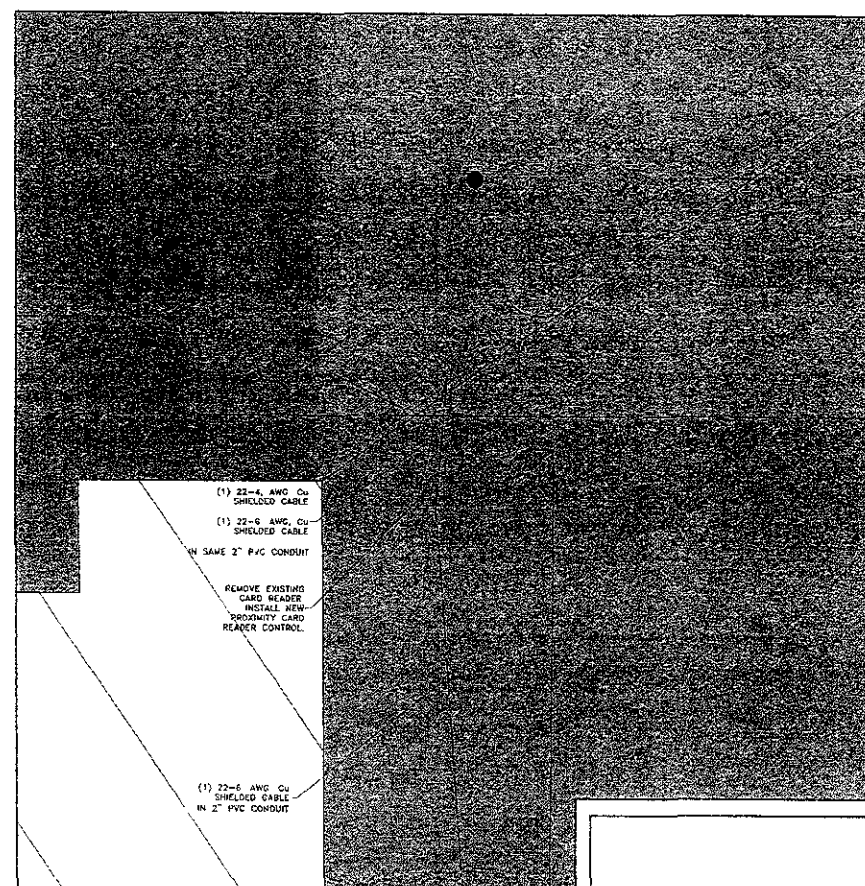
FILE NO: 10/22/2008

2: cadwin 12866385 2:00/11/21/2008 10:00:00 AM

RECEIVED



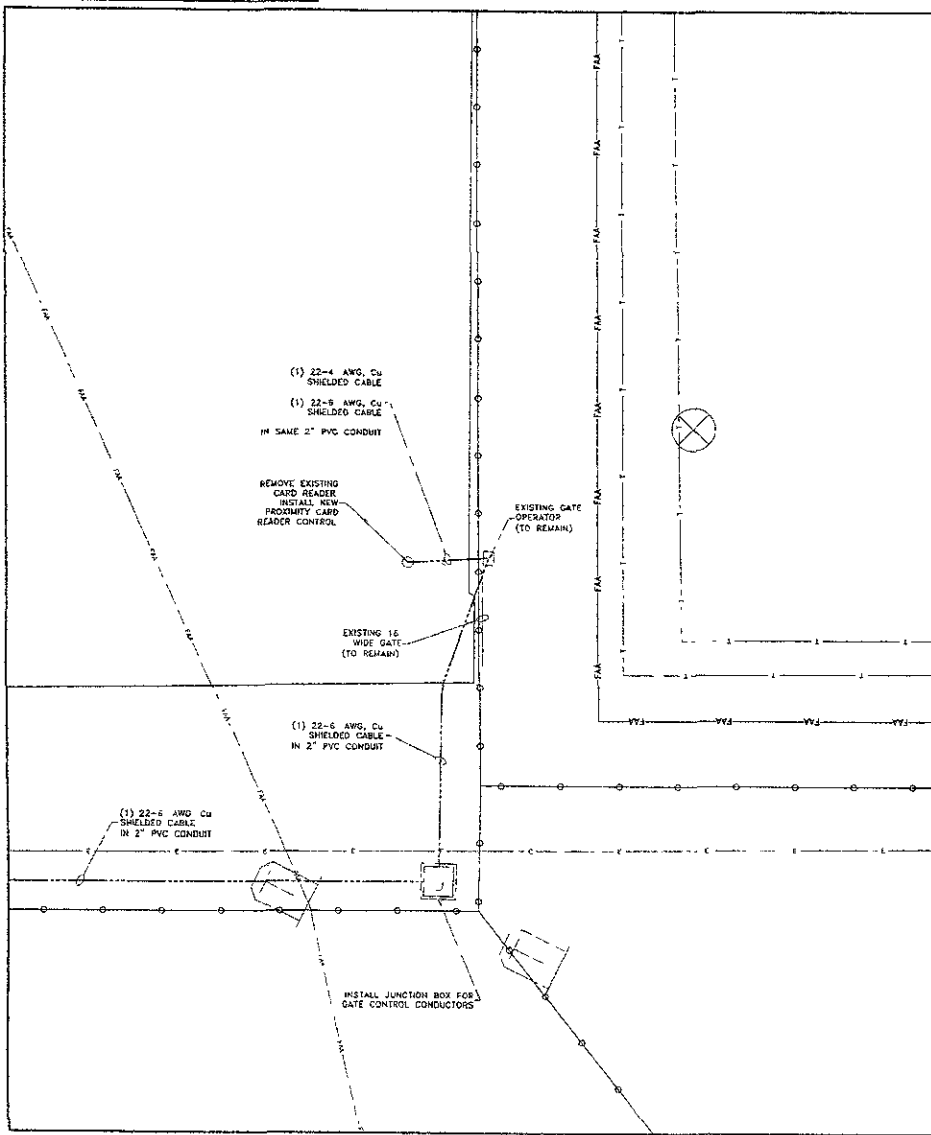
GATE #07 DETAIL



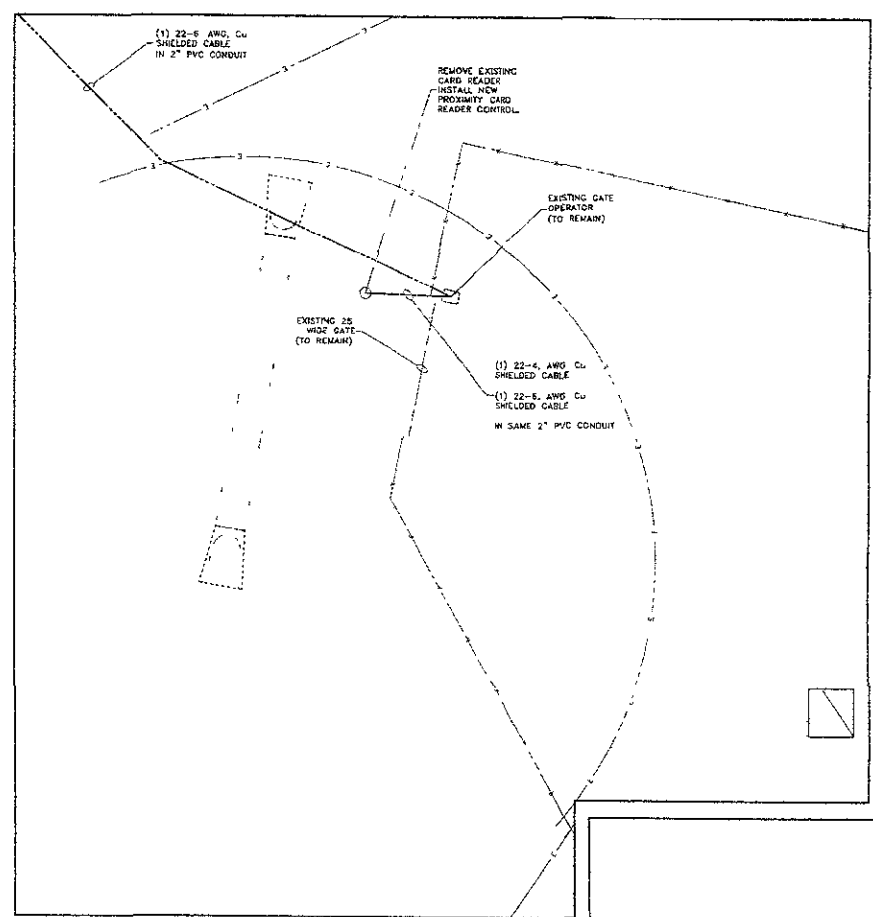
GATE #08 DETAIL



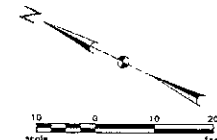
FIG. 1 RAPID CITY REGIONAL AIRPORT RAPID CITY REGIONAL AIRPORT BOARD (OWNERS) RAPID CITY, SOUTH DAKOTA		SHEET NO. E-13
Kadmas Lee S. Jackson Engineers, Surveyors and Planners	SECURITY GATE DETAIL LAYOUT	
Date of 2-8-5	Sheet No. 1050-6-105	Date Rec'd 12-22-2000
Prepared by: [] Checked by: [] Drawn by: [] Title: []		



GATE #9 DETAIL



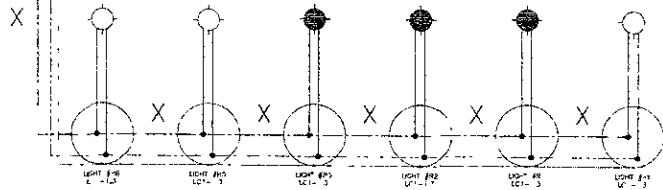
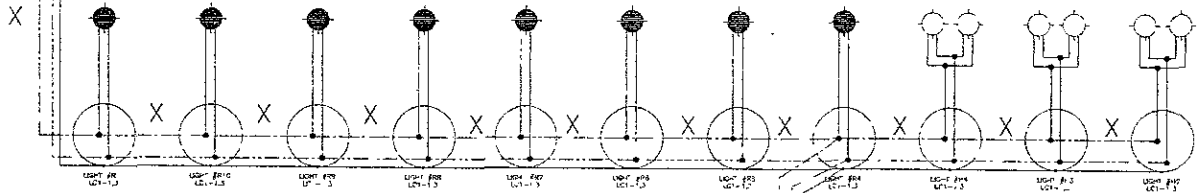
GATE #10 DETAIL



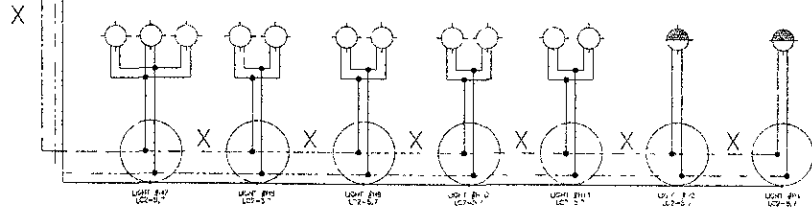
(Rev.) RAPID CITY REGIONAL AIRPORT RAPID CITY REGIONAL AIRPORT BOARD (OWNER) RAPID CITY SOUTH BANGS		SHEET NO. E-14
Kadmas Lee & Jackson Engineers, Surveyors and Drafters		SECURITY GATE DETAIL LAYOUT
DRAWN BY C.A.S.	CHECKED BY J.S.S.	DATE PLOTTED 12/22/2007

D:\projects\10506105\CAD\10506105.dwg (Date: 06/01/07)

LIGHTING FEEDPOINT #1



LIGHTING FEEDPOINT #1



- LEGEND**
- 40W, 480V HIGH PRESSURE SODIUM LUMINAIRE
 - ◊ 40W, 480V HIGH PRESSURE SODIUM LUMINAIRE
 - ◐ 40W, 480V HIGH PRESSURE SODIUM LUMINAIRE
 - LIGHT STANDOFF AS SHOWN BY THE PLANS
 - PHASE A CONDUCTOR
 - - - PHASE B CONDUCTOR
 - GROUND CONDUCTOR

Circuit Description

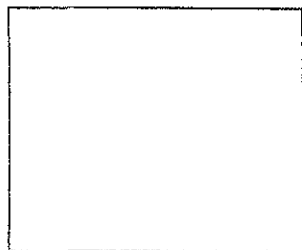
Light No. On is an Number
 Light No. Breaker Number,
 LC1-3

CABLE BUS

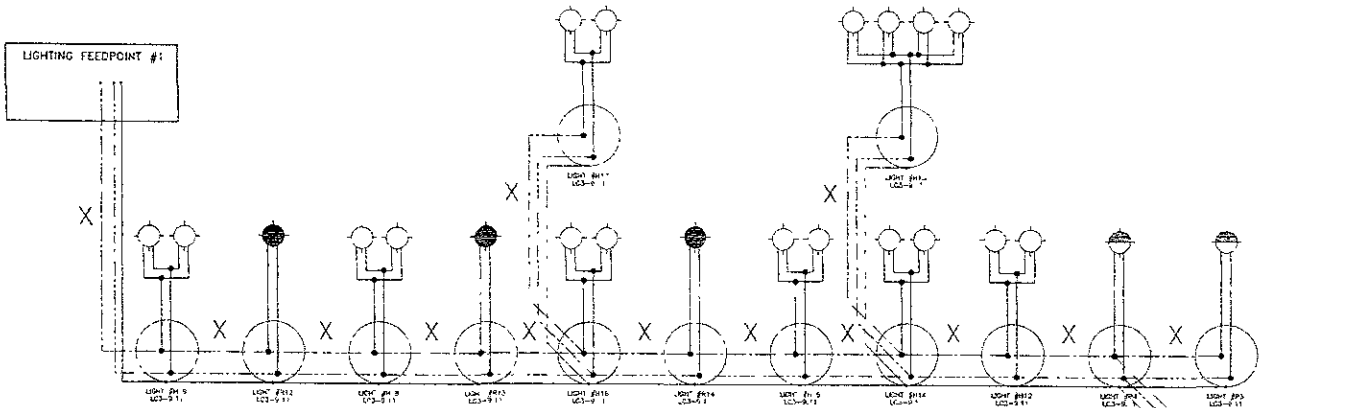
X 2-#6 AWG Cu TRNS
 1-#70 AWG Cu GND
 IN 2" SCH 40 PVC

Y 2-#4 AWG Cu TRNS
 -#70 AWG Cu GND
 IN 2" SCH 40 PVC

NOTE: CONTRACTOR SHALL PROVIDE AND INSTALL AN 8-1/2" DIA. RIGID PIPE IN THE HANDHOLE FOR EACH PHASE OF THE CIRCUIT. THE PIPE SHALL BE EXTENDED 5' ABOVE.



RAPID CITY REGIONAL AIRPORT RAPID CITY REGIONAL AIRPORT BOARD (OWNER) RAPID CITY, SOUTH DAKOTA		SHEET NO. E-15
Kadmas Lee & Jackson	ELECTRICAL LIGHTING SCHEMATIC	
Division, Department and Location	DATE: 4-11-64	DRAWN BY: J.S.M. CHECKED BY: J.S.M.
PROJECT NO. 15536 SHEET NO. 15536-15	CONTRACT NO. 15536-15	DATE: 11/17/1964



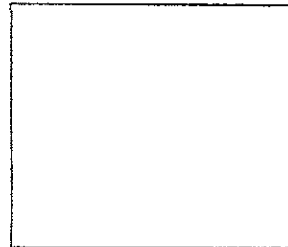
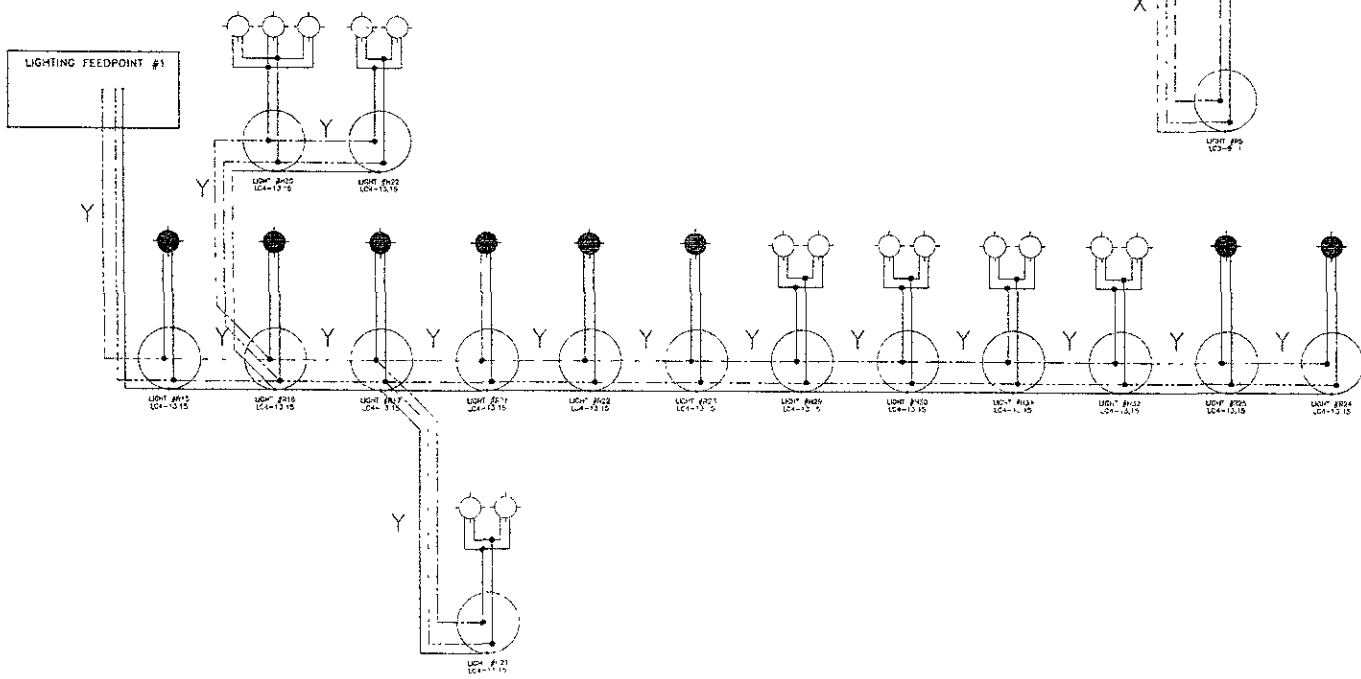
- LEGEND**
- 150W 480V HIGH PRESSURE SODIUM LAMP/FARE
 - 400W 480V HIGH PRESSURE SODIUM LAMP/FARE
 - 1000W 480V HIGH PRESSURE SODIUM LAMP/FARE
 - LIGHT FAREWARD AS SHOWN IN THE PLAN
 - PHASE A CONDUCTOR
 - PHASE B CONDUCTOR
 - GROUND CONDUCTOR

Circuit Descriptor

Lighting Control of Hangar
 LC1-9-5

- NOTES:**
- X 2-#6 AWG Cu THHN
 - 1-#2 G AWG Cu GUL
 - IN 2" SCH 40 PVC
 - Y # 24 AWG Cu THHN
 - 1-#10 AWG Cu EMT
 - IN 2" SCH 40 PVC

NOTE: CIRCUIT BREAKER SHALL PROVIDE AND INSTALL AN IN-LINE FUSE IN THE HANGAR FOR EACH HOT PHASE OF THE CIRCUIT. THE FUSE SHALL NOT EXCEED 15 AMPS.



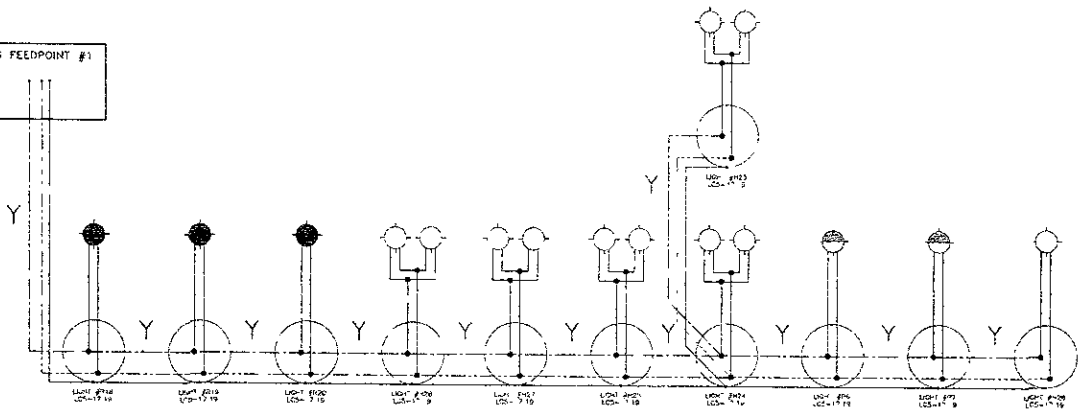
Re: d
 RAPID CITY REGIONAL AIRPORT
 RAPID CITY REGIONAL AIRPORT BOARD (OWNER)
 RAPID CITY, SOUTH DAKOTA

Sheet No.
E-16

Kadmas Lee & Jackson
 ELECTRICAL LIGHTING SCHEMATIC

Prepared by: [Name] Date: [Date]
 Checked by: [Name] Date: [Date]
 Drawn by: [Name] Date: [Date]
 Scale: [Scale]
 Project: [Project Name]
 Location: [Location]

LIGHTING FEEDPOINT #1



LEGEND

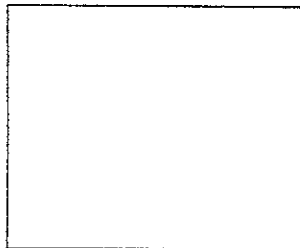
- 50W 480V HIGH PRESSURE SODIUM LUMINAIRE
- 400W 180V HIGH PRESSURE SODIUM LUMINAIRE
- 100W 480V HIGH PRESSURE SODIUM LUMINAIRE
- LIGHT STANDARDS AS SHOWN IN THE PLANS
- PHASE A CONDUCTOR
- PHASE B CONDUCTOR
- GROUND CONDUCTOR

Circuit Description
 — Loop and Connect at Junction
 — (See "Notes" Section)
 LC 1-3

CABLE SIZES

- X 2-#8 AWG CU THHN
1-#2 CU AWG CU GND
IN 2" SCH 40 PVC
- Y 2-#4 AWG CU THHN
1-#2 AWG CU GND
IN 2" SCH 40 PVC

NOTE: CONTRACTOR SHALL PROVIDE AND INSTALL AN IN-LINE FUSE IN THE MANHOLE FOR EACH PHASE OF THE CIRCUIT. THE FUSE SHALL NOT EXCEED 5 AMP.



Rev. d
 RAPID CITY REGIONAL AIRPORT
 RAPID CITY REGIONAL AIRPORT BOARD (OWNER)
 RAPID CITY, SOUTH DAKOTA

Kadmas Lee & Jackson <small>Engineers, Surveyors and Planners</small>	DATE	10/25/2017
	PROJECT NO.	E-17
ELECTRICAL LIGHTING SCHEMATIC		
<small>Company: 505.345.1234 Website: www.klj.com Email: info@klj.com</small>	<small>Sheet No.:</small> E-17	<small>Drawing No.:</small> 10524-00

DESIGNATION	MANUFACTURER	MODEL	FITTURE			REMARKS	BALLAST			LAMP										POLE					
			NO LAMPS	FNSP	MOUNTING		MANUFACTURER	MODEL	VOLTS	BF	TYPE	WATTS	EMF ADJ	MANUFACTURER	MODEL	OLT	CR	AVG LAMP LIFE	INT LUMENS	MEAN LUMENS	FRESH	BASE	MANUFACTURER	MODEL	HEIGHT
A	LITHONIA	CHL3-1603R-480UL	1		MAST ARM		SYLVANIA	LU155	480		185	0.4	SYLVANIA	LU155	2100	22	26000	15700	14700	CLEAR	E30 MOGLA	LITHONIA	RTS-30-80-100-480-000	30'	ROUND TAPERED STEEL POLE WITH 4 MAST ARM POLE TO HAVE FACTORY INSTALLED VIBRATION DAMPENING SYSTEM AND FULL BASE COVER AND GALVANIZED FINISH
B	LITHONIA	IFA-4005-142-480	1	DARK BRONZE	REFER TO MOUNTING SCHEDULE		SYLVANIA	LU100S-100S-540T	480		465	1.0	SYLVANIA	LU100	2100	22	20200	52700	48000	CLEAR	E30 MOGLA	LITHONIA	RTD-30-40-100-480-000	30'	ROUND TAPERED STEEL POLE TO HAVE FACTORY INSTALLED VIBRATION DAMPENING SYSTEM (REFER TO MOUNTING SCHEDULE) FOR MOUNTING REQUIREMENTS
C	LITHONIA	1706-10055-144-480-TU-CV	1	DARK BRONZE	POLE TOP	PROVIDE UPPER YIGOR	SYLVANIA	LU100S-100S-540T	480		100	2.4	SYLVANIA	LU100S	2100	22	36000	18000	17600	CLEAR	E30 MOGLA	LITHONIA	RTD-45-10-80-100-480-000	45'	ROUND TAPERED STEEL POLE WITH TEMON MOUNTING POLE TO HAVE FACTORY INSTALLED VIBRATION DAMPENING SYSTEM

MOUNTING SCHEDULE					
LIGHT #	FITTURE TYPE	# OF FITTURES	MOUNTING	CONCRETE FOUNDATION	REMARKS
R1	A	1	4 MAST ARM	FLUSH	
R2	A	1	4 MAST ARM	FLUSH	
R3	A	1	4 MAST ARM	FLUSH	
R4	A	1	4 MAST ARM	FLUSH	
R5	A	1	4 MAST ARM	FLUSH	
R6	A	1	4 MAST ARM	FLUSH	
R7	A	1	4 MAST ARM	FLUSH	
R8	A	1	4 MAST ARM	FLUSH	
R9	A	1	4 MAST ARM	FLUSH	
R10	A	1	4 MAST ARM	FLUSH	
R11	A	1	4 MAST ARM	FLUSH	
R12	A	1	4 MAST ARM	FLUSH	
R13	A	1	4 MAST ARM	FLUSH	
R14	A	1	4 MAST ARM	FLUSH	
R15	A	1	4 MAST ARM	FLUSH	
R18	A	1	4 MAST ARM	FLUSH	
R17	A	1	4 MAST ARM	FLUSH	
R18	A	1	4 MAST ARM	FLUSH	
R19	A	1	4 MAST ARM	FLUSH	
R20	A	1	4 MAST ARM	FLUSH	
R21	A	1	4 MAST ARM	FLUSH	
R22	A	1	4 MAST ARM	FLUSH	
R23	A	1	4 MAST ARM	FLUSH	
R24	A	1	4 MAST ARM	FLUSH	
R25	A	1	4 MAST ARM	FLUSH	
R26	A	1	4 MAST ARM	FLUSH	
R27	A	1	4 MAST ARM	FLUSH	
R28	A	1	4 MAST ARM	FLUSH	
R29	A	1	4 MAST ARM	FLUSH	
R30	A	1	4 MAST ARM	FLUSH	
H1	B	1	POLE TOP	30' ABOVE GRADE	
H2	B	2	2 POSITION BULL HORN	30' ABOVE GRADE	
H3	B	2	2 POSITION BULL HORN	30' ABOVE GRADE	
H4	B	2	2 POSITION BULL HORN	30' ABOVE GRADE	
H5	B	1	POLE TOP	FLUSH	
H6	B	1	POLE TOP	FLUSH	
H7	B	1	3 POSITION BULL HORN	30' ABOVE GRADE	
H8	B	1	2 POSITION BULL HORN	30' ABOVE GRADE	
H9	B	2	2 POSITION BULL HORN	30' ABOVE GRADE	
H10	B	2	2 POSITION BULL HORN	30' ABOVE GRADE	
H11	B	2	2 POSITION BULL HORN	30' ABOVE GRADE	
H12	B	2	2 POSITION BULL HORN	30' ABOVE GRADE	
H13	B	4	4 POSITION BULL HORN	FLUSH	
H14	B	2	2 POSITION BULL HORN	30' ABOVE GRADE	
H15	B	2	2 POSITION BULL HORN	30' ABOVE GRADE	
H16	B	2	2 POSITION BULL HORN	30' ABOVE GRADE	
H17	B	2	2 POSITION BULL HORN	30' ABOVE GRADE	
H18	B	2	2 POSITION BULL HORN	30' ABOVE GRADE	
H19	B	2	2 POSITION BULL HORN	30' ABOVE GRADE	
H20	B	3	3 POSITION BULL HORN	FLUSH	
H21	B	2	2 POSITION BULL HORN	FLUSH	
H22	B	2	2 POSITION BULL HORN	30' ABOVE GRADE	
H23	B	2	2 POSITION BULL HORN	30' ABOVE GRADE	
H24	B	2	2 POSITION BULL HORN	30' ABOVE GRADE	
H25	B	2	2 POSITION BULL HORN	30' ABOVE GRADE	
H26	B	1	POLE TOP	30' ABOVE GRADE	
H27	B	2	2 POSITION BULL HORN	30' ABOVE GRADE	
H28	B	2	2 POSITION BULL HORN	30' ABOVE GRADE	
H29	B	2	2 POSITION BULL HORN	30' ABOVE GRADE	
H30	B	2	2 POSITION BULL HORN	30' ABOVE GRADE	
H31	B	2	2 POSITION BULL HORN	30' ABOVE GRADE	
H32	B	2	2 POSITION BULL HORN	30' ABOVE GRADE	
H33	B	1	POLE TOP	30' ABOVE GRADE	
P1	C	1	POLE TOP	30' ABOVE GRADE	
P2	C	1	POLE TOP	30' ABOVE GRADE	
P3	C	1	POLE TOP	30' ABOVE GRADE	
P4	C	1	POLE TOP	30' ABOVE GRADE	
P5	C	1	POLE TOP	30' ABOVE GRADE	
P6	C	1	POLE TOP	30' ABOVE GRADE	
P7	C	1	POLE TOP	30' ABOVE GRADE	

PANEL A

200 Amp Main Breaker 240/480 Vol. Single Phase 4-Wire Fed From 200 Amp Utility Meter

3-410 amp Cu THHN & 1-84 AWG Cu Ground in 2" RSC

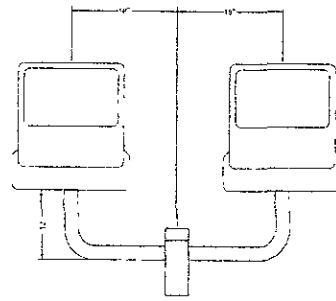
CIRCUIT DESCRIPTION	BRK	V.A.	AMPS WIRE AND CONDUIT		CONDUIT AND CONDUIT		AMPS	V.A.	BRK	DESCRIPTION	CIRCUIT
			15' 1/2" AWG Cu THHN & 1-84 AWG Cu GND in 2" RSC	15' 1/2" AWG Cu THHN & 1-84 AWG Cu GND in 2" RSC	15' 1/2" AWG Cu THHN & 1-84 AWG Cu GND in 2" RSC	15' 1/2" AWG Cu THHN & 1-84 AWG Cu GND in 2" RSC					
1											
2	Lighting Circuit #1	20	8432		15' 1/2" Cu GND in 2" Sch. 40 PVC	15'				Control Circuit	2
3					15' 1/2" AWG Cu THHN & 1-84 AWG Cu GND in 2" RSC	15'					8
4	Lighting Circuit #2	25	7354		15' 1/2" AWG Cu THHN & 1-84 AWG Cu GND in 2" Sch. 40 PVC	15'					6
5					15' 1/2" Cu GND in 2" Sch. 40 PVC	15'					5
6											5
7	Lighting Circuit #3	35	12872		25' 1/2" AWG Cu THHN & 1-84 AWG Cu GND in 2" Sch. 40 PVC	25'					12
8					25' 1/2" Cu GND in 2" Sch. 40 PVC	25'					14
9					15' 1/2" AWG Cu THHN & 1-84 AWG Cu GND in 2" Sch. 40 PVC	15'					10
10	Lighting Circuit #4	25	8736		15' 1/2" Cu GND in 2" Sch. 40 PVC	15'					18
11					15' 1/2" AWG Cu THHN & 1-84 AWG Cu GND in 2" Sch. 40 PVC	15'					20
12	Lighting Circuit #5	25	8160		17' 1/2" AWG Cu THHN & 1-84 AWG Cu GND in 2" Sch. 40 PVC	17'					23
13											24
14											26
15											25
16											26
17											26
18											26
19											26
20											26
21											26
22											26
23											26
24											26
25											26
26											26
27											26
28											26
29											26
Total Connected KVA and Amps		21	912								26

RAPID CITY REGIONAL AIRPORT
 RAPID CITY REGIONAL AIRPORT BOARD (OWNER)
 RAPID CITY, SOUTH DAKOTA

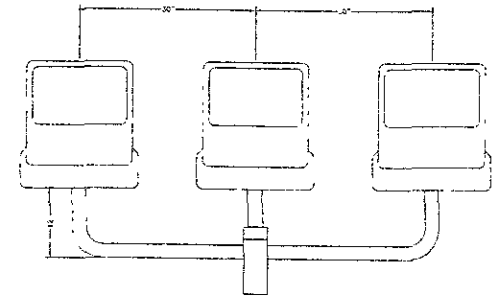
SHEET NO. **E-18**

Kadmas Lee & Jackson
 ENGINEERS, SURVEYORS AND DESIGNERS
 1000 N. 10TH ST. SUITE 200
 RAPID CITY, SD 57701-3359
 © Kadmas, Lee & Jackson, 2007

LIGHTING & MOUNTING SCHEDULE



(DUAL FIXTURE MOUNTING)



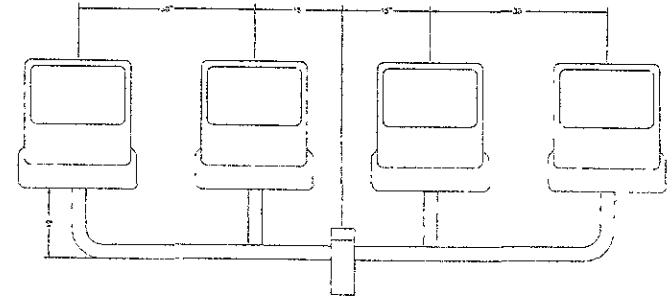
(THREE FIXTURE MOUNTING)



SIDE VIEW



(SINGLE FIXTURE MOUNTING)

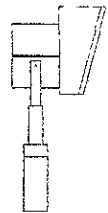


(FOUR FIXTURE MOUNTING)

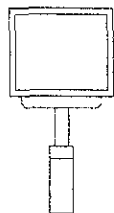
FRONT VIEW

"TYPE B" LIGHT FIXTURE DETAIL

NO SCALE



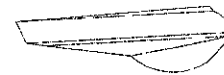
SIDE VIEW



FRONT VIEW

"TYPE C" LIGHT FIXTURE DETAIL

NO SCALE

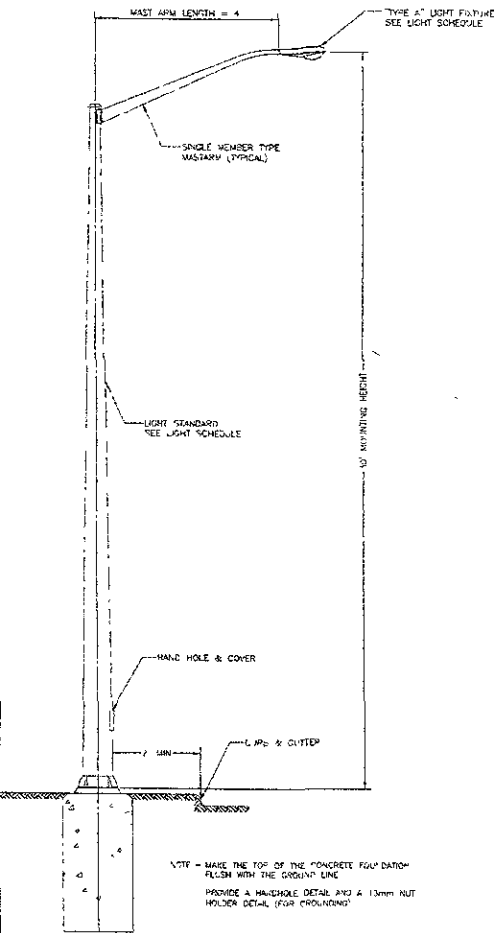


SIDE VIEW

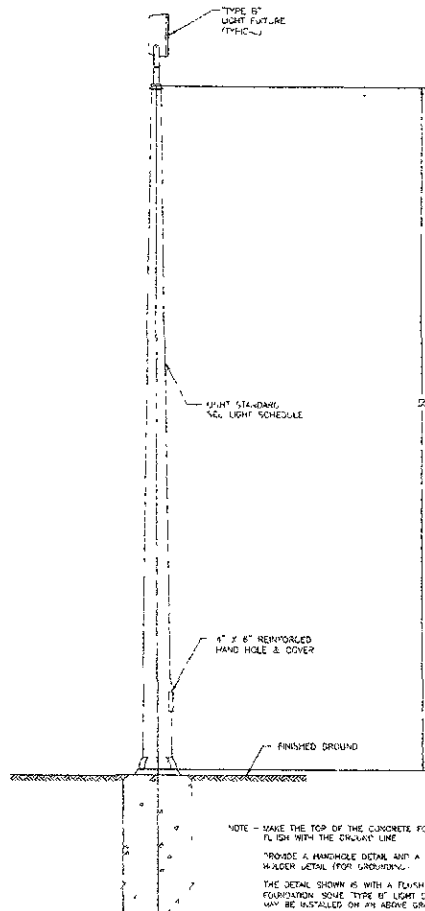
"TYPE A" LIGHT FIXTURE DETAIL

NO SCALE

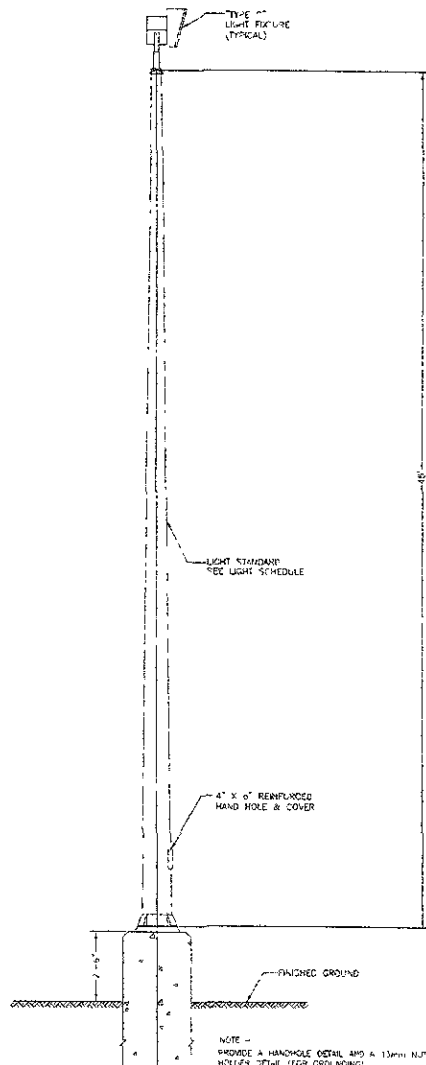
Rev. 01 RAPID CITY REGIONAL AIRPORT RAPID CITY REGIONAL AIRPORT BOARD (OWNER) RAPID CITY SOUTH DAKOTA		SHEET NO. E-19
Kadmas Lee & Jackson Registered Architects and Planners 1105 N. 17th St., Suite 100 Rapid City, SD 57701 Phone: 605/328-7999 Fax: 605/328-7999		LIGHT FIXTURE DETAILS
DRAWN BY J.A.S.	DATE 10/26/12	CHECKED BY J.A.S.
PROJECT NO. 110524101	SHEET NO. E-19	DATE 10/16/2012



"TYPE A" LIGHT FIXTURE & STANDARD DETAIL
NO SCALE

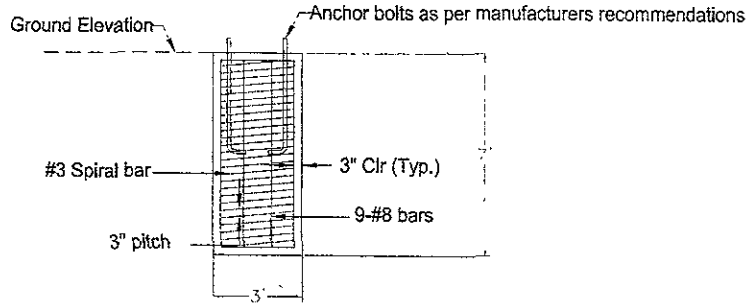


"TYPE B" LIGHT STANDARD DETAIL
NO SCALE



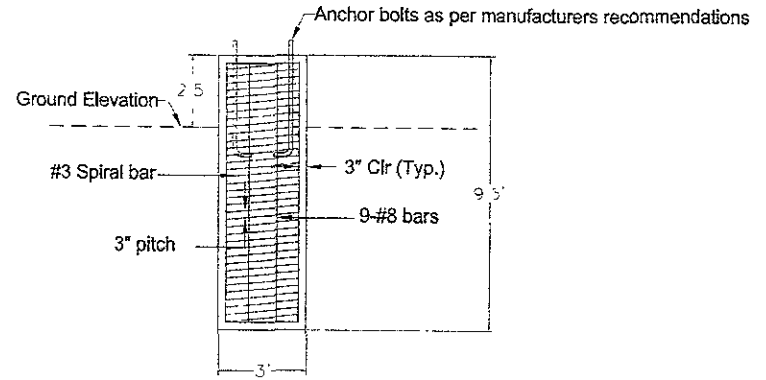
"TYPE C" LIGHT STANDARD DETAIL
NO SCALE

RAPID CITY REGIONAL AIRPORT RAPID CITY REGIONAL AIRPORT BOARD (OWNER) RAPID CITY, SOUTH DAKOTA		SHEET NO. E-20
Kadmas Lee & Jackson Engineers, Surveyors and Planners		
PROJECT NO. 10506105	DATE OF 10/21/2007	SHEET NO. OF TOTAL SHEETS 105/16/2007
TITLE LIGHT STANDARD DETAILS		



Concrete = 1.8 CY per foundation
 Rebar = 245 lb per foundation

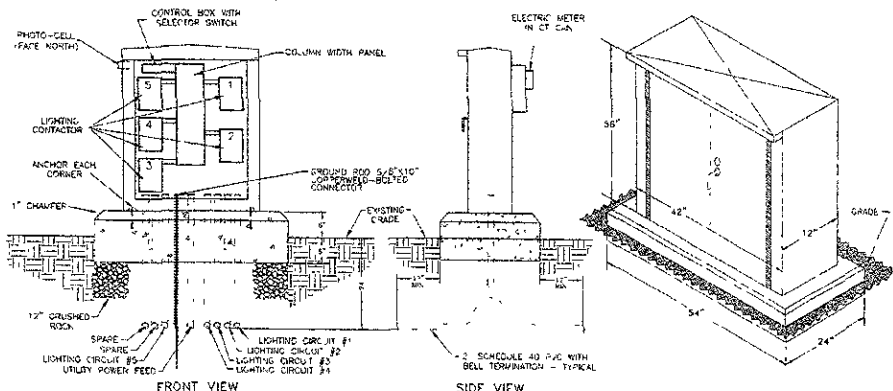
Type A & Type B, Flush Foundation



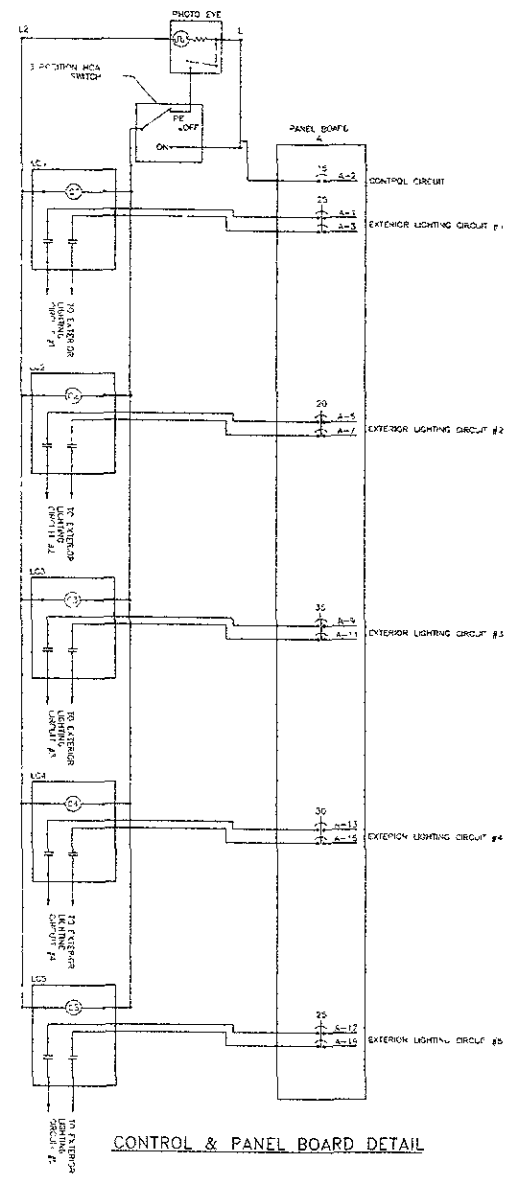
Concrete = 2.5 CY per foundation
 Rebar = 334 lb per foundation

Type B & Type C, 2.5' Foundation

Rapid City Regional Airport				Sheet No.
RAPID CITY REGIONAL AIRPORT BOARD (OWNER)				E-21
RAPID CITY, SOUTH DAKOTA				
Kadmas Lee & Jackson		LIGHT FOUNDATION DETAILS		
Engineer, Architect and Plumber	City	State	License No.	Exp. Date
	C.A.S.	S.D.	0506100	03-18-2007
<small> Project: 12522103 (City of Rapid City) - Light Foundation Date: 03/18/2007 </small>				



PAD MOUNT FEED POINT DETAIL
NO SCALE



Rev. 2
RAPID CITY REGIONAL AIRPORT
RAPID CITY REGIONAL AIRPORT BOARD (OWNER)
RAPID CITY, SOUTH DAKOTA

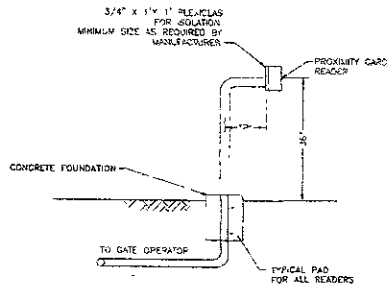
used by
E-22

Kadmas Lee & Jackson
Engineers, Surveyors and Planners

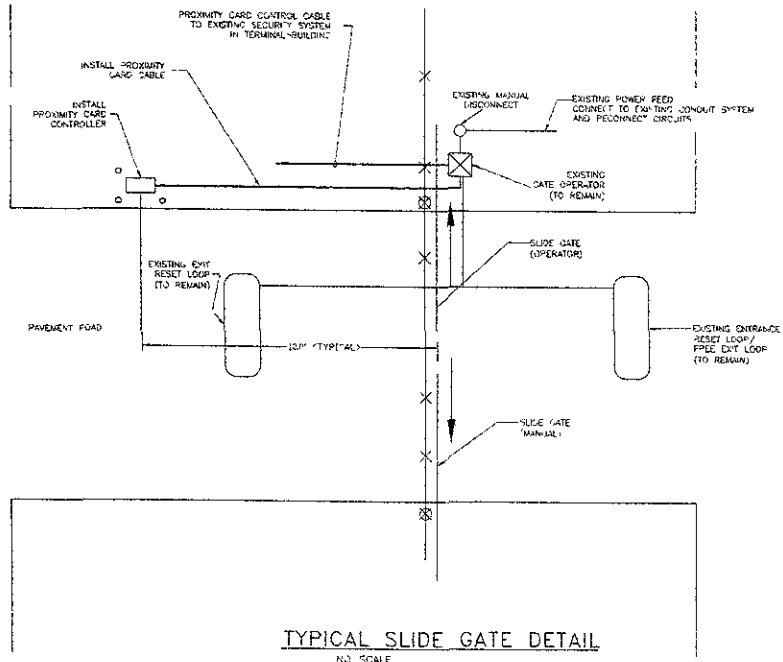
FEEPOINT, CONTROL & PANELBOARD DETAILS

DATE: 03/18/2007
DRAWN BY: JAC

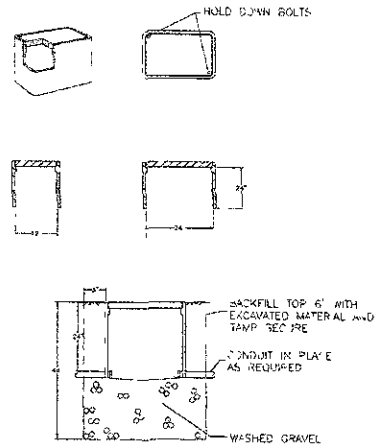
1. ALL DIMENSIONS UNLESS OTHERWISE SPECIFIED ARE IN FEET AND INCHES.
2. ALL MATERIALS AND METHODS SHALL BE AS SPECIFIED IN THE CONTRACT DOCUMENTS.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS.



TYPICAL ACCESS POINT DETAIL
240 VOLT SINGLE PHASE POWER



TYPICAL SLIDE GATE DETAIL
NO SCALE



JUNCTION BOX DETAIL
NO SCALE

Rev'd		Rapid City Regional Airport		SHEET NO.
		RAPID CITY REGIONAL AIRPORT BOARD (OWNER)		E-23
		RAPID CITY SOUTH GARAGE		
Kadmas Lee & Jackson		SLIDE GATE & JUNCTION BOX DETAILS		
Engineer, Designer and Planner	DATE OF C.A.S.	DATE OF P.L.C.	DATE OF P.E.C.	DATE OF P.E.C.
			10/26/18	10/26/2018
C:\Users\100001012\OneDrive\10220-1701_dwg_e-23.dwg Date: 10/26/2018				