

ITEM 13A
04-27-12 LETTING

TOTAL SHEETS: 23
BLO68

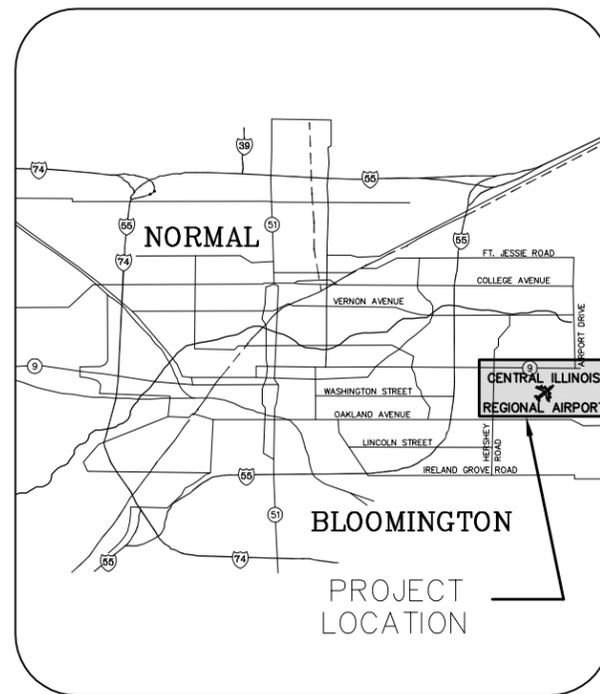
CONSTRUCTION PLANS FOR CENTRAL ILLINOIS REGIONAL AIRPORT

BLOOMINGTON-NORMAL AIRPORT AUTHORITY
BLOOMINGTON, IL

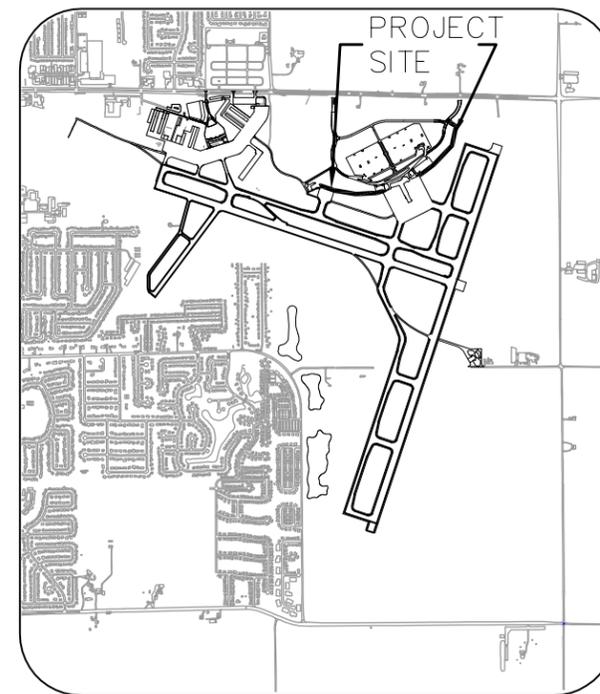
IL PROJ NO. BMI-4172
AIP PROJECT NO. 3-17-0006-XX

INSTALL 10' PERIMETER FENCE PHASE 5

MARCH 2, 2012



LOCATION MAP



SITE PLAN

811 Know what's below. Call before you dig. **J.U.L.I.E. JOINT UTILITY LOCATING INFORMATION FOR EXCAVATORS**
www.illinoiscall.com

THE LOCATION, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ON THE PLANS IS NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ACTUAL LOCATIONS OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES, PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY UTILITY COMPANIES OF HIS OPERATIONAL PLANS, OBTAIN FROM RESPECTIVE UTILITY COMPANIES DETAILED INFORMATION AND ASSISTANCE RELATIVE TO THE LOCATION OF THEIR FACILITIES AND THE WORKING SCHEDULE OF THE COMPANIES FOR REMOVAL OR ADJUSTMENT WHERE REQUIRED. IN THE EVENT AN UNEXPECTED UTILITY INTERFERENCE IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY COMPANY OF JURISDICTION AND THE ONE-CALL NOTICE SYSTEM. THE ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED ANY SUCH UTILITY OR SERVICES SHALL BE RESTORED TO SERVICE AT ONCE AND PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT.

CALL J.U.L.I.E. FOR UTILITY INFORMATION AT 811.

CALL J.U.L.I.E. BEFORE EXCAVATING
1-800-892-0123

TOWNSHIP: 23 NORTH
RANGE: 3 EAST OF 4TH P.M.
SECTION: 6 & 7
COUNTY: McLEAN
CIVIL TOWNSHIP: BLOOMINGTON CITY AND OLDTOWN

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

APPROVED *[Signature]*

DATE 3/5/12

3/2/12

JASON E. FRANK
LICENSED PROFESSIONAL ENGINEER
062-054100
STATE OF ILLINOIS

[Signature]
EXP. 11/30/13

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SUBMITTED BY *[Signature]*

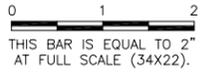
DATE 3/2/12

CMT JOB NUMBER: 100850101

K:\Bloomington\1008501\Draw\Sheets\PHASE 5
FILE: COVER.dwg
UPDATE BY: Jason Frank
PLOT DATE: 3/14/2012 3:38 PM

BLO68

REVISIONS		
NUMBER	BY	DATE



SUMMARY OF QUANTITIES

ITEM NO.	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY
BASE BID			
AR150510	ENGINEER'S FIELD OFFICE	L.S.	1
AR152440	BORROW EXCAVATION	CY	25
AR156513	SEPARATION FABRIC	SY	71
AR156543	RIPRAP GRADATION NO 3	SY	71
AR162510	CLASS E FENCE 10'	L.F.	3360
AR162604	CLASS E GATE - 4'	EACH	2
AR162724	ELECTRIC GATE - 24'	EACH	2
AR162900	REMOVE CLASS E FENCE	L.F.	3360
AR162905	REMOVE GATE	EACH	3
AR162908	REMOVE ELECTRIC GATE	EACH	2
AR701524	24" RCP, CLASS IV	LF	40
AR752424	Precast Reinforced Conc. FES 24"	EACH	3
AR752524	Grating for Conc. FES 24"	EACH	2
AR901510	SEEDING	ACRE	1.5
AR908510	MULCHING	ACRE	1.5
AR908520	EXCELSIOR BLANKET	S.Y.	1000
ALTERNATE #1 - VINYL COATING OF CLASS E FENCE AND GATES			
AS162010	VINYL COATING, 10' CLASS E FENCE	L.F.	3360
AS162104	VINYL COATING, 4' CLASS E GATE	EACH	2
AS162424	VINYL COATING, 24' ELECTRIC GATE	EACH	2

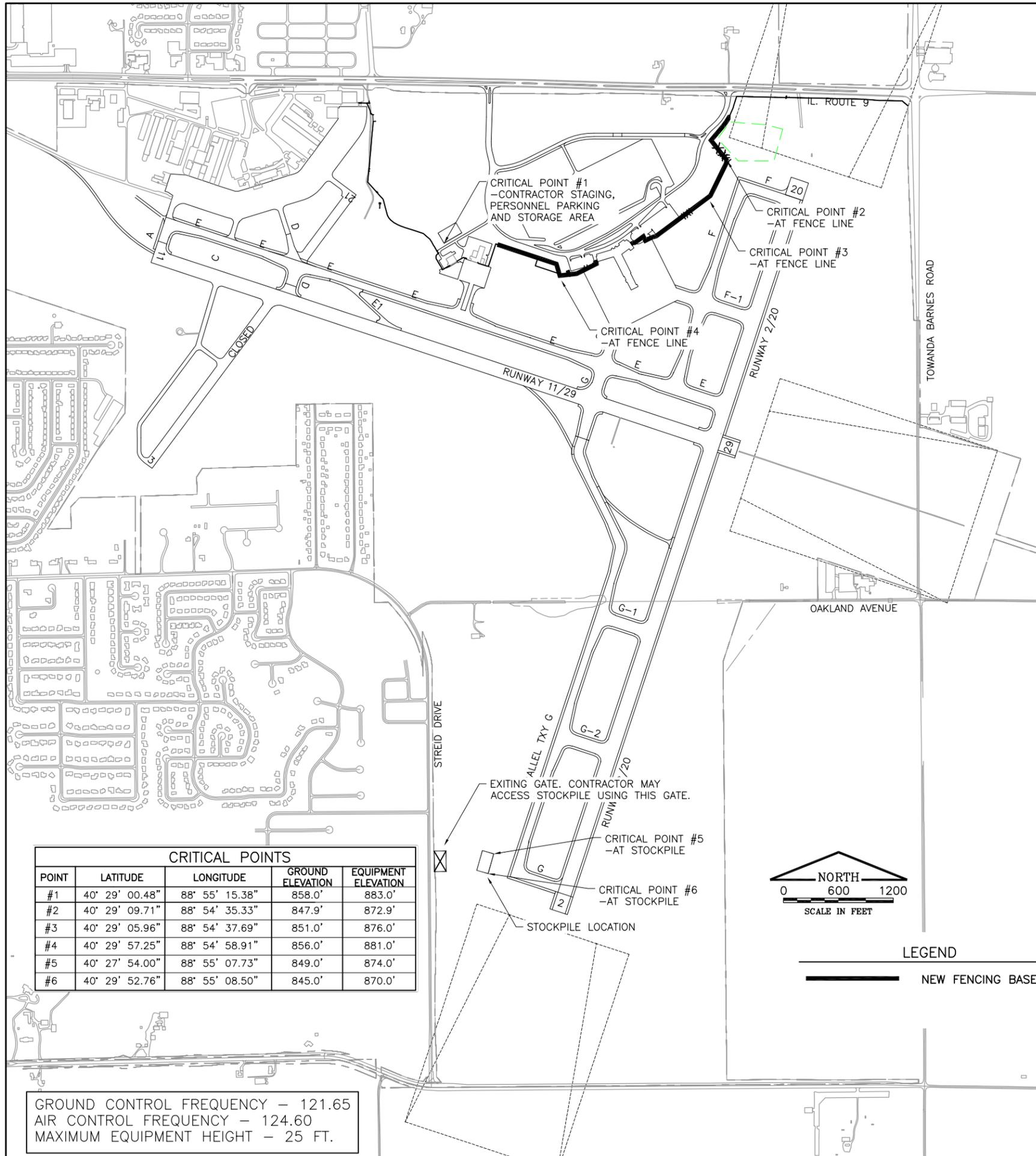
INDEX TO SHEETS	
Sheet Number	Sheet Title
1	COVER SHEET
2	INDEX-SUMMARY
3	SITE PLAN
4	CONSTRUCTION ACTIVITY PLAN 1
5	CONSTRUCTION ACTIVITY PLAN 2
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**BLOOMINGTON-NORMAL AIRPORT AUTHORITY
 CENTRAL ILLINOIS REGIONAL AIRPORT
 BLOOMINGTON, IL**

**INSTALL 10' PERIMETER FENCE PHASE 5
 INDEX TO SHEETS & SUMMARY OF QUANTITIES**



DESIGN BY:	JEF
DRAWN BY:	CMT
CHECKED BY:	
APPROVED BY:	
DATE:	MARCH 2, 2012
JOB No:	100850101
IL PROJ NO. BMI-4172 AIP PROJECT NO. 3-17-0006-XX	
SHEET	2 OF 23 SHEETS



CRITICAL POINTS				
POINT	LATITUDE	LONGITUDE	GROUND ELEVATION	EQUIPMENT ELEVATION
#1	40° 29' 00.48"	88° 55' 15.38"	858.0'	883.0'
#2	40° 29' 09.71"	88° 54' 35.33"	847.9'	872.9'
#3	40° 29' 05.96"	88° 54' 37.69"	851.0'	876.0'
#4	40° 29' 57.25"	88° 54' 58.91"	856.0'	881.0'
#5	40° 27' 54.00"	88° 55' 07.73"	849.0'	874.0'
#6	40° 29' 52.76"	88° 55' 08.50"	845.0'	870.0'

GROUND CONTROL FREQUENCY - 121.65
 AIR CONTROL FREQUENCY - 124.60
 MAXIMUM EQUIPMENT HEIGHT - 25 FT.



LEGEND
 ——— NEW FENCING BASE BID

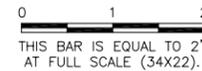
GENERAL NOTES

- ALL RUNWAYS, TAXIWAYS, AND APRONS SHALL BE KEPT OPEN TO AIRCRAFT TRAFFIC DURING CONSTRUCTION EXCEPT AS NOTED IN THE CONSTRUCTION ACTIVITY PLAN.
- THE CONTRACTOR SHALL REMAIN WITHIN 50' OF THE EXISTING FENCE LINE AT ALL TIMES DURING CONSTRUCTION. AT NO TIME SHOULD THE CONTRACTOR OR HIS PERSONNEL ACCESS ANY ACTIVE AIRFIELD PAVEMENTS. PRIOR TO BEGINNING CONSTRUCTION THE CONTRACTOR'S SUPERINTENDENT SHALL BE REQUIRED TO ATTEND TRAINING COURSES AT THE AIRPORT TO BECOME AWARE OF POLICIES AND PROCEDURES ASSOCIATED WITH WORKING WITHIN THE AIRPORT SECURITY FENCE.
- WHEN CONFLICTS ARISE BETWEEN CONSTRUCTION ACTIVITIES AND AIRCRAFT OPERATIONS AND SAFETY, AIRCRAFT OPERATIONS AND SAFETY SHALL TAKE PRECEDENCE AND SHALL GOVERN. FINAL AUTHORITY IN THE APPROVAL OF CONSTRUCTION SEQUENCING LIES WITH THE AIRPORT DIRECTOR.
- THE CONTRACTOR WILL BE PERMITTED TO STORE EQUIPMENT AND MATERIALS AT THE LOCATIONS SHOWN. THE MAXIMUM HEIGHT OF EQUIPMENT, MATERIALS AND STOCKPILES SHALL BE 25' ABOVE GROUND ELEVATION.
- BROKEN CONCRETE SHALL BE DISPOSED OF BY THE CONTRACTOR OFF AIRPORT PROPERTY.
- VEHICLES AND EQUIPMENT SHALL NOT BE ALLOWED WITHIN AREAS 95' FROM THE CENTERLINE OF ACTIVE TAXIWAYS OR 250' FROM THE CENTERLINE OF ACTIVE RUNWAYS.
- ALL CONTRACTOR VEHICLE AND EQUIPMENT SHALL BE PROPERLY MARKED AND HAVE 3'x3' INTERNATIONAL ORANGE AND WHITE CHECKED FLAG WHILE WORKING ON OR ADJACENT TO AIRFIELD.
- ALL PAVEMENTS, DRIVES, OR ANY OTHER AREAS UTILIZED BY THE CONTRACTOR FOR HAUL ROADS OR STORAGE AREAS SHALL BE MAINTAINED AND REPAIRED IN KIND BY THE CONTRACTOR TO THE SATISFACTION OF THE AIRPORT. NO ADDITIONAL COMPENSATION SHALL BE MADE TO THE CONTRACTOR FOR THIS WORK.
- EXISTING TURF AREAS DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY HIM AT HIS EXPENSE TO THE SATISFACTION OF THE AIRPORT.
- THE CONTRACTOR SHALL CONTINUOUSLY CLEAN ALL CONSTRUCTION AREAS WHICH WILL BE OPENED TO AIR TRAFFIC.
- IT WILL BE NECESSARY FOR THE CONTRACTOR TO MAKE HIS OWN FIELD INVESTIGATION TO DETERMINE THE EXACT LOCATION OF THE UNDERGROUND UTILITIES AT CRITICAL POINTS SO AS TO AVOID ANY DAMAGE. ANY UTILITY, INCLUDING AIRFIELD ELECTRICAL CABLE AND LIGHTS, DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED BY HIM AT HIS OWN EXPENSE IN A MANNER WHICH IS SATISFACTORY TO THE ENGINEER, THE AIRPORT AND TO THE OWNER OF THE UTILITY. ANY REPAIRS THAT MUST BE MADE BY THE OWNER OF THE UTILITY SHALL HAVE THE COST REIMBURSED TO THE UTILITY BY THE CONTRACTOR. AIRFIELD LIGHTING CABLES DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED BY A QUALIFIED ELECTRICIAN WITH THE COSTS TO BE BORNE BY THE CONTRACTOR.
- THE CONTRACTOR SHALL MAINTAIN A SECURE AIRFIELD PERIMETER WITH EXISTING, TEMPORARY, RELOCATED OR PERMANENT FENCE THROUGHOUT THE DURATION OF THE PROJECT. COST OF ERECTION AND REMOVAL OF TEMPORARY FENCE WILL BE INCIDENTAL TO CONTRACT.
- CONTRACTOR'S ACCESS SHALL BE AS FOLLOWS:
 - THE CONTRACTOR SHALL COMPLETE A TEN YEAR CRIMINAL AND EMPLOYMENT BACKGROUND CHECK AND A SECURITY FORM FOR THE SUPERINTENDENTS AND SUPERVISING FOREMEN HE PROPOSES TO USE ON THE AIRPORT. THESE FORMS SHALL BE COMPLETED PRIOR TO THAT PERSON BEING ALLOWED ON THE AIRFIELD. A LIST OF PERSONNEL AUTHORIZED TO WORK ON THE AIRFIELD SHALL BE PROVIDED TO THE RESIDENT ENGINEER BY THE CONTRACTOR.
 - THE CONTRACTOR SHALL USE AN EXISTING GATE(S) FOR ACCESS TO THE AIRFIELD. THE CONTRACTOR SHALL INSTALL AND MAINTAIN A HEAVY-DUTY PADLOCK ON THE ACCESS GATE. HE SHALL PROVIDE KEYS FOR THIS PADLOCK TO THE RESIDENT ENGINEER AND BNAA MAINTENANCE SUPERVISOR. NO ADDITIONAL KEYS ARE TO BE DISTRIBUTED UNLESS AUTHORIZED BY THE RESIDENT ENGINEER.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING THE ACCESS GATE(S) CLOSED DURING WORK HOURS. IF THE CONTRACTOR CHOOSES TO LEAVE THE GATE(S) OPEN, THEN HE SHALL POST A COMPETENT SECURITY GUARD TO PREVENT UNAUTHORIZED ENTRIES. THE CONTRACTOR SHALL REPLACE ANY UNSATISFACTORY SECURITY GUARDS IF SO DIRECTED.
 - THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND TEMPORARY EASEMENTS FOR THE ACCESS ROAD(S) SHOWN AND SHALL COMPLY WITH ALL TRAFFIC CONTROL SIGNAGE REQUIRED BY THE CITY, COUNTY, TOWNSHIP, OR I.D.O.T..
 - DURING ADVERSE WEATHER THE CONTRACTOR SHALL MAINTAIN ACCESS TO THE WORK AT NO ADDITIONAL COST TO THE CONTRACT. NO EXTENSION OF CONTRACT TIME WILL BE CONSIDERED FOR DELAYS DUE TO LACK OF ADEQUATE ACCESS TO THE WORK SITE.
 - THE CONTRACTOR WILL CLOSE AND LOCK THE ACCESS GATE(S) UPON LEAVING THE SITE.
 - ALL COSTS RELATING TO CONTRACTOR'S ACCESS AND SECURITY SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
 - THE CONTRACTOR SHALL STORE EQUIPMENT AND MATERIALS IN SUCH A WAY AS NOT TO VIOLATE AIRSPACE SURFACES, OR RUNWAY AND TAXIWAY OBJECT FREE OR SAFETY AREAS.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING ACTIVE AIRFIELD PAVEMENTS WHICH ARE CROSSED BY HIS VEHICLES ACCESSING THE WORK OR DEPARTING THE WORK IMMEDIATELY FOLLOWING SAID VEHICLE.

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 PLOT DATE: 3/14/2012 3:38 PM
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REVISIONS		
NUMBER	BY	DATE



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

INSTALL 10' PERIMETER FENCE PHASE 5
 SITE PLAN

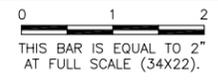
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APPROVED BY:	JEF
DATE:	MARCH 2, 2012
JOB No:	100850101
IL PROJ NO. BMI-4172 AIP PROJECT NO. 3-17-0006-XX	
SHEET 3 OF 23 SHEETS	

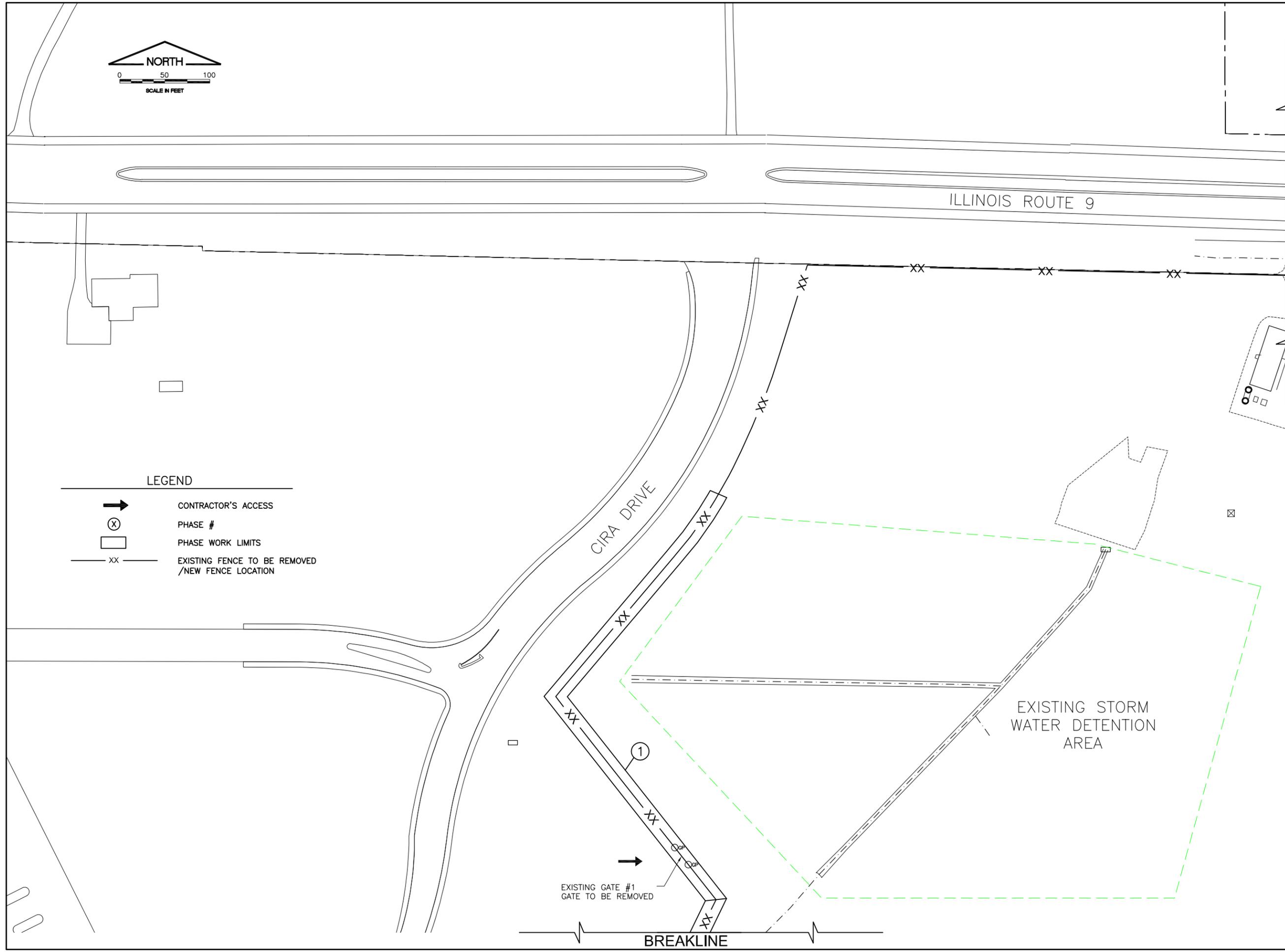


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NUMBER	BY	DATE



BREAKLINE



LEGEND

-  CONTRACTOR'S ACCESS
-  PHASE #
-  PHASE WORK LIMITS
-  EXISTING FENCE TO BE REMOVED /NEW FENCE LOCATION

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

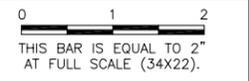
**INSTALL 10' PERIMETER FENCE PHASE 5
 CONSTRUCTION ACTIVITY PLAN 1**

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SHEET 4 OF 23 SHEETS	

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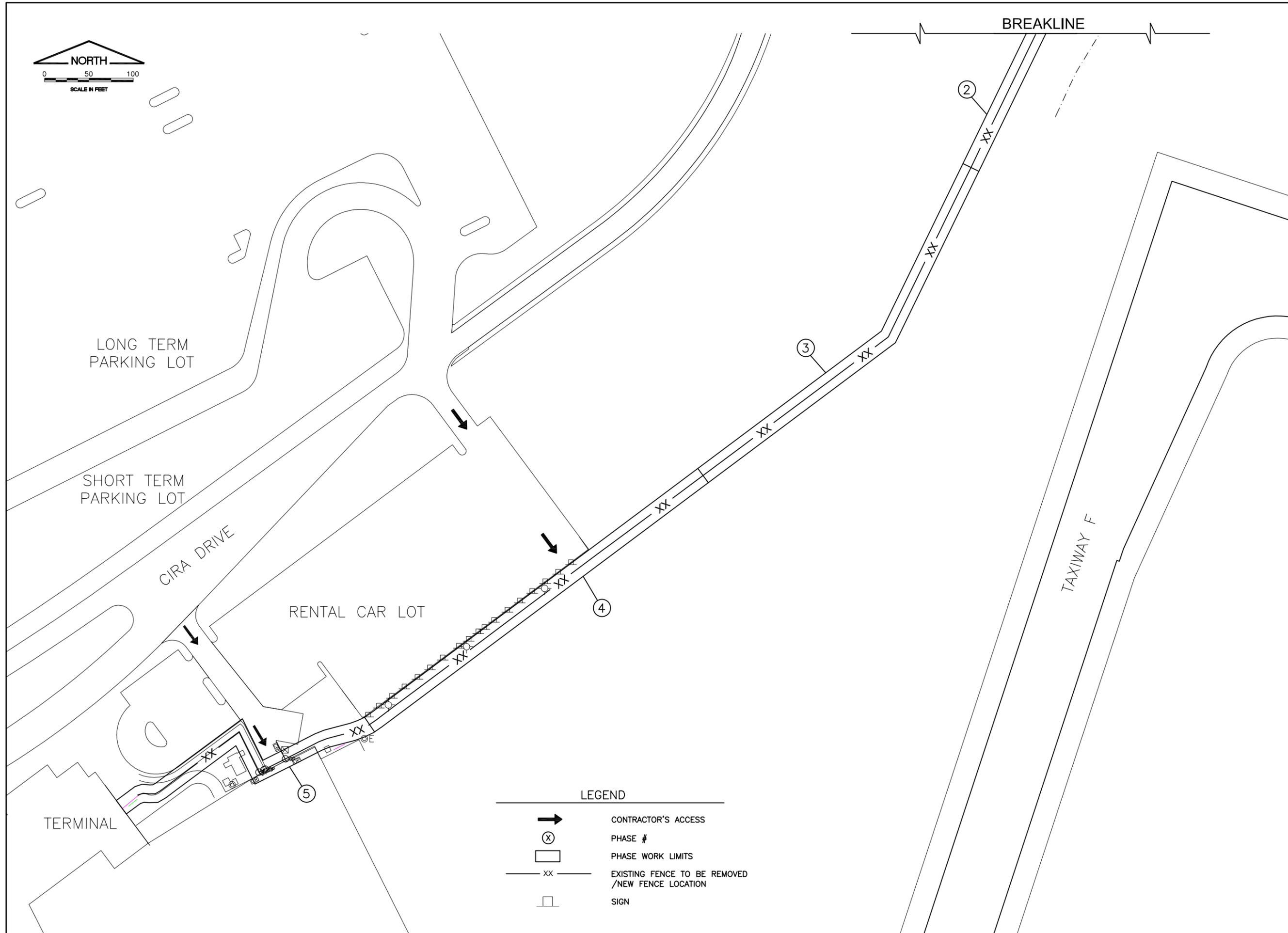


**BLOOMINGTON-NORMAL AIRPORT AUTHORITY
 CENTRAL ILLINOIS REGIONAL AIRPORT
 BLOOMINGTON, IL**

**INSTALL 10' PERIMETER FENCE PHASE 5
 CONSTRUCTION ACTIVITY PLAN 2**

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SHEET 5 OF 23 SHEETS	



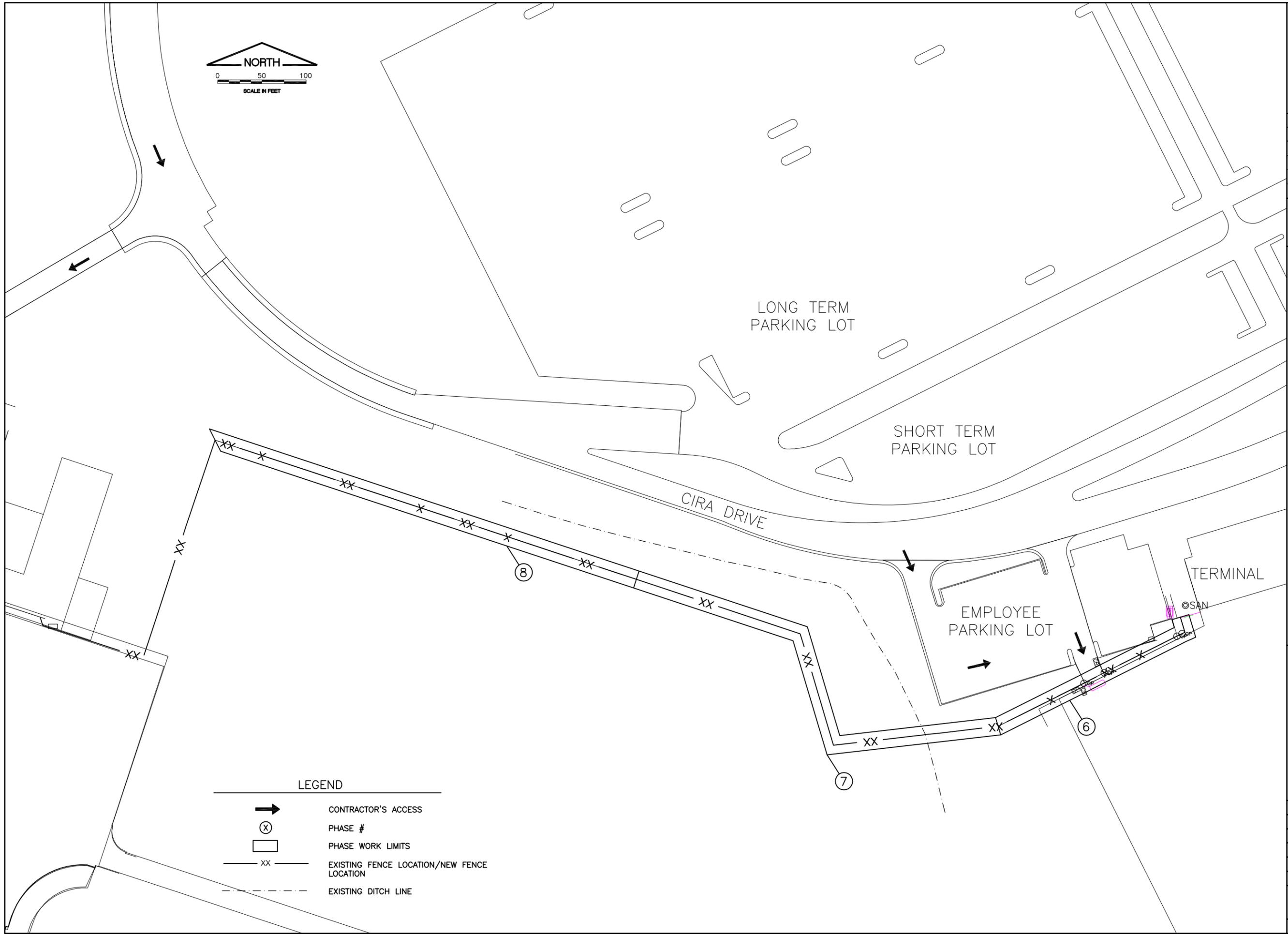
LEGEND

	CONTRACTOR'S ACCESS
	PHASE #
	PHASE WORK LIMITS
	EXISTING FENCE TO BE REMOVED /NEW FENCE LOCATION
	SIGN

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REVISIONS		
NUMBER	BY	DATE

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



LEGEND

	CONTRACTOR'S ACCESS
	PHASE #
	PHASE WORK LIMITS
	EXISTING FENCE LOCATION/NEW FENCE LOCATION
	EXISTING DITCH LINE

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

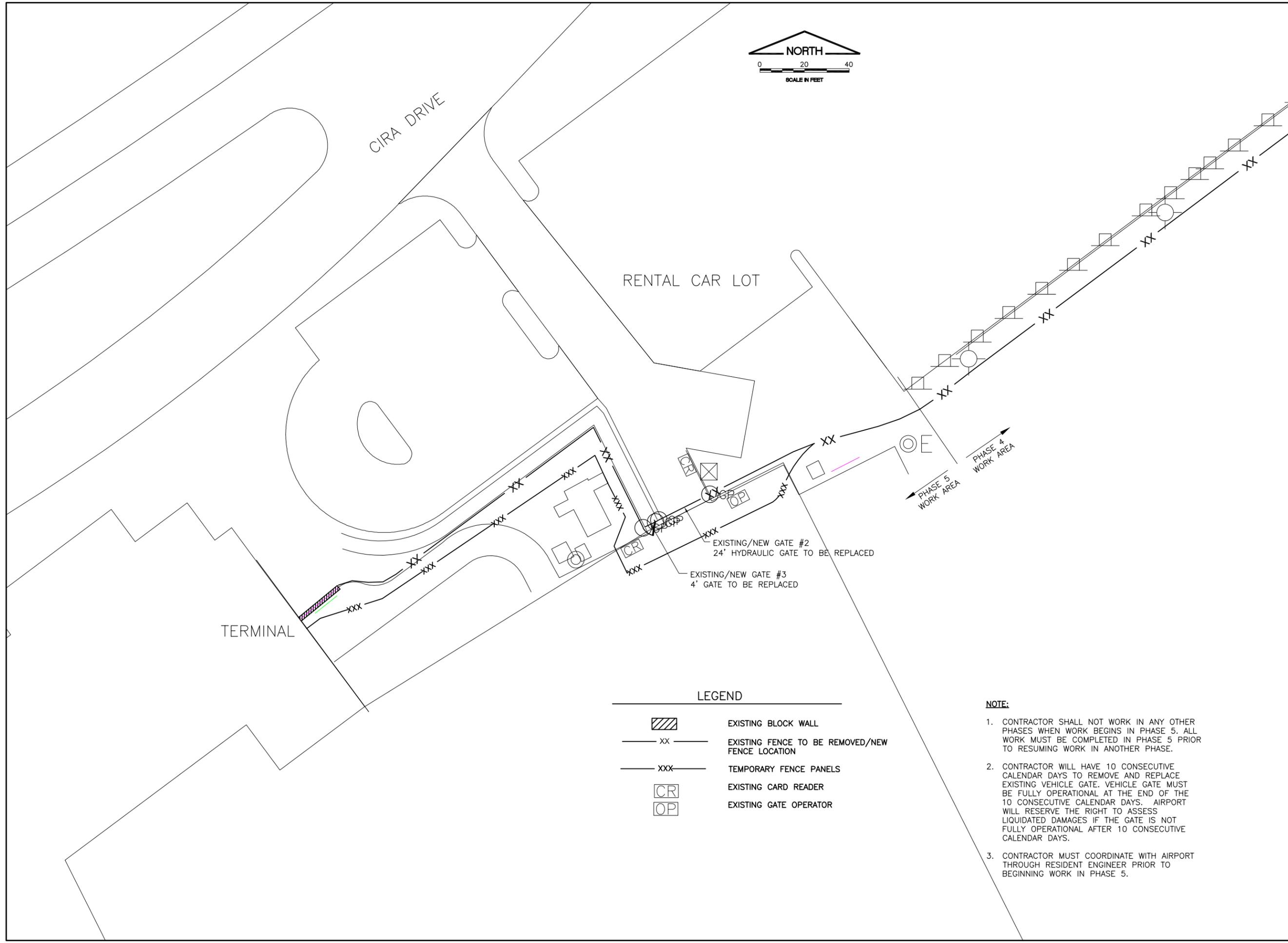
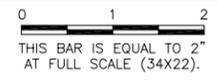
**INSTALL 10' PERIMETER FENCE PHASE 5
 CONSTRUCTION ACTIVITY PLAN 3**

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SHEET 6 OF 23 SHEETS	

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REVISIONS		
NUMBER	BY	DATE



LEGEND

- EXISTING BLOCK WALL
- EXISTING FENCE TO BE REMOVED/NEW FENCE LOCATION
- TEMPORARY FENCE PANELS
- EXISTING CARD READER
- EXISTING GATE OPERATOR

NOTE:

1. CONTRACTOR SHALL NOT WORK IN ANY OTHER PHASES WHEN WORK BEGINS IN PHASE 5. ALL WORK MUST BE COMPLETED IN PHASE 5 PRIOR TO RESUMING WORK IN ANOTHER PHASE.
2. CONTRACTOR WILL HAVE 10 CONSECUTIVE CALENDAR DAYS TO REMOVE AND REPLACE EXISTING VEHICLE GATE. VEHICLE GATE MUST BE FULLY OPERATIONAL AT THE END OF THE 10 CONSECUTIVE CALENDAR DAYS. AIRPORT WILL RESERVE THE RIGHT TO ASSESS LIQUIDATED DAMAGES IF THE GATE IS NOT FULLY OPERATIONAL AFTER 10 CONSECUTIVE CALENDAR DAYS.
3. CONTRACTOR MUST COORDINATE WITH AIRPORT THROUGH RESIDENT ENGINEER PRIOR TO BEGINNING WORK IN PHASE 5.

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

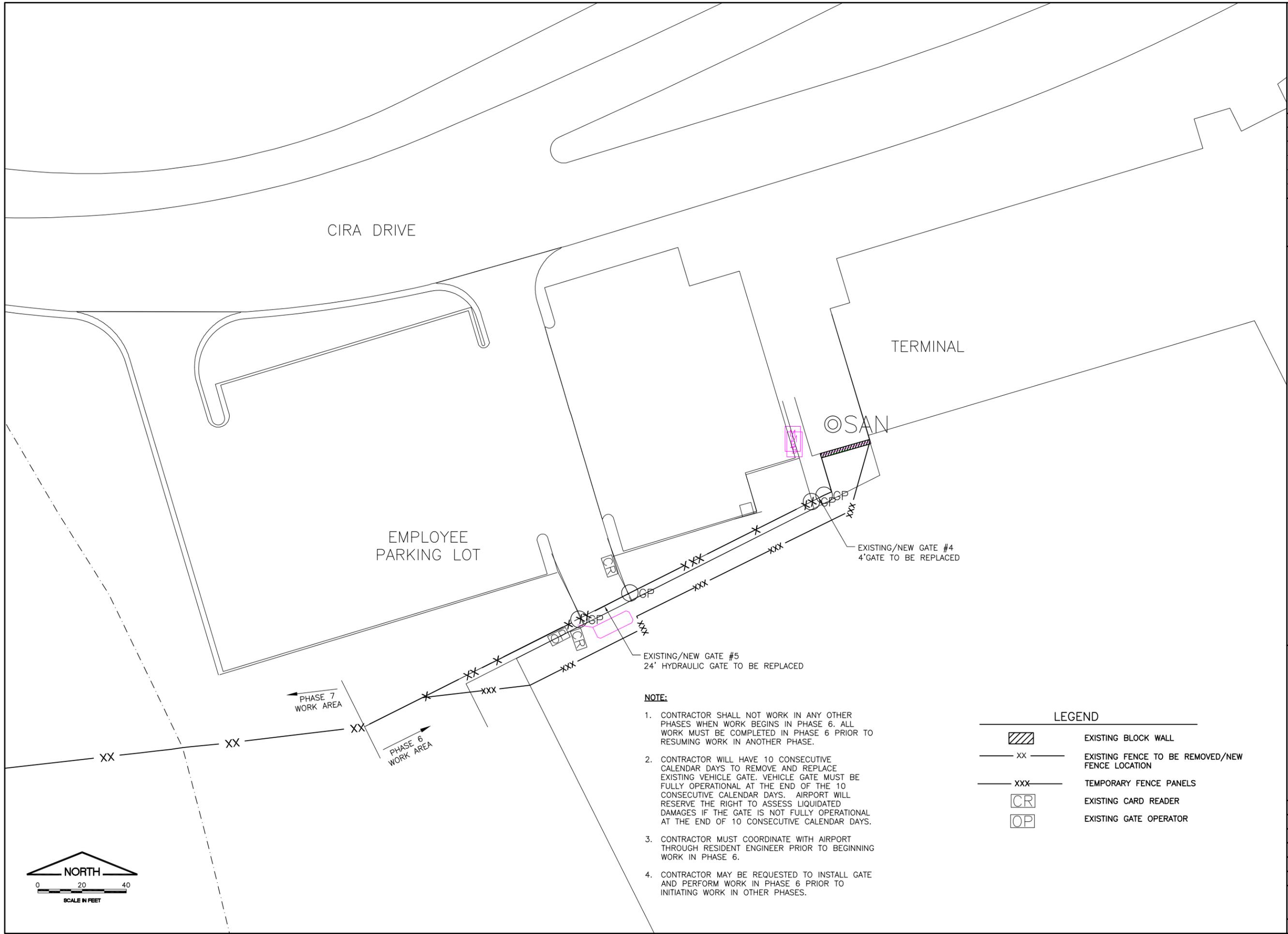
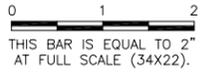
INSTALL 10' PERIMETER FENCE PHASE 5
CONSTRUCTION ACTIVITY PLAN 4

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IL PROJ NO. BMI-4172	
AIP PROJECT NO. 3-17-0006-XX	
SHEET 7 OF 23 SHEETS	

BLO68

REVISIONS		
NUMBER	BY	DATE



NOTE:

1. CONTRACTOR SHALL NOT WORK IN ANY OTHER PHASES WHEN WORK BEGINS IN PHASE 6. ALL WORK MUST BE COMPLETED IN PHASE 6 PRIOR TO RESUMING WORK IN ANOTHER PHASE.
2. CONTRACTOR WILL HAVE 10 CONSECUTIVE CALENDAR DAYS TO REMOVE AND REPLACE EXISTING VEHICLE GATE. VEHICLE GATE MUST BE FULLY OPERATIONAL AT THE END OF THE 10 CONSECUTIVE CALENDAR DAYS. AIRPORT WILL RESERVE THE RIGHT TO ASSESS LIQUIDATED DAMAGES IF THE GATE IS NOT FULLY OPERATIONAL AT THE END OF 10 CONSECUTIVE CALENDAR DAYS.
3. CONTRACTOR MUST COORDINATE WITH AIRPORT THROUGH RESIDENT ENGINEER PRIOR TO BEGINNING WORK IN PHASE 6.
4. CONTRACTOR MAY BE REQUESTED TO INSTALL GATE AND PERFORM WORK IN PHASE 6 PRIOR TO INITIATING WORK IN OTHER PHASES.

LEGEND

	EXISTING BLOCK WALL
	EXISTING FENCE TO BE REMOVED/NEW FENCE LOCATION
	TEMPORARY FENCE PANELS
	EXISTING CARD READER
	EXISTING GATE OPERATOR

BLOOMINGTON-NORMAL AIRPORT AUTHORITY
CENTRAL ILLINOIS REGIONAL AIRPORT
BLOOMINGTON, IL
INSTALL 10' PERIMETER FENCE PHASE 5
CONSTRUCTION ACTIVITY PLAN 5

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AIP PROJECT NO. 3-17-0006-XX	
SHEET 8 OF 23 SHEETS	



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 FILE: PROPIMP01.dwg
 UPDATE BY: Jason Frank
 PLOT DATE: 3/14/2012 3:39 PM
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REVISIONS		
NUMBER	BY	DATE

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

ILLINOIS ROUTE 9

CIRA DRIVE EAST

BEGIN NEW 10' FENCE

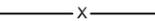
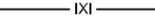
EXISTING FENCE TO REMAIN IN PLACE

EXISTING RIP RAP

EXISTING STORM WATER
 DETENTION AREA

EXISTING GATE #1 TO BE REMOVED

LEGEND

-  EXISTING AND/OR NEW GATE
SEE GATE PLAN AND SCHEDULE
-  EXISTING FENCE TO REMAIN
-  REMOVE EXISTING FENCE. INSTALL
NEW 10' CLASS E FENCE, WITH
BARB WIRE

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

**INSTALL 10' PERIMETER FENCE PHASE 5
 PROPOSED IMPROVEMENTS 1**

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SHEET 9 OF 23 SHEETS	

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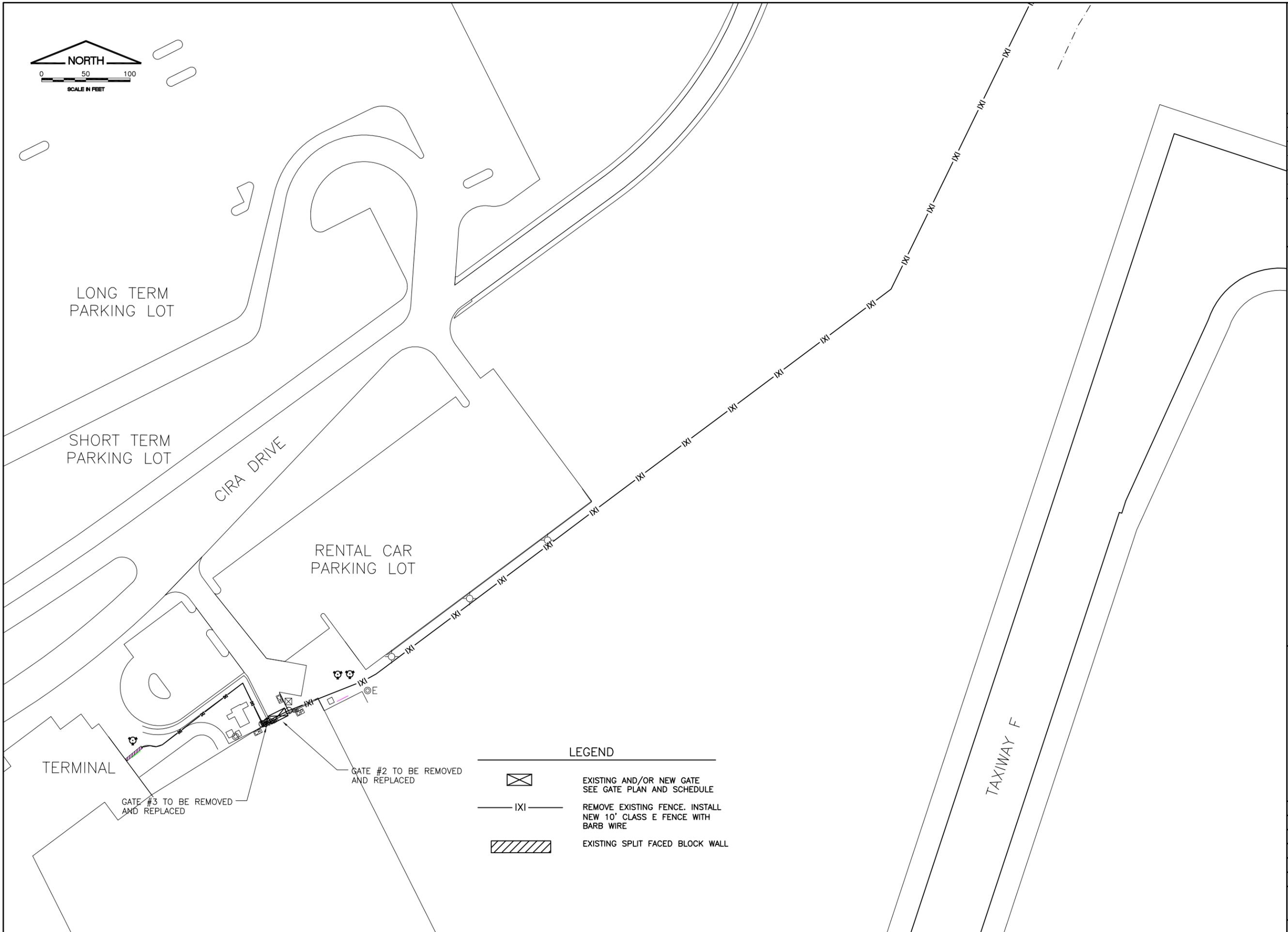
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 THIS BAR IS EQUAL TO 2"
 AT FULL SCALE (34X22).

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

**INSTALL 10' PERIMETER FENCE PHASE 5
 PROPOSED IMPROVEMENTS 2**

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SHEET 10 OF 23 SHEETS	



LEGEND

-  EXISTING AND/OR NEW GATE
SEE GATE PLAN AND SCHEDULE
-  REMOVE EXISTING FENCE. INSTALL
NEW 10' CLASS E FENCE WITH
BARB WIRE
-  EXISTING SPLIT FACED BLOCK WALL

BLO68

REVISIONS		
NUMBER	BY	DATE

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

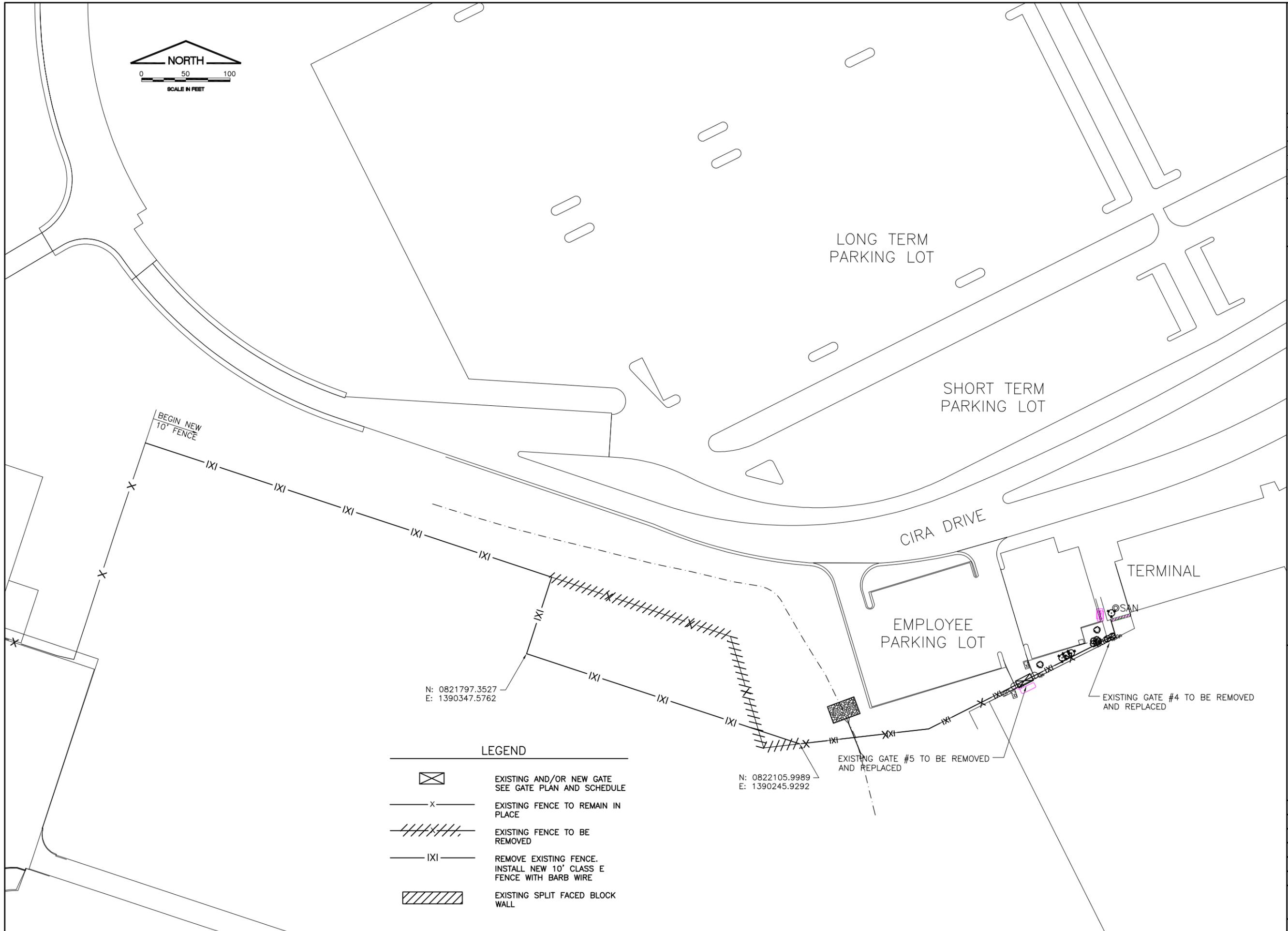
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 CENTRAL ILLINOIS REGIONAL AIRPORT
 BLOOMINGTON, IL**

**INSTALL 10' PERIMETER FENCE PHASE 5
 PROPOSED IMPROVEMENTS 3**

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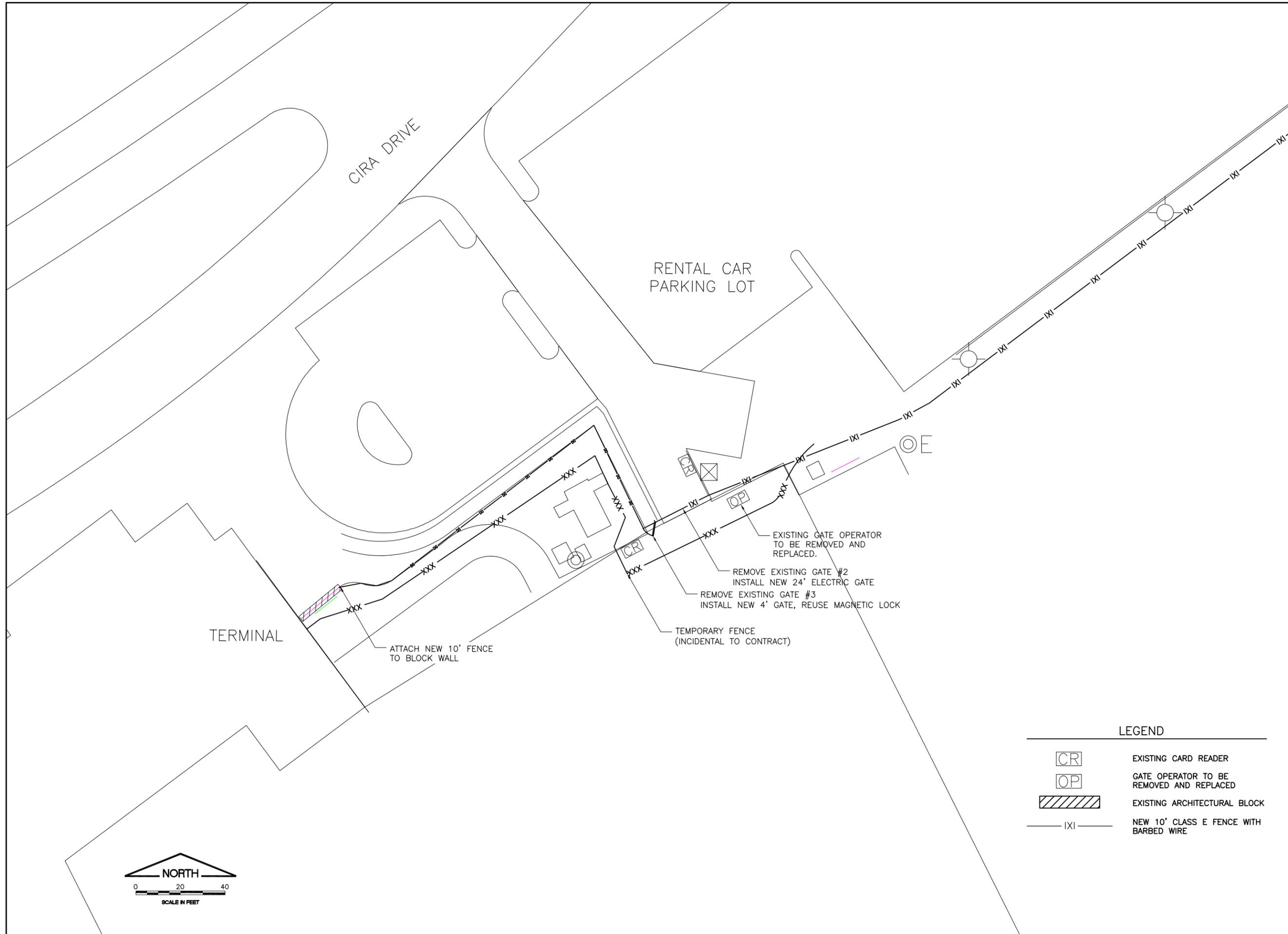
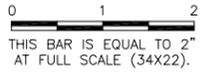


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APPROVED BY:	JEF
DATE:	MARCH 2, 2012
JOB No:	100850101
IL PROJ NO. BMI-4172 AIP PROJECT NO. 3-17-0006-XX	
SHEET 11 OF 23 SHEETS	



BLO68

REVISIONS		
NUMBER	BY	DATE



TERMINAL

CIRA DRIVE

RENTAL CAR
PARKING LOT



LEGEND

-  EXISTING CARD READER
-  GATE OPERATOR TO BE REMOVED AND REPLACED
-  EXISTING ARCHITECTURAL BLOCK
-  NEW 10' CLASS E FENCE WITH BARBED WIRE

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

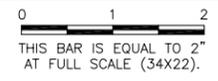
INSTALL 10' PERIMETER FENCE PHASE 5
PROPOSED IMPROVEMENTS 4

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AIP PROJECT NO. 3-17-0006-XX	
SHEET 12 OF 23 SHEETS	

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

**INSTALL 10' PERIMETER FENCE PHASE 5
 PROPOSED IMPROVEMENTS 5**

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IL PROJ NO. BMI-4172 AIP PROJECT NO. 3-17-0006-XX	
SHEET 13 OF 23 SHEETS	

LEGEND

- EXISTING CARD READER
- GATE OPERATOR TO BE REMOVED AND REPLACED
- EXISTING ARCHITECTURAL BLOCK
- NEW 10' CLASS E FENCE WITH BARBED WIRE

CIRA DRIVE

TERMINAL

EMPLOYEE PARKING LOT

OSAN

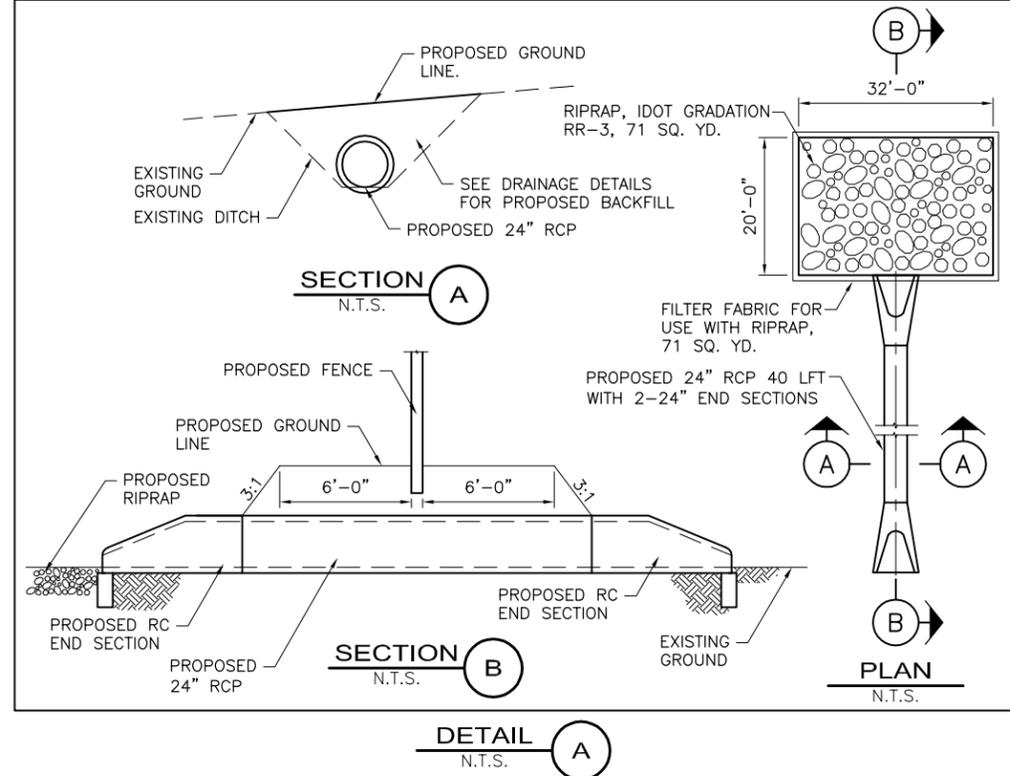
REMOVE EXISTING GATE #5
INSTALL NEW 24' ELECTRIC GATE

ATTACH NEW 10' FENCE TO BLOCK WALL

REMOVE EXISTING GATE #4. INSTALL NEW 4' GATE, REUSE MAGNETIC LOCK

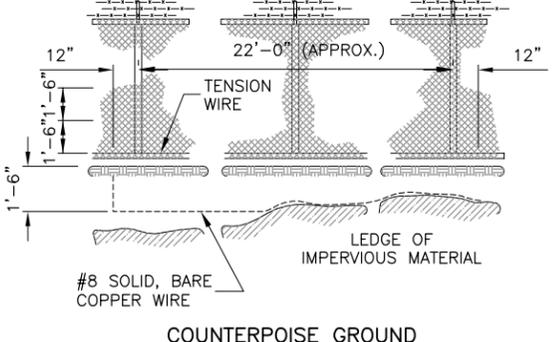
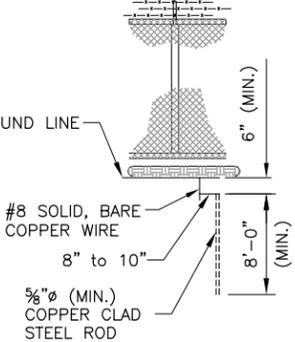
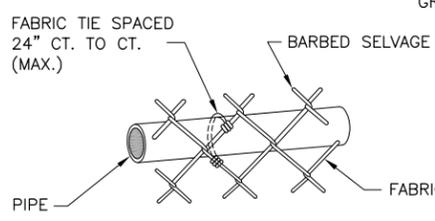
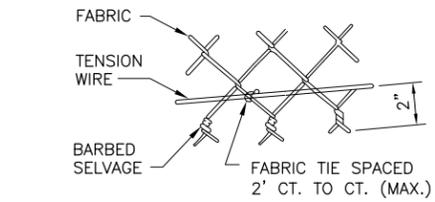
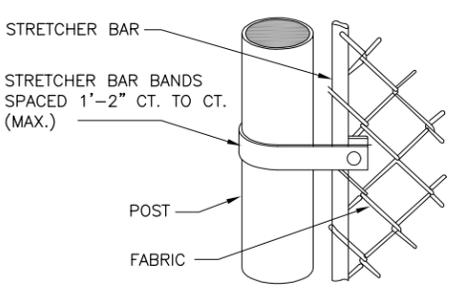
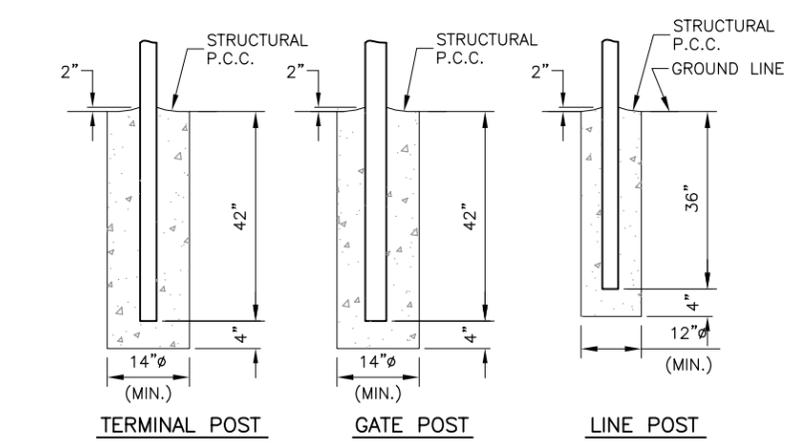
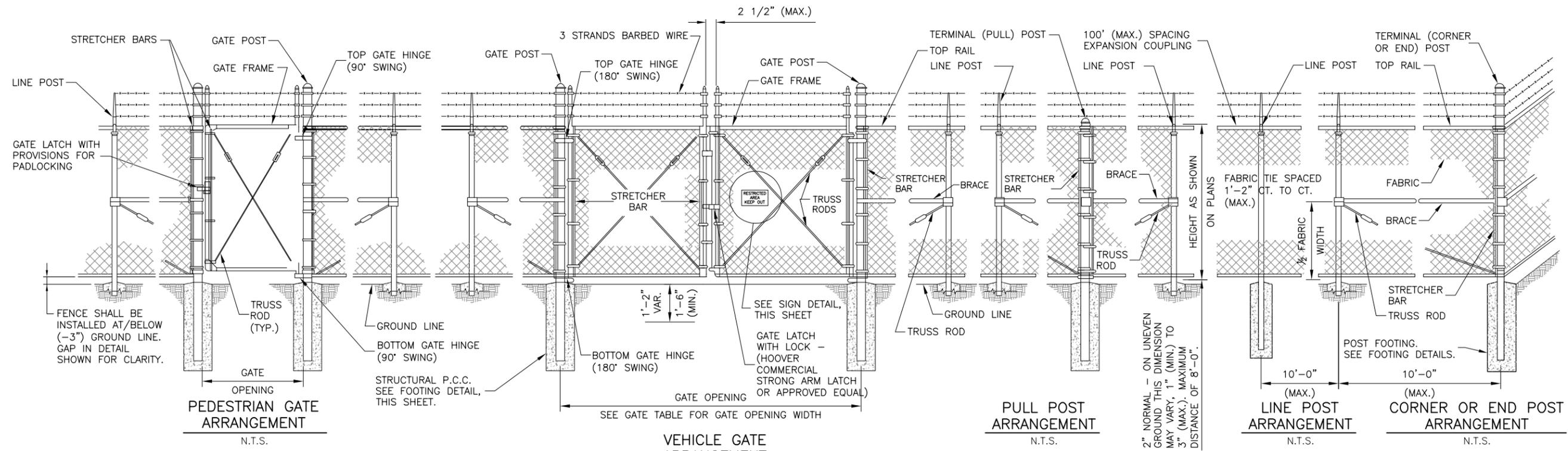
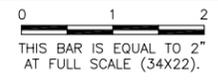
EXISTING GATE OPERATOR TO BE REMOVED AND REPLACED

TEMPORARY FENCE (INCIDENTAL TO CONTRACT)

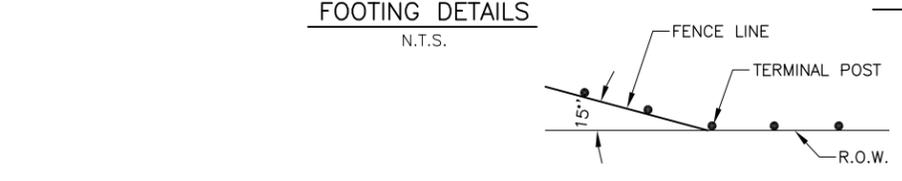


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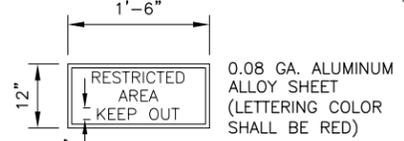
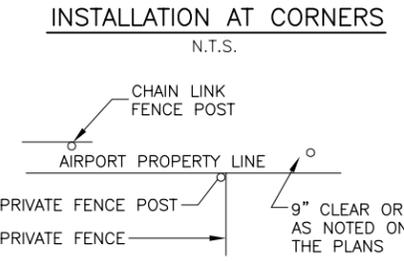
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NUMBER	BY	DATE



PROTECTIVE ELECTRICAL GROUND DETAILS
 N.T.S.



WHERE FENCE LINE HAS A CHANGE IN DIRECTION OF 15° OR MORE, A TERMINAL POST SHALL BE PLACED AS SHOWN ABOVE. WHERE ANGLE IS LESS THAN 15° AND EXISTING CONDITIONS REQUIRE A TERMINAL POST, THEY SHALL BE PLACED AS DIRECTED BY THE ENGINEER.



EACH GATE SHALL REQUIRE TWO SIGNS. EVERY 100' OF FENCE SHALL REQUIRE ONE SIGN. EVERY STRAIGHT SECTION OF FENCE SHALL REQUIRE MINIMUM ONE SIGN.

SIGN DETAIL
 N.T.S.

PULL POSTS SHALL BE PLACED AT LOCATIONS DETERMINED BY THE ENGINEER. THEY SHALL BE PLACED AT 660 FT. INTERVALS BETWEEN POSTS TO WHICH THE ENDS OF THE FABRIC ARE CLAMPED OR MIDWAY BETWEEN SUCH POSTS WHEN THE DISTANCE IS LESS THAN 1320 FT. AND GREATER THAN 660 FT.

- NOTES**
- CONTINUOUS FENCE SHALL BE GROUNDED AT INTERVALS NOT EXCEEDING 1000 FT. EXCEPT THERE SHALL BE A GROUND NOT EXCEEDING 100 FT. FROM GATE IN EACH SECTION OF THE FENCE ADJACENT TO THE GATE.
 - FENCE UNDER POWER LINES SHALL BE GROUNDED BY 3 GROUNDS, ONE DIRECTLY UNDER THE CROSSING AND ONE ON EACH SIDE 25 TO 50 FT. AWAY. A SINGLE GROUND SHALL BE LOCATED DIRECTLY UNDER EACH TELEPHONE WIRE OR CABLE CROSSINGS.
 - THE COUNTERPOISE SHALL BE USED ONLY WHERE IT IS IMPOSSIBLE TO DRIVE A GROUND ROD BECAUSE OF IMPERVIOUS EARTH STRUCTURES.
 - THE GROUND WIRE SHALL BE CONNECTED TO THE FABRIC AND THE GROUND ROD BY A MECHANICAL CLAMP OF CAST BRONZE BODY AND BRONZE OR STAINLESS STEEL BOLTS AND WASHERS. WHEN A TENSION WIRE IS REQUIRED, THE BOTTOM CONNECTION OF THE GROUND WIRE SHALL BE MADE TO THE TENSION WIRE.
 - ALL PROPOSED CLASS E FENCE SHALL MEET THE REQUIREMENTS OF IDOT STANDARD 664001-01.

BLOOMINGTON-NORMAL AIRPORT AUTHORITY
CENTRAL ILLINOIS REGIONAL AIRPORT
BLOOMINGTON, IL
INSTALL 10' PERIMETER FENCE PHASE 5
FENCE DETAILS 1

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JOB No:	100850101
IL PROJ NO.	BMI-4172
AIP PROJECT NO.	3-17-0006-XX
SHEET	14 OF 23 SHEETS

BLO68

REVISIONS		
NUMBER	BY	DATE

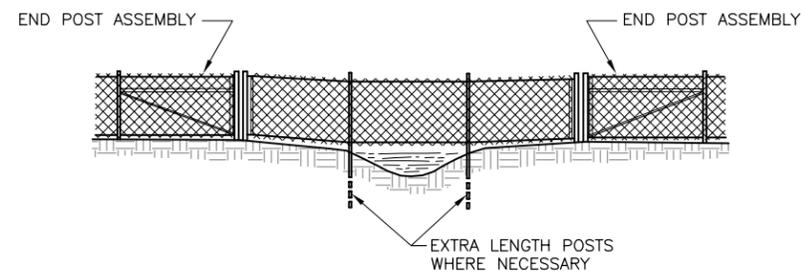
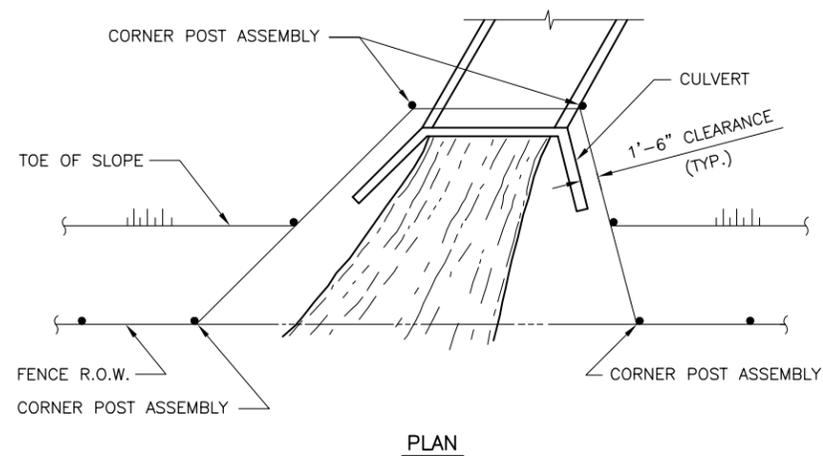
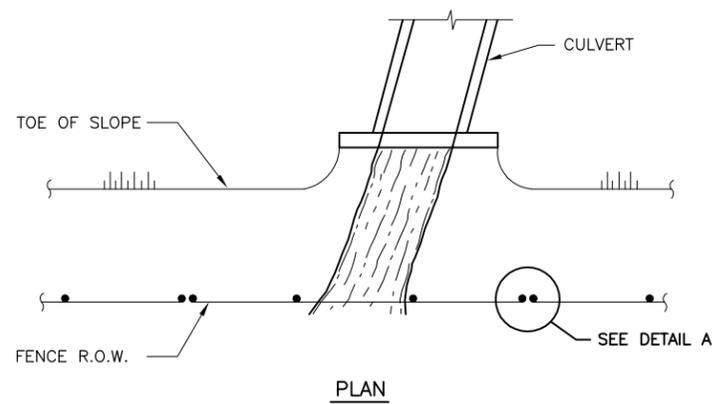
0 1 2
 THIS BAR IS EQUAL TO 2"
 AT FULL SCALE (34X22).

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

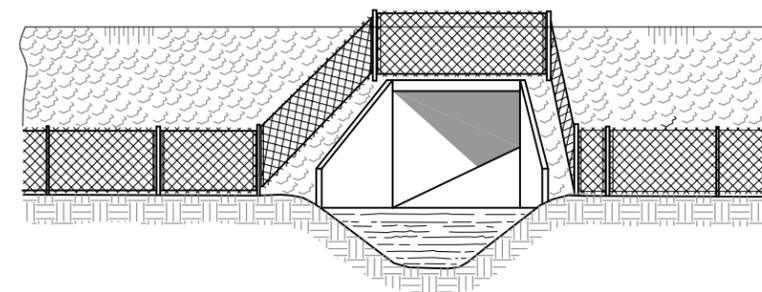
INSTALL 10' PERIMETER FENCE PHASE 5
 FENCE DETAILS 2

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SHEET	15 OF 23 SHEETS

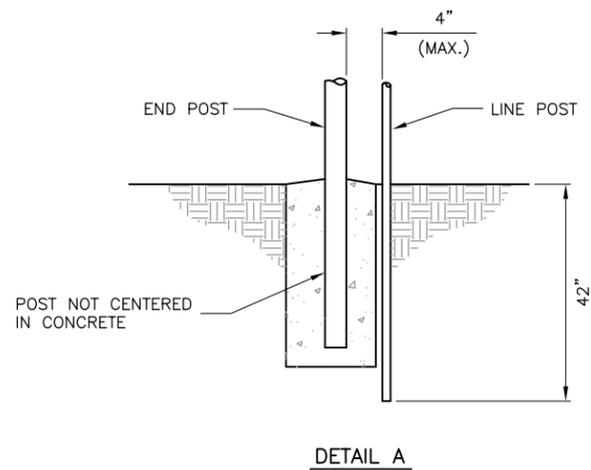


THE CHAIN LINK FABRIC SHALL BE REPLACED BY BARBED WIRE STRANDS AT 12" MAXIMUM CENTERS BETWEEN THE DOUBLE POSTS SHOWN ON DETAIL A WHEN SHOWN ON THE PLANS.

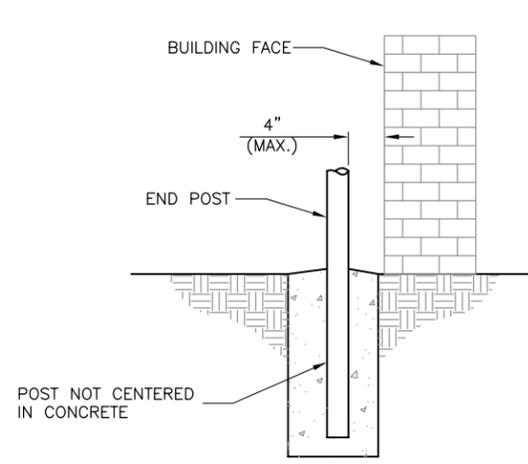


WHEN THE WIDTH OF THE CULVERT MAKES IT NECESSARY TO ANCHOR A POST TO THE TOP OF THE CULVERT, A CAST IRON SHOE OR OTHER DEVICE APPROVED BY THE ENGINEER SHALL BE USED.

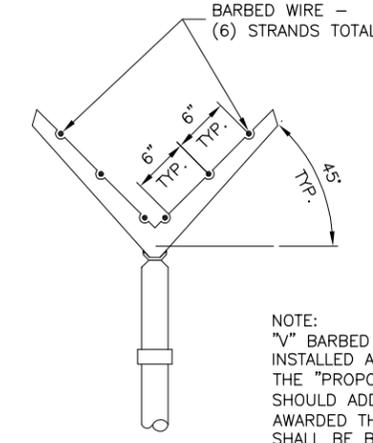
FENCE INSTALLATION AROUND HEADWALL DETAILS
 N.T.S.



FENCE INSTALLATION OVER STREAM DETAILS
 N.T.S.



FENCE INSTALLATION AT BUILDING FACE
 N.T.S.



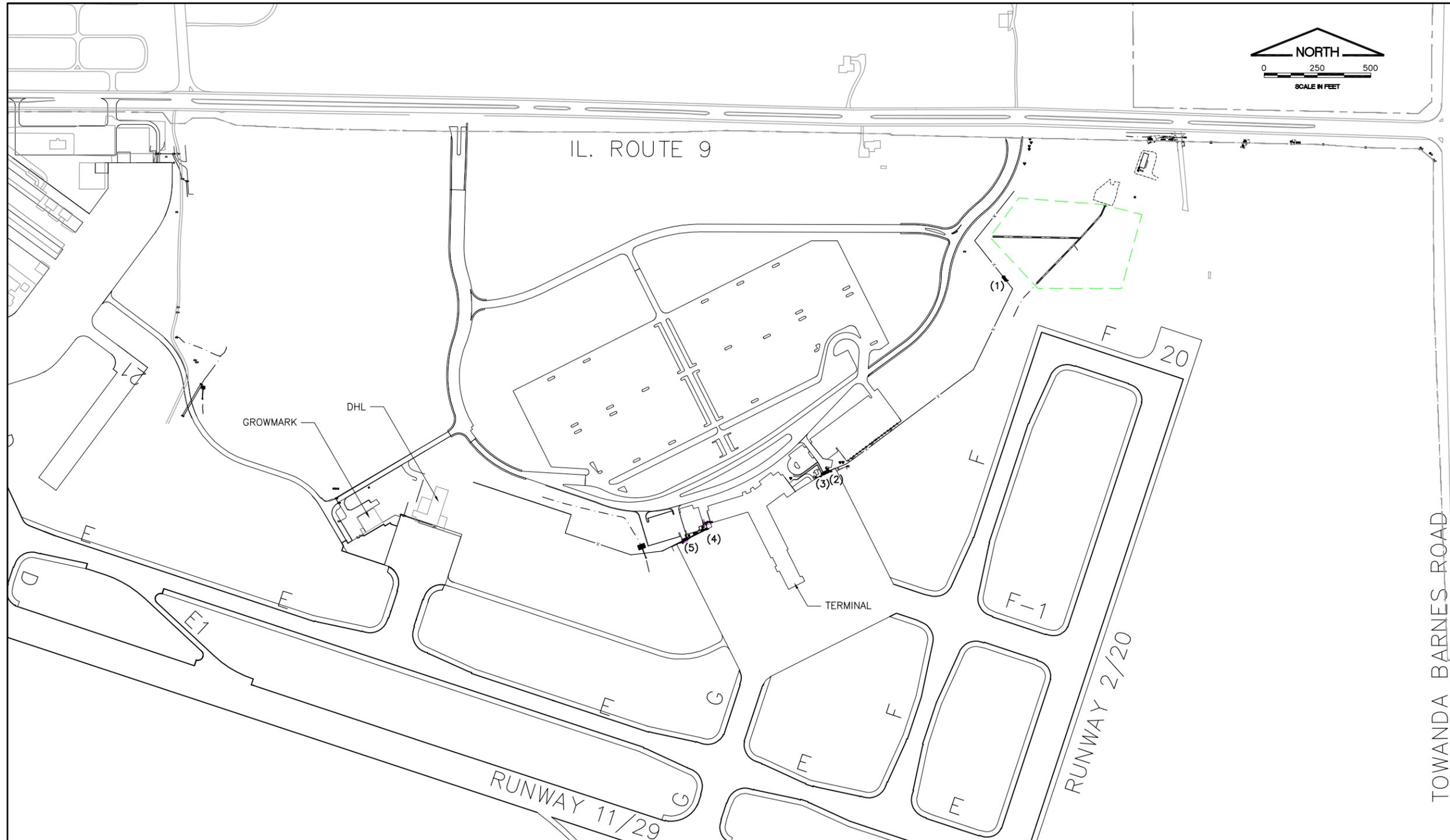
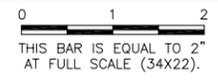
"V" BARBED WIRE ARM ON LINE POST
 N.T.S.

NOTE:
 "V" BARBED WIRE ARMS SHALL BE INSTALLED AT THE LOCATIONS SHOWN ON THE "PROPOSED IMPROVEMENTS" SHEETS. SHOULD ADDITIVE ALTERNATE #1 BE AWARDED THE "V" BARBED WIRE ARMS SHALL BE BLACK VINYL COATED.



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

**INSTALL 10' PERIMETER FENCE PHASE 5
 GATE PLAN AND SCHEDULE**

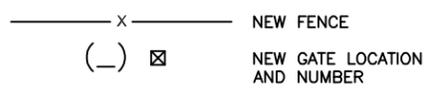
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IL PROJ NO.	BMI-4172
AIP PROJECT NO.	3-17-0006-XX
SHEET	16 OF 23 SHEETS

GATE TABLE

EXISTING GATE NUMBER	GATE LOCATION	OPENING WIDTH (FT)	TYPE	ACCESS RESPONSIBILITY	CONTROL TYPE	EXISTING GATE	NEW GATE	NOTES	NEW GATE NUMBER	SIGNS	PHASE	NOTES AND RESPONSE
1	Along CIRA Drive East	24'	Vehicle Gate	BNAA	Lock and Key	24' x 6' Double Swing	N/A	Remove Gate	TBD	-	1	
2	East Side of Terminal	24'	Vehicle Gate	BNAA	Card Reader	24' x 6' Cantilever	24' x 10' Cantilever	Replace Gate	TBD	Gate Number Sign Restricted Area Sign	5	Replace Hydraulic Drive with Chain Drive operator
3	East Side of Terminal	4'	Pedestrian Gate	BNAA	Card Reader	6' x 4' Swing Gate	10' x 4' Swing Gate	Replace Gate	TBD	Gate Number Sign Restricted Area Sign	5	Reuse Magnetic Lock. Install New Closer.
4	West Side of Terminal	4'	Pedestrian Gate	BNAA	Card Reader	6' x 4' Swing Gate	10' x 4' Swing Gate	Replace Gate	TBD	Gate Number Sign Restricted Area Sign	6	Reuse Magnetic Lock. Install New Closer.
5	West Side of Terminal	24'	Vehicle Gate	BNAA	Card Reader	24' x 6' Cantilever	24' x 10' Cantilever	Replace Gate	TBD	Gate Number Sign Restricted Area Sign	6	Replace Hydraulic Drive with Chain Drive operator

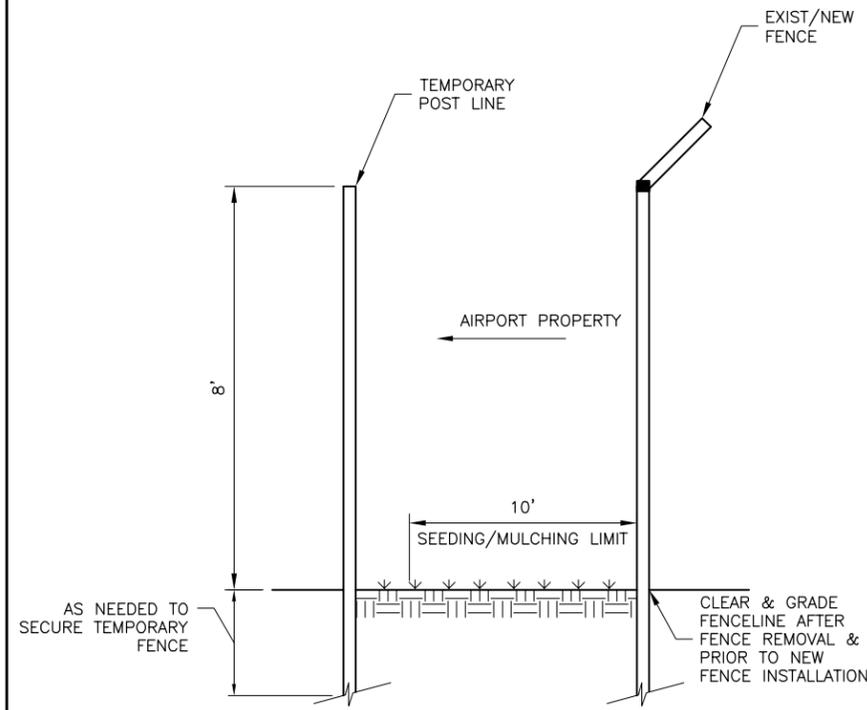
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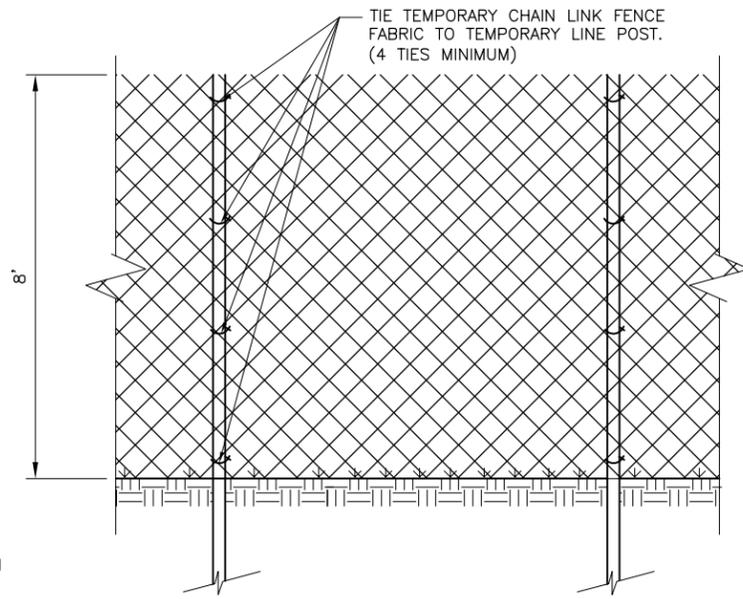
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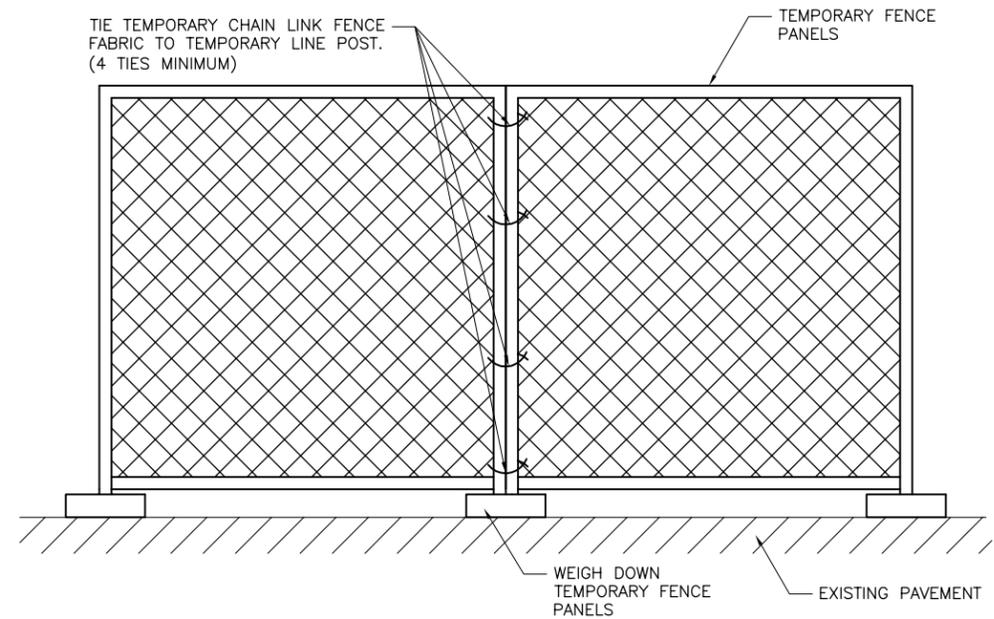
0 1 2
 THIS BAR IS EQUAL TO 2"
 AT FULL SCALE (34X22).



TEMPORARY FENCE IN TURF
 NTS



TEMPORARY FENCE IN TURF
 NTS



TEMPORARY FENCE ON PAVEMENT
 NTS

NOTES:

1. CONTRACTOR MUST ERECT TEMPORARY FENCE PRIOR TO OR CONCURRENT WITH REMOVAL OF EXISTING FENCE
2. CONTRACTOR WILL NOT BE ALLOWED TO LEAVE OPENINGS IN TEMPORARY FENCE UNLESS OPENING IS GUARDED.
3. CONTRACTOR SHALL SECURE TEMPORARY FENCE TO EXISTING FENCE DURING EACH PHASE OF WORK
4. CONTRACTOR MAY USE REMOVED FENCE MATERIAL FOR TEMPORARY FENCE.
5. TEMPORARY FENCE IS INCIDENTAL TO CONTRACT.

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INSTALL 10' PERIMETER FENCE PHASE 5
 TEMPORARY FENCE DETAILS

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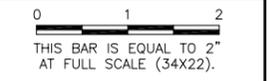
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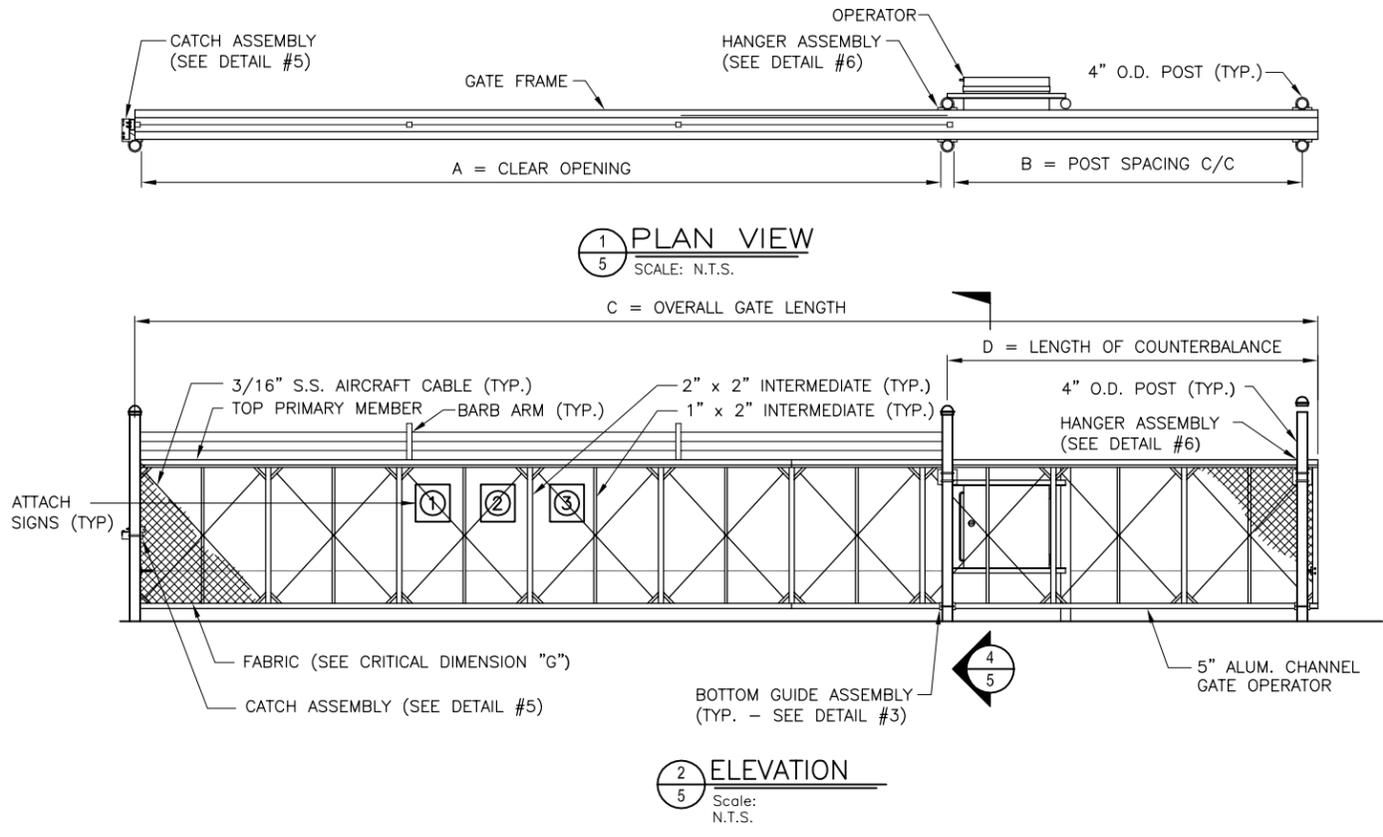


BLOOMINGTON-NORMAL AIRPORT AUTHORITY
 CENTRAL ILLINOIS REGIONAL AIRPORT
 BLOOMINGTON, IL

INSTALL 10' PERIMETER FENCE PHASE 5
 ELECTRIC GATE DETAILS 1

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SHEET	18 OF 23 SHEETS



		GATE #2 & #5
A	CLEAR OPENING	24'-0"
B	COUNTERBALANCE POST SPACING C/C	11'-1"
C	OVERALL GATE LENGTH	36'-0"
D	COUNTERBALANCE LENGTH	12'-0"
E	NOMINAL GATE HEIGHT	10'-0"
F	POST HEIGHT	11'-6"
G	FABRIC HEIGHT	9'-0"

CONTRACTOR SHALL FURNISH AND INSTALL SIGNS AS INDICATED IN TABLE BELOW					
SIGN	DIMENSIONS	BACKGROUND COLOR	LETTERING		TEXT
			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.

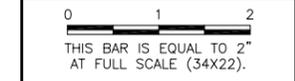
NOTES

- 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: NEW GATE, NEW GATE OPERATOR, NEW DETECTOR LOOP WIRING, RECONNECTING TO EXISTING GATE OPEN CONTROL WIRING AND EXISTING GATE POWER WIRING AND EXISTING DETECTOR LOOP WIRING, AND ALL LABOR AND MATERIALS NECESSARY TO COMPLETE OPERATION.
- 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.

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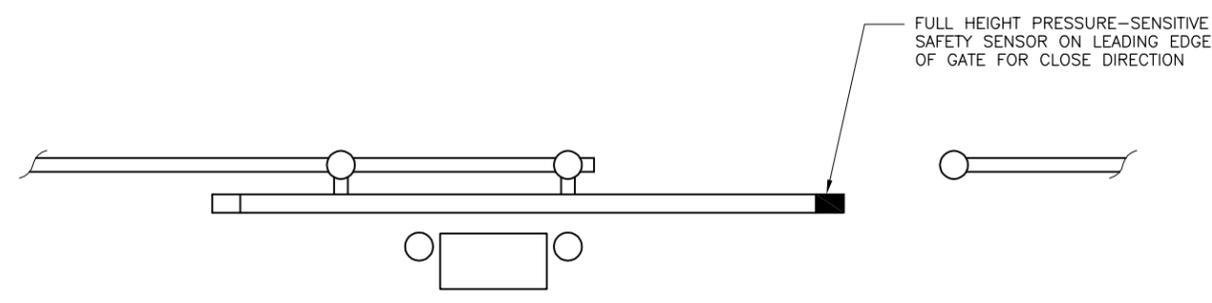


**BLOOMINGTON-NORMAL AIRPORT AUTHORITY
 CENTRAL ILLINOIS REGIONAL AIRPORT
 BLOOMINGTON, IL**

**INSTALL 10' PERIMETER FENCE PHASE 5
 ELECTRIC GATE DETAILS 2**

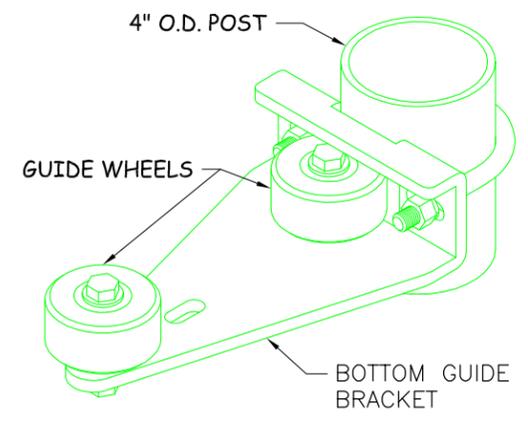
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APPROVED BY:	RLV
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SHEET	19 OF 23 SHEETS

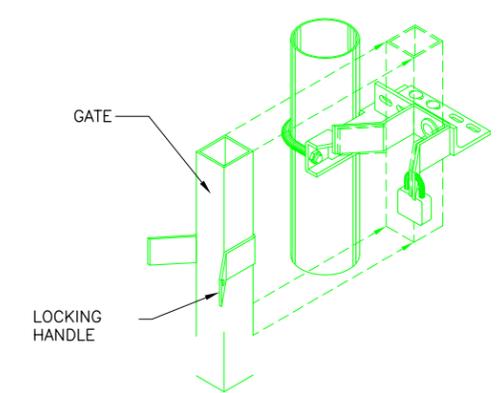


GATE OPERATOR CONTACT SENSOR

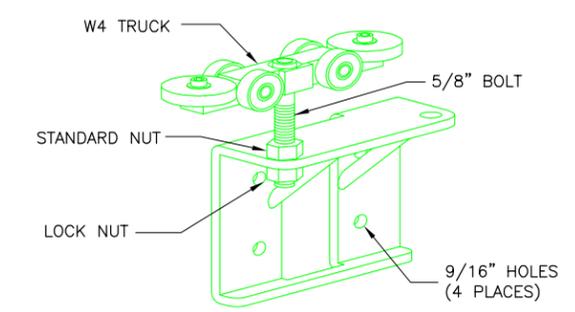
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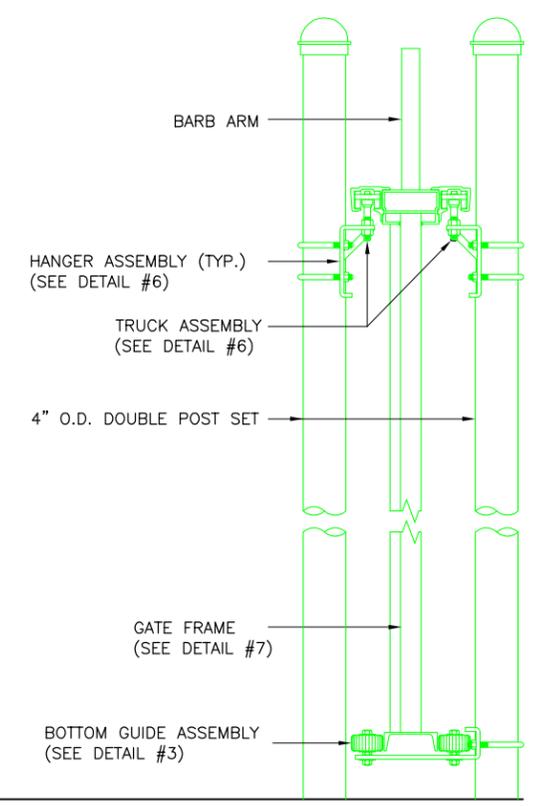
3
5 **BOTTOM GUIDE**
N.T.S.



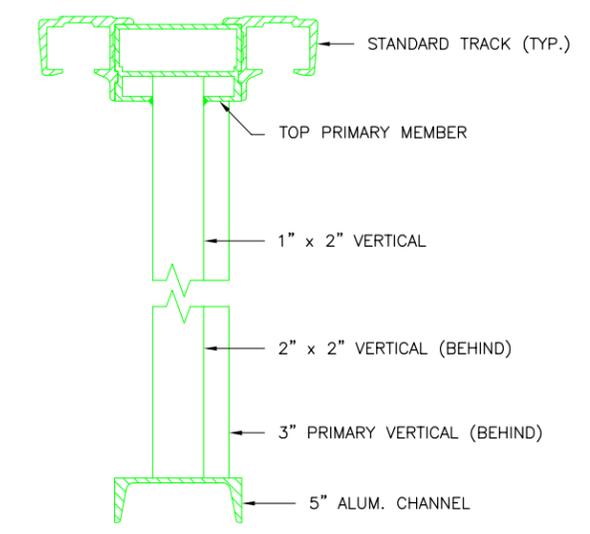
5
5 **CATCH ASSEMBLY**
N.T.S.



6
5 **GATE HANGER ASSEMBLY**
N.T.S.



4
5 **ASSEMBLY SECTION**
N.T.S.



7
5 **GATE FRAME SECTION**
N.T.S.

CANTILEVER SLIDE GATE DETAILS

BLO68

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

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 CENTRAL ILLINOIS REGIONAL AIRPORT
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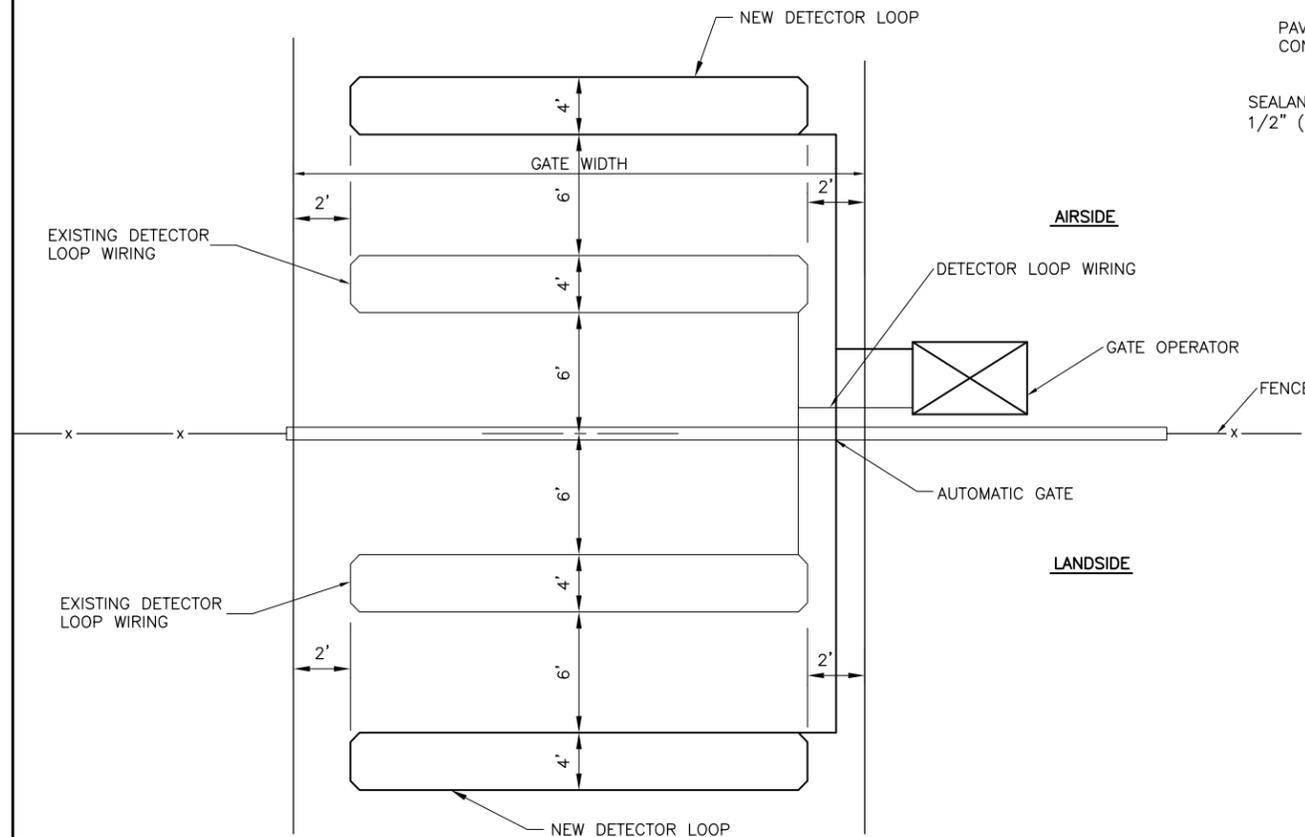
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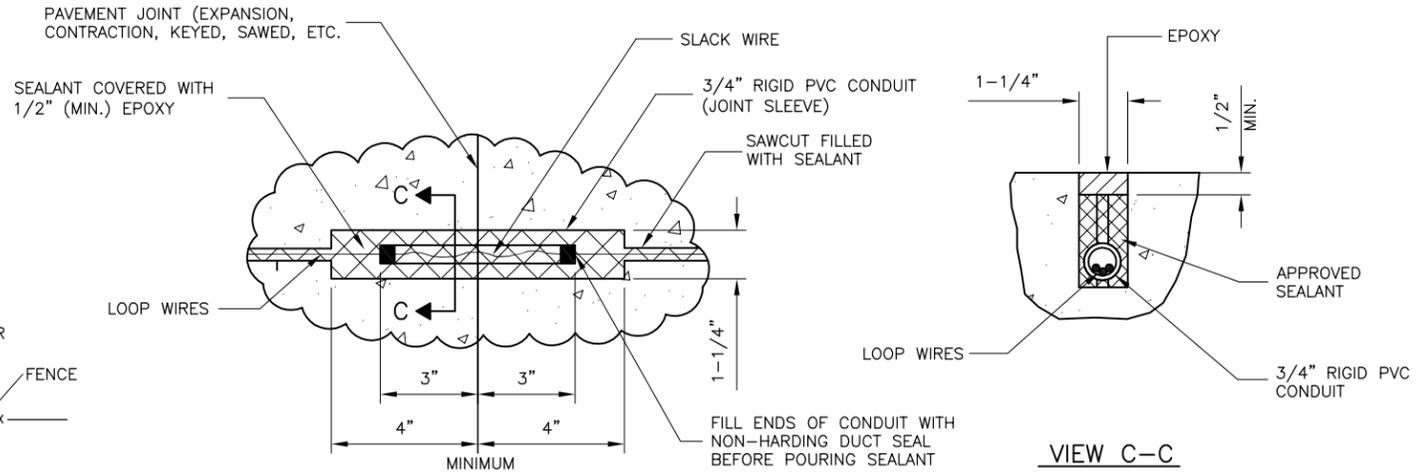


DESIGN BY:	JEF
DRAWN BY:	CMT
CHECKED BY:	CBG
APPROVED BY:	RLV
DATE:	MARCH 2, 2012
JOB No:	100850101

IL PROJ NO. BMI-4172
 AIP PROJECT NO. 3-17-0006-XX



TYP. GATE PLAN
 N.T.S.



JOINT CROSSING DETAIL
 N.T.S.

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.
6. ALL WIRE SHALL BE CONTINUOUS WITHOUT SPLICING.

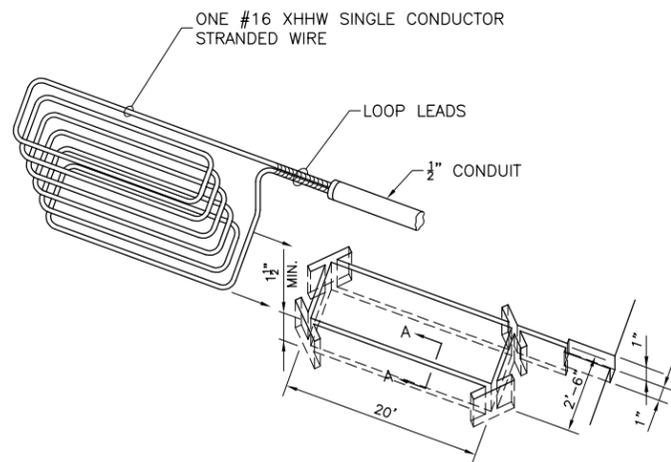
CAUTION:

- 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.

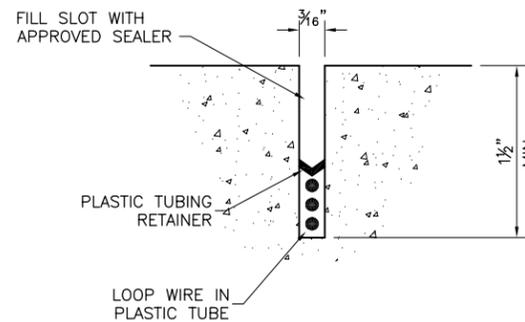
TYPICAL LAYOUT FOR LOOP:

- 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).

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



**PERSPECTIVE VIEW OF
 DETECTOR LOOP SAW SLOT**



SECTION A-A

DETECTOR LOOP DETAILS
 N.T.S.

Central Illinois Regional Airport- Hirsch Security System East / West Gate Wiring Diagram

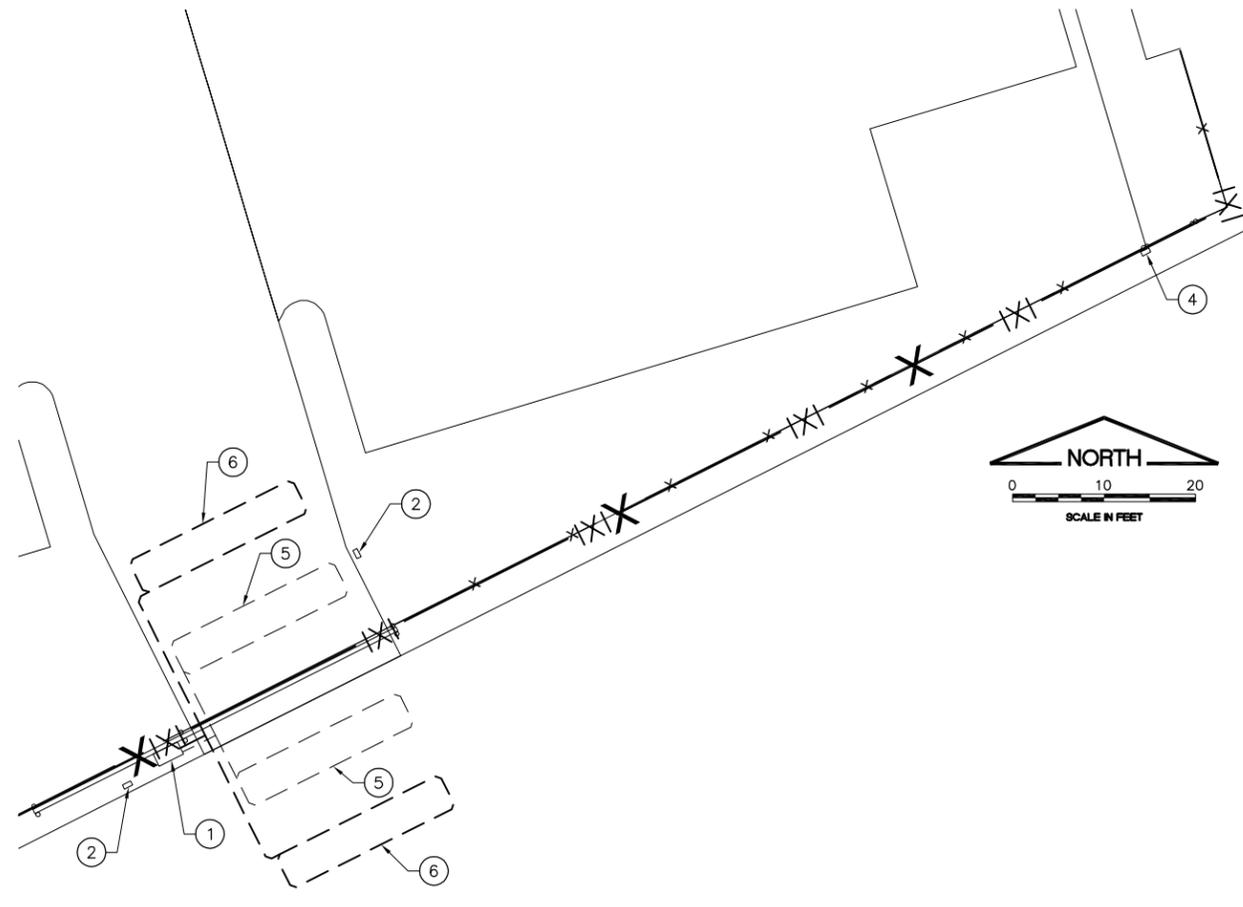
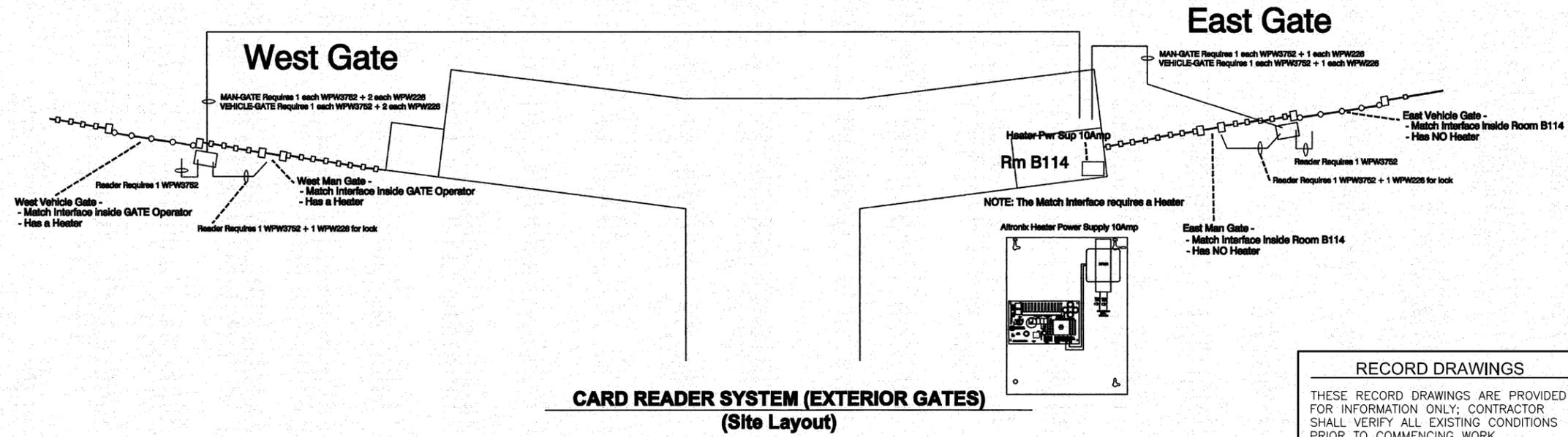
K:\BloomingtonAp\1008501\Draw\Sheets\PHASE 5
FILE: TERMINAL EAST AND WEST GATES
UPDATE BY: Jason Frank
PLOT DATE: 3/14/2012 3:40 PM
EXIST_TOPO
AIRPORT_LAYOUT_PLAN
AERIAL

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NUMBER	BY	DATE

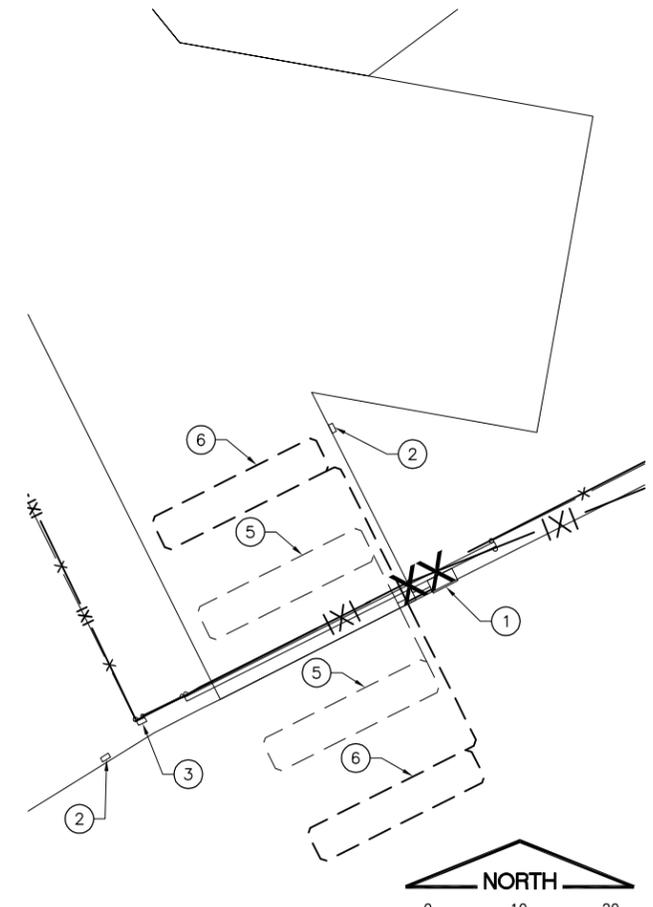
0 1 2
THIS BAR IS EQUAL TO 2"
AT FULL SCALE (34X22).



- KEYED NOTES**
- DISCONNECT AND REMOVE EXISTING GATE OPERATOR. INSTALL NEW GATE OPERATOR ON EXISTING CONCRETE PAD AND RECONNECT TO EXISTING POWER AND CONTROL WIRING.

NEW CANTILEVER SLIDE GATE MOTOR OPERATOR, LINEAR/OSCO MODEL HSLG-1, 1 HP, 120V, SINGLE PHASE, OR EQUIVALENT, SUITABLE FOR A MAXIMUM GATE WEIGHT OF 1700 LBS AND MAXIMUM GATE WIDTH OF 55 FEET. NEW GATE OPERATOR SHALL INCLUDE AN INTERNAL POWER DISCONNECT SWITCH AND DETECTOR LOOP ELECTRONICS FOR BOTH EXISTING AND NEW DETECTOR LOOPS. 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. SEE DETAILS FOR ADDITIONAL INFORMATION. NOTE: AN EARTH GROUND ROD IS REQUIRED AT GATE OPERATOR, BUT NOT SHOWN.
 - EXISTING CARD READERS TO REMAIN UNDISTURBED. VERIFY OPERATION OF CARD READERS BOTH BEFORE AND AFTER MODIFICATIONS. COORDINATE THIS WORK WITH THE ACCESS CONTROL CONTRACTOR.
 - EXISTING PEDESTRIAN GATE (GATE #3) MAGNETIC LOCK AND CARD READER. REINSTALL TO NEW PEDESTRIAN GATE TO MATCH EXISTING INSTALLATION. VERIFY OPERATION BOTH BEFORE AND AFTER MODIFICATIONS. COORDINATE THIS WORK WITH THE ACCESS CONTROL CONTRACTOR.
 - EXISTING PEDESTRIAN GATE (GATE #4) MAGNETIC LOCK AND CARD READER. REINSTALL TO NEW PEDESTRIAN GATE TO MATCH EXISTING INSTALLATION. VERIFY OPERATION BOTH BEFORE AND AFTER MODIFICATIONS. COORDINATE THIS WORK WITH THE ACCESS CONTROL CONTRACTOR.

AT WEST GATE OPERATOR (GATE #5), DISCONNECT AND REMOVE EXISTING ACCESS CONTROL "MATCH INTERFACE" AND "HEATER" INSIDE EXISTING GATE OPERATOR AND INSTALL IN NEW GATE OPERATOR. RECONNECT TO EXISTING WIRING. COORDINATE THIS WORK WITH THE ACCESS CONTROL CONTRACTOR.
 - EXISTING DETECTOR LOOP. TO BE REUSED WITH NEW GATE OPERATOR.
 - NEW DETECTOR LOOP.



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

INSTALL 10' PERIMETER FENCE PHASE 5
TERMINAL EAST AND WEST
GATES ELECTRICAL

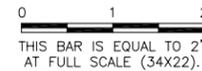
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DRAWN BY: CMT
CHECKED BY: WDP
APPROVED BY: WDP
DATE: MARCH 2, 2012
JOB No: 100850101

IL PROJ NO. BMI-4172
AIP PROJECT NO. 3-17-0006-XX
SHEET 21 OF 23 SHEETS

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NUMBER	BY	DATE



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

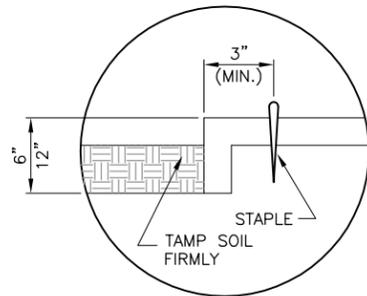
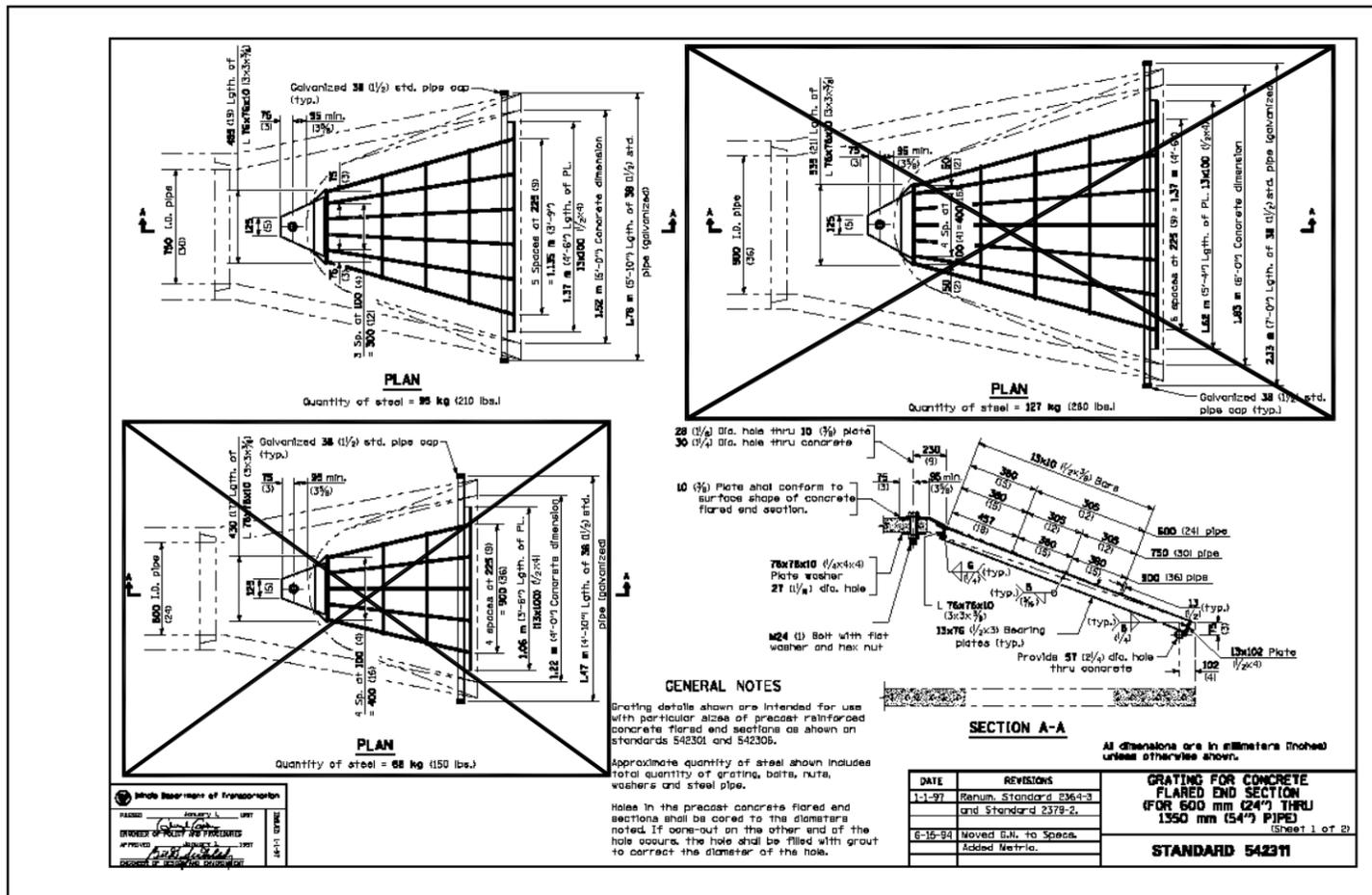
INSTALL 10' PERIMETER FENCE PHASE 5

EROSION CONTROL AND GRATING DETAILS

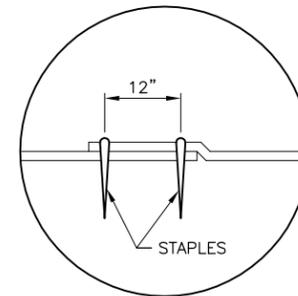
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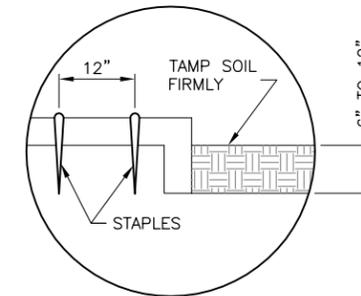
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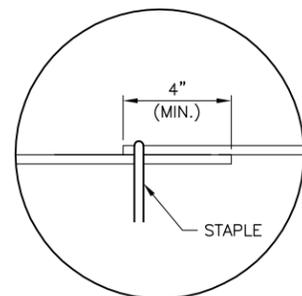
DETAIL 1 - TERMINAL FOLD



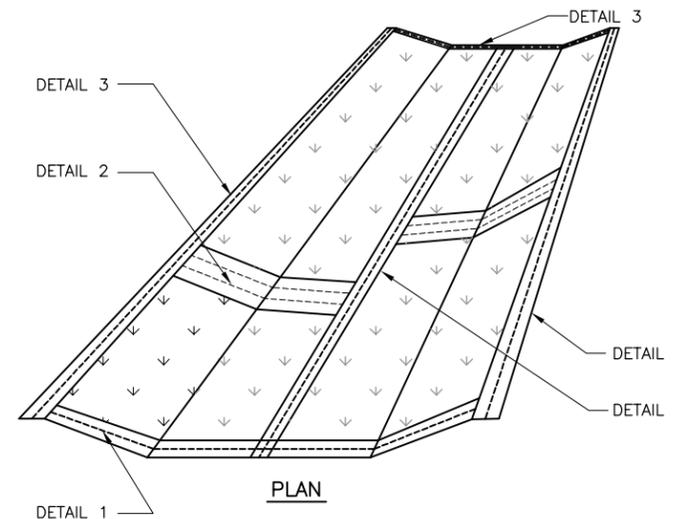
DETAIL 2 - JUNCTION SLOT



DETAIL 3 - ANCHOR SLOT



DETAIL 4 - LAP JOINT



PLAN

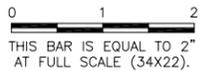
EXCELSIOR BLANKET DETAILS
 N.T.S.

NOTES

1. STAPLES TO BE PLACED ALTERNATELY, IN COLUMNS APPROXIMATELY 2' APART AND IN ROWS APPROXIMATELY 3' APART.
2. EROSION CONTROL MATERIAL SHALL BE PLACED LOOSELY OVER GROUND SURFACE. DO NOT STRETCH.
3. ALL TERMINALS ENDS AND TRANSVERSE LAPS SHALL BE STAPLED AT APPROXIMATELY 12" INTERVALS.

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NUMBER	BY	DATE

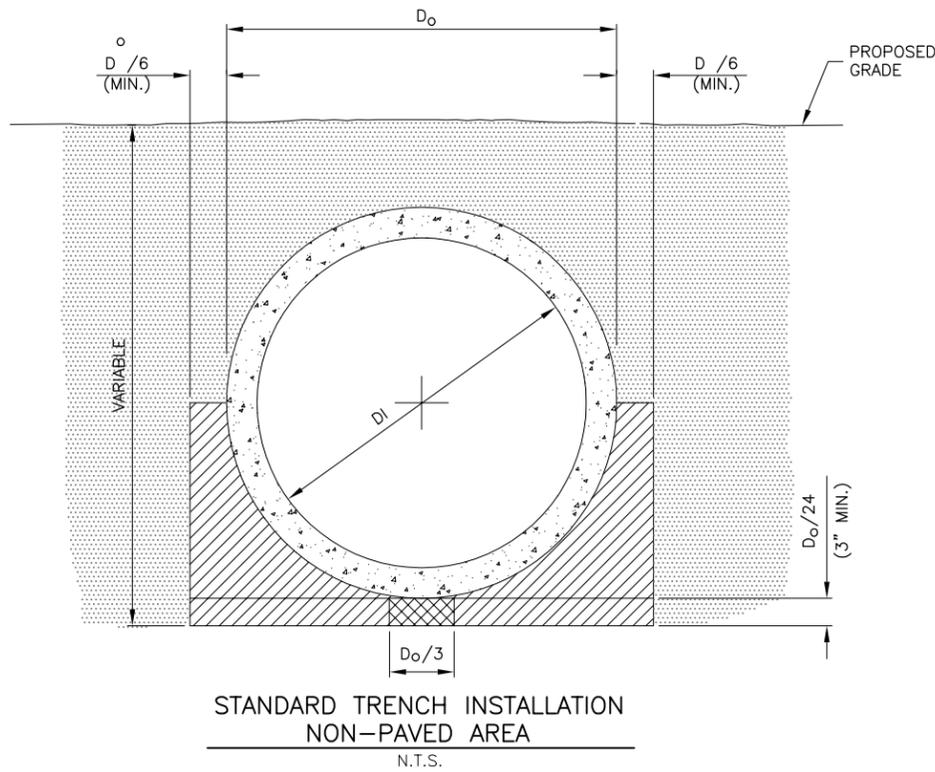


**BLOOMINGTON-NORMAL AIRPORT AUTHORITY
 CENTRAL ILLINOIS REGIONAL AIRPORT
 BLOOMINGTON, IL**

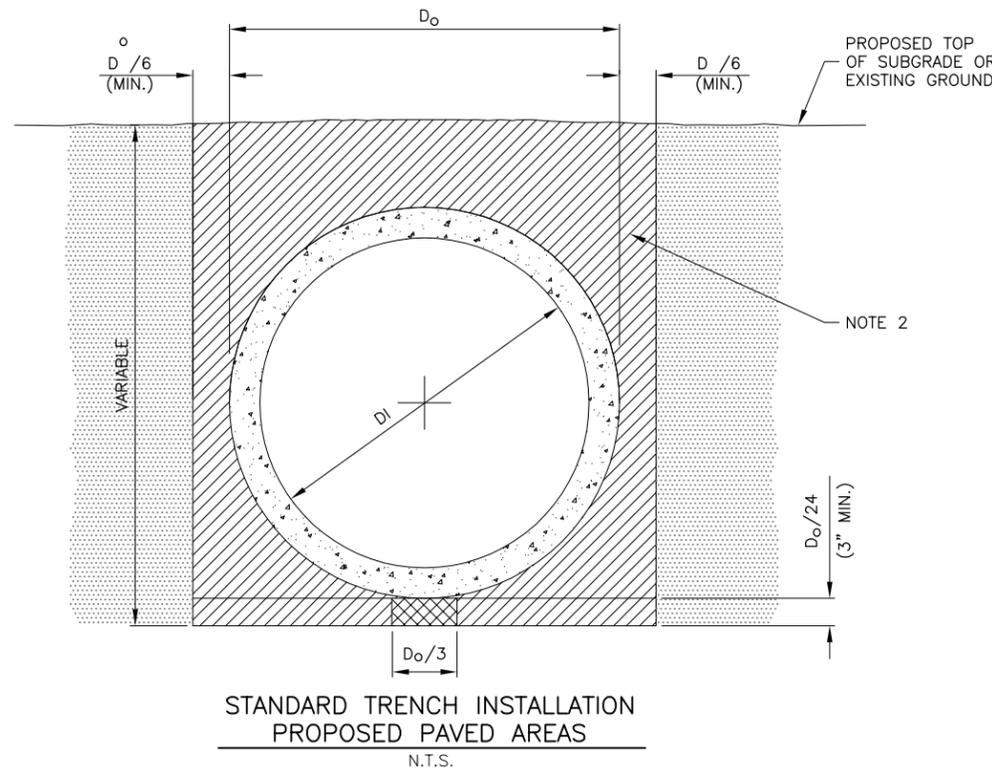
**INSTALL 10' PERIMETER FENCE PHASE 5
 DRAINAGE DETAILS**

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DESIGN BY:	JEF
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DATE:	MARCH 2, 2012
JOB No:	100850101
IL PROJ NO.	BMI-4172
AIP PROJECT NO.	3-17-0006-XX
SHEET	23 OF 23 SHEETS



STANDARD TRENCH INSTALLATION
 NON-PAVED AREA
 N.T.S.



STANDARD TRENCH INSTALLATION
 PROPOSED PAVED AREAS
 N.T.S.

LEGEND

- DRAINAGE CONDUIT MATERIAL-CONCRETE
- MIDDLE BEDDING LOOSELY PLACED UNCOMPACTED BEDDING
- HAUNCH AND OUTER BEDDING COMPACTION- TO ENGINEER'S SATISFACTION OR 95% STANDARD PROCTOR
- LOWER SIDE AND OVERFILL COMPACTION- SAME AS EMBANKMENT REQUIREMENTS. (USE ON AIRPORT BORROW MATERIAL)

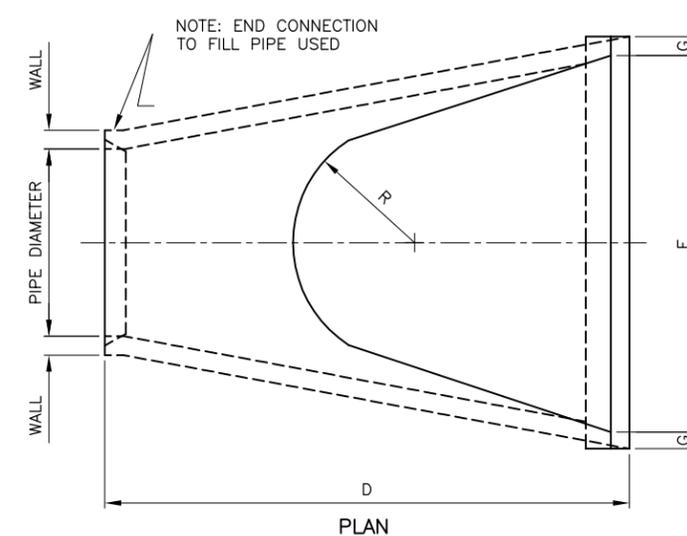
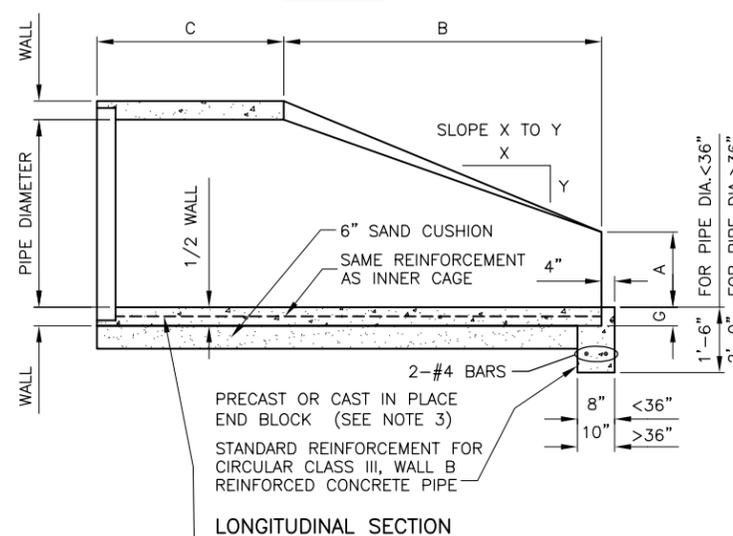
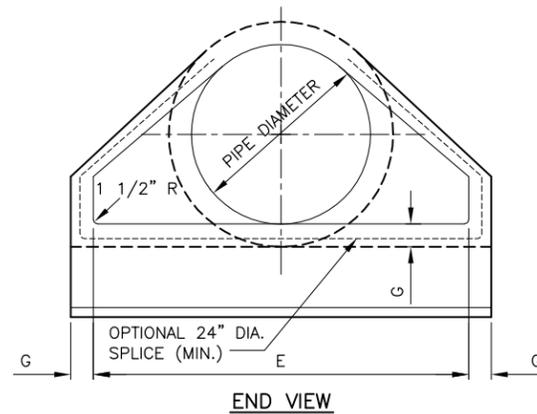
D_o PIPE OUTSIDE DIAMETER
 D_i PIPE INSIDE DIAMETER

- NOTES**
- BEDDING SHOWN IS IN ACCORDANCE WITH "STANDARD EMBANKMENT INSTALLATIONS", STANDARD INSTALLATION & BEDDING FACTORS FOR THE INDIRECT DESIGN METHOD (DESIGN DATA 40), AMERICAN CONCRETE PIPE ASSOCIATION.
 - BACKFILL TO EXTEND 3' BEYOND EDGES OF PROPOSED PAVEMENT.

DIMENSIONS - TABLE 1

PIPE DIA.	APPROX WT.(lbs.)	WALL	A	B	C	D	E	G	R	SLOPE
12"	530	2"	4"	2'-0"	4'-0 7/8"	6'-0 7/8"	2'-0"	2"	9"	3:1
15"	740	2 1/4"	6"	2'-3"	3'-10"	6'-1"	2'-6"	2 1/4"	11"	3:1
18"	990	2 1/2"	9"	2'-3"	3'-10"	6'-1"	3'-0"	2 1/2"	12"	3:1
21"	1280	2 3/4"	9"	2'-11"	3'-2"	6'-1"	3'-6"	2 3/4"	13"	3:1
24"	1520	3"	9 1/2"	3'-7 1/2"	2'-6"	6'-1 1/2"	4'-0"	3"	14"	3:1
27"	1930	3 1/4"	10 1/2"	4'-0"	2'-1 1/2"	6'-1 1/2"	4'-6"	3 1/4"	14 1/2"	3:1
30"	2190	3 1/2"	1'-0"	4'-6"	1'-7 3/4"	6'-1 3/4"	5'-0"	3 1/2"	15"	3:1
33"	3200	3 3/4"	1'-1 1/2"	4'-10 1/2"	3'-3 1/4"	8'-1 3/4"	5'-6"	3 3/4"	17 1/2"	3:1
36"	4100	4"	1'-3"	5'-3"	2'-10 3/4"	8'-1 3/4"	6'-0"	4"	20"	3:1
42"	5380	4 1/2"	1'-9"	5'-3"	2'-11"	8'-2"	6'-6"	4 1/2"	22"	3:1
48"	6550	5"	2'-0"	6'-0"	2'-2"	8'-2"	7'-0"	5"	22"	3:1
54"	8240	5 1/2"	2'-3"	5'-5"	2'-11"	8'-4"	7'-6"	5 1/2"	24"	2.4:1
60"	8730	6"	2'-11"	5'-0"	3'-3"	8'-3"	8'-0"	5"	*	2:1
66"	10710	6 1/2"	2'-6"	6'-0"	2'-3"	8'-3"	8'-6"	5 1/2"	*	2:1
72"	12520	7"	3'-0"	6'-6"	1'-9"	8'-3"	9'-0"	6"	*	1.86:1
78"	14770	7 1/2"	3'-0"	7'-6"	1'-9"	9'-3"	9'-6"	6 1/2"	*	1.82:1
84"	18160	8"	3'-0"	7'-6 1/2"	1'-9"	9'-3 1/2"	10'-0"	6 1/2"	*	1.5:1

* RADIUS AS FURNISHED BY MANUFACTURER.



- NOTES**
- PRECAST CONCRETE FLARED END SECTIONS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF AASHTO M-170 CLASS III, WALL B REINFORCED CONCRETE PIPE.
 - PRECAST CONCRETE FLARED END SECTION FOR PIPE DIAMETER REQUIRED SHALL BE AS INDICATED ON DETAIL PLAN FOR EACH INDIVIDUAL INSTALLATION.