







FILE | 15:04:30 | Project: 2019-04-15-04 | LAYOUT | DATE: 7/26/2019 15:04 | LAYOUT | DESIGNED: NH | CHECKED: NH | DRAFTED: JK

**ABBREVIATIONS**

ADF&G	ALASKA DEPARTMENT OF FISH AND GAME
AIP	AIRPORT IMPROVEMENT PROJECT
BFM	BONDED FIBER MATRIX
BMP	BEST MANAGEMENT PRACTICE
BRL	BUILDING RESTRICTION LINE
CL/℄	CENTERLINE
CABC	CRUSHED AGGREGATE BASE COURSE
CF	CUBIC FEET/FOOT
CMP	CORRUGATED METAL PIPE
CPP	CORRUGATED POLYETHYLENE PIPE
CS	CONTINGENT SUM
CSPP	CONSTRUCTION SAFETY AND PHASING PLAN
CVO	COMMAND VEHICLE OPERATOR
CY	CUBIC YARD
DOT&PF	DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
ELEV	ELEVATION
EG	EXISTING GROUND
EP	EDGE OF PAVEMENT
FAA	FEDERAL AVIATION ADMINISTRATION
F.F.	FINISHED FLOOR
FG	FINISHED GRADE
F&I	FURNISH AND INSTALL
FATO	FINAL APPROACH AND TAKE OFF AREA
FOD	FOREIGN OBJECTS AND DEBRIS
FT	FOOT/FEET
GA	GENERAL AVIATION
HDG	HOT DIP GALVANIZED
HMA	HOT MIX ASPHALT
HPZ	HELIPORT PROTECTION ZONE
HSA	HELIPORT SAFETY AREA
INV	INVERT
LF	LINEAR/LINEAL FOOT
LS	LUMP SUM
LT	LEFT
MAX	MAXIMUM
MIN	MINIMUM
N	NORTH
NFS	NON-FROST SUSCEPTIBLE
NIC	NOT IN CONTRACT
NOTAM	NOTICE TO AIRMEN
OFA	OBJECT FREE AREA
OFZ	OBSTACLE FREE ZONE
PAPI	PRECISION APPROACH PATH INDICATOR
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVE, OR PORTLAND CEMENT CONCRETE
PI	POINT OF INTERSECTION
PRC	POINT OF REVERSE CURVE
PT	POINT OF TANGENCY
PVI	POINT OF VERTICAL INTERSECTION
R	RADIUS
RAP	RECYCLED ASPHALT PAVEMENT
RP	RADIUS POINT
ROFA	RUNWAY OBJECT FREE AREA
RPZ	RUNWAY PROTECTION ZONE
RSA	RUNWAY SAFETY AREA
RT	RIGHT
RW	RUNWAY
SF	SQUARE FEET/FOOT
SSWR	SANITARY SEWER
STA	STATION
SY	SQUARE YARD
TLOF	TOUCHDOWN AND LIFTOFF AREA
TOFA	TAXIWAY/TAXILANE OBJECT FREE AREA
TW	TAXIWAY
TYP	TYPICAL
VC	VERTICAL CURVE

**LEGEND**

PROPOSED	EXISTING	DESCRIPTION
----	----	PROPERTY BOUNDARY
----	----	EDGE OF GRAVEL
≡≡≡	≡≡≡	EDGE OF ASPHALT PAVEMENT
---	---	DITCH OR SWALE FLOWLINE
---	---	WATER LINE
---	---	FENCE
---	---	FISH EXCLUSION FENCE
----	----	ABANDONED UNDERGROUND ELECTRIC
---	---	UNDERGROUND ELECTRICAL LINE
---	---	UNDERGROUND ELECTRICAL & TELEPHONE LINE
---	---	OVERHEAD ELECTRICAL LINE
---	---	HEAT TRACE CABLING
---	---	UNDERGROUND TELEPHONE CABLE
---	---	SANITARY SEWER LINE
---	---	CULVERT
---	---	CUT LIMITS
.....	.....	FILL LIMITS
---	---	BREAKLINE
---	---	RUNWAY SAFETY AREA
---	---	OBJECT FREE AREA
---	---	OBSTACLE FREE ZONE
---	---	TAXIWAY/TAXILANE OBJECT FREE AREA
---	---	HELIPORT PROTECTION ZONE
---	---	HELIPORT SAFETY AREA
---	---	FINAL APPROACH AND TAKEOFF AREA
---	---	TOUCHDOWN AND LIFTOFF AREA
⊙	⊙	STORM DRAIN CATCH BASIN
⊙	⊙	STORM DRAIN MANHOLE
⊙	⊙	FIRE HYDRANT ASSEMBLY
⊙	⊙	SANITARY SEWER CLEANOUT
⊙	⊙	SECONDARY POWER PEDESTAL
⊙	⊙	ELECTRICAL JUNCTION BOX
⊙	⊙	TELEPHONE PEDESTAL
⊙	⊙	POWER TRANSFORMER
⊙	⊙	BOLLARD/MISC POLE
⊙	⊙	SIGN
---	---	ASPHALT PAVEMENT
---	---	PORTLAND CEMENT CONCRETE
---	---	RAP SURFACE COURSE
---	---	ROCK LINING/RIPRAP
---	---	TOPSOIL, SEEDING & BFM
⊕	⊕	FED. GOV'T SECTION CORNER
⊕	⊕	PRIMARY MONUMENT
⊕	⊕	SECONDARY MONUMENT
⊕	⊕	CENTERLINE MONUMENT
⊕	⊕	GEODETIC CONTROL STATION
⊕	⊕	PRIMARY AIRPORT CONTROL STATION

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFAPT00176	2019	KG2	55

SHEET INDEX	
SHEET #	SHEET TITLE
KG1	COVER SHEET
KG2	SHEET INDEX, LEGEND, & ABBREVIATIONS
KG3	ESTIMATE OF QUANTITIES
KG4	SURVEY CONTROL DIAGRAM
KD1	DEMOLITION PLAN NORTH APRON AREA
KD2	DEMOLITION PLAN WEST CENTRAL APRON AREA
KD3	DEMOLITION PLAN CENTRAL APRON AREA
KD4	DEMOLITION PLAN EAST CENTRAL APRON AREA
KD5	DEMOLITION PLAN EAST APRON AREA
KD6	DEMOLITION PLAN GATE F5 AND VICINITY
KC1	GATE AND FENCING OVERVIEW
KC2	ENHANCED SITE PLAN - NORTH APRON AREA
KC3	ENHANCED SITE PLAN - WEST CENTRAL APRON AREA
KC4	ENHANCED SITE PLAN - CENTRAL APRON AREA
KC5	ENHANCED SITE PLAN - EAST CENTRAL APRON AREA
KC6	ENHANCED SITE PLAN - EAST APRON AREA
KC7	ENHANCED SITE PLAN - GATE F5 VICINITY
KC8	ENHANCED SITE PLAN - ARFF AREA
KC9	DETAILED SITE PLAN GATE F13
KC10	DETAILED SITE PLAN GATE F2
KC11	DETAILED SITE PLAN GATE F4
KC12	DETAILED SITE PLAN GATE F5
KC13	DETAILED SITE PLAN CULVERT AA
KGR1	GRADING PLAN - GATE F13
KGR2	GRADING PLAN - GATE F2
KGR3	GRADING PLAN - GATE F4
KGR4	GRADING PLAN - GATE F5
KTD1	TYPICAL SECTIONS AND CIVIL DETAILS
KTD2	CIVIL DETAILS
KTD3	WATER DETAILS
KE1	GENERAL NOTES AND LEGEND
KE2	OVERALL ELECTRICAL SITE PLAN
KE3	GATE F4 SITE PLAN
KE4	TERMINAL BUILDING SITE PLAN
KE5	GATE F13 DETAILED SITE PLAN
KE6	GATE F13 SINGLE LINE DIAGRAM
KE7	GATE F13 POWER & NETWORK SCHEMATIC
KE8	GATE F2 & F2A DETAILED SITE PLAN
KE9	GATE F2 & F2A SINGLE LINE DIAGRAM
KE10	GATE F2 & F2A POWER & NETWORK SCHEMATIC
KE11	GATE F4 DETAILED SITE PLAN
KE12	GATE F4 SINGLE LINE DIAGRAM
KE13	GATE F4 POWER & NETWORK SCHEMATIC
KE14	GATE F5 DETAILED SITE PLAN
KE15	GATE F5 SINGLE LINE DIAGRAM
KE16	GATE F5 POWER & NETWORK SCHEMATIC
KE17	WIRELESS TOPOLOGY SCHEMATIC

EROSION AND SEDIMENT CONTROL PLAN	
SHEET #	SHEET TITLE
KEC1	OVERALL EROSION AND SEDIMENT CONTROL PLAN
KEC2	EROSION AND SEDIMENT CONTROL PLAN-N & W APRON AREAS
KEC3	EROSION AND SEDIMENT CONTROL PLAN-GATES F4 AND F5

APPENDIX DRAWINGS	
CONSTRUCTION SAFETY AND PHASING PLAN	
SHEET #	SHEET TITLE
KAD1	CONST. SAFETY & PHASING PLAN OVERVIEW
KAD2	CONST. SAFETY & PHASING PLAN WORK AREA 1
KAD3	CONST. SAFETY & PHASING PLAN WORK AREA 2
KAD4	CONST. SAFETY & PHASING PLAN WORK AREA 3

Record Drawings have been reviewed by the Project Engineer and represent the project as constructed.


05/30/23  
 Signature Date

PLANS DEVELOPED BY:  
DOW  
5368 COMMERCIAL BLVD.  
JUNEAU, AK 99801  
AECL846



STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES  
6860 GLACIER HIGHWAY, JUNEAU, AK 99801  
(907) 465-1763

**KETHCIKAN AIRPORT PERIMETER FENCING UPGRADES**

SHEET INDEX, LEGEND, & ABBREVIATIONS





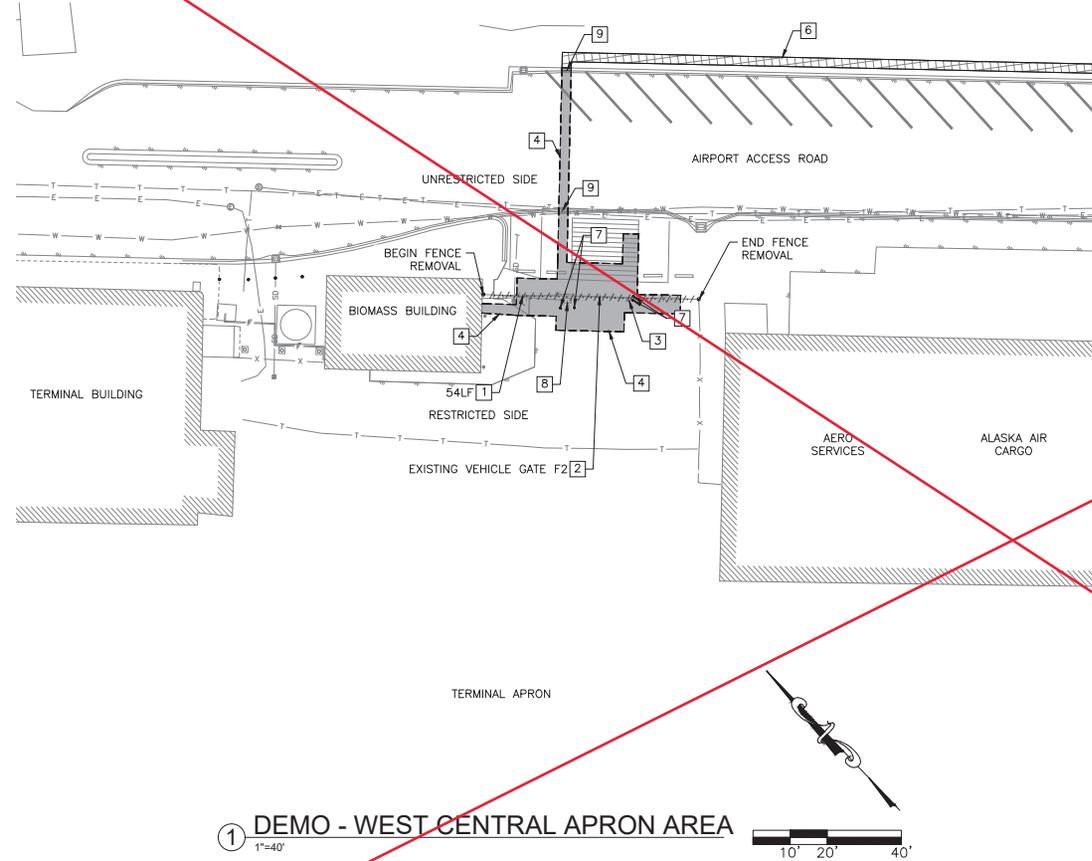


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- DEMOLITION NOTES:**
- WHERE EXISTING AUTOMATED GATES ARE TO BE REMOVED, REMOVAL SHALL INCLUDE DEMOLITION AND REMOVAL OF ALL ASSOCIATED EQUIPMENT, INCLUDING BUT NOT LIMITED TO: GATE, GATE FOUNDATION, GATE SUPPORTS, ALL CARD READERS, PEDESTALS, ACCESSORIES, GATE OPERATOR AND FOUNDATION, CABLES, CONDUIT, BOLLARDS, AND OTHER ITEMS. FENCE REMOVAL LIMITS WILL BE TO THE NEAREST EXISTING POST, UNLESS OTHERWISE NOTED. CONFIRM FENCE REMOVAL LIMITS WITH ENGINEER PRIOR TO BEGINNING WORK.
  - REMOVE ALL EXISTING SIGNAGE ON EXISTING FENCE AND GATES WITHIN WORK AREAS AND SALVAGE TO AIRPORT MAINTENANCE STAFF. PRESERVE FOR REINSTALLATION.
  - SEE GRADING PLANS, SHEETS KGR1-KGR4 FOR PAVEMENT REMOVAL LIMITS.
  - PAVEMENT MARKINGS REMOVED WITHIN WORK AREAS WILL BE RESTRIPTED BY AIRPORT STAFF.

- DEMOLITION KEY NOTES**
- REMOVE EXISTING FENCE
  - REMOVE EXISTING GATE
  - REMOVE EXISTING CARD READER, PEDESTAL, BOLLARDS, CABLE, CONDUITS, AND FOUNDATION
  - SAWCUT AND REMOVE EXISTING PAVEMENT AND BASE MATERIAL
  - REMOVE EXISTING AGGREGATE AND TURF AS NEEDED FOR NEW PAVEMENT SECTION OR TRENCHING
  - REMOVE EXISTING BOLLARD AND BASE
  - REMOVE EXISTING GATE OPERATOR
  - REMOVE EXISTING VALLEY GUTTER

- DEMOLITION LEGEND**
- REMOVE EXISTING ASPHALT PAVEMENT
  - REMOVE FENCE AND/OR GATE
  - SAWCUT EXISTING PAVEMENT FULL DEPTH
  - REMOVE EXISTING AGGREGATE/TURF
  - REMOVE EXISTING CONCRETE PAVEMENT

① DEMO - WEST CENTRAL APRON AREA  
 1"=40'

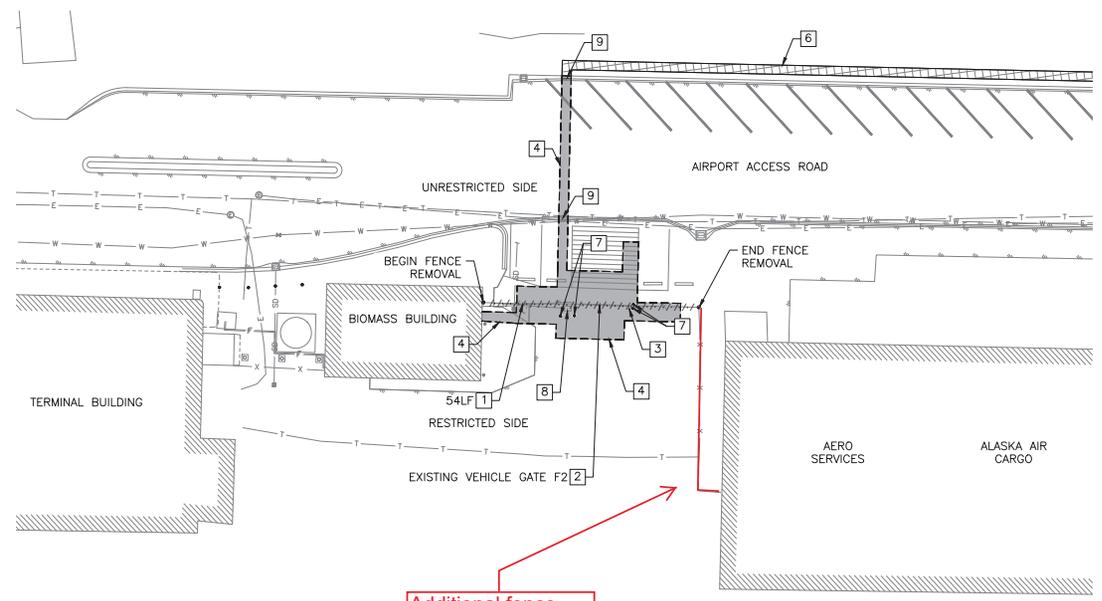
PLANS DEVELOPED BY: DOW 5368 COMMERCIAL BLVD. JUNEAU, AK 99801 AEOL846		STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES 6860 GLACIER HIGHWAY, JUNEAU, AK 99801 (907) 465-1763 <b>KETCHIKAN AIRPORT PERIMETER          FENCING UPGRADES          DEMOLITION PLAN WEST          CENTRAL APRON AREA</b>
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Additional fence removal/installation due to existing damaged fence. See CO4.

**DEMOLITION NOTES:**

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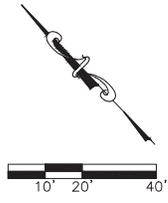
**DEMOLITION KEY NOTES**

- REMOVE EXISTING FENCE
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- REMOVE EXISTING CARD READER, PEDESTAL, BOLLARDS, CABLE, CONDUITS, AND FOUNDATION
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- REMOVE EXISTING AGGREGATE AND TURF AS NEEDED FOR NEW PAVEMENT SECTION OR TRENCHING
- REMOVE EXISTING BOLLARD AND BASE
- REMOVE EXISTING GATE OPERATOR
- REMOVE EXISTING VALLEY GUTTER

**DEMOLITION LEGEND**

- REMOVE EXISTING ASPHALT PAVEMENT
- REMOVE FENCE AND/OR GATE
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- REMOVE EXISTING AGGREGATE/TURF
- REMOVE EXISTING CONCRETE PAVEMENT

① DEMO - WEST CENTRAL APRON AREA  
 1"=40'



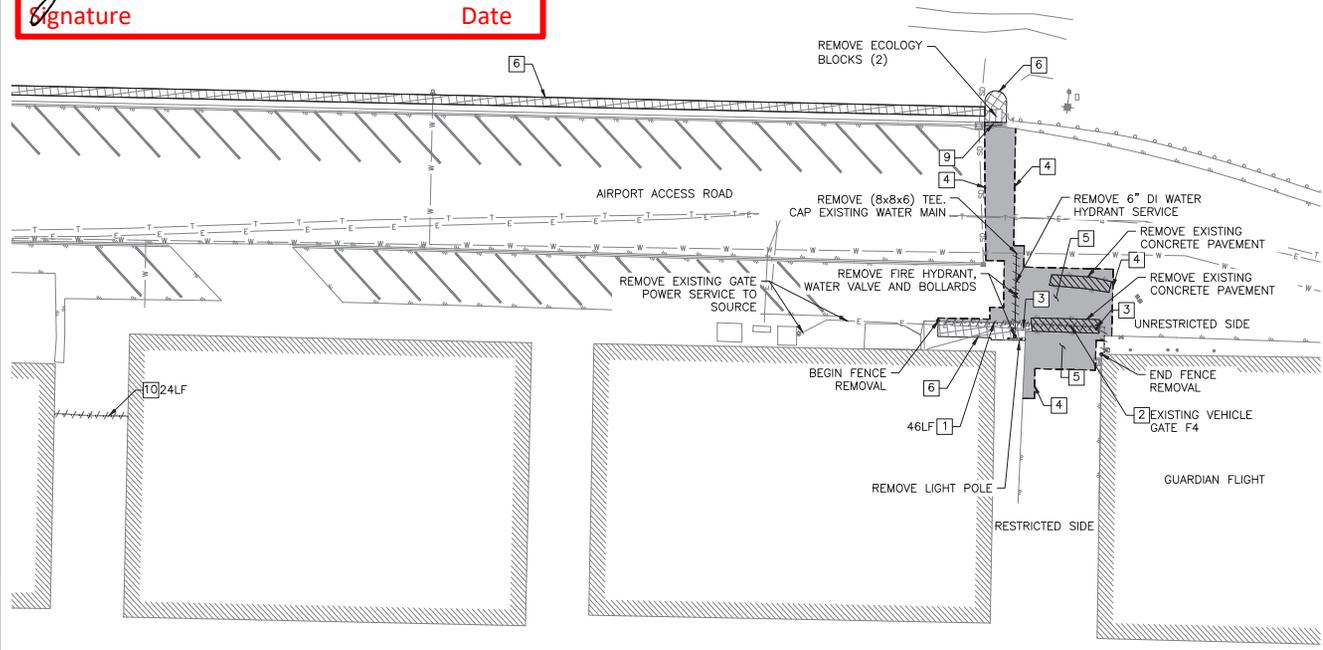
PLANS DEVELOPED BY: DOW 5368 COMMERCIAL BLVD. JUNEAU, AK 99801 AECL848		STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES 6860 GLACIER HIGHWAY, JUNEAU, AK 99801 (907) 465-1763  <b>KETCHIKAN AIRPORT PERIMETER          FENCING UPGRADES          DEMOLITION PLAN WEST          CENTRAL APRON AREA</b>
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- WATER DEMOLITION NOTES:**
- CONTACT KPU A MINIMUM OF 5 WORKING DAYS PRIOR TO BEGINNING WORK FOR SHUT OFF OF EXISTING HYDRANT.
- DEMOLITION NOTES:**
- WHERE EXISTING AUTOMATED GATES ARE TO BE REMOVED, REMOVAL SHALL INCLUDE DEMOLITION AND REMOVAL OF ALL ASSOCIATED EQUIPMENT, INCLUDING BUT NOT LIMITED TO: GATE, GATE FOUNDATION, GATE SUPPORTS, ALL CARD READERS, PEDESTALS, ACCESSORIES, GATE OPERATOR AND FOUNDATION, CABLES, CONDUIT, BOLLARDS, AND OTHER ITEMS. FENCE REMOVAL LIMITS WILL BE TO THE NEAREST EXISTING POST, UNLESS OTHERWISE NOTED. CONFIRM FENCE REMOVAL LIMITS WITH ENGINEER PRIOR TO BEGINNING WORK.
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  - REMOVE EXISTING GATE
  - REMOVE EXISTING CARD READER, PEDESTAL, BOLLARDS, CABLE, CONDUITS, AND FOUNDATION
  - SAWCUT AND REMOVE EXISTING PAVEMENT AND BASE MATERIAL
  - ABANDON EXISTING GATE SAFETY LOOPS
  - REMOVE EXISTING AGGREGATE AND TURF AS NEEDED FOR NEW PAVEMENT SECTION OR TRENCHING
  - REMOVE EXISTING VALLEY GUTTER
  - REMOVE BARBED WIRE FROM EXISTING FENCE

- DEMOLITION LEGEND**
- REMOVE EXISTING ASPHALT PAVEMENT
  - REMOVE FENCE AND/OR GATE
  - SAWCUT EXISTING PAVEMENT FULL DEPTH
  - REMOVE EXISTING AGGREGATE/TURF
  - REMOVE EXISTING CONCRETE PAVEMENT

1 DEMO - CENTRAL APRON AREA  
1"=40'  
10' 20' 40'

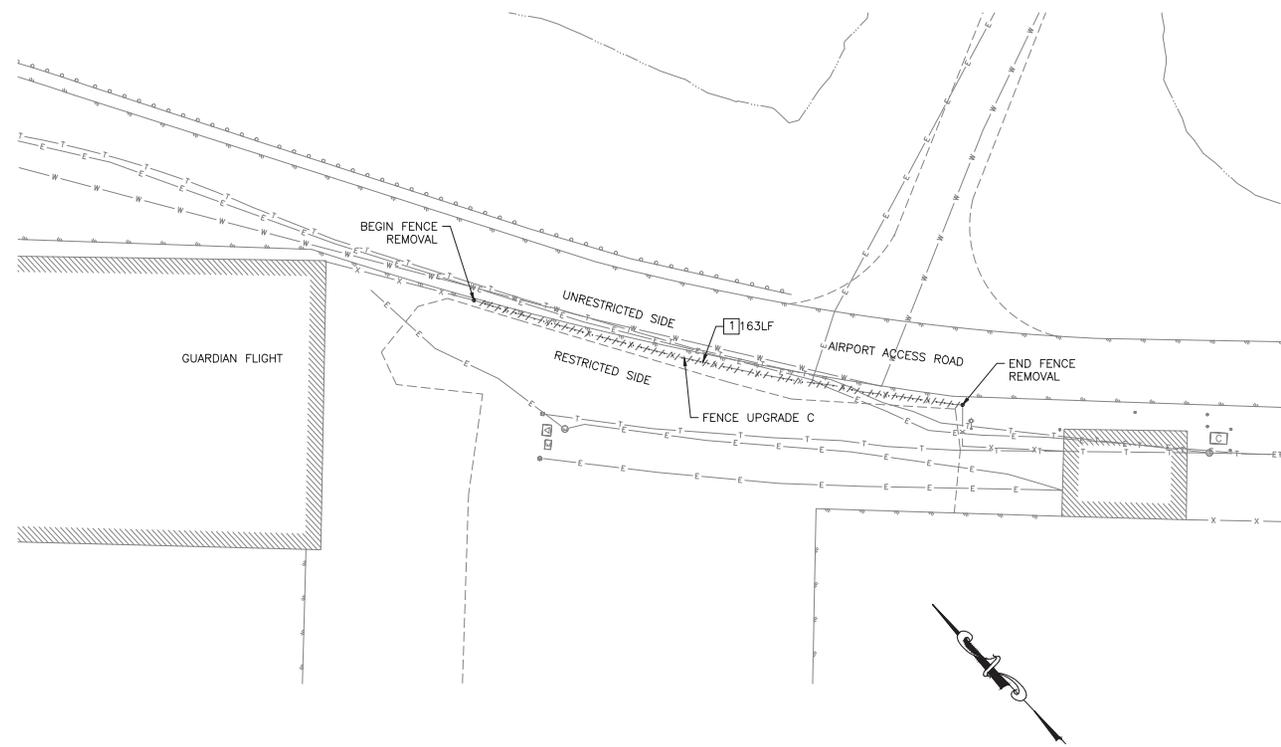
<p>PLANS DEVELOPED BY: DOW 5368 COMMERCIAL BLVD. JUNEAU, AK 99801 AEL848</p>		<p>STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES 6860 GLACIER HIGHWAY, JUNEAU, AK 99801 (907) 465-1763</p> <p><b>KETCHIKAN AIRPORT PERIMETER FENCING UPGRADES</b></p> <p><b>DEMOLITION PLAN</b></p> <p><b>CENTRAL APRON AREA</b></p>
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1 DEMO - EAST CENTRAL APRON AREA  
 1"=40'  
 10' 20' 40'

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**DEMOLITION KEY NOTES**

- 1 REMOVE EXISTING FENCE

**DEMOLITION LEGEND**

- REMOVE ASPHALT PAVEMENT
- REMOVE FENCE AND/OR GATE
- SAWCUT EXISTING PAVEMENT FULL DEPTH

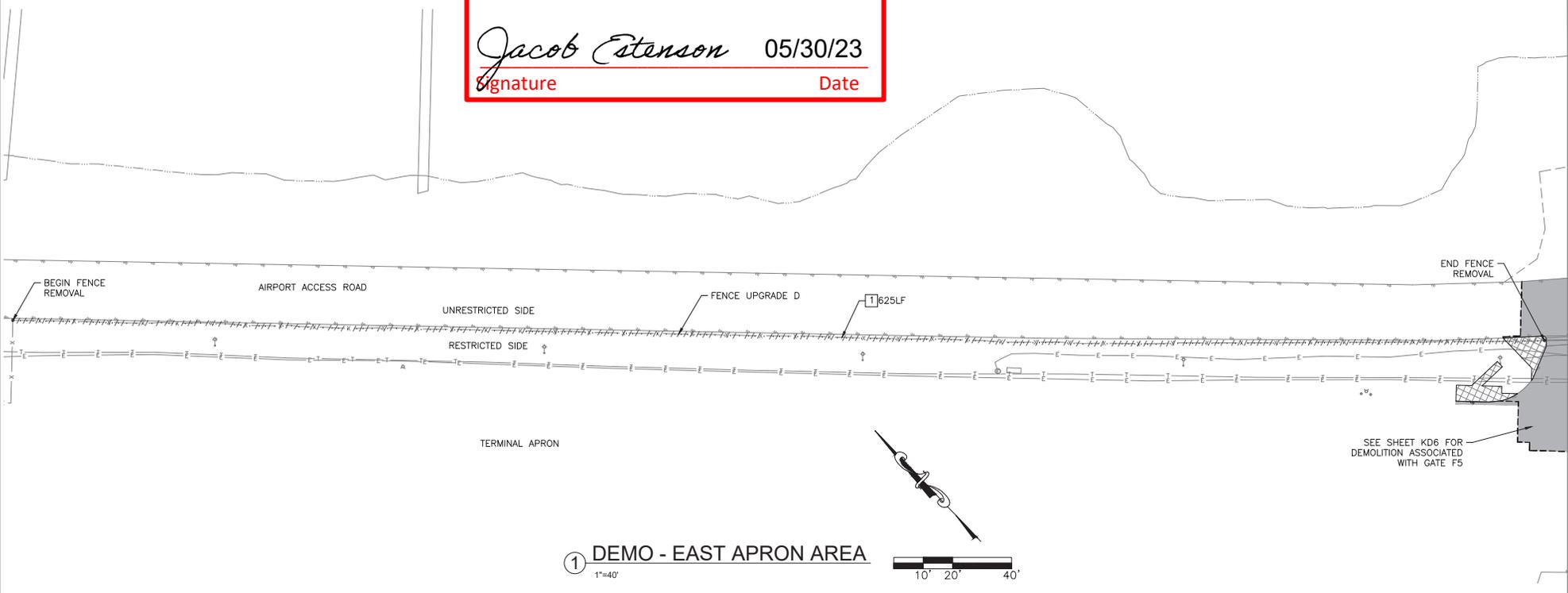
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			ALASKA	SFAPT00176	2019	KD5	55

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① DEMO - EAST APRON AREA  
 1"=40'

- DEMOLITION NOTES:**
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- DEMOLITION KEY NOTES**
- ① REMOVE EXISTING FENCE

- DEMOLITION LEGEND**
- REMOVE ASPHALT PAVEMENT
  - REMOVE FENCE AND/OR GATE
  - SAWCUT EXISTING PAVEMENT FULL DEPTH

PLANS DEVELOPED BY:  
 DCW  
 5368 COMMERCIAL BLVD.  
 JUNEAU, AK 99801  
 AECL848



STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES  
 6860 GLACIER HIGHWAY, JUNEAU, AK 99801  
 (907) 465-1763

**KETCHIKAN AIRPORT PERIMETER FENCING UPGRADES**  
 DEMOLITION PLAN  
 EAST APRON AREA



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CIVIL SITE PLAN NOTES:

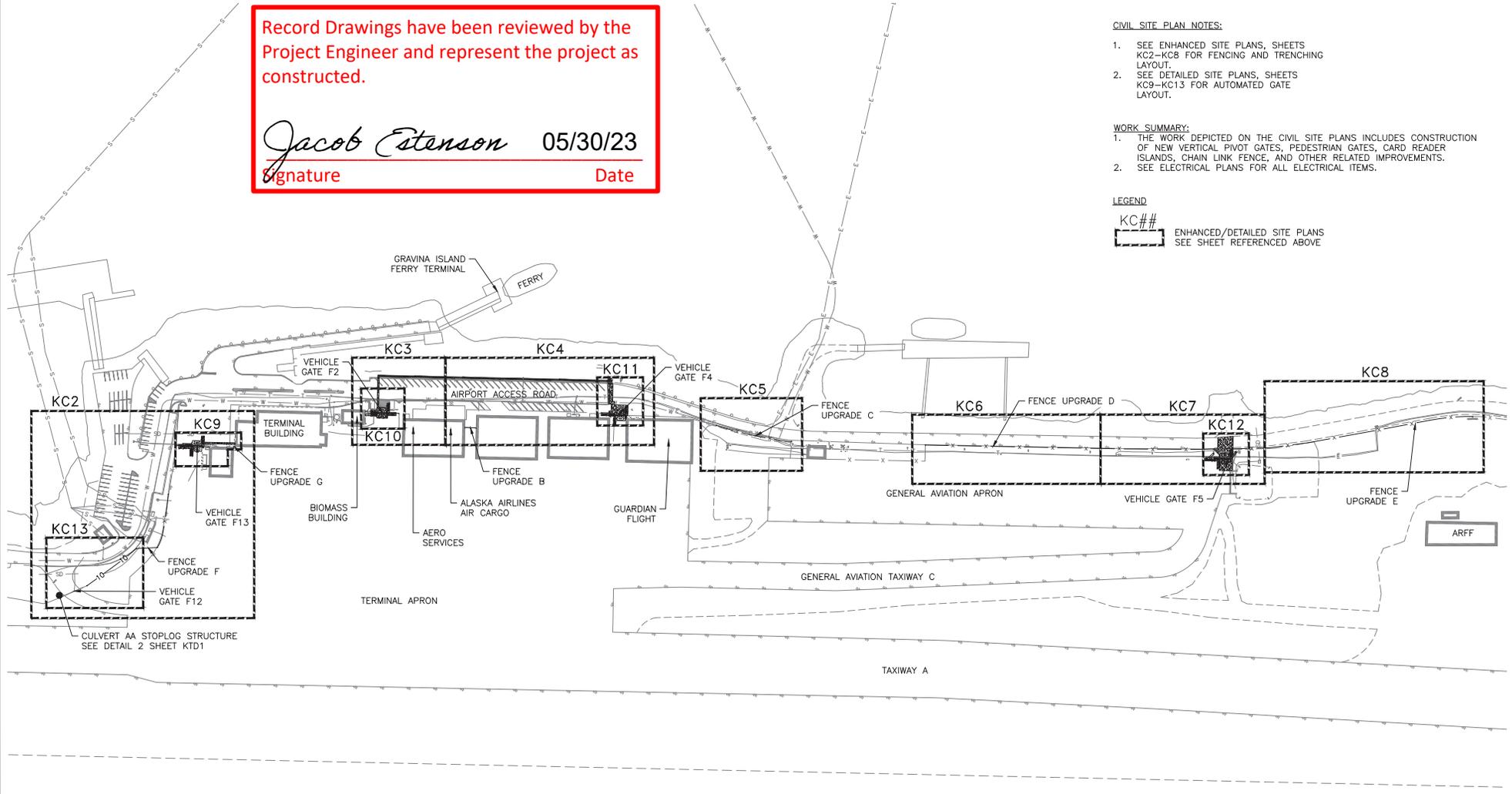
- SEE ENHANCED SITE PLANS, SHEETS KC2-KC8 FOR FENCING AND TRENCHING LAYOUT.
- SEE DETAILED SITE PLANS, SHEETS KC9-KC13 FOR AUTOMATED GATE LAYOUT.

WORK SUMMARY:

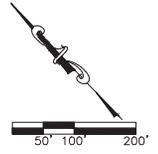
- THE WORK DEPICTED ON THE CIVIL SITE PLANS INCLUDES CONSTRUCTION OF NEW VERTICAL PIVOT GATES, PEDESTRIAN GATES, CARD READER ISLANDS, CHAIN LINK FENCE, AND OTHER RELATED IMPROVEMENTS.
- SEE ELECTRICAL PLANS FOR ALL ELECTRICAL ITEMS.

LEGEND

KC##  
 ENHANCED/DETAILED SITE PLANS  
 SEE SHEET REFERENCED ABOVE



① OVERALL CIVIL SITE PLAN  
 1"=200'



PLANS DEVELOPED BY:  
 DOW  
 5368 COMMERCIAL BLVD.  
 JUNEAU, AK 99801  
 AECL848



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 6860 GLACIER HIGHWAY, JUNEAU, AK 99801  
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**KETCHIKAN AIRPORT PERIMETER FENCING UPGRADES GATE AND FENCING OVERVIEW**

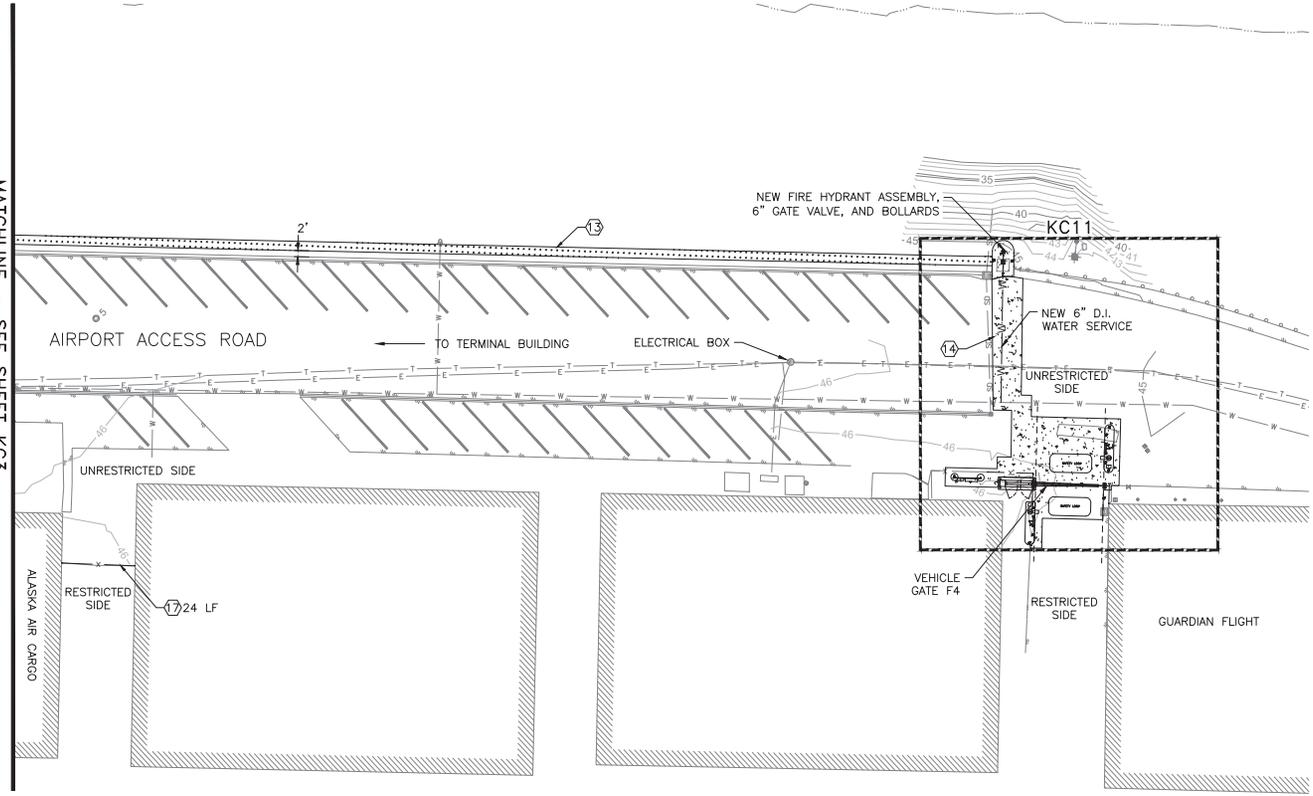




NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFAPT00176	2019	KC4	55

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MATCHLINE - SEE SHEET KC3



**ENHANCED CIVIL SITE PLAN GENERAL NOTES:**  
 1. SEE DETAILED SITE PLANS, SHEETS KC9-KC13 FOR SPECIFIC GATE AND FENCING CIVIL WORK.  
 2. SEE ELECTRICAL PLANS FOR ALL ELECTRICAL WORK. CONTRACTOR SHALL VERIFY ALL CONDUIT ROUTING IN THE FIELD WITH THE ENGINEER PRIOR TO INSTALLATION.

**ENHANCED SITE PLAN KEY NOTES**

- ⑦ INSTALL NEW 8'-FOOT CHAINLINK FENCE WITH 3-STRAND BARBED WIRE TO NEAREST EXISTING POST. SEE DETAIL 1, SHEET SC8. CONFIRM LOCATION WITH ENGINEER PRIOR TO INSTALLATION.
- ⑬ CONSTRUCT TRENCH REPAIR SECTION IN UNPAVED AREAS. SEE DETAIL 2, SHEET SC9.
- ⑭ CONSTRUCT TRENCH REPAIR SECTION IN PAVED AREAS. SEE DETAIL 1, SHEET SC9.
- ⑰ INSTALL NEW 3-STRAND BARBED WIRE ON EXISTING FENCE.

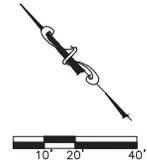
**LEGEND**

- NEW PCC PAVEMENT, WALKWAY, OR FOUNDATION
- TRENCH REPAIR IN UNPAVED AREAS
- NEW 8' CHAINLINK FENCE WITH 3-STRAND BARBED WIRE

Record Drawings have been reviewed by the Project Engineer and represent the project as constructed.

*Jacob Estenson* 05/30/23  
 Signature Date

① ENHANCED SITE PLAN CENTRAL APRON AREA  
 1"=40'



PLANS DEVELOPED BY: DOW 5368 COMMERCIAL BLVD. JUNEAU, AK 99801 AECL846		STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES 6860 GLACIER HIGHWAY, JUNEAU, AK 99801 (907) 465-1763  <b>KETCHIKAN AIRPORT PERIMETER FENCING UPGRADES</b>  ENHANCED SITE PLAN - CENTRAL APRON AREA
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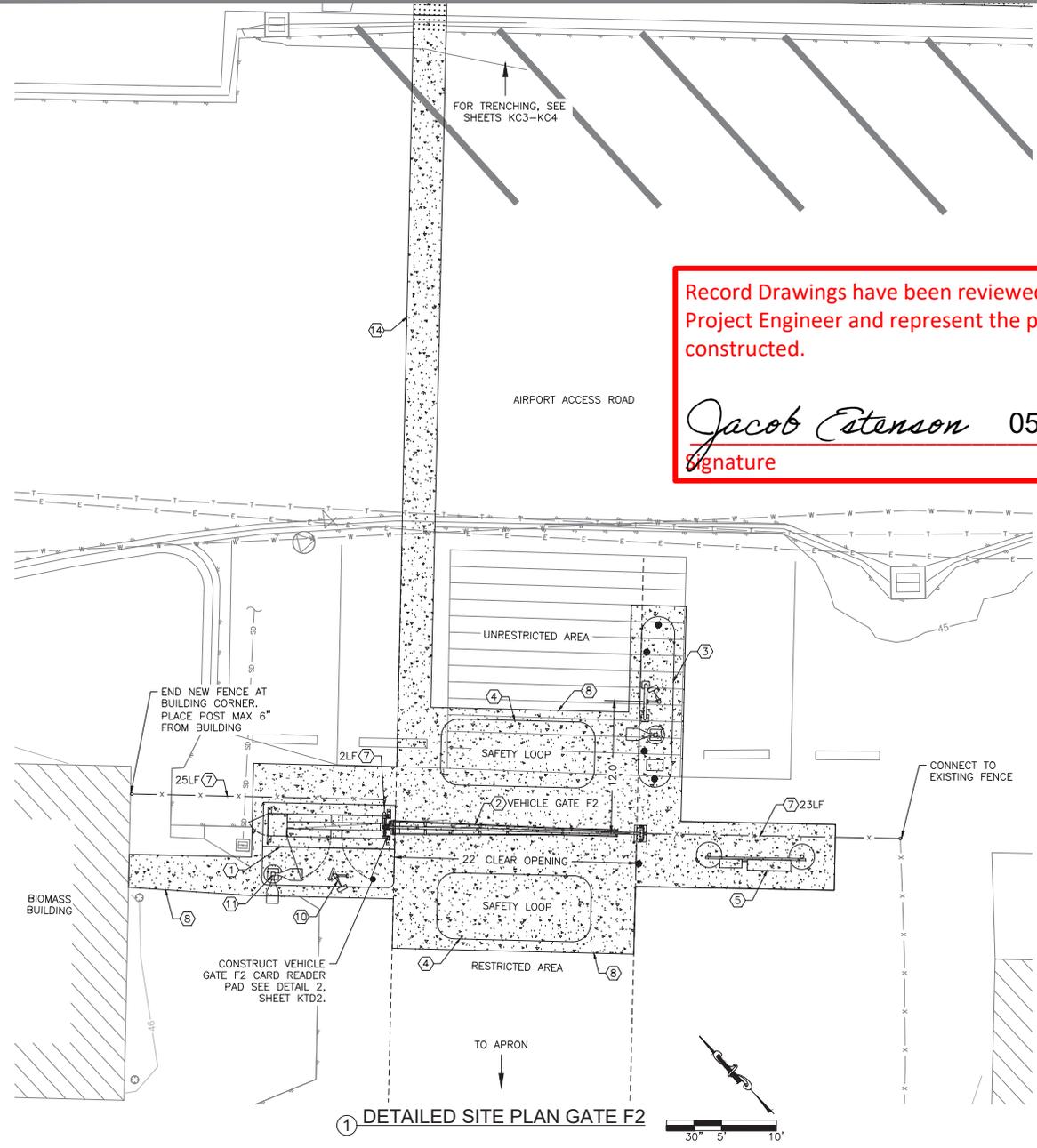






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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFAPT00176	2019	KC10	55



Record Drawings have been reviewed by the Project Engineer and represent the project as constructed.

Jacob Estenson

05/30/23

Signature Date

**CIVIL SITE PLAN GENERAL NOTES**

1. SEE GATE AND FENCING OVERVIEW SHEET KC1 AND ENHANCED SITE PLANS SHEETS KC2 - KC8 FOR CONDUIT ROUTING.
2. GATE AND OPERATOR DIMENSIONS VARY BY MANUFACTURER. A TYPICAL INSTALLATION IS SHOWN. CONTRACTOR TO VERIFY LAYOUT AND REQUIRED CLEARANCES FOR ASSOCIATED EQUIPMENT PRIOR TO INSTALLATION.
3. SEE SHEETS SC2-SC3 FOR GENERAL VERTICAL PIVOT GATE LAYOUT AND DETAILS.
4. CARD READERS SHALL BE PLACED 12- FEET FROM THE OPERATIONAL AXIS OF THE NEW AUTOMATED GATE UNLESS OTHERWISE SHOWN ON PLANS.
5. PROVIDE A MINIMUM OF 6- FEET OF CLEARANCE BETWEEN ANY MOVING PARTS OF THE VERTICAL PIVOT GATE SYSTEM AND ANY POWER RACKS OR OTHER EQUIPMENT THAT WILL REQUIRE REGULAR ACCESS FOR MAINTENANCE.
6. SEE ELECTRICAL PLANS FOR ELECTRICAL COMPONENTS.
7. CONFIRM ALL NEW FENCE LIMITS IN THE FIELD WITH THE ENGINEER PRIOR TO START OF CONSTRUCTION. LIMITS ARE APPROXIMATE.
8. ALL PAVEMENT MARKINGS REMOVED WITHIN WORK AREAS AS PART OF CONSTRUCTION WILL BE REPAINTED BY AIRPORT STAFF.

**DETAILED CIVIL SITE PLAN KEY NOTES:**

- ① INSTALL NEW GATE OPERATOR CONCRETE FOUNDATION. SEE CIVIL STANDARDS DETAIL 1 SHEET SC4.
- ② INSTALL NEW VERTICAL PIVOT GATE WITH CLEAR OPENING WIDTH SHOWN ON PLAN. FOR GATE OPERATOR, STANCHION, AND ASSOCIATED EQUIPMENT, SEE CIVIL STANDARDS DETAIL 1 SHEET SC3.
- ③ INSTALL VEHICLE GATE CARD READER ISLAND WITH BOLLARDS, MACHINE GUARD, CARD READER PEDESTAL, AREA LIGHT POLE, JUNCTION BOX, AND ASSOCIATED EQUIPMENT. SEE CIVIL STANDARDS DETAILS 1 AND 2 SHEET SC6.
- ④ INSTALL NEW SAFETY LOOPS PER ELECTRICAL PLANS.
- ⑤ INSTALL POWER AND ACCESS CONTROL ENCLOSURE RACK PER ELECTRICAL PLANS.
- ⑦ INSTALL NEW 8-FOOT CHAINLINK FENCE WITH 3-STRAND BARBED WIRE TO NEAREST EXISTING POST. SEE CIVIL STANDARDS DETAIL 1, SHEET SC8. CONFIRM LOCATION WITH ENGINEER PRIOR TO INSTALLATION.
- ⑧ CONSTRUCT NEW CONCRETE PAVEMENT. SEE TYPICAL SECTION 1, SHEET KTD1.
- ⑩ INSTALL LONG RANGE VEHICLE GATE CARD READER ON PEDESTAL. SEE CIVIL STANDARDS DETAILS 1 AND 2, SHEET SC6.
- ⑪ INSTALL NEW LIGHT POLE AND BASE. SEE CIVIL STANDARDS DETAILS 1 AND 2, SHEET SC7. NUMBER OF LUMINAIRES AS SHOWN ON PLAN.
- ⑭ CONSTRUCT TRENCH REPAIR SECTION IN PAVED AREAS. SEE DETAIL 1, SHEET SC9.

**LEGEND**

- NEW PCC PAVEMENT, WALKWAY, OR FOUNDATION
- NEW 8' CHAINLINK FENCE WITH 3-STRAND BARBED WIRE

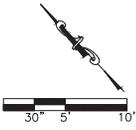
PLANS DEVELOPED BY:  
DOW  
5368 COMMERCIAL BLVD.  
JUNEAU, AK 99801  
AECL848



STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES  
6860 GLACIER HIGHWAY, JUNEAU, AK 99801  
(907) 465-1763

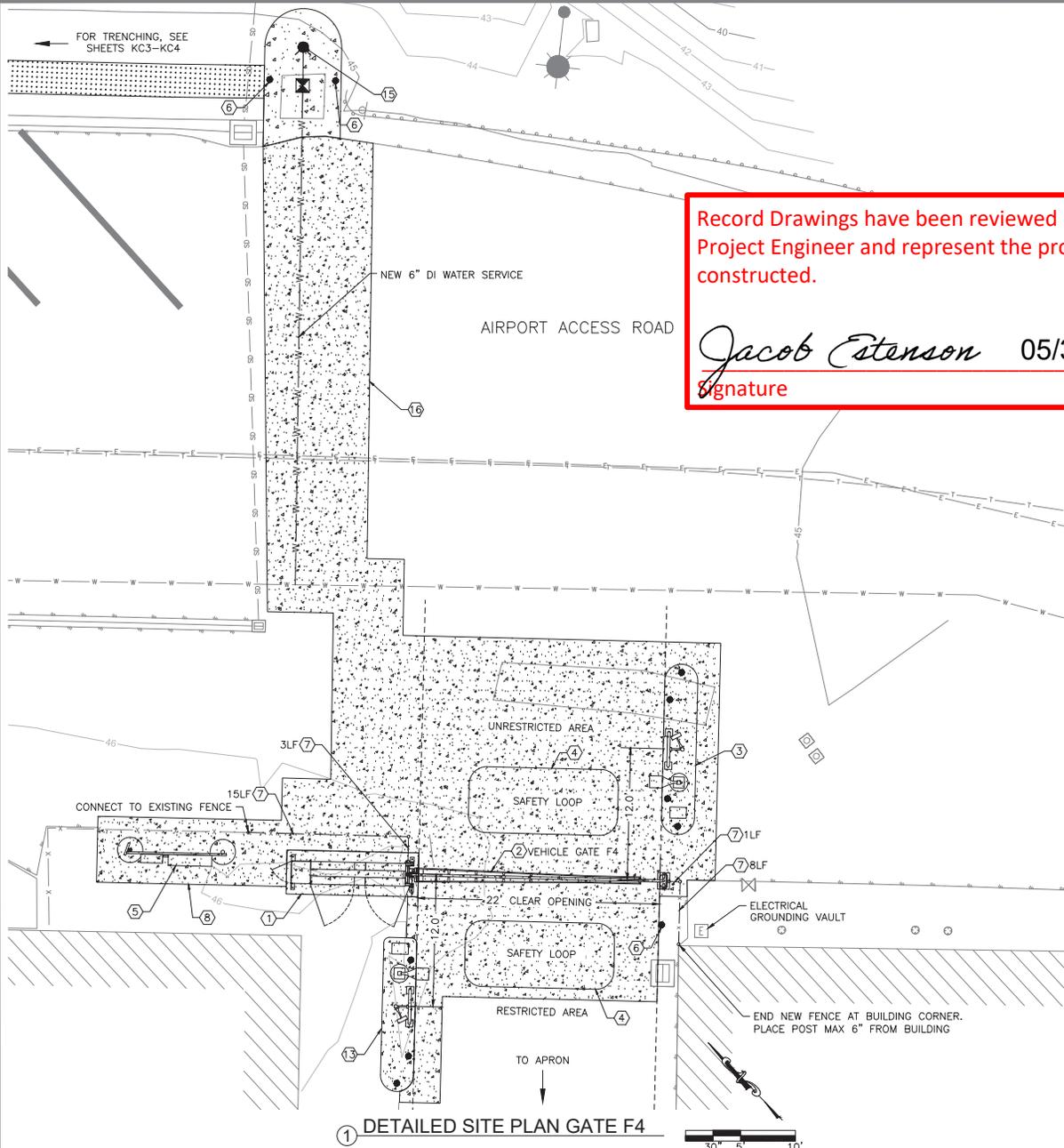
**KETCHIKAN AIRPORT PERIMETER FENCING UPGRADES**  
**DETAILED SITE PLAN**  
**GATE F2**

① DETAILED SITE PLAN GATE F2



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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFAPT00176	2019	KC11	55



Record Drawings have been reviewed by the Project Engineer and represent the project as constructed.

Jacob Estenson

05/30/23

Signature Date

**CIVIL SITE PLAN GENERAL NOTES**

1. SEE GATE AND FENCING OVERVIEW SHEET KC1 AND ENHANCED SITE PLANS SHEETS KC2 - KC8 FOR CONDUIT ROUTING.
2. GATE AND OPERATOR DIMENSIONS VARY BY MANUFACTURER. A TYPICAL INSTALLATION IS SHOWN. CONTRACTOR TO VERIFY LAYOUT AND REQUIRED CLEARANCES FOR ASSOCIATED EQUIPMENT PRIOR TO INSTALLATION.
3. SEE SHEETS SC2-SC3 FOR GENERAL VERTICAL PIVOT GATE LAYOUT AND DETAILS.
4. CARD READERS SHALL BE PLACED 12- FEET FROM THE OPERATIONAL AXIS OF THE NEW AUTOMATED GATE UNLESS OTHERWISE SHOWN ON PLANS.
5. PROVIDE A MINIMUM OF 6- FEET OF CLEARANCE BETWEEN ANY MOVING PARTS OF THE VERTICAL PIVOT GATE SYSTEM AND ANY POWER RACKS OR OTHER EQUIPMENT THAT WILL REQUIRE REGULAR ACCESS FOR MAINTENANCE.
6. SEE ELECTRICAL PLANS FOR ELECTRICAL COMPONENTS.
7. CONFIRM ALL NEW FENCE LIMITS IN THE FIELD WITH THE ENGINEER PRIOR TO START OF CONSTRUCTION. LIMITS ARE APPROXIMATE.
8. ALL PAVEMENT MARKINGS REMOVED WITHIN WORK AREAS AS PART OF CONSTRUCTION WILL BE REPAINTED BY AIRPORT STAFF.

**DETAILED CIVIL SITE PLAN KEY NOTES:**

- ① INSTALL NEW GATE OPERATOR CONCRETE FOUNDATION. SEE CIVIL STANDARDS DETAIL 1 SHEET SC4.
- ② INSTALL NEW VERTICAL PIVOT GATE WITH CLEAR OPENING WIDTH SHOWN ON PLAN. FOR GATE OPERATOR, STANCHION, AND ASSOCIATED EQUIPMENT, SEE CIVIL STANDARDS DETAIL 1 SHEET SC3.
- ③ INSTALL VEHICLE GATE CARD READER ISLAND WITH BOLLARDS, MACHINE GUARD, CARD READER PEDESTAL, AREA LIGHT POLE, JUNCTION BOX, AND ASSOCIATED EQUIPMENT. SEE CIVIL STANDARDS DETAILS 1 AND 2 SHEET SC6.
- ④ INSTALL NEW SAFETY LOOPS PER ELECTRICAL PLANS.
- ⑤ INSTALL POWER AND ACCESS CONTROL ENCLOSURE RACK PER ELECTRICAL PLANS.
- ⑥ INSTALL NEW CONCRETE BOLLARD. SEE DETAIL 3, SHEET SC9.
- ⑦ INSTALL NEW 8- FOOT CHAINLINK FENCE WITH 3- STRAND BARBED WIRE TO NEAREST EXISTING POST. SEE CIVIL STANDARDS DETAIL 1, SHEET SC8. CONFIRM LOCATION WITH ENGINEER PRIOR TO INSTALLATION.
- ⑧ CONSTRUCT NEW CONCRETE PAVEMENT. SEE TYPICAL SECTION 1, SHEET KTD1.
- ⑮ INSTALL FIRE HYDRANT ASSEMBLY AND ASSOCIATED WATER VALVE AND EQUIPMENT. SEE DETAILS 2-4, SHEET KTD3.
- ⑰ CONSTRUCT WATER PIPE TRENCH REPAIR. SEE DETAIL 1, SHEET KTD3.

**LEGEND**

- NEW PCC PAVEMENT, WALKWAY, OR FOUNDATION
- TRENCH REPAIR IN UNPAVED AREAS
- NEW 8' CHAINLINK FENCE WITH 3-STRAND BARBED WIRE

PLANS DEVELOPED BY: DOW 5368 COMMERCIAL BLVD. JUNEAU, AK 99801 AECL846		STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES 6860 GLACIER HIGHWAY, JUNEAU, AK 99801 (907) 465-1763  <b>KETCHIKAN AIRPORT PERIMETER                  FENCING UPGRADES</b>  DETAILED SITE PLAN GATE F4
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① DETAILED SITE PLAN GATE F4

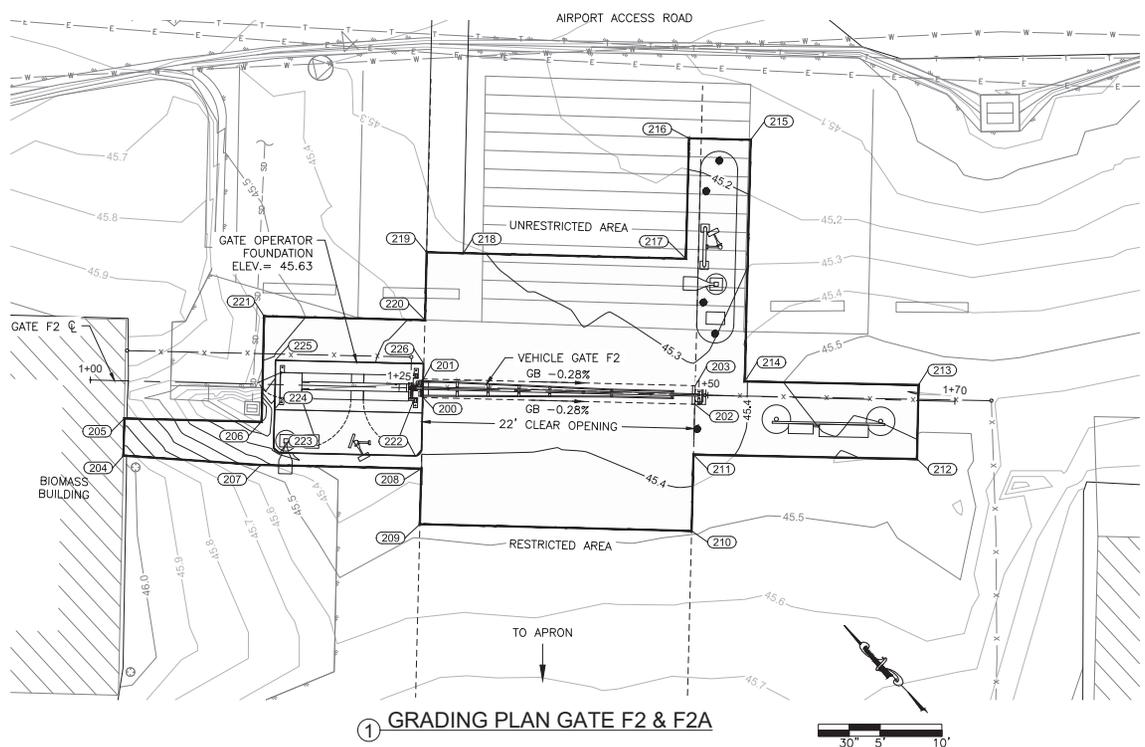
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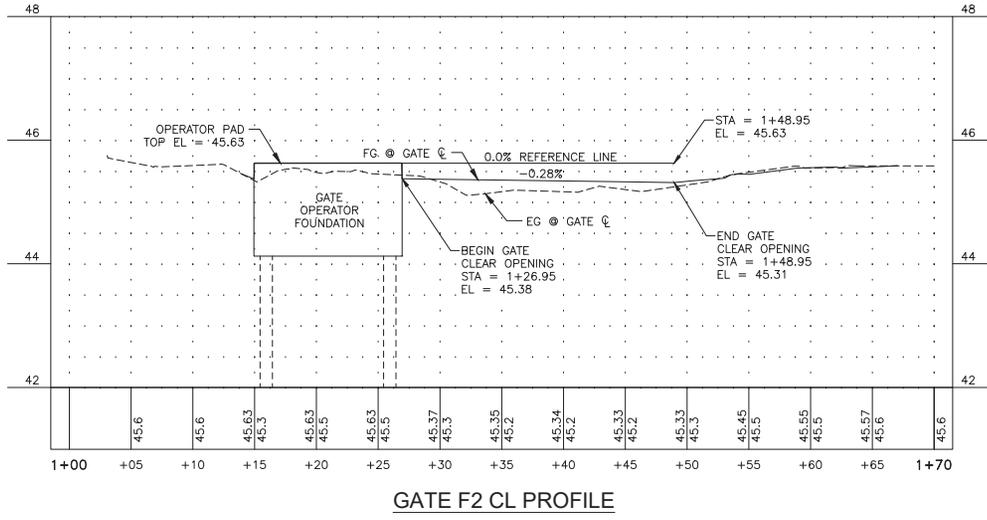


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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFAPT00176	2019	KGR2	55

GRADING POINTS				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
200	1292299.28	3093308.24	45.38'	GB
201	1292300.35	3093309.29	45.37'	GB
202	1292283.96	3093324.03	45.32'	GB
203	1292285.03	3093325.08	45.31'	GB
204	1292312.27	3093287.23	45.95' ±	MATCH EXIST.
205	1292314.43	3093289.31	45.76' ±	MATCH EXIST.
206	1292306.72	3093297.34	45.10' ±	MATCH EXIST.
207	1292304.18	3093294.89	45.44' ±	MATCH EXIST.
208	1292295.15	3093304.24	45.37' ±	MATCH EXIST.
209	1292291.92	3093301.10	45.47' ±	MATCH EXIST.
210	1292276.60	3093316.89	45.49' ±	MATCH EXIST.
211	1292281.03	3093321.19	45.35' ±	MATCH EXIST.
212	1292268.49	3093334.24	45.46' ±	MATCH EXIST.
213	1292272.82	3093338.40	45.58' ±	MATCH EXIST.
214	1292282.56	3093328.25	45.38' ±	MATCH EXIST.
215	1292296.60	3093341.87	45.15' ±	MATCH EXIST.
216	1292300.08	3093338.28	45.17' ±	MATCH EXIST.
217	1292293.08	3093331.50	45.27' ±	MATCH EXIST.
218	1292305.64	3093318.56	45.31' ±	MATCH EXIST.
219	1292307.70	3093316.42	45.34' ±	MATCH EXIST.
220	1292303.76	3093312.61	45.39' ±	MATCH EXIST.
221	1292312.84	3093303.25	45.58' ±	MATCH EXIST.
222	1292296.22	3093304.57	45.40'	GB
223	1292303.86	3093296.66	45.30'	GB
224	1292306.73	3093298.73	45.25'	GB
225	1292309.60	3093301.51	45.49'	GB
226	1292301.27	3093310.14	45.36'	GB



Record Drawings have been reviewed by the Project Engineer and represent the project as constructed.

*Jacob Estenson* 05/30/23  
 Signature Date

- GRADING PLAN GENERAL NOTES**
- ALL ELEVATIONS ARE AT FLOW LINE UNLESS OTHERWISE NOTED.
  - FLAT LINE ACROSS GATE OPENING FOR REFERENCE ONLY. PROVIDE WEDGE ON GATE BOTTOM TO MAINTAIN MAX. 3" GAP BETWEEN GATE BOTTOM AND NEW TOP OF PAVEMENT.

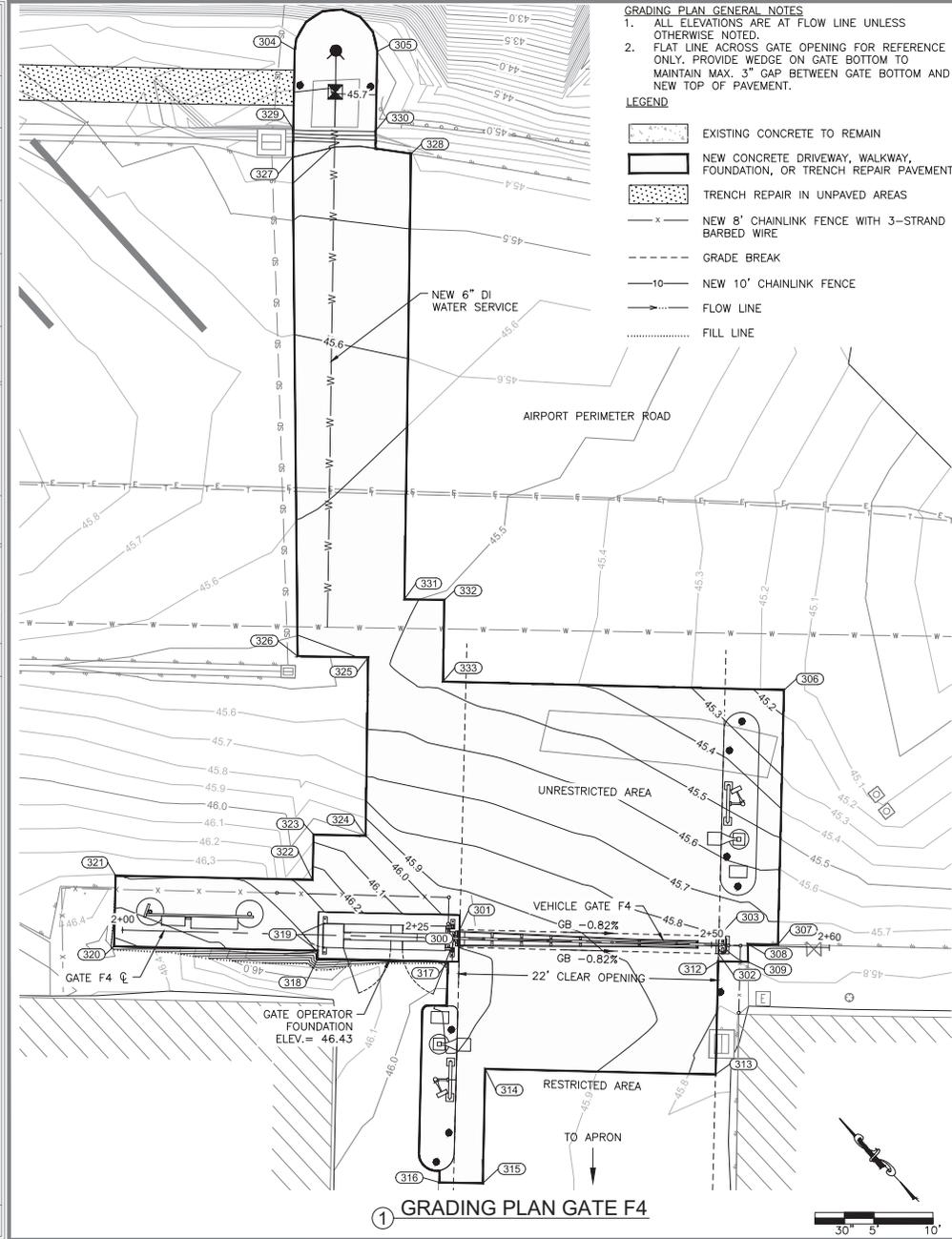
- LEGEND**
- [Pattern] EXISTING CONCRETE TO REMAIN
  - [Pattern] NEW CONCRETE DRIVEWAY, WALKWAY, FOUNDATION, OR TRENCH REPAIR PAVEMENT
  - [Pattern] TRENCH REPAIR IN UNPAVED AREAS
  - [Symbol] NEW 8' CHAINLINK FENCE WITH 3-STRAND BARBED WIRE
  - [Symbol] GRADE BREAK
  - [Symbol] NEW 10' CHAINLINK FENCE
  - [Symbol] FLOW LINE
  - [Symbol] FILL LINE

PLANS DEVELOPED BY:  
 DOW  
 5368 COMMERCIAL BLVD.  
 JUNEAU, AK 99801  
 AECL848

STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES  
 8860 GLACIER HIGHWAY, JUNEAU, AK 99801  
 (907) 465-1763

**KETCHIKAN AIRPORT PERIMETER FENCING UPGRADES**  
**GRADING PLAN – GATE F2**

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**GRADING PLAN GENERAL NOTES**  
 1. ALL ELEVATIONS ARE AT FLOW LINE UNLESS OTHERWISE NOTED.  
 2. FLAT LINE ACROSS GATE OPENING FOR REFERENCE ONLY. PROVIDE WEDGE ON GATE BOTTOM TO MAINTAIN MAX. 3" GAP BETWEEN GATE BOTTOM AND NEW TOP OF PAVEMENT.

**LEGEND**

- EXISTING CONCRETE TO REMAIN
- NEW CONCRETE DRIVEWAY, WALKWAY, FOUNDATION, OR TRENCH REPAIR PAVEMENT
- TRENCH REPAIR IN UNPAVED AREAS
- NEW 8' CHAINLINK FENCE WITH 3-STRAND BARBED WIRE
- GRADE BREAK
- NEW 10' CHAINLINK FENCE
- FLOW LINE
- FILL LINE

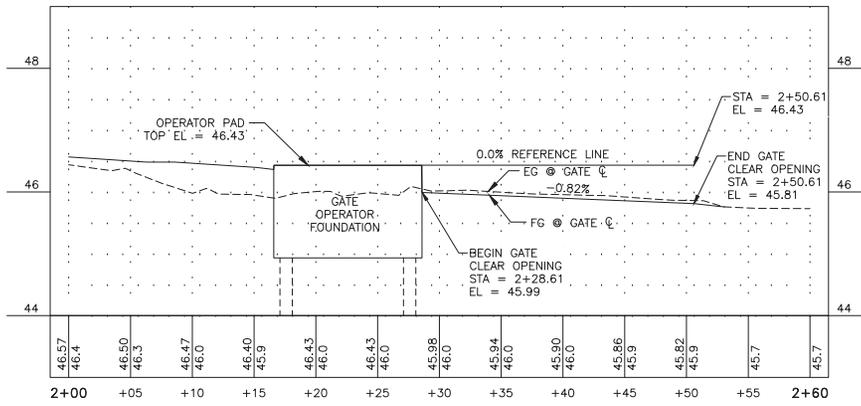
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFAPT00176	2019	KGR3	55

GRADING POINTS				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
300	1291956.05	3093672.01	46.00'	GB
301	1291957.13	3093673.06	45.98'	GB
302	1291940.73	3093687.80	45.82'	GB
303	1291941.81	3093688.85	45.80'	GB
304	1292021.46	3093713.40	45.66'	EP
305	1292016.60	3093718.44	45.66'	EP
306	1291953.39	3093707.06	45.15' ±	MATCH EXIST.
307	1291937.88	3093692.02	45.75' ±	MATCH EXIST.
308	1291939.65	3093690.18	45.76' ±	MATCH EXIST.
309	1291938.53	3093689.17	45.79' ±	MATCH EXIST.
312	1291940.27	3093687.35	45.87' ±	MATCH EXIST.
313	1291933.37	3093680.66	45.77' ±	MATCH EXIST.
314	1291946.99	3093666.63	45.98' ±	MATCH EXIST.
315	1291940.00	3093659.88	45.94' ±	MATCH EXIST.
316	1291942.57	3093657.23	45.96' ±	MATCH EXIST.
317	1291955.80	3093670.47	46.03' ±	MATCH EXIST.
318	1291963.50	3093662.50	46.37'	EP
319	1291963.99	3093662.98	46.40'	EP
320	1291976.00	3093650.55	46.63'	EP
321	1291980.31	3093654.72	46.40' ±	MATCH EXIST.

GRADING POINTS				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
322	1291968.70	3093666.74	46.26' ±	MATCH EXIST.
323	1291971.47	3093669.42	46.07' ±	MATCH EXIST.
324	1291968.40	3093672.58	46.00' ±	MATCH EXIST.
325	1291979.35	3093683.01	45.51' ±	MATCH EXIST.
326	1291983.51	3093678.68	45.47' ±	MATCH EXIST.
327	1292014.86	3093707.08	45.36' ±	MATCH EXIST.
328	1292008.27	3093714.66	45.40' ±	MATCH EXIST.
329	1292016.59	3093708.74	45.73' ±	MATCH EXIST. @ TBC
330	1292011.77	3093713.81	45.73'	TBC
331	1291980.90	3093688.62	45.50' ±	MATCH EXIST.
332	1291978.55	3093691.06	45.49' ±	MATCH EXIST.
333	1291973.56	3093686.28	45.49' ±	MATCH EXIST.

Record Drawings have been reviewed by the Project Engineer and represent the project as constructed.

*Jacob Estenson* 05/30/23  
 Signature Date

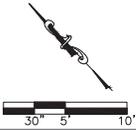


GATE F4 CL PROFILE

PLANS DEVELOPED BY:  
 DOW  
 5368 COMMERCIAL BLVD.  
 JUNEAU, AK 99801  
 AECL848

STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES  
 6860 GLACIER HIGHWAY, JUNEAU, AK 99801  
 (907) 465-1763

**KETCHIKAN AIRPORT PERIMETER FENCING UPGRADES**  
 GRADING PLAN - GATE F4

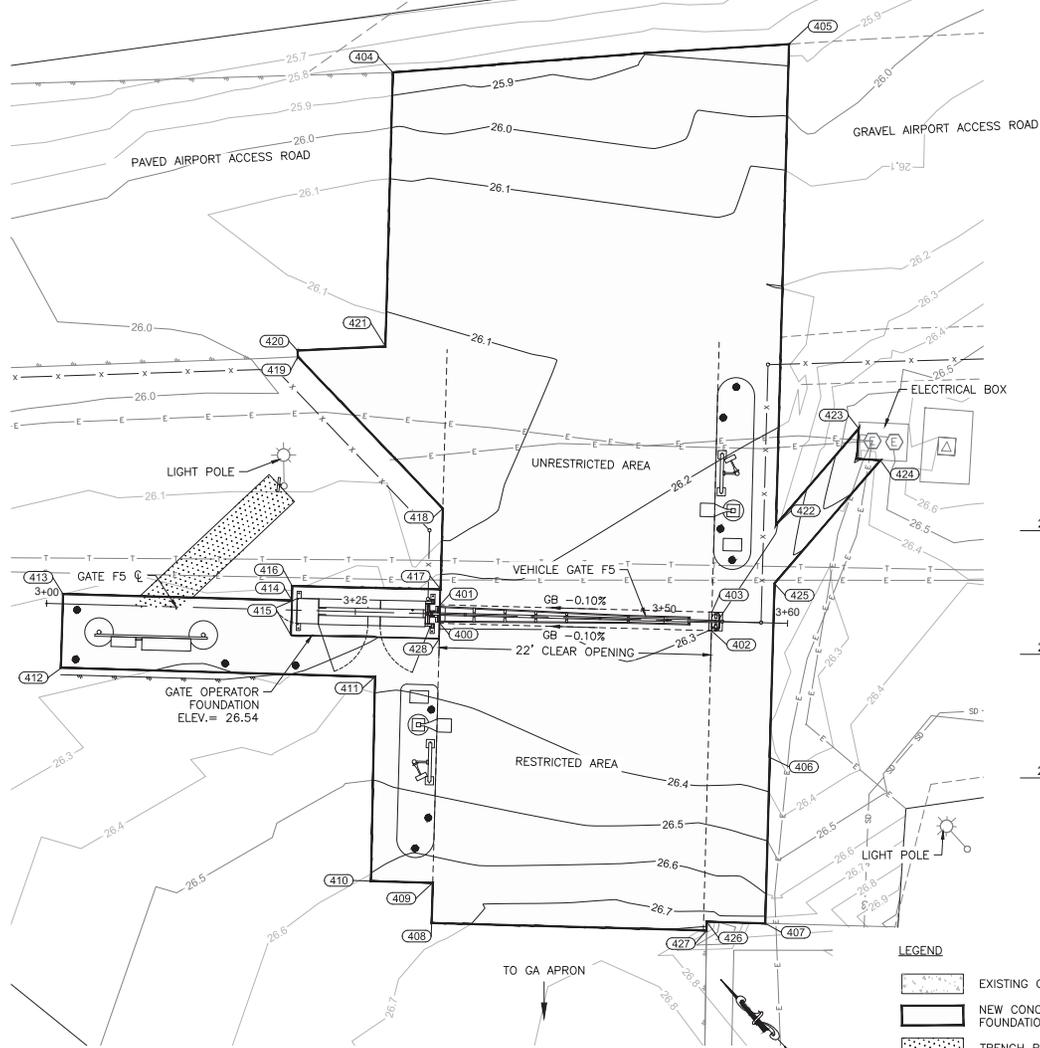


Record Drawings have been reviewed by the Project Engineer and represent the project as constructed.

*Jacob Estenson* 05/30/23  
Signature Date

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFAPT00176	2019	KGR4	55

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1 GRADING PLAN GATE F5



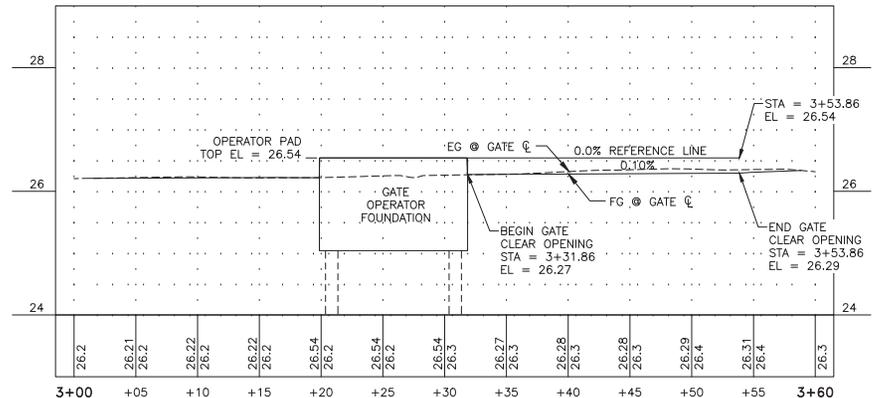
- LEGEND**
- EXISTING CONCRETE TO REMAIN
  - NEW CONCRETE DRIVEWAY, WALKWAY, FOUNDATION, OR TRENCH REPAIR PAVEMENT
  - TRENCH REPAIR IN UNPAVED AREAS
  - NEW 8' CHAINLINK FENCE WITH 3-STRAND BARBED WIRE
  - GRADE BREAK
  - NEW 10' CHAINLINK FENCE
  - FLOW LINE
  - FILL LINE

**GRADING POINTS**

POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
400	1291026.92	3094544.57	26.28'	GB
401	1291028.00	3094545.62	26.26'	GB
402	1291011.57	3094560.33	26.30'	GB
403	1291012.64	3094561.37	26.29'	GB
404	1291062.23	3094572.01	25.83' ±	MATCH EXIST.
405	1291042.16	3094597.13	25.86' ±	MATCH EXIST.
406	1291000.83	3094556.84	26.33'	EP
407	1290991.21	3094547.47	26.73'	EP
408	1291009.56	3094527.65	26.68' ±	MATCH EXIST.
409	1291011.89	3094529.92	26.64' ±	MATCH EXIST.
410	1291015.38	3094526.34	26.61' ±	MATCH EXIST.
411	1291027.30	3094537.79	26.38' ±	MATCH EXIST.
412	1291045.05	3094519.58	26.28' ±	MATCH EXIST.
413	1291049.35	3094523.77	26.20' ±	MATCH EXIST.
414	1291036.42	3094537.04	26.21' ±	MATCH EXIST.

**GRADING POINTS**

POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
415	1291034.37	3094535.07	26.25' ±	MATCH EXIST.
416	1291037.25	3094537.84	26.20' ±	MATCH EXIST.
417	1291028.90	3094546.49	26.23' ±	MATCH EXIST.
418	1291033.57	3094551.06	26.09' ±	MATCH EXIST.
419	1291050.55	3094550.76	26.02' ±	MATCH EXIST.
420	1291050.94	3094551.08	26.03' ±	MATCH EXIST.
421	1291046.36	3094556.54	26.06' ±	MATCH EXIST.
422	1291014.30	3094569.98	26.29'	EP
423	1291015.50	3094580.18	26.58' ±	MATCH EXIST.
424	1291012.42	3094579.73	26.56' ±	MATCH EXIST.
425	1291010.90	3094566.65	26.34'	EP
426	1290994.53	3094544.07	26.73' ±	MATCH EXIST.
427	1290994.02	3094543.58	26.86' ±	MATCH EXIST.
428	1291026.03	3094543.70	26.34'	GB



GATE F5 CL PROFILE

- GRADING PLAN GENERAL NOTES**
- ALL ELEVATIONS ARE AT FLOW LINE UNLESS OTHERWISE NOTED.
  - FLAT LINE ACROSS GATE OPENING FOR REFERENCE ONLY. PROVIDE WEDGE ON GATE BOTTOM TO MAINTAIN MAX. 3" GAP BETWEEN GATE BOTTOM AND NEW TOP OF PAVEMENT.

PLANS DEVELOPED BY:  
DOW  
5368 COMMERCIAL BLVD.  
JUNEAU, AK 99801  
AECL848

STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES  
8860 GLACIER HIGHWAY, JUNEAU, AK 99801  
(907) 465-1763

**KETCHIKAN AIRPORT PERIMETER FENCING UPGRADES**  
GRADING PLAN - GATE F5

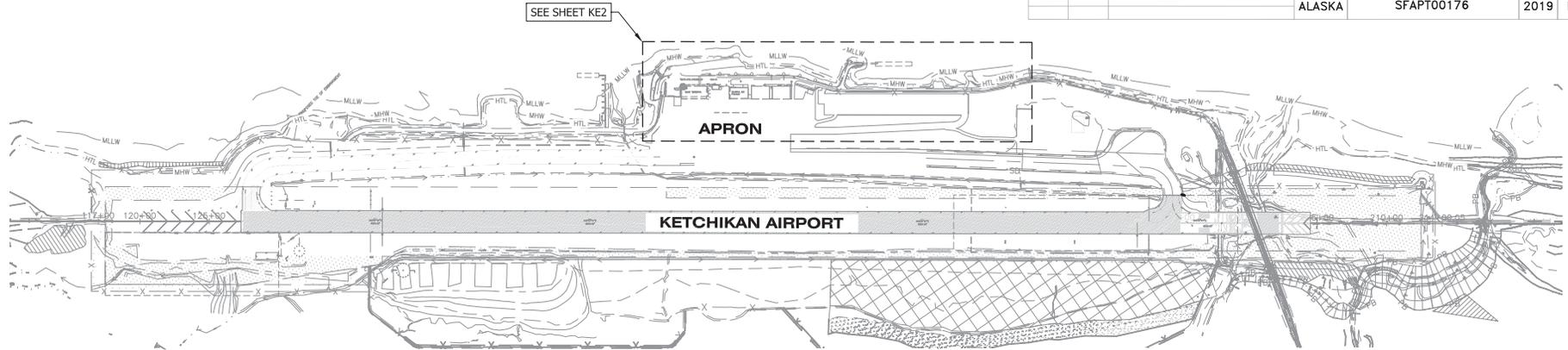






FILE: Y:\02 state of alaska\ketchikan airport perimeter fencing upgrade\working drawings\ak\GENERAL NOTES & LEGEND.dwg DATE: 7/30/2019 9:18 LAYOUT: KE1 CHECKED: MCM DESIGNED: MCM DRAFTED: LRW

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFAPT00176	2019	KE1	17



① KETCHIKAN AIRPORT LAYOUT PLAN

0 250 500 Feet



ELECTRICAL LEGEND			
ACL	ACCESS CONTROL	Ⓜ	METER/MAIN
ADJ.	ADJACENT	MIN	MINIMUM
AES	ADVANCED ENCRYPTION STANDARD	NEC	NATIONAL ELECTRICAL CODE
AFF	ABOVE FINISHED FLOOR	NO. 8	2 CONDUCTOR NUMBER 8 AWG
AFG	ABOVE FINISHED GRADE	NFS	NON-FROST SUSCEPTIBLE
AUX	AUXILIARY	N.C.	NORMALLY CLOSED
		N.O.	NORMALLY OPEN
AWG	AMERICAN WIRE GAUGE	NOM.	NOMINAL
BLDG	BUILDING	OSDP	OPEN SUPERVISED DEVICE PROTOCOL
C/B	CIRCUIT BREAKER		
		PED	PEDESTRIAN
20/3	CIRCUIT BREAKER (AMPS/POLES)	PTMP	POINT TO MULTI-POINT
CKT	CIRCUIT	PTP	POINT TO POINT
COAX	COAXIAL CABLE	PWR	POWER
C	CONDUIT	POE	POWER OVER ETHERNET
CTRL	CONTROL	PVC	RIGID POLYVINYL CHLORIDE CONDUIT
COND	CONDUCTOR	REC	RECEPTACLE
CU	COPPER	RM	READER MODULE
Ⓜ	DOUBLE DUPLEX RECEPTACLE	STP	SHIELDED TWISTED PAIR
ENCL	ENCLOSURE	SAS	SITE APPLICATION SERVER
EXTG	EXISTING	STR	STRANDED
GFI	GROUND FAULT INTERRUPTER	SPD	SURGE PROTECTION DEVICE
GND	GROUND	SS	316 STAINLESS STEEL
GRS	GALVANIZED RIGID STEEL	TC	TINNED COPPER
GRC	GALVANIZED RIGID STEEL CONDUIT	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION DEVICE
HH	HANDHOLE		
HTR	HEATER	TYP-#	TYPICAL OF # (TYP-2) = TYPICAL OF 2
ISP	INTERNET SERVICE PROVIDER	TSP	TWISTED SHIELDED PAIR
J-BOX	JUNCTION BOX	VAC	VOLTS AC
		VDC	VOLTS DC
LTG	LIGHTING	WAN	WIDE AREA NETWORK
LOS	LINE OF SIGHT	WP	WEATHERPROOF
LR	LONG RANGE	W/	WITH
■	MAIN LUG	XLPE	CROSS-LINKED POLYETHYLENE
MAX	MAXIMUM	1φ, 3W	1 PHASE, 3 WIRE
MAS	MASTER APPLICATION SERVER		

SHEET LIST TABLE	
SHEET NO.	SHEET TITLE
KE1	GENERAL NOTES & LEGEND
KE2	OVERALL ELECTRICAL SITE PLAN
KE3	GATES F2 & F4 SITE PLAN
KE4	GATE F13 DETAILED SITE PLAN
KE5	GATE F13 SINGLE LINE DIAGRAM
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KE8	GATE F2 DETAILED SITE PLAN
KE9	GATE F2 SINGLE LINE DIAGRAM
KE10	GATE F2 POWER & NETWORK SCHEMATIC
KE11	GATE F4 DETAILED SITE PLAN
KE12	GATE F4 SINGLE LINE DIAGRAM
KE13	GATE F4 POWER & NETWORK SCHEMATIC
KE14	GATE F5 DETAILED SITE PLAN
KE15	GATE F5 SINGLE LINE DIAGRAM
KE16	GATE F5 POWER & NETWORK SCHEMATIC
KE17	WIRELESS TOPOLOGY SCHEMATIC

SHEET NOTES:

- PROVIDE ELECTRICAL FOR VEHICLE AND PEDESTRIAN GATES PER THE ATTACHED STANDARDS SE1-SE24. THE STANDARDS SHOW THE TYPICAL CONFIGURATION OF EQUIPMENT AND WIRING. SITE SPECIFIC INFORMATION IS SHOWN IN THIS PLAN SET KE1-KE17. DEVIATIONS OR CHANGES FROM THE STANDARD SITE PLANS (SE2-SE4) ARE SHOWN ON THE SITE PLANS FOR EACH GATE.
- THE SINGLE LINE DIAGRAM FOR EACH GATE, THE POWER AND NETWORK SCHEMATIC FOR EACH GATE AND WIRELESS NETWORK TOPOLOGY FOR THE GATES ARE SHOWN IN THIS PLAN SET KE1-KE17. ALL OTHER REQUIRED WORK FOR EACH GATE IS SHOWN IN THE STANDARD DRAWINGS INCLUDING HOW EQUIPMENT IS TO BE MOUNTED, LAID OUT IN ENCLOSURES, DETAILS, ELEVATIONS, ETC.
- SEE CIVIL DRAWINGS FOR ALL CIVIL WORK INCLUDING GATES, FENCING, GATE ISLANDS, BOLLARDS, FOUNDATIONS AND ALL OTHER CIVIL WORK.
- THE SPACING FROM THE CARD READER TO GATE IS 12' IN KETCHIKAN INSTEAD OF THE 18' SHOWN IN STANDARD DRAWINGS. SEE GATE SPECIFIC SITE PLANS.
- ALL WORK IS NEW UNLESS NOTED OTHERWISE.
- ADJUST UNDERGROUND ROUTING TO COMPLY WITH NUMBER OF BENDS PER NEC. ADDITIONAL BENDS ARE SHOWN FOR CLARITY.

Record Drawings have been reviewed by the Project Engineer and represent the project as constructed.

*Jacob Estenson* 05/30/23  
 Signature Date

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 907-789-3350  
 AECL 1010



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KETCHIKAN AIRPORT PERIMETER FENCING UPGRADES

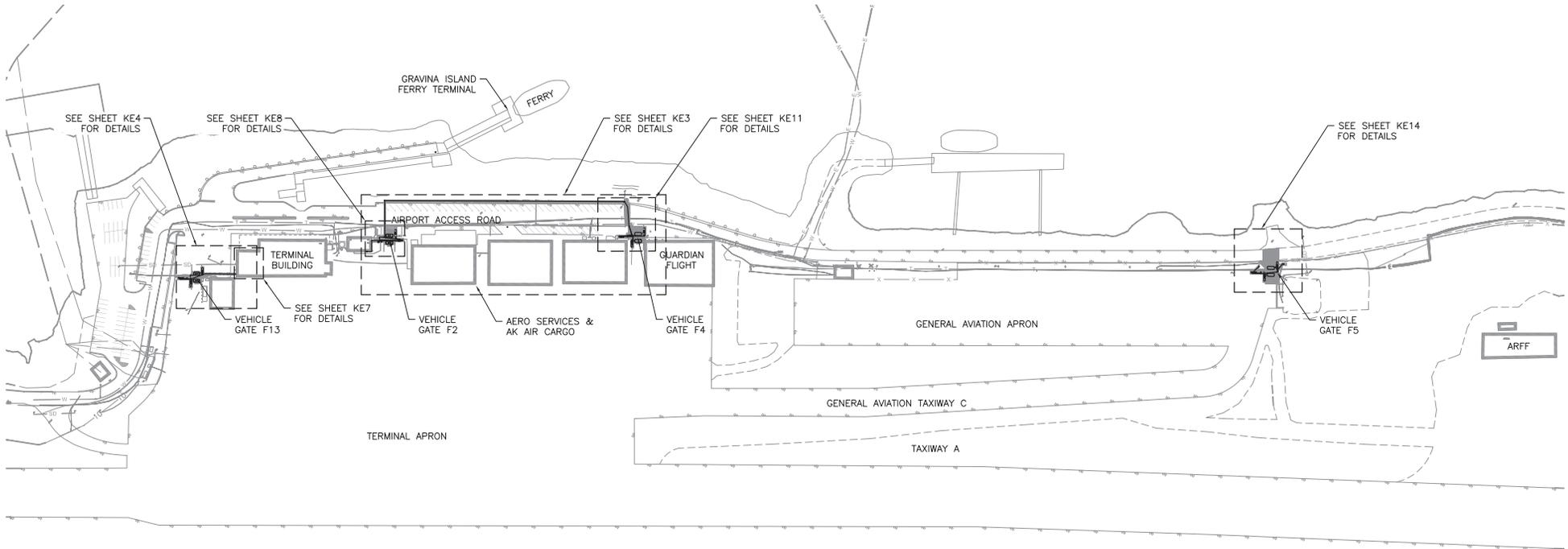
GENERAL NOTES & LEGEND

FILE | X:\02 state of ak\66 ketchikan airport perimeter fencing upgrade\working drawings\overall site plan.dwg | DATE | 8/20/2019 9:06 | LAYOUT | KE2 | DESIGNED | MDM | CHECKED | MCM | DRAFTED | LRW

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFAPT00176	2019	KE2	17

SHEET NOTES:

1. SEE CIVIL PLANS FOR GATE, GATE ISLAND, AND OTHER CIVIL WORK.
2. DISCONNECT AND REMOVE THE EXISTING GATE OPERATOR ELECTRICAL, POWER FEEDER, AND ASSOCIATED BOXES AT ALL EXISTING GATES TO BE DEMOLISHED. DISCONNECT AND REMOVE ALL CARD READERS AND ASSOCIATED ELECTRICAL AT VEHICLE GATES AND AT PEDESTRIAN GATES THAT ARE TO BE DEMOLISHED. REMOVE PORTIONS OF CONDUIT WITHIN THE CONCRETE PATCH & REPAIR LIMITS OF EACH VEHICLE AND PEDESTRIAN GATE. CONDUIT BEYOND THESE LIMITS CAN BE ABANDONED IN PLACE. INCLUDE LOCATION INFORMATION ABOUT THE EXISTING CONDUITS IN THE FINAL AS-BUILT DRAWINGS. SEE CIVIL DRAWINGS FOR MORE ON DEMOLITION WORK REQUIRED AND COORDINATE WITH DEMOLITION PROCESS WITH ALL OTHER TRADES.



Record Drawings have been reviewed by the Project Engineer and represent the project as constructed.

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① OVERALL ELECTRICAL SITE PLAN

0 100 200 Feet



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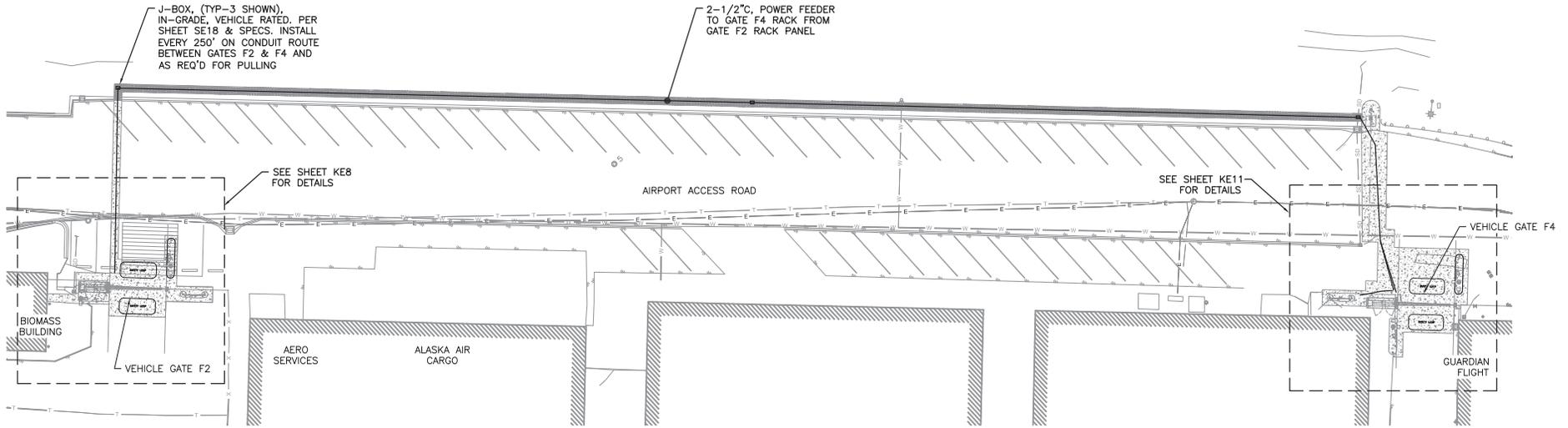
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KETCHIKAN AIRPORT PERIMETER  
 FENCING UPGRADES

OVERALL ELECTRICAL SITE PLAN

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			ALASKA	SFAPT00176	2019	KE3	17



① GATE F2 & F4 SITE PLAN



SHEET NOTES:

- SEE STANDARD DRAWINGS ASSOCIATED WITH THIS PROJECT FOR TYPICAL DETAILS, MORE COMPLETE DESCRIPTIONS, DIMENSIONS, ADDITIONAL WIRING INFORMATION, EQUIPMENT ELEVATIONS, ETC. NOT INCLUDED HERE. STANDARD DRAWINGS ARE TO BE UTILIZED IN CONJUNCTION WITH SITE SPECIFIC DRAWINGS TO FULLY SPECIFY THE PROJECT REQUIREMENTS. REFERENCES FROM STANDARD DRAWINGS INCLUDE:
  - VERTICAL PIVOT GATES: SE2, SE3, SE8-SE10 (AS APP'L), SE21.
  - CANTILEVER GATES: SE4, SE5, SE8-SE10 (AS APP'L), SE21.
  - PEDESTRIAN GATES: SE6, SE7, SE9-SE10 (AS APP'L).
  - POWER & AC ENCLOSURE RACKS: SE8-SE10 (AS APP'L), SE12-SE16 (AS APP'L), SE23.
  - READER ISLAND: SE17, SE22 (AS APP'L).
  - FRONT END & GEN ELEC: SE11, SE18, SE19, SE20.
- SEE CIVIL PLANS FOR GATE, DRIVEWAY, OTHER CIVIL WORK. THIS INCLUDES DIMENSIONAL INFORMATION NOT SHOWN ON THIS SHEET (I.E. CONCRETE ISLAND POSITIONS, DRIVEWAY WIDTHS, ETC.)
- THE PHYSICAL ARRANGEMENT OF EQUIPMENT AND ELECTRICAL ON THIS SHEET WILL COMPLY WITH SITE SPECIFIC INFORMATION AND REQUIREMENTS. UNLESS OTHERWISE NOTED ON THESE SHEETS, ALL ELECTRICAL WILL COMPLY WITH THE STANDARD ELECTRICAL SHEETS WITH FIELD MODIFICATIONS AS NECESSARY OR NOTED.
- ALL DIMENSIONS SHOWN ON THIS PLAN ARE NOMINAL AND SHALL BE COORDINATED WITH FENCE INSTALLER AND CONCRETE CONTRACTOR. NOT ALL DIMENSIONS ARE SHOWN ON THIS SHEET. SEE CIVIL PLANS FOR MORE INFORMATION.
- SEE SHEET KE9 FOR POWER CIRCUIT INFO AND SHEET KE10 FOR AC & COMM CIRCUITS ASSOCIATED WITH GATE F2, AND SHEETS KE12 & KE13 FOR WORK AT GATE F4.

Record Drawings have been reviewed by the Project Engineer and represent the project as constructed.

*Jacob Estenson* 05/30/23  
 Signature Date

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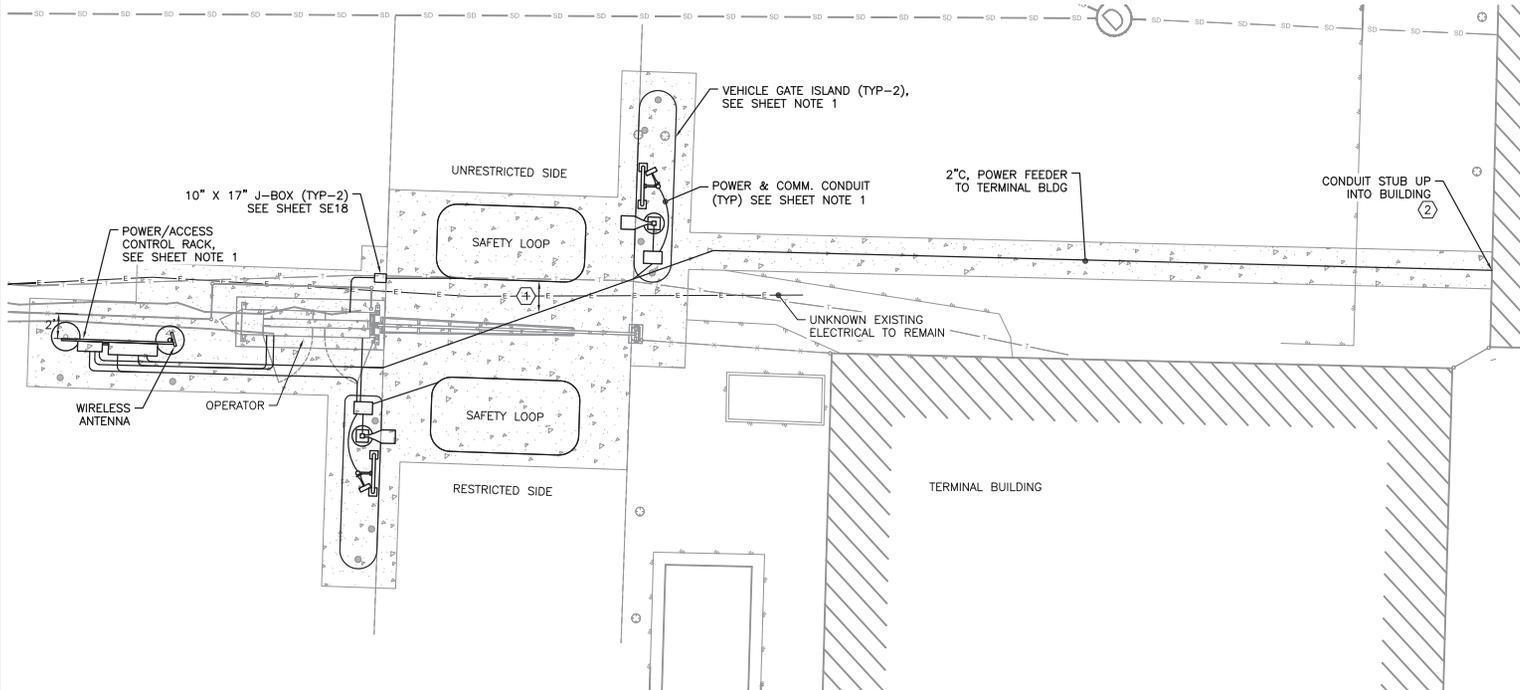
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KETCHIKAN AIRPORT PERIMETER  
 FENCING UPGRADES

GATES F2 & F4 SITE PLAN

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			ALASKA	SFAPT00176	2019	KE4	17



SHEET NOTES:

- SEE STANDARD DRAWINGS ASSOCIATED WITH THIS PROJECT FOR TYPICAL DETAILS, MORE COMPLETE DESCRIPTIONS, DIMENSIONS, ADDITIONAL WIRING INFORMATION, EQUIPMENT ELEVATIONS, ETC. NOT INCLUDED HERE. STANDARD DRAWINGS ARE TO BE UTILIZED IN CONJUNCTION WITH SITE SPECIFIC DRAWINGS TO FULLY SPECIFY THE PROJECT REQUIREMENTS. REFERENCES FROM STANDARD DRAWINGS INCLUDE:
  - VERTICAL PIVOT GATES: SE2, SE3, SE8-SE10 (AS APP'L), SE21.
  - CANTILEVER GATES: SE4, SE5, SE8-SE10 (AS APP'L), SE21.
  - PEDESTRIAN GATES: SE6, SE7, SE9-SE10 (AS APP'L).
  - POWER & AC ENCLOSURE RACKS: SE8-SE10 (AS APP'L), SE12-SE16 (AS APP'L), SE23.
  - READER ISLAND: SE17, SE22 (AS APP'L).
  - FRONT END & GEN ELEC: SE11, SE18, SE19, SE20.
- SEE CIVIL PLANS FOR GATE, DRIVEWAY, OTHER CIVIL WORK. THIS INCLUDES DIMENSIONAL INFORMATION NOT SHOWN ON THIS SHEET (I.E. CONCRETE ISLAND POSITIONS, DRIVEWAY WIDTHS, ETC.)
- THE PHYSICAL ARRANGEMENT OF EQUIPMENT AND ELECTRICAL ON THIS SHEET WILL COMPLY WITH SITE SPECIFIC INFORMATION AND REQUIREMENTS. UNLESS OTHERWISE NOTED ON THESE SHEETS, ALL ELECTRICAL WILL COMPLY WITH THE STANDARD ELECTRICAL SHEETS WITH FIELD MODIFICATIONS AS NECESSARY OR NOTED.
- ALL DIMENSIONS SHOWN ON THIS PLAN ARE NOMINAL AND SHALL BE COORDINATED WITH FENCE INSTALLER AND CONCRETE CONTRACTOR. NOT ALL DIMENSIONS ARE SHOWN ON THIS SHEET. SEE CIVIL PLANS FOR MORE INFORMATION.
- SEE SHEET KE5 FOR POWER CIRCUIT INFO AND SHEET KE6 FOR AC & COMM CIRCUITS ASSOCIATED WITH GATES.
- REMOVE EXISTING POWER AND CONTROL FOR THE EXISTING VEHICLE GATE F13 TO BE REMOVED. SEE CIVIL DEMO PLANS.

KEY NOTES:

- MAINTAIN A MINIMUM OF 12" SPACE BETWEEN EMBEDDED DETECTOR LOOPS AND ALL ADJACENT CONDUIT RUNS. DEPICTED SEPARATIONS SHOWN ARE NOT TO SCALE AND NOT ALL ADJACENT CONDUITS ARE NOTED. MAINTAIN SEPARATION IN ALL CASES.
- ROUTE 2" GRC CONDUIT WITH GATE POWER FEEDER UP EXTERIOR OF BUILDING AND STUB INTO BUILDING ABOVE FIRST FLOOR CEILING. CONDUIT TO BE EXTENDED TO EXISTING PANEL WITH NEW BREAKER SERVING GATE F13. SEE SHEET KE7 FOR BUILDING FLOOR PLANS.

① GATE F13 DETAILED SITE PLAN



Record Drawings have been reviewed by the Project Engineer and represent the project as constructed.

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 Signature Date

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KETCHIKAN AIRPORT PERIMETER  
 FENCING UPGRADES

GATE F13 DETAILED SITE PLAN

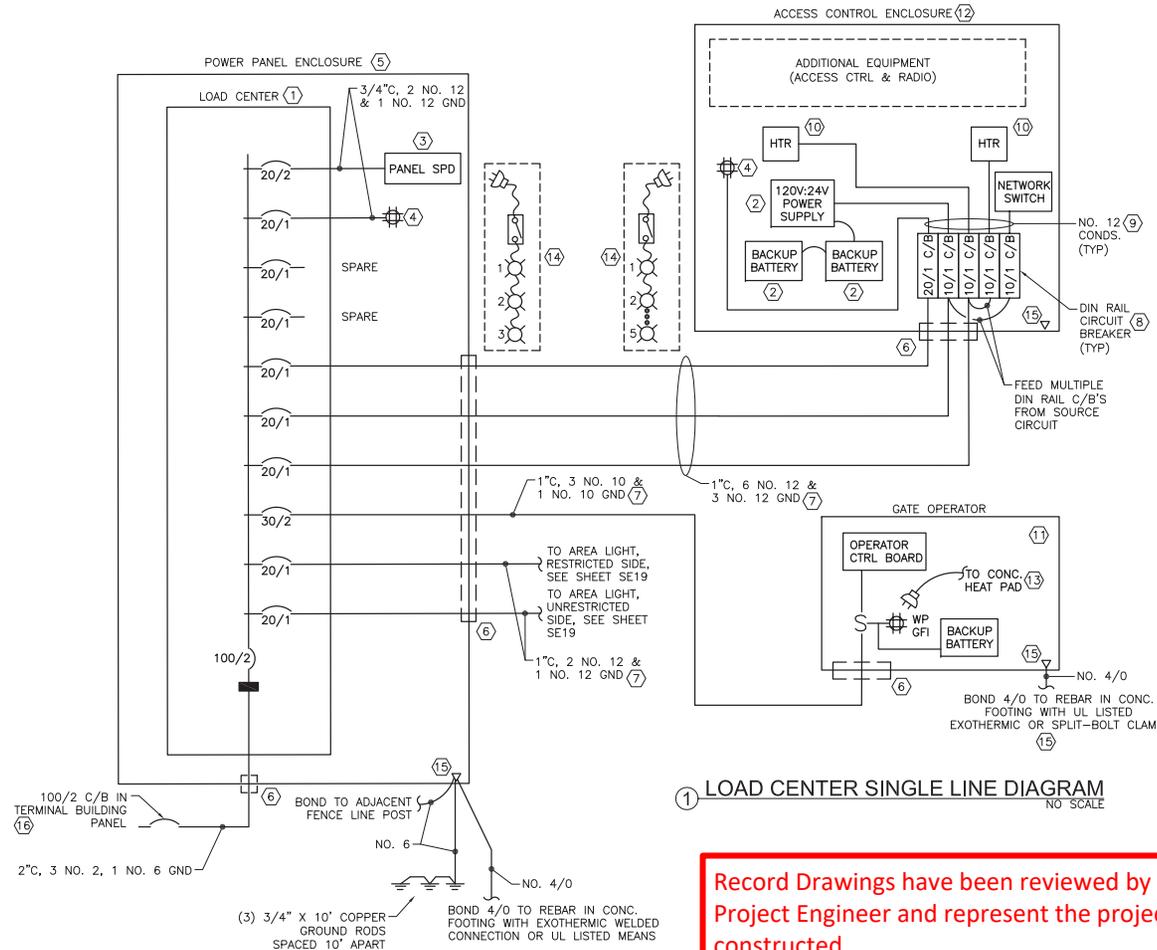
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			ALASKA	SFAPT00176	2019	KE5	17

SHEET NOTES:

- THIS SCHEMATIC IS DIAGRAMMATIC ONLY AND REPRESENTS THE POWER SYSTEM INFRASTRUCTURE REQUIRED TO CONNECT THE SYSTEM COMPONENTS AND LOCATIONS. THIS BLOCK DIAGRAM DOES NOT REPRESENT ALL CONDUITS AND CONDUCTORS REQUIRED FOR THE PROJECT. SEE SHEET KE6 FOR ACCESS CONTROL SCHEMATIC.
- ALL JUNCTION BOXES, CABINETS, ENCLOSURE, ETC. THAT ARE ACCESSIBLE TO THE PUBLIC MUST HAVE TAMPERPROOF SCREWS OR BE KEY LOCKABLE.
- ALL POWER SUPPLIES, WIRING, CONDUIT, ETC. MUST BE SIZED ACCORDING TO MANUFACTURERS' RECOMMENDATIONS AND SPECIFICATIONS AND ALL SHALL BE INSTALLED PER THE NATIONAL ELECTRICAL CODE.
- NOT ALL SYSTEM COMPONENTS ARE LOCATED AT EACH GATE LOCATION. SEE PLANS FOR EQUIPMENT INCLUDED AT EACH LOCATION.
- PROVIDE BONDING OF ALL METALLIC ENCLOSURES AT THE ENCLOSURE RACK PER NEC REQUIREMENTS AND TIED BACK TO THE GROUNDING ELECTRODE AS SHOWN ON THIS SHEET.

KEY NOTES:

- LOAD CENTER 120/240V, 1ø, 3W, 100A, 12 CKT. UNIT TO INCLUDE NEMA 3R CONSTRUCTION AND MAIN CIRCUIT BREAKER. PROVIDE WITH 10KAIC RATED BRANCH AND MAIN BREAKERS.
- LOW-VOLTAGE POWER DISTRIBUTION WITHIN ACCESS CONTROL ENCLOSURE. SEE SHEET KE6 FOR AC SCHEMATIC.
- SURGE PROTECTION DEVICE. SERVICE ENTRANCE RATED WITH INDIVIDUALLY FUSED MOV ELEMENTS, NEMA 4X RATED, UL LISTED 1449 DEVICE. MOUNT ON SIDE OF PANEL FED WITH STRAIGHT AND SHORT CONDUCTORS.
- SURFACE MOUNT SERVICE QUAD REC, 20A GFI, HD, COMMERCIAL GRADE. MOUNT INSIDE ENCLOSURES.
- STAINLESS STEEL, NEMA 4X ENCLOSURE THAT HOUSES THE POWER PANEL AND ACCESSORIES INDICATED. SEE SHEET SE14 FOR POWER PANEL ELEVATION & TYPICAL PANEL SCHEDULE.
- ALL CONDUIT ENCLOSURE CONNECTIONS SHALL CONSIST OF A ZINC DIE CAST, WATERTIGHT CONDUIT HUB WITH PROTECTIVE INSULATED THROAT, AND EMBEDDED O-RING. UNITS SHALL BE NEMA 4X AND RATED FOR WET OR DRY APPLICATIONS, PROVIDED IN GROUNDED STYLE WHERE REQUIRED. USED TO CONNECT RIGID METAL CONDUIT TO A THREADLESS OPENING IN THE ENCLOSURE.
- CO-LOCATE CONDUITS IN COMMON TRENCHES WHERE POSSIBLE. SEE SITE PLAN & SHEET SE18.
- THERMAL MAGNETIC, CIRCUIT BREAKER IN DIN RAIL MOUNT CONFIGURATION WITH 10KAIC RATING AND POSITIVE TRIP INDICATOR, UL LISTED FOR DIN RAIL MOUNTING.
- BREAKER SECONDARY CONDUCTORS IN ACCESS PANEL. QUANTITIES AND ROUTING AS REQUIRED. KEEP ALL CONDUCTORS AND CABLES NEATLY TRAINED, BUNDLED, AND LABELED WITHIN THE ENCLOSURE. THE NEUTRAL IS NOT SHOWN HERE BUT SHALL BE PROVIDED FOR EACH CIRCUIT.
- THERMOSTATICALLY CONTROLLED FAN POWERED HEATER WITH ADJUSTABLE SETTING BETWEEN 0-100 DEG F. 400 WATT UNITS MOUNTED TO BACK WALL OF ENCLOSURE. MODIFY SETTINGS TO MEET EQUIPMENT REQUIREMENTS.
- GATE OPERATOR WITH INTEGRAL CONTROL PANEL, SERVICE RECEPTACLE, DISCONNECT SWITCH, AND BACKUP BATTERY. SEE SHEET KE6 FOR AC SCHEMATIC.
- STAINLESS STEEL, NEMA 4X ENCLOSURE THAT HOUSES THE ACCESS CONTROL DEVICES AND ACCESSORIES INDICATED. SEE SHEET SE15 FOR TYPICAL ACCESS CONTROL ENCLOSURE ELEVATION.
- 120 WATT (1 AMP @ 120V) HEAT MAT BELOW FOOTPRINT OF OPERATOR. THERMOSTATICALLY CONTROLLED MAT WITH 6 FOOT CORD & PLUG. SEE SHEET SE2 FOR STANDARD SITE PLAN.
- PROVIDE ENCLOSURE WITH CORD & PLUG BASED LED STRIP LIGHTS FOR INTERNAL ILLUMINATION. SEE SHEET SE14 FOR POWER PANEL ENCLOSURE ELEVATION & SHEET SE15 FOR TYPICAL ACCESS CONTROL ENCLOSURE ELEVATION. QUANTITY OF COMPONENTS AND CABLE LENGTHS AS REQUIRED PER EACH ENCLOSURE SIZE.
- PROVIDE SOLID GROUND CONNECTIONS FOR ALL ENCLOSURE CIRCUITS. BOND ENCLOSURE AND ENCLOSURE LOW RESISTANCE GROUND ESTABLISHED BACK TO THE GROUNDING ELECTRODE SYSTEM AT THE POWER PANEL.
- POWER GATE FROM NEW CIRCUIT BREAKER IN EXISTING SQUARE D NQO PANEL IN TERMINAL BUILDING. SEE DETAIL 1, SHEET KE7.



Record Drawings have been reviewed by the Project Engineer and represent the project as constructed.

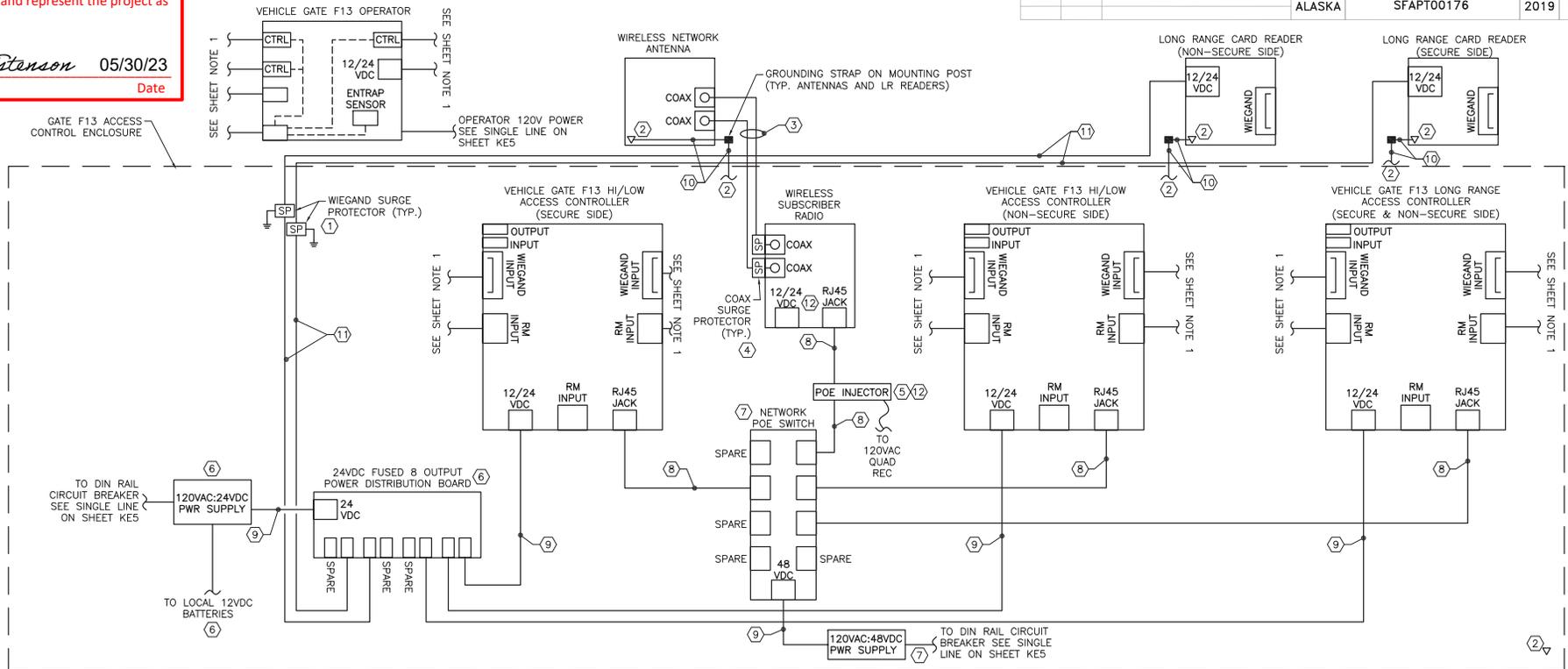

05/30/23  
Date

<p>PLANS DEVELOPED BY: MORRIS ENGINEERING GROUP, INC 2375 JORDAN AVE #7 JUNEAU, AK 99801 907-789-3350 AECIL 1010</p>		<p>STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES 6860 GLACIER HIGHWAY, JUNEAU, AK 99801 (907) 465-1763</p> <p style="text-align: center;"><b>KETCHIKAN AIRPORT PERIMETER FENCING UPGRADES</b></p> <p style="text-align: center;">GATE F13 SINGLE LINE DIAGRAM</p>
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Record Drawings have been reviewed by the Project Engineer and represent the project as constructed.

*Jacob Etanson* 05/30/23  
Signature Date

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFAPT00176	2019	KE6	17



1 ACCESS CONTROL POWER & NETWORK SCHEMATIC  
NO SCALE

SHEET NOTES:

- THIS SCHEMATIC REPRESENTS THE POWER, NETWORK CABLES, & CONNECTIONS WITHIN THE ACCESS CONTROL ENCLOSURE SPECIFIC TO GATE F13. SEE SHEET SE8 FOR TYPICAL 3-CONTROLLER SCHEMATIC WITH ADDITIONAL CIRCUITS & CONNECTIONS REQUIRED.
- PROVIDE FACTORY TERMINATED CAT 6 CABLING AND 1/2" OR 7/8" COAXIAL CABLING. 7/8" FOR LENGTHS > 75 FT.
- SEE SHEET SE15 FOR ACCESS CONTROL ENCLOSURE ELEVATION AND GENERAL LAYOUT WITHIN THE ENCLOSURE.
- NEATLY TRAIN, BUNDLE, AND LABEL ALL CABINET CABLES AND CONDUCTORS. UTILIZE THE WIRE MANAGEMENT TRACKS AS MUCH AS POSSIBLE (NOT SHOWN HERE). ALL POWER SUPPLIES, WIRING, CONDUIT, ETC. MUST BE SIZED ACCORDING TO THE NATIONAL ELECTRICAL CODE AND INSTALLED PER MANUFACTURER RECOMMENDATIONS.
- ALL SHIELDED CABLES SHALL BE PROPERLY GROUNDED TO ONE COMMON GROUND AT THE ACCESS CONTROL CABINET. GROUNDED SINGLE POINTS TO MULTIPLE EARTH GROUND POINTS CREATES GROUND LOOPS AND SHOULD BE AVOIDED.
- ANTI-CORROSION LUBRICANT SHALL BE APPLIED TO ALL EXPOSED WIRELESS ANTENNA CONDUCTOR AND CABLE CONNECTIONS.

KEY NOTES:

- PROVIDE IN-LINE WIEGAND CABLE SURGE PROTECTION DEVICES FOR LONG RANGE READERS. 2K AMP PROTECTION PER PAIR, 12V/24V RATED DEVICES, WITH DIN RAIL MOUNTING KIT. MOUNT UNITS INSIDE OF ACCESS CONTROL ENCLOSURE AND SOLIDLY CONNECT TO ENCLOSURE GROUND PER THE NATIONAL ELECTRICAL CODE. THE CABLE SHIELDING TO GROUND LUG ON DEVICE.
- ANTENNAS AND LONG RANGE READERS SHALL BE SOLIDLY GROUNDED TO THE COMMON EQUIPMENT GROUNDING CONDUCTOR WITHIN THE ACCESS CONTROL ENCLOSURE. BOND EQUIPMENT TO THE GROUNDING STRAP ADJACENT TO THE ANTENNAS & READERS AND CONNECT FROM GROUNDING STRAP TO THE ACCESS CONTROL ENCLOSURE GROUNDING POINT.
- (2) PRE-TERMINATED 1/2" OR 7/8" LDF SHIELDED COAX CABLES TO ANTENNA FROM RADIO. COAX CABLES ARE NOT TO BE MADE IN THE FIELD BUT ORDERED AT EXACT LENGTHS REQUIRED. WHERE COAX THREADS ONTO THE ANTENNA CONNECTORS PROVIDE MULTIPLE LAYERS OF VINYL ELECTRIC TAPE, FOLLOWED BY BUTYL MASTIC TAPE, FOLLOWED AGAIN BY VINYL TAPE TO ENSURE A COMPLETELY SEALED CONNECTION. FOLLOW MANUFACTURER WRITTEN INSTRUCTIONS.
- IN-LINE COAXIAL LIGHTNING SURGE PROTECTOR FOR RADIO SIDE OF WIRELESS NETWORK LINK. CONNECT TO OUTPUT SIDE OF RADIO TO COAX FEEDING THE ANTENNA.
- WIRELESS ANTENNA POE INJECTOR WITH INTEGRAL SURGE ARRESTOR. CONNECT WITH CAT 5E/6 CABLE BETWEEN SWITCH AND RADIO, POWER FROM 120V SOURCE.
- 120VAC:24VDC, 250 WATT POWER SUPPLY WITH CONNECTIVITY FOR EXTERNAL BATTERY SOURCE FOR LOW VOLTAGE POWER SYSTEM BACKUP. SWITCH MODE DC POWER SUPPLY WITH FIELD SELECTABLE 12 OR 24VDC OUTPUT. MULTIPLE OUTPUTS FOR SYSTEM POWER, LOCK, AND FIRE ALARM DIRECT CONNECTIONS. TIE TO THE 8-OUTPUT DISTRIBUTION BOARD WITH INDIVIDUALLY FUSED OUTPUTS AND FIELD SELECTABLE 12 OR 24VDC VOLTAGES.
- HARDENED NETWORK SWITCH WITH MINIMUM (8) RJ45 OUTPUT PORTS. POWER FROM INDUSTRIAL GRADE, SWITCH MODE, LOW NOISE, 120VAC:48VDC 240 WATT POWER SUPPLY.
- (1) CAT 6 SHIELDED, OUTDOOR CABLE W/RJ45 JACKS ON BOTH ENDS.
- (1) SHIELDED 18/2 MULTI-COND. CABLE (POWER CABLE).
- (1) 12 AWG SOLID CU COND., GREEN JKT (EQUIPMENT GROUNDING CONDUCTOR).
- (1) SHIELDED 16/2 MULTI-COND. CABLE (LONG RANGE READER POWER CABLE).
- USE EITHER POE OR 12/24VDC POWER ON POE ENABLED DEVICES, NEVER BOTH. IF 12/24VDC SUPPLY IS USED THEN CONNECT RADIO TO SWITCH VIA CAT 5E/6 CABLE WITHOUT A POE INJECTOR. POWERING ANY DEVICE WITH POE AND A POWER SUPPLY CAN RESULT IN DAMAGE TO EQUIPMENT AND POSSIBLY TO PERSONNEL.

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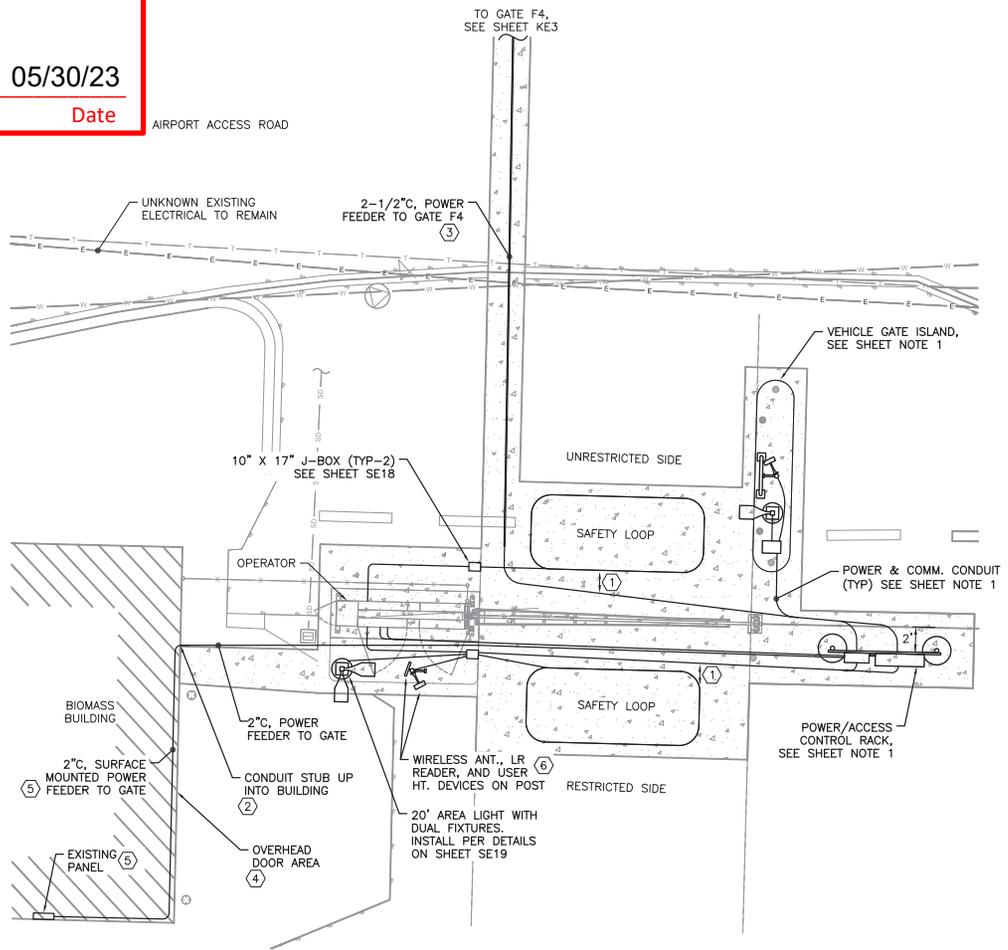


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*Jacob Estenson* 05/30/23  
 Signature Date

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			ALASKA	SFAPT00176	2019	KE8	17



① GATE F2 DETAILED SITE PLAN  
 1"=10'  
 30' 5' 10'

- SHEET NOTES:
- SEE STANDARD DRAWINGS ASSOCIATED WITH THIS PROJECT FOR TYPICAL DETAILS, MORE COMPLETE DESCRIPTIONS, DIMENSIONS, ADDITIONAL WIRING INFORMATION, EQUIPMENT ELEVATIONS, ETC. NOT INCLUDED HERE. STANDARD DRAWINGS ARE TO BE UTILIZED IN CONJUNCTION WITH SITE SPECIFIC DRAWINGS TO FULLY SPECIFY THE PROJECT REQUIREMENTS. REFERENCES FROM STANDARD DRAWINGS INCLUDE:
    - VERTICAL PIVOT GATES: SE2, SE3, SE8-SE10 (AS APP'L), SE21.
    - CANTILEVER GATES: SE4, SE5, SE8-SE10 (AS APP'L), SE21.
    - PEDESTRIAN GATES: SE6, SE7, SE9-SE10 (AS APP'L).
    - POWER & AC ENCLOSURE RACKS: SE8-SE10 (AS APP'L), SE12-SE16 (AS APP'L), SE23.
    - READER ISLAND: SE17, SE22 (AS APP'L).
    - FRONT END & GEN ELEC: SE11, SE18, SE19, SE20.
  - SEE CIVIL PLANS FOR GATE, DRIVEWAY, OTHER CIVIL WORK. THIS INCLUDES DIMENSIONAL INFORMATION NOT SHOWN ON THIS SHEET (I.E. CONCRETE ISLAND POSITIONS, DRIVEWAY WIDTHS, ETC.)
  - THE PHYSICAL ARRANGEMENT OF EQUIPMENT AND ELECTRICAL ON THIS SHEET WILL COMPLY WITH SITE SPECIFIC INFORMATION AND REQUIREMENTS. UNLESS OTHERWISE NOTED ON THESE SHEETS, ALL ELECTRICAL WILL COMPLY WITH THE STANDARD ELECTRICAL SHEETS WITH FIELD MODIFICATIONS AS NECESSARY OR NOTED.
  - ALL DIMENSIONS SHOWN ON THIS PLAN ARE NOMINAL AND SHALL BE COORDINATED WITH FENCE INSTALLER AND CONCRETE CONTRACTOR. NOT ALL DIMENSIONS ARE SHOWN ON THIS SHEET. SEE CIVIL PLANS FOR MORE INFORMATION.
  - SEE SHEET KE9 FOR POWER CIRCUIT INFO AND SHEET KE10 FOR AC & COMM CIRCUITS ASSOCIATED WITH GATES.
  - REMOVE EXISTING POWER AND CONTROL FOR THE EXISTING VEHICLE GATE F2 TO BE REMOVED. SEE CIVIL DEMO PLANS.
- KEY NOTES:
- MAINTAIN A MINIMUM OF 12" SPACE BETWEEN EMBEDDED DETECTOR LOOPS AND ALL ADJACENT CONDUIT RUNS. DEPICTED SEPARATIONS SHOWN ARE NOT TO SCALE AND NOT ALL ADJACENT CONDUITS ARE NOTED. MAINTAIN SEPARATION IN ALL CASES.
  - ROUTE 2" RMC CONDUIT WITH GATE POWER FEEDER UP EXTERIOR OF BUILDING AND STUB INTO BUILDING. ROUTE CONDUIT SURFACE MOUNTED ABOVE OVERHEAD DOOR TO EXISTING PANEL.
  - PROVIDE NEW POWER FEEDER TO GATE F4 FROM GATE F2 PANEL. CIRCUIT SIZED INCREASED TO ACCOUNT FOR VOLTAGE DROP. ROUTE FEEDER NORTH ACROSS ACCESS ROAD, CONTINUE ALONG NORTH SIDE OF ROAD TO GATE F4. SEE SHEETS KE3 AND KE11 FOR CONTINUATION.
  - EXISTING BIOMASS BUILDING OVERHEAD GARAGE DOOR IS IN THIS AREA. DO NOT BLOCK GARAGE DOOR OPENING OR ROUTE CONDUITS ACROSS THE AREA IN FRONT OF THE DOOR. ACCESS SHALL BE MAINTAINED DURING COURSE OF CONSTRUCTION.
  - PROVIDE A NEW CIRCUIT BREAKER IN THE EXISTING BIOMASS BUILDING. THE PANEL IS A SQUARE NQOD TYPE. ROUTE FEEDER CONDUIT SURFACE MOUNTED AROUND AND ABOVE THE GARAGE DOOR TO CONDUIT STUB OUT SHOWN. PROVIDE LB CONDULETS AS NECESSARY. PROVIDE WEATHERPROOF CAULK AROUND ALL EXTERIOR WALL PENETRATIONS.
  - POST WILL BE AS SHOWN ON SHEET SE17 DETAILS, EXPECT ONLY THE LOWER 'USER' HEIGHT CARD READER AND KEYPAD WILL BE PROVIDED. MOUNT BOTH LR READER AND WIRELESS ANTENNA NEAR TOP IN BACK-TO-BACK FASHION AS REQUIRED.

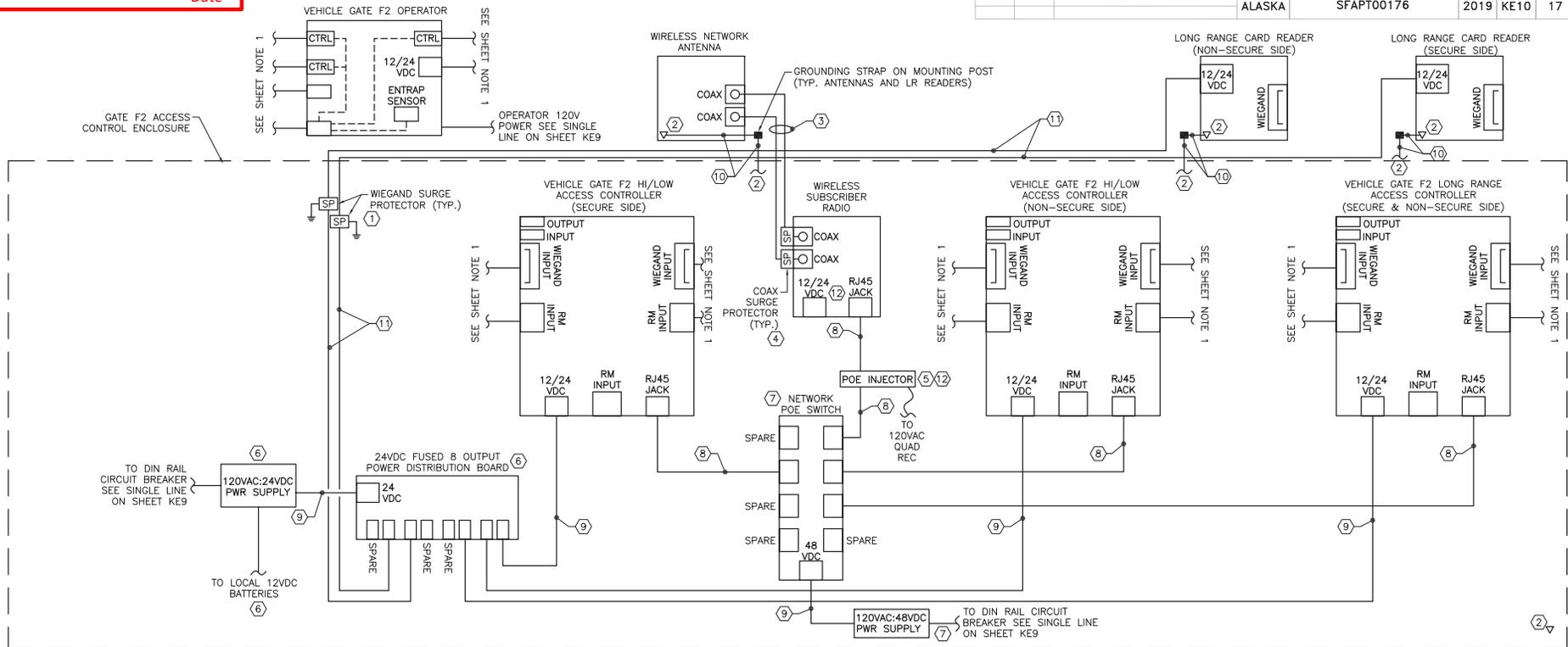
PLANS DEVELOPED BY: MORRIS ENGINEERING GROUP, INC 2375 JORDAN AVE #7 JUNEAU, AK 99801 907-789-3350 AECIL 1010		STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES 6860 GLACIER HIGHWAY, JUNEAU, AK 99801 (907) 465-1763 <b>KETCHIKAN AIRPORT PERIMETER FENCING UPGRADES</b> <b>GATE F2 DETAILED SITE PLAN</b>
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Record Drawings have been reviewed by the Project Engineer and represent the project as constructed.

*Jacob Estenson* 05/30/23  
Signature Date

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFAPT00176	2019	KE10	17



1 ACCESS CONTROL POWER & NETWORK SCHEMATIC  
NO SCALE

SHEET NOTES:

- THIS SCHEMATIC REPRESENTS THE POWER, NETWORK CABLES, & CONNECTIONS WITHIN THE ACCESS CONTROL ENCLOSURE SPECIFIC TO GATE F2. SEE SHEET SE8 FOR TYPICAL 3-CONTROLLER SCHEMATIC WITH ADDITIONAL CIRCUITS & CONNECTIONS REQUIRED.
- PROVIDE FACTORY TERMINATED CAT 6 CABLING AND 1/2" OR 7/8" COAXIAL CABLING. 7/8" FOR LENGTHS >75 FT.
- SEE SHEET SE15 FOR ACCESS CONTROL ENCLOSURE ELEVATION AND GENERAL LAYOUT WITHIN THE ENCLOSURE.
- NEATLY TRAIN, BUNDLE, AND LABEL ALL CABINET CABLES AND CONDUCTORS. UTILIZE THE WIRE MANAGEMENT TRACKS AS MUCH AS POSSIBLE (NOT SHOWN HERE). ALL POWER SUPPLIES, WIRING, CONDUIT, ETC. MUST BE SIZED ACCORDING TO THE NATIONAL ELECTRICAL CODE AND INSTALLED PER MANUFACTURER RECOMMENDATIONS.
- ALL SHIELDED CABLES SHALL BE PROPERLY GROUNDED TO ONE COMMON GROUND AT THE ACCESS CONTROL CABINET. GROUNDED SINGLE POINTS TO MULTIPLE EARTH GROUND POINTS CREATES GROUND LOOPS AND SHOULD BE AVOIDED.
- ANTI-CORROSION LUBRICANT SHALL BE APPLIED TO ALL EXPOSED WIRELESS ANTENNA CONDUCTOR AND CABLE CONNECTIONS.

KEY NOTES:

- PROVIDE IN-LINE WIEGAND CABLE SURGE PROTECTION DEVICES FOR LONG RANGE READERS. 2K AMP PROTECTION PER PAIR, 12V/24V RATED DEVICES, WITH DIN RAIL MOUNTING KIT. MOUNT UNITS INSIDE OF ACCESS CONTROL ENCLOSURE AND SOLIDLY CONNECT TO ENCLOSURE GROUND PER THE NATIONAL ELECTRICAL CODE. TIE CABLE SHIELDING TO GROUND LUG ON DEVICE.
- ANTENNAS AND LONG RANGE READERS SHALL BE SOLIDLY GROUNDED TO THE COMMON EQUIPMENT GROUNDING CONDUCTOR WITHIN THE ACCESS CONTROL ENCLOSURE. BOND EQUIPMENT TO THE GROUNDING STRAP ADJACENT TO THE ANTENNAS & READERS AND CONNECT FROM GROUNDING STRAP TO THE ACCESS CONTROL ENCLOSURE GROUNDING POINT.
- (2) PRE-TERMINATED 1/2" OR 7/8" LDF SHIELDED COAX CABLES TO ANTENNA FROM RADIO. COAX CABLES ARE NOT TO BE MADE IN THE FIELD BUT ORDERED AT EXACT LENGTHS REQUIRED. WHERE COAX THREADS ONTO THE ANTENNA CONNECTORS PROVIDE MULTIPLE LAYERS OF VINYL ELECTRIC TAPE, FOLLOWED BY BUTYL MASTIC TAPE, FOLLOWED AGAIN BY VINYL TAPE TO ENSURE A COMPLETELY SEALED CONNECTION. FOLLOW MANUFACTURER WRITTEN INSTRUCTIONS.
- IN-LINE COAXIAL LIGHTNING SURGE PROTECTOR FOR RADIO SIDE OF WIRELESS NETWORK LINK. CONNECT TO OUTPUT SIDE OF RADIO TO COAX FEEDING THE ANTENNA.
- WIRELESS ANTENNA POE INJECTOR WITH INTEGRAL SURGE ARRESTOR. CONNECT WITH CAT 5E/6 CABLE BETWEEN SWITCH AND RADIO, POWER FROM 120V SOURCE.
- 120VAC:24VDC, 250 WATT POWER SUPPLY WITH CONNECTIVITY FOR EXTERNAL BATTERY SOURCE FOR LOW VOLTAGE POWER SYSTEM BACKUP. SWITCH MODE DC POWER SUPPLY WITH FIELD SELECTABLE 12 OR 24VDC OUTPUT. MULTIPLE OUTPUTS FOR SYSTEM POWER, LOCK, AND FIRE ALARM DIRECT CONNECTIONS. TIE TO THE 8-OUTPUT DISTRIBUTION BOARD WITH INDIVIDUALLY FUSED OUTPUTS AND FIELD SELECTABLE 12 OR 24VDC VOLTAGES.
- HARDENED NETWORK SWITCH WITH MINIMUM (8) RJ45 OUTPUT PORTS. POWER FROM INDUSTRIAL GRADE, SWITCH MODE, LOW NOISE, 120VAC:48VDC 240 WATT POWER SUPPLY.
- (1) CAT 6 SHIELDED, OUTDOOR CABLE W/RJ45 JACKS ON BOTH ENDS.
- (1) SHIELDED 18/2 MULTI-COND. CABLE (POWER CABLE).
- (1) 12 AWG SOLID CU COND., GREEN JKT (EQUIPMENT GROUNDING CONDUCTOR).
- (1) SHIELDED 16/2 MULTI-COND. CABLE (LONG RANGE READER POWER CABLE).
- USE EITHER POE OR 12/24VDC POWER ON POE ENABLED DEVICES, NEVER BOTH. IF 12/24VDC SUPPLY IS USED THEN CONNECT RADIO TO SWITCH VIA CAT 5E/6 CABLE WITHOUT A POE INJECTOR. POWERING ANY DEVICE WITH POE AND A POWER SUPPLY CAN RESULT IN DAMAGE TO EQUIPMENT AND POSSIBLY TO PERSONNEL.

FILE: X:\02 state of alaska\information support\permits\working drawings\gates f2 power & network schematic.dwg DATE: 6/4/2019 12:37 LAYOUT: KE10 CHECKED: MCM DESIGNED: MCM DRAFTED: LRW

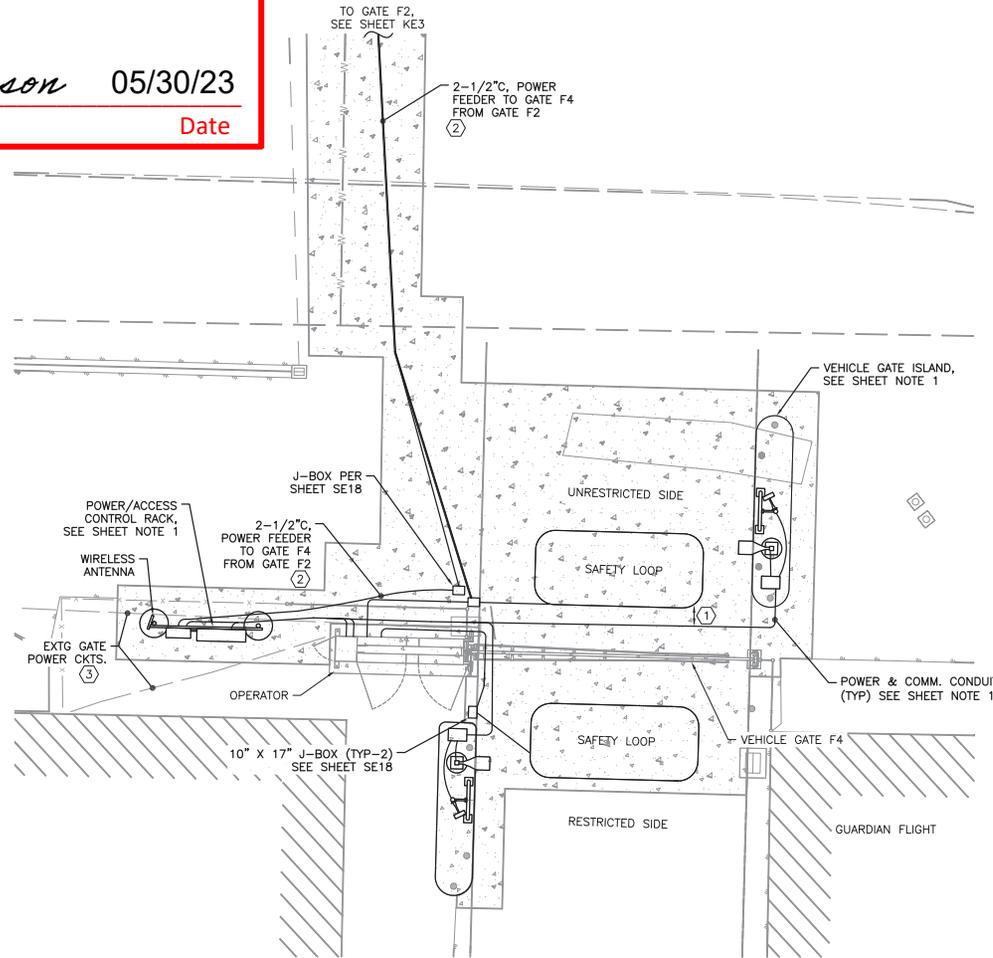
<p>PLANS DEVELOPED BY: MORRIS ENGINEERING GROUP, INC 2375 JORDAN AVE #7 JUNEAU, AK 99801 907-789-3350 AECIL 1010</p>		<p>STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES 6860 GLACIER HIGHWAY, JUNEAU, AK 99801 (907) 465-1763</p> <p><b>KETCHIKAN AIRPORT PERIMETER FENCING UPGRADES</b></p> <p><b>GATE F2 POWER &amp; NETWORK SCHEMATIC</b></p>
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FILE | X:\02 state of alaska\hatchback airport perimeter fencing upgrade\working drawings\overall site plan.dwg | DATE | 7/29/2019 10:06 | LAYOUT | KE11 | DESIGNED | MDM | CHECKED | MDM | DRAFTED | LRW

Record Drawings have been reviewed by the Project Engineer and represent the project as constructed.

*Jacob Estenson* 05/30/23  
 Signature Date

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFAPT00176	2019	KE11	17



1 GATE F4 DETAILED SITE PLAN



SHEET NOTES:

- SEE STANDARD DRAWINGS ASSOCIATED WITH THIS PROJECT FOR TYPICAL DETAILS, MORE COMPLETE DESCRIPTIONS, DIMENSIONS, ADDITIONAL WIRING INFORMATION, EQUIPMENT ELEVATIONS, ETC. NOT INCLUDED HERE. STANDARD DRAWINGS ARE TO BE UTILIZED IN CONJUNCTION WITH SITE SPECIFIC DRAWINGS TO FULLY SPECIFY THE PROJECT REQUIREMENTS. REFERENCES FROM STANDARD DRAWINGS INCLUDE:
  - VERTICAL PIVOT GATES: SE2, SE3, SE8-SE10 (AS APP'L), SE21.
  - CANTILEVER GATES: SE4, SE5, SE8-SE10 (AS APP'L), SE21.
  - PEDESTRIAN GATES: SE6, SE7, SE9-SE10 (AS APP'L).
  - POWER & AC ENCLOSURE RACKS: SE8-SE10 (AS APP'L), SE12-SE16 (AS APP'L), SE23.
  - READER ISLAND: SE17, SE22 (AS APP'L).
  - FRONT END & GEN ELEC: SE11, SE18, SE19, SE20.
- SEE CIVIL PLANS FOR GATE, DRIVEWAY, OTHER CIVIL WORK. THIS INCLUDES DIMENSIONAL INFORMATION NOT SHOWN ON THIS SHEET (I.E. CONCRETE ISLAND POSITIONS, DRIVEWAY WIDTHS, ETC.)
- THE PHYSICAL ARRANGEMENT OF EQUIPMENT AND ELECTRICAL ON THIS SHEET WILL COMPLY WITH SITE SPECIFIC INFORMATION AND REQUIREMENTS, UNLESS OTHERWISE NOTED ON THESE SHEETS, ALL ELECTRICAL WILL COMPLY WITH THE STANDARD ELECTRICAL SHEETS WITH FIELD MODIFICATIONS AS NECESSARY OR NOTED.
- ALL DIMENSIONS SHOWN ON THIS PLAN ARE NOMINAL AND SHALL BE COORDINATED WITH FENCE INSTALLER AND CONCRETE CONTRACTOR. NOT ALL DIMENSIONS ARE SHOWN ON THIS SHEET. SEE CIVIL PLANS FOR MORE INFORMATION.
- SEE SHEET KE12 FOR POWER CIRCUIT INFO AND SHEET KE13 FOR AC & COMM CIRCUITS ASSOCIATED WITH GATES.
- REMOVE EXISTING POWER AND CONTROL FOR THE EXISTING VEHICLE GATE F4 TO BE REMOVED. SEE CIVIL DEMO PLANS.

KEY NOTES:

- MAINTAIN A MINIMUM OF 12" SPACE BETWEEN EMBEDDED DETECTOR LOOPS AND ALL ADJACENT CONDUIT RUNS. DEPICTED SEPARATIONS SHOWN ARE NOT TO SCALE AND NOT ALL ADJACENT CONDUITS ARE NOTED. MAINTAIN SEPARATION IN ALL CASES.
- PROVIDE NEW POWER FEEDER TO GATE F4 PANEL FROM GATE F2 PANEL. CIRCUIT SIZED INCREASED TO ACCOUNT FOR VOLTAGE DROP. ROUTE FEEDER NORTH ACROSS ACCESS ROAD, CONTINUE ALONG NORTH SIDE OF ROAD TO GATE F4. SEE SHEETS KE3 AND KE8 FOR CONTINUATION.
- EXISTING GATE SYSTEM FED BY PRIVATE HANGER. EXISTING FEEDER TO BE DISCONNECTED AND CONDUCTORS REMOVED BACK TO SOURCE. DEMOLISH CONDUIT AS REQUIRED IN ORDER TO INSTALL THE NEW EQUIPMENT RACK. INCLUDE EXISTING ABANDONED ELECTRICAL INFO IN THE AS-BUILTS FOR THE PROJECT.

PLANS DEVELOPED BY:  
 MORRIS ENGINEERING  
 GROUP, INC  
 2375 JORDAN AVE #7  
 JUNEAU, AK 99801  
 907-789-3350  
 AECIL 1010



STATE OF ALASKA DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 6860 GLACIER HIGHWAY, JUNEAU, AK 99801  
 (907) 465-1763

KETCHIKAN AIRPORT PERIMETER  
 FENCING UPGRADES

GATE F4 DETAILED SITE PLAN

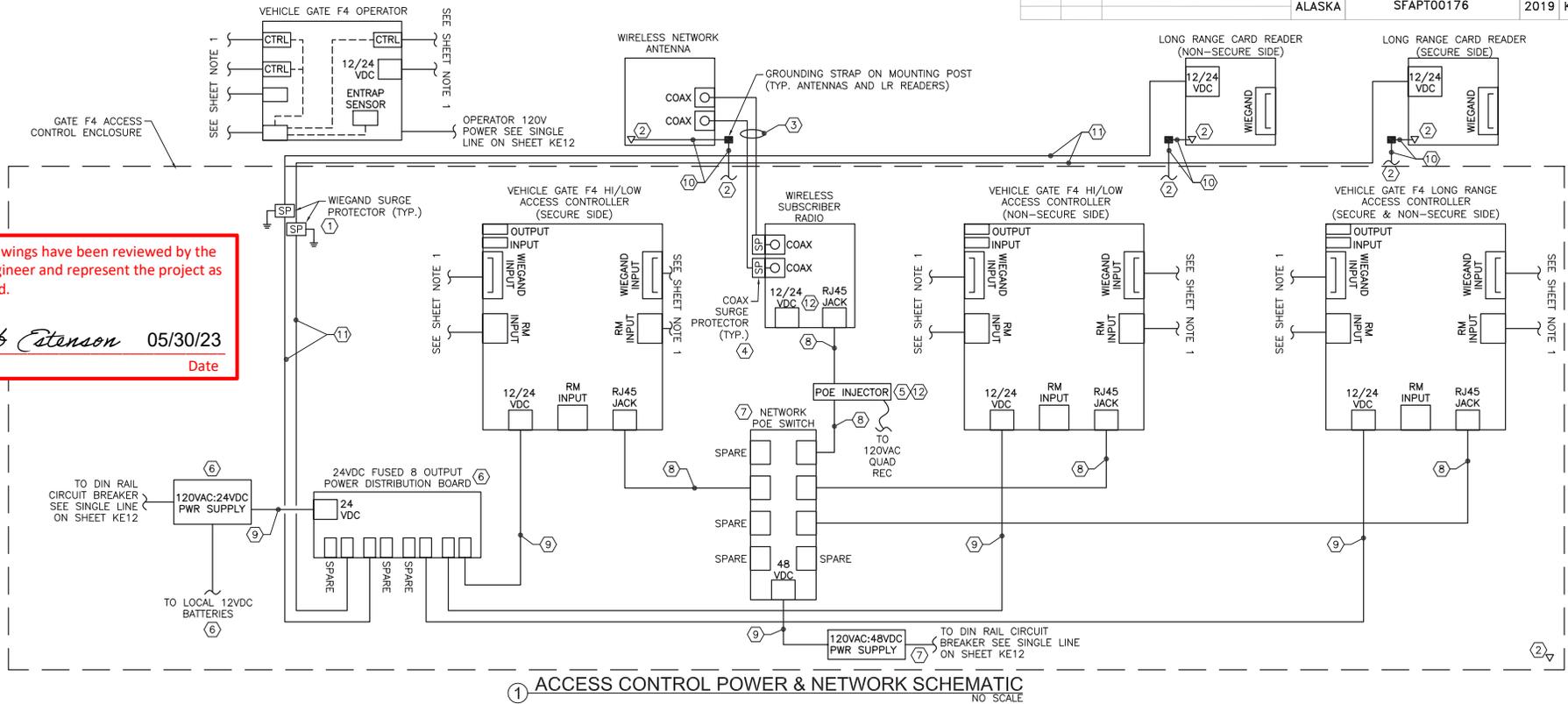


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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFAPT00176	2019	KE13	17

Record Drawings have been reviewed by the Project Engineer and represent the project as constructed.

*Jacob Estenson* 05/30/23  
Signature Date



1 ACCESS CONTROL POWER & NETWORK SCHEMATIC  
NO SCALE

SHEET NOTES:

- THIS SCHEMATIC REPRESENTS THE POWER, NETWORK CABLES, & CONNECTIONS WITHIN THE ACCESS CONTROL ENCLOSURE SPECIFIC TO GATE F4. SEE SHEET SE8 FOR TYPICAL 3-CONTROLLER SCHEMATIC WITH ADDITIONAL CIRCUITS & CONNECTIONS REQUIRED.
- PROVIDE FACTORY TERMINATED CAT 6 CABLING AND 1/2" OR 7/8" COAXIAL CABLING. 7/8" FOR LENGTHS > 75 FT.
- SEE SHEET SE15 FOR ACCESS CONTROL ENCLOSURE ELEVATION AND GENERAL LAYOUT WITHIN THE ENCLOSURE.
- NEATLY TRAIN, BUNDLE, AND LABEL ALL CABINET CABLES AND CONDUCTORS. UTILIZE THE WIRE MANAGEMENT TRACKS AS MUCH AS POSSIBLE (NOT SHOWN HERE). ALL POWER SUPPLIES, WIRING, CONDUIT, ETC. MUST BE SIZED ACCORDING TO THE NATIONAL ELECTRICAL CODE AND INSTALLED PER MANUFACTURER RECOMMENDATIONS.
- ALL SHIELDED CABLES SHALL BE PROPERLY GROUNDED TO ONE COMMON GROUND AT THE ACCESS CONTROL CABINET. GROUNDED SINGLE POINTS TO MULTIPLE EARTH GROUND POINTS CREATES GROUND LOOPS AND SHOULD BE AVOIDED.
- ANTI-CORROSION LUBRICANT SHALL BE APPLIED TO ALL EXPOSED WIRELESS ANTENNA CONDUCTOR AND CABLE CONNECTIONS.

KEY NOTES:

- PROVIDE IN-LINE WIEGAND CABLE SURGE PROTECTION DEVICES FOR LONG RANGE READERS. 2K AMP PROTECTION PER PAIR, 12V/24V RATED DEVICES, WITH DIN RAIL MOUNTING KIT. MOUNT UNITS INSIDE OF ACCESS CONTROL ENCLOSURE AND SOLIDLY CONNECT TO ENCLOSURE GROUND PER THE NATIONAL ELECTRICAL CODE. THE CABLE SHIELDING TO GROUND LUG ON DEVICE.
- ANTENNAS AND LONG RANGE READERS SHALL BE SOLIDLY GROUNDED TO THE COMMON EQUIPMENT GROUNDING CONDUCTOR WITHIN THE ACCESS CONTROL ENCLOSURE. BOND EQUIPMENT TO THE GROUNDING STRAP ADJACENT TO THE ANTENNAS & READERS AND CONNECT FROM GROUNDING STRAP TO THE ACCESS CONTROL ENCLOSURE GROUNDING POINT.
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- IN-LINE COAXIAL LIGHTNING SURGE PROTECTOR FOR RADIO SIDE OF WIRELESS NETWORK LINK. CONNECT TO OUTPUT SIDE OF RADIO TO COAX FEEDING THE ANTENNA.
- WIRELESS ANTENNA POE INJECTOR WITH INTEGRAL SURGE ARRESTOR. CONNECT WITH CAT 5E/6 CABLE BETWEEN SWITCH AND RADIO, POWER FROM 120V SOURCE.
- 120VAC:24VDC, 250 WATT POWER SUPPLY WITH CONNECTIVITY FOR EXTERNAL BATTERY SOURCE FOR LOW VOLTAGE POWER SYSTEM BACKUP. SWITCH MODE DC POWER SUPPLY WITH FIELD SELECTABLE 12 OR 24VDC OUTPUT. MULTIPLE OUTPUTS FOR SYSTEM POWER, LOCK, AND FIRE ALARM DIRECT CONNECTIONS. TIE TO THE 8-OUTPUT DISTRIBUTION BOARD WITH INDIVIDUALLY FUSED OUTPUTS AND FIELD SELECTABLE 12 OR 24VDC VOLTAGES.

- HARDENED NETWORK SWITCH WITH MINIMUM (8) RJ45 OUTPUT PORTS. POWER FROM INDUSTRIAL GRADE, SWITCH MODE, LOW NOISE, 120VAC:48VDC 240 WATT POWER SUPPLY.
- (1) CAT 6 SHIELDED, OUTDOOR CABLE W/RJ45 JACKS ON BOTH ENDS.
- (1) SHIELDED 18/2 MULTI-COND. CABLE (POWER CABLE).
- (1) 12 AWG SOLID CU COND., GREEN JKT (EQUIPMENT GROUNDING CONDUCTOR).
- (1) SHIELDED 16/2 MULTI-COND. CABLE (LONG RANGE READER POWER CABLE).
- USE EITHER POE OR 12/24VDC POWER ON POE ENABLED DEVICES, NEVER BOTH. IF 12/24VDC SUPPLY IS USED THEN CONNECT RADIO TO SWITCH VIA CAT 5E/6 CABLE WITHOUT A POE INJECTOR. POWERING ANY DEVICE WITH POE AND A POWER SUPPLY CAN RESULT IN DAMAGE TO EQUIPMENT AND POSSIBLY TO PERSONNEL.

PLANS DEVELOPED BY:  
MORRIS ENGINEERING GROUP, INC  
2375 JORDAN AVE #7  
JUNEAU, AK 99801  
907-789-3350  
AECIL 1010



STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES  
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(907) 465-1763

**KETCHIKAN AIRPORT PERIMETER FENCING UPGRADES**

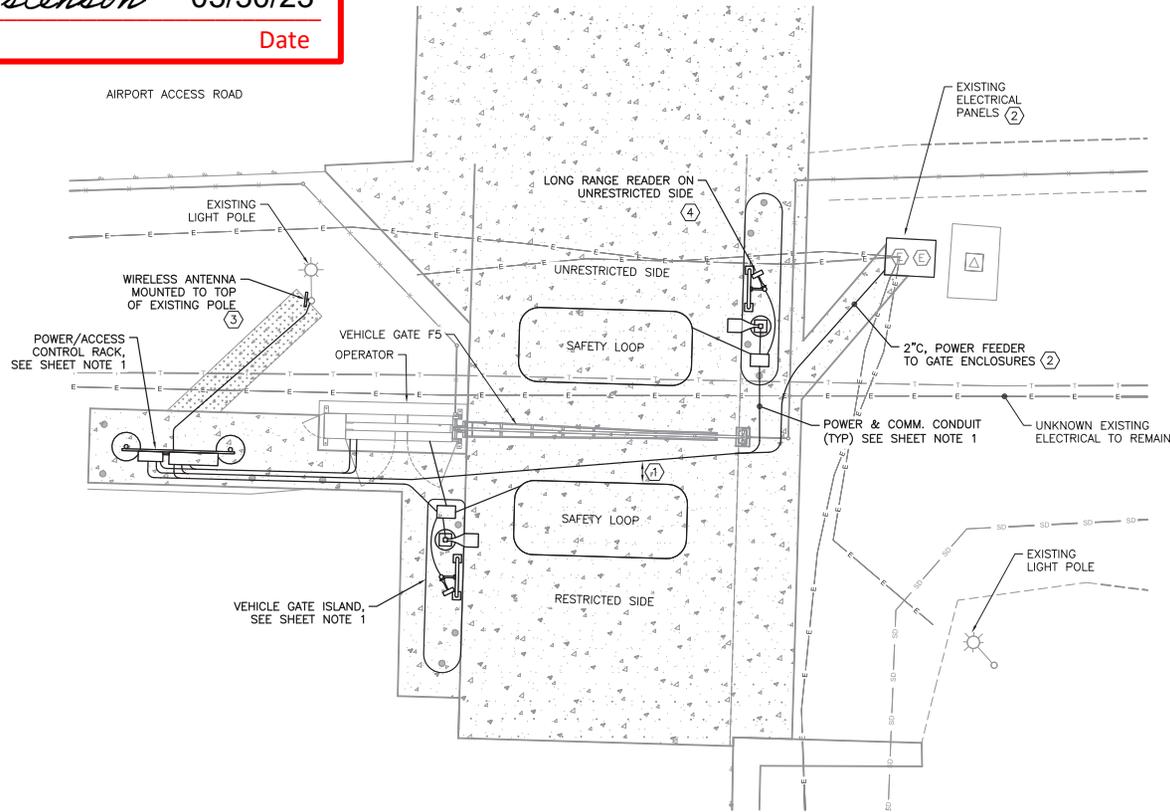
**GATE F4 POWER & NETWORK SCHEMATIC**

FILE: X:\102 state of alaska\airports\perimeter fencing\upgrade\working drawings\overall site plan.dwg DATE: 7/29/2019 10:06 LAYOUT: KE14 DESIGNED: MDM CHECKED: MDM DRAFTED: LRW

Record Drawings have been reviewed by the Project Engineer and represent the project as constructed.

*Jacob Estenson* 05/30/23  
 Signature Date

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFAPT00176	2019	KE14	17



① GATE F5 DETAILED SITE PLAN  
 1"=10'



SHEET NOTES:

- SEE STANDARD DRAWINGS ASSOCIATED WITH THIS PROJECT FOR TYPICAL DETAILS, MORE COMPLETE DESCRIPTIONS, DIMENSIONS, ADDITIONAL WIRING INFORMATION, EQUIPMENT ELEVATIONS, ETC. NOT INCLUDED HERE. STANDARD DRAWINGS ARE TO BE UTILIZED IN CONJUNCTION WITH SITE SPECIFIC DRAWINGS TO FULLY SPECIFY THE PROJECT REQUIREMENTS. REFERENCES FROM STANDARD DRAWINGS INCLUDE:
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  - CANTILEVER GATES: SE4, SE5, SE8-SE10 (AS APP'L), SE21.
  - PEDESTRIAN GATES: SE6, SE7, SE9-SE10 (AS APP'L).
  - POWER & AC ENCLOSURE RACKS: SE8-SE10 (AS APP'L), SE12-SE16 (AS APP'L), SE23.
  - READER ISLAND: SE17, SE22 (AS APP'L).
  - FRONT END & GEN ELEC: SE11, SE18, SE19, SE20.
- SEE CIVIL PLANS FOR GATE, DRIVEWAY, OTHER CIVIL WORK. THIS INCLUDES DIMENSIONAL INFORMATION NOT SHOWN ON THIS SHEET (I.E. CONCRETE ISLAND POSITIONS, DRIVEWAY WIDTHS, ETC.)
- THE PHYSICAL ARRANGEMENT OF EQUIPMENT AND ELECTRICAL ON THIS SHEET WILL COMPLY WITH SITE SPECIFIC INFORMATION AND REQUIREMENTS. UNLESS OTHERWISE NOTED ON THESE SHEETS, ALL ELECTRICAL WILL COMPLY WITH THE STANDARD ELECTRICAL SHEETS WITH FIELD MODIFICATIONS AS NECESSARY OR NOTED.
- ALL DIMENSIONS SHOWN ON THIS PLAN ARE NOMINAL AND SHALL BE COORDINATED WITH FENCE INSTALLER AND CONCRETE CONTRACTOR. NOT ALL DIMENSIONS ARE SHOWN ON THIS SHEET. SEE CIVIL PLANS FOR MORE INFORMATION.
- SEE SHEET KE15 FOR POWER CIRCUIT INFO AND SHEET KE16 FOR AC AND COMM CIRCUITS ASSOCIATED WITH GATES.

KEY NOTES:

- MAINTAIN A MINIMUM OF 12" SPACE BETWEEN EMBEDDED DETECTOR LOOPS AND ALL ADJACENT CONDUIT RUNS. DEPICTED SEPARATIONS SHOWN ARE NOT TO SCALE AND NOT ALL ADJACENT CONDUITS ARE NOTED. MAINTAIN SEPARATION IN ALL CASES.
- PROVIDE A NEW CIRCUIT BREAKER IN THE EXISTING PANEL AND ROUTE NEW CONDUIT FROM THE PANEL UNDERGROUND TO RACK LOCATION AS SHOWN. SEE SINGLE LINE ON SHEET KE15 FOR CIRCUIT BREAKER AND CIRCUIT SIZE INFORMATION.
- MOUNT WIRELESS ANTENNA TO TOP OF EXISTING LIGHT POLE. ROUTE CONDUIT UNDERGROUND TO POLE BASE AND THEN SURFACE MOUNTED UP TO HANDHOLE. TRANSITION INTO POLE AT HANDHOLE W/FLEX CONDUIT AND CONNECT TO HANDHOLE COVER. DRILL HOLE IN POLE AT WIRELESS ANTENNA AND MOUNT ANTENNA TO POLE WITH STAINLESS STRAPS. GROMMET HOLE IN POLE & FEED ANTENNA WITH CABLE THROUGH HOLE.
- AIM LONG RANGE READER DOWN AIRPORT ACCESS ROAD TO PICKUP VEHICLES APPROACHING GATE WELL BEFORE THEY TURN INTO THE GATE DRIVEWAY.

PLANS DEVELOPED BY:  
 MORRIS ENGINEERING  
 GROUP, INC  
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 AECL 1010

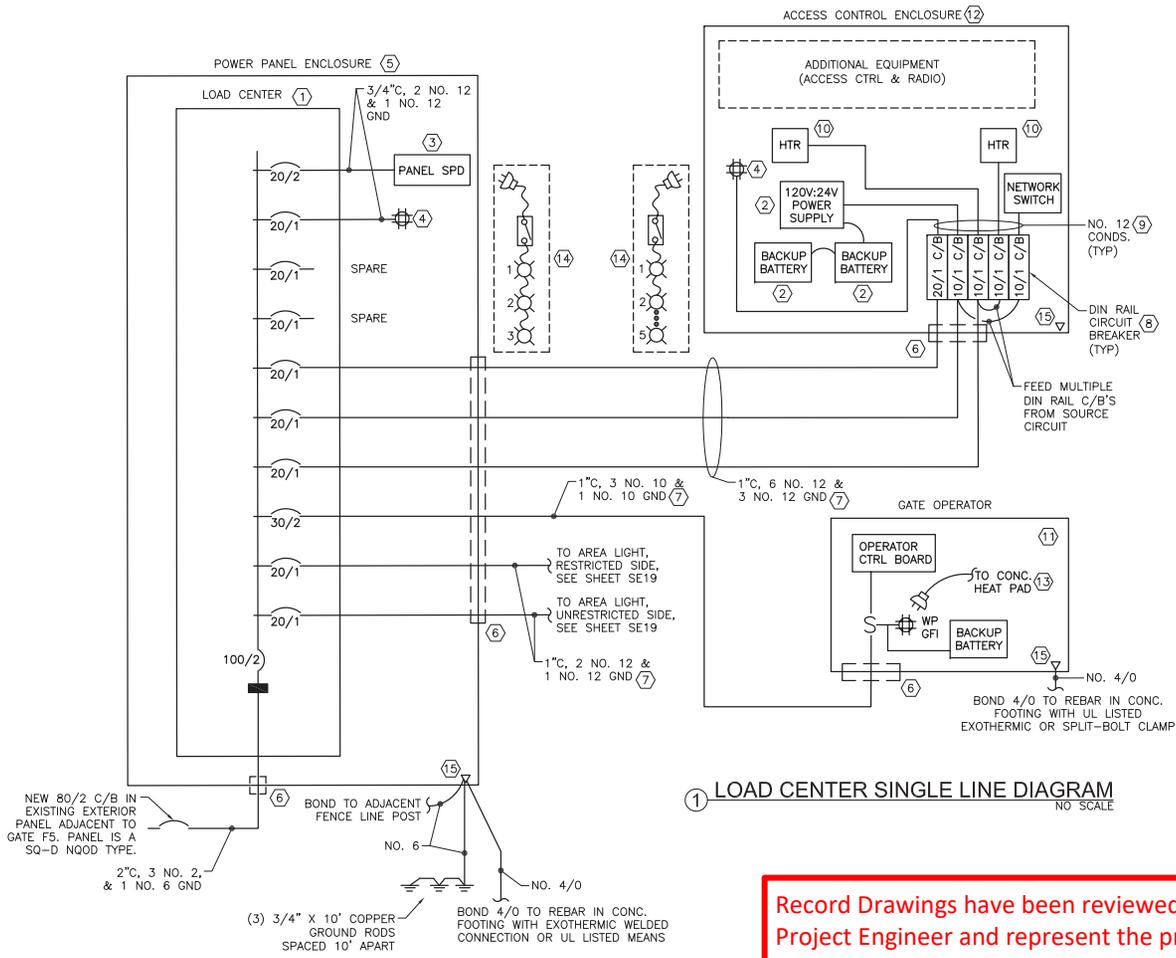


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KETCHIKAN AIRPORT PERIMETER  
 FENCING UPGRADES

GATE F5 DETAILED SITE PLAN

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFAPT00176	2019	KE15	17



**SHEET NOTES:**

- THIS SCHEMATIC IS DIAGRAMMATIC ONLY AND REPRESENTS THE POWER SYSTEM INFRASTRUCTURE REQUIRED TO CONNECT THE SYSTEM COMPONENTS AND LOCATIONS. THIS BLOCK DIAGRAM DOES NOT REPRESENT ALL CONDUITS AND CONDUCTORS REQUIRED FOR THE PROJECT. SEE SHEETS KE16 FOR ACCESS CONTROL SCHEMATIC.
- ALL JUNCTION BOXES, CABINETS, ENCLOSURE, ETC. THAT ARE ACCESSIBLE TO THE PUBLIC MUST HAVE TAMPERPROOF SCREWS OR BE KEY LOCKABLE.
- ALL POWER SUPPLIES, WIRING, CONDUIT, ETC. MUST BE SIZED ACCORDING TO MANUFACTURERS' RECOMMENDATIONS AND SPECIFICATIONS AND ALL SHALL BE INSTALLED PER THE NATIONAL ELECTRICAL CODE.
- NOT ALL SYSTEM COMPONENTS ARE LOCATED AT EACH GATE LOCATION. SEE PLANS FOR EQUIPMENT INCLUDED AT EACH LOCATION.
- PROVIDE BONDING OF ALL METALLIC ENCLOSURES AT THE ENCLOSURE RACK PER NEC REQUIREMENTS AND TIED BACK TO THE GROUNDING ELECTRODE AS SHOWN ON THIS SHEET.

**KEY NOTES:**

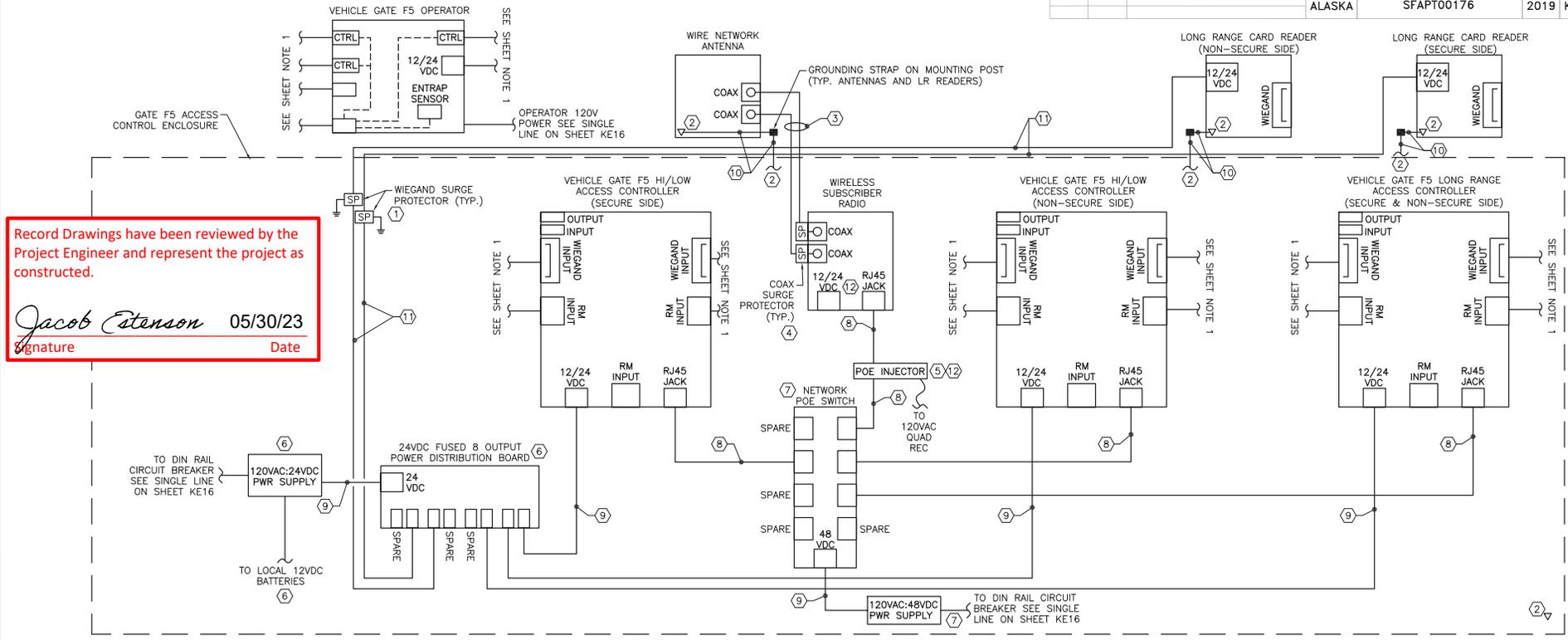
- METER/DISCONNECT LOAD CENTER 120/240V, 1φ, 3W, 100A, 12 CKT. UNIT TO INCLUDE NEMA 3R CONSTRUCTION AND MAIN CIRCUIT BREAKER. PROVIDE WITH 10KAIC RATED BRANCH AND MAIN BREAKERS.
- LOW-VOLTAGE POWER DISTRIBUTION WITHIN ACCESS CONTROL ENCLOSURE. SEE SHEET KE16 FOR AC SCHEMATIC.
- SURGE PROTECTION DEVICE. SERVICE ENTRANCE RATED WITH INDIVIDUALLY FUSED MOV ELEMENTS, NEMA 4X RATED, UL LISTED 1449 DEVICE. MOUNT ON SIDE OF PANEL FED WITH STRAIGHT AND SHORT CONDUCTORS.
- SURFACE MOUNT SERVICE QUAD REC, 20A GFI, HD, COMMERCIAL GRADE. MOUNT INSIDE ENCLOSURES.
- STAINLESS STEEL, NEMA 4X ENCLOSURE THAT HOUSES THE POWER PANEL AND ACCESSORIES INDICATED. SEE SHEET SE14 FOR POWER PANEL ELEVATION & TYPICAL PANEL SCHEDULE.
- ALL CONDUIT ENCLOSURE CONNECTIONS SHALL CONSIST OF A ZINC DIE CAST, WATERTIGHT CONDUIT HUB WITH PROTECTIVE INSULATED THROAT, AND EMBEDDED O-RING. UNITS SHALL BE NEMA 4X AND RATED FOR WET OR DRY APPLICATIONS, PROVIDED IN GROUNDLESS STYLE WHERE REQUIRED. USED TO CONNECT RIGID METAL CONDUIT TO A THREADLESS OPENING IN THE ENCLOSURE.
- CO-LOCATE CONDUITS IN COMMON TRENCHES WHERE POSSIBLE. SEE SITE PLAN & SHEET SE18.
- THERMAL MAGNETIC, CIRCUIT BREAKER IN DIN RAIL MOUNT CONFIGURATION WITH 10KAIC RATING AND POSITIVE TRIP INDICATOR, UL LISTED FOR DIN RAIL MOUNTING.
- BREAKER SECONDARY CONDUCTORS IN ACCESS PANEL. QUANTITIES AND ROUTING AS REQUIRED. KEEP ALL CONDUCTORS AND CABLES NEATLY TRAINED, BUNDLED, AND LABELED WITHIN THE ENCLOSURE. THE NEUTRAL IS NOT SHOWN HERE BUT SHALL BE PROVIDED FOR EACH CIRCUIT.
- THERMOSTATICALLY CONTROLLED FAN POWERED HEATER WITH ADJUSTABLE SETTING BETWEEN 0-100 DEG F. 400 WATT UNITS MOUNTED TO BACK WALL OF ENCLOSURE. MODIFY SETTINGS TO MEET EQUIPMENT REQUIREMENTS.
- GATE OPERATOR WITH INTEGRAL CONTROL PANEL, SERVICE RECEPTACLE, DISCONNECT SWITCH, AND BACKUP BATTERY. SEE SHEET KE16 FOR POWER & NETWORK SCHEMATIC.
- STAINLESS STEEL, NEMA 4X ENCLOSURE THAT HOUSES THE ACCESS CONTROL DEVICES AND ACCESSORIES INDICATED. SEE SHEET SE15 FOR TYPICAL ACCESS CONTROL ENCLOSURE ELEVATION.
- 120 WATT (1 AMPS @ 120V) HEAT MAT BELOW FOOTPRINT OF OPERATOR. THERMOSTATICALLY CONTROLLED MAT WITH 6 FOOT CORD & PLUG. SEE SHEET SE2 FOR TYPICAL STANDARD SITE PLAN.
- PROVIDE ENCLOSURE WITH CORD & PLUG BASED LED STRIP LIGHTS FOR INTERNAL ILLUMINATION. SEE SHEET SE14 FOR POWER PANEL ENCLOSURE ELEVATION & SHEET SE15 FOR TYPICAL ACCESS CONTROL ENCLOSURE ELEVATION. QUANTITY OF COMPONENTS AND CABLE LENGTHS AS REQUIRED PER EACH ENCLOSURE SIZE.
- PROVIDE SOLID GROUND CONNECTIONS FOR ALL ENCLOSURE CIRCUITS. BOND ENCLOSURE AND ENCLOSURE LOW RESISTANCE GROUND ESTABLISHED BACK TO THE GROUNDING ELECTRODE SYSTEM AT THE POWER PANEL.

Record Drawings have been reviewed by the Project Engineer and represent the project as constructed.


05/30/23  
 Signature Date

PLANS DEVELOPED BY: MORRIS ENGINEERING GROUP, INC 2375 JORDAN AVE #7 JUNEAU, AK 99801 907-789-3350 AECIL 1010		STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES 6860 GLACIER HIGHWAY, JUNEAU, AK 99801 (907) 465-1763  KETCHIKAN AIRPORT PERIMETER FENCING UPGRADES  GATE F5 SINGLE LINE DIAGRAM
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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFAPT00176	2019	KE16	17



Record Drawings have been reviewed by the Project Engineer and represent the project as constructed.

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1 ACCESS CONTROL POWER & NETWORK SCHEMATIC  
NO SCALE

SHEET NOTES:

- THIS SCHEMATIC REPRESENTS THE POWER, NETWORK CABLES, & CONNECTIONS WITHIN THE ACCESS CONTROL ENCLOSURE SPECIFIC TO GATE F5. SEE SHEET SE8 FOR TYPICAL 3-CONTROLLER SCHEMATIC WITH ADDITIONAL CIRCUITS & CONNECTIONS REQUIRED.
- PROVIDE FACTORY TERMINATED CAT 6 CABLING AND 1/2" OR 7/8" COAXIAL CABLING. 7/8" FOR LENGTHS > 75 FT.
- SEE SHEET SE15 FOR ACCESS CONTROL ENCLOSURE ELEVATION AND GENERAL LAYOUT WITHIN THE ENCLOSURE.
- NEATLY TRAIN, BUNDLE, AND LABEL ALL CABINET CABLES AND CONDUCTORS. UTILIZE THE WIRE MANAGEMENT TRACKS AS MUCH AS POSSIBLE (NOT SHOWN HERE). ALL POWER SUPPLIES, WIRING, CONDUIT, ETC. MUST BE SIZED ACCORDING TO THE NATIONAL ELECTRICAL CODE AND INSTALLED PER MANUFACTURER RECOMMENDATIONS.
- ALL SHIELDED CABLES SHALL BE PROPERLY GROUNDED TO ONE COMMON GROUND AT THE ACCESS CONTROL CABINET. GROUNDED SINGLE POINTS TO MULTIPLE EARTH GROUND POINTS CREATES GROUND LOOPS AND SHOULD BE AVOIDED.
- ANTI-CORROSION LUBRICANT SHALL BE APPLIED TO ALL EXPOSED WIRELESS ANTENNA CONDUCTOR AND CABLE CONNECTIONS.

KEY NOTES:

- PROVIDE IN-LINE WIEGAND CABLE SURGE PROTECTION DEVICES FOR LONG RANGE READERS. 2K AMP PROTECTION PER PAIR, 12V/24V RATED DEVICES, WITH DIN RAIL MOUNTING KIT. MOUNT UNITS INSIDE OF ACCESS CONTROL ENCLOSURE AND SOLIDLY CONNECT TO ENCLOSURE GROUND PER THE NATIONAL ELECTRICAL CODE. THE CABLE SHIELDING TO GROUND LUG ON DEVICE.
- ANTENNAS AND LONG RANGE READERS SHALL BE SOLIDLY GROUNDED TO THE COMMON EQUIPMENT GROUNDING CONDUCTOR WITHIN THE ACCESS CONTROL ENCLOSURE. BOND EQUIPMENT TO THE GROUNDING STRAP ADJACENT TO THE ANTENNAS & READERS AND CONNECT FROM GROUNDING STRAP TO THE ACCESS CONTROL ENCLOSURE GROUNDING POINT.
- (2) PRE-TERMINATED 1/2" OR 7/8" LDF SHIELDED COAX CABLES TO ANTENNA FROM RADIO. COAX CABLES ARE NOT TO BE MADE IN THE FIELD BUT ORDERED AT EXACT LENGTHS REQUIRED. WHERE COAX THREADS ONTO THE ANTENNA CONNECTORS PROVIDE MULTIPLE LAYERS OF VINYL ELECTRIC TAPE, FOLLOWED BY BUTYL MASTIC TAPE, FOLLOWED AGAIN BY VINYL TAPE TO ENSURE A COMPLETELY SEALED CONNECTION. FOLLOW MANUFACTURER WRITTEN INSTRUCTIONS.
- IN-LINE COAXIAL LIGHTNING SURGE PROTECTOR FOR RADIO SIDE OF WIRELESS NETWORK LINK. CONNECT TO OUTPUT SIDE OF RADIO TO COAX FEEDING THE ANTENNA.
- WIRELESS ANTENNA POE INJECTOR WITH INTEGRAL SURGE ARRESTOR. CONNECT WITH CAT 5E/6 CABLE BETWEEN SWITCH AND RADIO, POWER FROM 120V SOURCE.
- 120VAC:24VDC, 250 WATT POWER SUPPLY WITH CONNECTIVITY FOR EXTERNAL BATTERY SOURCE FOR LOW VOLTAGE POWER SYSTEM BACKUP. SWITCH MODE DC POWER SUPPLY WITH FIELD SELECTABLE 12 OR 24VDC OUTPUT. MULTIPLE OUTPUTS FOR SYSTEM POWER, LOCK, AND FIRE ALARM DIRECT CONNECTIONS. TIE TO THE 8-OUTPUT DISTRIBUTION BOARD WITH INDIVIDUALLY FUSED OUTPUTS AND FIELD SELECTABLE 12 OR 24VDC VOLTAGES.

- HARDENED NETWORK SWITCH WITH MINIMUM (8) RJ45 OUTPUT PORTS. POWER FROM INDUSTRIAL GRADE, SWITCH MODE, LOW NOISE, 120VAC:48VDC 240 WATT POWER SUPPLY.
- (1) CAT 5E/6 SHIELDED, OUTDOOR CABLE W/RJ45 JACKS ON BOTH ENDS.
- (1) SHIELDED 18/2 MULTI-COND. CABLE (POWER CABLE).
- (1) 12 AWG SOLID CU COND., GREEN JKT (EQUIPMENT GROUNDING CONDUCTOR).
- (1) SHIELDED 16/2 MULTI-COND. CABLE (LONG RANGE READER POWER CABLE).
- USE EITHER POE OR 12/24VDC POWER ON POE ENABLED DEVICES, NEVER BOTH. IF 12/24VDC SUPPLY IS USED THEN CONNECT RADIO TO SWITCH VIA CAT 5E/6 CABLE WITHOUT A POE INJECTOR. POWERING ANY DEVICE WITH POE AND A POWER SUPPLY CAN RESULT IN DAMAGE TO EQUIPMENT AND POSSIBLY TO PERSONNEL.

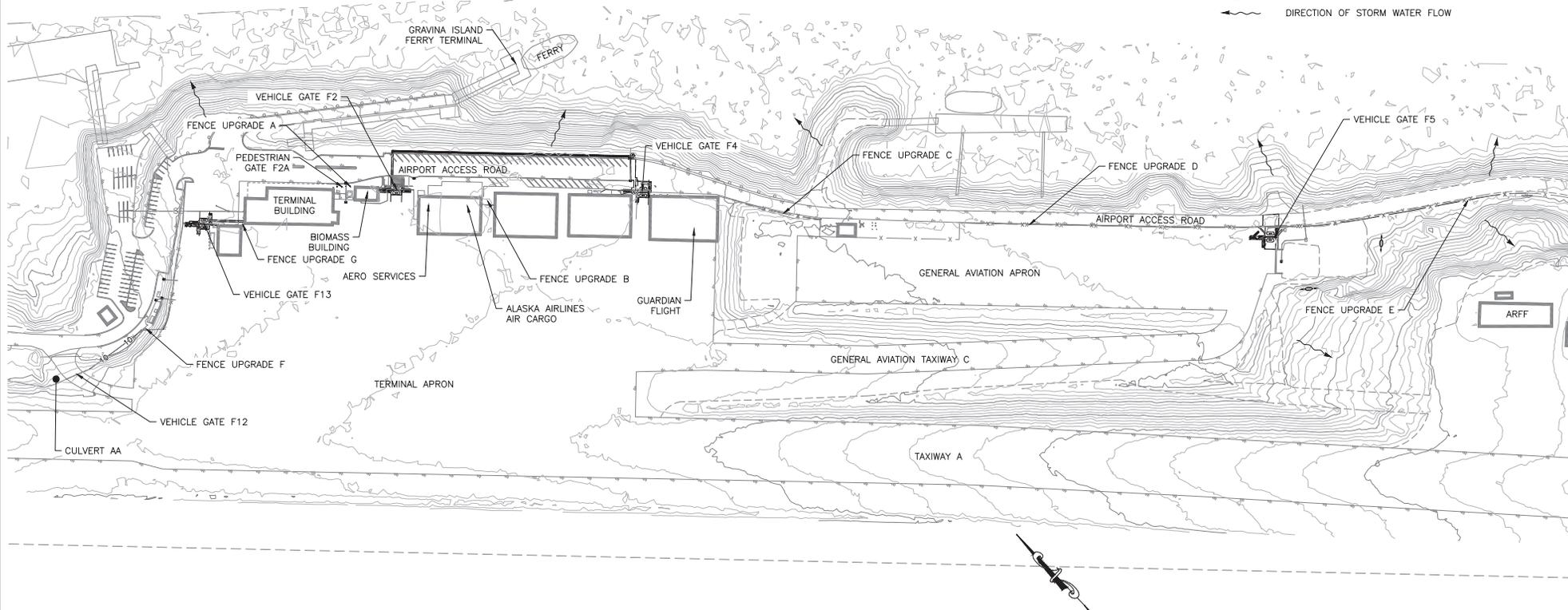
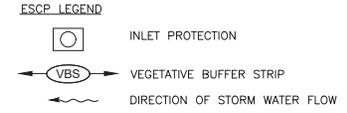
<p>PLANS DEVELOPED BY: MORRIS ENGINEERING GROUP, INC 2375 JORDAN AVE #7 JUNEAU, AK 99801 907-789-3350 AECL 1010</p>		<p>STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES 6860 GLACIER HIGHWAY, JUNEAU, AK 99801 (907) 465-1763</p> <p><b>KETCHIKAN AIRPORT PERIMETER FENCING UPGRADES</b></p> <p><b>GATE F5 POWER &amp; NETWORK SCHEMATIC</b></p>
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Record Drawings have been reviewed by the Project Engineer and represent the project as constructed.

*Jacob Estenson* 05/30/23  
 Signature Date

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFAPT00176	2019	KEC1	55



① OVERALL EROSION AND SEDIMENT CONTROL PLAN  
 1"=200'



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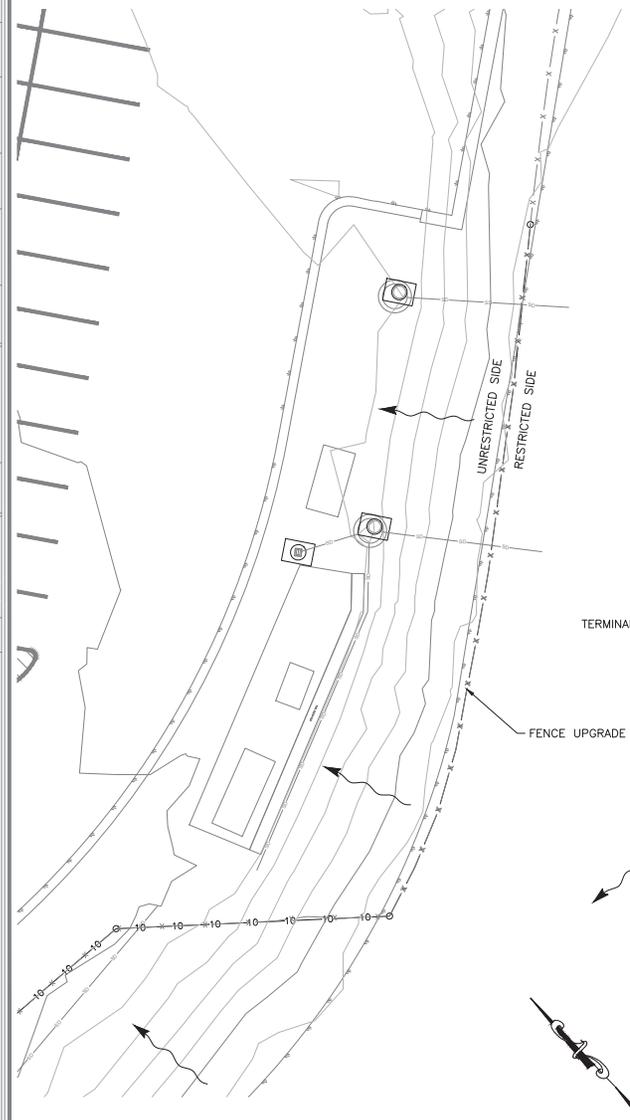
PLANS DEVELOPED BY: DOW 5368 COMMERCIAL BLVD. JUNEAU, AK 99801 AECL848		STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES 6860 GLACIER HIGHWAY, JUNEAU, AK 99801 (907) 465-1763 <b>KETCHIKAN AIRPORT          PERIMETER FENCING UPGRADES</b> OVERALL EROSION AND SEDIMENT CONTROL PLAN
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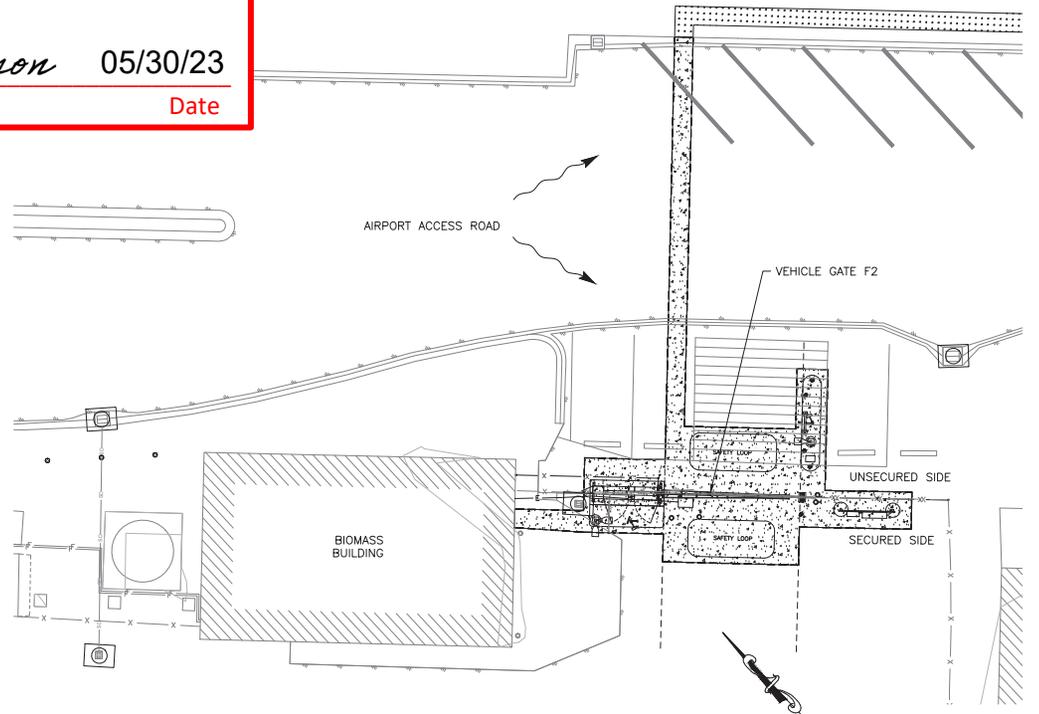
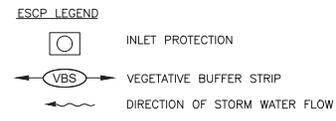
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			ALASKA	SFAPT00176	2019	KEC2	55

Record Drawings have been reviewed by the Project Engineer and represent the project as constructed.

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① ESCP-NORTH APRON AREA  
 1"=20'  
 5' 10' 20'



① ESCP-WEST CENTRAL APRON AREA  
 1"=20'  
 5' 10' 20'

PLANS DEVELOPED BY:  
 DOW  
 5368 COMMERCIAL BLVD.  
 JUNEAU, AK 99801  
 AECL848



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 (907) 465-1763

**KETCHIKAN AIRPORT PERIMETER FENCING UPGRADES**

EROSION AND SEDIMENT CONTROL PLAN-N & W APRON AREAS



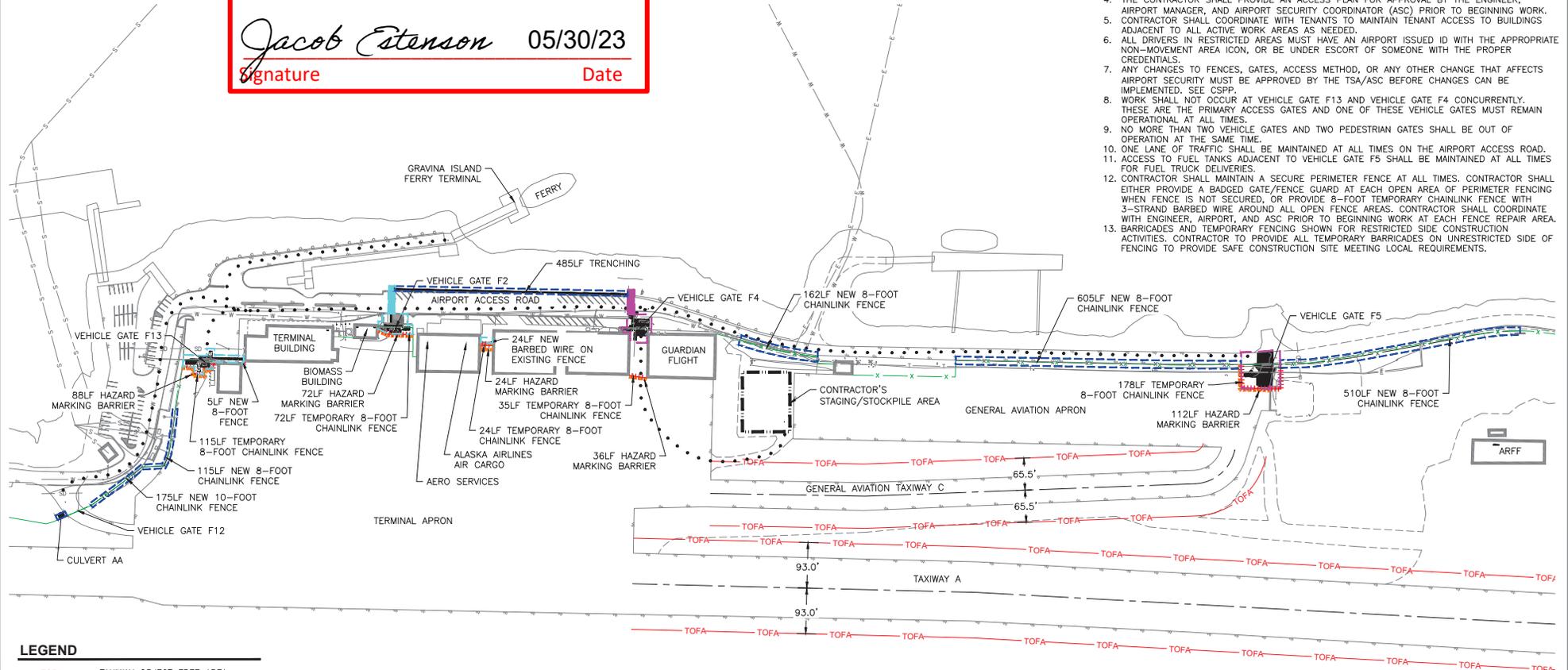
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			ALASKA	SFAPT00176	2019	KAD1	55

Record Drawings have been reviewed by the Project Engineer and represent the project as constructed.

*Jacob Estenson* 05/30/23  
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**GENERAL PHASING NOTES (APPLICABLE TO ALL WORK AREAS):**

1. ALL PRE-CONSTRUCTION AND NOTIFICATION REQUIREMENTS OF THE CONSTRUCTION SAFETY AND PHASING PLAN (CSPP) MUST BE MET PRIOR TO THE START OF CONSTRUCTION.
2. THE CONTRACTOR'S SAFETY PLAN COMPLIANCE DOCUMENT (SPCD) MUST BE APPROVED PRIOR TO THE START OF CONSTRUCTION.
3. ALL TEMPORARY FENCING MUST BE OF THE SAME TYPE AS EXISTING PERIMETER FENCING, AND SHALL BE A MINIMUM 8-FOOT IN HEIGHT WITH 3-STRAND BARBED WIRE MOUNTED TO THE TOP.
4. THE CONTRACTOR SHALL PROVIDE AN ACCESS PLAN FOR APPROVAL BY THE ENGINEER, AIRPORT MANAGER, AND AIRPORT SECURITY COORDINATOR (ASC) PRIOR TO BEGINNING WORK.
5. CONTRACTOR SHALL COORDINATE WITH TENANTS TO MAINTAIN TENANT ACCESS TO BUILDINGS ADJACENT TO ALL ACTIVE WORK AREAS AS NEEDED.
6. ALL DRIVERS IN RESTRICTED AREAS MUST HAVE AN AIRPORT ISSUED ID WITH THE APPROPRIATE NON-MOVEMENT AREA ICON, OR BE UNDER ESCORT OF SOMEONE WITH THE PROPER CREDENTIALS.
7. ANY CHANGES TO FENCES, GATES, ACCESS METHOD, OR ANY OTHER CHANGE THAT AFFECTS AIRPORT SECURITY MUST BE APPROVED BY THE TSA/ASC BEFORE CHANGES CAN BE IMPLEMENTED. SEE CSPP.
8. WORK SHALL NOT OCCUR AT VEHICLE GATE F13 AND VEHICLE GATE F4 CONCURRENTLY. THESE ARE THE PRIMARY ACCESS GATES AND ONE OF THESE VEHICLE GATES MUST REMAIN OPERATIONAL AT ALL TIMES.
9. NO MORE THAN TWO VEHICLE GATES AND TWO PEDESTRIAN GATES SHALL BE OUT OF OPERATION AT THE SAME TIME.
10. ONE LANE OF TRAFFIC SHALL BE MAINTAINED AT ALL TIMES ON THE AIRPORT ACCESS ROAD.
11. ACCESS TO FUEL TANKS ADJACENT TO VEHICLE GATE F5 SHALL BE MAINTAINED AT ALL TIMES FOR FUEL TRUCK DELIVERIES.
12. CONTRACTOR SHALL MAINTAIN A SECURE PERIMETER FENCE AT ALL TIMES. CONTRACTOR SHALL EITHER PROVIDE A BADGED GATE/FENCE GUARD AT EACH OPEN AREA OF PERIMETER FENCING WHEN FENCE IS NOT SECURED, OR PROVIDE 8-FOOT TEMPORARY CHAINLINK FENCE WITH 3-STRAND BARBED WIRE AROUND ALL OPEN FENCE AREAS. CONTRACTOR SHALL COORDINATE WITH ENGINEER, AIRPORT, AND ASC PRIOR TO BEGINNING WORK AT EACH FENCE REPAIR AREA.
13. BARRICADES AND TEMPORARY FENCING SHOWN FOR RESTRICTED SIDE CONSTRUCTION ACTIVITIES. CONTRACTOR TO PROVIDE ALL TEMPORARY BARRICADES ON UNRESTRICTED SIDE OF FENCING TO PROVIDE SAFE CONSTRUCTION SITE MEETING LOCAL REQUIREMENTS.



**LEGEND**

	TOFA	TAXIWAY OBJECT FREE AREA
	EXISTING FENCE LINE	
	TEMPORARY FENCE LINE	
	HAZARD MARKING BARRIER	
	CONTRACTOR'S HAUL ROUTE	
	WORK AREA 1A/1B BOUNDARY	
	WORK AREA 2A/2B BOUNDARY	
	WORK AREA 3 BOUNDARY	
	CONTRACTOR'S STAGING AND TEMPORARY STOCKPILE BOUNDARY	

1 CONST. SAFETY & PHASING PLAN OVERVIEW  
 1"=100'



PLANS DEVELOPED BY:  
 DOW  
 5368 COMMERCIAL BLVD.  
 JUNEAU, AK 99801  
 AECL846



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 6860 GLACIER HIGHWAY, JUNEAU, AK 99801  
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**KETCHIKAN AIRPORT PERIMETER FENCING UPGRADES**

CONST. SAFETY & PHASING PLAN OVERVIEW

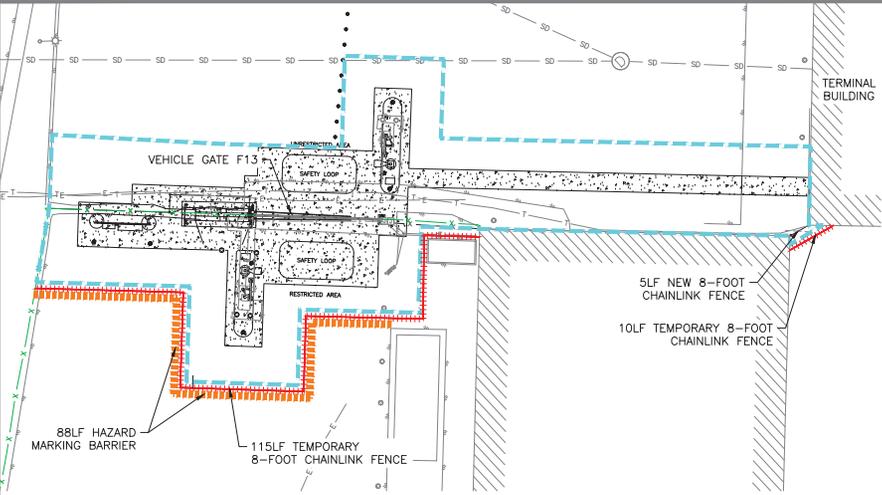
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Record Drawings have been reviewed by the Project Engineer and represent the project as constructed.

*Jacob Peterson* 05/30/23  
 Signature Date

REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
	ALASKA	SFAPT00176	2019	KAD2	55



**WORK AREA 1-GATE F13 NOTES:**

1. THE AIR OPERATIONS AREA IS DEFINED BY THE EXISTING AND TEMPORARY FENCE LINE. ALL TEMPORARY FENCE SHALL BE SECURELY IN PLACE PRIOR TO REMOVING ANY EXISTING FENCE OR GATES. ALL WORK WILL BE OUTSIDE OF THE AIRCRAFT OPERATIONS AREA, AS DELINEATED BY TEMPORARY FENCE, EXISTING FENCE, AND EXISTING BUILDINGS.
2. VEHICLE GATE F13 IS A PRIMARY ACCESS GATE. VEHICLE GATE F4 MUST REMAIN FULLY OPERATIONAL WHILE WORK IS OCCURRING AT VEHICLE GATE F13.
3. THE FOLLOWING WORK IS INCLUDED IN WORK AREA 1 AT VEHICLE GATE F13:
  - A. INSTALL TEMPORARY FENCING TO REDEFINE RESTRICTED AREA AND PLACE WORK AREA OUTSIDE OF RESTRICTED AREA.
  - B. REMOVE PAVEMENT, BASE MATERIAL, EXISTING FENCING, VEHICLE GATE F13, AND OTHER DEMOLITION ITEMS.
  - C. INSTALL NEW TRENCHING/CABLE/CONDUIT, NEW VEHICLE GATE F13, OPERATOR, AND FOUNDATION, CURB ISLAND AND ASSOCIATED EQUIPMENT, LIGHT POLES, AND ALL NEW EQUIPMENT.
  - D. CONSTRUCT NEW PAVEMENT SECTIONS.
  - E. RESTORE DISTURBED AREAS.

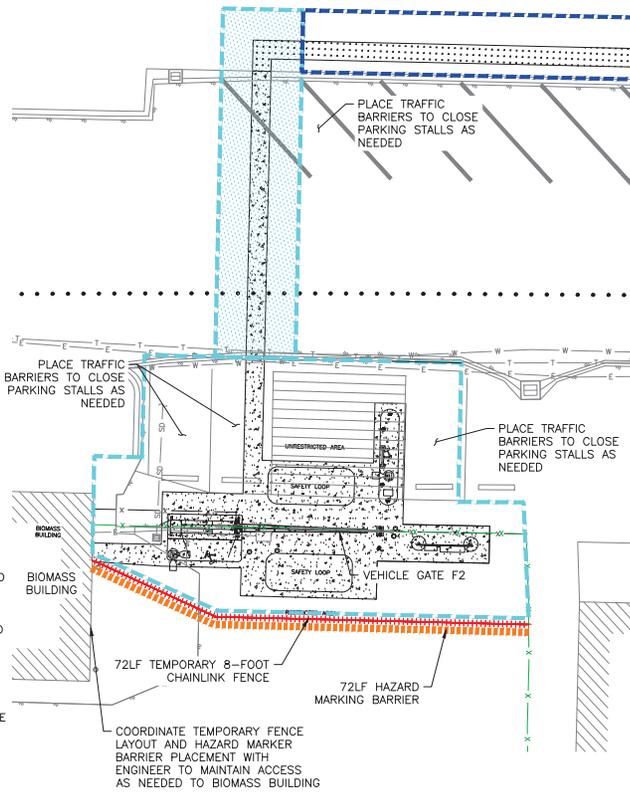
**GENERAL PHASING NOTES (APPLICABLE TO ALL WORK AREAS):**

1. ALL PRE-CONSTRUCTION AND NOTIFICATION REQUIREMENTS OF THE CONSTRUCTION SAFETY AND PHASING PLAN (CSPF) MUST BE MET PRIOR TO THE START OF CONSTRUCTION.
2. THE CONTRACTOR'S SAFETY PLAN COMPLIANCE DOCUMENT (SPCD) MUST BE APPROVED PRIOR TO THE START OF CONSTRUCTION.
3. ALL TEMPORARY FENCING MUST BE OF THE SAME TYPE AS EXISTING PERIMETER FENCING, AND SHALL BE A MINIMUM 8-FOOT IN HEIGHT WITH 3-STRAND BARBED WIRE MOUNTED TO THE TOP.
4. THE CONTRACTOR SHALL PROVIDE AN ACCESS PLAN FOR APPROVAL BY THE ENGINEER, AIRPORT MANAGER, AND AIRPORT SECURITY COORDINATOR (ASC) PRIOR TO BEGINNING WORK. CONTRACTOR SHALL COORDINATE WITH TENANTS TO MAINTAIN TENANT ACCESS TO BUILDINGS ADJACENT TO ALL ACTIVE WORK AREAS AS NEEDED.
5. ALL DRIVERS IN RESTRICTED AREAS MUST HAVE AN AIRPORT ISSUED ID WITH THE APPROPRIATE NON-MOVEMENT AREA ICON, OR BE UNDER ESCORT OF SOMEONE WITH THE PROPER CREDENTIALS.
6. ANY CHANGES TO FENCES, GATES, ACCESS METHOD, OR ANY OTHER CHANGE THAT AFFECTS AIRPORT SECURITY MUST BE APPROVED BY THE TSA/ASC BEFORE CHANGES CAN BE IMPLEMENTED. SEE CSPF.
7. WORK SHALL NOT OCCUR AT VEHICLE GATE F13 AND VEHICLE GATE F4 CONCURRENTLY. THESE ARE THE PRIMARY ACCESS GATES AND ONE OF THESE VEHICLE GATES MUST REMAIN OPERATIONAL AT ALL TIMES.
8. NO MORE THAN TWO VEHICLE GATES AND TWO PEDESTRIAN GATES SHALL BE OUT OF OPERATION AT THE SAME TIME.
9. ONE LANE OF TRAFFIC SHALL BE MAINTAINED AT ALL TIMES ON THE AIRPORT ACCESS ROAD.
10. ACCESS TO FUEL TANKS ADJACENT TO VEHICLE GATE F5 SHALL BE MAINTAINED AT ALL TIMES FOR FUEL TRUCK DELIVERIES.
11. CONTRACTOR SHALL MAINTAIN A SECURE PERIMETER FENCE AT ALL TIMES. CONTRACTOR SHALL EITHER PROVIDE A BADGED GATE/FENCE GUARD AT EACH OPEN AREA OF PERIMETER FENCING WHEN FENCE IS NOT SECURED, OR PROVIDE 8-FOOT TEMPORARY CHAINLINK FENCE WITH 3-STRAND BARBED WIRE AROUND ALL OPEN FENCE AREAS. CONTRACTOR SHALL COORDINATE WITH ENGINEER, AIRPORT, AND ASC PRIOR TO BEGINNING WORK AT EACH FENCE REPAIR AREA.
12. BARRICADES AND TEMPORARY FENCING SHOWN FOR RESTRICTED SIDE CONSTRUCTION ACTIVITIES. CONTRACTOR TO PROVIDE ALL TEMPORARY BARRICADES ON UNRESTRICTED SIDE OF FENCING TO PROVIDE SAFE CONSTRUCTION SITE MEETING LOCAL REQUIREMENTS.

**LEGEND**

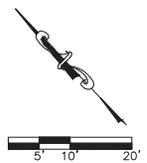
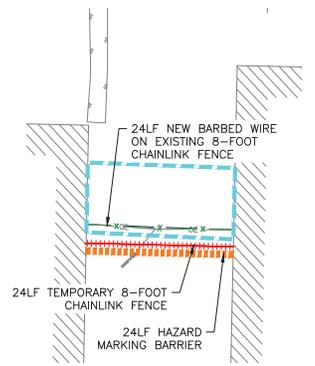
- TOFA TAXIWAY OBJECT FREE AREA
- EXISTING FENCE LINE
- TEMPORARY FENCE LINE
- HAZARD MARKING BARRIER
- CONTRACTOR'S HAUL ROUTE
- WORK AREA 1A BOUNDARY
- WORK AREA 1B BOUNDARY
- WORK AREA 2A/2B BOUNDARY
- WORK AREA 3 BOUNDARY
- CONTRACTOR'S STAGING AREA AND TEMPORARY STOCKPILE BOUNDARY

1 CONST. SAFETY & PHASING PLAN WORK AREA 1  
 1"=10'



**WORK AREA 1A/1B-GATE F2 NOTES:**

1. THE AIR OPERATIONS AREA IS DEFINED BY THE EXISTING AND TEMPORARY FENCE LINE. ALL TEMPORARY FENCE SHALL BE SECURELY IN PLACE PRIOR TO REMOVING ANY EXISTING FENCE OR GATES. ALL WORK WILL BE OUTSIDE OF THE AIRCRAFT OPERATIONS AREA, AS DELINEATED BY TEMPORARY FENCE, EXISTING FENCE, AND EXISTING BUILDINGS.
2. THE FOLLOWING WORK IS INCLUDED IN WORK AREA 1A AT VEHICLE GATE F2:
  - A. INSTALL TEMPORARY FENCING TO REDEFINE RESTRICTED AREA AND PLACE WORK AREA OUTSIDE OF RESTRICTED AREA.
  - B. REMOVE PAVEMENT, BASE MATERIAL, EXISTING FENCING, VEHICLE GATE F2, AND OTHER DEMOLITION ITEMS.
  - C. INSTALL NEW TRENCHING/CABLE/CONDUIT TO EDGE OF WORK AREA 1B, NEW VEHICLE GATE F2, OPERATOR, AND FOUNDATION, CURB ISLAND AND ASSOCIATED EQUIPMENT, LIGHT POLES, AND ALL NEW EQUIPMENT.
  - D. INSTALL BARBED WIRE ON EXISTING FENCE.
  - E. CONSTRUCT NEW PAVEMENT SECTIONS.
  - F. RESTORE DISTURBED AREAS.
3. THE FOLLOWING WORK IS INCLUDED IN WORK AREA 1B AT VEHICLE GATE F2:
  - A. INSTALL NEW TRENCHING/CABLE/CONDUIT FROM THE EDGE OF WORK AREA 1B ACROSS THE AIRPORT ACCESS ROAD.
  - B. RESTORE DISTURBED AREAS.
  - C. CONTRACTOR SHALL MAINTAIN 1-LANE OF ACCESS ON AIRPORT ACCESS ROAD AT ALL TIMES.



PLANS DEVELOPED BY:  
 DOW  
 5368 COMMERCIAL BLVD.  
 JUNEAU, AK 99801  
 AECL848



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**KETCHIKAN AIRPORT PERIMETER FENCING UPGRADES**

CONST. SAFETY & PHASING PLAN  
 WORK AREA 1



FILE 12: Civil 3D Project 2019\AK\70988-01\Main\12-Civil-AF-CSPP-KAD3-AV-AF-CSPP-KAD3-70988.dwg DATE 5/29/2019 14:38 LAYOUT DRAFTED JK CHECKED NH DESIGNED NH

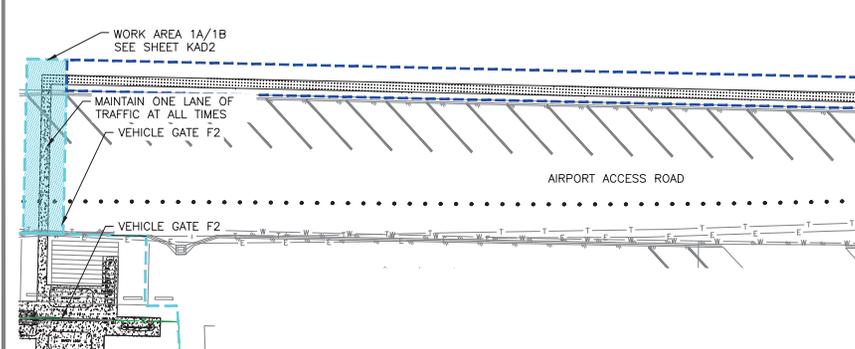
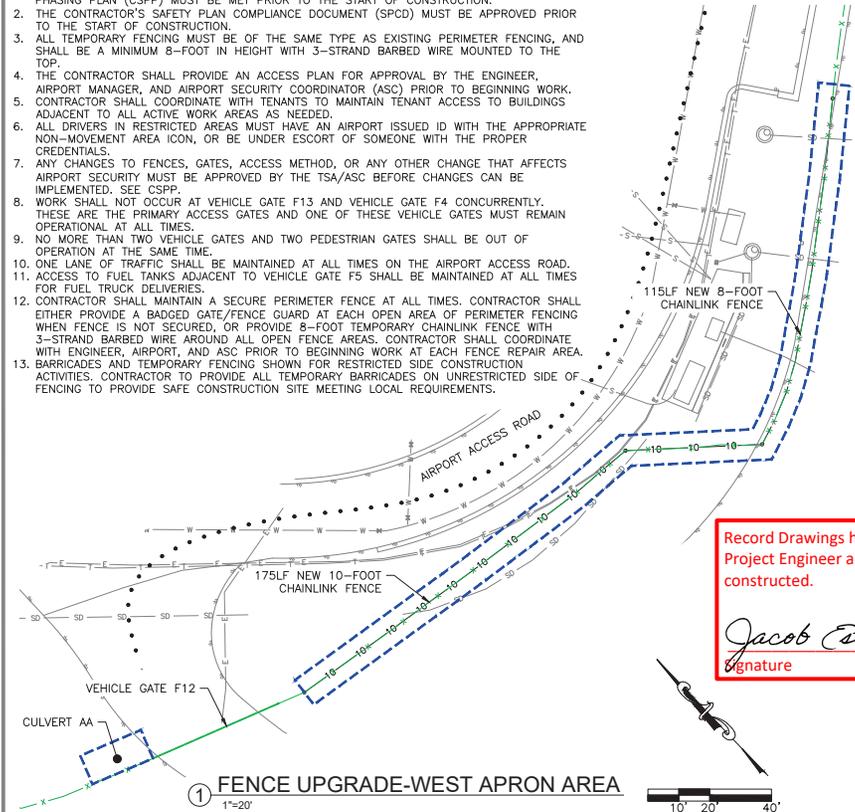
**GENERAL PHASING NOTES (APPLICABLE TO ALL WORK AREAS):**

1. ALL PRE-CONSTRUCTION AND NOTIFICATION REQUIREMENTS OF THE CONSTRUCTION SAFETY AND PHASING PLAN (CSPP) MUST BE MET PRIOR TO THE START OF CONSTRUCTION.
2. THE CONTRACTOR'S SAFETY PLAN COMPLIANCE DOCUMENT (SPCD) MUST BE APPROVED PRIOR TO THE START OF CONSTRUCTION.
3. ALL TEMPORARY FENCING MUST BE OF THE SAME TYPE AS EXISTING PERIMETER FENCING, AND SHALL BE A MINIMUM 8-FOOT IN HEIGHT WITH 3-STRAND BARBED WIRE MOUNTED TO THE TOP.
4. THE CONTRACTOR SHALL PROVIDE AN ACCESS PLAN FOR APPROVAL BY THE ENGINEER, AIRPORT MANAGER, AND AIRPORT SECURITY COORDINATOR (ASC) PRIOR TO BEGINNING WORK.
5. CONTRACTOR SHALL COORDINATE WITH TENANTS TO MAINTAIN TENANT ACCESS TO BUILDINGS ADJACENT TO ALL ACTIVE WORK AREAS AS NEEDED.
6. ALL DRIVERS IN RESTRICTED AREAS MUST HAVE AN AIRPORT ISSUED ID WITH THE APPROPRIATE NON-MOVEMENT AREA ICON, OR BE UNDER ESCORT OF SOMEONE WITH THE PROPER CREDENTIALS.
7. ANY CHANGES TO FENCES, GATES, ACCESS METHOD, OR ANY OTHER CHANGE THAT AFFECTS AIRPORT SECURITY MUST BE APPROVED BY THE TSA/ASC BEFORE CHANGES CAN BE IMPLEMENTED. SEE CSPP.
8. WORK SHALL NOT OCCUR AT VEHICLE GATE F13 AND VEHICLE GATE F4 CONCURRENTLY. THESE ARE THE PRIMARY ACCESS GATES AND ONE OF THESE VEHICLE GATES MUST REMAIN OPERATIONAL AT ALL TIMES.
9. NO MORE THAN TWO VEHICLE GATES AND TWO PEDESTRIAN GATES SHALL BE OUT OF OPERATION AT THE SAME TIME.
10. ONE LANE OF TRAFFIC SHALL BE MAINTAINED AT ALL TIMES ON THE AIRPORT ACCESS ROAD.
11. ACCESS TO FUEL TANKS ADJACENT TO VEHICLE GATE F5 SHALL BE MAINTAINED AT ALL TIMES FOR FUEL TRUCK DELIVERIES.
12. CONTRACTOR SHALL MAINTAIN A SECURE PERIMETER FENCE AT ALL TIMES. CONTRACTOR SHALL EITHER PROVIDE A BADGED GATE/FENCE GUARD AT EACH OPEN AREA OF PERIMETER FENCING WHEN FENCE IS NOT SECURED, OR PROVIDE 8-FOOT TEMPORARY CHAINLINK FENCE WITH 3-STRAND BARBED WIRE AROUND ALL OPEN FENCE AREAS. CONTRACTOR SHALL COORDINATE WITH ENGINEER, AIRPORT, AND ASC PRIOR TO BEGINNING WORK AT EACH FENCE REPAIR AREA.
13. BARRICADES AND TEMPORARY FENCING SHOWN FOR RESTRICTED SIDE CONSTRUCTION ACTIVITIES. CONTRACTOR TO PROVIDE ALL TEMPORARY BARRICADES ON UNRESTRICTED SIDE OF FENCING TO PROVIDE SAFE CONSTRUCTION SITE MEETING LOCAL REQUIREMENTS.

**WORK AREA 3 NOTES:**

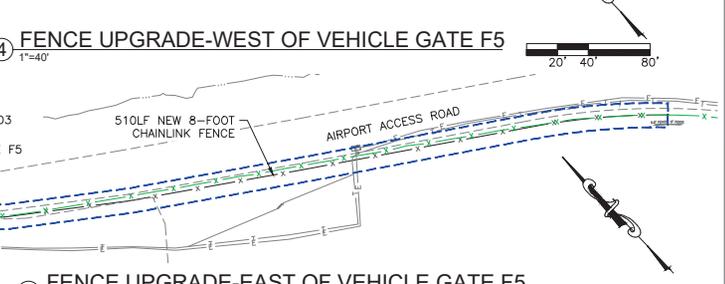
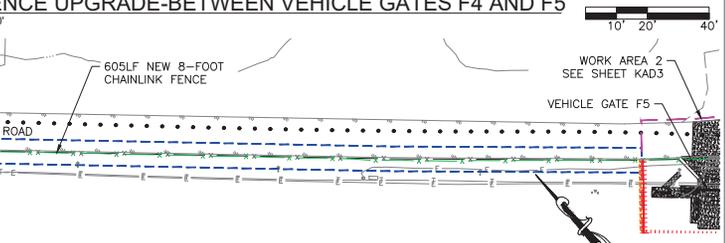
1. THE AIR OPERATIONS AREA IS DEFINED BY THE EXISTING AND TEMPORARY FENCE LINE. ALL TEMPORARY FENCE SHALL BE SECURELY IN PLACE, OR BADGED GATE GUARD PRESENT, PRIOR TO REMOVING ANY EXISTING FENCE OR GATES. ALL WORK TO REMAIN WITHIN 10-FEET OF THE FENCELINE, AND OUTSIDE OF AIRCRAFT OPERATIONS AREA TO THE MAXIMUM EXTENT FEASIBLE, AS DELINEATED BY EXISTING OR TEMPORARY FENCE LINE AND EXISTING BUILDINGS.
2. THE FOLLOWING WORK IS INCLUDED IN WORK AREA 3:
  - A. PROVIDE GATE GUARD AT EACH FENCE OPENING OR INSTALL TEMPORARY FENCING TO REDEFINE RESTRICTED AREA AND PLACE WORK AREA OUTSIDE OF RESTRICTED AREA.
  - B. REMOVE EXISTING FENCING.
  - C. INSTALL NEW FENCING.
  - D. RESTORE DISTURBED AREAS.

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**LEGEND**

- TOFA TAXIWAY OBJECT FREE AREA
- EXISTING FENCE LINE
- TEMPORARY FENCE LINE
- HAZARD MARKING BARRIER
- CONTRACTOR'S HAUL ROUTE
- WORK AREA 1A/1B BOUNDARY
- WORK AREA 2A/2B BOUNDARY
- WORK AREA 3 BOUNDARY
- CONTRACTOR'S STAGING AREA AND TEMPORARY STOCKPILE BOUNDARY



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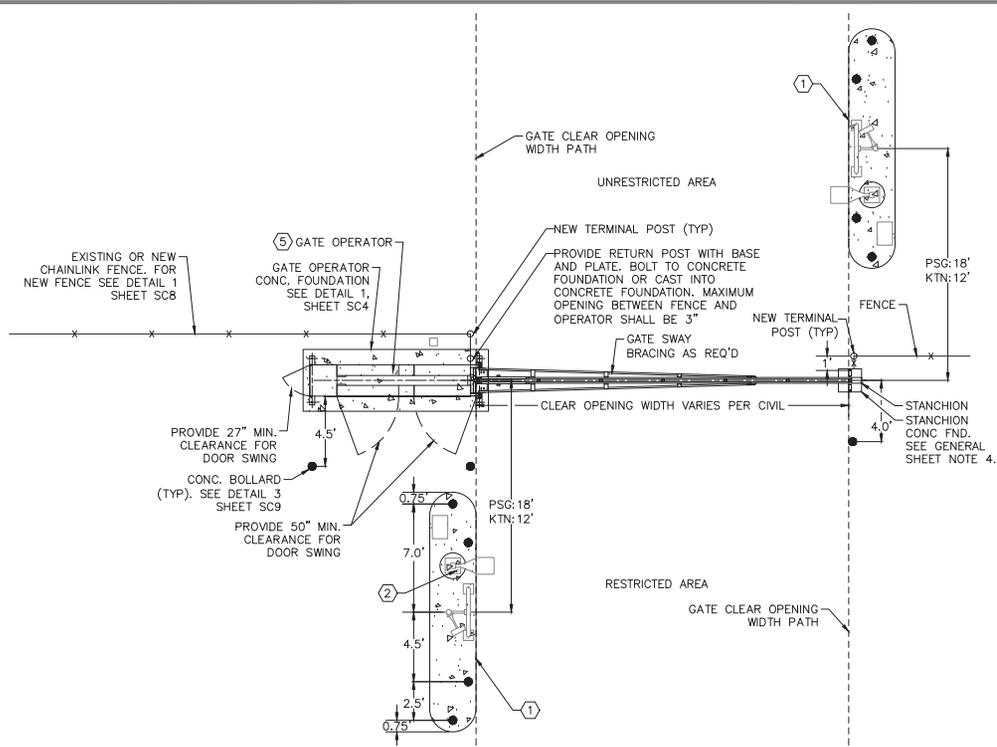
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6860 GLACIER HIGHWAY, JUNEAU, AK 99801  
(907) 465-1763

**KETCHIKAN AIRPORT PERIMETER FENCING UPGRADES**

CONST. SAFETY & PHASING PLAN  
WORK AREA 3



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1 VERTICAL PIVOT GATE DIMENSIONS SITE PLAN (LEFT HAND) NOT TO SCALE

GENERAL CIVIL STANDARDS NOTES:  
 1. SEE ELECTRICAL PLANS FOR ALL ELECTRICAL WORK. ALL ELECTRICAL ITEMS SHOWN ON THESE CIVIL STANDARDS PLANS ARE FOR REFERENCE ONLY.

- GENERAL SHEET NOTES:
- THIS SITE PLAN DEPICTS A TYPICAL LAYOUT OF EQUIPMENT AT A 24 FOOT WIDE DRIVEWAY WITH A VERTICAL PIVOT GATE SYSTEM. THIS PLAN INCLUDES GENERAL SIZING, SPACING, AND DIMENSIONAL RELATIONSHIPS BETWEEN ADJACENT ELEMENTS. SEE ELECTRICAL PLANS FOR WIRING PLAN.
  - CARD READER ISLANDS ON EITHER SIDE OF THE VEHICLE GATES ARE MIRROR IMAGES OF ONE ANOTHER WITH THE SAME EQUIPMENT IN THE SAME RELATIVE LOCATIONS. SEE SHEET SC6 FOR ISLAND ELEVATIONS.
  - ALL WORK SHALL ADHERE TO PROJECT-SPECIFIC CIVIL PLAN REQUIREMENTS WHICH OVERRIDE ANY SPECIFICS PROVIDED IN THIS PLAN THAT ARE LESS STRINGENT. CONSULT PROJECT ENGINEER FOR ANY QUESTIONS OR CLARIFICATIONS PRIOR TO MODIFYING DESIGN FROM THE DIMENSIONS, RELATIONAL LOCATIONS, OR SPECIFICATIONS REQUIRED OF THE PROJECT. PROVIDE SHOP DRAWINGS OF ALL ITEMS FOR REVIEW.
  - GATE STANCHION FOUNDATION PER GATE MANUFACTURER REQUIREMENTS AND NOTES. PROVIDE MAXIMUM 3" OPENING BETWEEN NEW GATE STANCHION AND NEW FENCE POST.
  - ON UNRESTRICTED SIDE OF FENCE OR GATE, DO NOT INSTALL ANY ABOVE-GROUND OBJECTS GREATER THAN 6" IN HEIGHT WITHIN 6- FEET OF FENCE OR GATE.

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- KEY NOTES:
- VEHICLE GATE CARD READER ISLAND. SEE DETAIL 1, SHEET SC6.
  - CARD READER ISLAND AREA LIGHT POLE WITH BASE. SEE READER ISLAND ELEVATION ON DETAIL 1, SHEET SC6.
  - CARD READER ISLAND JUNCTION BOX. SEE READER ISLAND ELEVATION ON DETAIL 1, SHEET SC6 AND DETAIL 2, SHEET ELECTRICAL FOR JUNCTION BOX.
  - WHERE GATE OPERATOR IS NOT SUFFICIENTLY LONG TO ENCAPSULATE THE FULL HEIGHT OF THE VERTICAL GATE WHEN PERPENDICULAR TO GRADE PROVIDE GATE GUARD AT BACK OF OPERATOR TO PREVENT GATE DAMAGE OR ENTRAPMENT HAZARDS. FOLLOW MANUFACTURER GUIDELINES FOR GUARD SPECIFICATIONS.
  - SEE SHEET SC3 FOR VERTICAL PIVOT GATE ELEVATION.
  - MOUNT GATE OPERATOR ONTO THE MANUFACTURER APPROVED CONCRETE PAD. SEE DETAIL 1, SHEET SC4. POSITION OPERATOR RELATIVE TO THE ADJACENT FENCE LINE AND DRIVEWAY AS SHOWN ON THIS DETAIL AND DETAILED SITE PLANS FOR EACH GATE.

Record Drawings have been reviewed by the Project Engineer and represent the project as constructed.

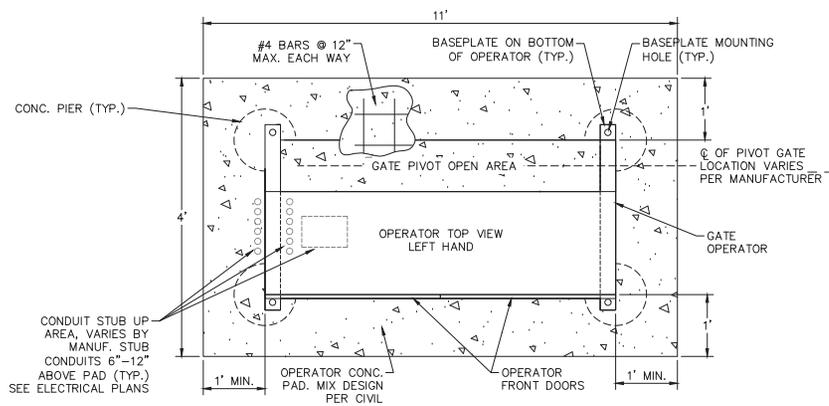
**05/30/23**  
 Signature Date

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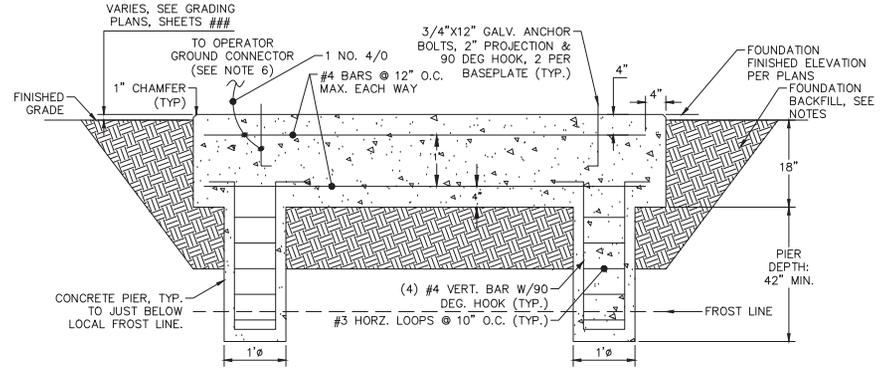


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GATE OPERATOR FOUNDATION SITE PLAN



GATE OPERATOR FOUNDATION ELEVATION

① GATE OPERATOR FOUNDATION DETAIL NOT TO SCALE

- SHEET NOTES:**
- COORDINATE FOUNDATION DIMENSIONS, BASEPLATE LOCATIONS, ANCHOR POINTS, AND ANCHOR BOLT DETAILS WITH OPERATOR MANUFACTURER RECOMMENDATIONS.
  - MAINTAIN A MINIMUM OF 2" CONCRETE COVER OVER ALL EMBEDDED REINFORCEMENT BARS.
  - SEE PROJECT SPECIFIC CIVIL DETAILS AND SPECIFICATIONS FOR CONCRETE MIX DESIGN REQUIREMENTS, SUBBASE MATERIAL AND COMPACTION REQUIREMENTS, GEOTEXTILE FILTER FABRIC SPECIFICS, ETC. ADJUST DETAILS AS REQUIRED TO MEET THE STANDARDS REQUIRED BY THE PROJECT CIVIL ENGINEER.
  - BACKFILL 12" ALL SIDES AND BOTTOM. COMPACT SUBBASE TO 95% PER MODIFIED PROCTOR DENSITY METHOD. WRAP SUBBASE WITH GEOTEXTILE ON ALL SIDES, TOP AND BOTTOM PRIOR TO CONCRETE PLACEMENT.
  - THIS DETAIL IS BASED ON A LEFT HAND GATE OPERATOR. DETAIL APPLIES BUT IN A MIRRORED FASHION FOR RIGHT HAND OPERATORS.
  - BOND 4/0 TO REBAR IN CONC. FOOTING WITH UL LISTED EXOTHERMIC OR SPLIT-BOLT CLAMP.
  - PROVIDE FULL FOUNDATION TO FULL DEPTH IN LIEU OF CONCRETE PIERS SHOWN.
  - FOLLOW SIMILAR DESIGN FOR CANTILEVER GATE OPERATOR. COORDINATE DIMENSIONS, BASEPLATE LOCATIONS, ANCHOR POINTS, AND ANCHOR BOLT DETAILS WITH OPERATOR MANUFACTURER RECOMMENDATIONS.

GENERAL CIVIL STANDARDS NOTES:  
 1. SEE ELECTRICAL PLANS FOR ALL ELECTRICAL WORK. ALL ELECTRICAL ITEMS SHOWN ON THESE CIVIL STANDARDS PLANS ARE FOR REFERENCE ONLY.

Record Drawings have been reviewed by the Project Engineer and represent the project as constructed.

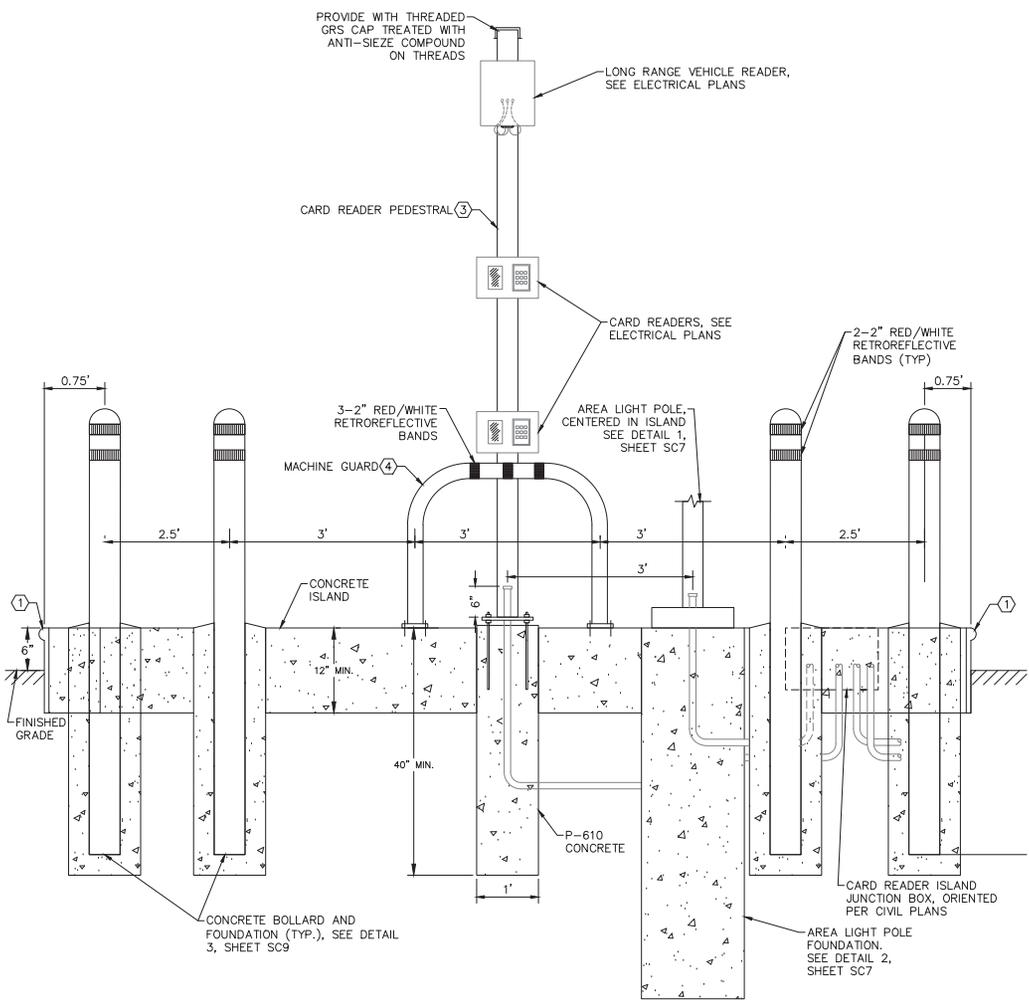
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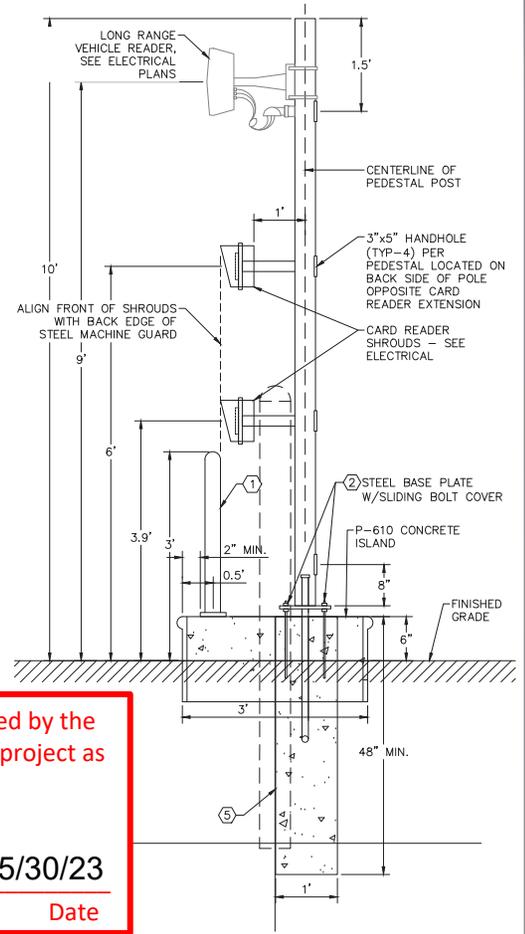
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFAPT00175/00176	2019	SC6	9



① VEHICLE GATE ISLAND ELEVATION NOT TO SCALE

KEY NOTES:

- CARD READER ISLAND FORM SHALL BE 12 GAUGE STEEL WITH 1-1/4" TOP BEAD AND 1-1/4" BOTTOM FLANGE AROUND ENTIRE ISLAND. EMBEDDED DEPTH MIN. 6". APPLY SAFETY YELLOW ENAMEL COATING TO ALL EXPOSED STEEL SURFACES
- PEDESTAL HOT DIPPED GALVANIZED BASE PLATE WITH 10" DIA. BASE AND BOLT CIRCLE. PROVIDE GALVANIZED ANCHOR BOLTS SIZED PER PEDESTAL MANUFACTURER REQUIREMENTS. MINIMUM 1/2" DIA. X 8" EMBEDDED ANCHOR BOLTS (MINIMUM). PROVIDE BOLTS WITH GALVANIZED LEVELING NUTS AND LEAVE 1-1/2" SPACE ABOVE CONCRETE ISLAND FOR GROUT INFILL.
- HOT DIPPED GALVANIZED MULTI-HEIGHT CARD READER PEDESTAL. CONSISTS OF 4" DIA. STANDARD PIPE WITH SINGLE GANG (3"x5") HANDHOLES BEHIND EACH READER MOUNT LOCATION, AND 1/2" X 10" DIA BASE PLATE. PROVIDE WITH 8" SQ. MOUNTING PLATE AT EACH OF THE VEHICLE READER POSITIONS ATTACHED TO PEDESTAL VIA 2" DIA. STANDARD PIPE. DRILL AND SMOOTH OPENINGS FOR ALL CABLES ROUTED WITHIN THE PEDESTAL. HANDHOLE COVERS SHALL BE WEATHERPROOF DIE CAST ALUMINUM. DIMENSIONS SHOWN ARE IN RELATION TO FINISHED GRADE (DRIVING SURFACE) AND NOT THE CONCRETE ISLAND. MODIFY DIMENSIONS OF PEDESTAL FOR SPECIFICS OF EACH PROJECT LOCATION TO ACHIEVE THE CARD READER MOUNTING HEIGHTS NOTES ON THIS SHEET.
- 4" O.D. SCHEDULE 40 STEEL U-SHAPE MACHINE GUARD. PAINT SAFETY YELLOW WITH ENAMEL COATING.
- WRAP CONCRETE FOUNDATION WITH 3 LAYERS OF 6MIL POLYETHYLENE SHEETING



② VEHICLE GATE CARD READER ISLAND ELEVATION SIDE VIEW NOT TO SCALE

Record Drawings have been reviewed by the Project Engineer and represent the project as constructed.

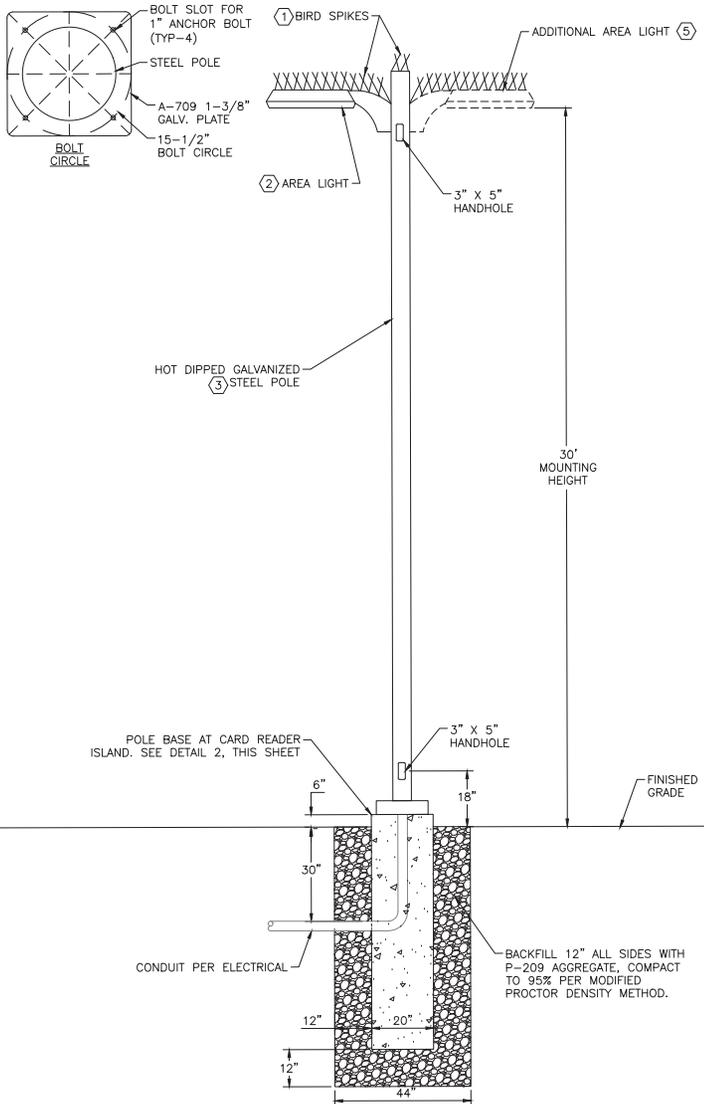
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GENERAL CIVIL STANDARDS NOTES:  
 1. SEE ELECTRICAL PLANS FOR ALL ELECTRICAL WORK. ALL ELECTRICAL ITEMS SHOWN ON THESE CIVIL STANDARDS PLANS ARE FOR REFERENCE ONLY.

SHEET NOTES:  
 1. SEE ELECTRICAL PLANS FOR POWER AND CONTROL CIRCUITING INFORMATION FOR THE CARD READERS, AREA LIGHT FIXTURE, AND THE LONG RANGE READER.  
 2. SEE SHEET SC7 FOR LIGHT POLE DETAILS.  
 3. ALL CIVIL REQUIREMENTS SHOWN ARE TYPICAL AND GENERAL IN NATURE. PROJECT SHALL ADHERE TO SPECIFIC PROJECT CIVIL REQUIREMENTS WHICH OVERRIDE ANY SPECIFICS PROVIDED IN THIS PLAN THAT ARE LESS STRINGENT. CONSULT PROJECT ENGINEER FOR ANY QUESTIONS OR CLARIFICATIONS PRIOR TO MODIFYING DESIGN FROM THE DIMENSIONS, RELATIONAL LOCATIONS, OR SPECIFICATIONS REQUIRED OF THE PROJECT.  
 4. CONDUIT ROUTING SHOWN IN THIS DETAIL IS GRAPHIC IN NATURE. WHERE APPLICABLE AND PRACTICAL, ROUTE CONDUITS IN COMMON TRENCHES. FOLLOW TRENCHING AND CONDUIT PLACEMENT REQUIREMENTS IN ELECTRICAL PLANS.

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① AREA LIGHT ELEVATION DETAIL  
NOT TO SCALE

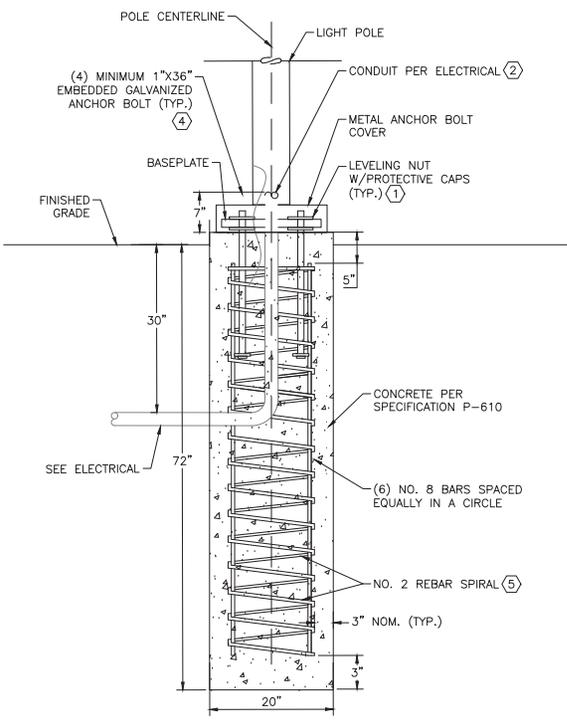
**GENERAL CIVIL STANDARDS NOTES:**  
 1. SEE ELECTRICAL PLANS FOR ALL ELECTRICAL WORK. ALL ELECTRICAL ITEMS SHOWN ON THESE CIVIL STANDARDS PLANS ARE FOR REFERENCE ONLY.

- DETAIL 1 GENERAL NOTES:**
- COORDINATE FOUNDATION DIMENSIONS, BASEPLATE LOCATIONS, BASEPLATE ANCHOR POINTS, AND ANCHOR BOLT DETAILS WITH MANUFACTURER RECOMMENDATIONS. DETAILS SHOWN ARE TYPICAL AND DIAGRAMMATIC ONLY.
  - SEE PROJECT SPECIFIC CIVIL DETAILS AND SPECIFICATIONS FOR CONCRETE MIX DESIGN REQUIREMENTS, SUBBASE MATERIAL AND COMPACTION REQUIREMENTS, GEOTEXTILE FILTER FABRIC SPECIFICS, ETC. ADJUST DETAILS AS REQUIRED TO MEET THE STANDARDS REQUIRED BY THE PROJECT CIVIL PLANS.
  - SIZE POLE WITH LUMINAIRE FOR 120 MPH SUSTAINED WINDS WITH GUSTS UP TO 150 MPH. POLE DIMENSIONS INDICATED ARE A MINIMUM. PROVIDE CALCULATIONS SHOWING COMPLIANCE SEALED BY A CIVIL ENGINEER REGISTERED IN THE STATE OF ALASKA.
  - PROVIDE GROUND BUSHINGS ON ALL CONDUIT STUB UPS INTO POLE.
  - SEE ELECTRICAL PLANS FOR ALL ELECTRICAL REQUIREMENTS.

- DETAIL 1 KEY NOTES:**
- BIRD SPIKES. SECURE TO FIXTURE MOUNTING ARM, FIXTURE, AND POLE TOP WITH MANUFACTURER RECOMMENDED ADHESIVE.
  - SEE ELECTRICAL FOR LUMINAIRES.
  - HOT DIPPED GALVANIZED LIGHT POLE. PROVIDE WITH HANDHOLES WHERE NOTED AND BOLT CIRCLE PER THIS DETAIL, OR PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE SHOP DRAWINGS FOR REVIEW.
  - PROVIDE CABLE SUPPORTS AND PROTECTION AS NECESSARY TO PREVENT CABLE DAMAGE DUE TO MECHANICAL STRESS.
  - WHERE ADDITIONAL AREA LIGHTS ARE REQUIRED PROVIDE POLE WITH MOUNT SUITABLE FOR THE ADDITIONAL LIGHT(S). ARRANGE LIGHTS 180 DEG APART, 90 DEG APART, ETC. AS SHOWN ON THE PLANS

Record Drawings have been reviewed by the Project Engineer and represent the project as constructed.  
  
*Jacob Estenson* 05/30/23  
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			ALASKA	SFAPT00175/00176	2019	SC7	9



② 20' AREA LIGHT POLE BASE DETAIL  
NOT TO SCALE

- DETAIL 2 GENERAL NOTES:**
- ALL SPLICES SHALL BE IN BASE OF POLE. LOOP FIELD POWER CONDUCTORS IF REQUIRED PER SPECIFIC SITE REQUIREMENTS FOR EACH POLE.
  - PROVIDE FUSE KITS IN EACH POLE BASE.
  - BOND THE GROUND CONDUCTOR TO FOUNDATION REBAR, ANCHOR BOLTS, LIGHT POLE, AND TO THE EQUIPMENT GROUNDING CONDUCTOR RAN WITH THE LIGHTING CIRCUIT.
  - PROVIDE ANCHOR BOLTS WITH 4" MINIMUM HOOK AND 6" OF THREAD ON BOTH ENDS. BOLTS SHALL MEET ASTM-A36 WITH MINIMUM YIELD STRESS OF 36.0 KSI.
  - SEE DETAIL 1, THIS SHEET FOR LIGHT POLE BASE BACKFILL REQUIREMENTS.
- DETAIL 2 KEY NOTES:**
- USE SILICONE FILLED WIRE NUTS WITH SPLICES.
  - SPLIT STYLE, COLOR MATCH TO POLE.
  - LOCATE JUST INSIDE THE REBAR SPIRAL PERIMETER.
  - START AND STOP SPIRAL 3" BELOW TOP AND ABOVE BOTTOM. SPIRAL TO HAVE 14" DIAMETER WITH 1 TURN EVERY 3".

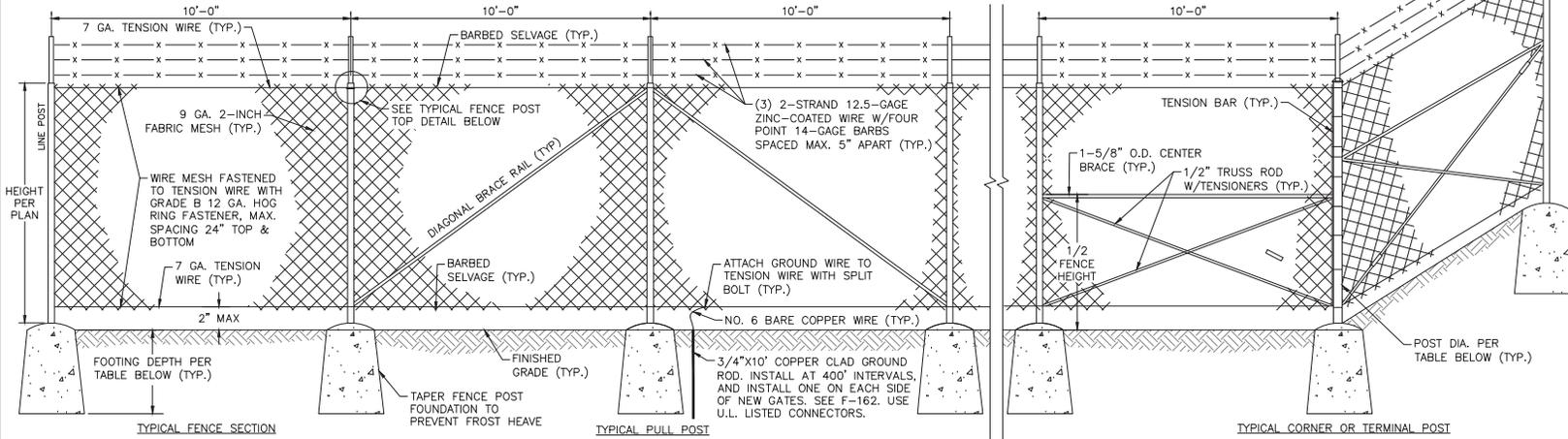
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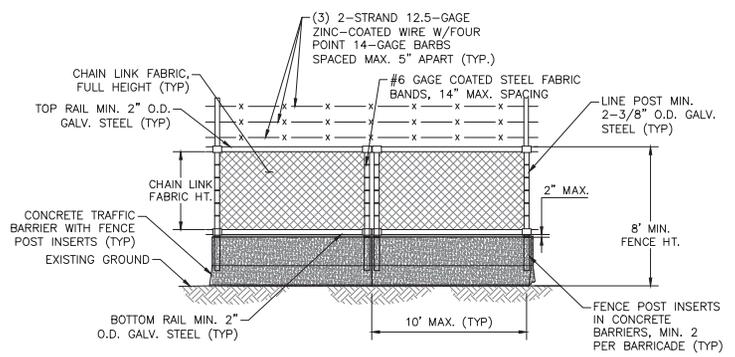
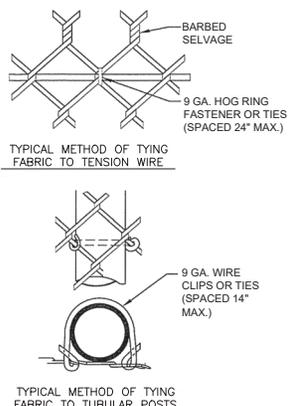
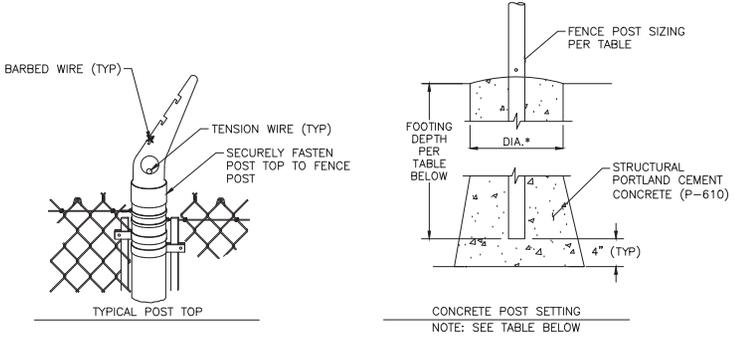
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NOTE: PULL POST SHALL BE SPACED AT 250' INTERVALS MAX. FABRIC SHALL BE PLACED ON UNRESTRICTED SIDE OF POSTS.



- CHAINLINK FENCE NOTES:**
1. POSTS SHALL BE SPACED EQUAL DISTANCES APART. MAXIMUM SPACING SHALL BE 10 FEET UNLESS DIRECTED OTHERWISE BY THE ENGINEER.
  2. POST TOPS SHALL BE SECURELY FASTENED TO POST.
  3. BRACE RAILS AND TRUSS RODS SHALL BE SECURELY FASTENED TO POST WITH BRACE BANDS WITH THREADED TAKE-UP ADAPTER FOR TRUSS RODS.
  4. GROUND WIRE SHALL BE ATTACHED TO FENCE FABRIC BY MEANS OF A SPLIT BOLT.
  5. FABRIC SHALL BE STRETCHED TO A SMOOTH UNIFORM APPEARANCE.
  6. DETAILS SHOWN INDICATE GENERAL DESIGN AND DIMENSIONS MAY VARY AMONG MANUFACTURERS.
  7. LINE POST SHALL BE SET IN CONCRETE UNLESS SHOWN OTHERWISE ON THE PLANS.
  8. FABRIC SHALL BE PLACED ON UNRESTRICTED SIDE OF POSTS.

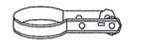


- TEMPORARY CHAINLINK FENCE NOTES:**
1. SEE PROJECT AIRPORT-SPECIFIC CONSTRUCTION SAFETY AND PHASING PLAN FOR TEMPORARY FENCE LOCATIONS.
  2. DETAILS SHOWN INDICATE GENERAL DESIGN. SUPPLIED TEMPORARY FENCE SHALL MEET ALL TSA REQUIREMENTS.
  3. POST TOPS SHALL BE SECURELY FASTENED TO POSTS.
  4. FABRIC SHALL BE STRETCHED TO A SMOOTH UNIFORM APPEARANCE.
  5. FABRIC SHALL BE PLACED ON UNRESTRICTED SIDE OF POSTS.

**1 TEMPORARY CHAINLINK FENCE DETAIL**  
NOT TO SCALE

**1 CHAIN LINK FENCE DETAILS**  
NOT TO SCALE

FENCE FABRIC HEIGHT	CHAINLINK FENCE DESIGN PARAMETERS								TOP RAIL OR BRACE RAIL	
	END-CORNER-PULL				LINE-BRACE				PIPE	PIPE
	PIPE	FOOTING	PIPE		FOOTING	PIPE				
SIZE (IN.)	LB/FT	DEPTH (IN.)	DIA. (IN.)	SIZE (IN.)	LB/FT	DEPTH (IN.)	DIA. (IN.)	SIZE	LB/FT	
8'	2 7/8	4.64	54	18	2 3/8	3.12	40	12	1 1/4	1.25
10'	3	4.64	60	18	2 7/8	4.64	40	12	1 1/4	1.25



TYPICAL METHOD OF TYING FABRIC TO TUBULAR POSTS



BACK STOP C-2

PLANS DEVELOPED BY:  
DOW,  
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AEC-848

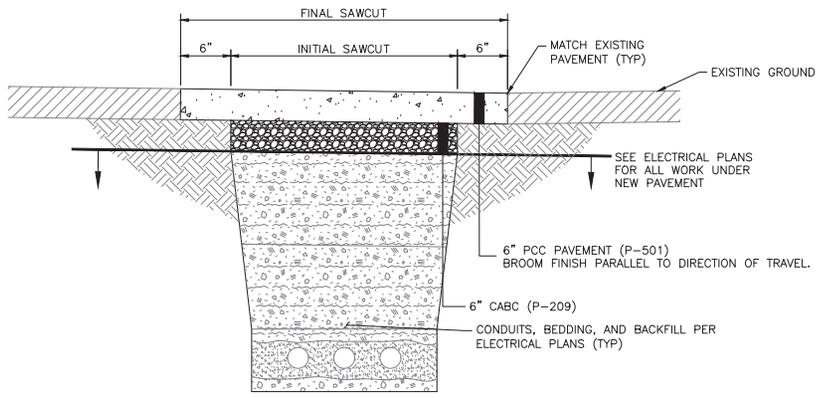
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**AIRPORT PERIMETER FENCING UPGRADES CIVIL STANDARDS**

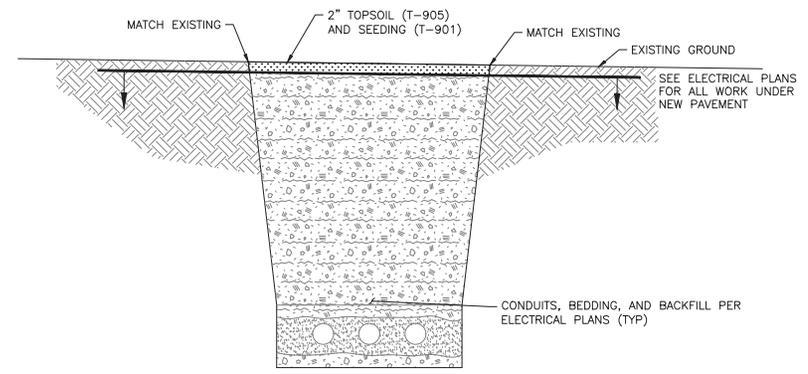
FENCE DETAILS

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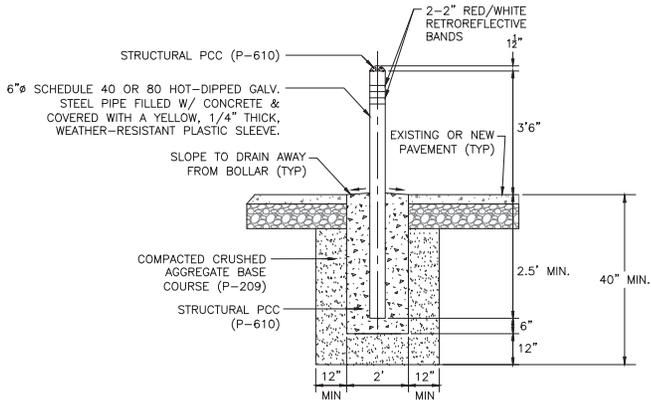
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFAPT00175/00176	2019	SC9	9



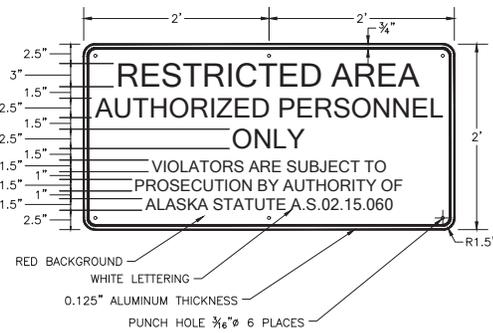
① TYPICAL TRENCH REPAIR SECTION - PAVED AREAS  
NOT TO SCALE



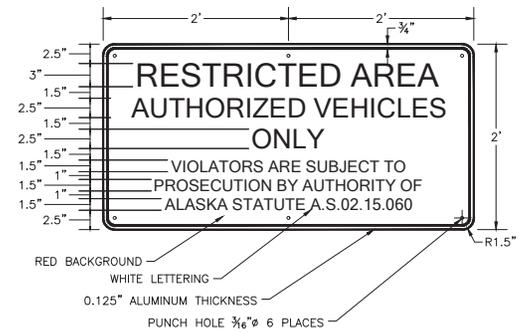
② TYPICAL TRENCH REPAIR SECTION - UNPAVED AREAS  
NOT TO SCALE



③ BOLLARD DETAIL  
NOT TO SCALE



④ FENCE RESTRICTED AREA SIGN DETAIL  
NOT TO SCALE



⑤ VEHICLE GATE RESTRICTED AREA SIGN DETAIL  
NOT TO SCALE

- NOTES:
1. INSTALL NEW SIGNS AT MAXIMUM 200' INTERVALS ON ALL NEW FENCING. 200' INTERVALS TO BEGIN AT NEAREST EXISTING SIGN ON ADJACENT EXISTING FENCING, OR WHERE FENCE CONNECTS TO AN EXISTING BUILDING.
  2. INSTALL ONE SIGN ON THE UNRESTRICTED SIDE OF ALL NEW PEDESTRIAN GATES.
  3. INSTALL SIGNS AT 7' HEIGHT, AS MEASURED FROM GROUND TO TOP OF SIGN.
  4. USE ALUMINUM WIRE TIES TO SECURE SIGN TO FENCE.

- NOTE:
1. INSTALL ONCE SIGN AT EACH NEW VEHICLE GATE, CENTERED ON THE CLEAR OPENING WIDTH.
  2. POST SIGN AT 7' HEIGHT, AS MEASURED FROM GROUND TO TOP OF SIGN.
  3. USE ALUMINUM WIRE TIES TO SECURE SIGN TO FENCE.

Record Drawings have been reviewed by the Project Engineer and represent the project as constructed.

*Jacob Estenson* 05/30/23  
Signature Date

<p>PLANS DEVELOPED BY: DOW 5368 COMMERCIAL BLVD. JUNEAU, AK 99801 AECL848</p>		<p>STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES 6860 GLACIER HIGHWAY, JUNEAU, AK 99801 (907) 465-1763</p> <p>AIRPORT PERIMETER FENCING UPGRADES CIVIL STANDARDS</p> <p>CIVIL DETAILS</p>
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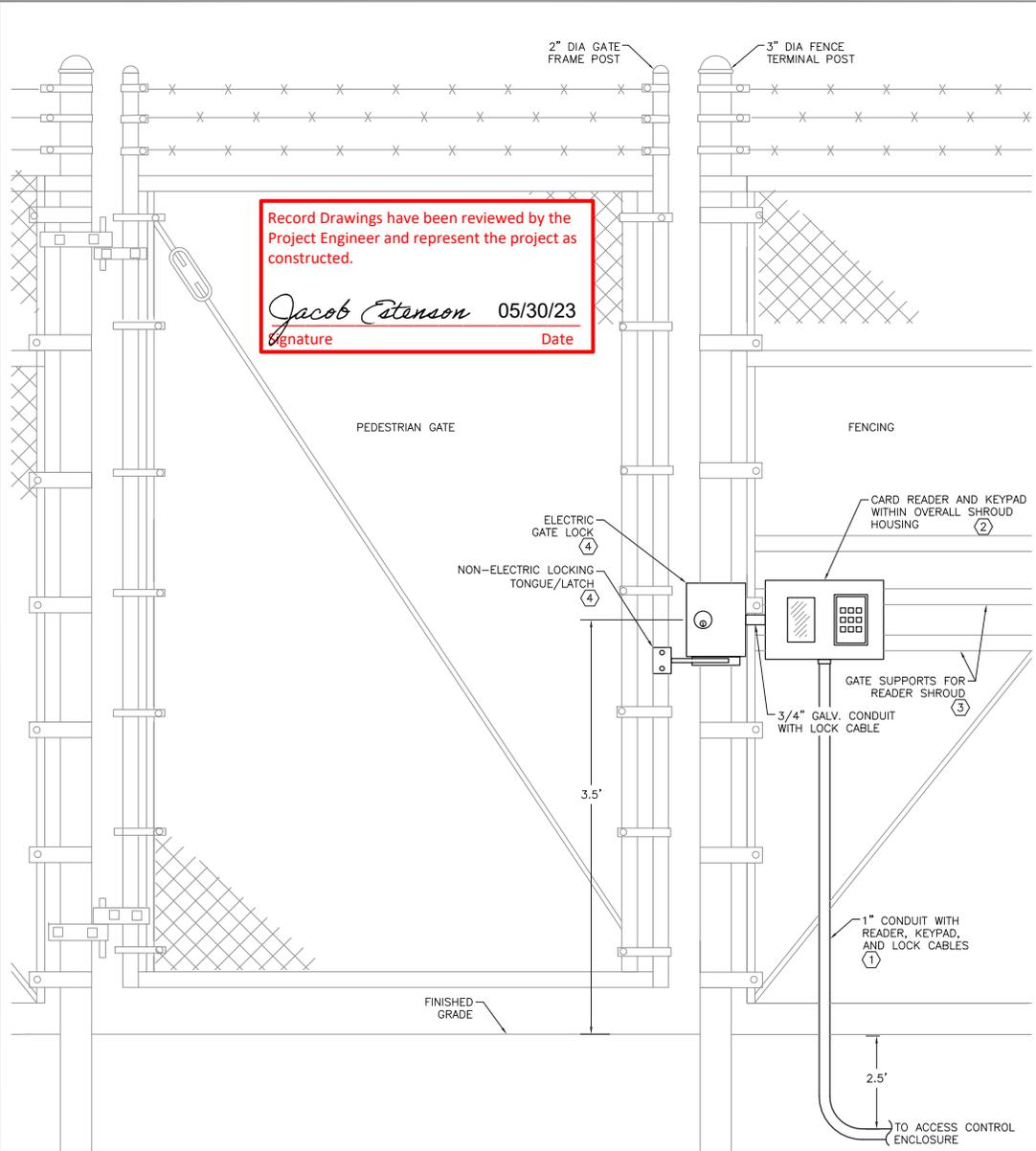






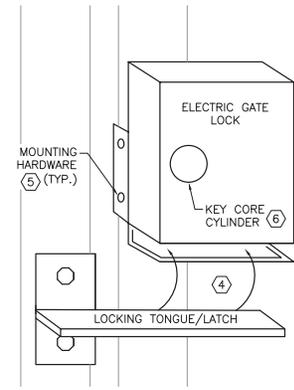


FILE | A:\02 State of AK\01 Airport perimeter fencing approach\workshop drawings\03 Airport Electrical, BRT Building | DATE | 7/26/2019 17:18 | LAYOUT | SEE | DESIGNED | MCM | CHECKED | MCM | DRAFTED | LRW

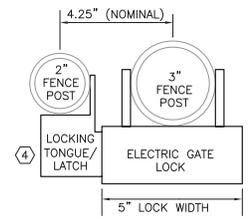


① PEDESTRIAN GATE CARD READER & KEYPAD ELEVATION  
NOT TO SCALE

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFAPT00176/00175	2019	SE6	24



② PEDESTRIAN GATE LOCK ENLARGED DETAILS  
NO SCALE



③ PEDESTRIAN GATE LOCK TOP DETAILS  
NO SCALE

SHEET NOTES:

- SEE GATE SPECIFIC FOR POWER & NETWORK SCHEMATICS AND SHEETS SE7-SE10 FOR APPLICABLE READER & DEVICE SCHEMATIC.
- COORDINATE THE FENCE TERMINAL POSTS AND GATE FRAME SIZES WITH CIVIL ENGINEER TO ENSURE GATE LOCK WILL PROPERLY MOUNT PER MANUFACTURER REQUIREMENTS.
- COORDINATE WITH CIVIL ENGINEER SO THAT GATES SWING OUT FROM THE SECURE SIDE OF THE FENCE INTO THE NON-SECURE SIDE OF THE FENCE.
- PROVIDE GROMMETS IN HOLES FOR CABLE PASS THROUGH IN ALL ENCLOSURES.
- DOOR SHALL SWING INTO THE PUBLIC OR NON-SECURE SIDE OF THE FENCE LINE.
- COORDINATE WITH CIVIL ENGINEER TO PROVIDE SPRING LOADED AUTOMATIC CLOSURE DEVICE AND PUSH & PULL PLATES FOR MANUAL DOOR OPENING (NOT SHOWN HERE).

KEY NOTES:

- ROUTE CONDUIT ON SECURE SIDE OF FENCE TO THE BACK-TO-BACK CARD READER HOUSINGS. SECURE CONDUIT FENCING AS REQUIRED.
- CARD READER & KEYPAD SIDE BY SIDE IN SHROUD HOUSING. SHROUD AS SPECIFIED ON VEHICLE GATE ISLAND ELEVATION DETAIL 2, SHEET SE17. ONE HOUSING WITH CARD READER AND KEYPAD ON BOTH SIDES OF THE FENCE MOUNTED BACK TO BACK. NIPPLE BETWEEN THE TWO READERS THROUGH BACK OF HOUSINGS WITH CABLES. PROVIDE GROMMETS FOR ALL CABLE PASS THROUGH LOCATIONS AND SEAL ALL CONDUIT PENETRATIONS INTO SHROUD.
- AS REQUIRED PER FENCE DESIGN OR CONDITIONS, PROVIDE ADDITIONAL SUPPORT CHANNEL OR FENCE STRUCTURAL SUPPORT MEMBERS AS BACKING FOR THE BACK-TO-BACK SHROUD HOUSINGS. MOUNT HOUSINGS WITH STAINLESS STEEL HARDWARE TO THE FENCE SYSTEM.
- MOUNT ELECTRIC GATE LOCK AND NON-ELECTRIC LATCH AT HEIGHT INDICATED, ALIGN AS REQUIRED FOR PROPER FIT BASED ON SPECIFIC GATE AND FENCE POST SIZES AND DISTANCES. SET PLUMB AND LEVEL TO FINISHED GRADE. PROPERLY ALIGN TONGUE WITH GATE LOCK SLOT IN ALL DIRECTIONS PRIOR TO DRILLING MOUNTING HOLES.
- MOUNT LATCH AND LOCK TO FENCE AND GATE POST WITH THROUGH BOLTS. DRILL POSTS AS REQUIRED, APPLY SPRAY GALVANIZED PAINT TO ALL DRILLED PENETRATIONS.
- PROVIDE ANSI 1-1/8" INTERCHANGEABLE MORTISE KEY CYLINDER AS REQUIRED. KEY TO AKDOT&PF REQUIREMENTS.

PLANS DEVELOPED BY:  
MORRIS ENGINEERING  
GROUP, INC  
2375 JORDAN AVE #7  
JUNEAU, AK 99801  
907-789-3350  
AECIL 1010



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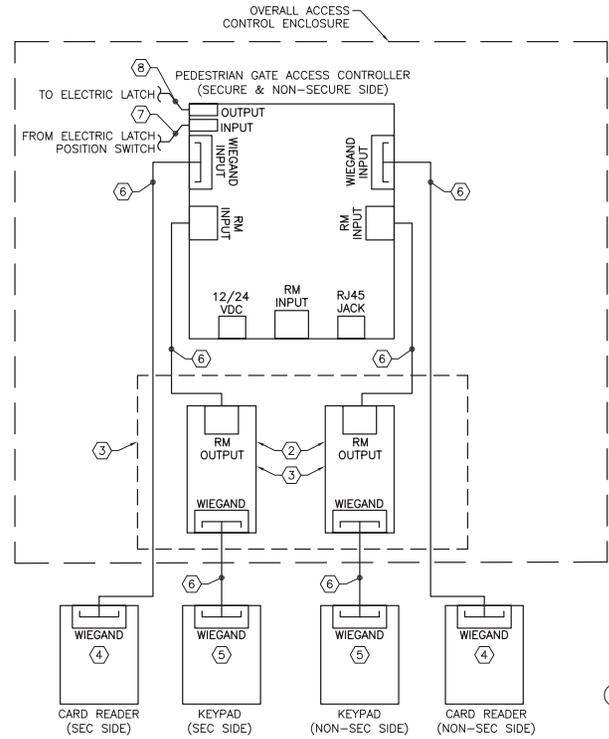
AIRPORT PERIMETER FENCING  
STANDARDS FOR PSG & KTN

PEDESTRIAN GATE  
ELEVATION

FILE | 1/10/2019 10:58 AM | DATE | 6/3/2019 10:58 | LAYOUT | SE7 | DESIGNED | MCM | CHECKED | MCM | DRAFTED | LRW

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFAPT00176/00175	2019	SE7	24

Record Drawings have been reviewed by the Project Engineer and represent the project as constructed.  
*Jacob Estenson*      05/30/23  
 Signature                      Date



① 1-CONTROLLER READER & DEVICE SCHEMATIC NO SCALE

**SHEET NOTES:**

- THIS SCHEMATIC IS DIAGRAMMATIC ONLY AND REPRESENTS THE TYPICAL VOLTAGE CONTROL AND CABLE CONNECTIONS WITHIN THE GATE ACCESS CONTROLLER. SEE GATE SPECIFIC POWER AND NETWORK SCHEMATIC.
- SEE SHEET SE15 FOR ACCESS CONTROL ENCLOSURE ELEVATION AND GENERAL LAYOUT WITHIN THE ENCLOSURE.
- NEATLY TRAIN, BUNDLE, AND LABEL ALL CABINET CABLES AND CONDUCTORS. UTILIZE THE WIRE MANAGEMENT TRACKS AS MUCH AS POSSIBLE (NOT SHOWN HERE). ALL POWER SUPPLIES, WIRING, CONDUIT, ETC. MUST BE SIZED ACCORDING TO THE NATIONAL ELECTRICAL CODE AND INSTALLED ACCORDING TO MANUFACTURER SPECIFICATIONS.
- ALL SHIELDED CABLES SHALL BE PROPERLY GROUNDED TO ONE COMMON GROUND AT THE ACCESS CONTROL CABINET. GROUNDING SINGLE POINTS TO MULTIPLE EARTH GROUND POINTS CREATES GROUND LOOPS AND SHOULD BE AVOIDED.
- ANTI-CORROSION LUBRICANT SHALL BE APPLIED TO ALL EXPOSED WIRELESS ANTENNA CONDUCTOR AND CABLE CONNECTIONS.
- WHERE DISTANCE BETWEEN PEDESTRIAN GATE AND ACCESS CONTROLLER EXCEEDS 150 FEET, PROVIDE INCREASED WIRE SIZE TO ACCOUNT FOR VOLTAGE DROP. CONSULT MANUFACTURER WIRING SIZING CHARTS AS REQ'D.

**KEY NOTES:**

- GATE OPERATOR SAFETY DEVICE INTERFACE. MOUNT WITHIN THE GATE OPERATOR. UNIT CONVERTS THE MONITORED (I.E. CURRENT DRAWING) EDGE SENSOR CIRCUITS TO NORMALLY CLOSED INPUTS REQUIRED BY THE GATE OPERATOR. PROVIDE MULTI-INPUT DEVICE POWERED FROM GATE OPERATOR INTERNAL 12/24VDC.
- SOFTWARE HOUSE RM-4 CONVERTER MODULE. REQUIRED FOR EACH WIEGAND (NON-OSDP) OUTPUT DEVICE CONNECTED TO AN ACCESS CONTROLLER AS EDGE CONTROLLERS ONLY HAVE TWO NATIVE WIEGAND INPUTS PER UNIT.
- WIEGAND CONVERTER DEVICES ONLY REQ'D WHERE WIEGAND OUTPUT DEVICES ARE USED (NO OSDP OUTPUT). IF OSDP OUTPUT IS AVAILABLE FROM DEVICE, CONVERTER CAN BE REMOVED. SEE SPECIFICATIONS FOR MORE DETAILS.
- MULTI-FORMAT (PROX AND iCLASS) TOUCHLESS CARD READER, HARDENED.
- PIEZOELECTRIC 3X4 KEYPAD, HARDENED. SINGLE GANG, WIEGAND FORMAT.
- (1) SHIELDED 22/6 TSP (3-PAIR) CABLE (WIEGAND READER OR RM MODULE CABLE). GENERALLY, TSP CABLE WILL ACCOMMODATE BOTH WIEGAND DEVICES AND DEVICES ACCOMMODATING OSDP OUTPUT PROTOCOL REQUIRING RS-485. WHERE LENGTHS ARE LONG(>200 FT., TYPICAL) A TSP CABLE WITH SEPARATE POWER AND CONTROL CONDUCTORS MAY BE REQUIRED TO DISTANT WIEGAND CONNECTED DEVICES. COORDINATE THE SPECIFICS WITH THE SYSTEM INTEGRATOR ON THE PROJECT ON A DEVICE BY DEVICE LOCATION AS REQUIRED.
- (1) SHIELDED 22/2 MULTI-COND. CABLE, (SUPERVISED INPUT OR RELAY CONTROL).
- (1) SHIELDED 18/3 MULTI-COND. CABLE, (PED GATE SWITCHED POWER). SEE SHEET NOTE 6.

PLANS DEVELOPED BY:  
 MORRIS ENGINEERING GROUP, INC  
 2375 JORDAN AVE #7  
 JUNEAU, AK 99801  
 907-789-3350  
 AECL 1010

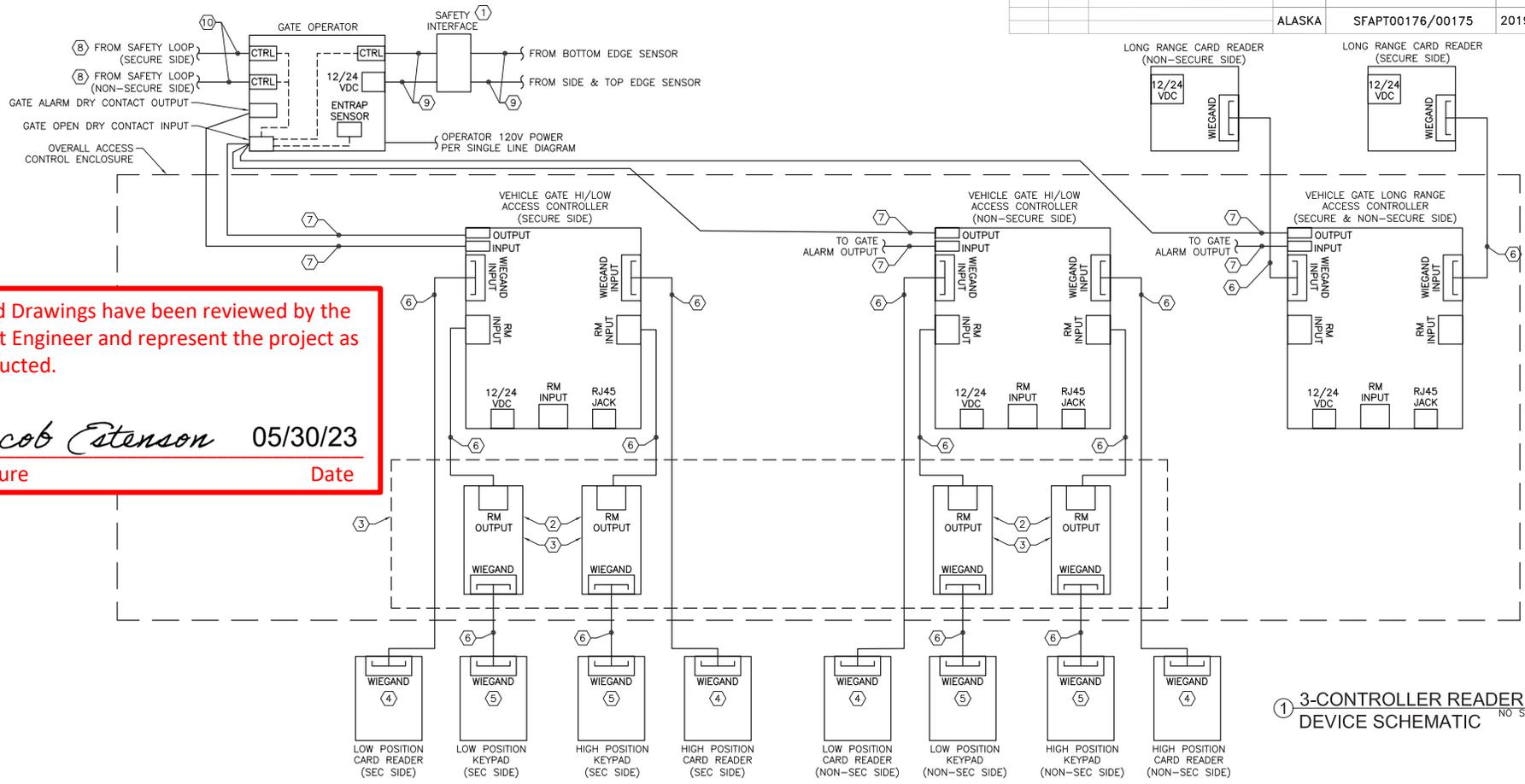


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 (907) 465-1763

**AIRPORT PERIMETER FENCING STANDARDS FOR PSG & KTN**  
 1-CONTROLLER READER & DEVICE SCHEMATIC

FILE | 1/10/2019 10:58 AM | DATE | 6/3/2019 10:58 | LAYOUT | SE8 | CHECKED | MCM | DRAFTED | LRW

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFAPT00176/00175	2019	SE8	24



Record Drawings have been reviewed by the Project Engineer and represent the project as constructed.  
  
*Jacob Estenson* 05/30/23  
 Signature Date

① 3-CONTROLLER READER & DEVICE SCHEMATIC NO SCALE

SHEET NOTES:

- THIS SCHEMATIC IS DIAGRAMMATIC ONLY AND REPRESENTS THE TYPICAL VOLTAGE CONTROL AND CABLE CONNECTIONS WITHIN THE GATE ACCESS CONTROLLER. SEE GATE SPECIFIC POWER AND NETWORK SCHEMATIC.
- SEE SHEET SE15 FOR ACCESS CONTROL ENCLOSURE ELEVATION AND GENERAL LAYOUT WITHIN THE ENCLOSURE.
- NEATLY TRAIN, BUNDLE, AND LABEL ALL CABINET CABLES AND CONDUCTORS. UTILIZE THE WIRE MANAGEMENT TRACKS AS MUCH AS POSSIBLE (NOT SHOWN HERE). ALL POWER SUPPLIES, WIRING, CONDUIT, ETC. MUST BE SIZED ACCORDING TO THE NATIONAL ELECTRICAL CODE AND INSTALLED ACCORDING TO MANUFACTURER SPECIFICATIONS.
- ALL SHIELDED CABLES SHALL BE PROPERLY GROUNDED TO ONE COMMON GROUND AT THE ACCESS CONTROL CABINET. GROUNDING SINGLE POINTS TO MULTIPLE EARTH GROUND POINTS CREATES GROUND LOOPS AND SHOULD BE AVOIDED.
- ANTI-CORROSION LUBRICANT SHALL BE APPLIED TO ALL EXPOSED WIRELESS ANTENNA CONDUCTOR AND CABLE CONNECTIONS.
- WHERE DISTANCE BETWEEN PEDESTRIAN GATE AND ACCESS CONTROLLER EXCEEDS 150 FEET, PROVIDE INCREASED WIRE SIZE TO ACCOUNT FOR VOLTAGE DROP. CONSULT MANUFACTURER WIRING SIZING CHARTS AS REQ'D.

KEY NOTES:

- GATE OPERATOR SAFETY DEVICE INTERFACE. MOUNT WITHIN THE GATE OPERATOR. UNIT CONVERTS THE MONITORED (I.E. CURRENT DRAWING) EDGE SENSOR CIRCUITS TO NORMALLY CLOSED INPUTS REQUIRED BY THE GATE OPERATOR. PROVIDE MULTI-INPUT DEVICE POWERED FROM GATE OPERATOR INTERNAL 12/24VDC.
- SOFTWARE HOUSE RM-4 CONVERTER MODULE. REQUIRED FOR EACH WIEGAND (NON-OSDP) OUTPUT DEVICE CONNECTED TO AN ACCESS CONTROLLER AS EDGE CONTROLLERS ONLY HAVE TWO NATIVE WIEGAND INPUTS PER UNIT.
- WIEGAND CONVERTER DEVICES ONLY REQUIRED WHERE WIEGAND OUTPUT DEVICES ARE USED (NO OSDP OUTPUT). IF OSDP OUTPUT IS AVAILABLE FROM DEVICE, CONVERTER CAN BE REMOVED FROM DESIGN. SEE SPECIFICATIONS FOR MORE DETAILS.
- MULTI-FORMAT (PROX AND iCLASS) TOUCHLESS CARD READER, HARDENED.
- PIEZOELECTRIC 3X4 KEYPAD, HARDENED. SINGLE GANG, WIEGAND FORMAT.
- (1) SHIELDED 22/6 TSP (3-PAIR) CABLE (WIEGAND READER OR RM MODULE CABLE). GENERALLY, TSP CABLE WILL ACCOMMODATE BOTH WIEGAND DEVICES AND DEVICES ACCOMMODATING OSDP OUTPUT PROTOCOL REQUIRING RS-485. WHERE LENGTHS ARE LONG (>200 FT., TYPICAL) A TSP CABLE WITH SEPARATE POWER AND CONTROL CONDUCTORS MAY BE REQUIRED TO DISTANT WIEGAND CONNECTED DEVICES. COORDINATE THE SPECIFICS WITH THE SYSTEM INTEGRATOR ON THE PROJECT ON A DEVICE BY DEVICE LOCATION AS REQUIRED.
- (1) SHIELDED 18/4 MULTI-COND. CABLE, (LOCK INPUT OR RELAY CONTROL).

- SOME GATE OPERATORS MAY REQUIRE A SEPARATE EXPANSION BOARD OR CONTROL MODULE TO BE CONNECTED TO THE OPERATOR IN FRONT OF THE SAFETY LOOP CABLE AND TO BE PLACED INSIDE OPERATOR HOUSING. CHECK MANUFACTURER DETAILS & INSTRUCTIONS.
- (1) SHIELDED 18/4 MULTI-COND. CABLE, (MONITORED SAFETY INTERFACE POWER CABLE).
- (1) 14 AWG, STRANDED, CU, XLPE, 600V COND. (DETECTOR LOOP CABLE).

PLANS DEVELOPED BY:  
 MORRIS ENGINEERING GROUP, INC  
 2375 JORDAN AVE #7  
 JUNEAU, AK 99801  
 907-789-3350  
 AECL 1010



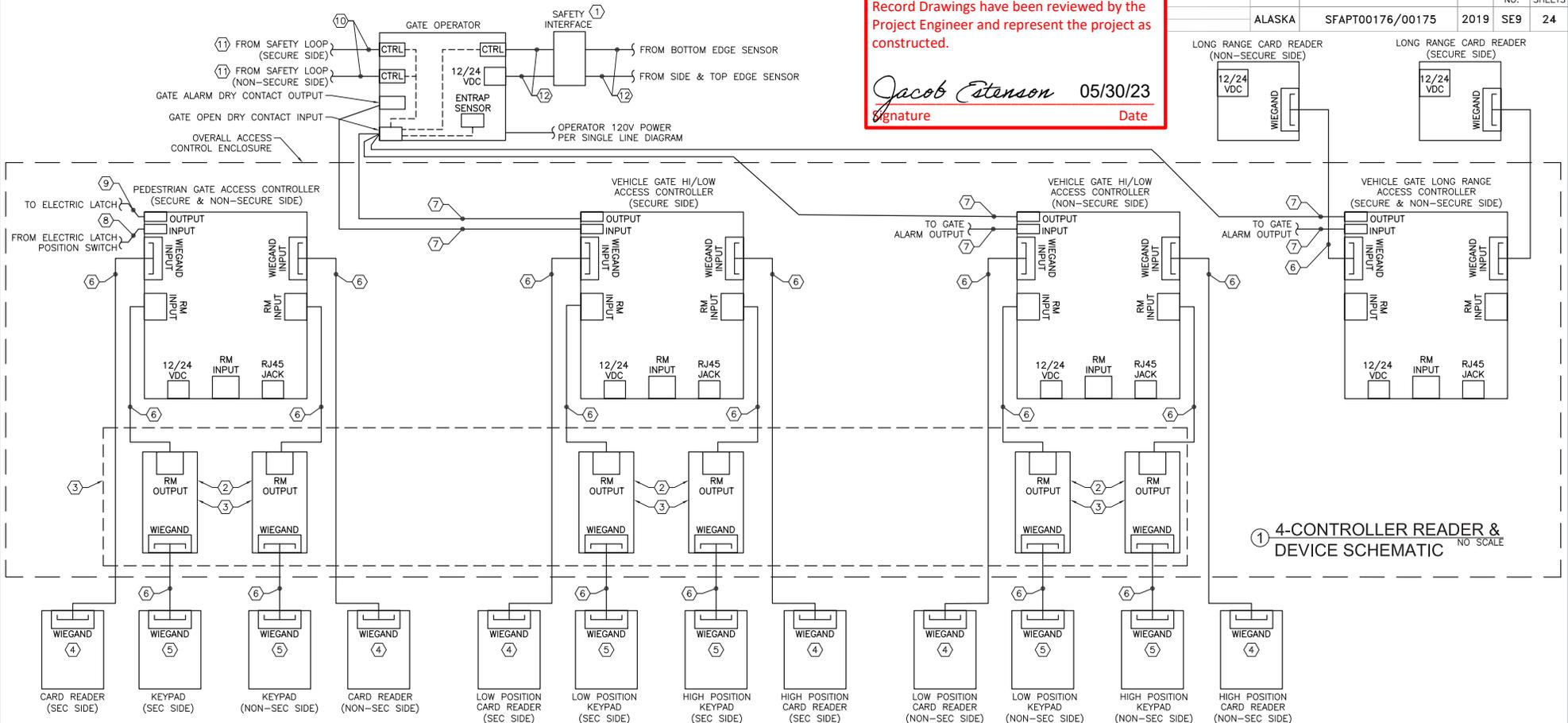
STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES  
 6860 GLACIER HIGHWAY, JUNEAU, AK 99801  
 (907) 465-1763

AIRPORT PERIMETER FENCING STANDARDS FOR PSG & KTN  
 3-CONTROLLER READER & DEVICE SCHEMATIC

FILE | 1/10/2019 10:58 | DATE | 6/3/2019 10:58 | LAYOUT | SE9 | DESIGNED | MCM | CHECKED | MCM | DRAFTED | LRW

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFAPT00176/00175	2019	SE9	24

Record Drawings have been reviewed by the Project Engineer and represent the project as constructed.  
*Jacob Etenson* 05/30/23  
 Signature Date



- SHEET NOTES:**
- THIS SCHEMATIC IS DIAGRAMMATIC ONLY AND REPRESENTS THE TYPICAL VOLTAGE CONTROL AND CABLE CONNECTIONS WITHIN THE GATE ACCESS CONTROLLER. SEE GATE SPECIFIC POWER AND NETWORK SCHEMATIC.
  - SEE SHEET SE15 FOR ACCESS CONTROL ENCLOSURE ELEVATION AND GENERAL LAYOUT WITHIN THE ENCLOSURE.
  - NEATLY TRAIN, BUNDLE, AND LABEL ALL CABINET CABLES AND CONDUCTORS. UTILIZE THE WIRE MANAGEMENT TRACKS AS MUCH AS POSSIBLE (NOT SHOWN HERE). ALL POWER SUPPLIES, WIRING, CONDUIT, ETC. MUST BE SIZED ACCORDING TO THE NATIONAL ELECTRICAL CODE AND INSTALLED ACCORDING TO MANUFACTURER SPECIFICATIONS.
  - ALL SHIELDED CABLES SHALL BE PROPERLY GROUNDED TO ONE COMMON GROUND AT THE ACCESS CONTROL CABINET. GROUNDING SINGLE POINTS TO MULTIPLE EARTH GROUND POINTS CREATES GROUND LOOPS AND SHOULD BE AVOIDED.
  - ANTI-CORROSION LUBRICANT SHALL BE APPLIED TO ALL EXPOSED WIRELESS ANTENNA CONDUCTOR AND CABLE CONNECTIONS.
  - WHERE DISTANCE BETWEEN PEDESTRIAN GATE AND ACCESS CONTROLLER EXCEEDS 150 FEET, PROVIDE INCREASED WIRE SIZE TO ACCOUNT FOR VOLTAGE DROP. CONSULT MANUFACTURER WIRING SIZING CHARTS AS REQ'D.
- KEY NOTES:**
- GATE OPERATOR SAFETY DEVICE INTERFACE. MOUNT WITHIN THE GATE OPERATOR. UNIT CONVERTS THE MONITORED (I.E. CURRENT DRAWING) EDGE SENSOR CIRCUITS TO NORMALLY CLOSED INPUTS REQUIRED BY THE GATE OPERATOR. PROVIDE MULTI-INPUT DEVICE POWERED FROM GATE OPERATOR INTERNAL 12/24VDC.
  - SOFTWARE HOUSE RM-4 CONVERTER MODULE. REQUIRED FOR EACH WIEGAND (NON-OSDP) OUTPUT DEVICE CONNECTED TO AN ACCESS CONTROLLER AS EDGE CONTROLLERS ONLY HAVE TWO NATIVE WIEGAND INPUTS PER UNIT.
  - WIEGAND CONVERTER DEVICES ONLY REQ'D WHERE WIEGAND OUTPUT DEVICES ARE USED (NO OSDP OUTPUT). IF OSDP OUTPUT IS AVAILABLE FROM DEVICE, CONVERTER CAN BE REMOVED FROM DESIGN. SEE SPECS FOR MORE DETAILS.
  - MULTI-FORMAT (PROX AND iCLASS) TOUCHLESS CARD READER, HARDENED.
  - PIEZOELECTRIC 3X4 KEYPAD, HARDENED. SINGLE GANG, WIEGAND FORMAT.
  - (1) SHIELDED 22/6 TSP (3-PAIR) CABLE (WIEGAND READER OR RM MODULE CABLE). GENERALLY, TSP CABLE WILL ACCOMMODATE BOTH WIEGAND DEVICES AND DEVICES ACCOMMODATING OSDP OUTPUT PROTOCOL REQUIRING RS-485. WHERE LENGTHS ARE LONG (>200 FT., TYPICAL) A TSP CABLE WITH SEPARATE POWER AND CONTROL CONDUCTORS MAY BE REQUIRED TO DISTANT WIEGAND CONNECTED DEVICES. COORDINATE THE SPECIFICS WITH THE SYSTEM INTEGRATOR ON THE PROJECT ON A DEVICE BY DEVICE LOCATION AS REQUIRED.
  - (1) SHIELDED 18/4 MULTI-COND. CABLE, (LOCK INPUT OR RELAY CONTROL).
  - (1) SHIELDED 22/2 MULTI-COND. CABLE, (SUPERVISED INPUT OR RELAY CONTROL).
  - (9) (1) SHIELDED 18/3 MULTI-COND. CABLE, (PED GATE SWITCHED POWER). SEE SHEET NOTE 6.
  - (10) (1) 14 AWG, STRANDED, CU, XLPE, 600V COND. (DETECTOR LOOP CABLE).
  - (11) SOME GATE OPERATORS MAY REQUIRE A SEPARATE EXPANSION BOARD OR CONTROL MODULE TO BE CONNECTED TO THE OPERATOR IN FRONT OF THE SAFETY LOOP CABLE AND TO BE PLACED INSIDE OPERATOR HOUSING. CHECK MANUFACTURER DETAILS & INSTRUCTIONS.
  - (12) (1) SHIELDED 18/4 MULTI-COND. CABLE, (MONITORED SAFETY INTERFACE POWER CABLE).

PLANS DEVELOPED BY:  
 MORRIS ENGINEERING  
 GROUP, INC  
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 AND PUBLIC FACILITIES  
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 (907) 465-1763  
  
**AIRPORT PERIMETER FENCING  
 STANDARDS FOR PSG & KTN**  
  
**4-CONTROLLER READER &  
 DEVICE SCHEMATIC**



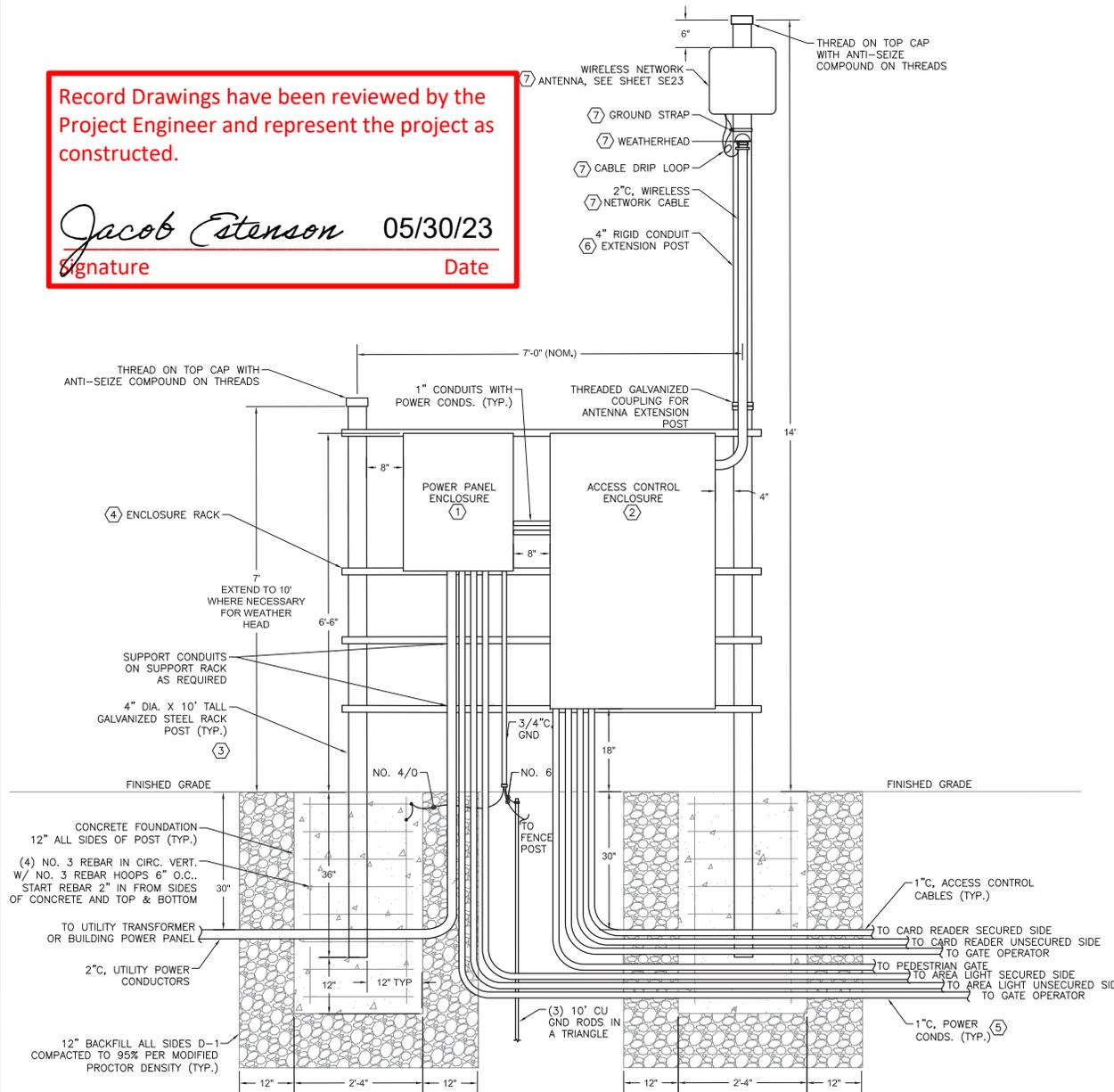


FILE | A:\08 State of Alaska | Airport Perimeter Fencing Standards | Enclosure Rack Elevation | DATE 7/26/2019 17:36 | LAYOUT | SET2 | DESIGNED MCM | CHECKED MCM | DRAFTED LRW

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFAPT00176/00175	2019	SE12	24

Record Drawings have been reviewed by the Project Engineer and represent the project as constructed.

*Jacob Estenson* 05/30/23  
Signature Date



SHEET NOTES:

1. MAINTAIN A MINIMUM OF 2" CONCRETE COVER OVER ALL EMBEDDED REINFORCEMENT BARS.
2. SEE PROJECT SPECIFIC CIVIL DETAILS AND SPECIFICATIONS FOR CONCRETE MIX DESIGN REQUIREMENTS, SUBBASE MATERIAL AND COMPACTION REQUIREMENTS, GEOTEXTILE FILTER FABRIC SPECIFICS, ETC. ADJUST DETAILS AS REQUIRED TO MEET THE STANDARDS REQUIRED BY THE PROJECT CIVIL ENGINEER.
3. BACKFILL 12" ALL SIDES AND BOTTOM. COMPACT SUBBASE TO 95% PER MODIFIED PROCTOR DENSITY METHOD. WRAP SUBBASE WITH GEOTEXTILE ON ALL SIDES, TOP AND BOTTOM PRIOR TO CONCRETE PLACEMENT.
4. PROVIDE BONDING OF ALL METALLIC ENCLOSURES AT THE ENCLOSURE RACK AND TIED BACK TO THE GROUNDING ELECTRODE PER THE NATIONAL ELECTRIC CODE. SEE GATE SPECIFIC SINGLE LINE DIAGRAM. GROUNDING NOT SHOWN HERE.
5. PROVIDE SCHEDULE 80 PVC CONDUIT UNDERGROUND. PROVIDE GALVANIZED RIGID STEEL CONDUIT ELBOWS UNDERGROUND. PROVIDE GALVANIZED RIGID STEEL CONDUIT ABOVE ELBOWS UNDERGROUND. PROVIDE GALVANIZED RIGID STEEL CONDUIT ABOVE GROUND.
6. ESTABLISH GROUNDING ELECTRODE SYSTEM AT ENCLOSURE RACK. THIS INCLUDES GROUND CONNECTIONS TO REINFORCING BAR, TRIANGLE OF GROUND RODS IN THE SOIL, AND SOLID GROUND CONNECTIONS TO ALL EXPOSED STRUCTURAL COMPONENTS AND ANY LOCALLY MOUNTED ENCLOSURES OR EQUIPMENT.
7. PROVIDE AN EQUIPMENT GROUNDING CONDUCTOR IN ALL CONDUIT WITH 120V OR GREATER CIRCUITS. PROVIDE A NO. 12, GREEN JACKET GROUND CONDUCTOR IN ALL LOW VOLTAGE CONDUIT.

KEY NOTES:

- (1) SEE SHEET SE14 FOR POWER PANEL ENCLOSURE ELEVATION.
- (2) SEE SHEET SE15 & SE16 FOR ACCESS CONTROL ENCLOSURE ELEVATIONS.
- (3) 10 FOOT TALL, 4" DIAMETER GALVANIZED STEEL POST. BURY 3 FEET INTO THE GROUND AS INDICATED. PROVIDE POST WITH SCREW-ON GALVANIZED CAP AS NOTED.
- (4) 1-1/2" GALVANIZED SUPPORT CHANNEL OR GALVANIZED STEEL ANGLE SEGMENTS MOUNT HORIZONTALLY TO POSTS. MOUNT ENCLOSURES AND OTHER EQUIPMENT TO HORIZONTAL MEMBERS. PROVIDE QUANTITY OF HORIZONTAL SUPPORT MEMBERS AS REQUIRED TO SUFFICIENTLY SUPPORT ENCLOSURES PER ENCLOSURE MANUFACTURER MOUNTING INSTRUCTIONS.
- (5) GROUP OF POWER CONDUITS IS SHOWN DEEPER THAN OTHERS FOR VISUAL CLARITY ONLY. ALL CONDUITS MUST BE AT MINIMUM DEPTHS INDICATED. CONDUITS, MAY BE CO-LOCATED IN COMMON TRENCHES AND ARRANGED BASED ON ROUTING REQUIREMENTS.
- (6) PROVIDE AN EXTENSION POST AT THE 10' RACK POST TO MOUNT THE NETWORK ANTENNA AT THE MOUNTING HEIGHT REQUIRED FOR LINE-OF-SIGHT (NOM. HEIGHT SHOWN). POST SPECIFICS PER KEY NOTE (3). THREAD POST SEGMENTS TOGETHER AS REQUIRED TO ACHIEVE APPROPRIATE MOUNTING HEIGHT.
- (7) FEED ANTENNA CABLES FROM WEATHERHEAD AT TOP OF WIRELESS NETWORK CABLE CONDUIT. SEE SHEET SE23 FOR WIRELESS ANTENNA DETAILS. LOCATE TOP EDGE OF ANTENNA A MINIMUM OF 6" BELOW TOP OF EXTENSION POST. REQUIRED MOUNTING HEIGHT OF ANTENNA TO BE CONFIRMED ON A LOCATION-BY-LOCATION BASIS BASED ON LINE OF SIGHT BETWEEN ADJACENT WIRELESS NETWORK DISTRIBUTION NODES.

1 POWER & ACCESS CONTROL ENCLOSURE ELEVATION  
NOT TO SCALE

PLANS DEVELOPED BY:  
MORRIS ENGINEERING  
GROUP, INC  
2375 JORDAN AVE #7  
JUNEAU, AK 99801  
907-789-3350  
AECIL 1010



STATE OF ALASKA DEPARTMENT OF TRANSPORTATION  
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AIRPORT PERIMETER FENCING  
STANDARDS FOR PSG & KTN

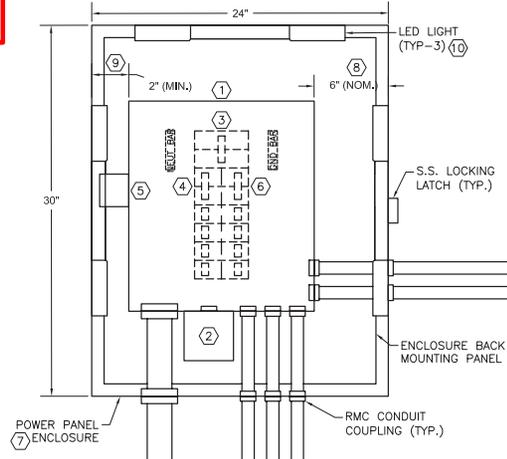
ENCLOSURE RACK ELEVATION



FILE | A:\02 State of Alaska | Airport Perimeter Fencing | Airport Perimeter Fencing Standards for PSG & KTN | 07/30/2019 16:41 | LAYOUT | SE14 | DESIGNED | MCM | CHECKED | MCM | DRAFTED | JRW

Record Drawings have been reviewed by the Project Engineer and represent the project as constructed.

*Jacob Estenson* 05/30/23  
 Signature Date



1 POWER PANEL ENCLOSURE DETAIL  
 NOT TO SCALE

GATE PANEL		SIZE	VOLTS, PHASE			MAIN	LOCATION	
CKT NO.	DESCRIPTION	C/B SIZE	KVA			C/B SIZE	DESCRIPTION	CKT NO.
			CKT	A $\phi$	B $\phi$			
1	AREA LIGHT	20/1	0.5	1.0	0.5	20/1	ACCESS CTRL POWER SUPPLY	2
3	POWER PANEL GFI RECEPTACLE	20/1	0.2		0.4	20/1	ACCESS CTRL SERV. RECEPTACLE	4
5	GATE OPERATOR POWER SUPPLY	30/2	1.5	2.3	0.8	20/1	ACCESS CTRL HEATERS	6
7	-	-	1.5		1.5	20/1	SPARE	8
9	PEDESTRIAN ELECTRIC GATE LOCK	20/1	0.1	0.1	0.0	20/2	SURGE PROTECTION DEVICE	10
11	SPARE	20/1	0.0		0.0	-	-	12
TOTAL CONNECTED LOAD = 5.3 KVA / 22 AMPS			3.4	1.9				

2 POWER PANEL SCHEDULE

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFAPT00176/00175	2019	SE14	24

SHEET NOTES:

- SEE GATE SPECIFIC SINGLE LINE DIAGRAMS FOR CIRCUIT SIZES & QUANTITIES.
- SEE SHEET SE12 FOR ACCESS CONTROL ENCLOSURE RACK DETAIL.
- POWER ENCLOSURE CONDUCTORS AND INTERNAL CONDUITS ARE NOT SHOWN ON THIS DIAGRAM. ALL CONDUCTORS AND CONDUITS SHALL BE NEATLY TRAINED AND ROUTED WITHIN THE OVERALL ENCLOSURE AND POWER PANEL TO ALLOW FULL SERVICE AND REPLACEMENT OF DEVICES WITHOUT DISTURBING ADJACENT COMPONENTS.
- GENERAL ARRANGEMENT OF COMPONENTS WITHIN THE POWER PANEL ENCLOSURE SHOWN IS BASED ON PAST SUCCESSFUL INSTALLATIONS WITH A SIMILAR PROJECT SCOPE. SPECIFIC PROJECT REQUIREMENT DIMENSIONS INCLUDED ARE EXPECTED TO BE MAINTAINED UNLESS THERE ARE ADEQUATE REASONS TO DEVIATE.
- THE POWER PANEL ENCLOSURE IS EXPECTED TO BE PROVIDED AS SHOWN HERE AT ALL INSTANCES OF THE ENCLOSURE SHOWN ON THE PROJECT SITE PLANS, UNLESS PROJECT MANAGER AUTHORIZES A DEVIATION FROM THIS NORM.

KEY NOTES:

- NEMA 3R LOAD CENTER WITH MAIN CIRCUIT BREAKER. MOUNT WITHIN OVERALL ENCLOSURE TO ENCLOSURE RACK. INTERNAL WIRING IS NOT SHOWN IN THIS DETAIL.
- GFI, 20A, HD, QUAD RECEPTACLE IN GALV. 4" OUTLET BOX. MOUNT TIGHT TO BOTTOM OF POWER PANEL. POWER THE LED INTERIOR LIGHTS FROM ONE OF THE RECEPTABLES.
- MAIN LOAD CENTER CIRCUIT BREAKER.
- SURGE PROTECTION DEVICE TWO-POLE CIRCUIT BREAKER.
- SURGE PROTECTION DEVICE (SPD). MOUNT TO SIDE OF PANEL AS REQUIRED. POSITION SO THAT CONDUCTORS ARE RUN AS STRAIGHT AND AS SHORT AS POSSIBLE TO MAXIMIZE SPD FUNCTIONAL PERFORMANCE.
- GATE OPERATOR TWO-POLE CIRCUIT BREAKER.
- NEMA 4X S.S. ENCLOSURE MOUNTED TO ENCLOSURE RACK. PROVIDE WITH LOCKABLE LATCH, LED LIGHTS, AND MOUNTING BACK PANEL.
- PROVIDE SUFFICIENT SPACE ALONG AND BELOW POWER PANEL FOR BRANCH CIRCUIT CONDUIT INSTALLATION WITHIN THE OVERALL ENCLOSURE.
- MAINTAIN MINIMUM TWO-INCH CLEARANCE ON ALL SIDES BETWEEN POWER PANEL AND OVERALL ENCLOSURE.
- ADJUSTABLE AIM, SLIM FORMAT LED STRIP LIGHT. PROVIDE ONE FOR EACH SIDE AND TOP OF ENCLOSURE. CONTROL VIA DOOR SWITCH (NOT SHOWN) AND POWER FROM CIRCUIT SERVING THE SERVICE RECEPTACLE IN THE POWER ENCLOSURE. MOUNT TOWARDS FRONT OF ENCLOSURE PER DETAIL 2, SHEET SE15. CONNECT FIXTURES W/CORDS ROUTED TIGHT TO EDGES OF ENCLOSURE TO ALLOW CONDUIT PENETRATIONS WITHOUT CABLE DAMAGE.

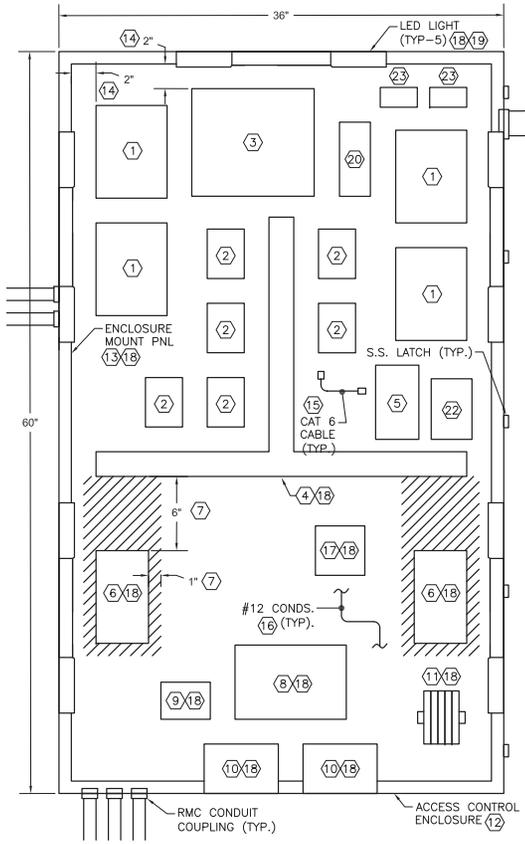
PLANS DEVELOPED BY: MORRIS ENGINEERING GROUP, INC 2375 JORDAN AVE #7 JUNEAU, AK 99801 907-789-3350 AECOL 1010		STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES 6860 GLACIER HIGHWAY, JUNEAU, AK 99801 (907) 465-1763 <b>AIRPORT PERIMETER FENCING          STANDARDS FOR PSG &amp; KTN</b> POWER PANEL DETAILS
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FILE: I:\08 State of Alaska\airport perimeter fencing\app\dwg\03 smart enclosure\enclosure smart ACME PANEL DETAIL.dwg  
 DATE: 7/28/2019 16:41 LAYOUT: SE15  
 DESIGNED: MCM CHECKED: MCM DRAFTED: LRW

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFAPT00176/00175	2019	SE15	24

**SHEET NOTES: (APPLIES TO SE15 & SE16)**

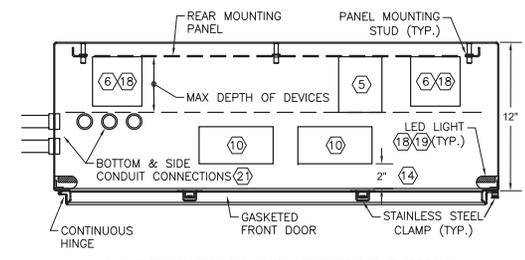
- THE DETAILS ON THIS SHEET DEPICT A GENERAL ARRANGEMENT OF DEVICES WITHIN THE ACCESS CONTROL ENCLOSURE FOR A TYPICAL GATE LOCATION. DEVICES AND THE ENCLOSURE ARE DRAWN TO SCALE BASED ON SPECIFIED PRODUCTS AND AN ATTEMPT TO ARRANGE THE DEVICES IN A REALISTIC PHYSICAL LAYOUT (BASED ON PREVIOUS PROJECTS). FINAL ARRANGEMENT ACCOMMODATING THE FINAL DEVICES FOR SIZES, CABLING REQUIREMENTS, AND NUMBER OF DEVICES AT EACH ENCLOSURE WILL BE DONE ON A PROJECT-BY-PROJECT & GATE-BY-GATE BASIS AND MAY DIFFER FROM WHAT IS SHOWN HERE.
- SEE GATE SPECIFIC SINGLE LINE DIAGRAM, AND GATE SPECIFIC POWER NETWORK SCHEMATIC, AND SHEETS FOR READER AND DEVICE SCHEMATIC.
- SEE SHEET SE12 FOR ENCLOSURE RACK ELEVATION.
- ACCESS CONTROL ENCLOSURE, POWER CONDUCTORS ENCLOSURE RACK ELEVATION, AND COMMUNICATION & CONTROL CABLES ARE NOT SHOWN ON THIS DIAGRAM. ALL CONDUCTORS AND CABLES SHALL BE NEATLY TRAINED IN THE CABINET TO ALLOW FULL SERVICE AND REPLACEMENT OF DEVICES WITHOUT DISTURBING ADJACENT COMPONENTS. UTILIZE WIRE MANAGEMENT DUCT SYSTEM AS MUCH AS POSSIBLE. SEE ENCLOSURE WIRING SCHEMATICS FOR MORE INFORMATION.
- LABEL ALL POWER, COMMUNICATION, AND CONTROL CONDUCTORS AND CABLES AT BOTH ENDS WITH PRINTED LABEL.
- THE GENERIC DEVICE LAYOUT PROVIDED IN THIS DETAIL ARE BASED ON SPECIFIC BASIS OF DESIGN PRODUCTS. SIZES WILL GENERALLY VARY SLIGHTLY AND COULD CHANGE IF ALTERNATE PRODUCTS ARE CHOSEN.
- GENERIC LAYOUT SHOWN IS NOT INDICATIVE OF ALL ACCESS CONTROL CABINETS ON A PROJECT. SMALLER CABINETS WITH FEWER COMPONENTS THAN SHOWN MAY BE APPLICABLE BASED ON SPECIFIC LOCATION REQUIREMENTS. SOME COMPONENTS ARE EXPECTED WITHIN ALL ACCESS CONTROL ENCLOSURES AND ARE NOTED AS SUCH IN THIS DETAIL.
- GENERAL ARRANGEMENT OF COMPONENTS WITHIN THE OVERALL ENCLOSURE SHOWN IS BASED ON PAST SUCCESSFUL INSTALLATIONS SIMILAR IN PROJECT SCOPE. ADJUSTMENTS ARE ALLOWED AS PRACTICAL AND NECESSARY FOR SPECIFIC PROJECT REQUIREMENTS. MINIMUM AND MAXIMUM DISTANCES AND DIMENSIONS NOTED MUST BE MAINTAINED AND SHALL COMPLY WITH WRITTEN MANUFACTURER INSTALLATION INSTRUCTIONS IN ALL CASES.
- PROTECT ALL CABLE AND CONDUCTORS FROM CHAFFING THROUGH ENCLOSURE PENETRATIONS. PROVIDE GROMMETS OR OTHER SUITABLE PROTECTION MEANS AS REQUIRED.
- PROVIDE DIN RAIL MOUNTABLE EQUIPMENT AND DEVICES WHERE POSSIBLE. DIN RAIL NOT SHOWN ON THIS SHEET.



**1 ACCESS CONTROL ENCLOSURE ELEVATION**  
NOT TO SCALE

**KEY NOTES:**

- SOFTWARE HOUSE ISTAR ACCESS CONTROLLER. MAXIMUM OF (4) CONTROLLERS PER ACCESS CONTROL ENCLOSURE. POWER FROM 24V POWER DISTRIBUTION BOARD AND CONNECT TO NETWORK SWITCH.
- SOFTWARE HOUSE RM-4 WIEGAND CONVERSION MODULE. CONNECT TO ACCESS CONTROLLER AND WIEGAND READER OR KEYPAD. WIEGAND CONVERTER DEVICES ONLY REQUIRED WHERE WIEGAND OUTPUT DEVICES ARE USED (NO OSDP OUTPUT AVAILABLE). IF OSDP OUTPUT IS AVAILABLE, CONVERTER DEVICE CAN BE REMOVED FROM DESIGN LAYOUT. REVIEW SYSTEM DESIGN AS REQUIRED.
- WIRELESS NETWORK RADIO CONNECTED TO UPSTREAM EXTERNAL ANTENNA AND TO THE DOWNSTREAM POWER OVER ETHERNET INJECTOR (KEYNOTE 20).
- ENCLOSURE WIRE MANAGEMENT DUCT SEGMENTS WITH WIDE SLOT/FINGERS, FIELD CUTTABLE PVC IN 2" X 2" CONFIGURATION. PROVIDE SEGMENTS AS REQUIRED TO ROUTE LOW VOLTAGE POWER, CONTROL, AND COMMUNICATION CONDUCTORS INSIDE ENCLOSURE. USE WIRE MANAGEMENT TO NEATLY TRAIN ALL CABLING.
- HARDENED NETWORK SWITCH. CONNECT NETWORK BASED DEVICES VIA CAT 6 CABLE WITH RJ45 JACKS AND POWER FROM DIN RAIL CIRCUIT BREAKER.
- FAN DRIVEN ENCLOSURE HEATER. TWO HEATERS PER ENCLOSURE. POWER FROM DIN RAIL CIRCUIT BREAKERS.
- MAINTAIN UNIT HEATER CLEARANCES AS NOTED OR PER APPROVED HEATER INSTRUCTIONS.
- 120VAC:12/24VDC 250W POWER SUPPLY FED FROM DIN RAIL CIRCUIT BREAKER. OUTPUT CONNECTED TO LOW VOLTAGE DISTRIBUTION BOARD. CONNECT 12VDC BACKUP BATTERIES BELOW POWER SUPPLY INTO EXTERNAL CONNECTION PORT ON POWER SUPPLY.
- 12/24VDC, 8 INDIVIDUALLY FUSED OUTPUTS POWER DISTRIBUTION BOARD FED FROM 120:12/24VDC POWER SUPPLY. POWER ACCESS CONTROLLERS AND OTHER PERIPHERALS IN ENCLOSURE FROM FUSED OUTPUTS AS REQUIRED.
- 12VDC LEAD ACID BATTERIES PLACED LOOSE INSIDE OF OVERALL ENCLOSURE. CONNECT (2) 12VDC BATTERIES IN SERIES FOR 24VDC OUTPUT TO POWER SUPPLY. NUMBER OF BATTERIES OR HIGH AMP-HOUR MODELS AS REQUIRED TO SUPPLY 24 HOURS OF BACKUP POWER TO DEVICES IN THE ACCESS CONTROLLER. SIT BATTERIES OFF FLOOR OF ENCLOSURE ON RUBBER BLOCKS TO AVOID STANDING WATER.
- SET OF DIN RAIL MOUNTED CIRCUIT BREAKERS POWERED FROM ADJACENT POWER PANEL. MOUNTED TO SEGMENT OF DIN RAIL.
- NEMA 4X STAINLESS STEEL ENCLOSURE MOUNTED TO ENCLOSURE RACK. PROVIDE WITH LOCKABLE LATCH, LED LIGHTS, AND MOUNTING BACK PANEL. SIZE SHOWN (60"H X 36"W X 12"D) IS TYPICAL MAXIMUM SIZE.
- MOUNTING BACK PANEL WITH OVERALL ENCLOSURE. MOUNT PANEL TO ENCLOSURE AND MOUNT ALL DEVICES TO BACK PANEL.
- MAINTAIN A MINIMUM OF TWO INCH CLEARANCE ALL SIDES BETWEEN DEVICES MOUNTED TO BACK PANEL AND THE BACK PANEL EDGE. MAINTAIN A TWO INCH CLEARANCE BETWEEN DEVICE AND CONDUIT PENETRATIONS AND SIDES, TOP, AND BOTTOM OF THE ENCLOSURE.
- ACCESS CONTROL COMMUNICATION AND CONTROL CABLES NOT SHOWN. ALL SHALL BE NEATLY TRAINED AND ROUTED WITHIN THE WIRE MANAGEMENT DUCT AS MUCH AS PRACTICAL. ALL CABLES AND CONTROL WIRING TO BE 600V RATED.
- ACCESS CONTROL CABINET POWER CONDUCTORS NOT SHOWN. ALL SHALL BE 600V RATED, COPPER, STRANDED, AND SIZED AS REQUIRED PER CODE AND EQUIPMENT MANUFACTURER INSTALLATION REQUIREMENTS. MAINTAIN SEPARATION FROM LOW VOLTAGE CABLES.
- PROVIDE A 20A, 120V, HD, QUAD RECEPTACLE IN 4" SQ. SURFACE MOUNT BOX. POWER ALL PLUG LOADS FROM RECEPTACLE.
- DEVICE OR FEATURE NOTED IS A STANDARD REQUIREMENT OF ALL ACCESS CONTROL CABINETS REGARDLESS OF SIZE OR CONFIGURATION. NUMBER OF DEVICES OR THEIR POSITIONS AND SPECIFIC FEATURES NOTED MAY NEED ADJUSTMENT BASED ON EACH ENCLOSURE CHARACTERISTICS (I.E. NUMBER OF ACCESS CONTROLLERS AND PERIPHERAL DEVICES INSIDE).
- ADJUSTABLE AIM, SLIM FORMAT LED STRIP LIGHT. PROVIDE TWO FOR EACH SIDE AND ONE AT TOP OF ENCLOSURE (5 TOTAL). CONTROL VIA DOOR SWITCH (NOT SHOWN) AND POWER FROM DIN RAIL CIRCUIT BREAKER SERVING NETWORK SWITCH. MOUNT TO FRONT FACE OF SIDES & CEILING OF ENCLOSURE PER DETAIL 2, THIS SHEET. INTERCONNECT FIXTURES WITH CORDS ROUTED TIGHT TO EDGES OF ENCLOSURE TO ALLOW CONDUIT PENETRATIONS WITHOUT CABLE DAMAGE.
- WIRELESS ANTENNA POWER OVER ETHERNET INJECTOR WITH INTEGRAL SURGE ARRESTOR. CONNECT WITH CAT 5E/6 CABLE BETWEEN WIRELESS RADIO AND DOWNSTREAM EXTERIOR ANTENNA UNIT.
- ARRANGE CONDUIT PENETRATIONS AND KNOCKOUTS INTO ENCLOSURE ON ALL SIDES, TOP AND BOTTOM, SO THAT THEY ARE BEYOND THE MAX DEPTH OF THE DEVICES IN THE ENCLOSURE AND AVOID DEVICES IN THE AREA.
- INDUSTRIAL GRADE, LOW NOISE, SWITCH MODE POWER SUPPLY FOR NETWORK SWITCH. DIN RAIL MOUNTABLE, HARDENED UNIT WITH 48VDC REGULATED OUTPUT. FEED FROM DIN RAIL CIRCUIT BREAKER & CONNECT TO SWITCH INPUT.
- LONG RANGE VEHICLE READER CABLE SURGE SUPPRESSOR (ONE PER READER). SEE GATE SPECIFIC POWER NETWORK SCHEMATIC.



**2 ACCESS ENCLOSURE TOP DETAIL**  
NOT TO SCALE

Record Drawings have been reviewed by the Project Engineer and represent the project as constructed.

*Jacob Estenson*      05/30/23  
 Signature                      Date

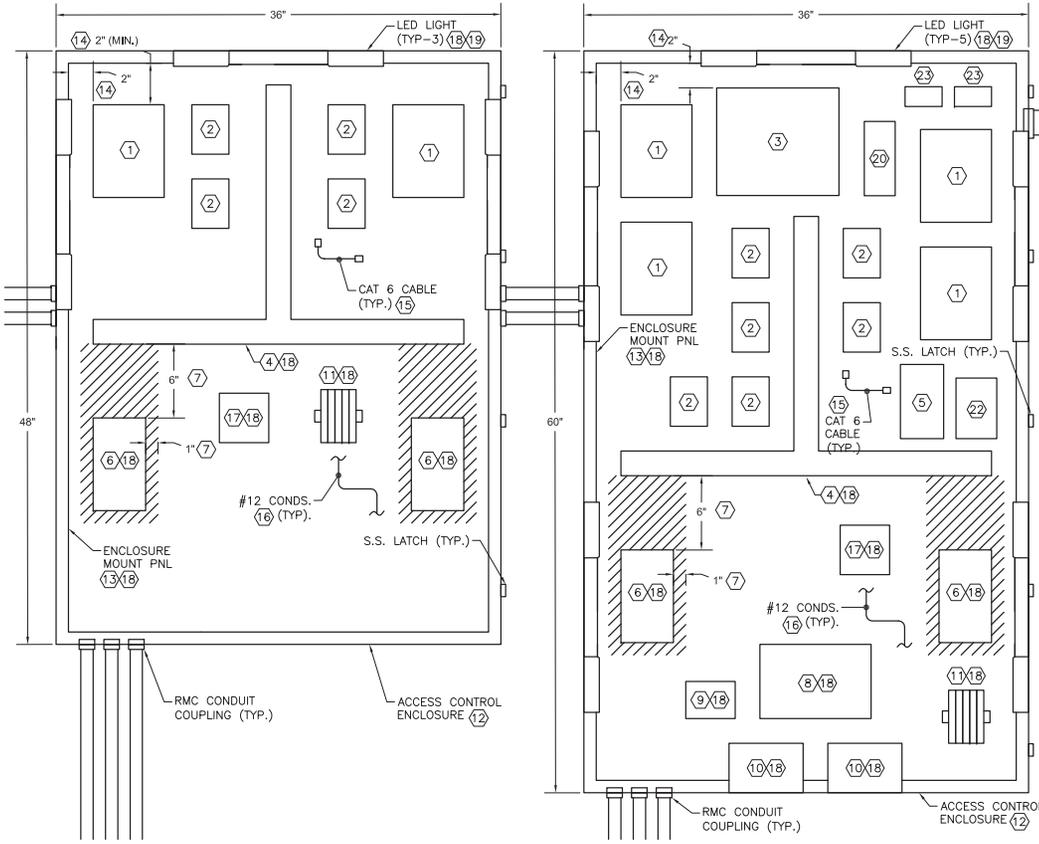
PLANS DEVELOPED BY: MORRIS ENGINEERING GROUP, INC. 2375 JORDAN AVE #7 JUNEAU, AK 99801 907-789-3350 AECI 1010		STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES 6860 GLACIER HIGHWAY, JUNEAU, AK 99801 (907) 465-1763  <b>AIRPORT PERIMETER FENCING STANDARDS FOR PSG &amp; KTN</b>  <b>ACCESS CONTROL ENCLOSURE DETAILS</b>
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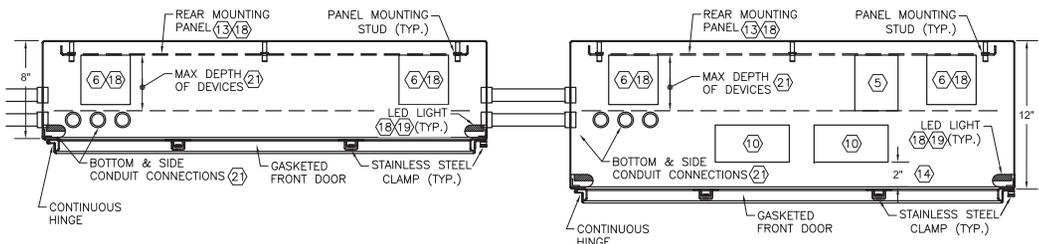
*Jacob Estenson* 05/30/23  
Signature Date

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFAPT00176/00175	2019	SE16	24

FILE: A:\03 - State of Alaska Department of Transportation and Public Facilities - 6860 Glacier Highway, Juneau, AK 99801 - 907-586-8815  
DATE: 7/28/2019 16:41 LAYOUT: SET16 CHECKED: MCM DESIGNED: MCM DRAFTED: LRW



1 DUAL ACCESS CONTROL ENCLOSURE ELEVATION  
NOT TO SCALE



2 DUAL ACCESS CONTROL ENCLOSURE TOP DETAIL  
NOT TO SCALE

SHEET NOTES:

- SEE SHEET SE15 FOR SHEET NOTES APPLICABLE TO THIS SHEET.

KEY NOTES:

- SOFTWARE HOUSE ISTAR ACCESS CONTROLLER. MAXIMUM OF (4) CONTROLLERS PER ACCESS CONTROL ENCLOSURE. POWER FROM 24V POWER DISTRIBUTION BOARD AND CONNECT TO NETWORK SWITCH.
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- NEMA 4X STAINLESS STEEL ENCLOSURE MOUNTED TO ENCLOSURE RACK. PROVIDE WITH LOCKABLE LATCH, LED LIGHTS, AND MOUNTING BACK PANEL. SIZES SHOWN (60"H X 36"W X 12"D AND 48"H X 36"W X 8"D) ARE TYPICAL.
- MOUNTING BACK PANEL WITH OVERALL ENCLOSURE. MOUNT PANEL TO ENCLOSURE AND MOUNT ALL DEVICES TO BACK PANEL.
- MAINTAIN A MINIMUM OF TWO INCH CLEARANCE ALL SIDES BETWEEN DEVICES MOUNTED TO BACK PANEL AND THE BACK PANEL EDGE. MAINTAIN A TWO INCH CLEARANCE BETWEEN DEVICE AND CONDUIT PENETRATIONS AND SIDES, TOP, AND BOTTOM OF THE ENCLOSURE.
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- ADJUSTABLE AIM, SLIM FORMAT LED STRIP LIGHT. PROVIDE TWO FOR EACH SIDE AND ONE AT TOP OF ENCLOSURE (5 TOTAL). CONTROL VIA DOOR SWITCH (NOT SHOWN) AND POWER FROM DIN RAIL CIRCUIT BREAKER SERVING NETWORK SWITCH. MOUNT TO FRONT FACE OF SIDES & CEILING OF ENCLOSURE PER DETAIL 2, THIS SHEET. INTERCONNECT FIXTURES WITH CORDS ROUTED TIGHT TO EDGES OF ENCLOSURE TO ALLOW CONDUIT PENETRATIONS WITHOUT CABLE DAMAGE.
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- LONG RANGE VEHICLE READER CABLE SURGE SUPPRESSOR (ONE PER READER). SEE GATE SPECIFIC POWER NETWORK SCHEMATIC.

PLANS DEVELOPED BY:  
MORRIS ENGINEERING  
GROUP, INC  
2375 JORDAN AVE #7  
JUNEAU, AK 99801  
907-789-3350  
ACCL 1010



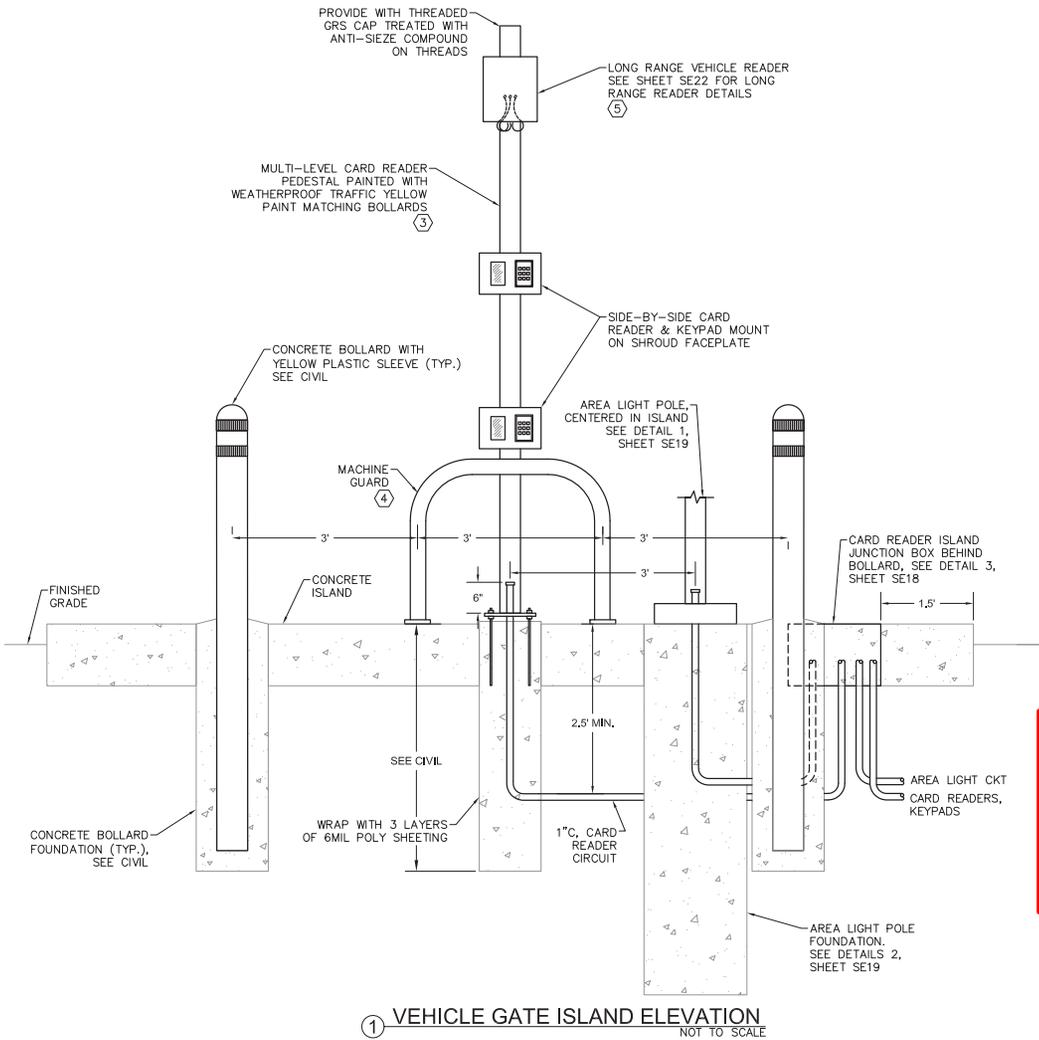
STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES  
6860 GLACIER HIGHWAY, JUNEAU, AK 99801  
(907) 465-1763

**AIRPORT PERIMETER FENCING  
STANDARDS FOR PSG & KTN**

DUAL ACCESS CONTROL  
ENCLOSURE DETAILS

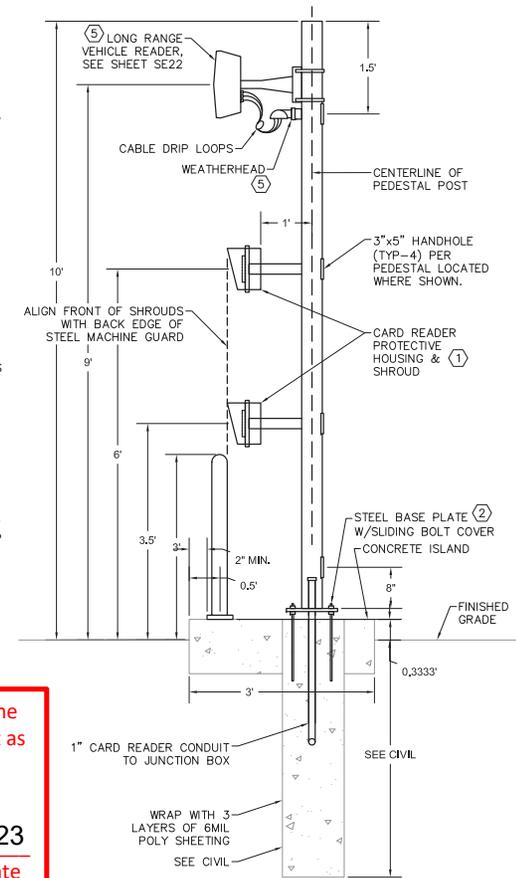
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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFAPT00176/00175	2019	SE17	24



**KEY NOTES:**

- 8" W X 8" H X 3" D 14GA STEEL (YELLOW POLYESTER POWDER COATED) HOUSING SHROUD WITH HINGED DOOR, CAM LOCK & KEYS. MOUNT KEYPAD AND CARD READER CENTERED AND SPACED APART ON FRONT FACE OF SHROUD. SEAL ALL PENETRATIONS INTO SHROUD.
- PEDESTAL HOT DIPPED GALVANIZED BASE PLATE WITH 10" DIA. BASE AND BOLT CIRCLE. PROVIDE GALVANIZED ANCHOR BOLTS SIZED PER PEDESTAL MANUFACTURER REQUIREMENTS. MINIMUM 1/2" DIA. X 8" EMBEDDED ANCHOR BOLTS (MINIMUM). PROVIDE BOLTS WITH GALVANIZED LEVELING NUTS AND LEAVE 1-1/2" SPACE ABOVE CONCRETE ISLAND FOR GROUT INFILL.
- HOT DIPPED GALVANIZED MULTI-HEIGHT CARD READER PEDESTAL. CONSISTS OF 4" DIA. STANDARD PIPE WITH SINGLE GANG (3"x5") HANDHOLES BEHIND EACH READER MOUNT LOCATION, AND 1/2" X 10" DIA. BASE PLATE. PROVIDE WITH 8" SQ. MOUNTING PLATE AT EACH OF THE VEHICLE READER POSITIONS ATTACHED TO PEDESTAL VIA 2" DIA. STANDARD PIPE. DRILL AND SMOOTH OPENINGS FOR ALL CABLES ROUTED WITHIN THE PEDESTAL. DIMENSIONS SHOWN ARE IN RELATION TO FINISHED GRADE (DRIVING SURFACE) AND NOT THE CONCRETE ISLAND. MODIFY DIMENSIONS OF PEDESTAL FOR SPECIFICS OF EACH PROJECT LOCATION TO ACHIEVE THE CARD READER MOUNTING HEIGHTS NOTES ON THIS SHEET.
- 3" H X 3" W X 3" D SCHEDULE 40 STEEL MACHINE GUARD. PAINT WITH EXTERIOR TRAFFIC YELLOW PAINT SUITABLE FOR ENVIRONMENT. MOUNT TO CONCRETE ISLAND WITH EMBEDDED HARDWARE. PROVIDE PER CIVIL DESIGN REQUIREMENTS.
- SECURE LONG RANGE READER TO PEDESTAL POST AT HEIGHT INDICATED. FEED CABLES TO READER FROM WEATHERHEAD MOUNTED TO A 2" CONDUIT STUB OUT OF PEDESTAL AT HEIGHT SHOWN. LOCATE HANDHOLE AT TOP OF POST DIRECTLY ACROSS FROM WEATHERHEAD CONDUIT NIPPLE.



Record Drawings have been reviewed by the Project Engineer and represent the project as constructed.  
*Jacob Estenson* 05/30/23  
 Signature Date

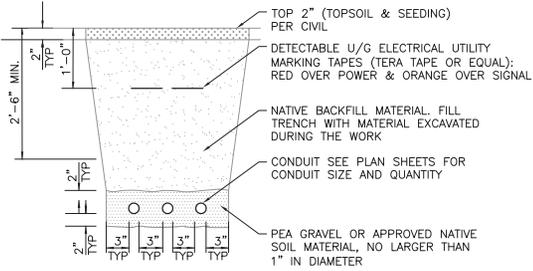
**SHEET NOTES:**

- SEE GATE SPECIFIC SINGLE LINE DIAGRAMS, POWER & CONTROL SCHEMATICS & SHEETS SE7-SE10 FOR POWER AND CONTROL CIRCUITING INFORMATION FOR THE CARD READERS, AREA LIGHT FIXTURE, AND THE LONG RANGE READER.
- SEE SHEET SE22 FOR LONG RANGE READER DETAILS, AND SHEET SE19 FOR LIGHT POLE DETAILS.
- ALL CIVIL REQUIREMENTS SHOWN ARE GENERIC IN NATURE. PROJECT SHALL ADHERE TO CIVIL ENGINEER REQUIREMENTS WHICH OVERRIDE ANY SPECIFICS PROVIDED IN THIS PLAN THAT ARE LESS STRINGENT. CONSULT PROJECT ENGINEER FOR ANY QUESTIONS OR CLARIFICATIONS PRIOR TO MODIFYING DESIGN FROM THE DIMENSIONS, RELATIONAL LOCATIONS, OR SPECIFICATIONS REQUIRED OF THE PROJECT.
- CONDUIT ROUTING SHOWN IN THIS DETAIL IS GRAPHIC IN NATURE, WHERE APPLICABLE AND PRACTICAL, ROUTE CONDUITS IN COMMON TRENCHES. FOLLOW TRENCHING AND CONDUIT PLACEMENT REQUIREMENTS ON SHEET SE18
- PROVIDE GROMMETS IN HOLES FOR CABLE PASS THROUGH IN ALL ENCLOSURES.

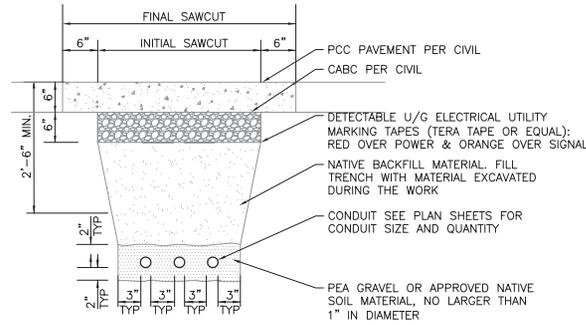
PLANS DEVELOPED BY: MORRIS ENGINEERING GROUP, INC. 2375 JORDAN AVE #7 JUNEAU, AK 99801 907-789-3350 AECIL 1010		STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES 6860 GLACIER HIGHWAY, JUNEAU, AK 99801 (907) 465-1763 <b>AIRPORT PERIMETER FENCING STANDARDS FOR PSG &amp; KTN</b> <b>VEHICLE GATE ISLAND ELEVATION</b>
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Record Drawings have been reviewed by the Project Engineer and represent the project as constructed.

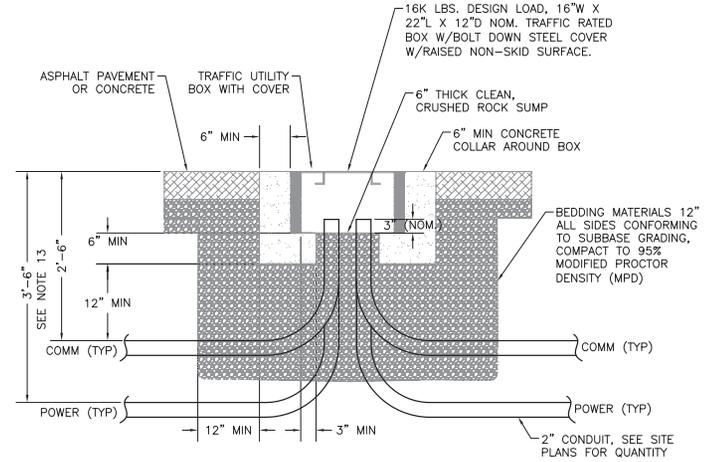
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① TRENCH DETAIL - NON-PAVED AREAS  
 NOT TO SCALE



② TRENCH DETAIL - PAVED AREAS  
 NOT TO SCALE



③ PAVED JUNCTION BOX DETAIL  
 NOT TO SCALE

NOTES (APPLICABLE TO ALL DETAILS, THIS SHEET):

1. ALL DIMENSIONS ARE MINIMUM.
2. SEE CIVIL DRAWINGS FOR TYPICAL SECTIONS UNDER PAVED AREAS. PROVIDE BACKFILL (MATERIAL, COMPACTION, ETC.) PER CIVIL SPECS.
3. THE LOCATION OF ALL EXISTING PIPING, CONDUIT, ETC MAY NOT BE WHERE SHOWN AND MAY NOT BE SHOWN. ALL LOCATIONS THAT ARE SHOWN ARE APPROXIMATE AND SHOULD BE FIELD VERIFIED. OBTAIN UTILITY LOCATES PRIOR TO DIGGING. DIG WITH CAUTION. AVOID WATER, SEWER, DRAINAGE PIPES AND OTHER CONFLICTS.
4. MAINTAIN 12 INCHES MINIMUM SEPARATION (ALL DIRECTIONS) BETWEEN POWER AND OTHER EXISTING CONDUITS, PIPES, CONCRETE STRUCTURE, VAULTS, ETC.
5. CUT & REPLACE EXISTING ASPHALT, CONCRETE, CONCRETE CURB, GUTTER, SIDEWALK, ETC. AS NECESSARY. FOLLOWS THE CIVIL SPECS.
6. ALL TRENCHES SHALL BE 18" WIDE MIN. COMPACT BACKFILL & PROVIDE TOP LAYERS PER CIVIL.
7. POWER UTILITY CONDUIT SHALL BE BURIED AT A MINIMUM OF 3'-6". ALL NON-UTILITY CONDUITS AT DEPTH SHOWN IN THESE DETAILS, UNLESS NOTED OTHERWISE ON THE PLANS.
8. MODIFY CONDUIT BURIAL DEPTH WHERE SHOWN ON DRAWINGS.
9. MAINTAIN 36" MINIMUM LATERAL SEPARATION FROM WATER AND SEWER LINES. MAINTAIN 12" SEPARATION BETWEEN ELECTRICAL UTILITY CONDUITS.
10. THIS IS A TYPICAL TRENCH SECTION SHOWING MINIMUM DIMENSIONS AND REQUIRED MATERIALS. CONFIGURE ALL TRENCHES AS NECESSARY TO COMPLY WITH DIMENSIONS SHOWN. USE THIS DETAIL WHERE CONDUIT HAS TO BE PLACED BELOW EXISTING ASPHALT TO REMAIN.
11. SAWCUT EXISTING ASPHALT AS REQUIRED TO INSTALL CONDUIT AND OTHER ELECTRICAL ITEMS. SAWCUT ASPHALT BACK ON EACH SIDE OF TRENCH OR EXCAVATION AREA (ALL SIDES). SEE CIVIL SHEETS FOR SPECIFICATION ON SAW CUTTING LIMITS. COMPACT BACKFILL TO 95%. COMPACT D-1 TO 100% WHERE COVERED WITH PAVEMENT. RE-PAVE SAWCUT AREAS PER CIVIL SPECIFICATIONS.
12. RETURN PAVEMENT TO THE CONDITION IT WAS IN PRIOR TO MAKING THE SAW CUT.
13. POWER CONDUITS SHALL BE AT DEEPER DEPTH INDICATED HERE AS REQUIRED TO AVOID UNDERGROUND OBSTACLES IN THE AREA. OTHERWISE, THE MINIMUM 2'-6" BURIAL DEPTH IS GENERALLY ACCEPTABLE.

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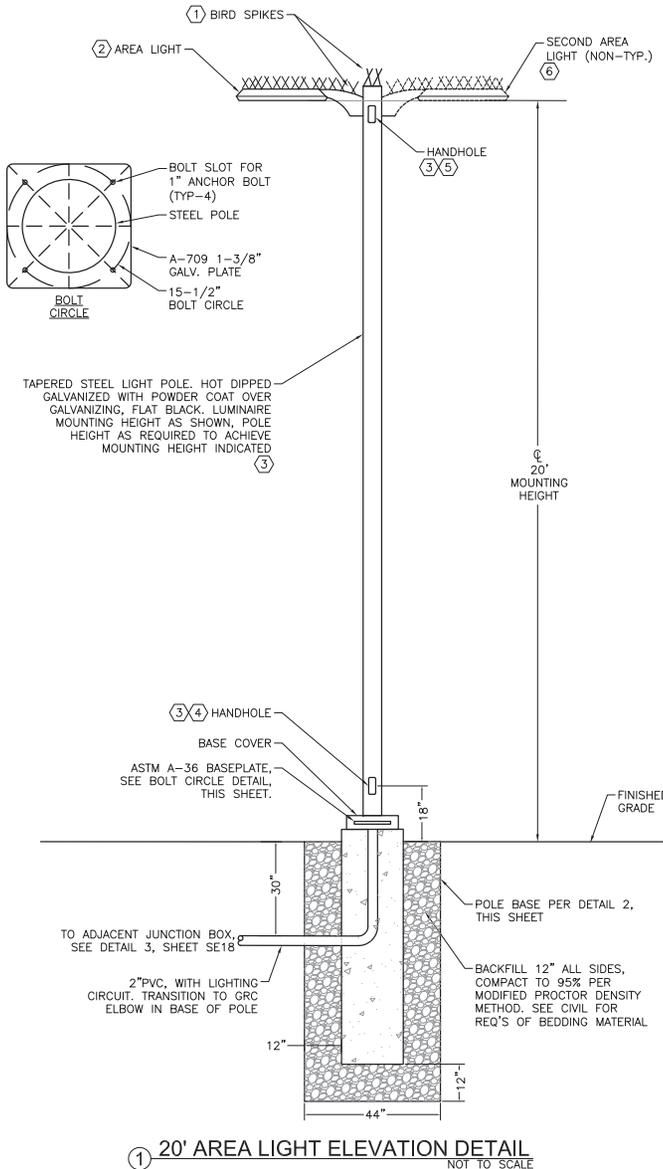
AIRPORT PERIMETER FENCING  
 STANDARDS FOR PSG & KTN  
 TRENCH & JUNCTION BOX  
 DETAILS

Record Drawings have been reviewed by the Project Engineer and represent the project as constructed.

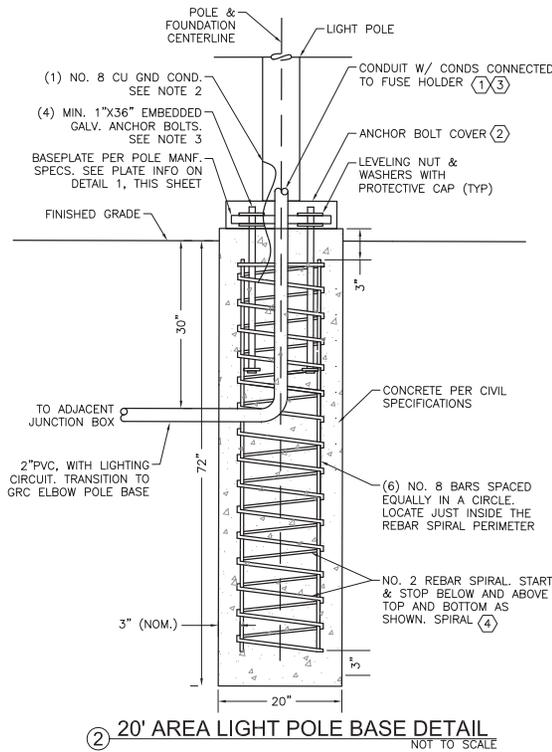
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			ALASKA	SFAPT00176/00175	2019	SE19	24

FILE: \\103\state\alaska\department\transportation\public\facilities\standards\psg&ktn\20' LIGHT POLE DETAILS.dwg DATE: 7/29/2019 11:17 LAYOUT: SE19 CHECKED: MCM DRAFTED: LRW



1 20' AREA LIGHT ELEVATION DETAIL NOT TO SCALE



2 20' AREA LIGHT POLE BASE DETAIL NOT TO SCALE

NOTES (APPLICABLE TO DETAIL 1, THIS SHEET):

- COORDINATE FOUNDATION DIMENSIONS, BASEPLATE LOCATIONS, BASEPLATE ANCHOR POINTS, AND ANCHOR BOLT DETAILS WITH MANUFACTURER RECOMMENDATIONS. WHAT IS SHOWN HERE IS TYPICAL AND DIAGRAMMATIC ONLY.
- SEE PROJECT SPECIFIC CIVIL DETAILS AND SPECIFICATIONS FOR CONCRETE MIX DESIGN REQUIREMENTS, SUBBASE MATERIAL AND COMPACTION REQUIREMENTS, GEOTEXTILE FILTER FABRIC SPECIFICS, ETC. ADJUST DETAILS AS REQUIRED TO MEET THE STANDARDS REQUIRED BY THE PROJECT CIVIL ENGINEER.

KEY NOTES (APPLICABLE TO DETAIL 1, THIS SHEET):

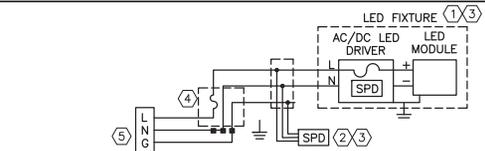
- BIRD SPIKES: SECURE TO FIXTURE MOUNTING ARM, FIXTURE, AND POLE TOP WITH MANUFACTURER RECOMMENDED ADHESIVE.
- LED AREA LIGHT, FULL CUTOFF LUMINAIRE. TYPE II SHORT DIST., 5K CCT, MVOLT DRIVER, 4.7K LUMENS (NOMINAL), 70 CRI (MIN.) WITH POLE MOUNTING ADAPTER, HOUSESIDE SHIELD, BIRD SPIKES, AND INTEGRAL PE CELL FOR CONTROL.
- PROVIDE POLE WITH 3" X 5" HANDHOLES WHERE NOTED. HANDHOLES SHALL BE GASKETED.
- PROVIDE DOUBLE FUSE CONNECTOR KIT IN EACH POLE BASE. WATERTIGHT RUBBER MOLDED FUSE HOLDER FILLED WITH SILICONE. FUSE @ 4 AMPS. LOCATE TO BE ACCESSIBLE FROM THE HANDHOLE AT BASE OF POLE. PROVIDE #12 XHHW CONDS. UP TO LIGHTS.
- CABLES INSIDE POLE AT TOP OF POLE SHALL BE SUPPORTED WITH INTERIOR CABLE GRIP OR SIMILAR MECHANISM TO PREVENT CABLE DAMAGE DUE TO MECHANICAL STRESS.
- TYPICALLY, ONLY ONE AREA LIGHT IS REQUIRED PER POLE. WHERE ADDITIONAL AREA LIGHTS ARE REQUIRED PROVIDE POLE WITH MOUNT SUITABLE FOR THE ADDITIONAL LIGHTS. ARRANGE LIGHTS 180 DEG APART, 90 DEG APART, ETC. AS SHOWN ON THE SITE PLANS.

NOTES (APPLICABLE TO DETAIL 2, THIS SHEET):

- ALL SPLICES SHALL BE IN BASE OF POLE. LOOP FEED BETWEEN LIGHT POLES AS REQUIRED. PROVIDE FUSE KITS IN EACH POLE BASE PER DETAIL 1.
- BOND THE GROUND CONDUCTOR TO FOUNDATION REBAR, ANCHOR BOLTS, LIGHT POLE, AND TO THE EQUIPMENT GROUNDING CONDUCTOR RAN WITH THE LIGHTING CIRCUIT.
- PROVIDE ANCHOR BOLTS WITH 4" MINIMUM HOOK AND 6" OF THREAD ON BOTH ENDS. BOLTS SHALL MEET ASTM-A36 WITH MINIMUM YIELD STRESS OF 36.0 KSI.
- SEE DETAIL 1, THIS SHEET FOR LIGHT POLE BASE BACKFILL REQUIREMENTS.

KEY NOTES (APPLICABLE TO DETAIL 2, THIS SHEET):

- FOR SPLICES TO ADD'L POLES, USE SILICONE FILLED WIRE NUTS. SPLICES SHALL BE ACCESSIBLE FROM HANDHOLE
- GALV. METALLIC, SPLIT STYLE, COLOR MATCH TO POLE.
- STUB TO JUST BELOW HANDHOLE IN BASE OF POLE.
- SPIRAL TO HAVE 20" DIAMETER WITH 1 TURN EVERY 3".



3 SURGE PROTECTION DEVICE (SPD) WIRING DIAGRAM NOT TO SCALE

NOTES (APPLICABLE TO DETAIL 3, THIS SHEET):

- KEEP WIRES AS STRAIGHT AND SHORT AS POSSIBLE.
- ROUND WIRES RATHER THAN BENDING AT A HARD 90 DEGREES ANGLE.
- DO NOT CROSS OR OVERLAP PROTECTED WIRES (THOSE AFTER THE SPD, EITHER AC OR DC WIRES) WITH UNPROTECTED WIRES (THOSE BEFORE THE SPD, AC WIRES).
- ONLY ONE EXTERNAL SPD REQUIRED PER POLE, REGARDLESS OF THE NUMBER OF FIXTURE HEADS ON THE POLE.

KEY NOTES (APPLICABLE TO DETAIL 3, THIS SHEET):

- OVERALL LED FIXTURE WITH FUSED DRIVER FURNISHED WITH INTEGRAL & INTERNAL SPD.
- EXTERNAL LED FIXTURE SPD CIRCUIT AS SHOWN. MAKE PARALLEL CONNECTION INTO CIRCUIT WITH AS SHORT AND STRAIGHT OF CONDUCTORS AS POSSIBLE, SIZE MATCHED TO CIRCUIT CONDUCTORS SIZES.
- CO-LOCATE EXTERNAL SPD WITHIN LIGHT FIXTURE HOUSING IF ACCEPTABLE TO FIXTURE MANUFACTURER. OTHERWISE INSTALL WITHIN POLE IMMEDIATELY ADJACENT TO FIXTURE MOUNTING LOCATION.
- FINGER SAFE FUSE HOLDER AT BASE OF LIGHT POLE ACCESSIBLE FROM BASE HANDHOLE.
- SOURCE PANEL PER PLANS.

SHEET NOTES:

- UNLESS NOTED ELSEWHERE, ALL SPLICES SHALL BE IN BASE OF POLE.
- PROVIDE GROUNDING BUSHINGS ON CONDUIT STUB UPS INTO POLE. BOND CONDUIT TO LIGHT POLE. ALSO BOND LIGHT POLE TO REBAR IN THE POLE FOUNDATION.
- SIZE POLE WITH LUMINAIRE AND POLE BASE FOR 120 MPH SUSTAINED WINDS WITH GUSTS UP TO 150 MPH. POLE DIMENSIONS INDICATED ARE A MINIMUM PROVIDE CALCULATIONS SHOWING COMPLIANCE SEALED BY A CIVIL ENGINEER REGISTERED IN THE STATE OF ALASKA.
- PROTECT ANCHOR BOLTS FROM PHYSICAL DAMAGE DURING PROJECT.
- ALL DIMENSIONS SHOWN ARE A MINIMUM.
- SEE CIVIL DRAWINGS FOR MORE DETAILS AND INFORMATION REGARDING THE POLES AND RELATED CIVIL WORK.

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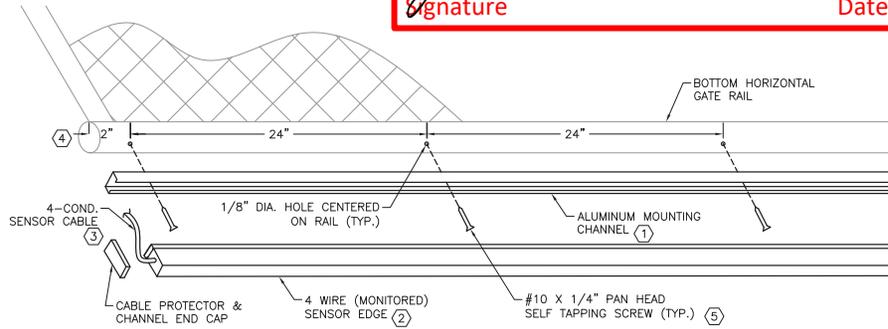
20' LIGHT POLE DETAILS



Record Drawings have been reviewed by the Project Engineer and represent the project as constructed.

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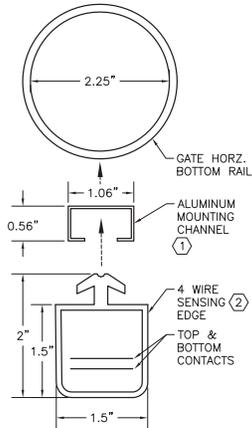
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			ALASKA	SFAPT00176/00175	2019	SE21	24



① GATE EDGE SENSOR DETAIL  
NOT TO SCALE

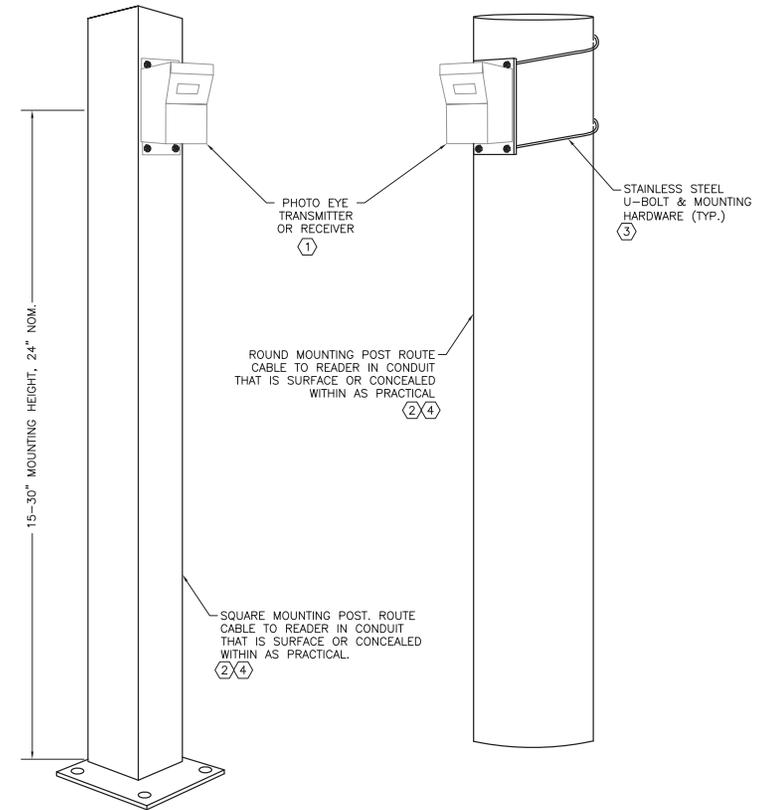
KEY NOTES (APPLICABLE TO DETAIL 1, THIS SHEET):

- ① POSITION ALUMINUM MOUNTING CHANNEL ON UNDERSIDE OF BOTTOM RAIL ON VERTICAL PIVOT GATES AND ON LEADING AND TRAILING RAIL EDGES ON CANTILEVER GATES WHEN USED. CENTER THE CHANNEL ALONG THE RAIL. MOUNT TO RAIL WITH SCREWS SPACED 24 INCHES ON CENTER, USING FLAT-HEAD SCREWS TO PREVENT DAMAGE TO THE SENSING EDGE MOVEMENT.
- ② ROUTE SENSING EDGE WITHIN MOUNTING CHANNEL AS REQUIRED. PIN THE EDGE WITHIN THE CHANNEL WITH A SELF TAPPING SCREW AT BOTH ENDS OF THE RUN OR PER MANUFACTURER REQUIREMENTS.
- ③ ROUTE THE SENSOR CABLE THROUGH CHANNEL THEN VERTICALLY ALONG GATE RAILS TO CONNECTION POINT AS REQUIRED. PROVIDE ROUNDED & SMOOTH PENETRATIONS FOR CABLE ROUTING TO PREVENT DAMAGE.
- ④ PROVIDE A STOP SCREW AT BOTH ENDS OF THE ALUMINUM MOUNTING CHANNEL 2" FROM BOTH ENDS TO PREVENT THE SENSING EDGE FROM SLIDING OUT OF THE TRACK. STOP SCREW NOT SHOWN HERE.
- ⑤ HOLES DRILLED THROUGH MOUNTING CHANNEL INTO BOTTOM RAIL OF GATE SHOULD BE 1" DEEP MINIMUM.



SHEET NOTES:

1. CODE REQUIRES SENSORS TO BE UL RECOGNIZED. SENSORS SHALL ALSO BE TESTED, APPROVED, AND LISTED AS COMPATIBLE WITH SPECIFIED GATE OPERATOR.
2. UL 325 REQUIRES MONITORING OF SENSORS. WHERE SPECIFIED, GATE OPERATOR REQUIRES A NORMALLY CLOSED CONTACT FOR EDGE MONITORING, PROVIDE INTERFACING DEVICE TO CONVERT RESISTOR OUTPUT INTO N.C. CONTACT.
3. ROUTE WIRING FROM SENSOR TO GATE OPERATOR SO AS TO PREVENT DAMAGE.
4. SENSING EDGE IS REQUIRED ALONG THE TOP AND SIDE OF THE OPERATOR WHERE THE VERTICAL GATE MOVES IN AND OUT. INSTALLATION AT THOSE LOCATIONS WILL DIFFER FROM WHAT IS SHOWN HERE AND WILL VARY BY MANUFACTURER. FOLLOW MANUFACTURER RECOMMENDATIONS AND SPECIFICATIONS.
5. SENSING EDGES REQUIRED ALONG THE LEADING AND TRAILING EDGES OF CANTILEVER GATES. CANTILEVER SENSING EDGES SHALL BE WIRELESS, NOT HARDWIRED.
6. CANTILEVER GATES REQUIRE AT LEAST ONE SENSOR FOR EACH DIRECTION OF TRAVEL PER UL325. SENSORS CAN BE EDGE SENSORS OR PHOTO EYE SENSORS.



② PHOTO SENSOR DETAIL  
NOT TO SCALE

KEY NOTES (APPLICABLE TO DETAIL 2, THIS SHEET):

- ① PHOTO SENSOR TRANSMITTER AND RECEIVER MAY BE SURFACE OR FLUSH MOUNTED ONTO SQUARE OR ROUND POSTS AS REQUIRED. MOUNTING HEIGHTS TO BE ADJUSTED FOR BEST PERFORMANCE. MOUNT AT HEIGHT SHOWN UNLESS ADJUSTMENT REQUIRED PER SITE CONDITIONS, SITE GRADING, OR SENSOR MANUFACTURER INSTRUCTIONS.
- ② POSITION POST NO FURTHER THAN 6" PERPENDICULAR FROM THE GATE CENTERLINE ON EACH SIDE OF THE GATE OPENING.
- ③ PHOTO SENSOR RECEIVERS SHOULD BE MOUNTED AT THE OPERATOR SIDE OF EACH PAIR OF SENSORS. RECEIVERS MAY BE MOUNTED TO THE GATE OPERATOR IF APPROVED BY THE GATE OPERATOR MANUFACTURER AND IN A LOCATION UNOBSTRUCTED THAT DOESN'T DAMAGE OPERATOR.
- ④ DO NOT MOUNT SENSORS TO FENCE POSTS DUE TO VIBRATION DURING GATE OPERATION.

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AIRPORT PERIMETER FENCING  
STANDARDS FOR PSG & KTN

GATE SAFETY DEVICE DETAILS

Record Drawings have been reviewed by the Project Engineer and represent the project as constructed.

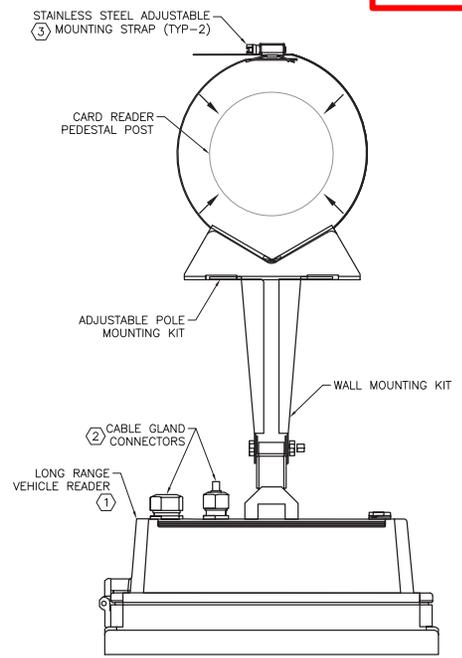
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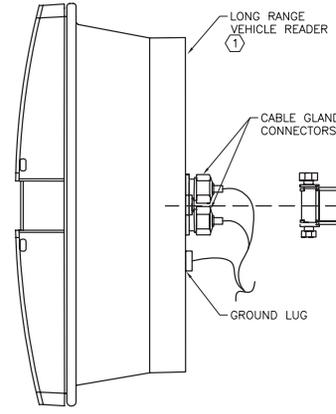
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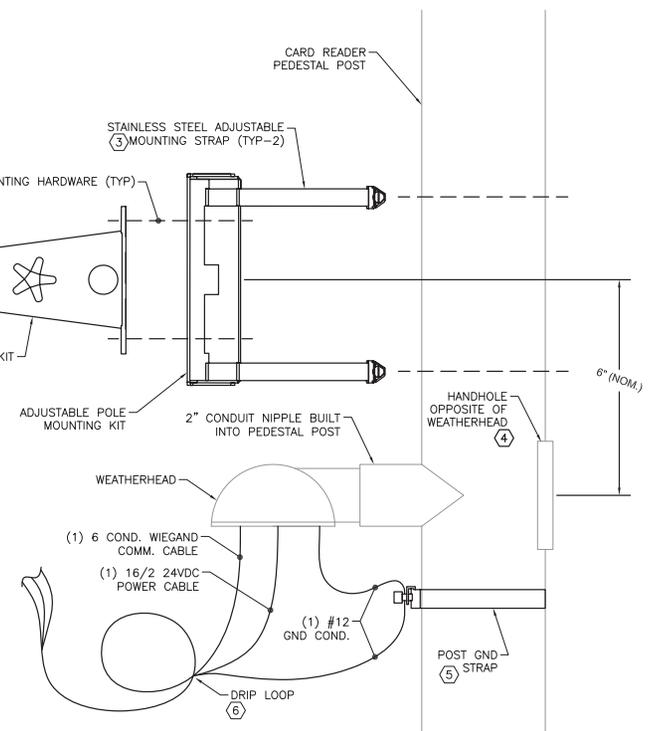
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① LONG RANGE READER - TOP VIEW  
NOT TO SCALE



② LONG RANGE READER - SIDE VIEW  
NOT TO SCALE



- SHEET NOTES:**
- THE DETAILS ON THIS SHEET ARE NOT SPECIFIC TO ALL MANUFACTURERS. FOLLOW ALL MANUFACTURER WRITTEN INSTALLATION INSTRUCTIONS AND REQUIREMENTS.
  - SEE SITE PLANS AND CARD READER ISLAND ELEVATION ON SHEET SE17 FOR MOUNTING HEIGHTS AND RELATIVE LOCATIONS OF COMPONENTS ON SITE.
  - LONG RANGE READER SHALL BE CAPABLE OF PROCESSING PROXIMITY CARDS (125 KHZ) AND ICCLASS CARDS (13.56 MHZ).
  - ANTI-CORROSION LUBRICANT SHALL BE APPLIED TO ALL EXPOSED LONG RANGE READER CONDUCTOR AND CABLE CONNECTIONS.
  - EACH LONG RANGE READER SHALL INCLUDE WEATHER HOOD AND UNIVERSAL MOUNTING ADAPTER. SEE SPECIFICATIONS FOR MORE INFORMATION. THEY ARE NOT COMPLETELY DETAILED ON THIS SHEET.
  - EACH AIRPORT SHALL RECEIVE SIX (6) VEHICLE BOOSTER DEVICES FOR COMMUNICATION WITH CREDENTIALS AND LONG RANGE READERS (NOT SHOWN ON THIS SHEET). BOOSTER KITS TO INCLUDE SINGLE AND DUAL ID PROX BOOSTERS AND SMARTCARD BOOSTERS. SEE SPECIFICATIONS FOR MORE INFORMATION.

- KEY NOTES:**
- LONG RANGE READER. ADJUST INITIAL TILT AND ROTATION OF READER FOR BEST PERFORMANCE PER MANUFACTURER RECOMMENDATIONS.
  - CABLE GLANDS INTEGRAL TO BACK OF READER FOR POWER AND COMMUNICATION CABLE CONNECTIONS. PROPER ASSEMBLY MUST BE FOLLOWED FOR CORRECT READER OPERATION AND WATER INFILTRATION PROTECTION. CONNECTION STEPS INCLUDE CUTTING BACK CABLE OUTER SHEATH, PROPER TREATMENT OF THE SCREEN BRAIDING OVER GLAND SOCKET, AND CORRECT TIGHTENING TORQUE. FOLLOW SPECIFIC MANUFACTURER WRITTEN INSTALLATION INSTRUCTIONS.
  - ASSEMBLE READER MOUNT WITH SUPPLIED MOUNTING HARDWARE (INDICATED VIA DASHED LINES) AND MOUNT OVERALL ASSEMBLY TO POST WITH STAINLESS STEEL STRAPS. TORQUE REQUIREMENTS PER MANUFACTURER.
  - HANDHOLE INTEGRAL TO POST. PROVIDE STAINLESS STEEL STRAIN RELIEF WITHIN THE THE HANDHOLE AND ROUTE ALL CABLES THROUGH STRAIN RELIEF BEFORE PASSING THROUGH INTO WEATHERHEAD. STRAIN RELIEF NOT SHOWN HERE.
  - PROVIDE STAINLESS STEEL GROUNDING STRAP TO SOLIDLY GROUND THE READER TO THE POST. ENSURE DIRECT METAL TO METAL CONTACT WITH POST.
  - CREATE DELIBERATE DRIP LOOP OF ALL CABLES AND CONDUCTORS TO READER TO MINIMIZE WATER MIGRATION. MAINTAIN ALL CABLE BENDING RADIUS REQUIREMENTS.

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MANUFACTURER INFORMATION * (#)		
EQUIPMENT	APPROVED MANUFACTURER #1	APPROVED MANUFACTURER #2
POWER ENCLOSURE	HOFFMAN: A60H3612SSLP3PT W/A60P36SSG	B-LINE: 603612-4XSS63PT W/AW6036GP
POWER PANEL	SQUARE-D Q0-1-12-M-100-R-B	EATON BRP-12-B-C-100-R-G
POWER PANEL SURGE PROTECTION DEVICE	EATON: SPC-050-240S-8-P	EATON: CHSPT2MAX
METER SOCKET	MILBANK: U7043-XL-TG	DURHAM: UT-4203B
ACCESS CONTROL ENCLOSURE (LARGE)	HOFFMAN: A60H3612SSLP3PT W/A60P36SSG	B-LINE: 603612-4XSS63PT W/AW6036GP
ACCESS CONTROL ENCLOSURE (SMALL)	HOFFMAN: A48H3612SSLP3PT W/A48P36SSG	B-LINE: 483612-4XSS63PT W/AW4836GP
ACCESS CONTROL ENCL LED LIGHTING**	HOFFMAN: LED24V15, LDSWITCH, LED24VCORD, LGCABLE	RITTAL: SZ SERIES LED LIGHTING SYSTEM
HARDENED NETWORK SWITCH & POWER SUPPLY	COMNET: CNGE11FX3TX8MSPOE W/PS-DR2420-48A	TRANSITION NETWORKS: SISPM1040384LRTC W/25104
POWER & AC ENCLOSURE HEATER	HOFFMAN: DAH4001B	RITTAL: 3105.420
DIN RAIL MINI CIRCUIT BREAKERS	SQUARE D: QOU115	EATON: FAZ-D15/1-DC
WIRELESS RADIO SYSTEM	PROXIM: TSUNAMI SERIES	CAMBUM WIRELESS: 450 SERIES
TILT-DOWN AREA LIGHT POLE (20 FT)	VALMONT: DSF10 SERIES	LITHONIA: RTAH SERIES
TILT-DOWN AREA LIGHT POLE (30 FT)	VALMONT: DSF15 SERIES	MILLERBERND: AHT SERIES
STANDARD LIGHT POLE (20 FT)	VALMONT: DS210 SERIES	LITHONIA: RTS SERIES
STANDARD LIGHT POLE (30 FT)	VALMONT: DS210 SERIES	LITHONIA: RTS SERIES
AREA LIGHT FIXTURES	LITHONIA: DSX0-LED-P1-50K-T2S-MVLT-PER-HS-BS	HUBBELL: BEACON BRAND VIPER SMALL SERIES
AREA LIGHT FIXTURE EXTERNAL SPD	LITTLEFUSE LSP10	HUBBELL FSP3 SERIES
INGRADE JUNCTION BOXES	OLDCASTLE: B1017 BOX W/B1017-51JH LID	BROOKS: 5-T PB SERIES BOX W/LID
LONG RANGE CARD READERS	NEDAP: TRANSIT ULTIMATE SERIES W/PROX-BOOSTER 2G	APPROVED EQUAL
STANDALONE USER CARD READERS	ESSEX ELECTRONICS: IROX PLUS	APPROVED EQUAL
DUAL HEAD GOOSENECK PEDESTAL & SHROUD	PEDESTAL PRO - 72-9C-D PED WITH CUSTOM MODS & MC CS 08 E SHROUD	THE HOUSING COMPANY - PD114 PED WITH CUSTOM MODS & PCH091 SHROUD
STANDALONE USER KEYPADS	ESSEX ELECTRONICS: KTP-10312-SN	APPROVED EQUAL
GATE ELECTRONIC LATCHES	SDC SECURITY: GL260MRAH W/DPS-GL	SECURITRON: GL1 W/FMK-SW
NETWORK UPS	CONTROLLED POWER COMPANY: MD7000 SERIES W/ MB2F120C EXTERNAL BATTERY SYSTEM	EATON: 9PX SERIES UPS WITH EMBs AS REQUIRED
INDOOR NETWORK SWITCH	COMNET: CNGE24FX12TX12MSPOE	CISCO: 3850 POE+ SERIES
WALL MOUNTED NETWORK RACK	MIDDLE ATLANTIC PRODUCTS: DWR SERIES WITH FAN & FILTER KIT	CHATSWORTH 11840 CUBE-IT SERIES WITH FAN & FILTER KIT

Record Drawings have been reviewed by the Project Engineer and represent the project as constructed.

*Jacob Estenson* 05/30/23  
 Signature Date

TABLE NOTES:

\* THIS TABLE IS PROVIDED AS A REFERENCE FOR PRODUCT MANUFACTURER NAMES AND PART NUMBERS FOR EQUIPMENT FOUND IN THE DESIGN. NOT ALL EQUIPMENT AND DEVICES REQUIRED ARE REPRESENTED IN THIS TABLE, I.E. COMMODITY ELECTRICAL ITEMS ARE NOT INCLUDED HERE (CONDUIT, WIRE, BOXES, ETC.). SEE SPECIFICATIONS FOR COMPLETE REQUIREMENTS OF THE PROJECT, INCLUDING ADDITIONAL APPROVED MANUFACTURER INFORMATION.

\*\* ENCLOSURE LIGHTING KITS INCLUDE AN ENSEMBLE OF FIXTURES, FIXTURE CORDS, DOOR SWITCHES, END CAPS, ETC. QUANTITY OF ENSEMBLED COMPONENTS VARIES BY ENCLOSURE SIZE.

(#) SEE SPECIFICATIONS AND SUPPORTING DOCUMENTATION INFORMATION ABOUT PRODUCT COMPLIANCE WITH BUY AMERICAN REQUIREMENTS AND ASSOCIATED WAIVER REQUIREMENTS THAT MAY APPLY.

PLANS DEVELOPED BY: MORRIS ENGINEERING GROUP, INC. 2375 JORDAN AVE #7 JUNEAU, AK 99801 907-789-3350 AECL 1010		STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES 6860 GLACIER HIGHWAY, JUNEAU, AK 99801 (907) 465-1763 <b>AIRPORT PERIMETER FENCING STANDARDS FOR PSG &amp; KTN</b> <b>MANUFACTURER INFORMATION</b>
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