

CANTILEVER SLIDE GATE CRITICAL DIMENSION CHART				
		GATE #2	GATE #10 & ALT #3	GATE #4 & #7
A	CLEAR OPENING	20'-0"	24'-0"	24'-0"
B	COUNTERBALANCE POST SPACING C/C	9'-1"	11'-1"	11'-1"
C	OVERALL GATE LENGTH	30'-0"	36'-0"	36'-0"
D	COUNTERBALANCE LENGTH	10'-0"	12'-0"	12'-0"
E	NOMINAL GATE HEIGHT	10'-0"	10'-0"	8'-0"
F	POST HEIGHT	11'-6"	11'-6"	9'-6"
G	FABRIC HEIGHT	9'-0"	9'-0"	7'-0"

SIGNS						
CONTRACTOR SHALL FURNISH AND INSTALL SIGNS AS INDICATED IN TABLE BELOW						
SIGN	DIMENSIONS	BACKGROUND		LETTERING		TEXT
		COLOR	COLOR	COLOR	HEIGHT	
1	24' x 18"	WHITE	RED	1.5"		FAA REGULATIONS REQUIRE THAT AFTER ENTERING OR EXITING THROUGH THIS SECURITY GATE YOU ARE REQUIRED TO WAIT UNTIL THE GATE CLOSES BEFORE PROCEEDING. FINES OR PENALTIES WILL BE IMPOSED.
2	8" x 8"	WHITE	RED	4"		GATE (SEE NOTE #2)
3						SEE WARNING SIGN DETAIL

**NOTES**  
 1) SIGNS #1 AND #3 SHALL BE INSTALLED ON BOTH SIDES OF GATE. SIGN #2 SHALL BE INSTALLED ON "LAND" SIDE OF GATE.  
 2) REPLACE WITH GATE #. SEE CRITICAL DIMENSION CHART.



WARNING SIGN DETAIL

UL 235 COMPLIANCE NOTES

- GATE INSTALLATION SHALL COMPLY WITH ALL REQUIREMENTS OF UL 235, INCLUDING, BUT NOT LIMITED TO:
- ALL OPENINGS OF THE SLIDE GATE ARE GUARDED OR SCREENED FROM THE BOTTOM OF THE GATE TO A MINIMUM OF 4 FEET ABOVE GROUND TO PREVENT A 2-1/4" DIAMETER SPHERE FROM PASSING THROUGH THE OPENINGS ANYWHERE IN THE GATE, AND IN THAT PORTION OF THE ADJACENT FENCE THAT THE GATE COVERS IN THE OPEN POSITION.
  - ALL EXPOSED PINCH POINTS ARE ELIMINATED OR GUARDED AND GUARDING IS SUPPLIED FOR ALL EXPOSED ROLLERS.
  - A WARNING SIGN (SEE DETAIL, THIS SHEET) MUST BE AFFIXED TO BOTH SIDES OF THE SLIDE GATE.
  - FOR ADDITIONAL UL 235 REQUIREMENTS FOR THIS GATE INSTALLATION, SEE GATE OPERATOR DETAILS SHEET.

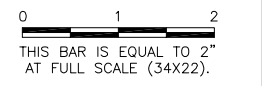
NOTES

- CANTILEVERED GATE SHALL BE SUFFICIENTLY RIGID TO WITHSTAND FLEXING OR BENDING DURING WINDY CONDITIONS. CONTRACTOR SHALL PROVIDE STIFFENERS, STRUCTURAL SHAPES IN EXCESS OF THE MINIMUM SPECIFIED DIMENSIONS OR ADDITIONAL ROLLERS AND POSTS SUFFICIENT TO PREVENT DISPLACEMENT OF THE GATE BY WIND OR BY UNAUTHORIZED PERSONNEL.
- CONTRACTOR SHALL PROVIDE AND INSTALL GATE AS COMPLETE WORKING UNIT. THE GATE WORK SHALL INCLUDE, BUT NOT BE LIMITED TO: GATE, OPERATOR, DIGITAL CODE CONTROL AND POWER CABLES, CONDUIT, TRENCHING, CIRCUIT BREAKERS, AND ALL CONNECTIONS, LABOR AND MATERIALS NECESSARY TO COMPLETE OPERATION.
- LOCATION OF THE GATE OPERATOR SHALL BE AS RECOMMENDED BY THE MANUFACTURER.
- PIPE BOLLARDS SHALL BE INSTALLED AT LOCATIONS SHOWN IN PLAN VIEW.
- THE FABRIC TYPE AND FINISH OF THE GATE, MATCH WITH PROPOSED FENCE OR AS DIRECTED BY THE ENGINEER.
- ALL SLIDING GATES SHALL HAVE ALL ROLLERS ENCLOSED IN STEEL OR PLASTIC SHROUDS TO PREVENT ACCIDENTAL INJURY.

LOCATIONS, DETAILS AND CHARACTER OF EQUIPMENT SHOWN ON THIS SHEET IS GENERIC. EQUIPMENT LOCATIONS SHALL BE AS RECOMMENDED BY THE EQUIPMENT MANUFACTURER.

BL067

REVISIONS		
NUMBER	BY	DATE
1	WDP	5/25/11



BLOOMINGTON-NORMAL AIRPORT AUTHORITY  
 CENTRAL ILLINOIS REGIONAL AIRPORT  
 BLOOMINGTON, ILLINOIS

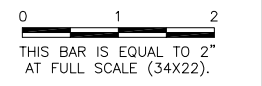
INSTALL 10' PERIMETER FENCE PHASE 4  
 ELECTRIC GATE DETAILS 1

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DESIGN BY:	JEF
DRAWN BY:	CMT
CHECKED BY:	
APPROVED BY:	
DATE:	04/22/2011
JOB No:	1008501
IL PROJ NO.	BMI-4098
AIP PROJ NO.	3-17-0006-XX
SHEET	24 OF 38 SHEETS

**BL067**

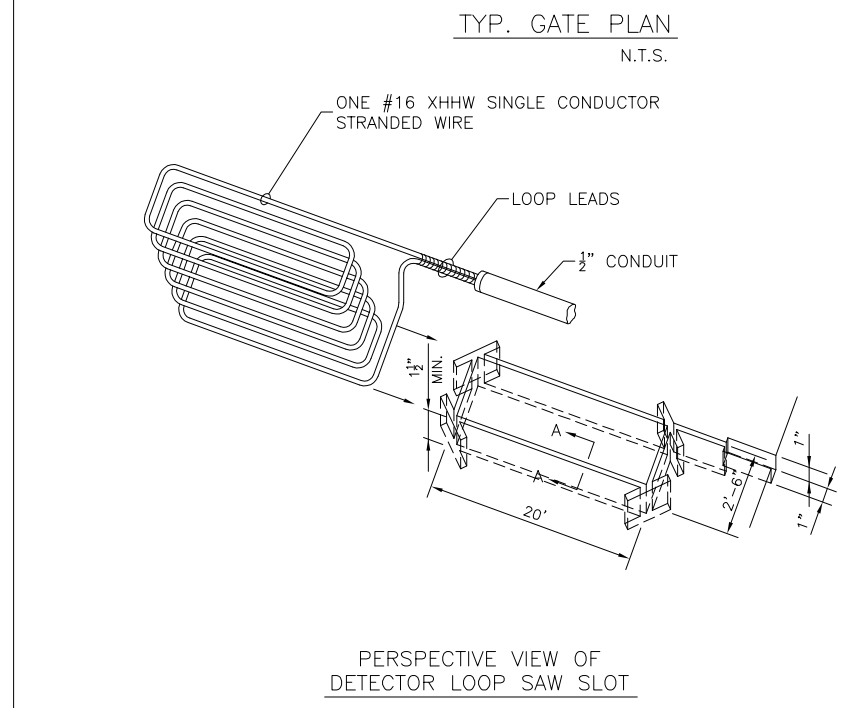
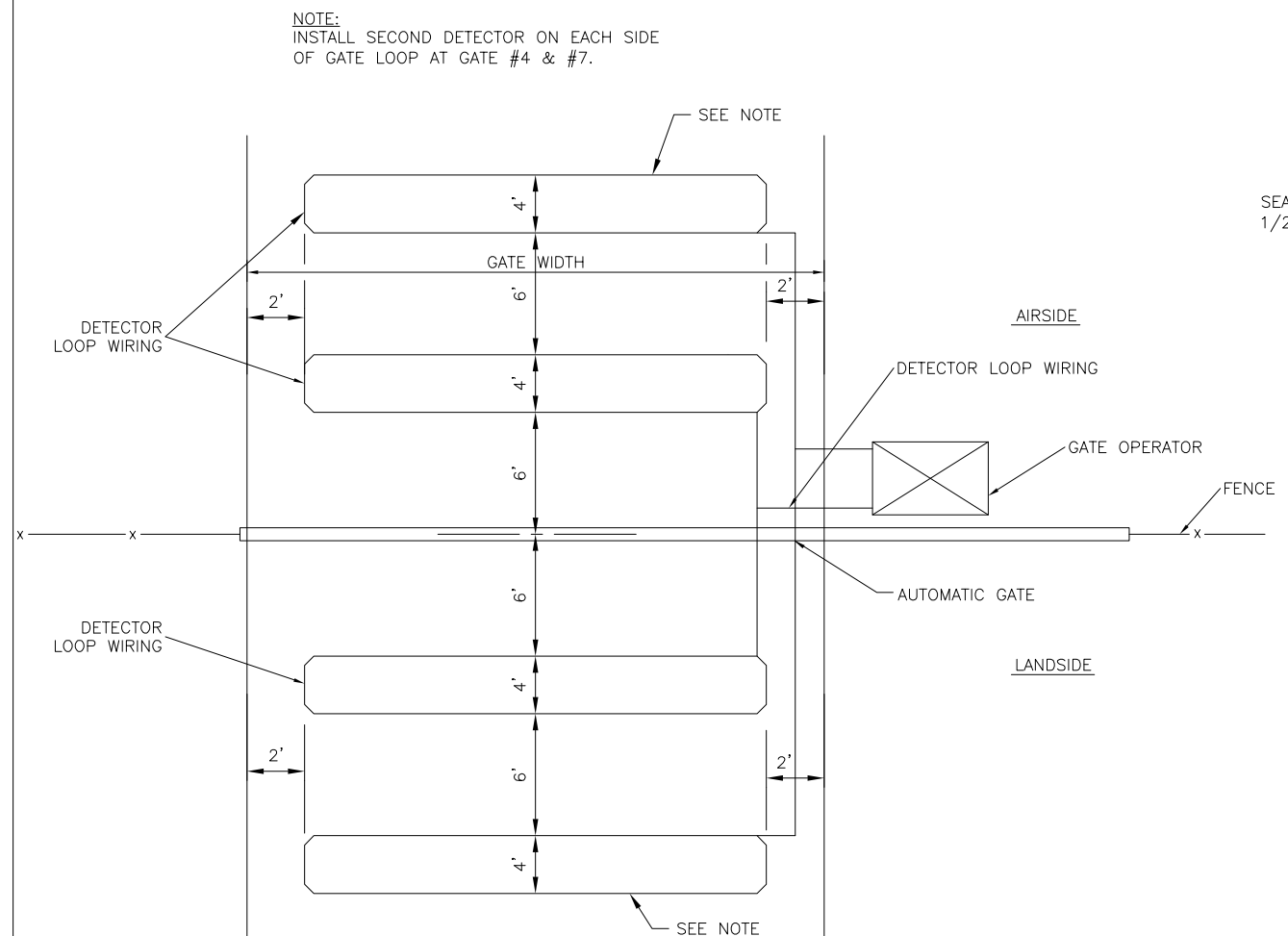
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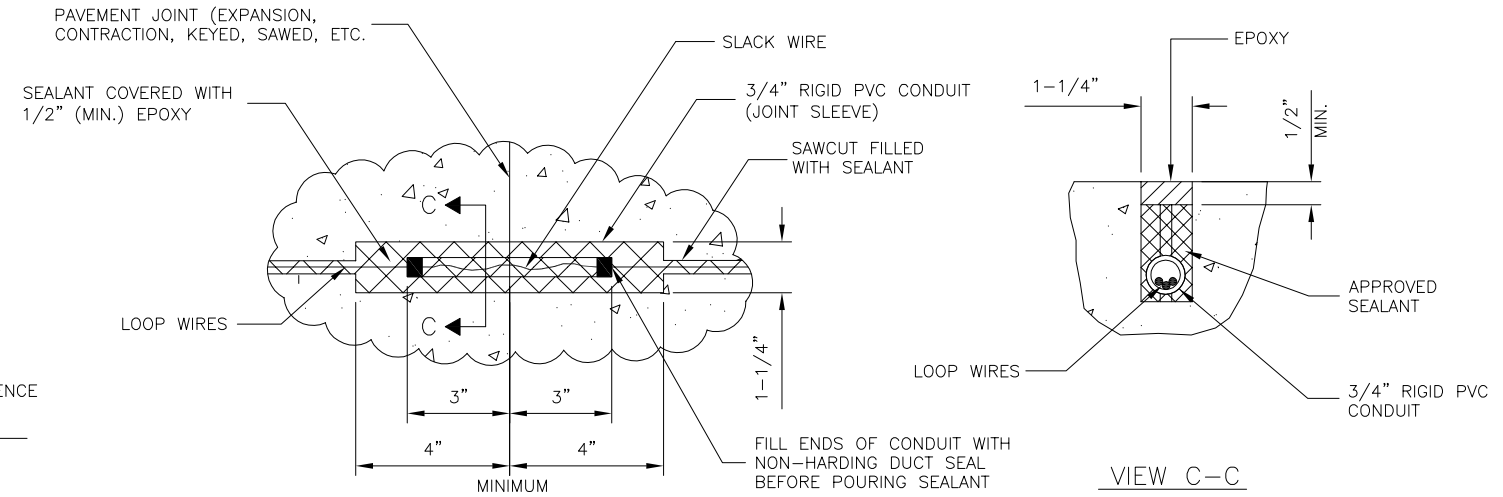
**BLOOMINGTON-NORMAL AIRPORT AUTHORITY**  
**CENTRAL ILLINOIS REGIONAL AIRPORT**  
**BLOOMINGTON, ILLINOIS**  
**INSTALL 10' PERIMETER FENCE PHASE 4**  
**ELECTRIC GATE DETAILS 3**

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APPROVED BY:	RLV
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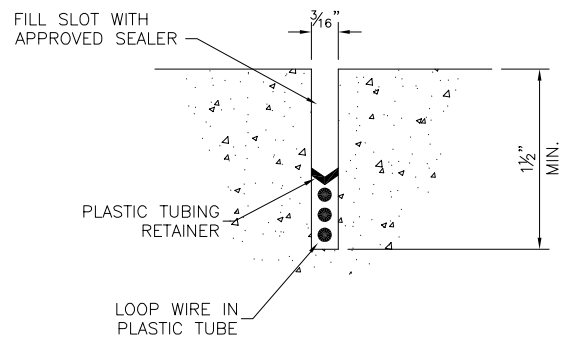


**DETECTOR LOOP DETAILS**  
N.T.S.



**JOINT CROSSING DETAIL**  
N.T.S.

NOTE:  
 LOCATIONS, DETAILS AND CHARACTER OF EQUIPMENT SHOWN ON THIS SHEET ARE GENERIC. EQUIPMENT LOCATION SHALL BE AS RECOMMENDED BY THE EQUIPMENT MANUFACTURER.



**SECTION A-A**

**NOTES**

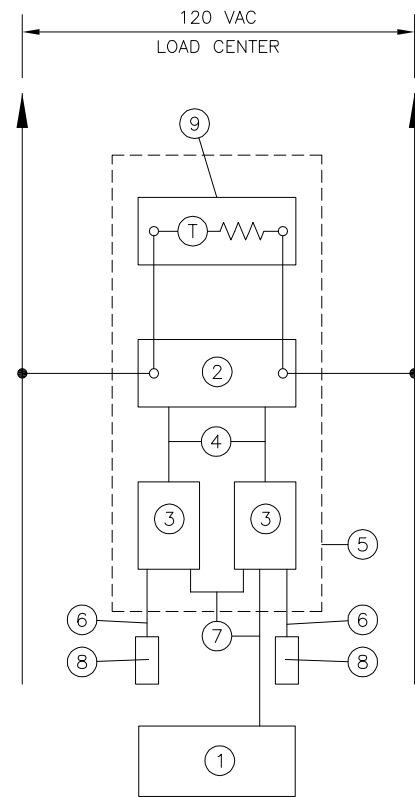
1. LOOP LEADS ARE LIMITED TO 100 FEET.
2. LOOP LEADS MUST HAVE FOUR (4) TWISTS PER FOOT.
3. LOOP AND LOOP LEADS MUST BE LOCATED, AT LEAST, 18" FROM ANY ELECTRICAL POWER SERVICE OR STEEL REINFORCEMENT.
4. LOOP LEADS MUST BE IN SEPARATE CONDUIT BETWEEN LOOP AND DETECTOR. THEY MUST NOT SHARE CONDUIT WITH OTHER WIRING OR LEADS FROM OTHER LOOPS.
5. WIRE SHALL BE #16 XHHW SINGLE CONDUCTOR STRANDED WIRE. 1
6. ALL WIRE SHALL BE CONTINUOUS WITHOUT SPLICING.

**CAUTION:**

- DO NOT SPLICE WIRE.
- DO NOT FRACTURE WIRE INSULATION. LOOPS SHORTED TO GROUND WILL CAUSE DETECTOR MALFUNCTION. WHEN PLACING WIRE IN THE SLOT. DO NOT USE SCREWDRIVER OR OTHER SHARP TOOLS.

**TYPICAL LAYOUT FOR LOOP:**

- SAW SLOT 3/16" WIDE x 1-1/2" DEEP. MAKE RECTANGULAR SHAPE TO SPECIFIED LOOP DIMENSIONS PLUS SLOT FOR LEAD CONDUIT.
- GROUT WITH NO. 202 WEATHERBAN SEALANT (A PRODUCT OF 3M CO.) OR APPROVED EQUIVALENT ... (EXAMPLE: DE WITTS NO. 99 BLACK MASTIC CAULK).

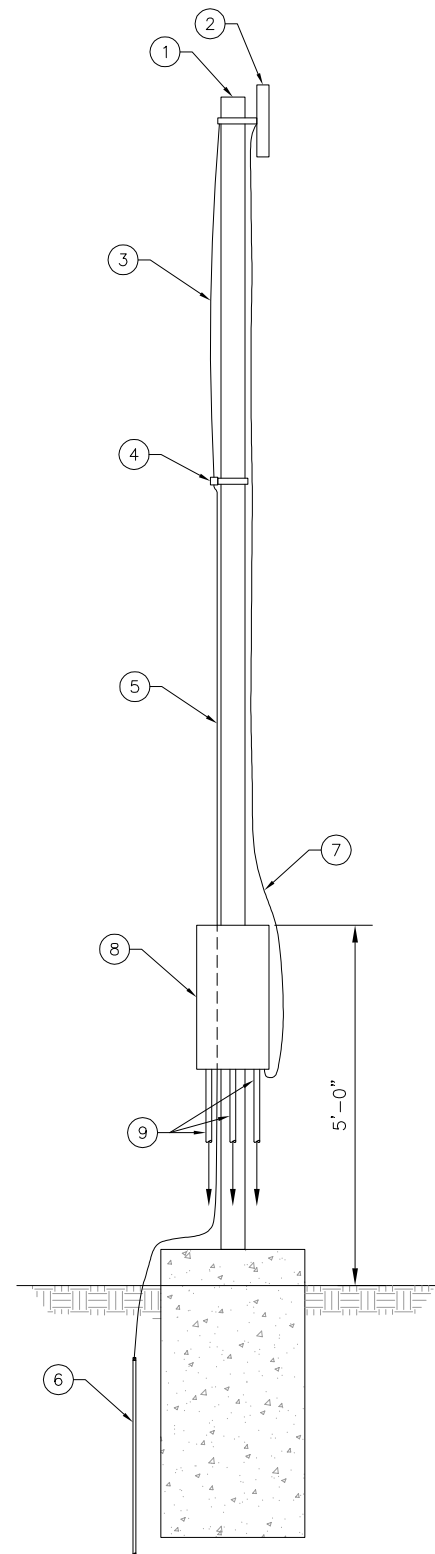


**ROUTE 9 GATE & GROWMARK GATE  
OPERATOR CONTROL BLOCK DIAGRAM**

**GATE OPERATOR CONTROL BLOCK DIAGRAM NOTES**

- ① GATE OPERATOR.
- ② WIRELESS CARD READER INTERFACE POWER SUPPLY.
- ③ WIRELESS CARD READER INTERFACE.
- ④ 2/C #14 SHIELDED CABLE (12VDC POWER).
- ⑤ NEMA 4X STAINLESS STEEL HINGED COVER ENCLOSURE, HOFFMAN, OR EQUIVALENT, SIZED AS REQUIRED TO HOUSE EQUIPMENT.
- ⑥ 6-CONDUCTOR #16 SHIELDED CABLE (CONTRACTOR SHALL VERIFY WITH CARD READER SUPPLIER).
- ⑦ 2/C #14 SHIELDED CABLE (GATE OPEN CONTROL).
- ⑧ INDALA LONG RANGE CARD READER, OR EQUIVALENT.
- ⑨ THERMOSTATICALLY CONTROLLED SPACE HEATER SIZED AS REQUIRED TO MAINTAIN TEMPERATURE INSIDE ENCLOSURE ABOVE 32°F AT OUTSIDE TEMPERATURE OF -10°F.

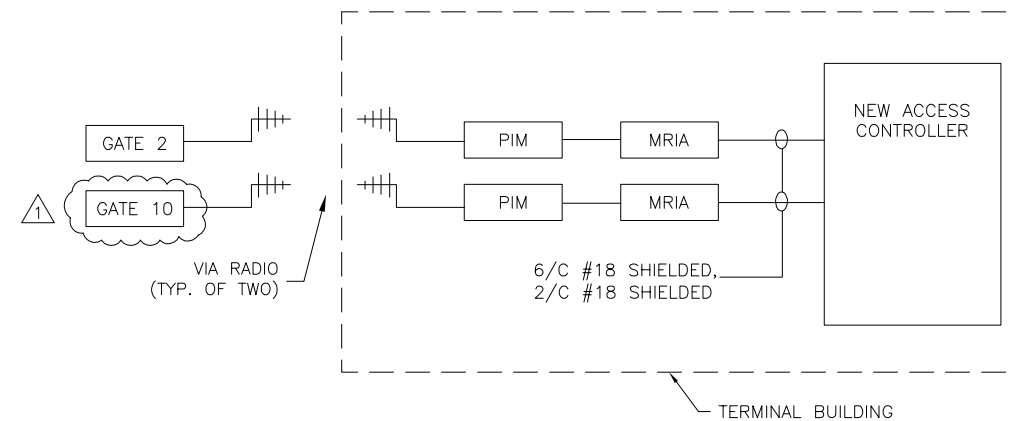
**NOTES:**  
- THE ENCLOSURE, COMPLETE WITH ALL EQUIPMENT AND INTERNAL WIRING, SHALL BE FURNISHED BY THE ACCESS CONTROL CONTRACTOR TO THE ELECTRICAL CONTRACTOR FOR MOUNTING ON ANTENNA POLE AND WIRING TO REMOTE EQUIPMENT.



**ACCESS CONTROL ANTENNA  
DETAIL  
N.T.S.**

**ACCESS CONTROL ANTENNA NOTES**

- ① ANTENNA POLE, ROUND STRAIGHT ALUMINUM, 16-TALL, KIM LIGHTING, MODEL PRA16-5188/FM/LG-P, MOUNTED ON 24" DIAMETER CONCRETE FOUNDATION, BY ELECTRICAL CONTRACTOR.
- ② ANTENNA, SUPPLIED BY ACCESS CONTROL CONTRACTOR, INSTALLED BY ELECTRICAL CONTRACTOR (TYPICAL OF TWO PER POLE).
- ③ 5-FOOT GROUNDING CONNECTION CABLE, SUPPLIED BY ACCESS CONTROL CONTRACTOR, INSTALLED BY ELECTRICAL CONTRACTOR (TYPICAL OF TWO PER POLE).
- ④ GROUNDING BLOCK, SUPPLIED BY ACCESS CONTROL CONTRACTOR, INSTALLED BY ELECTRICAL CONTRACTOR.
- ⑤ GROUND WIRE, INSTALLED BY ELECTRICAL CONTRACTOR PER ACCESS CONTROL SUPPLIER REQUIREMENTS. CONNECTION TO GROUND ROD SHALL BE VIA EXOTHERMIC WELD.
- ⑥ 3/4" DIAMETER X 10' LONG COPPERCLAD GROUND ROD, MINIMUM BURY 1'-0", BY ELECTRICAL CONTRACTOR.
- ⑦ COAXIAL ANTENNA CABLE, SUPPLIED BY ACCESS CONTROL CONTRACTOR, INSTALLED BY ELECTRICAL CONTRACTOR (TYPICAL OF TWO PER POLE). PROVIDE SEALING GROMMETS IN OPENINGS IN BOTTOM OF NEMA 4X ENCLOSURE FOR CABLE ENTRY. PROVIDE "DRIP LOOP" IN COAXIAL CABLES WHEN INSTALLING CABLES. THE NEMA 4 WATER-TIGHTNESS OF ENCLOSURE SHALL BE MAINTAINED.
- ⑧ NEMA 4X STAINLESS STEEL HINGED COVER ENCLOSURE WITH SPACE HEATER, POWER SUPPLY AND WIRELESS READER INTERFACES, FURNISHED COMPLETE BY ACCESS CONTROL SUPPLIER, INSTALLED BY ELECTRICAL CONTRACTOR.
- ⑨ CONDUITS AND WIRING AS NEEDED TO REMOTE EQUIPMENT, BY ELECTRICAL CONTRACTOR.



**NOTES:**

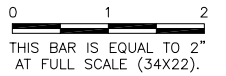
THE ACCESS CONTROL CONTRACTOR SHALL FURNISH AND INSTALL ALL LABOR, MATERIALS AND EQUIPMENT IN TERMINAL BLDG, INCLUDING ANY CABLES, CONDUITS, ANTENNAS, MASTS, PANEL INTERFACE MODULES (PIM), MATCH READER INTERFACE MODULES (MRIA), NEW ACCESS CONTROLLER, ACCESSORIES, ETC., AS REQUIRED FOR A COMPLETE AND ACCEPTED ACCESS CONTROL INSTALLATION IN THE TERMINAL BUILDING.

**TERMINAL BUILDING  
ACCESS CONTROL BLOCK DIAGRAM**

**BL067**

**REVISIONS**

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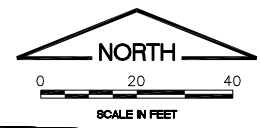


**BLOOMINGTON-NORMAL AIRPORT AUTHORITY  
CENTRAL ILLINOIS REGIONAL AIRPORT  
BLOOMINGTON, ILLINOIS**

**INSTALL 10' PERIMETER FENCE PHASE 4  
ELECTRIC GATE DETAILS 5**

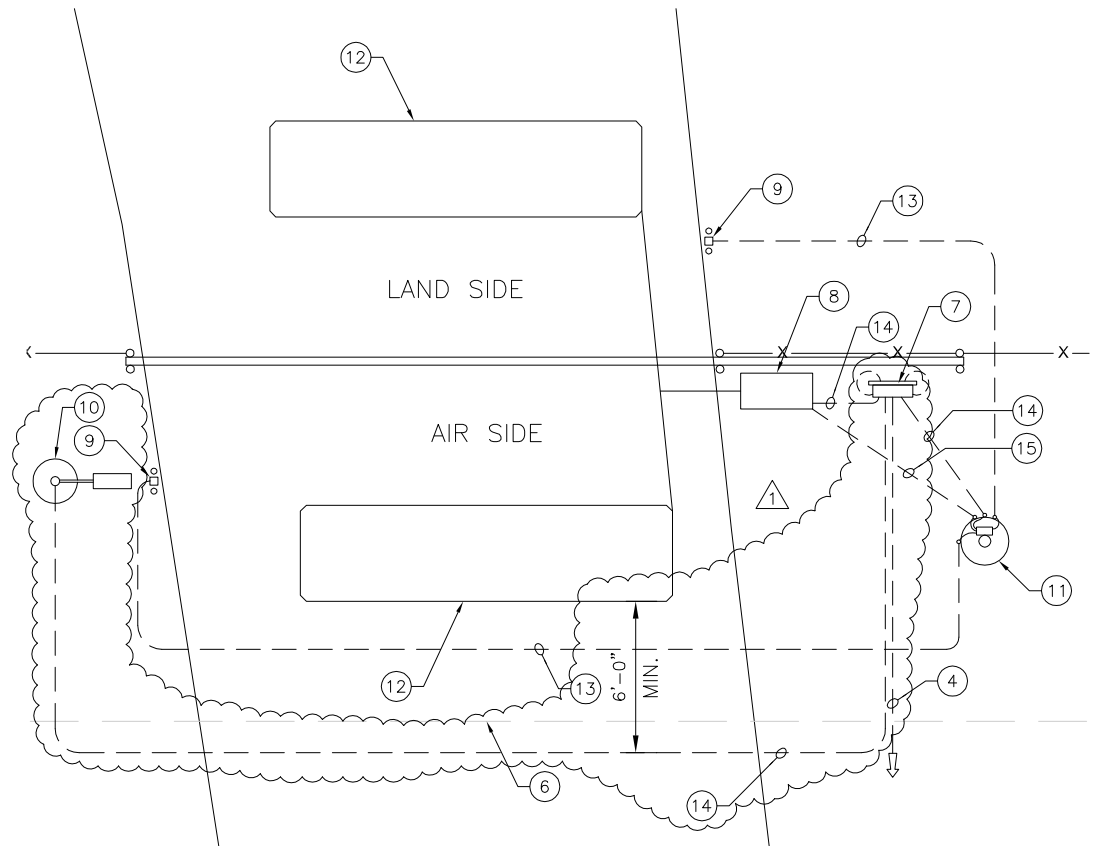
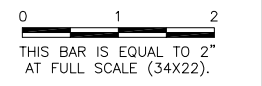
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SHEET	28 OF 38 SHEETS



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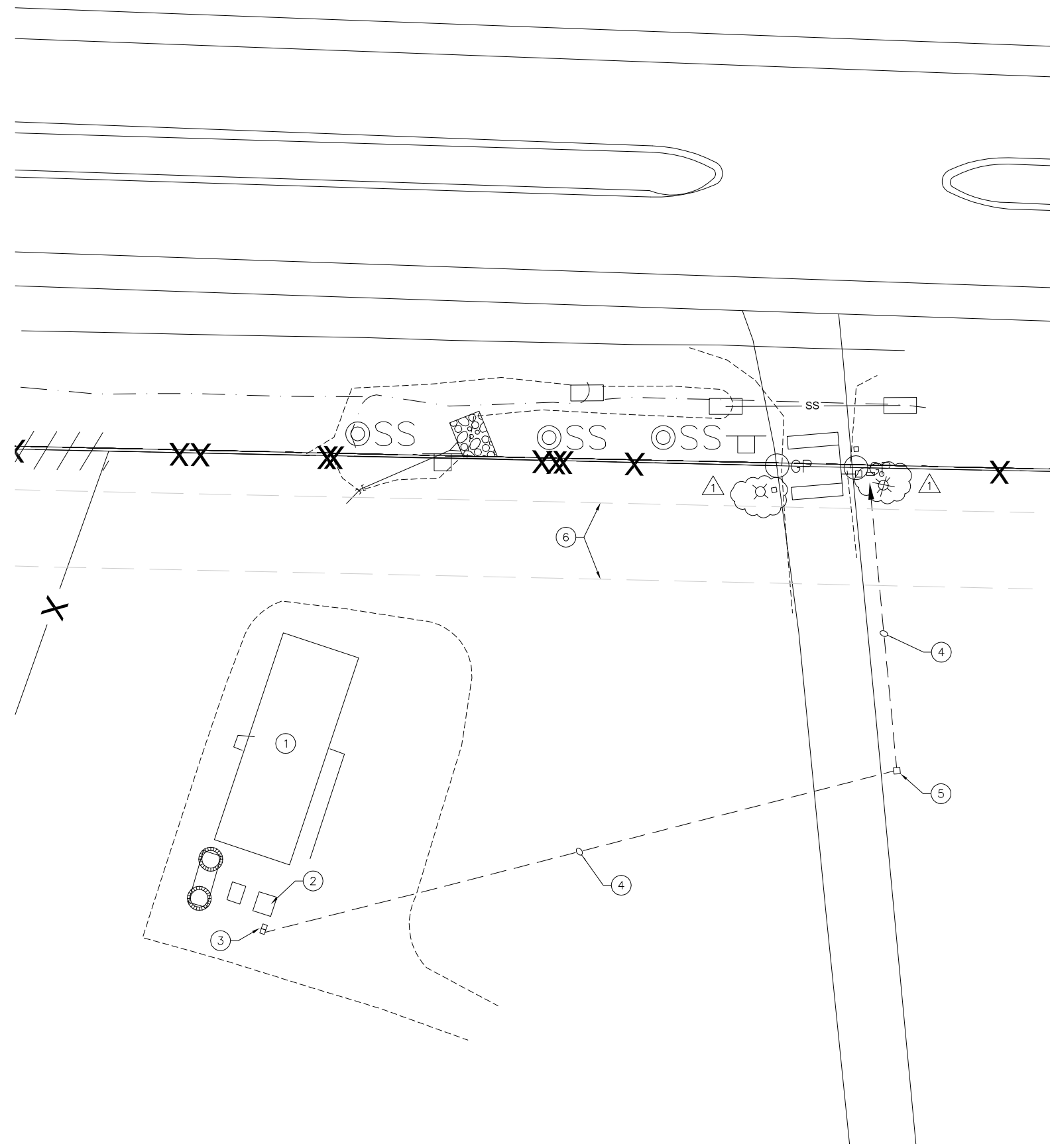
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**ENLARGED VIEW**  
1/4"=1'-0"

**KEYED NOTES**

- 1 EXISTING FAA ALSF SHELTER.
- 2 EXISTING UTILITY TRANSFORMER.
- 3 NEW UTILITY METER AND SERVICE ENTRANCE DISCONNECT. SEE DETAILS AND SPECIFICATIONS. LOCATE METER AND DISCONNECT BEHIND EXISTING PROTECTIVE BOLLARDS.
- 4 THREE #3 USE (LOAD CENTER 120/240V POWER), ONE #8 GROUND IN 1-1/2" CONDUIT.
- 5 NEW POLYMER CONCRETE HANDHOLE, OPEN-BOTTOM DESIGN, QUAZITE/HUBBELL #PG-2436-BA-42 WITH #PG-2436-HH-00-17 COVER, LABELED "ELECTRICAL", OR EQUIVALENT. THE USE OF CHOPPED FIBERGLASS STRANDS, HIGH DENSITY POLYETHYLENE OR HIGH DENSITY POLYSTYRENE IS UNACCEPTABLE. PLASTIC AND/OR FIBERGLASS BOXES WILL NOT BE CONSIDERED AS ACCEPTABLE ALTERNATES FOR POLYMER CONCRETE HANDHOLES.
- 6 FUTURE PERIMETER ROADWAY.
- 7 NEW LOAD CENTER, 100A, 120/240V, SINGLE-PHASE, WITH 100A 2P MAIN BREAKER, IN OUTDOOR RAINPROOF ENCLOSURE, SQUARE D QO116M100RB (16-POLE), EATON CH14B100R (14-POLE), OR EQUIVALENT. PROVIDE SURGE PROTECTIVE DEVICE WITH LOAD CENTER. SEE DETAILS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- 8 NEW CANTILEVER SLIDE GATE MOTOR OPERATOR, CHAMBERLAIN LIFTMASTER MODEL SL 575, 1 HP, 120V, SINGLE PHASE, OR EQUIVALENT, SUITABLE FOR A MAXIMUM GATE WEIGHT OF 1800 LBS AND MAXIMUM GATE WIDTH OF 32 FEET. NEW GATE OPERATOR SHALL INCLUDE AN INTERNAL POWER DISCONNECT SWITCH AND DETECTOR LOOP ELECTRONICS. PROVIDE A REMOTE GATE SENSOR FOR MOUNTING ON LEADING GATE EDGE AND WIRE TO OPERATOR TO REVERSE GATE UPON CONTACT WITH AN OBSTRUCTION WHILE CLOSING. CONNECT NEW GATE OPERATOR TO POWER AND CONTROL WIRING. SEE DETAILS FOR ADDITIONAL INFORMATION. NOTE: AN EARTH GROUND ROD IS REQUIRED AT GATE OPERATOR, BUT NOT SHOWN.
- 9 NEW INDALA WEATHERPROOF LONG RANGE CARD READER, OR EQUIVALENT, FURNISHED BY ACCESS CONTROL CONTRACTOR, INSTALLED BY ELECTRICAL CONTRACTOR. SEE PLANS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION. LOCATE CARD READER 5' FROM FENCE.
- 10 NEW AREA LIGHT, KIM LIGHTING (NO ALTERNATE), MODEL 1A/STL3/150PMH120/\*A-25/TDP (\* = COLOR TO BE SELECTED BY OWNER), 150W PULSE START METAL HALIDE, 120V, WITH PHOTOCELL RECEPTACLE & PHOTOCELL, AND DOUBLE TENSION STRUCTURAL OPTION. POLE SHALL BE KIM LIGHTING (NO ALTERNATE) MODEL PRA20-5188/A/TD/\*DR-GF1 (\* = COLOR TO BE SELECTED BY OWNER), 20' TALL, ROUND, STRAIGHT ALUMINUM, WITH 20A DUPLEX GFCI RECEPTACLE OPPOSITE HANDHOLE. PROVIDE WEATHERPROOF COVER FOR RECEPTACLE WHICH COMPLIES WITH NEC ARTICLE 406.9B1. COVER SHALL REMAIN RAIN-TIGHT WHETHER OR NOT A PLUG AND CORD IS INSERTED. COVER SHALL BE EXTRA-DEEP, SUNLIGHT RESISTANT, PADLOCKABLE, POLYCARBONATE CONSTRUCTION AS MANUFACTURED BY TAYMAC MM740C-B, OR EQUIVALENT. LOCATE POLE 5' FROM ROADWAY AND FENCE.
- 11 NEW ACCESS CONTROL EQUIPMENT, ANTENNAS AND ANTENNA POLE, KIM LIGHTING, MODEL PRA16-5188/FM/LG-P. SEE DETAILS AND SPECIFICATIONS. LOCATE POLE 10' FROM ROADWAY AND 8' FROM FENCE.
- 12 NEW DETECTOR LOOP.
- 13 6-CONDUCTOR #18 SHIELDED CABLE (CONTRACTOR SHALL VERIFY WITH CARD READER SUPPLIER) IN 1" CONDUIT.
- 14 TWO #12 USE (120V POWER), ONE #12 GROUND IN 3/4" CONDUIT.
- 15 2/C #14 SHIELDED CABLE (GATE OPEN CONTROL) IN 3/4" CONDUIT.



**SITE PLAN**  
1"=20'-0"

**BLOOMINGTON-NORMAL AIRPORT AUTHORITY  
 CENTRAL ILLINOIS REGIONAL AIRPORT  
 BLOOMINGTON, ILLINOIS**

**INSTALL 10' PERIMETER FENCE PHASE 4  
 ROUTE 9 GATE ELECTRICAL**

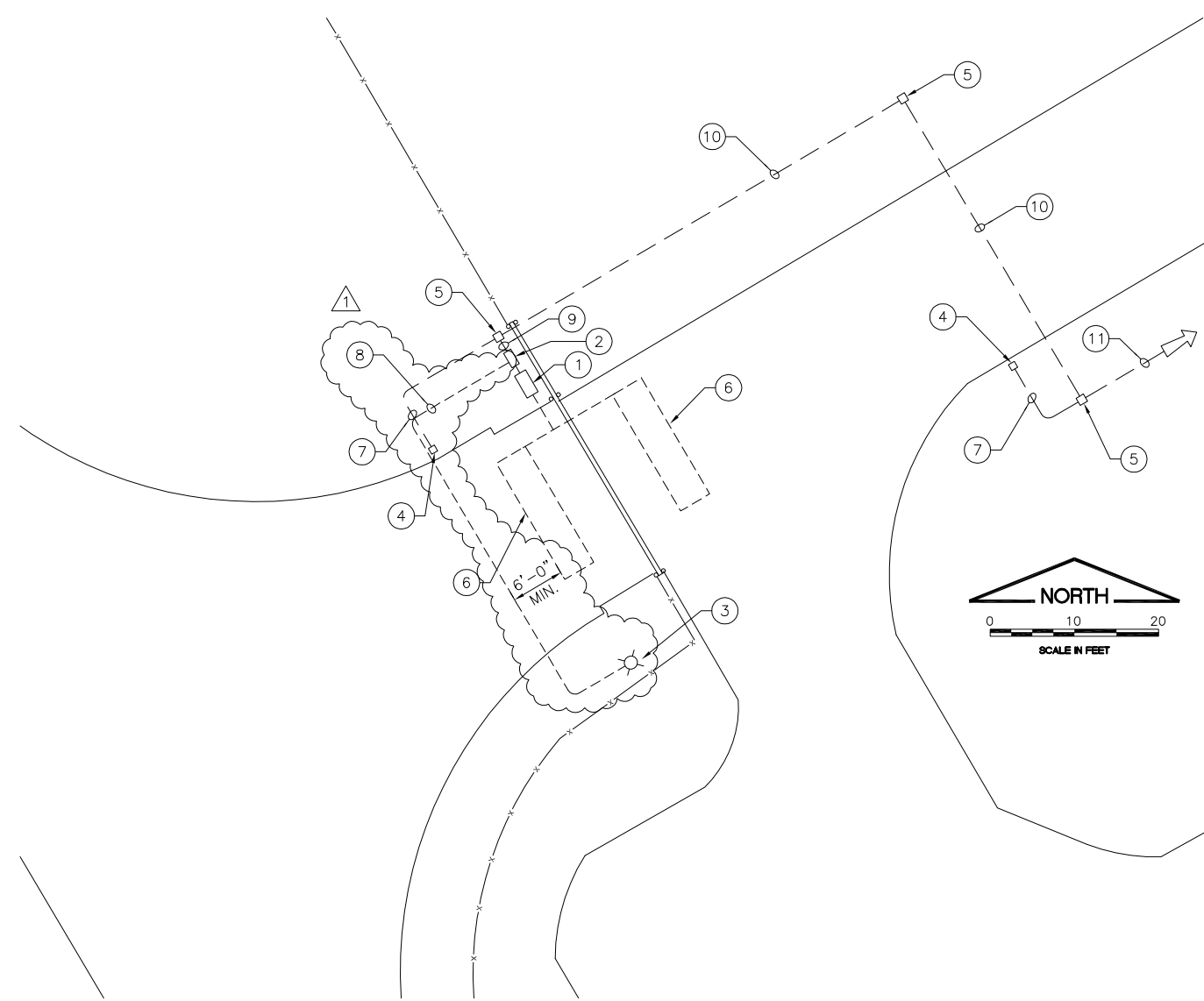
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SHEET	34 OF 38 SHEETS

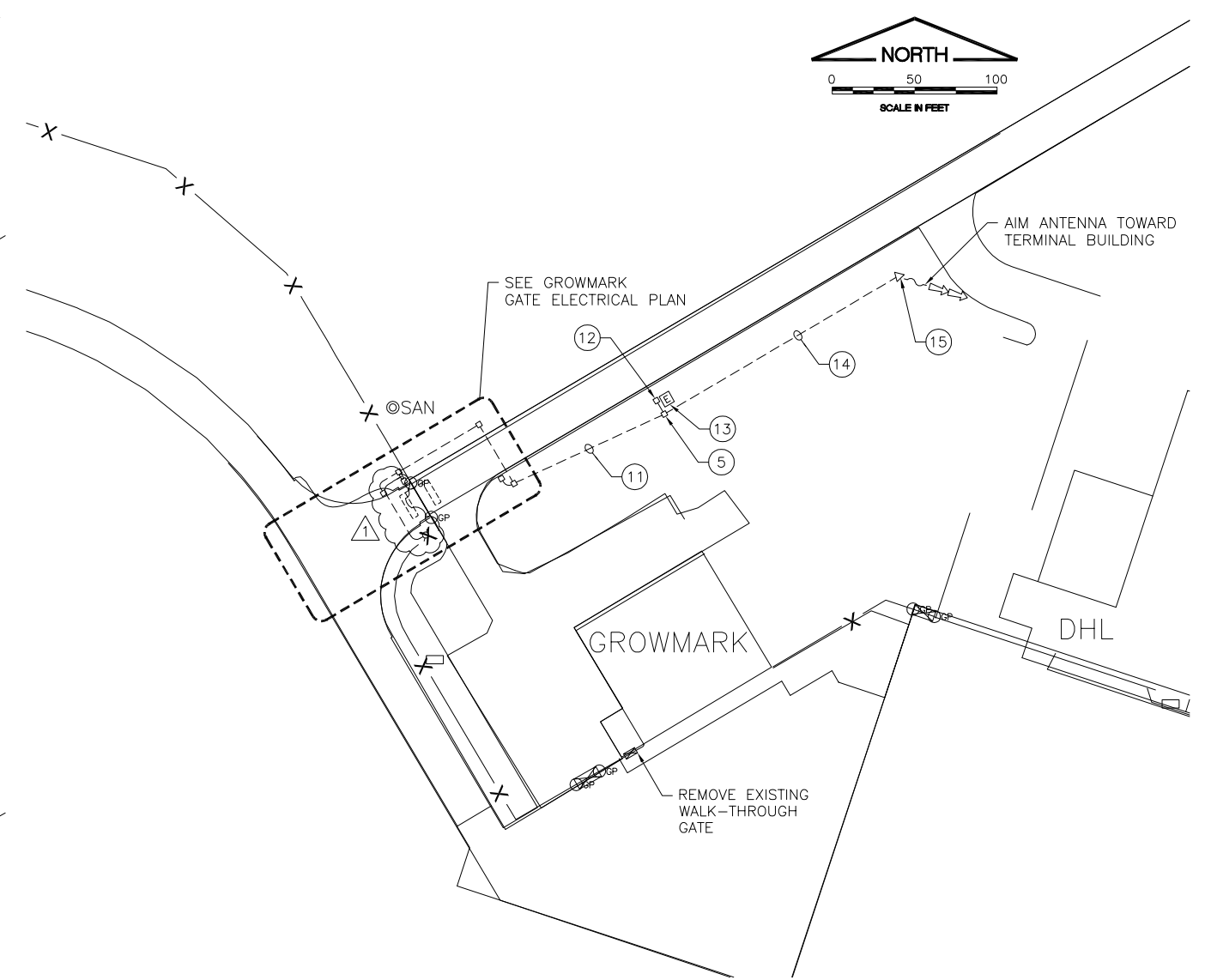
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NUMBER	BY	DATE
1	WDP	5/25/11

0 1 2  
 THIS BAR IS EQUAL TO 2"  
 AT FULL SCALE (34X22).



**GROWMARK GATE ELECTRICAL PLAN**  
 1"=10'-0"



**GROWMARK SITE PLAN ELECTRICAL**  
 1"=50'-0"

**KEYED NOTES**

- ① NEW CANTILEVER SLIDE GATE MOTOR OPERATOR, CHAMBERLAIN LIFTMASTER MODEL SL 575, 1 HP, 120V, SINGLE PHASE, OR EQUIVALENT, SUITABLE FOR A MAXIMUM GATE WEIGHT OF 1800 LBS AND MAXIMUM GATE WIDTH OF 32 FEET. NEW GATE OPERATOR SHALL INCLUDE AN INTERNAL POWER DISCONNECT SWITCH AND DETECTOR LOOP ELECTRONICS. PROVIDE A REMOTE GATE SENSOR FOR MOUNTING ON LEADING GATE EDGE AND WIRE TO OPERATOR TO REVERSE GATE UPON CONTACT WITH AN OBSTRUCTION WHILE CLOSING. CONNECT NEW GATE OPERATOR TO POWER AND CONTROL WIRING. SEE DETAILS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION. NOTE: AN EARTH GROUND ROD IS REQUIRED AT GATE OPERATOR, BUT NOT SHOWN.
- ② NEW LOAD CENTER, 100A, 120/240V, SINGLE-PHASE, WITH 100A 2P MAIN BREAKER, IN OUTDOOR RAINPROOF ENCLOSURE, SQUARE D Q0116M100RB (16-POLE), EATON CH14B100R (14-POLE), OR EQUIVALENT. PROVIDE SURGE PROTECTIVE DEVICE WITH LOAD CENTER. SEE DETAILS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- ③ NEW AREA LIGHT, KIM LIGHTING (NO ALTERNATE), MODEL 1A/STL3/150PMH120/\*A-25/TDP (\* = COLOR TO BE SELECTED BY OWNER), 150W PULSE START METAL HALIDE, 120V, WITH PHOTOCELL RECEPTACLE & PHOTOCELL, AND DOUBLE TENSION STRUCTURAL OPTION. POLE SHALL BE KIM LIGHTING (NO ALTERNATE) MODEL PRA20-5188/A/TD/\*DR-GFI (\* = COLOR TO BE SELECTED BY OWNER), 20' TALL, ROUND, STRAIGHT ALUMINUM, WITH 20A DUPLEX GFCI RECEPTACLE OPPOSITE HANDHOLE. PROVIDE WEATHERPROOF COVER FOR RECEPTACLE WHICH COMPLIES WITH NEC ARTICLE 406.9B1. COVER SHALL REMAIN RAIN-TIGHT WHETHER OR NOT A PLUG AND CORD IS INSERTED. COVER SHALL BE EXTRA-DEEP, SUNLIGHT RESISTANT, PADLOCKABLE, POLYCARBONATE CONSTRUCTION AS MANUFACTURED BY TAYMAC MM740C-B, OR EQUIVALENT. LOCATE POLE 5' FROM BOTH ROADWAY AND FENCE.
- ④ NEW INDALA WEATHERPROOF LONG RANGE CARD READER, OR EQUIVALENT, FURNISHED BY ACCESS CONTROL CONTRACTOR, INSTALLED BY ELECTRICAL CONTRACTOR. SEE PLANS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION. LOCATE "AIR SIDE" READER 15' (NOM.) FROM GATE. LOCATE "LAND SIDE" READER NEAR END OF RADIUS OF ENTRANCE TO GROWMARK.
- ⑤ NEW POLYMER CONCRETE HANDHOLE, OPEN-BOTTOM DESIGN, QUAZITE/HUBBELL #PG-2436-BA-42 WITH #PG-2436-HH-00-17 COVER, LABELED "ELECTRICAL", OR EQUIVALENT. THE USE OF CHOPPED FIBERGLASS STRANDS, HIGH DENSITY POLYETHYLENE OR HIGH DENSITY POLYSTYRENE IS UNACCEPTABLE. PLASTIC AND/OR FIBERGLASS BOXES WILL NOT BE CONSIDERED AS ACCEPTABLE ALTERNATES FOR POLYMER CONCRETE HANDHOLES.
- ⑥ NEW DETECTOR LOOP. SEE DETAILS AND SPECIFICATIONS.
- ⑦ 6-CONDUCTOR #18 SHIELDED CABLE (CONTRACTOR SHALL VERIFY WITH CARD READER SUPPLIER) IN 1" CONDUIT.
- ⑧ TWO #12 USE (AREA LIGHT/RECEPTACLE 120V POWER), ONE #12 GROUND IN 1" CONDUIT.
- ⑨
  - FROM HANDHOLE TO LOAD CENTER: THREE #3 USE (120/240V POWER FROM UTILITY), ONE #8 GROUND IN 1-1/2" CONDUIT.
  - FROM HANDHOLE TO GATE OPERATOR: 2/C #14 SHIELDED CABLE (GATE OPEN CONTROL FROM WIRELESS READER INTERFACE) IN 1" CONDUIT.
  - FROM LOAD CENTER TO GATE OPERATOR: TWO #12 USE (GATE 120V POWER), ONE #12 GROUND IN 1" CONDUIT.
  - FROM LOAD CENTER TO HANDHOLE: TWO #12 USE (WIRELESS READER INTERFACE 120V POWER), ONE #12 GROUND IN 1" CONDUIT.
- ⑩
  - THREE #3 USE (LOAD CENTER 120/240V POWER FROM UTILITY), ONE #8 GROUND IN 1-1/2" CONDUIT.
  - TWO #12 USE (WIRELESS READER INTERFACE 120V POWER), ONE #12 GROUND, 2/C #14 SHIELDED CABLE (GATE OPEN CONTROL) IN 1" CONDUIT.
  - 6-CONDUCTOR #18 SHIELDED CABLE (CONTRACTOR SHALL VERIFY WITH CARD READER SUPPLIER) IN 1" CONDUIT.
- ⑪
  - THREE #3 USE (LOAD CENTER 120/240V POWER FROM UTILITY), ONE #8 GROUND IN 1-1/2" CONDUIT.
  - TWO #12 USE (WIRELESS READER INTERFACE 120V POWER), ONE #12 GROUND, 2/C #14 SHIELDED CABLE (GATE OPEN CONTROL) IN 1" CONDUIT.
  - TWO 6-CONDUCTOR #18 SHIELDED CABLES (CONTRACTOR SHALL VERIFY WITH CARD READER SUPPLIER) IN 1-1/2" CONDUIT.
- ⑫ NEW UTILITY METER AND SERVICE ENTRANCE DISCONNECT. SEE DETAILS AND SPECIFICATIONS.
- ⑬ EXISTING UTILITY TRANSFORMER.
- ⑭
  - TWO #12 USE (WIRELESS READER INTERFACE 120V POWER), ONE #12 GROUND, 2/C #14 SHIELDED CABLE (GATE OPEN CONTROL) IN 1" CONDUIT.
  - TWO 6-CONDUCTOR #18 SHIELDED CABLES (CONTRACTOR SHALL VERIFY WITH CARD READER SUPPLIER) IN 1-1/2" CONDUIT.
- ⑮ NEW ACCESS CONTROL EQUIPMENT, ANTENNAS AND ANTENNA POLE, KIM LIGHTING, MODEL PRA16-5188/FM/LG-P. SEE DETAILS AND SPECIFICATIONS.

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**CENTRAL ILLINOIS REGIONAL AIRPORT**  
**BLOOMINGTON, ILLINOIS**  
**INSTALL 10' PERIMETER FENCE PHASE 4**  
**GROWMARK GATE ELECTRICAL**

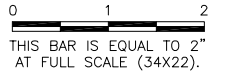
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**BLOOMINGTON-NORMAL AIRPORT AUTHORITY  
 CENTRAL ILLINOIS REGIONAL AIRPORT  
 BLOOMINGTON, ILLINOIS**

**INSTALL 10' PERIMETER FENCE PHASE 4  
 ALT-3 ELECTRIC GATE**

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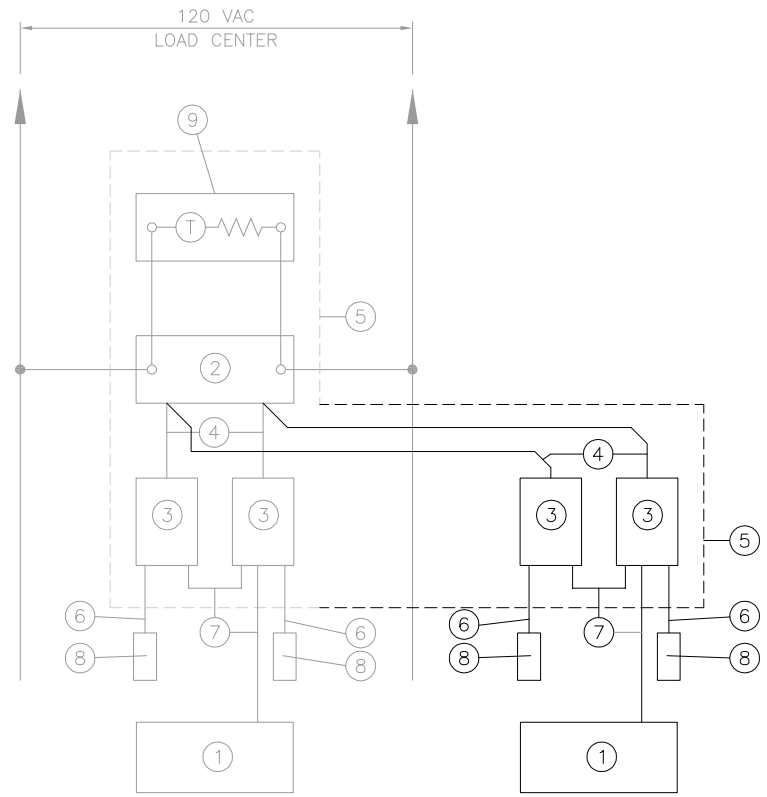


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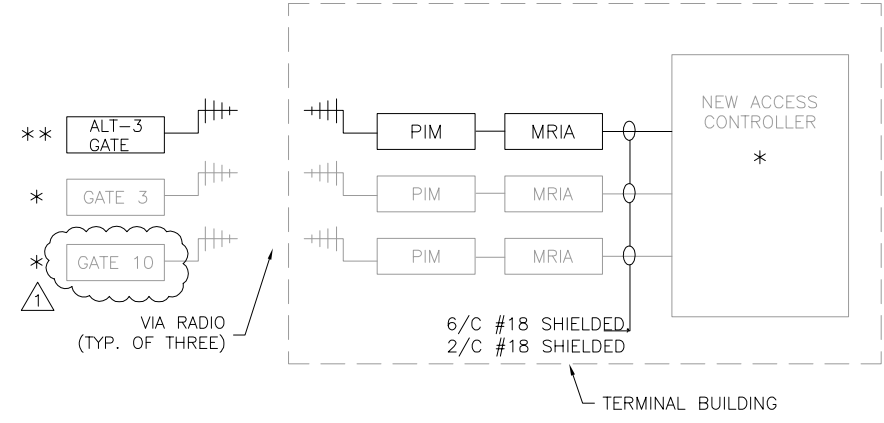
**KEYED NOTES**

NOTE: THE FOLLOWING DESCRIBES WORK TO BE DONE TO PERFORM THE ELECTRICAL WORK FOR ALT-3 ELECTRIC GATE AT GROWMARK. IT DESCRIBES NEW WORK TO BE DONE AND MODIFICATIONS TO BASE-BID WORK TO FURNISH AND INSTALL ALT-3 ELECTRIC GATE.

- ① NEW CANTILEVER SLIDE GATE MOTOR OPERATOR, CHAMBERLAIN LIFTMASTER MODEL SL 575, 1 HP, 120V, SINGLE PHASE, OR EQUIVALENT, SUITABLE FOR A MAXIMUM GATE WEIGHT OF 1800 LBS AND MAXIMUM GATE WIDTH OF 32 FEET. NEW GATE OPERATOR SHALL INCLUDE AN INTERNAL POWER DISCONNECT SWITCH AND DETECTOR LOOP ELECTRONICS. PROVIDE A REMOTE GATE SENSOR FOR MOUNTING ON LEADING GATE EDGE AND WIRE TO OPERATOR TO REVERSE GATE UPON CONTACT WITH AN OBSTRUCTION WHILE CLOSING. CONNECT NEW GATE OPERATOR TO POWER AND CONTROL WIRING. SEE DETAILS FOR ADDITIONAL INFORMATION. NOTE: AN EARTH GROUND ROD IS REQUIRED AT GATE OPERATOR, BUT NOT SHOWN.
- ② NEW INDALA WEATHERPROOF LONG RANGE CARD READER, OR EQUIVALENT. SEE PLANS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION. LOCATE BOTH CARD READERS 15' (NOM.) FROM GATE.
- ③ NEW POLYMER CONCRETE HANDHOLE, OPEN-BOTTOM DESIGN, QUAZITE/HUBBELL #PG-2436-BA-42 WITH #PG-2436-HH-00-17 COVER, LABELED "ELECTRICAL", OR EQUIVALENT. THE USE OF CHOPPED FIBERGLASS STRANDS, HIGH DENSITY POLYETHYLENE OR HIGH DENSITY POLYSTYRENE IS UNACCEPTABLE. PLASTIC AND/OR FIBERGLASS BOXES WILL NOT BE CONSIDERED AS ACCEPTABLE ALTERNATES FOR POLYMER CONCRETE HANDHOLES.
- ④ NEW DETECTOR LOOP. SEE DETAILS AND SPECIFICATIONS.
- ⑤ 6-CONDUCTOR #18 SHIELDED CABLE (CONTRACTOR SHALL VERIFY WITH CARD READER SUPPLIER) IN 1" CONDUIT.
- ⑥ TWO #6 USE (GATE 120V POWER), ONE #10 GROUND, 2/C #14 SHIELDED CABLE (GATE OPEN CONTROL) IN 1" CONDUIT.
- ⑦ - TWO #6 USE (GATE 120V POWER), ONE #10 GROUND, 2/C #14 SHIELDED CABLE (GATE OPEN CONTROL) IN 1" CONDUIT.  
 - 6-CONDUCTOR #18 SHIELDED CABLE (CONTRACTOR SHALL VERIFY WITH CARD READER SUPPLIER) IN 1" CONDUIT.
- ⑧ - TWO #6 USE (GATE 120V POWER), ONE #10 GROUND, 2/C #14 SHIELDED CABLE (GATE OPEN CONTROL) IN 1" CONDUIT.  
 - TWO 6-CONDUCTOR #18 SHIELDED CABLES (CONTRACTOR SHALL VERIFY WITH CARD READER SUPPLIER) IN 1-1/2" CONDUIT.
- ⑨ TWO #6 USE, ONE #10 GROUND IN 1" CONDUIT FROM HANDHOLE INSTALLED AS PART OF BASE BID TO 20A, 1P CIRCUIT BREAKER IN LOAD CENTER INSTALLED AS PART OF BASE BID.
- ⑩ - TO THE CONDUIT WITH ONE 6-CONDUCTOR #18 SHIELDED CABLE INSTALLED AS PART OF THE BASE BID, ADD TWO 6-CONDUCTOR #18 SHIELDED CABLES (CONTRACTOR SHALL VERIFY WITH CARD READER SUPPLIER). INCREASE CONDUIT SIZE FROM 1" TO 2" CONDUIT.
- ① - TO THE CONDUIT WITH TWO #12 USE (WIRELESS READER INTERFACE 120V POWER), ONE #12 GROUND, 2/C #14 SHIELDED CABLE (GROWMARK GATE #10 OPEN CONTROL) IN 1" CONDUIT, ADD 2/C #14 SHIELDED CABLE (ALT-3 GATE OPEN CONTROL). CONDUIT SIZE DOES NOT CHANGE.
- ①① - TO THE CONDUIT WITH TWO 6-CONDUCTOR #18 SHIELDED CABLES INSTALLED AS PART OF THE BASE BID, ADD TWO 6-CONDUCTOR #18 SHIELDED CABLES (CONTRACTOR SHALL VERIFY WITH CARD READER SUPPLIER). INCREASE CONDUIT SIZE FROM 1-1/2" TO 2" CONDUIT.
- ① - TO THE CONDUIT WITH TWO #12 USE (WIRELESS READER INTERFACE 120V POWER), ONE #12 GROUND, 2/C #14 SHIELDED CABLE (GROWMARK GATE #10 OPEN CONTROL) IN 1" CONDUIT, ADD 2/C #14 SHIELDED CABLE (ALT-3 GATE OPEN CONTROL). CONDUIT SIZE DOES NOT CHANGE.
- ①② - AT THE ANTENNA POLE INSTALLED AS PART OF BASE BID, ADD TWO ANTENNAS AND RELATED HARDWARE, CABLES, ETC., FOR ALT-3 GATE USE, SAME AS DETAILED IN THE BASE BID.  
 - IN NEMA 4X ENCLOSURE INSTALLED AS PART OF BASE BID AT ANTENNA POLE, INSTALL TWO WIRELESS READER INTERFACE UNITS AND ASSOCIATED WIRING AND HARDWARE, SAME AS DETAILED IN THE BASE BID.

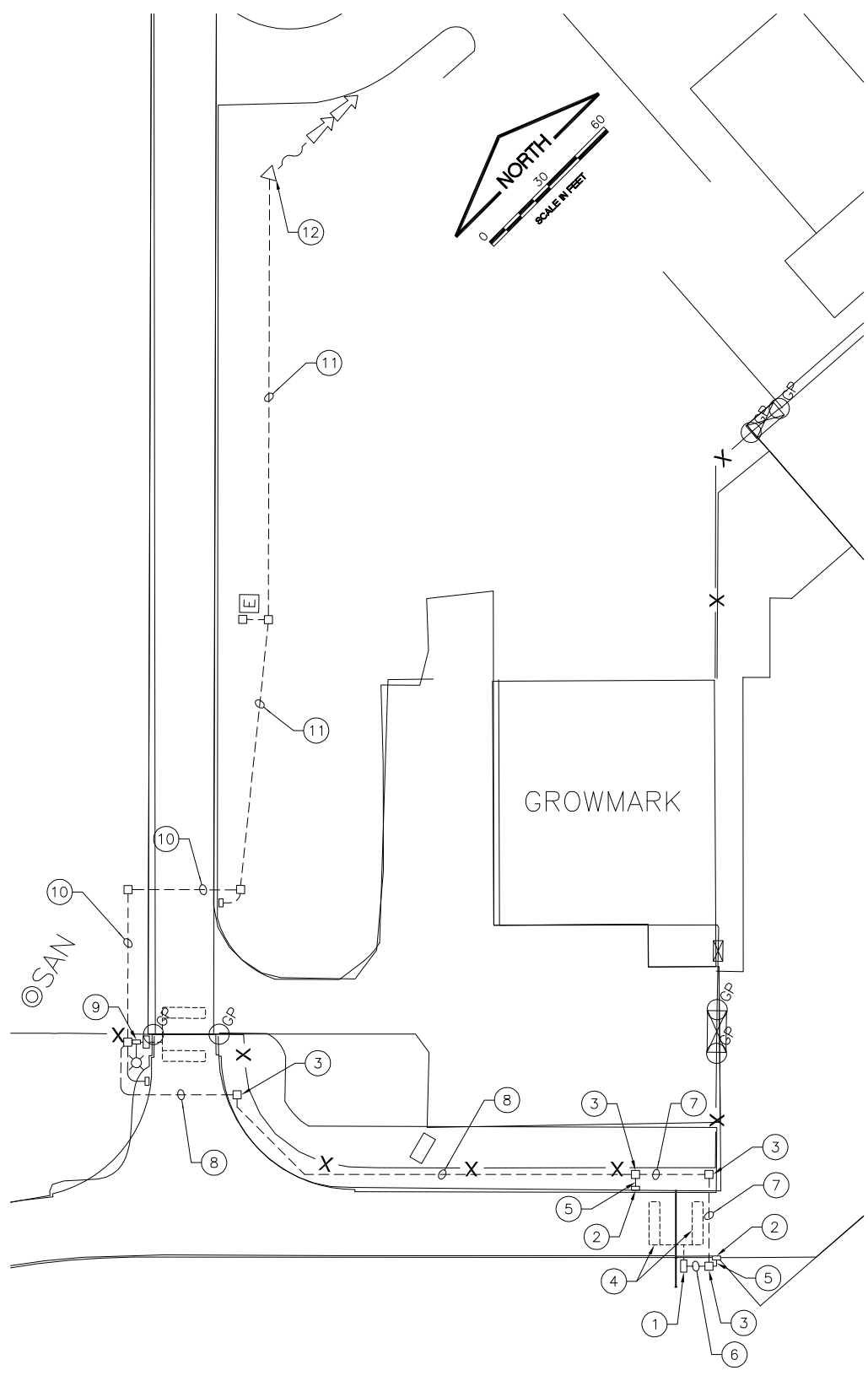


**BASE BID**                      **ALT-3**  
 SEE ELECTRIC GATE DETAILS 5 FOR NOTES  
**GROWMARK GATE #11 & ALT-3 GATE OPERATOR CONTROL BLOCK DIAGRAM**



NOTES:  
 \* = BASE BID  
 \*\* = ALT-3

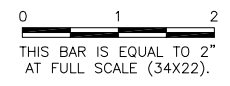
**ALT-3  
 TERMINAL BUILDING  
 ACCESS CONTROL BLOCK DIAGRAM**



**ALT-3 GATE PLAN**  
 1"=30'-0"

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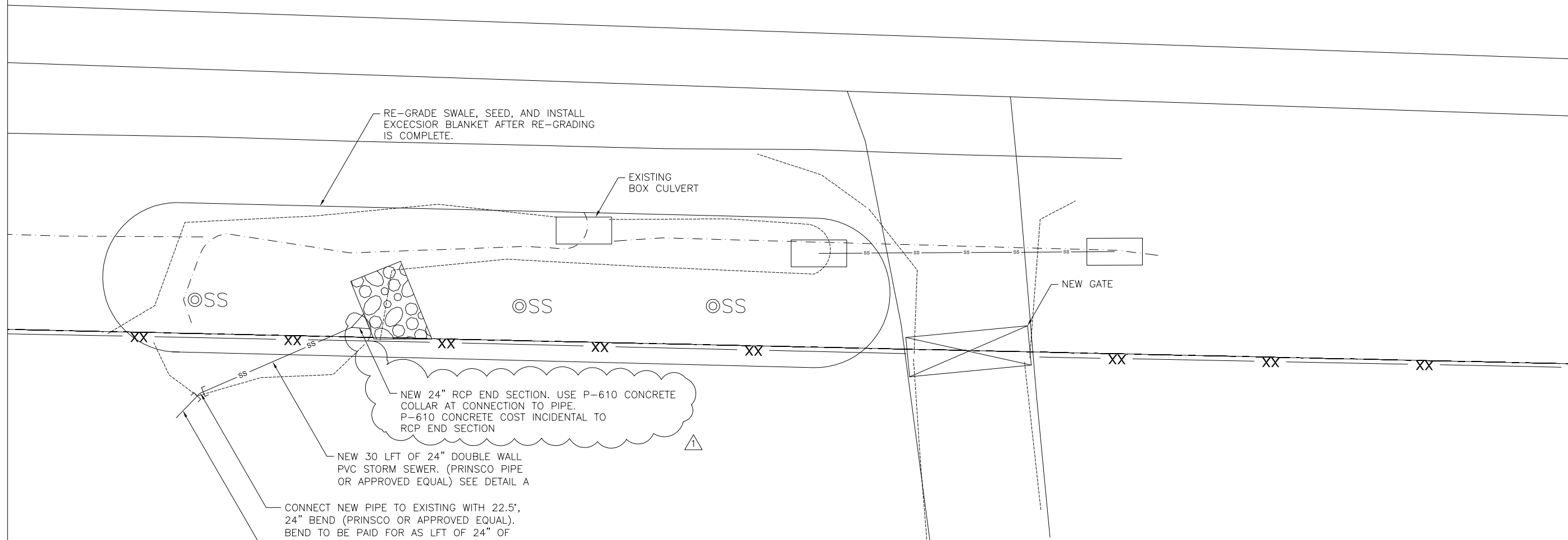
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**INSTALL 10' PERIMETER FENCE PHASE 4**  
**REGRADE SWALE**

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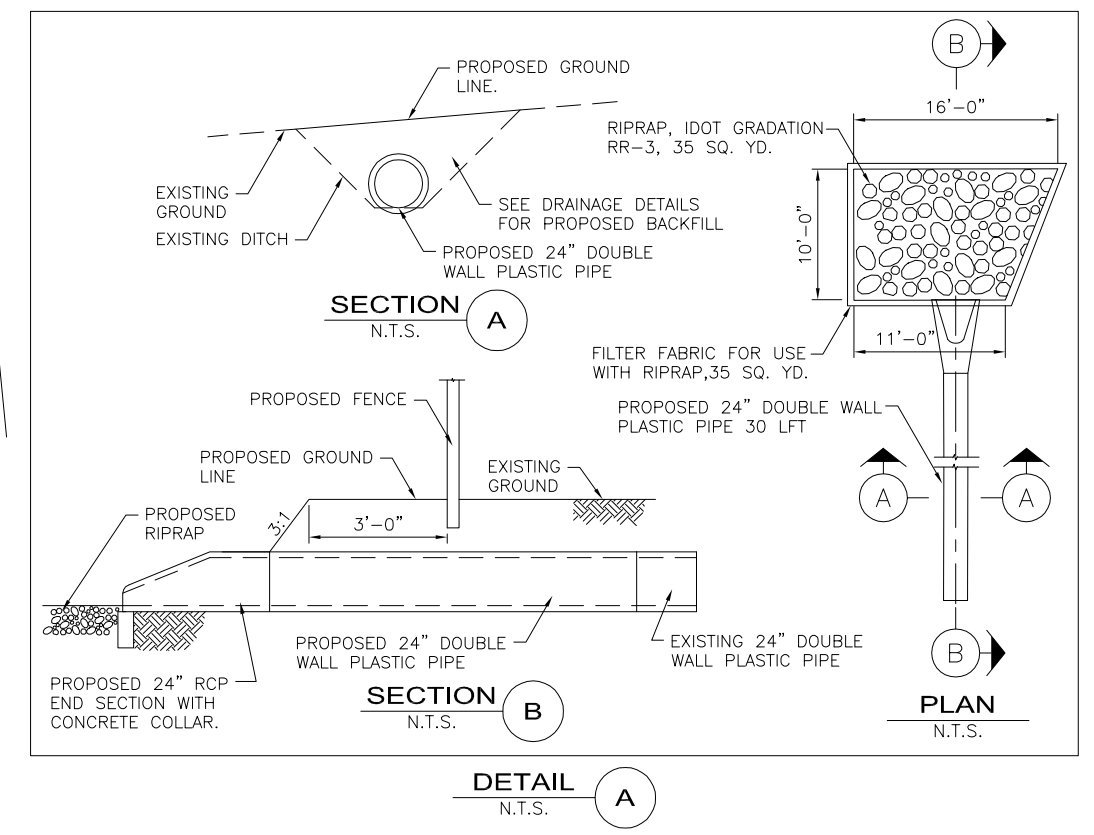
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- NOTES:**
- SWALE SHALL BE RE-GRADED TO PROMOTE POSITIVE DRAINAGE.
  - CONTRACTOR SHALL REMOVE EXISTING RIP-RAP PRIOR TO REGRADING SWALE. RIP-RAP SHALL BE DISPOSED OF ON AIRPORT PROPERTY. COST OF REMOVAL OF RIP-RAP IS INCIDENTAL TO REGRADING OF SWALE.
  - CONTRACTOR MAY USE THE TOP 12"-18" OF THE EXISTING BERM ADJACENT TO THE 24" PLASTIC PIPE FOR TOP OF BACKFILL OF PLASTIC PIPE.
  - CONTRACTOR SHALL PLACE ALL PROPER WARNING SIGNS AND BARRICADES WHEN WORKING WITHIN THE RIGHT OF WAY OF ILLINOIS STATE ROUTE 9. COST OF BARRICADES AND WARNING SIGNS INCIDENTAL SHALL BE TO THE PROJECT.

**LEGEND**

	NEW GATE
	NEW 10' CLASS E FENCE WITH (3) STRANDS OF BARBED WIRE.
	NEW RCP END SECTION

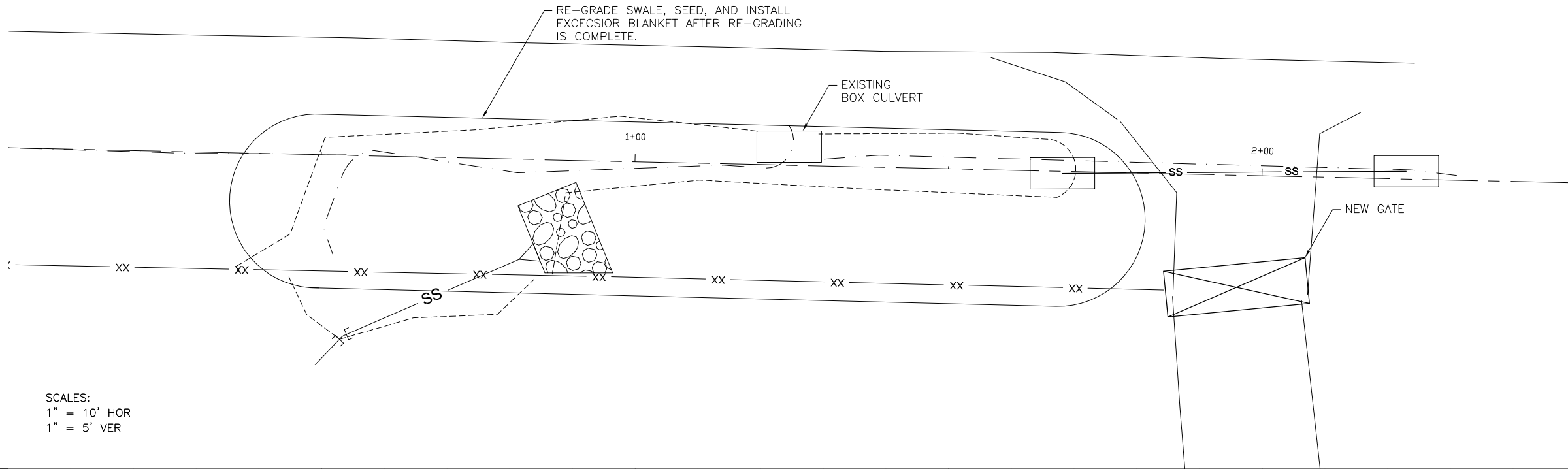
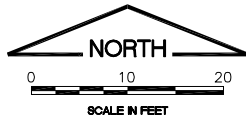


**DETAIL A**  
N.T.S.

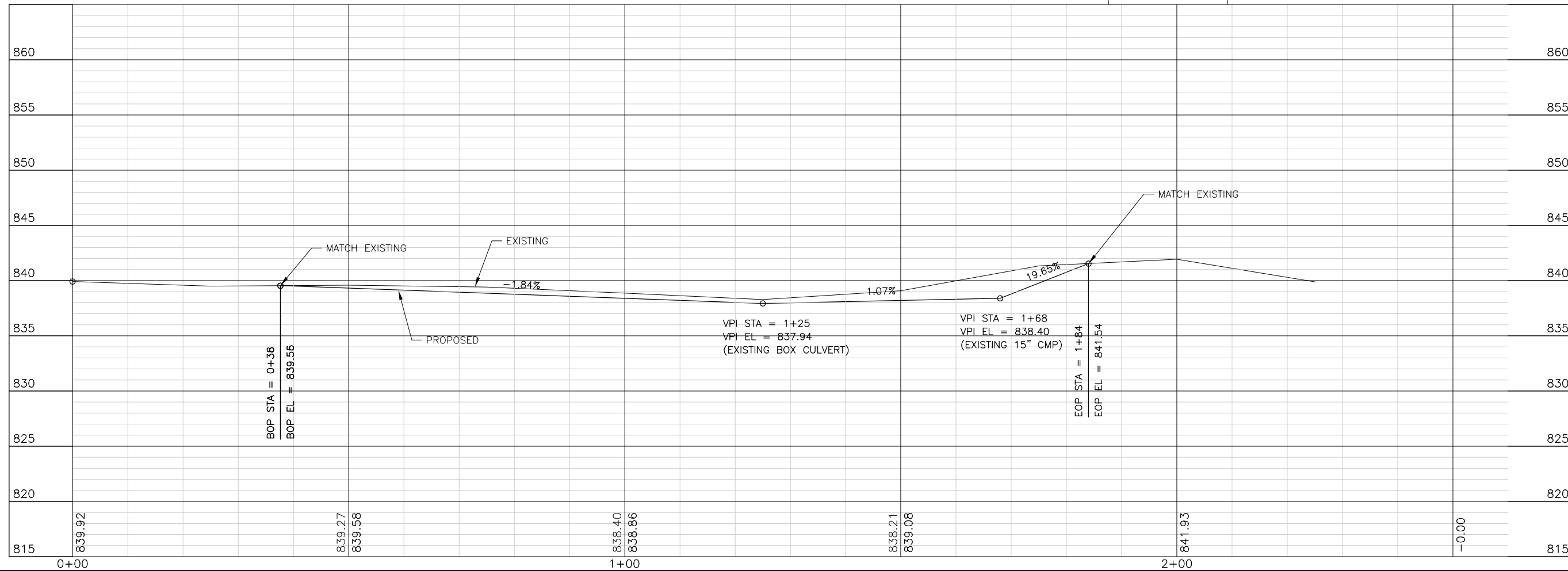
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0 1 2  
 THIS BAR IS EQUAL TO 2"  
 AT FULL SCALE (34X22).



SCALES:  
 1" = 10' HOR  
 1" = 5' VER



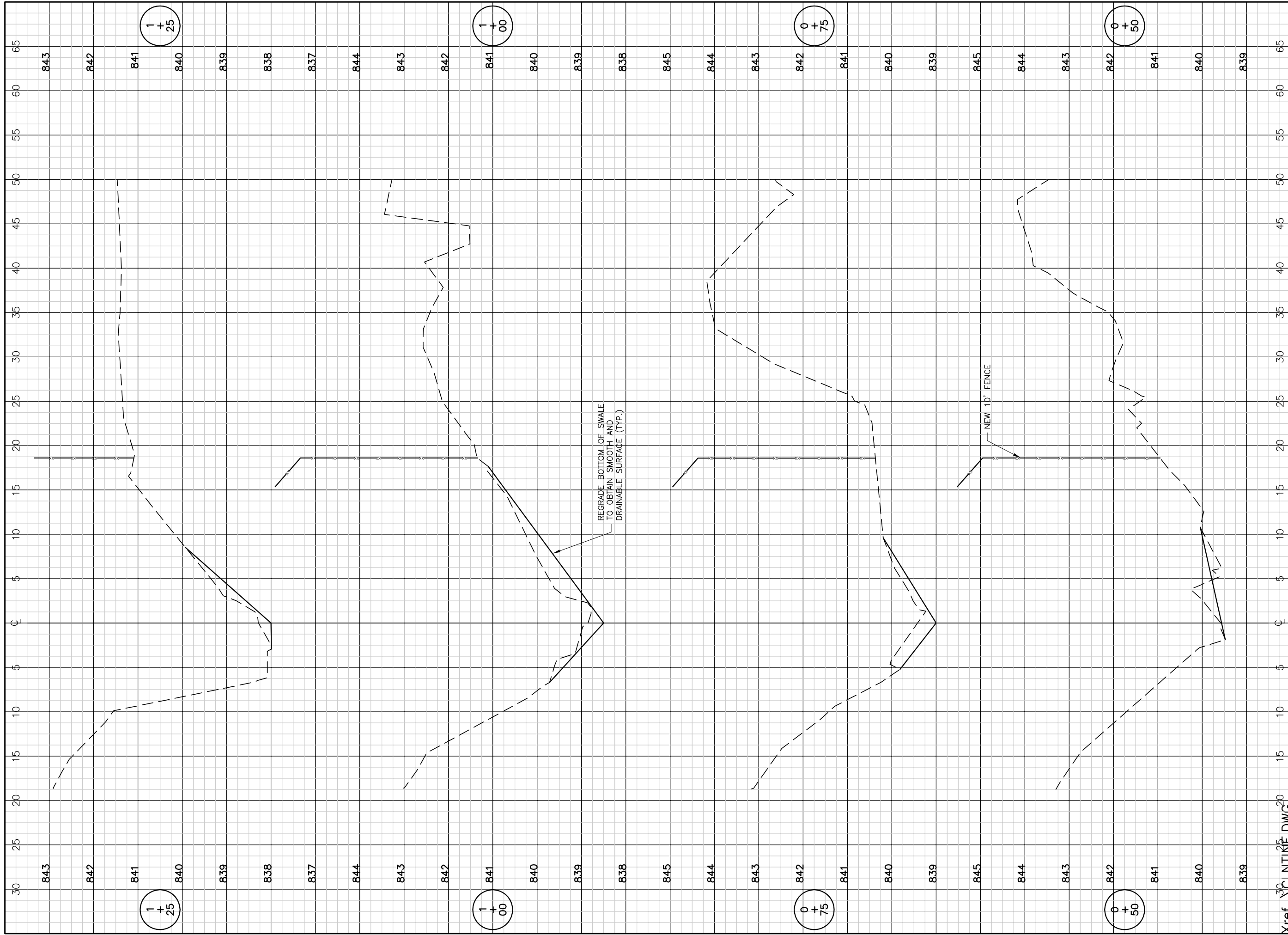
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**INSTALL 10' PERIMETER FENCE  
 REGRADE SWALE PROFILE**

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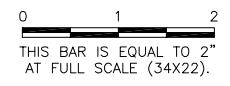




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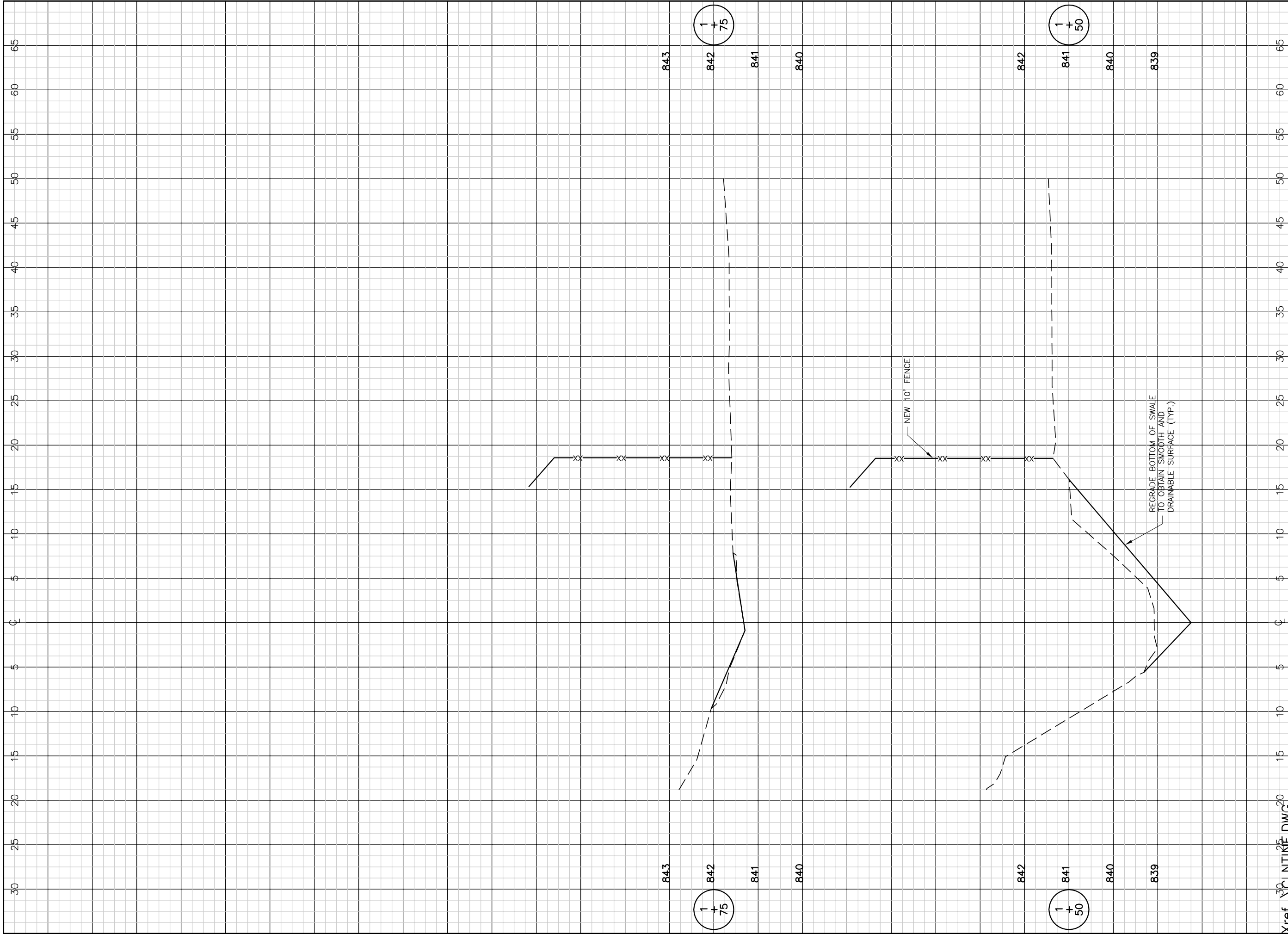
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**INSTALL 10' PERIMETER FENCE  
 REGRADE SWALE CROSS SECTIONS 1**

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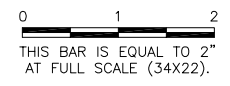
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**BLOOMINGTON-NORMAL AIRPORT AUTHORITY  
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**INSTALL 10' PERIMETER FENCE  
 REGRADE SWALE CROSS SECTIONS 2**

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