

11-18-05 LETTING
ITEM 01A

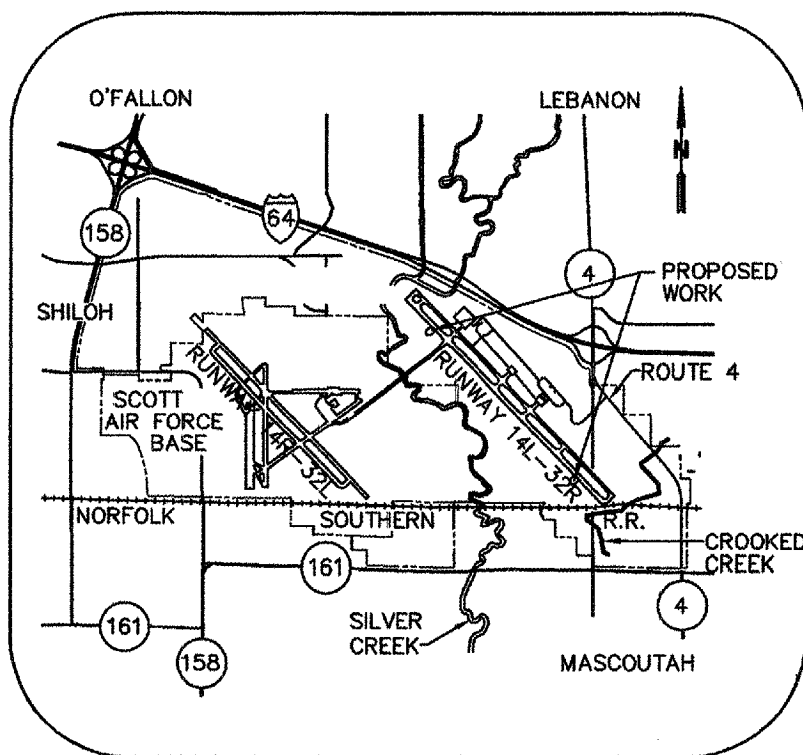
ST. CLAIR COUNTY, ILLINOIS CONSTRUCTION PLANS

FOR



LIGHT SUPPLEMENTAL WIND CONES

TOTAL SHEETS
6
CONTRACT NO.
SC063



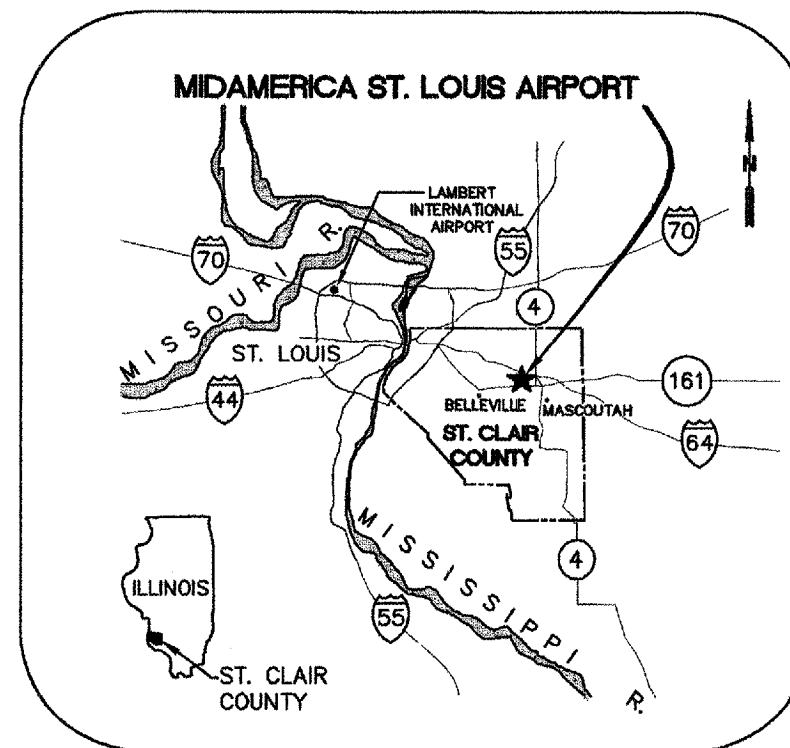
VICINITY MAP

SEPTEMBER 23, 2005

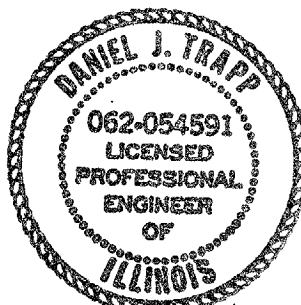


A Tyco International Ltd. Company

1075 Eastgate Drive
O'Fallon, Illinois 62269
PH 618-624-2628
FAX 618-624-2730



LOCATION MAP



EXPIRES: 11/30/05

EARTH TECH, INC.

SUBMITTED: *[Signature]*
DATE: 9/23/05

**ST CLAIR COUNTY
PUBLIC BUILDING COMMISSION
AIRPORT SPONSOR**

APPROVED: *[Signature]*
DATE: 9/24/05

IDOT PROJECT NO. BLV-3520
AIP PROJECT NO. 3-17-0146-xx
EARTHTECH NO. 87727

SUMMARY OF QUANTITIES

ITEM NO.	ITEM	UNIT	QUANTITY
AR107408	L-806 WIND CONE-8' LIGHTED	EACH	2
AR107900	REMOVE WIND CONE	EACH	2
AR108658	3/C #8 600 V UG CABLE IN UD	L.F.	440
AR110212	2" STEEL DUCT, DIRECT BURY	L.F.	45
AR801820	LIGHTING CONTROLLER SPECIAL	EACH	2
AR801821	ELECTRIC SERVICE INSTALL	EACH	2
AR801822	ELECTRIC SERVICE CONNECTION	L.S.	1

INDEX TO SHEETS

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	INDEX TO SHEETS, QUANTITIES, ABBREVIATIONS, AND LEGENDS
3	CONSTRUCTION SAFETY PLAN
4	SITE PLAN
5	PARTIAL SITE PLAN
6	DETAILS

LEGEND

EXISTING	DESCRIPTION	PROPOSED
	FIRE HYDRANT AND VALVE	
	STRUCTURE	
	STORM CULVERT WITH FLARED END SECTION	
	STORM SEWER	
	SUBDRAIN	
	EXISTING GLYCOL PIPE	
	EXISTING FORCE MAIN	
	UTILITY POLE	
	SOIL BORING	
	TEST PIT	
	WATER LINE	
	GAS LINE	
	SANITARY SEWER LINE	
	FENCE	
	CENTERLINE	
	SHOULDER	
	436 CONTOUR	
	SIGN	
	RIPRAP	
	COMMUNICATIONS MH	
	ELECTRICAL MH	
	STRAW BALE	
	MANHOLE	
	VALVE	
	JUNCTION BOX	
	LIGHT	
	LIGHTED WIND CONE	
	WIND CONE (UNLIGHTED)	

ABBREVIATIONS

AASHTO	= AMERICAN ASSOCIATION OF STATE HIGHWAY TRANSPORTATION OFFICIALS	MAINT	= MAINTENANCE
AC	= ADVISORY CIRCULAR	MAX	= MAXIMUM
APPROX	= APPROXIMATE	MH	= MANHOLE
ARFF	= AIRPORT RESCUE AND FIREFIGHTING FACILITY	MIN	= MINIMUM
ATCT	= AIR TRAFFIC CONTROL TOWER	MSDS	= MATERIAL SAFETY DATA SHEETS
BLDG	= BUILDING	N	= NORTH
CL, CL	= CENTERLINE	NO	= NUMBER
C.O.	= CLEAN OUT	NTS	= NOT TO SCALE
CP	= CONNECTION POINT	OD	= OUTSIDE DIAMETER
CY	= CUBIC YARD	OL	= OUTLET
DIA	= DIAMETER	OSHA	= OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
DWG	= DRAWING	PAPI	= PRECISION APPROACH PATH INDICATOR
E	= EAST	PROP	= PROPOSED
EA	= EACH	PVC	= POLYVINYL CHLORIDE, POINT OF VERTICAL CURVATURE
EL	= ELEVATION	R	= RADIUS
ELEC	= ELECTRIC	RE	= RESIDENT ENGINEER
ELEV	= ELEVATION	REL	= RELOCATE
EXIST	= EXISTING	REV	= REVISION
EXT	= EXTENSION	RMV	= REMOVE
φ	= DIAMETER	RR	= RAILROAD
FAA	= FEDERAL AVIATION ADMINISTRATION	RT	= RIGHT
FAR	= FEDERAL AVIATION REGULATION	RVR	= RUNWAY VISUAL RANGE
FES	= FLARED END SECTION	SAN	= SANITARY
FL, FL	= FLOWLINE	SF	= SQUARE FEET
GRS	= GALVANIZED RIGID STEEL	SPA	= SPACING
HP	= HIGH POINT	SPECS	= SPECIFICATIONS
IDOT	= ILLINOIS DEPARTMENT OF TRANSPORTATION	STA	= STATION
INV	= INVERT	STD	= STANDARD
L	= LENGTH	SY	= SQUARE YARDS
LAT	= LATITUDE	T/W	= TAXIWAY
LBS	= POUNDS	TP	= TEST PIT
LF	= LINEAR FEET	TYP	= TYPICAL
LONG	= LONGITUDE	UE	= UNCLASSIFIED EXCAVATION
LP	= LOW POINT	UIP	= USE IN PLACE
LT	= LEFT	WT	= WEIGHT

GENERAL NOTES

- UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS; AND, THEREFORE, THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. IT IS POSSIBLE THERE MAY BE OTHERS, THE EXISTENCE OF WHICH IS PRESENTLY NOT KNOWN OR SHOWN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THEIR EXISTENCE AND EXACT LOCATION AND TO AVOID DAMAGE THERETO.
- NOT USED
- CALCULATED QUANTITIES ARE BASED ON DESIGN CONDITIONS. ACTUAL CONSTRUCTION QUANTITIES WILL BE MEASURED USING THE METHODS DEPICTED IN THE SPECIFICATIONS.

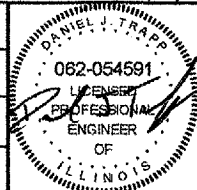
EXPIRES: 11/30/05

DESIGNED BY: JRK

DRAWN BY: JRK

CHECKED BY: DJT

DATE: 9/23/05



LIGHT SUPPLEMENTAL WIND CONES

1075 Eastgate Drive
O'Fallon, Illinois 62269
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INDEX TO SHEETS, QUANTITIES, ABBREVIATIONS, AND LEGENDS

DWG. FILE NAME

87727-E-02

SHEET NO.

2

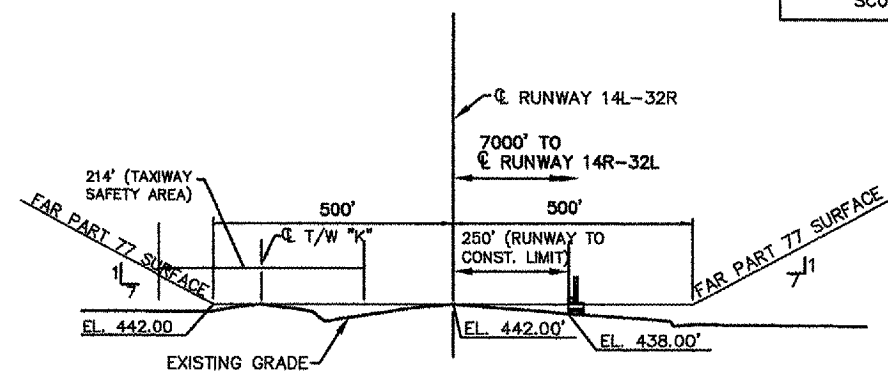
NOTES:

- GENERAL OPERATIONAL SAFETY SHALL BE GOVERNED BY FAA AC 150/5370-2E. CONTRACTOR FACILITIES/EQUIPMENT SHALL NOT PENETRATE FAR PART 77 SURFACES (SEE SECTION A-A).**
- CONSTRUCTION ACTIVITIES IN CLASSIFIED AREA.** CLASSIFIED AREAS ARE ALL AREAS WITHIN 200 FEET AND 107 FEET OF RUNWAY AND TAXIWAY CENTERLINES, RESPECTIVELY. NO CONSTRUCTION ACTIVITIES SHALL OCCUR WITHIN CLASSIFIED AREAS OR AREAS BOUNDED BY CLASSIFIED AREAS OF OPEN RUNWAYS/TAXIWAYS, EXCEPT AS PERMITTED BY THE AIRPORT OPERATIONS MANAGER AND THE RESIDENT ENGINEER. TEMPORARY RUNWAY/TAXIWAY DEACTIVATION, PREDICATED ON WIND CONDITIONS, WILL BE ACCOMPLISHED BY ATCT CONTROL PROCEDURES; REACTIVATION WILL OCCUR ON SHORT NOTICE WHEREUPON THE CONTRACTOR WILL VACATE SUCH CLASSIFIED AREAS AND AREAS BOUNDED THEREBY. VACATING SHALL INCLUDE REMOVAL OF ALL CONSTRUCTION EQUIPMENT, MATERIALS, WORKERS AND THE COVERING OF ALL OPEN MANHOLES.
- CONSTRUCTION IN UNCLASSIFIED AREAS.** UNCLASSIFIED AREAS ARE ALL AREAS NOT LOCATED IN CLASSIFIED AREAS. UNRESTRICTED CONSTRUCTION WILL BE PERMITTED IN UNCLASSIFIED AREAS EXCEPT AS REQUIRED HEREIN, IN THE SPECIFICATIONS, AND AS ESTABLISHED IN THE PRE-CONSTRUCTION CONFERENCE.
- CONSTRUCTION IN NAVIGATIONAL AID CRITICAL AREAS.** CONSTRUCTION WILL TAKE PLACE ADJACENT TO GLIDE SLOPE CRITICAL AREAS AS SHOWN ON THIS DRAWING. CONSTRUCTION ACTIVITY WITHIN THESE AREAS WILL BE RESTRICTED WHEN THE RESPECTIVE AREAS ARE IN USE. ACCESS TO THESE AREAS WILL BE SUBJECT TO THE SAME OPERATIONAL CONTROL PROCEDURES AS DESCRIBED IN ABOVE FOR CLASSIFIED AREAS.

5. LIMITATION ON CONSTRUCTION.

- ALL VEHICLES ARE TO BE PARKED AND SERVICED IN AN AREA DESIGNATED BY THE AIRPORT OPERATOR.
 - OPEN TRENCHES, EXCAVATIONS AND STOCKPILED MATERIAL AT THE CONSTRUCTION SITE SHOULD BE PROMINENTLY MARKED WITH RED OR ORANGE FLAGS AND EQUIPPED WITH FLASHING RED LIGHT UNITS (ACCEPTABLE TO THE AIRPORT OPERATOR AND THE FAA) DURING HOURS OF RESTRICTED VISIBILITY AND/OR DARKNESS.
 - STOCKPILED MATERIAL SHOULD BE CONSTRAINED IN A MANNER TO PREVENT MOVEMENT AS A RESULT OF AIRCRAFT BLAST OR WIND. MATERIAL SHOULD NOT BE STORED NEAR AIRCRAFT TURNING AREAS OR MOVEMENT AREAS.
 - THE TALLEST PIECE OF CONSTRUCTION EQUIPMENT USED WITHIN THE CONSTRUCTION LIMITS (OUTSIDE CLASSIFIED AREAS) WILL BE NO MORE THAN 50' TALL WITHOUT PRIOR APPROVAL OF RESIDENT ENGINEER AND AIRPORT DIRECTOR.
6. **MARKING AND LIGHTING OF CLOSED OR HAZARDOUS AREAS ON AIRPORTS.** ONCE THE CONTRACTOR BEGINS CONSTRUCTION WITHIN THE AIRFIELD OPERATIONS AREA, THE CONSTRUCTION CONTRACTOR SHALL HAVE A MAN ON CALL 24 HOURS PER DAY FOR EMERGENCY MAINTENANCE OF AIRPORT HAZARD LIGHTING AND BARRICADES. THIS WILL BE DISCUSSED AT THE PRE-CONSTRUCTION CONFERENCE AS AN AGENDA ITEM.
7. **EXCAVATION AND TRENCHES.** EXCAVATIONS AND OPEN TRENCHES MAY BE PERMITTED WITHIN THE CONSTRUCTION LIMITS OF THIS CONTRACT, PROVIDED THAT THEY ARE ADEQUATELY SIGNED, LIGHTED AND MARKED, EXCEPT THOSE AREAS WHICH SPECIFICALLY REQUIRE WORK DURING SHORT-TERM TAXIWAY SHUTDOWN.

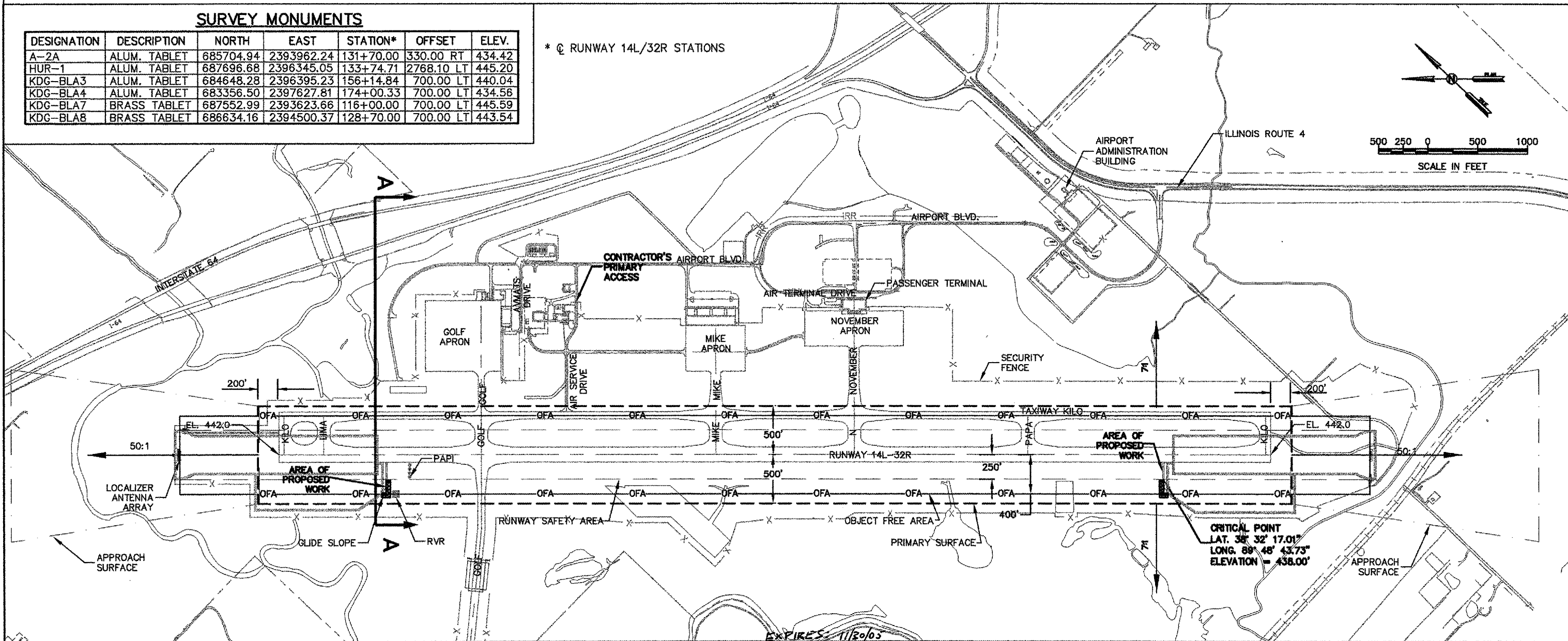
- CONSTRUCTION VEHICLE TRAFFIC.** CONSTRUCTION VEHICLES SHALL NOT CROSS ANY ACTIVE OR INACTIVE RUNWAY WITHOUT ATCT CLEARANCE. ACCESS TO CONSTRUCTION SITES SHALL FOLLOW ROUTES UTILIZING TAXIWAYS, ACCESS AND PERIMETER ROADS, AS SHOWN ON THIS DRAWING AND/OR AS ESTABLISHED IN THE PRE-CONSTRUCTION CONFERENCE. ALL CONSTRUCTION EQUIPMENT AND VEHICLES SHALL BE PARKED OUTSIDE OF ALL CLASSIFIED AREAS, CRITICAL AREAS, RUNWAY APPROACH SURFACES AND WHERE DIRECTED DURING THE PRE-CONSTRUCTION CONFERENCE. ALL CONSTRUCTION EQUIPMENT SHALL BE FLAGGED AND LIGHTED IN ACCORDANCE WITH AC 150/5210-5. CONSTRUCTION ACCESS TO ALL SECURED AREAS WILL BE THROUGH LOCKED GATES OR THOSE MANNED BY SECURITY GUARDS (NORMAL WORKING HOURS AND AS ESTABLISHED DURING THE PRE-CONSTRUCTION CONFERENCE).
- AIRPORT AND AIRCRAFT SURFACE MAINTENANCE.** SOIL, DEBRIS, AND LOOSE MATERIAL DROPPED OR TRUCKED ONTO AIRPORT ROADS, TAXIWAYS, AND SOD SURFACE OR WHICH CAN BE BLOWN ONTO SUCH SURFACES SHALL BE IMMEDIATELY SWEEPED OR PICKED UP AND REMOVED OR PLACED INTO CLOSED CONTAINERS AS REQUIRED IN THE SPECIFICATIONS. ANY MATERIALS TRACKED ONTO AIRPORT ROADS SHALL BE SWEEPED OFF AT THE END OF THE DAY.
- CONTRACTOR'S SECURITY CLEARANCE.** THE CONTRACTOR AND HIS EMPLOYEES SHALL SUBMIT TO ALL SECURITY CLEARANCE REQUIREMENTS LISTED IN THE GENERAL PROVISIONS OF THE CONSTRUCTION CONTRACT. HE IS ALSO REQUIRED TO ADHERE TO ALL AIRPORT SECURITY REQUIREMENTS (I.E. SECURITY BADGES). THIS WILL INCLUDE AN EMPLOYMENT HISTORY SUMMARY, FINGERPRINTING, ETC OF ALL EMPLOYEES WITH ACCESS TO THE JOB SITE.
- CONSTRUCTION SAFETY PLAN APPLICABILITY AND RESPONSIBILITIES.** THIS PLAN, WHEN SIGNED BY ALL PARTICIPANTS AT THE PRE-CONSTRUCTION CONFERENCE, BECOMES PART OF THE CONTRACT.



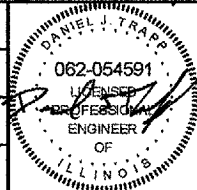
SURVEY MONUMENTS

DESIGNATION	DESCRIPTION	NORTH	EAST	STATION*	OFFSET	ELEV.
A-2A	ALUM. TABLET	685704.94	2393962.24	131+70.00	330.00 RT	434.42
HUR-1	ALUM. TABLET	687696.68	2396345.05	133+74.71	2768.10 LT	445.20
KDG-BLA3	ALUM. TABLET	684648.28	2396395.23	156+14.84	700.00 LT	440.04
KDG-BLA4	ALUM. TABLET	683356.50	2397627.81	174+00.33	700.00 LT	434.56
KDG-BLA7	BRASS TABLET	687552.99	2393623.66	116+00.00	700.00 LT	445.59
KDG-BLA8	BRASS TABLET	686634.16	2394500.37	128+70.00	700.00 LT	443.54

* @ RUNWAY 14L/32R STATIONS



DESIGNED BY: JRK
DRAWN BY: JRK
CHECKED BY: DJT
DATE: 9/23/05



LIGHT SUPPLEMENTAL WIND CONES
1075 Eastgate Drive
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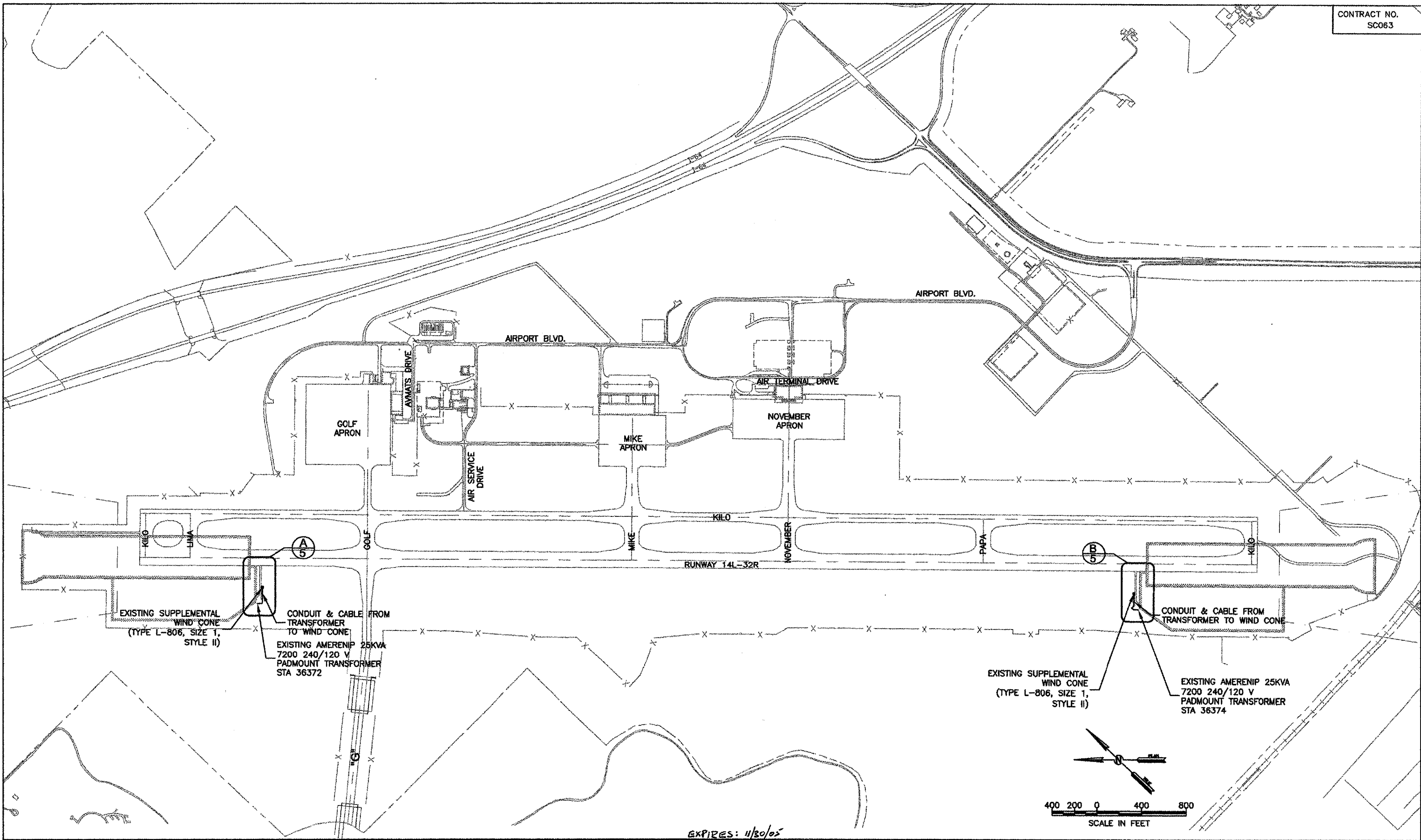


CONSTRUCTION SAFETY PLAN

DWG. FILE NAME
84723-C-03
SHEET NO.
3

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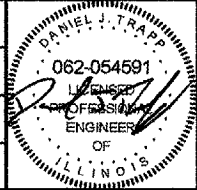
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EXPIRES: 11/30/05

REV.	DATE	BY	APPR.	DESCRIPTION	PLOT FILE	REV.	DATE	BY	APPR.	DESCRIPTION	PLOT FILE

DESIGNED BY: RWH
DRAWN BY: RWH
CHECKED BY: DJT
DATE: 9/23/05



LIGHT SUPPLEMENTAL
WIND CONES

1075 Eastgate Drive
O'Fallon, Illinois 62268
PH 618-624-2628
FAX 618-624-2730



SITE PLAN

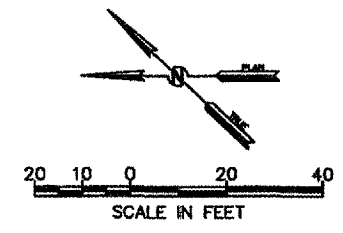
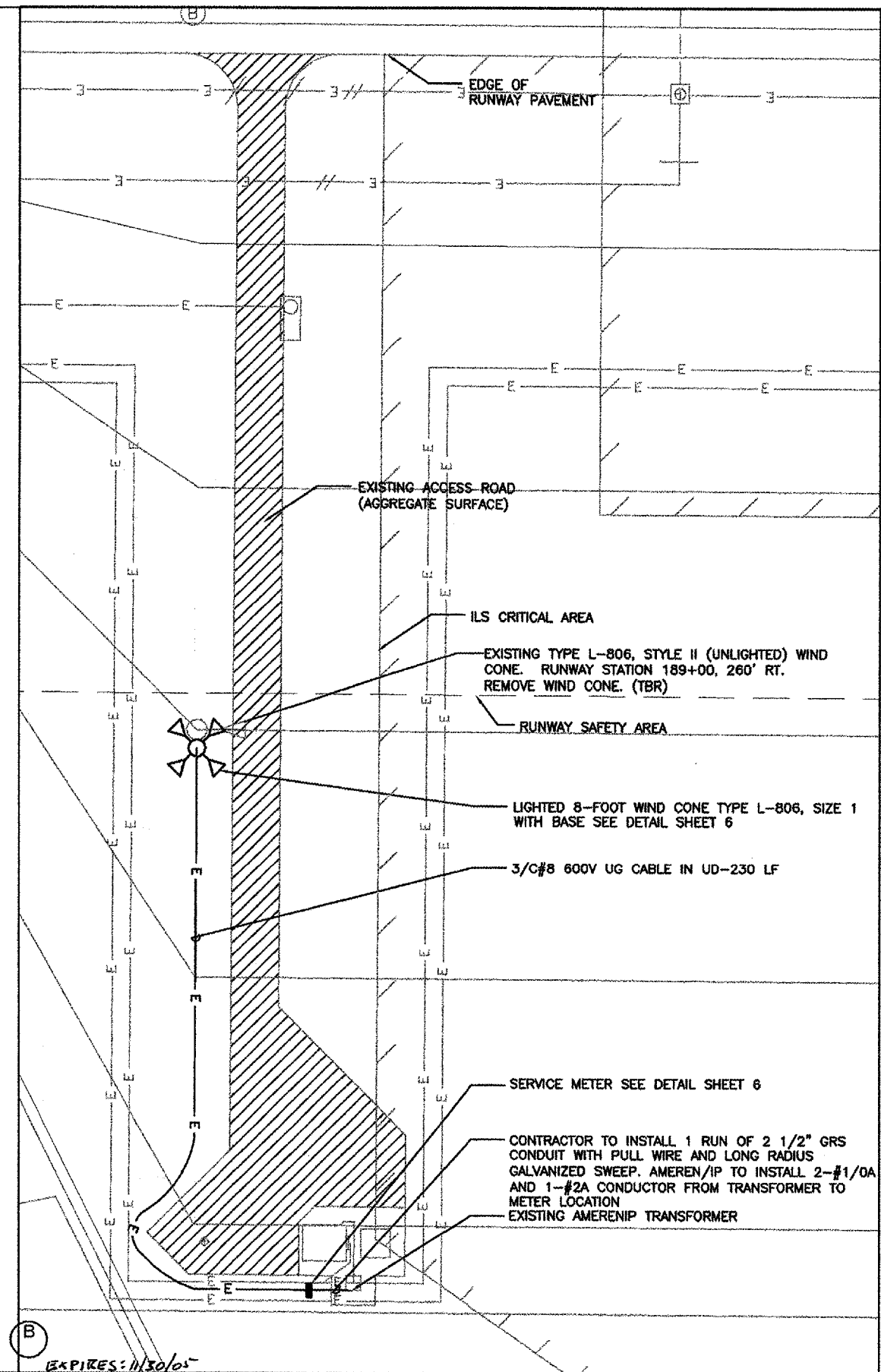
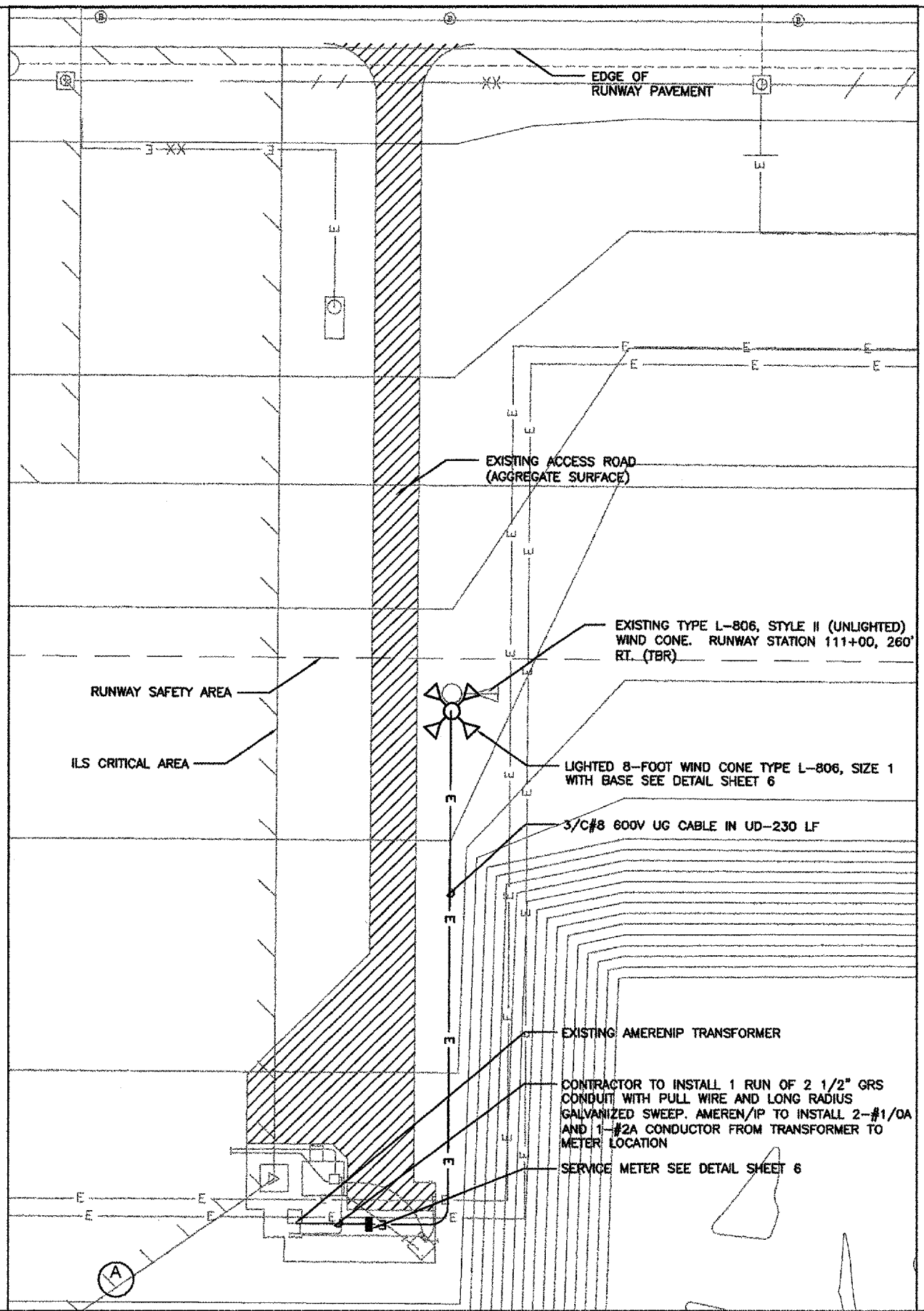
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87727-E-04

SHEET NO.
4

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NOTES:

1. CONTRACTOR TO NOTIFY FAA (RUDY BRODSKY, 618.256.1800) AT LEAST PRIOR TO ANY TRENCHING ACTIVITIES.
2. INSTALL EROSION CONTROL MEASURES AS REQUIRED OR AS DIRECTED BY R.E. COST OF ANY EROSION CONTROL SHALL BE INCIDENTAL TO PROJECT.



EXPIRES: 11/30/05

REV.	DATE	BY	APPR.	DESCRIPTION	PLOT FILE	REV.	DATE	BY	APPR.	DESCRIPTION	PLOT FILE

DESIGNED BY: RWH
 DRAWN BY: RWH
 CHECKED BY: DJT
 DATE: 9/23/05

Daniel J. Trapp
 LICENSED PROFESSIONAL ENGINEER
 OF ILLINOIS
 062-054591

MidAmerica
 ST. LOUIS AIRPORT

EarthTech
 A Tyco International Ltd. Company

LIGHT SUPPLEMENTAL WIND CONES

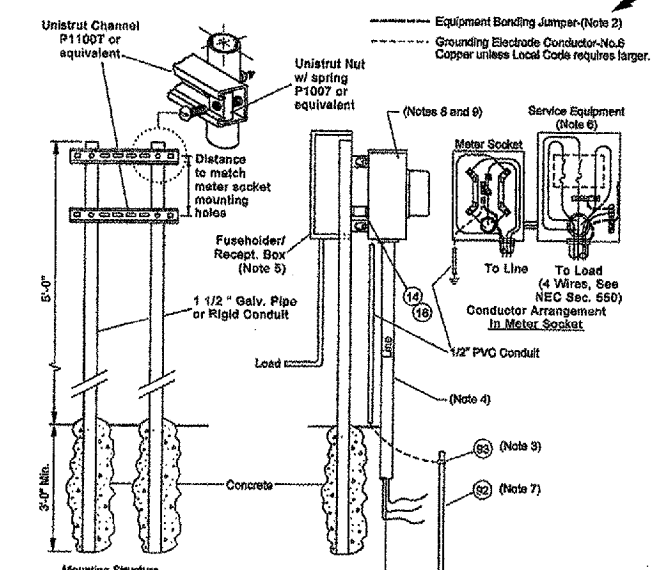
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PARTIAL SITE PLAN

DWG. FILE NAME 87727-E-05
SHEET NO. 5

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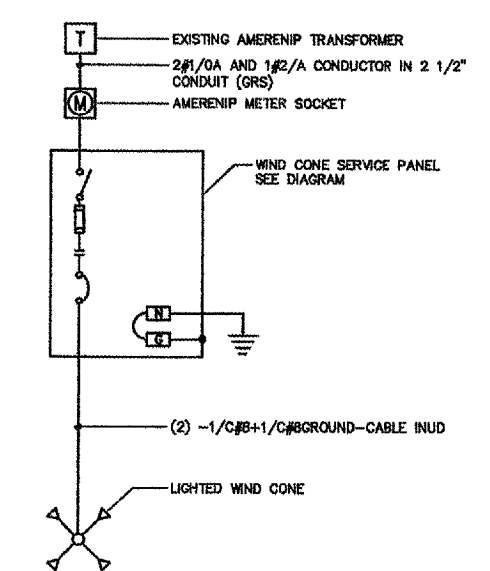
ITEM NO.	DESCRIPTION
(14)	GALVANIZED CONDUIT LOCKWIT.
(15)	GALVANIZED CONDUIT BUSHING, BONDING TYPE.
(22)	COPPERWELD GROUND ROD 5/8" X 10'.
(23)	GROUND ROD CLAMP, 3/8", NEC APPROVED.
(24)	METERING MOUNTING DEVICE, 100 OR 200 AMP, 1 PHASE, UNDERGROUND. THE METER SOCKET MUST HAVE A U.L. LABEL AND CONFORM TO THE APPLICABLE REQUIREMENTS LISTED IN SWS 102.515.

RECOMMENDED SIZE FOR SERVICE ENTRANCE CONDUIT, CONDUCTOR, AND BONDING JUMPER FOR 1 PHASE, 3 WIRE RESIDENTIAL SERVICE (METER TO MAIN PANEL).

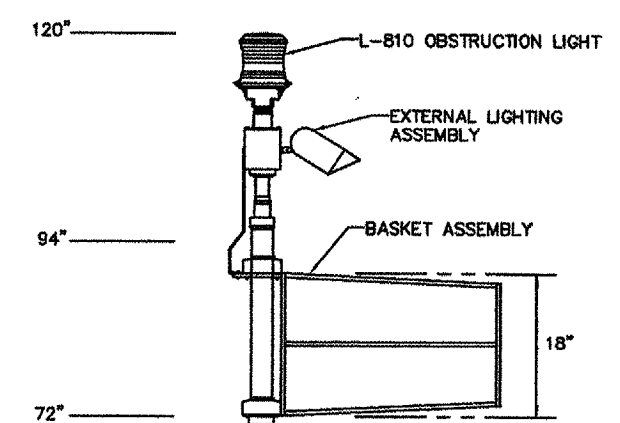
THE FOLLOWING COPPER AND ALUMINUM CONDUCTORS ARE PERMITTED. PROPER APPLICATION OF "CON-TAX" GREASE IS REQUIRED WITH ALUMINUM CONDUCTORS.

SERVICE AMPERE RATING	CONDUCTOR SIZE		BONDING JUMPER		CONDUIT SIZE
	CUL	AL	CUL	AL	
100 AMP	NO. 3	NO. 1	NO. 8	NO. 6	1 1/2"
200 AMP	NO. 2	NO. 1	NO. 2	NO. 4	2"

NOTES:
 1) ALL CONDUCTOR SIZES ARE BASED ON 75°C INSULATION RATING.
 2) CUSTOMER IS TO PROVIDE, INSTALL, AND MAINTAIN MATERIAL. IPE IS TO PROVIDE, INSTALL, AND MAINTAIN MATERIAL.
 3) NEC APPROVED CLAMP. LEAVE UNCOVERED UNTIL AFTER INSPECTION. GROUND CLAMP MUST BE 8" BELOW SURFACE OF FINAL GRADE.
 4) ALWAYS CONSULT THE LOCAL IPE OFFICE FOR PROPER LIVE SIDE CONDUIT SIZE.

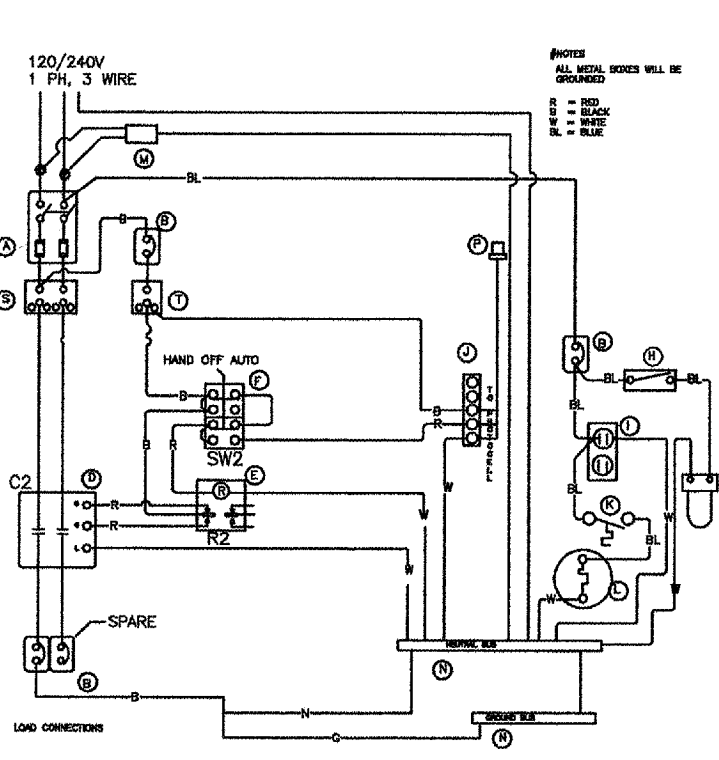


SINGLE LINE DIAGRAM
NTS



1 WIND CONE PCC BASE ELEVATION
NTS

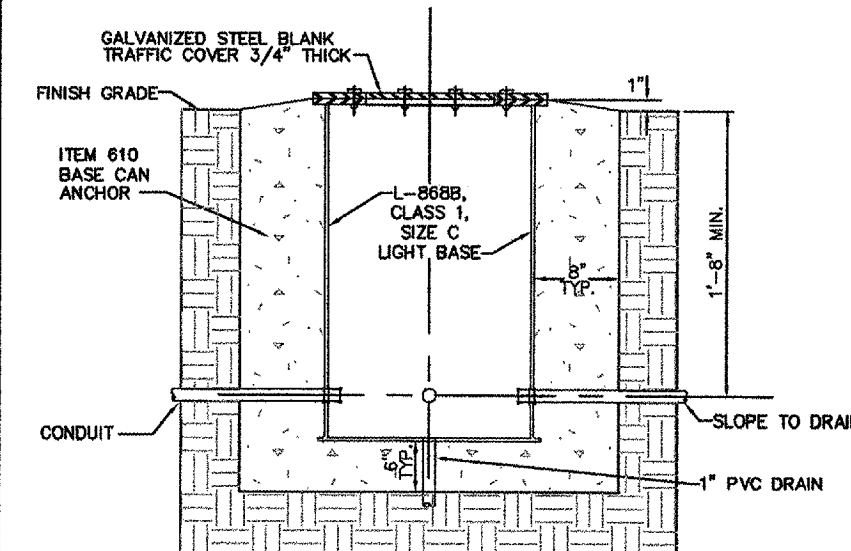
ELECTRIC UTILITY STANDARDS
NTS



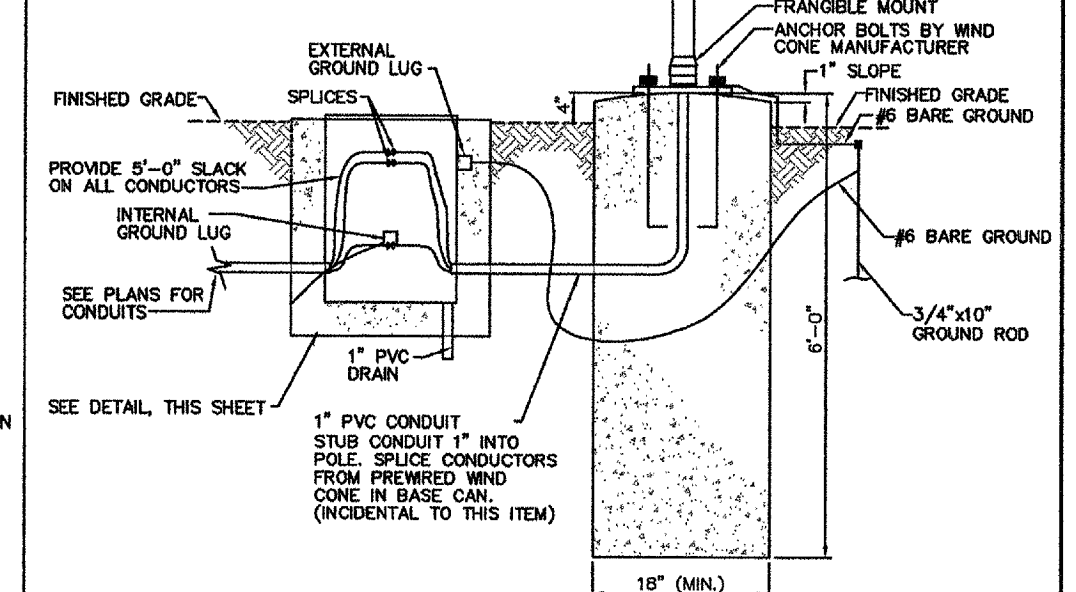
WIND CONE SERVICE PANEL DIAGRAM
NTS

BILL OF MATERIALS

ITEM	QTY	DESCRIPTION
A	1	SQUARE D FUSE SW SERVICE DISCONNECT ENCLOSURE
B	2	CIRCUIT BREAKER GRC1015 1P/10A
C	2	CIRCUIT BREAKER GRC1030 1P/30A
D	1	MECH HELD CONTACTOR 2P 30A 120V COIL
E	1	MAGNECRAFT W211AC050C-7 120V
F	1	SQUARE D 9001K1111 HOA
G	1	DMR VIKTORIA LIGHT FIXTURE
H	1	LEVER SWITCH-42 DOOR SWITCH
I	1	LEVITON 8888 OFG 20A RECP.
J	1	CONCH SET 3B
K	1	THERMOSTAT GRINDER 20302
L	1	STIMP HEATER GRINDER 20319
M	1	SQUARE D 808A1175 SURGE ARRESTOR
N	2	SECURON/ADDITIONAL REAR BASE
P	1	PHOTO CELL WITH TRIP BASE



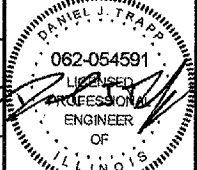
2 TYPICAL INSTALLATION DETAIL FOR
BASE CAN IN TURF
NTS



1 WIND CONE PCC BASE ELEVATION
NTS

EXPIRES: 11/30/05

DESIGNED BY: RWH
 DRAWN BY: RWH
 CHECKED BY: DJT



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WIND CONES
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DETAILS

DWG. FILE NAME
87727-E-06
 SHEET NO.
6

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DATE: 9/23/05