9-21-07 Letting Item

1A

DK051

TOTAL SHEETS - 52

CONSTRUCTION PLANS

FOR

DEKALB TAYLOR MUNICIPAL AIRPORT

DEKALB, DEKALB COUNTY, ILLINOIS

INSTALL MALSR AND GLIDE SLOPE ON RUNWAY END 2

THIS WORK SHALL CONSIST OF INSTALLING A MEDIUM INTENSITY APPROACH LIGHTING SYSTEM WITH RUNWAY ALIGNMENT INDICATOR LIGHTS (MALSR) AND INSTALLING A GLIDE SLOPE ON RUNWAY END 2. ASSOCIATED WORK ITEMS INCLUDE INSTALLATION OF POWER AND CONTROL CABLES, COORDINATION OF THE INSTALLATION OF PRIMARY POWER FOR BOTH FACILITIES, INSTALLATION OF APPROPRIATE ELECTRICAL EQUIPMENT FOR BOTH FACILITIES.

LOCATION OF COUNTY

LOCATION MAP

ILL. PROJ. DKB-3225
AIP. PROJ. 3-17-0139-B37

LATITUDE: 41° 55' 48"
LONGITUDE: 88° 42' 48"
ELEVATION: 911.0' M.S.L.

DATE: MARCH 30, 2007

LICENSED PROFESSIONAL ENGINEER — CHARLES A. HAGLOCH 062-037621 — STATE OF ILLINOIS

LICENSED PROFESSIONAL ENGINEER — KEVIN N. LIGHTFOOT 062-047643 — STATE OF ILLINOIS

COVERING ELECTRICAL DESIGN

REVISED 06/25/07
REVISED AS PER FAA REVIEW - 04/19/07

PLANS PREPARED BY:

HANSON
Hanson Professional Services Inc.

Submitted by: Charles A. Hagloch ENG'R
Date Submitted 6/26/07
Lics. Exp. Date NOVEMBER 30, 2007

PLANS PREPARED BY:

HANSON
Hanson Professional Services Inc.

ELECTRICAL ENGINEER
Submitted by: Kevin N. Lightfoot ENG'R
Date Submitted 6/26/2007
Lics. Exp. Date NOVEMBER 30, 2007

CITY OF DEKALB

Approved Joel Maurer
JOEL MAURER - CITY ENGINEER
Date 4-4-07

Approved Thomas K. Cleveland
TOM CLEVELAND - AIRPORT MANAGER
Date 4-4-07

REVISION	DATE	BY

DTMA — DEKALB TAYLOR MUNICIPAL AIRPORT
A.I.P. PROJ.: 3-17-0139-B37
IL. PROJ.: DKB-3225

HANSON PROJECT No. 803-06ELEC
Filename R-001CVR.DWG
Scale N/A
Date 04/20/07

LAYOUT	CCC	02/02/07
DRAWN	BAK	02/02/07
REVIEWED	CAH	03/19/07

HANSON
Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62703-2886
Offices Nationwide

INSTALL MALSR & GLIDE SLOPE

COVER SHEET

1

1 of 48 sheets

JUN 22, 2007 11:12 AM CAH
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DK051

SUMMARY OF QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	TOTAL QUANTITIES	AS BUILT QUANTITIES
AR107408	L-806 WIND CONE-8' LIGHTED	EA.	1	
AR110014	4" DIRECTIONAL BORE	L.F.	426	
AR125907	REMOVE REILS	PR.	1	
AR127420	GLIDE SLOPE	L.S.	1	
AR127431	10' X 12' SHELTER BUILDING	EA.	1	
AR127432	10' X 14' SHELTER BUILDING	EA.	1	
AR127450	MALSR INSTALLATION	L.S.	1	
AR150510	ENGINEER'S FIELD OFFICE	L.S.	1	
AR150540	HAUL ROUTE	L.S.	1	
AR152410	UNCLASSIFIED EXCAVATION	C.Y.	177	
AR209510	CRUSHED AGGREGATE BASE COURSE	TON	371	
AR620520	PAVEMENT MARKING - WATERBORNE	S.F.	17,152	
AR620912	TEMPORARY MARK & LIGHT	L.S.	1	
AR800432	TELEPHONE CABLE	L.F.	1,964	

INDEX TO SHEETS

DATE	REVISION	BY

DMA

DeKalb Taylor Municipal Airport

A.I.P. PROJ.: 3-17-0139-B37

IL. PROJ.: DKB-3225

HANSON PROJECT No. 803-06ELEC
Filename R-001FLP.DWG
Scale NOT TO SCALE
Date 06/27/07

LAYOUT	BAK	02/02/07
DRAWN	BAK	02/02/07
REVIEWED	CAH	03/19/07

HANSON

Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62703-2886
Offices Nationwide

INSTALL MALSR & GLIDE SLOPE

SUMMARY OF QUANTITIES AND INDEX TO SHEETS

2

2 of 48 sheets

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DK051

SCOPE OF WORK

THIS WORK SHALL CONSIST OF INSTALLING A MEDIUM INTENSITY APPROACH LIGHTING SYSTEM WITH RUNWAY ALIGNMENT INDICATOR LIGHTS (MALSR) AND INSTALLING A GLIDE SLOPE ON RUNWAY END 2. ASSOCIATED WORK ITEMS INCLUDE INSTALLATION OF POWER AND CONTROL CABLES, COORDINATION OF THE INSTALLATION OF PRIMARY POWER FOR BOTH FACILITIES, INSTALLATION OF APPROPRIATE ELECTRICAL EQUIPMENT FOR BOTH FACILITIES.

BARRICADES AND TRAFFIC CONES

IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO PLACE AND MAINTAIN BARRICADES, TRAFFIC CONES AND SIGNS AS SHOWN ON THE STAGING PLAN, DISPLACEMENT INSTALLATION PLANS AND AS DIRECTED BY THE RESIDENT ENGINEER. THE BARRICADES WILL BE EQUIPPED WITH RED STEADY BURN OR RED FLASHING LIGHTS. THE BARRICADES WILL HAVE A MAXIMUM HEIGHT OF 30 INCHES, INCLUSIVE OF THE LIGHT. THE BARRICADES, THEIR MAINTENANCE, PLACEMENT AND REMOVAL WILL BE CONSIDERED AS AN INCIDENTAL ITEM TO THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

CONTRACTOR RESPONSIBILITIES

THE CONTRACTOR'S EQUIPMENT PARKING AND STORAGE AREA WILL BE AS SHOWN ON THIS PROPOSED SAFETY PLAN. THE CONTRACTOR'S EMPLOYEES WILL PARK THEIR VEHICLES IN THIS AREA, AND ONLY CONTRACTOR VEHICLES REQUIRED FOR CONSTRUCTION WILL BE ALLOWED OUTSIDE THIS AREA.

THE CONTRACTOR AND HIS EMPLOYEES WILL BE RESTRICTED TO THE WORK AREA AND ALL OTHER AREAS OF THE AIRPORT ARE "OFF LIMITS".

THE CONTRACTOR WILL BE REQUIRED TO LIMIT THE USE OF CONSTRUCTION EQUIPMENT ON ANY EXISTING PAVEMENTS. ONLY THAT EQUIPMENT NEEDED TO COMPLETE THE SPECIFIC WORK ON THE EXISTING PAVEMENTS WILL BE ALLOWED. NO EXCESSIVE TRAFFIC ACROSS THESE PAVEMENTS WILL BE PERMITTED. ANY DAMAGE TO EXISTING PAVEMENTS WILL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER AT NO ADDITIONAL COST TO THE CONTRACT.

HAUL ROUTE AND EQUIPMENT PARKING

THE DESIGNATED HAUL ROUTES WILL BE THE ONLY VEHICULAR ACCESS TO THE CONSTRUCTION SITE.

THE CONTRACTOR WILL BE REQUIRED TO MAINTAIN THE PROPOSED HAUL ROUTES AND EQUIPMENT PARKING AND MATERIAL STORAGE AREAS THROUGHOUT THE COURSE OF THE PROJECT. ANY AREAS DAMAGED OUTSIDE OF THE DESIGNATED HAUL ROUTES AND EQUIPMENT PARKING AND MATERIAL STORAGE AREAS WILL BE REPAIRED BY THE CONTRACTOR AT THE CONTRACTOR'S OWN EXPENSE. AT THE CONCLUSION OF THE PROJECT, THE CONTRACTOR WILL RESTORE THE HAUL ROUTES AND ADJACENT TURF AREAS WILL BE RESTORED TO THEIR ORIGINAL STATE. RESTORATION OF THESE AREAS WILL BE CONSIDERED INCIDENTAL TO THE PROJECT, AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

PROPOSED SAFETY PLAN

THE DEKALB TAYLOR MUNICIPAL AIRPORT IS COMPRISED OF TWO RUNWAYS. THIS PROJECT WILL REQUIRE RUNWAY END 2 TO BE TEMPORARILY DISPLACED AT THE START OF CONSTRUCTION ACTIVITIES. ALL RUNWAY CLOSURES WILL BE COORDINATED WITH THE AIRPORT MANAGER IN ADVANCE TO ALLOW TIME FOR THE ISSUANCE OF THE REQUIRED NOTICE TO AIRMAN (NOTAM).

NO OPEN HOLES OR TRENCHES WILL BE ALLOWED WITHIN 200' OF AN ACTIVE RUNWAY, WITHIN 40' OF A ACTIVE TAXIWAY.

IDENTIFICATION – WHEN THE CONTRACTOR'S VEHICLES AND EQUIPMENT ARE ON THE AIRPORT THEY SHALL BE PROPERLY MARKED WITH THREE (3') FOOT SQUARE CHECKERED FLAGS. (INTERNATIONAL ORANGE AND WHITE).

RADIO CONTROL – THE CONTRACTOR WILL BE REQUIRED TO BE IN TWO-WAY RADIO CONTACT (122.7 MHZ.) WITH THE AIRPORT UNICOM. THIS WILL KEEP THE CONTRACTOR IN CONSTANT CONTACT WITH THE DEKALB TAYLOR MUNICIPAL AIRPORT AND ENABLE THE AIRPORT TO IMMEDIATELY CONTACT THE CONTRACTOR IN CASE OF A AERONAUTICAL EMERGENCY THAT WOULD REQUIRE ACTION BY THE CONTRACTOR AND/OR HIS PERSONNEL.

EROSION CONTROL

THIS PROJECT WILL DISTURB LESS THAN 1 ACRE OF LAND. A STORMWATER POLLUTION PREVENTION PLAN IS NOT REQUIRED.

150-ENGINEER'S FIELD OFFICE NOTES

THE PROPOSED ENGINEER'S FIELD OFFICE WILL BE FURNISHED, MAINTAINED, AND REMOVED IN ACCORDANCE WITH ITEM AR150510 "ENGINEER'S FIELD OFFICE" AS STATED ON PAGE 168 OF THE SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS, ADOPTED JULY 1, 2004.

THE LOCATION OF THE PROPOSED ENGINEER'S FIELD OFFICE WILL BE AS SHOWN. THIS WILL REQUIRE PHONE AND ELECTRIC SERVICE TO BE SUPPLIED.

THE ENGINEERING FIRM WILL MAKE PAYMENT FOR ALL LONG DISTANCE TELEPHONE CALLS IN EXCESS OF ONE HUNDRED DOLLARS ($100.00) PER MONTH.

THE PROPOSED ENGINEER'S FIELD OFFICE WILL BE PAID FOR UNDER ITEMS:
AR150510 ENGINEER'S FIELD OFFICE _____ 1 L.S.

BENCHMARK DATA

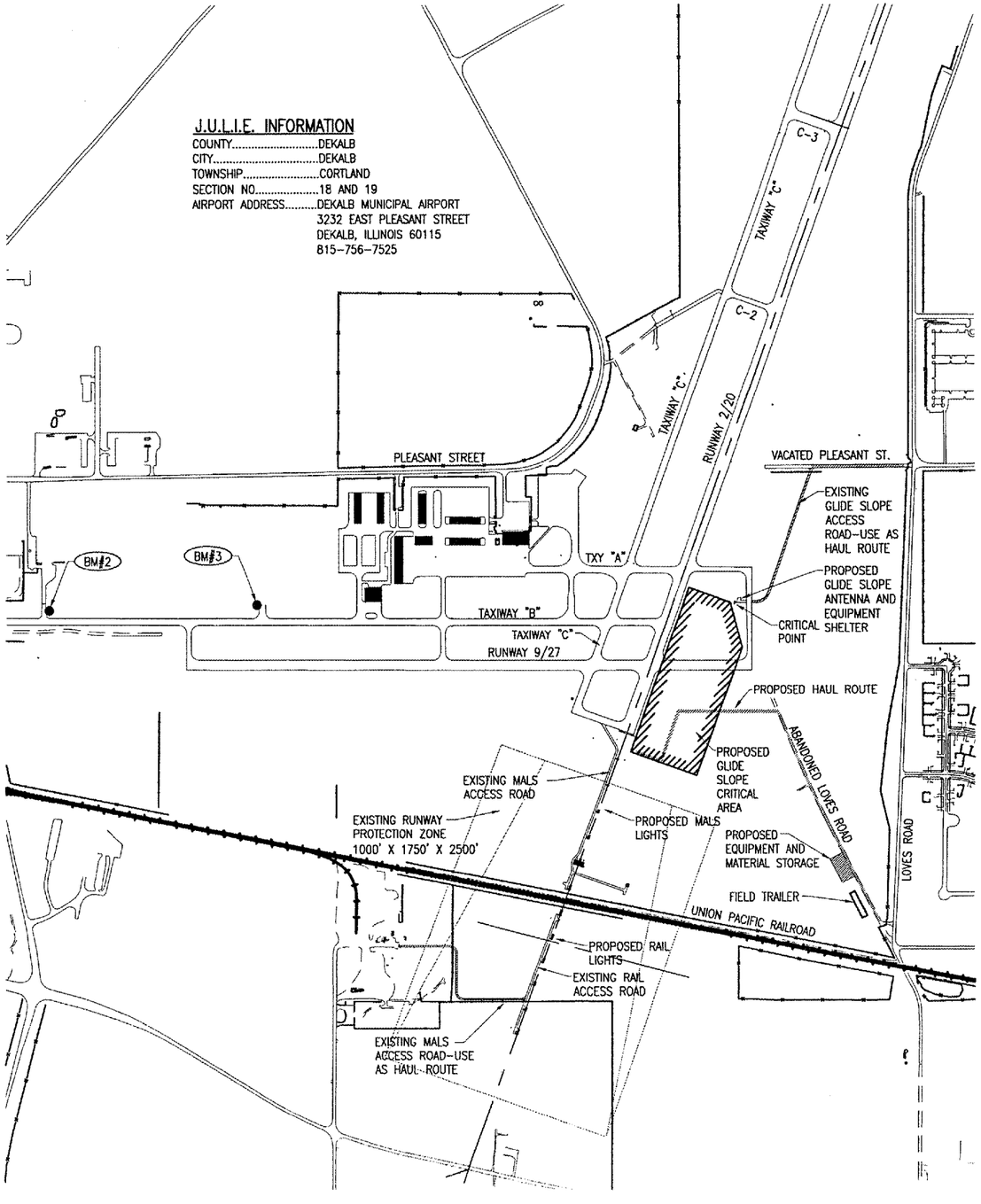
BM#	DESCRIPTION	ELEVATION
BM #2	NGS MONUMENT "KALBPORT AZ MK": STAINLESS STEEL ROD IN SLEEVE	903.47'
BM #3	NGS MONUMENT "KALBPORT": STAINLESS STEEL ROD IN SLEEVE	907.81'

CRITICAL POINT DATA

DESCRIPTION	STATION	LATITUDE	LONGITUDE	ELEVATION
SW CORNER GLIDE SLOPE SHELTER	424.5' RT., 113+81.5	41°55'49.077"	88°42'13.93"	907.5'

J.U.L.I.E. INFORMATION

COUNTY.....DEKALB
CITY.....DEKALB
TOWNSHIP.....CORTLAND
SECTION NO.....18 AND 19
AIRPORT ADDRESS.....DEKALB MUNICIPAL AIRPORT
3232 EAST PLEASANT STREET
DEKALB, ILLINOIS 60115
815-756-7525



AIRPORT SECURITY NOTE

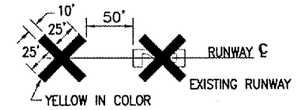
AIRPORT SECURITY WILL BE MAINTAINED AT ALL TIMES. THE CONTRACTOR WILL ALLOW HIS PERSONNEL AND EQUIPMENT ACCESS TO THE CONSTRUCTION SITE ONLY THROUGH THE PROPOSED HAUL ROUTE AS DESIGNATED. THE CONTRACTOR WILL ENSURE THE GATE TO THE HAUL ROUTE IS CLOSED AND LOCKED AT THE END OF EACH WORKING DAY.

HEIGHT OF CONSTRUCTION EQUIPMENT

THE MAXIMUM ANTICIPATED HEIGHT OF THE CONSTRUCTION EQUIPMENT IS 65 FEET. THE TALLEST EQUIPMENT IS EXPECTED TO BE A CRANE TO ERECT THE GLIDE SLOPE TOWER.

UTILITY NOTE

THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES AND AGENCIES WHICH HAVE LINES OR CONDUITS IN THE PROPOSED WORK AREA. ALL LINES AND CONDUITS SHALL BE LOCATED AND IDENTIFIED FOR DEPTH BEFORE ANY EXCAVATION BEGINS. THE CONTRACTOR WILL CALL J.U.L.I.E. (1-800-892-0123) TO ACCOMPLISH THE ABOVE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO IDENTIFY ALL UNDERGROUND NON-J.U.L.I.E. UTILITIES LOCATED WITHIN THE PROPOSED CONSTRUCTION LIMITS. THESE UNDERGROUND UTILITIES ARE TO BE LOCATED PRIOR TO THE START OF CONSTRUCTION OPERATIONS.



DETAIL OF CROSS FOR CLOSED RUNWAY
"NOT TO SCALE"

NOTE:

THE COST OF CONSTRUCTING, PLACING, MAINTAINING, AND REMOVING CROSSES WILL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED. THE CROSSES WILL BE YELLOW IN COLOR AND SHALL BE MADE OF A SUITABLE MATERIAL AS APPROVED BY THE RESIDENT ENGINEER. THE CROSSES WILL BE PLACED OVER THE NUMERALS AND SECURED IN A MANNER APPROVED BY THE RESIDENT ENGINEER. THE PROPOSED CROSSES WILL BE PLACED EACH DAY THE RUNWAY IS CLOSED AND REMOVED WHEN THE RUNWAY IS RE-OPENED. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE PLACEMENT AND REMOVAL OF THE CROSSES AT NO ADDITIONAL COST TO THE CONTRACT.

J.U.L.I.E. TELEPHONE NUMBER

1-800-892-0123

KNOWN UTILITIES WITHIN THE LIMITS OF THE PROPOSED IMPROVEMENTS ARE:

MRC TELECOMMUNICATIONS
P.O. BOX 60
RUBICON, WISCONSIN 53078

COMMONWEALTH EDISON
123 ENERGY AVENUE
ROCKFORD, ILLINOIS 61109

VERIZON
112 WEST ELM STREET
SYCAMORE, ILLINOIS 60178

TOWN OF CORTLAND
1909 SOMONAUK RD.
CORTLAND, IL. 60112

NORTHERN ILLINOIS GAS
300 WEST TERRA COTTA AVENUE
CRYSTAL LAKE, IL 60014-3595

DEKALB SANITARY DISTRICT
303 HOLLISTER AVE.
DEKALB, IL. 60115

DEKALB COUNTY HIGHWAY DEPARTMENT
WILLIAM LORENCE, COUNTY ENGINEER
2910 BARBER GREENE RD.
DEKALB, IL. 60115

CORTLAND TOWNSHIP
ROBERT NORDMAN
HIGHWAY COMMISSIONER
1020 PRAIRIE STREET
CORTLAND, IL. 60112

LEGEND

EXISTING IMPROVEMENTS
PROPOSED IMPROVEMENTS
EXISTING PAVEMENT TO BE REMOVED
PROPOSED HAUL ROUTE

0' 250' 500' 1000'
SCALE: 1"= 500'

DITMAX

DEKALB TAYLOR MUNICIPAL AIRPORT

A.I.P. PROJ.: 3-17-0139-B37
IL. PROJ.: DKB-3225

BY	REVISION	DATE

HANSON PROJECT No. 803-06ELEC
Filename R-003SFY.DWG
Scale 1"=500'
Date 04/20/07

	BAK	02/02/07
LAYOUT	BAK	02/02/07
DRAWN	CAH	03/19/07
REVIEWED		

HANSON

Hanson Professional Services Inc.
1525 S. 6th Street, Suite 4
Springfield, Illinois 62703-2866
Offices Nationwide

INSTALL MALSR & GLIDE SLOPE

PROPOSED SAFETY PLAN

3

3 of 48 sheets

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DK051

NOTES – DISPLACED THRESHOLD ON RUNWAY 2-20

THIS PROJECT WILL REQUIRE THE TEMPORARY RELOCATION OF RUNWAY 2 END. THIS RELOCATION WILL BE IN ACCORDANCE WITH THE LAYOUTS AND DETAILS SHOWN ON THIS SHEET.

THE PROPOSED TEMPORARY MARKING (TYPE 1) WILL CONSIST OF PLACING REFLECTIVE TAPE ON THE EXISTING PAVEMENT AT THE LOCATIONS AND DETAILS SHOWN ON THIS SHEET AND ON RUNWAY END 2 PROPOSED TEMPORARY MARKING AND LIGHTING PLAN. PRIOR TO PLACING THE REFLECTIVE TAPE, THESE LOCATIONS SHALL BE PRESSURE WASHED.

THE REFLECTIVE TAPE WILL BE 4" WIDE, WHITE OR YELLOW IN COLOR. THE PROPOSED TAPE SHALL BE STANDARD HIGHWAY PRESSURE SENSITIVE TRAFFIC MARKING TAPE OR APPROVED EQUAL.

THE TEMPORARY RELOCATED THRESHOLD BAR AND RUNWAY NUMERAL WILL BE WHITE IN COLOR AND CONSTRUCTED IN ACCORDANCE WITH THE DETAILS ON THIS SHEET.

THE PROPOSED TEMPORARY CHEVRONS WILL BE YELLOW IN COLOR AND CONSTRUCTED IN ACCORDANCE WITH THE DETAIL ON THIS SHEET.

THE TEMPORARY CHEVRONS WILL BE PLACED ON RUNWAY 2-20 AS SHOWN ON THIS SHEET.

ALL TEMPORARY MARKING WILL BE IN PLACE AT THE END OF EACH CONSTRUCTION DAY AND REPAIRED TO THE SATISFACTION OF THE RESIDENT ENGINEER.

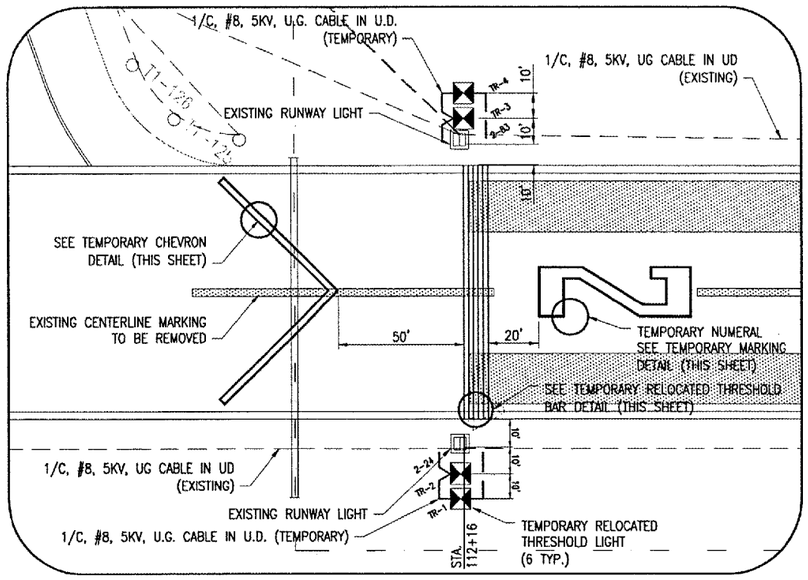
THE EXISTING RUNWAY LIGHTS 2-1 THRU 2-5, AND 2-16 THRU 2-20 WILL HAVE THEIR SPLIT CLEAR-AMBER LENSES REMOVED AND SWAPPED WITH THE LENSES FROM LIGHTS 2-26 THRU 2-30 AND 2-77 THRU 2-81. THE AMBER SIDE OF THE LENSES WILL BE POSITIONED TOWARD THE NORTH. THEN REMAINING RUNWAY 2-20 LIGHTS THAT ARE SOUTH OF THE TEMPORARY DISPLACED THRESHOLD. WILL BE COVERED IN A WAY THAT IS APPROVED BY THE RESIDENT ENGINEER AND WILL NOT EMIT LIGHT.

EXISTING THRESHOLD LIGHTS 2-7 THRU 2-11 WILL BE RELOCATED AS SHOWN ON THIS SHEET TO COMPLETE THE RELOCATED THRESHOLD. THE LENSE ON LIGHT 2-18 WILL BE REPLACED WITH SPLIT RED/GREEN LENSES FROM EXISTING THRESHOLD LIGHTS 2-12. ALL REMAINING THRESHOLD LIGHTS ON RUNWAY END 2 WILL BE COVERED SO THEY DO NOT EMIT ANY LIGHT. UPON REMOVAL OF THE TEMPORARY THRESHOLD THE CONTRACTOR WILL RETURN THE THRESHOLD LIGHTS BACK TO THEIR ORIGINAL LOCATION AND RETURN ALL GLOBES TO THEIR ORIGINAL OWNERS.

APPROXIMATELY 100' OF NO. 8, 5KV., 1/C TYPE C UG. CABLE WILL BE REQUIRED TO CONNECT THE TEMPORARY THRESHOLD LIGHTS INTO THE RUNWAY 2-20 LIGHTING CIRCUIT.

ALL PROPOSED NO. 8, 5KV., 1/C TYPE C CABLE NEEDED TO TEMPORARILY WIRE THE PROPOSED TEMPORARY THRESHOLD LIGHTS WILL BE TURNED OVER TO THE AIRPORT UPON REMOVAL OF THE RELOCATED THRESHOLD. THIS CABLE WILL BE CONSIDERED INCIDENTAL TO THE TEMPORARY MARKING AND LIGHTING AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

THE EXISTING REIL'S AND V.A.S.I. FOR RUNWAY END 2 WILL BE TURNED OFF AS LONG AS THE TEMPORARY DISPLACEMENT IS IN PLACE.



DETAIL "A"
FULL SIZE SCALE: 1" = 30'
HALF SIZE SCALE: 1" = 60'

MARKING REMOVAL NOTES

THE AREAS THAT ARE DESIGNATED EXISTING (TO BE REMOVED) WILL BE REMOVED BY SANDBLASTING, SHOT BLASTING OR WATER BLASTING.

ALL AREAS TO BE REMOVED ARE CALCULATED AREAS. ANY ADDITIONAL AREAS, DUE TO OVER SPRAY, SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED

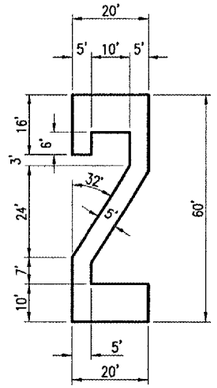
THE PROPOSED MARKING REMOVAL SHALL BE PAID FOR UNDER ITEM AR620912 "TEMPORARY MARK AND LIGHT" – 1 L.S.

LEGEND

- EXISTING PAVEMENT
- EXISTING MARKING (TO BE REMOVED)
- PROPOSED TEMPORARY MARKING
- EXISTING ELECTRICAL CABLES
- PROPOSED ELECTRICAL CABLES
- EXISTING STAKE MOUNTED RUNWAY LIGHT
- PROPOSED TEMPORARY RELOCATED THRESHOLD LIGHT

RUNWAY 2-20 MARKING REMOVAL QUANTITIES

DESCRIPTION	UNIT AREA	NUMBER REQUIRED	TOTAL AREA (S.F.)
RUNWAY NUMERAL 2	652	1	652
RUNWAY TOUCHDOWN ZONE STRIPE – 4'x75'	300	6	1,800
RUNWAY CENTERLINE STRIPE – 3'x38'	114	1	114
RUNWAY CENTERLINE STRIPE – 3'x120'	360	4	1,440
RUNWAY THRESHOLD STRIPE – 5.75'x150'	862.5	8	6,900
RUNWAY AIMING POINT STRIPE – 20'x150'	3,000.0	2	6,000
TOTAL RUNWAY 2-20 MARKING REMOVAL			**16,906**



NUMERAL 2 DETAIL
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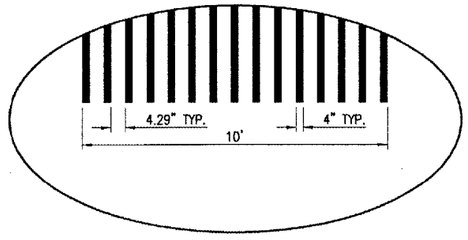

TEMPORARY RELOCATED THRESHOLD BAR DETAIL
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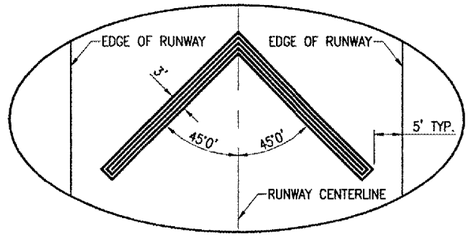

TEMPORARY CHEVRON DETAIL
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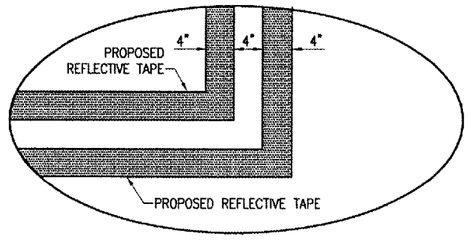

TEMPORARY MARKING DETAIL
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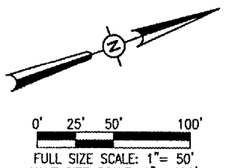
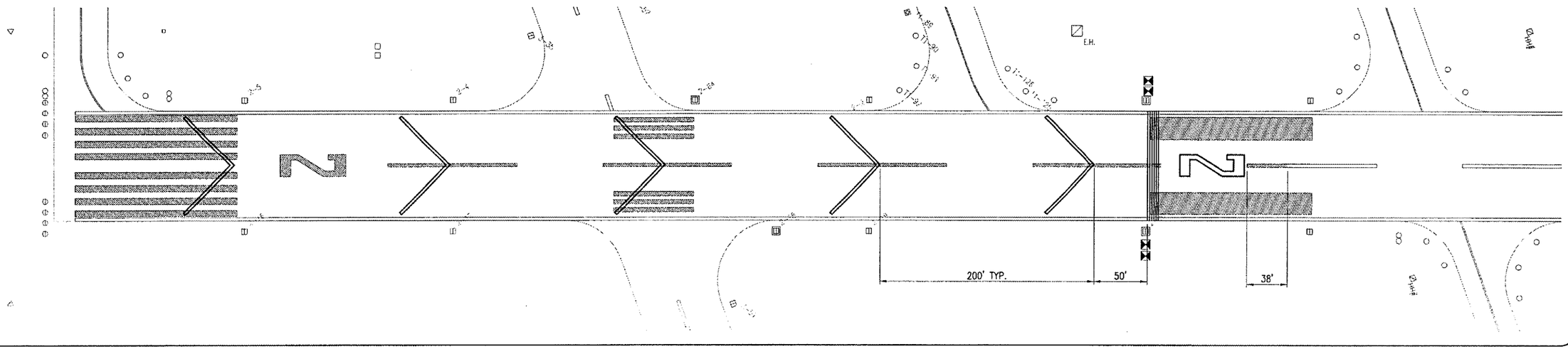


FULL SIZE SCALE: 1"= 50'
HALF SIZE SCALE: 1"= 100'



DATE | REVISION | BY

DEKALB TAYLOR MUNICIPAL AIRPORT
A.I.P. PROJ.: 3-17-0139-B37
IL. PROJ.: DKB-3225

HANSON PROJECT No. 803-06ELEC
Filename R-151MRK.DWG
Scale 1"=50'
Date 04/20/07

LAYOUT	CAH	03/19/07
DRAWN	CCC	03/19/07
REVIEWED	CAH	03/21/07

HANSON
Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62703-2886
Offices Nationwide

INSTALL MALSR RUNWAY END 2

PROPOSED TEMPORARY MARKING AND LIGHTING PLAN

4

4 OF 48 SHEETS

APR 06, 2007 8:54 AM BAK
\\AIRPORTS\DEKALB\803-06ELEC\AIRPORT\SHEETS\AUTO-CADD SHEETS\R-151MRK.DWG - Sheet 4

DK051

MARKING QUANTITIES	
WHITE MARKING: AR620520	TOTAL AREA (S.F.)
RUNWAY THRESHOLD STRIPE – 5.75'x150' (x8)	6,900
RUNWAY CENTERLINE STRIPE – 3'x120' (x5)	1,800
RUNWAY TOUCHDOWN ZONE STRIPE – 4'x75' (x6)	1,800
RUNWAY AIMING POINT STRIPE – 20'x150' (x2)	6,000
RUNWAY NUMERAL 2	652
TOTAL WHITE:	17,152

620–PAVEMENT MARKING–WATERBORNE

THE PAVEMENT MARKING–WATERBORNE (620) SHALL BE PLACED IN ACCORDANCE WITH ITEM 620 "PAVE MARKING" AS STATED ON PAGE 77 OF THE SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS, ADOPTED JULY 1, 2004.

ALL PROPOSED RUNWAY MARKING WILL BE SOLID AND WHITE IN COLOR.

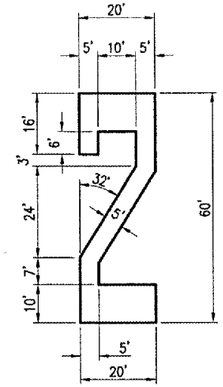
ALL PROPOSED MARKING WILL BE COMPLETED IN ACCORDANCE WITH THE DETAILS SHOWN ON THE CONSTRUCTION PLANS.

TWO APPLICATIONS OF PAINT ARE REQUIRED FOR ALL MARKING.

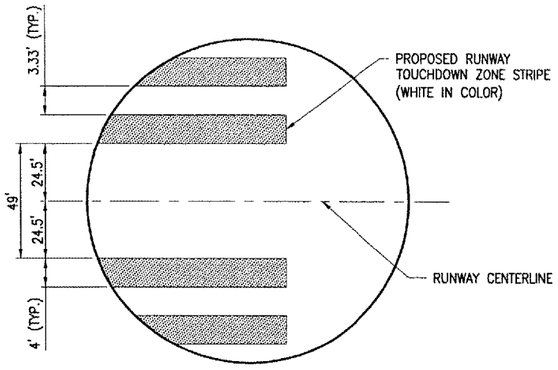
ALL PROPOSED MARKING WILL BE APPLIED WITH A REFLECTIVE MEDIA IN ACCORDANCE WITH THE SPECIFICATIONS. REFLECTIVE MEDIA IS NOT REQUIRED IN THE BLACK PAINT.

CUT–OFF SHEETS WILL BE REQUIRED TO INSURE STRAIGHT EDGES.

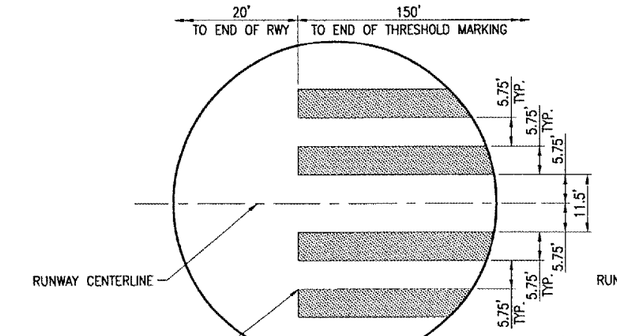
THE PROPOSED MARKING WILL BE PAID FOR UNDER ITEM:
AR620520 "PAVEMENT MARKING–WATERBORNE" – PER S.F.



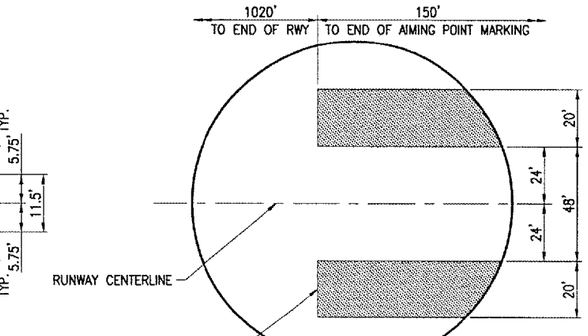
NUMERAL 2 DETAIL
"NOT TO SCALE"



TOUCHDOWN ZONE STRIPE DETAIL
"NOT TO SCALE"

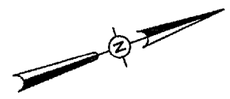


THRESHOLD STRIPE DETAIL
"NOT TO SCALE"

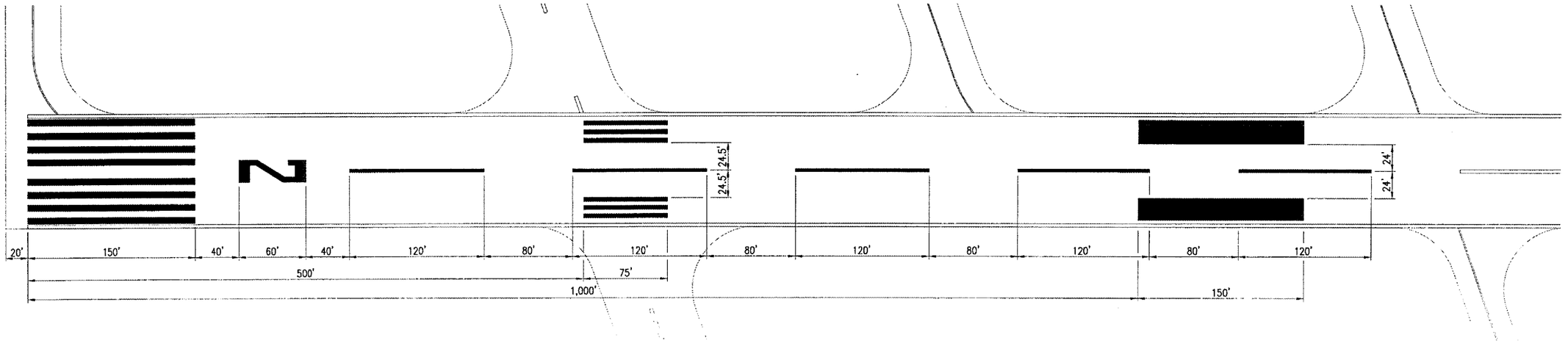


AIMING POINT DETAIL
"NOT TO SCALE"

LEGEND
- EXISTING PAVEMENT
- EXISTING MARKING
- PROPOSED MARKING



FULL SIZE SCALE: 1"= 50'
HALF SIZE SCALE: 1"= 100'



DATE	REVISION	BY

DITMAX
DEKALB TAYLOR MUNICIPAL AIRPORT
IL. PROJ.: DKB-3225 A.I.P. PROJ.: 3-17-0139-B37

HANSON PROJECT No. 803-06ELEC
Filename R-151MRK.DWG
Scale 1"=50'
Date 04/20/07

LAYOUT	CAH	03/19/07
DRAWN	CCC	03/20/07
REVIEWED	CAH	03/22/07

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1525 South Sixth Street
Springfield, Illinois 62703-2888
Offices Nationwide

INSTALL MALSR
RUNWAY END 2

PROPOSED RUNWAY 2-20
MARKING PLAN

5
5 of 48 sheets

APR 06, 2007 8:54 AM BAK
\\HANSON\PROJECTS\DEKALB\803-06ELEC\AIRPORT\SHEETS\AUTO-CADD SHEETS\R-151MRK.DWG - Sheet 5

DK051

110 – 4" DIRECTIONAL BORE NOTES:

1. THE RESIDENT ENGINEER WILL LOCATE WHERE THE PROPOSED 4" CONDUITS WILL BE DIRECTIONAL BORED.
2. THE 4" CONDUITS WILL BE DIRECTIONAL BORED AT A DEPTH OF 3.5 FEET BELOW THE TOP OF THE EXISTING PAVEMENT.
3. THE 4" CONDUIT WILL EXTEND 3 FEET BEYOND THE EDGE OF THE PAVEMENT IF THERE ARE NO LIGHTS ON THE PAVEMENT (SIDEWALK). IF THERE ARE LIGHTS ON THE PAVEMENT (TAXIWAYS AND RUNWAY), THEN THE CONDUITS WILL EXTEND 12 FEET BEYOND THE PAVEMENT EDGE.
4. PRIOR TO DIGGING THE CONTRACTOR WILL LOCATE ALL EXISTING UTILITIES WITHIN THE AREA WHERE THE DIRECTIONAL BORE WILL OCCUR.
5. ANY EXISTING UTILITIES DAMAGED DURING THE DIRECTIONAL BORING WILL BE IMMEDIATELY REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE.
6. THE CONTRACTOR WILL BE RESPONSIBLE TO CLOSE A TAXIWAY WHEN HE IS DIRECTIONAL BORING A CONDUIT UNDER IT. TO CLOSE THE TAXIWAY THE CONTRACTOR WILL PLACE BARRICADES ACROSS THE TAXIWAY AT LOCATIONS DESIGNATED BY THE RESIDENT ENGINEER. ONCE THE CONDUIT HAS BEEN INSTALLED AND THERE ARE NO HOLES WITHIN 85 FEET OF THE TAXIWAY CENTERLINE, THE CONTRACTOR WILL REMOVE THE BARRICADES AND OPEN THE TAXIWAY TO AIRCRAFT TRAFFIC.
7. THE CONTRACTOR WILL BE ALLOWED TO CLOSE RUNWAY 2–20 TWICE IN ORDER TO DIRECTIONAL BORE THE 4" CONDUIT UNDER RUNWAY 2–20 AND TO INSTALL THE PROPOSED TELEPHONE CABLE THROUGH THE CONDUIT. THE RUNWAY WILL BE OPEN AT THE END OF THE CONSTRUCTION DAY.
8. THE CONDUIT WHICH IS DIRECTIONAL BORED WILL BE PAID FOR UNDER ITEM:
   AR110014 4" DIRECTIONAL BORE – 506 L.F.

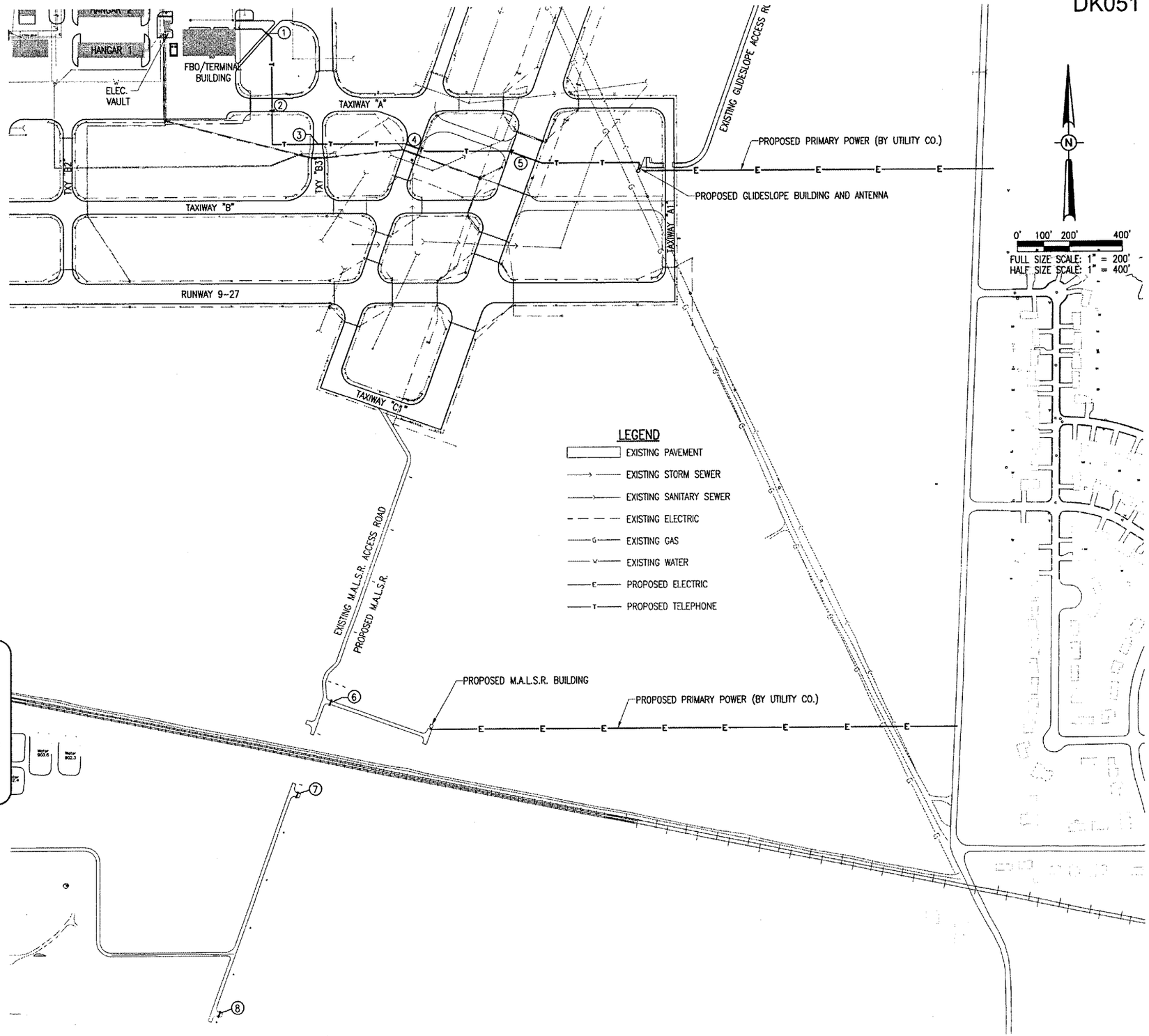
800432 TELEPHONE CABLE NOTES:

1. THE CONTRACTOR WILL LOCATE ALL EXISTING UNDERGROUND UTILITIES PRIOR TO TRENCHING THE PROPOSED TELEPHONE CABLE INTO PLACE.
2. WHERE THE PROPOSED TELEPHONE CABLE INTERSECTS AN EXISTING UTILITY, THE CONTRACTOR WILL HAND EXPOSE THE EXISTING UTILITY TO INSURE NO DAMAGE TO IT.
3. ANY DAMAGE TO AN EXISTING UTILITY WILL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE RESIDENT ENGINEER. THE UTILITY REPAIR WILL BE AT THE CONTRACTOR'S OWN EXPENSE.
4. THE PROPOSED TELEPHONE CABLE WILL BE TRENCHED INTO PLACE AT A DEPTH OF 18 INCHES. THE CABLE WILL GO DEEPER WHEN RUNNING THROUGH THE PROPOSED 4" DIRECTIONAL BORED CONDUITS.
5. THE PROPOSED TELEPHONE CABLE WILL BE PAID FOR UNDER ITEM:
   AR800432 TELEPHONE CABLE - 1,964 L.F.

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 THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES OF HIS OPERATIONAL PLANS AND SHALL OBTAIN FROM THE 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. THE ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY SUCH MAINS AND 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 1–800–892–0123. CONTACT AIRPORT PERSONNEL FOR ASSISTANCE IN LOCATING AIRPORT CABLES.

PROPOSED 4" DIRECTIONAL BORE DATA		
NO.	LOCATION	LENGTH
1	SIDEWALK	16 L.F.
2	TAXIWAY "A"	80 L.F.
3	TAXIWAY "B3"	60 L.F.
4	TAXIWAY "C"	80 L.F.
5	RUNWAY 2–20	130 L.F.
6	MALSR ACCESS ROAD	20 L.F.
7	MALSR ACCESS ROAD	20 L.F.
8	MALSR ACCESS ROAD	20 L.F.
	TOTAL	426 L.F.



BY	REVISION	DATE

DITMAX

DEKALB TAYLOR MUNICIPAL AIRPORT

IL. PROJ.: DKB-3225 A.I.P. PROJ.: 3-17-0139-B37

HANSON PROJECT No. 803-06ELEC
Filename R-131ELE.DWG
Scale 1" = 200'
Date 04/20/07

LAYOUT	CAH	3/23/07
DRAWN	CCC	3/23/07
REVIEWED	CAH	03/22/07

HANSON

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1525 S. Sixth Street
Springfield, Illinois 62703-2886
Offices Nationwide

DEKALB AIRPORT IMPROVEMENTS

PROPOSED UTILITY PLAN

6

6 of 48 sheets

JUN 22, 2007 2:17 PM CAH
I:\AIRPORTS\DEKALB\803-06ELEC\AIRPORT\SHEETS\AUTO-CADD SHEETS\R-131ELE.DWG - Layout1

ELECTRICAL LEGEND – ONE-LINE DIAGRAM

	CABLE TERMINATOR/LUG
	TRANSFORMER
	DISCONNECT SWITCH
	FUSIBLE DISCONNECT SWITCH
	CIRCUIT BREAKER
	THERMAL MAGNETIC CIRCUIT BREAKER
	FUSE
	TRANSIENT VOLTAGE SURGE SUPPRESSOR OR SURGE PROTECTOR DEVICE
	GROUND – GROUND ROD, GROUNDING ELECTRODE, OR AT EARTH POTENTIAL
	INDICATING LIGHT
M	MOTOR
#	LOAD, MOTOR, # = HORSEPOWER
	ELECTRIC UTILITY METER BASE
	JUNCTION BOX WITH SPLICE
XXX	EQUIPMENT, XXX = DEVICE DESCRIPTION
GND	GROUND BUS OR TERMINAL
S/N	NEUTRAL BUS
	PANELBOARD WITH MAIN LUGS
	PANELBOARD WITH MAIN BREAKER
	FUSE PANEL WITH MAIN FUSE PULLOUT
	DUPLEX RECEPTACLE 120V SINGLE PHASE GROUNDING TYPE
	CONTROL STATION
N EM L	TRANSFER SWITCH
G	ENGINE GENERATOR SET

ELECTRICAL ABBREVIATIONS

A.F.F.	ABOVE FINISHED FLOOR
A, AMP	AMPERES
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
BKR	BREAKER
C	CONDUIT
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CR	CONTROL RELAY
CU	COPPER
DEB	DIRECT EARTH BURY
DPDT	DOUBLE POLE DOUBLE THROW
DPST	DOUBLE POLE SINGLE THROW
EES	EARTH ELECTRODE SYSTEM
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
ENCL	ENCLOSURE
EP	EXPLOSION PROOF
ES	EMERGENCY STOP
ETL	INTERTEK – ELECTRICAL TESTING LABS
ETM	ELAPSE TIME METER
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFI	GROUND FAULT INTERRUPTER
GND	GROUND
GRSC	GALVANIZED RIGID STEEL CONDUIT
HID	HIGH INTENSITY DISCHARGE
HOA	HAND OFF AUTOMATIC
HP	HORSEPOWER
HPS	HIGH PRESSURE SODIUM
J	JUNCTION BOX
KVA	KILOVOLT AMPERE(S)
KW	KILOWATTS
LC	LIGHTING CONTACTOR
LTFMC	LIQUID TIGHT FLEXIBLE METAL CONDUIT (UL LISTED)
LTG	LIGHTING
LP	LIGHTING PANEL
MAX	MAXIMUM
MCB	MAIN CIRCUIT BREAKER
MCM	THOUSAND CIRCLUAR MIL
MDP	MAIN DISTRIBUTION PANEL
MFR	MANUFACTURER
MH	METAL HALIDE
MIN	MINIMUM
MLO	MAIN LUGS ONLY
NEC	NATIONAL ELECTRICAL CODE (NFPA 70)
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NPT	NATIONAL PIPE THREAD

ELECTRICAL ABBREVIATIONS (CONTINUED)

NTS	NOT TO SCALE
OHE	OVERHEAD ELECTRIC
OL	OVERLOAD
PB	PULL BOX
PC	PHOTO CELL
PDB	POWER DISTRIBUTION BLOCK
PNL	PANEL
PVC	POLY-VINYL CHLORIDE
RCPT	RECEPTACLE
R	RELAY
S	STARTER
SPD	SURGE PROTECTION DEVICE
SPST	SINGLE POLE SINGLE THROW
TB	TERMINAL BLOCK
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
TYP	TYPICAL
UG	UNDERGROUND
UGE	UNDERGROUND ELECTRIC
UL	UNDERWRITER'S LABORATORIES
UPS	UNINTERRUPTABLE POWER SUPPLY
V	VOLTS
W/	WITH
W/O	WITHOUT
WP	WEATHER PROOF
XFER	TRANSFER
XFMR	TRANSFORMER

AIRPORT EQUIPMENT ABBREVIATIONS

CCR	CONSTANT CURRENT REGULATOR
DME	DISTANCE MEASURING EQUIPMENT
FAR	FEDERAL AVIATION REGULATION
GS	GLIDE SLOPE FACILITY
HIRL	HIGH INTENSITY RUNWAY LIGHT
IM	INNER MARKER
LIR	LOW IMPACT-RESISTANT
LOC	LOCALIZER FACILITY
MALS	MEDIUM INTENSITY APPROACH LIGHTING SYSTEM
MALSR	MEDIUM INTENSITY APPROACH LIGHTING SYSTEM WITH RUNWAY ALIGNMENT INDICATING LIGHTS
MIRL	MEDIUM INTENSITY RUNWAY LIGHT
MITL	MEDIUM INTENSITY TAXIWAY LIGHT
NDB	NON-DIRECTIONAL BEACON
PAPI	PRECISION APPROACH PATH INDICATOR
PLASI	PULSE LIGHT APPROACH SLOPE INDICATOR
RAIL	RUNWAY ALIGNMENT INDICATING LIGHTS
REIL	RUNWAY END IDENTIFIER LIGHT
RVR	RUNWAY VISUAL RANGE
VADI	VISUAL APPROACH DESCENT INDICATOR
VASI	VISUAL APPROACH SLOPE INDICATOR
WC	WIND CONE

NOTES:

1. ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN CONFORMANCE WITH NFPA 70 – NATIONAL ELECTRICAL CODE (NEC) MOST CURRENT ISSUE IN FORCE, THE RESPECTIVE EQUIPMENT MANUFACTURER'S DIRECTIONS AND ALL OTHER APPLICABLE LOCAL CODES, LAWS, ORDINANCES, AND REQUIREMENTS IN FORCE. ANY INSTALLATIONS WHICH VOID THE U.L. LISTING, ETL LISTING (OR OTHER THIRD PARTY LISTING) AND/OR THE MANUFACTURER'S WARRANTY OF A DEVICE WILL NOT BE PERMITTED.

2. CONTRACTOR SHALL KEEP A COPY OF THE LATEST NEC IN FORCE ON SITE AT ALL TIMES DURING CONSTRUCTION FOR USE AS A REFERENCE.

3. CONTRACTOR SHALL COORDINATE WORK AND ANY POWER OUTAGES WITH THE RESPECTIVE FACILITY OWNER PERSONNEL AND THE AIRPORT MANAGER.

4. COLOR CODE PHASE AND NEUTRAL CONDUCTOR INSULATION FOR NO. 6 AWG OR SMALLER. PROVIDE COLORED INSULATION OR COLORED MARKING TAPE FOR PHASE AND NEUTRAL CONDUCTORS FOR NO. 4 AWG AND LARGER. INSULATED GROUND CONDUCTORS SHALL HAVE GREEN COLORED INSULATION FOR ALL CONDUCTOR AWG AND/OR KCMIL. STANDARD COLORS FOR POWER WIRING AND BRANCH CIRCUITS SHALL BE AS FOLLOWS:

   120/240 VAC, 1 PHASE, 3 WIRE

PHASE A	BLACK
PHASE B	RED
NEUTRAL	WHITE
GROUND	GREEN

5. PROVIDE LIQUID TIGHT FLEXIBLE METAL CONDUIT AT CONNECTIONS TO EQUIPMENT SUBJECT TO VIBRATION OR WHERE FLEXIBILITY IS REQUIRED. LIQUID TIGHT FLEXIBLE METAL CONDUIT AND ASSOCIATED FITTINGS SHALL BE U.L. LISTED TO MEET THE REQUIREMENTS OF NEC 350.6, SUITABLE FOR GROUNDING, SUNLIGHT RESISTANT, AND RESISTANT TO OIL, GASOLINE, AND GREASE. LIQUID TIGHT FLEXIBLE METAL CONDUIT THAT IS USED FOR FLEXIBILITY (INCLUDING CONNECTIONS TO MOTORS & TRANSFORMERS) SHALL REQUIRE AN EXTERNAL BONDING JUMPER OR INTERNAL EQUIPMENT GROUNDING CONDUCTOR PER NEC 350.60. DO NOT INSTALL LIQUID TIGHT FLEXIBLE METAL CONDUIT THAT IS NOT UL. LISTED.

6. CONDUCTORS FOR SERVICE ENTRANCE APPLICATIONS SHALL BE XHHW-2 OR USE-2. POWER CONDUCTORS FOR DIRECT EARTH BURIAL (600 VOLT APPLICATIONS) SHALL BE XLP-USE-2. CONDUCTORS FOR BRANCH CIRCUIT WIRING LOCATED INSIDE BUILDINGS OR RACEWAYS SHALL BE XHHW-2 OR THWN-2. ALL CONDUCTORS SHALL BE COPPER. WHERE USE TYPE CONDUCTORS ARE USED, INSTEAD OF THWN OR XHHW CONDUCTORS, INCREASE CONDUIT SIZES AS APPLICABLE TO MEET NEC CONDUIT & TUBING FILL REQUIREMENTS.

7. JUNCTION BOXES SHALL BE SIZED PER NEC 314 FOR THE RESPECTIVE SPLICES, WIRING AND CONDUITS. JUNCTION BOXES SHALL BE RATED SUITABLE FOR THE RESPECTIVE LOCATION WHERE INSTALLED. SURFACE MOUNTED EXTERIOR JUNCTION BOXES LOCATED IN NON-HAZARDOUS, NON-CLASSIFIED AREAS SHALL BE RATED NEMA 3R OR NEMA 4. BOXES SHALL BE UL LISTED. PROVIDE NEMA 4 WATERTIGHT HUBS FOR ALL CONDUIT ENTRIES INTO NEMA 4 RATED ENCLOSURES TO MAINTAIN NEMA 4 RATING.

8. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL HOT-DIPPED GALVANIZED STEEL STRUT SUPPORT & CORROSION RESISTANT HARDWARE FOR MOUNTING ELECTRICAL PANELS, SWITCHES, OUTLETS, CONTROL STATIONS, BOXES, & OTHER EQUIPMENT.

9. FURNISH & INSTALL A WEATHERPROOF WARNING LABEL FOR EACH METER SOCKET, SERVICE DISCONNECT, SAFETY SWITCH, PANELBOARD, & CONTROL PANEL TO WARN PERSONS OF POTENTIAL ELECTRIC ARC FLASH HAZARDS, PER THE REQUIREMENTS OF NEC 110.16 "FLASH PROTECTION".

10. 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 THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES OF HIS OPERATIONAL PLANS AND SHALL OBTAIN FROM THE 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. THE ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY SUCH MAINS AND 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 1-800-892-0123. ALSO CONTACT AIRPORT MANAGER AND/OR RESPECTIVE AIRPORT PERSONNEL FOR ASSISTANCE IN LOCATING UNDERGROUND AIRPORT CABLES AND/OR UTILITIES.

DATE | REVISION | BY

DTMA

DEKALB TAYLOR MUNICIPAL AIRPORT

IL. PROJ.: DKB-3225 A.I.P. PROJ.: 3-17-0139-837

HANSON PROJECT No. 803-06ELEC
Filename: E-001.DWG
Scale: NONE
Date: 04/20/07

LAYOUT	KNL	03/20/07
DRAWN	MV	03/21/07
REVIEWED	CAH	03/29/07

HANSON

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Springfield, Illinois 62703-2888
Offices Nationwide

INSTALL MALSR & GLIDE SLOPE

ELECTRICAL LEGEND AND ABBREVIATIONS

7

7 of 48 sheets

DK051

INSTALLATION OF MALSR

SUMMARY OF QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	AS AWARDED	AS BUILT QUANTITIES
AR110014	4" DIRECTIONAL BORE	L.F.	60	
AR127431	10' X 12' SHELTER BUILDING	EA.	1	
AR127450	MALSR INSTALLATION	L.S.	1	
AR152410	UNCLASSIFIED EXCAVATION	C.Y.	161	
AR209510	CRUSHED AGGREGATE BASE COURSE	TON	336	

APR 05, 2007 8:51 AM BAK
I:\AIRPORTS\DEKALB\803-06ELEC\AIRPORT\SHEETS\AUTO-CADD SHEETS\R-002FLP.DWG - TOTAL QUANTITIES

DATE	REVISION	BY

DITMAX

DEKALB TAYLOR MUNICIPAL AIRPORT

IL. PROJ.: DKB-3225 A.I.P. PROJ.: 3-17-0139-B37

INSTALL MALSR RUNWAY END 2

SUMMARY OF QUANTITIES FOR MALSR INSTALLATION

8

8 of 48 sheets

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Springfield, Illinois 62703-2886
Offices Nationwide

HANSON PROJECT No. 803-06ELEC
Filename R-002FLP.DWG
Scale NOT TO SCALE
Date 04/20/07

LAYOUT	CAH	03/20/07
DRAWN	BAK	03/20/07
REVIEWED	CAH	03/29/07

IL

DK051

UNION PACIFIC RAILROAD

EXISTING AIRPORT PROPERTY LINE

LEGEND
- EXISTING MALSR ACCESS ROAD
- PROPOSED 209-CRUSHED AGG. BASE CSE. (6" DEPTH)
- PROPOSED MALSR RUNWAY THRESHOLD
- PROPOSED MALSR LIGHT
- PROPOSED 4" DIRECTIONAL BORED CONDUIT

FIFTH LIGHT UNIT
RUNWAY STA. 91+50
MALSR STA. 10+50

FUTURE LOCALIZER

THRESHOLD LIGHT BAR
RUNWAY STA. 99+90
MALSR STA. 00+10

EXISTING MALS ACCESS ROAD

25'

89+00 90+00 91+00 92+00 93+00 94+00 95+00 96+00 97+00 98+00 99+00 100+00 101+00 102+00

SIXTH LIGHT UNIT
RUNWAY STA. 89+50
MALSR STA. 12+50

PROPOSED 4" DIRECTIONAL
BORED CONDUIT - 20 L.F.

FOURTH LIGHT UNIT
RUNWAY STA. 93+60
MALSR STA. 8+40

THIRD LIGHT UNIT
RUNWAY STA. 95+70
MALSR STA. 6+30

SECOND LIGHT UNIT
RUNWAY STA. 97+80
MALSR STA. 4+20

FIRST LIGHT UNIT
RUNWAY STA. 99+90
MALSR STA. 2+10

(MALS)
TWO SPACES AT 200' = 400'

PROPOSED MEDIUM INTENSITY APPROACH LIGHTING SYSTEM (MALS)
FIVE SPACES AT 210' = 1,050'

STA. 102+00 RWY.
STA. 0+00 MALSR

SCALES:
1" = 50' HOR
1" = 5' VER

APPROACH LIGHT SCHEDULE

LIGHT	FAA STATION	OFFSET TO RWY. CENTERLINE	EX. GROUND ELEV.	PROPOSED FOUNDATION ELEV.	PROP. LIGHT CENTERLINE ELEV.	PROPOSED TOWER TILT DIRECTION	PROP. APPROACH LIGHT TYPE	PROP. AIMING ANGLE	PROP. MAST HEIGHT
T-HOLD	0+10	0	912.5	912.5	913.67	N.T.	THRESHOLD	3.2	1.17
1	2+10	0	911.3	911.4	912.81	N.T.	MALSR	3.3	1.41
2	4+20	0	909.8	909.9	917.01	T.	MALSR	3.3	7.11
3	6+30	0	908.4	908.5	921.21	T.	MALSR	3.4	12.71
4	8+40	0	907.0	907.1	925.41	T.	MALSR	3.3	18.31
5	10+50	28' LT.	905.6	905.7	929.61	T.	MALSR	3.4	23.91
6	10+50	0	905.7	905.8	929.61	T.	MALSR	3.4	23.81
7	10+50	28' RT.	905.6	905.7	929.61	T.	MALSR	3.4	23.91
8	12+50	0	904.3	904.4	933.61	T.	MALSR	3.4	29.21
9	14+50	0	903.0	903.1	937.61	T.	MALSR	3.5	34.51
10	16+40	0	901.1	901.2	933.81	T.	RAIL	6.0	32.61
11	18+30	0	901.9	902.0	930.01	T.	RAIL	6.0	28.01
12	20+20	0	904.5	904.6	926.21	T.	RAIL	6.0	21.61
13	22+10	0	906.6	906.6	922.41	T.	RAIL	6.0	15.81
14	24+00	0	906.0	906.1	918.61	T.	RAIL	6.0	12.51

PERMISSIBLE ELEVATION
AT RAILROAD = 935.27

TOP OF SIXTH
LIGHT UNIT = 933.61

TOP OF FIFTH
LIGHT UNIT = 929.61

SLOPE 2.0%

TOP OF FOURTH
LIGHT UNIT = 925.41

TOP OF THIRD
LIGHT UNIT = 921.21

TOP OF SECOND
LIGHT UNIT = 917.01

TOP OF FIRST
LIGHT UNIT = 912.81

PROPOSED LIGHT
UNIT (TYPICAL)

EXISTING GROUNDLINE

NOTE:
CONTRACTOR SHALL VERIFY EXISTING GROUND ELEVATIONS BEFORE FIELD CUTTING THE TOWERS TO THEIR RESPECTIVE HEIGHTS.

NEAREST RAIL
STA. 88+67.13
ELEVATION 911.93

935 930 925 920 915 910 905 900 895

903.70 903.28 904.61 905.02 905.38 905.69 905.93 906.26 906.60 906.93 907.27 907.60 907.93 908.27 908.60 908.94 909.27 909.60 909.94 910.27 910.61 910.94 911.27 911.61 911.94 912.28 912.61

88+00 89+00 90+00 91+00 92+00 93+00 94+00 95+00 96+00 97+00 98+00 99+00 100+00 101+00 102+00

APR 06, 2007 9:06 AM BAK
J:\AIRPORTS\DEKALB\803-06ELEC\AIRPORT\SHEETS\AUTO-CADD SHEETS\R-702PNP.DWG - 88+00-102+00

DATE | REVISION | BY

DEKALB TAYLOR MUNICIPAL AIRPORT
A.I.P. PROJ.: 3-17-0139-B37
IL. PROJ.: DKB-3225

HANSON PROJECT No. 803-06ELEC
Filename R-702PNP.DWG
Scale
Date 04/20/02

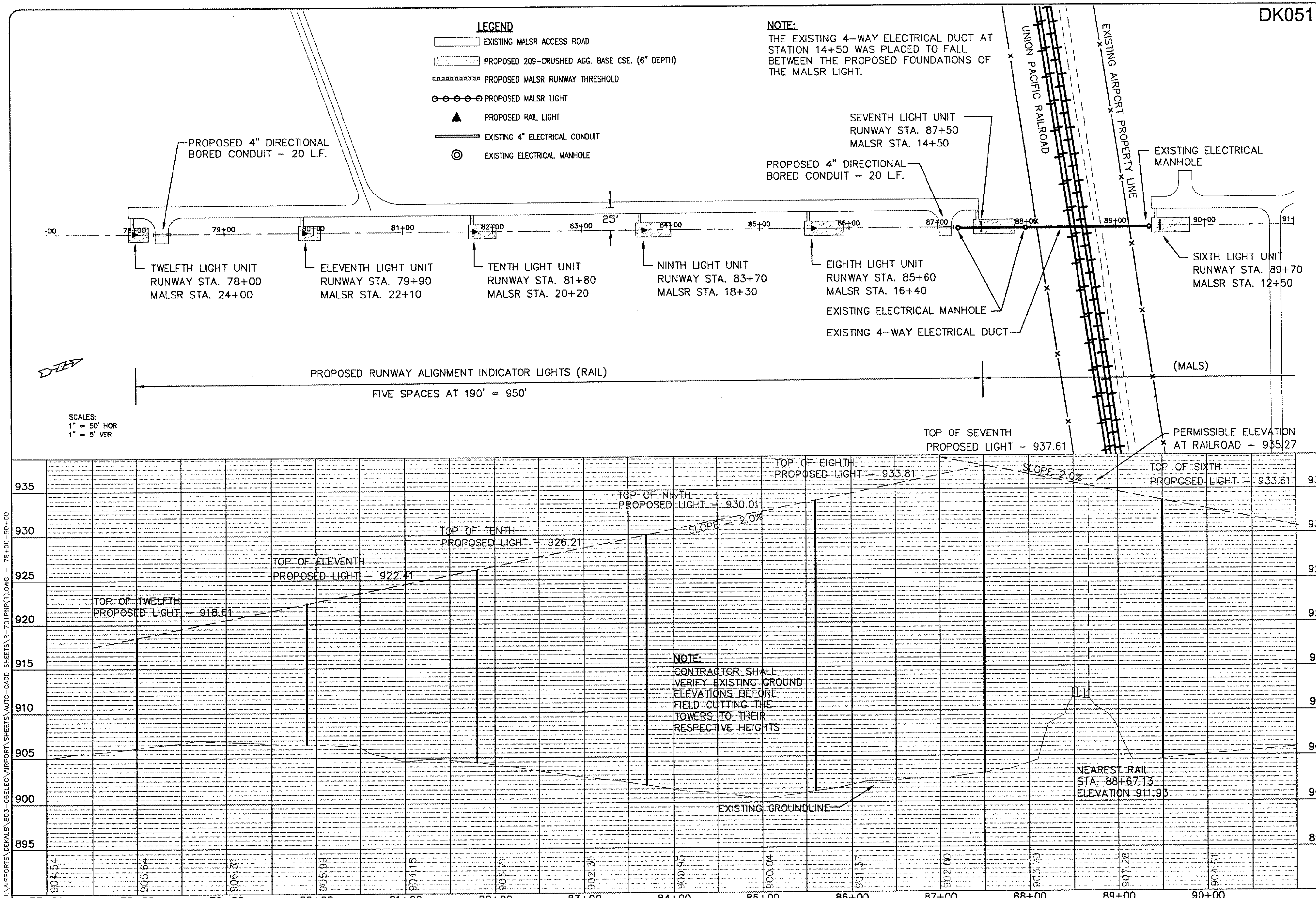
LAYOUT	CAH	03/13/07
DRAWN	JEO	03/13/07
REVIEWED	CAH	03/21/07

HANSON
Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62703-2886
Offices Nationwide

INSTALL MALSR
RUNWAY END 2

RWY. & MALSR PLAN & PROFILE
STA. 90+00 TO STA. 102+00
DKB-D-MALSR02-C01

9


LEGEND
EXISTING MALSR ACCESS ROAD
PROPOSED 209-CRUSHED AGG. BASE CSE. (6" DEPTH)
PROPOSED MALSR RUNWAY THRESHOLD
PROPOSED MALSR LIGHT
PROPOSED RAIL LIGHT
EXISTING 4" ELECTRICAL CONDUIT
EXISTING ELECTRICAL MANHOLE
NOTE:
THE EXISTING 4-WAY ELECTRICAL DUCT AT STATION 14+50 WAS PLACED TO FALL BETWEEN THE PROPOSED FOUNDATIONS OF THE MALSR LIGHT.
UNION PACIFIC RAILROAD
EXISTING AIRPORT PROPERTY LINE
PROPOSED 4" DIRECTIONAL BORED CONDUIT - 20 L.F.
SEVENTH LIGHT UNIT
RUNWAY STA. 87+50
MALSR STA. 14+50
PROPOSED 4" DIRECTIONAL BORED CONDUIT - 20 L.F.
EXISTING ELECTRICAL MANHOLE
25'
TWELFTH LIGHT UNIT
RUNWAY STA. 78+00
MALSR STA. 24+00
ELEVENTH LIGHT UNIT
RUNWAY STA. 79+90
MALSR STA. 22+10
TENTH LIGHT UNIT
RUNWAY STA. 81+80
MALSR STA. 20+20
NINTH LIGHT UNIT
RUNWAY STA. 83+70
MALSR STA. 18+30
EIGHTH LIGHT UNIT
RUNWAY STA. 85+60
MALSR STA. 16+40
SIXTH LIGHT UNIT
RUNWAY STA. 89+70
MALSR STA. 12+50
EXISTING ELECTRICAL MANHOLE
EXISTING 4-WAY ELECTRICAL DUCT
PROPOSED RUNWAY ALIGNMENT INDICATOR LIGHTS (RAIL)
FIVE SPACES AT 190' = 950'
(MALS)
SCALES:
1" = 50' HOR
1" = 5' VER
TOP OF SEVENTH
PROPOSED LIGHT - 937.61
PERMISSIBLE ELEVATION
AT RAILROAD - 935.27
TOP OF EIGHTH
PROPOSED LIGHT - 933.81
SLOPE 2.0%
TOP OF SIXTH
PROPOSED LIGHT - 933.61
TOP OF NINTH
PROPOSED LIGHT - 930.01
SLOPE - 2.0%
TOP OF TENTH
PROPOSED LIGHT - 926.21
TOP OF ELEVENTH
PROPOSED LIGHT - 922.41
TOP OF TWELFTH
PROPOSED LIGHT - 918.61
NOTE:
CONTRACTOR SHALL VERIFY EXISTING GROUND ELEVATIONS BEFORE FIELD CUTTING THE TOWERS TO THEIR RESPECTIVE HEIGHTS
NEAREST RAIL
STA. 88+67.13
ELEVATION 911.93
EXISTING GROUNDLINE
935
930
925
920
915
910
905
900
895
904.54
905.64
906.31
905.99
904.15
903.71
902.31
900.95
900.04
901.37
902.00
903.70
907.28
904.61
77+00
78+00
79+00
80+00
81+00
82+00
83+00
84+00
85+00
86+00
87+00
88+00
89+00
90+00

JUN 22, 2007 9:47 AM CAH
I:\AIRPORTS\DEKALB\803-06ELEC\AIRPORT\SHEETS\AUTO-CADD SHEETS\R-701PNP(1).DWG - 78+00-90+00

DATE	REVISION	BY

DTMA — DEKALB TAYLOR MUNICIPAL AIRPORT

IL. PROJ.: DKB-3225 A.I.P. PROJ.: 3-17-0139-B37

HANSON PROJECT No. 803-06ELEC
Filename R-701PNP(1).DWG
Scale
Date 04/20/07

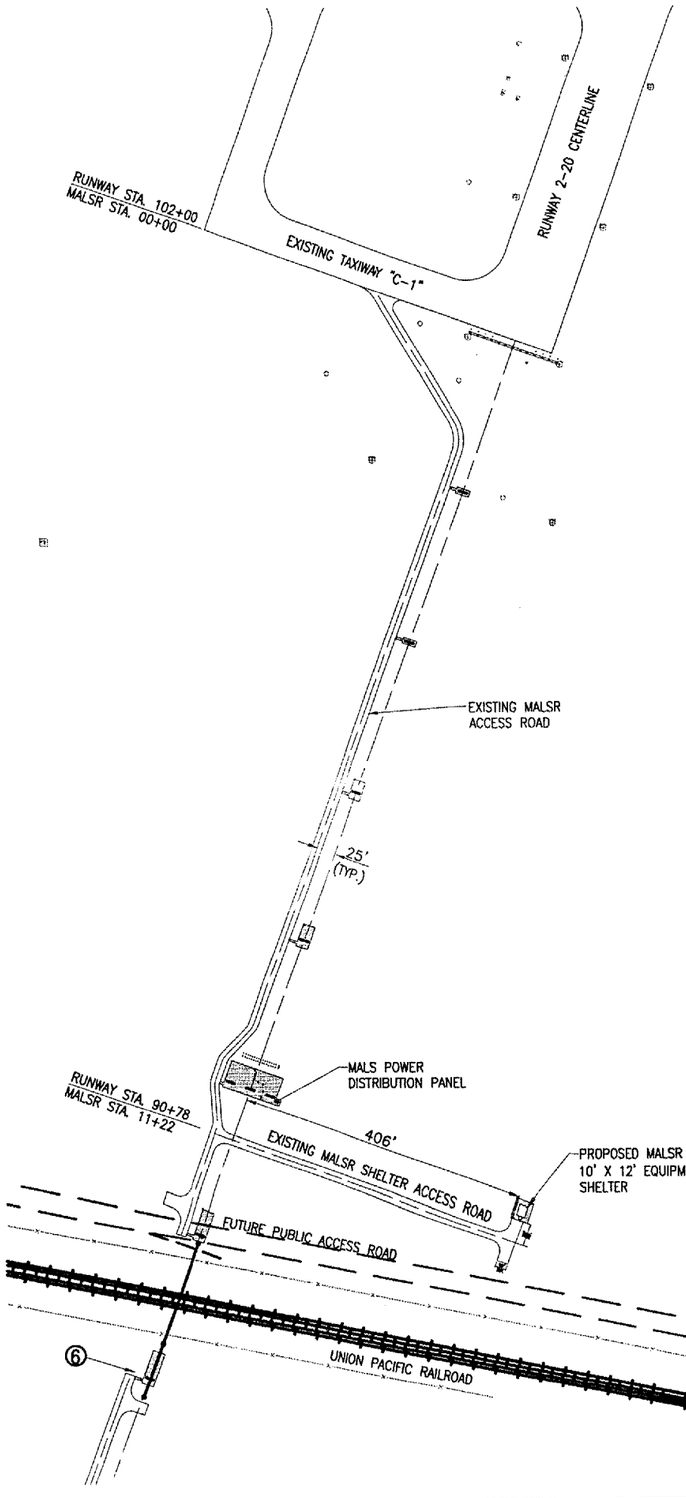
LAYOUT	CAH	03/13/07
DRAWN	JEO	03/13/07
REVIEWED	CAH	03/22/07

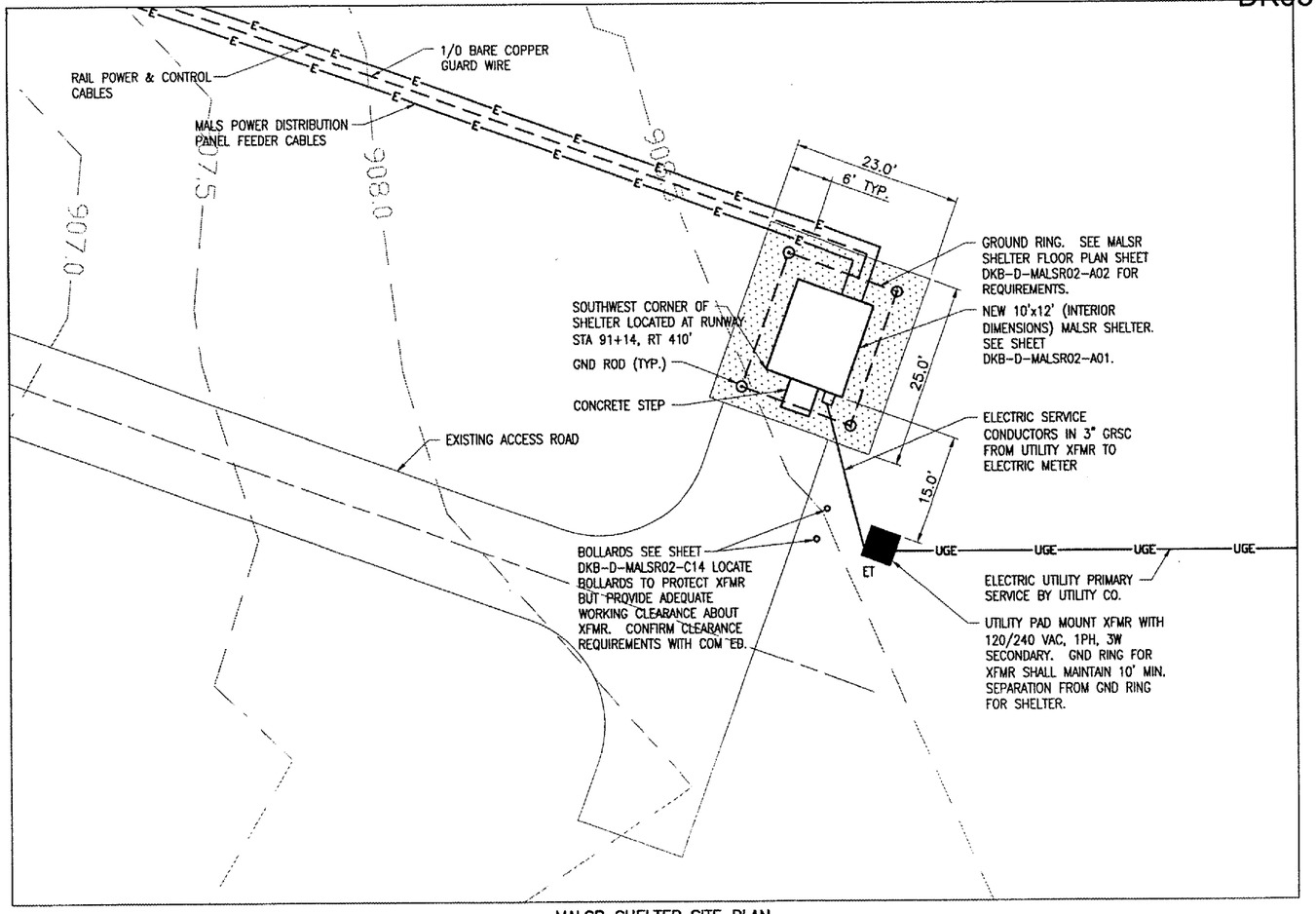
HANSON
Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62703-2886
Offices Nationwide

INSTALL MALSR RUNWAY END 2

RWY. & MALSR PLAN & PROFILE
STA. 78+00 TO STA. 90+00
DKB-D-MALSR02-CO2

DK051





MALSR SHELTER SITE PLAN
SCALE: 1" = 10'

NOTES:

1. COORDINATE ELECTRIC SERVICE WITH THE SERVING ELECTRIC UTILITY AND THE AIRPORT MANAGER. UTILITY CONTACT IS MR. JIM ACKERT, COM ED, 17028 S. STATE RT 23, DEKALB, IL 60115, PHONE 815-748-2271, FAX 815-748-2267. AIRPORT MANAGER IS MR. TOM CLEVELAND, CITY OF DEKALB AIRPORT DIVISION, 3232 PLEASANT STREET, DEKALB, IL 60115, PHONE 815-748-2020, FAX. 815-748-2022.
2. CONTRACTOR SHALL FURNISH & INSTALL UTILITY TRANSFORMER PAD PER SERVING ELECTRIC UTILITY CO. REQUIREMENTS. SEE "UTILITY TRANSFORMER PAD DETAIL" ON SHEET 42 FOR REQUIREMENTS.
3. SEE MALSR ELECTRICAL ONE LINE, RUNWAY 02, DKB-D-MALSR02-E05 FOR ADDITIONAL REQUIREMENTS ON ELECTRIC SERVICE.

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 THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES OF HIS OPERATIONAL PLANS AND SHALL OBTAIN FROM THE 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. THE ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY SUCH MAINS AND 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 1-800-892-0123.

LEGEND

- EXISTING IMPROVEMENTS
- PROPOSED 209-CRUSHED AGGREGATE BASE COURSE (6" DEPTH)
- EXISTING STORM SEWER
- SS — EXISTING UNDERDRAIN
- E — PROPOSED ELECTRIC CABLES
- UGE — PROPOSED UNDERGROUND ELECTRIC UTILITY PRIMARY
- EXISTING INLET
- EXISTING MANHOLE
- EXISTING UNDEDRAIN INSPECTION HOLE
- EXISTING HEADWALL
- ET UTILITY PAD MOUNT TRANSFORMER

0' 50' 100' 200'
SCALE: 1"= 100'

DATE	REVISION	BY

DITMAX

DEKALB TAYLOR MUNICIPAL AIRPORT

A.I.P. PROJ.: 3-17-0139-B37

IL. PROJ.: DKB-3225

HANSON PROJECT No. 803-06ELEC
Filename: MALSR_SITE_PLAN.DWG
Scale: 1"=100'
Date: 04/20/07

LAYOUT	KNL	03/20/07
DRAWN	CCC	03/23/07
REVIEWED	CAH	03/29/07

HANSON

Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62703-2888
Offices Nationwide

INSTALL MALSR RUNWAY END 2

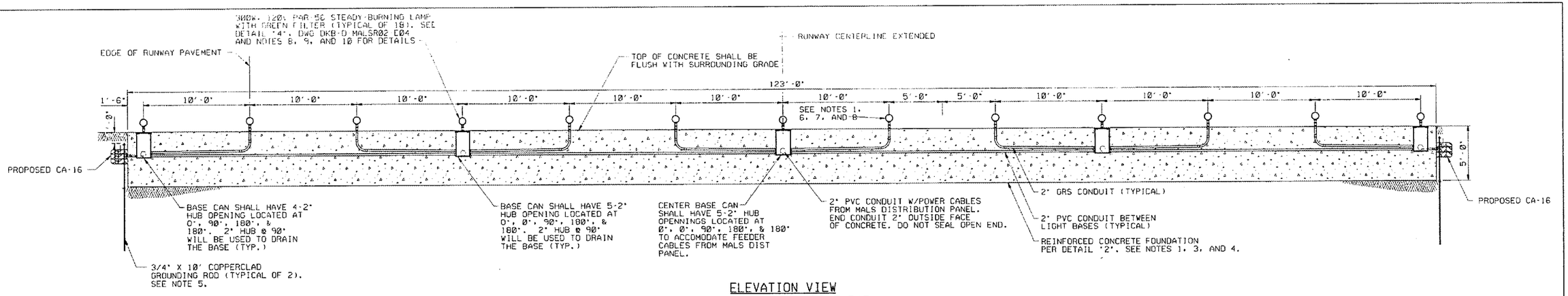
RUNWAY 2 MALSR SHELTER SITE PLAN DKB-D-MALSR02-C03

11

11 of 48 sheets

JUN 22, 2007 11:17 AM CAH
I:\AIRPORTS\DEKALB\803-06ELEC\AIRPORT\SHEETS\AUTO-CADD SHEETS\MALSR SITE PLAN.DWG N. MALSR ROAD

CONTRACT NO.

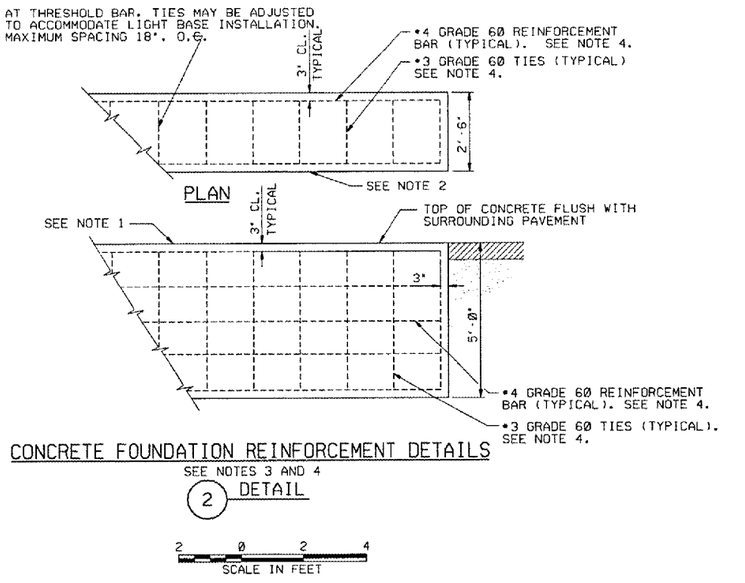


ELEVATION VIEW
STEADY-BURNING LIGHT BAR
AT RUNWAY THRESHOLD (STATION 0+10)

1 DETAIL

4 0 4 8
SCALE IN FEET

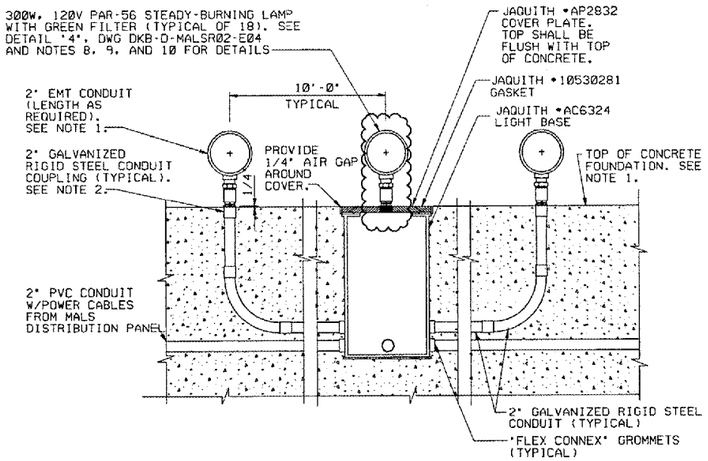
NOTE:
THE CONTRACTOR WILL FURNISH AND INSTALL A LAYER OF CA-16 ALONG THE SOUTH SIDE OF THE CONCRETE FOUNDATION. THE LAYER OF CA-16 WILL BE 6' WIDE, 12" DEEP AND WILL BE PLACED 18" BELOW THE TOP OF THE CONCRETE FOUNDATION. THIS LAYER OF CA-16 WILL BE CONTINUED ON TO THE EXISTING UNDERDRAIN BACKFILL TO ALLOW MOISTURE TO FLOW TO THE EXISTING UNDERDRAIN.



CONCRETE FOUNDATION REINFORCEMENT DETAILS
SEE NOTES 3 AND 4

2 DETAIL

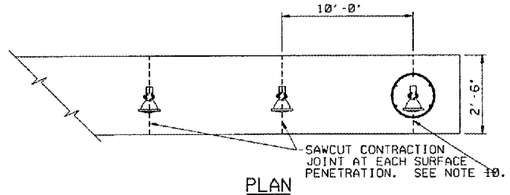
2 0 2 4
SCALE IN FEET



TYPICAL LIGHT BASE AND CONDUIT INSTALLATION DETAILS

3 DETAIL

1 0 1 2
SCALE IN FEET



PLAN
TYPICAL CONTRACTION JOINT DETAILS

4 DETAIL

NOTES:

1. SEE DWG DKB-D-MALSR02-C01 FOR LAMP CENTERLINE AND FOUNDATION TOP ELEVATIONS.
2. RIGID STEEL COUPLINGS SHALL BE INSTALLED PLUMB. THE TOP OF THE COUPLING SHALL PROTRUDE 1/4" ABOVE THE TOP OF THE CONCRETE FOUNDATION. INSTALL A SHORT NIPPLE INSIDE THE RIGID STEEL COUPLING TO PROVIDE A STOP FOR THE FRANGIBLE COUPLING SO THAT THE TOP THREAD OF THE FRANGIBLE COUPLING IS EXPOSED ABOVE THE RIGID STEEL COUPLING. TIGHTEN FRANGIBLE COUPLING AGAINST SHORT NIPPLE TO PREVENT ROTATION OF THE LAMPHOLDER. SEE SECTION 13A.2D OF THE SPECIFICATION FAA-GL-918C.
3. SEE PROJECT SPECIAL PROVISIONS FOR EXCAVATION AND BACKFILL REQUIREMENTS. EXCAVATION SHALL BE SHORED OR SHAPED PER OSHA REQUIREMENTS.
4. SEE PROJECT SPECIAL PROVISIONS FOR CONCRETE FORM WORK, REINFORCEMENT, MATERIAL PLACEMENT, AND CURING SPECIFICATIONS.
5. ALL CONNECTIONS TO GROUNDING RODS SHALL BE MADE USING EXOTHERMIC WELDS PER SPECIFICATIONS.
6. GREEN GLASS FILTER SHALL BE INSTALLED PER NOTE 8 AND DETAIL "4", DWG DKB-D-MALSR02-E04.
7. LAMPHOLDER RETAINING RINGS SHALL BE INSTALLED ON THE PAR-56 LAMPHOLDERS. SEE NOTE 9 AND DETAIL "4", DWG DKB-D-MALSR02-E04.
8. SEE DETAIL "1", DWG DKB-D-MALSR02-E03 FOR THRESHOLD BAR WIRING DETAILS.
9. SEE DETAIL "4", DWG DKB-D-MALSR02-E04 FOR THRESHOLD BAR PAR-56 LAMPHOLDER ASSEMBLY DETAILS.
10. 1/4" WIDE X 1/2" DEEP CONTRACTION JOINTS SHALL BE SAWCUT INTO THE SURFACE OF THE THRESHOLD BAR FOUNDATION AT LOCATIONS SHOWN.

DATE	DESCRIPTION	JCN	REDLINE DATE	APVD

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
GREAT LAKES REGION — CHICAGO, ILLINOIS

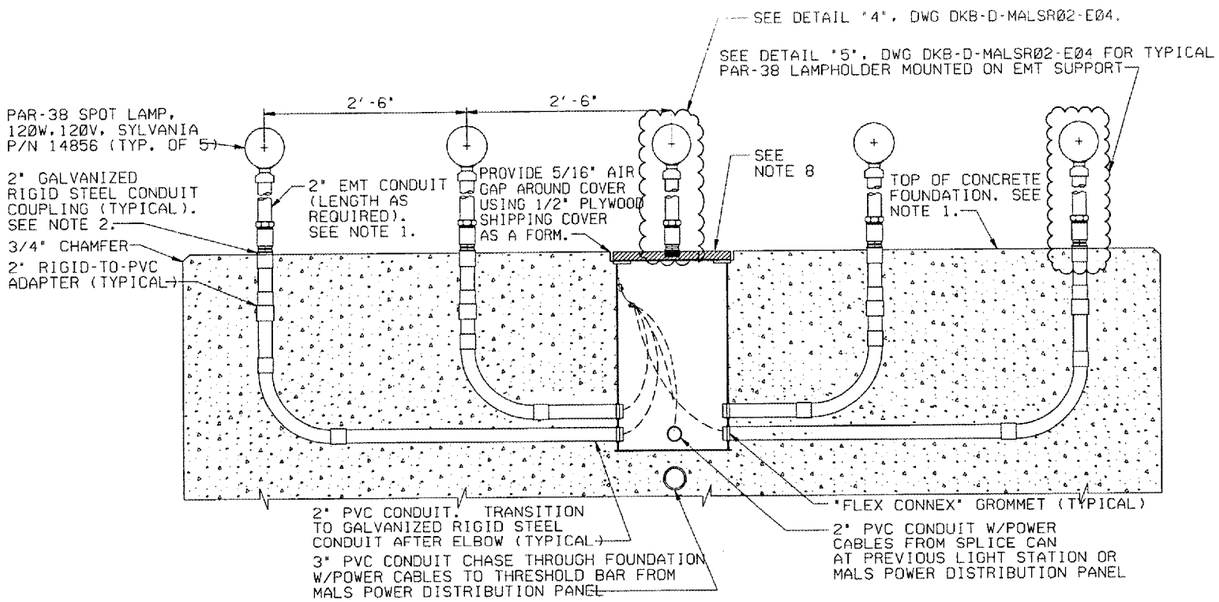
MALSR
FOUNDATION DETAILS FOR STEADY - BURNING LIGHT BAR AT RUNWAY THRESHOLD

DEKALB — DEKALB TAYLOR MUNICIPAL AIRPORT — IL

REVIEWED BY	SUBMITTED BY	APPROVED BY
PROJ. ENGR.		PLATFORM MGR.
DATE TAD	ISSUED BY CHICAGO NAS IMPLEMENTATION CENTER	DATE JCN
DRAWN TAD		DRAWING NO. DKB-D-MALSR02-C04 REV
DRAWN EGS		

PLOT DATE = 04\19\2007, 10:00 AM
FILE NAME = I:\AIRPORTS\DEKALB\803-06ELEC\AIRPORT\SHEETS\MICRO-STATION SHEETS\MALSR\MALSR VERT STDY BRNG LIGHT BAR AT THRESHOLD FOR 180° RWY.DGN
PLOT SCALE = 1.18 1/8 " / IN.
USER NAME = BAK♦

CONTRACT NO.



TYPICAL LIGHT BASE AND CONDUIT INSTALLATION DETAILS

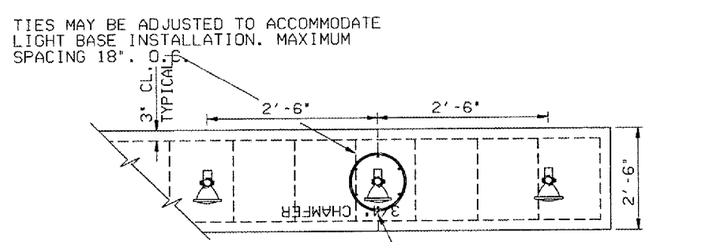
5 DETAIL

1 0 1 2

SCALE IN FEET

NOTES:

1. SEE DWG DKB-D-MALSR02-C01 FOR LAMP CENTERLINE AND FOUNDATION TOP ELEVATIONS.
2. RIGID STEEL COUPLINGS SHALL BE INSTALLED PLUMB. THE TOP OF THE COUPLING SHALL PROTRUDE 1/4" ABOVE THE TOP OF THE CONCRETE FOUNDATION. THE FRANGIBLE COUPLING SHALL BE LOCKED AGAINST TURNING USING A LOCKING RING. TIGHTEN LOCKING RING AGAINST TOP OF COUPLING TO PREVENT ROTATION OF THE LAMPHOLDER. SEE SECTION 13A.2D OF THE SPECIFICATION FAA-GL-918C.
3. SEE PROJECT SPECIAL PROVISIONS FOR EXCAVATION AND BACKFILL REQUIREMENTS. EXCAVATION SHALL BE SHORED OR SHAPED PER OSHA REQUIREMENTS.
4. SEE PROJECT SPECIAL PROVISIONS FOR CONCRETE FORM WORK. REINFORCEMENT, MATERIAL, PLACEMENT, AND CURING SPECIFICATIONS.
5. ALL CONNECTIONS TO GROUNDING RODS SHALL BE MADE USING EXOTHERMIC WELDS PER SPECIFICATIONS.
6. SEE DETAIL "2", DWG DKB-D-MALSR02-E03 FOR PAR-38 LAMPHOLDER WIRING DETAILS FOR 5-LIGHT BAR MOUNTED ON EMT SUPPORTS.
7. 1/4" WIDE X 1/2" DEEP CONTRACTION JOINTS SHALL BE SAWCUT INTO THE SURFACE OF THE LIGHT FOUNDATION AT LOCATIONS SHOWN.
8. THE SPLICE CAN SHALL BE A SPECIFICATION FAA-E-1315A, L867D LIGHT BASE, CLASS 1, 16 1/4" I. D., 24" DEEP, WITH 3/8" COVER PLATE, JAQUITH TYPE AP2832 AND GASKET, JAQUITH TYPE 10530281. AT THE THRESHOLD BAR THE LIGHT BASE WILL BE JAQUITH CAT. NO. AC63242Q600301. AT THE 5-LIGHT EMT BARS, THE LIGHT BASE WILL BE JAQUITH CAT. NO. AC63242QX00301 AND SHALL HAVE 2" DIA FLEXIBLE GROMMET CONNECTIONS (FLEX CONNEX) AT THE FOLLOWING LOCATIONS: TWO AT 0° AND 180° (STACKED VERTICALLY) AND ONE AT 90° AND 270°. THE PLYWOOD SHIPPING COVER SHALL BE USED AS CONCRETE FORM TO PROVIDE 5/16" WIDE AIR GAP IN CONCRETE AROUND BASE PLATE. TOP OF COVER SHALL BE FLUSH WITH TOP OF CONCRETE FOUNDATION CONFIRM ALL PART NUMBERS WITH MANUFACTURER.



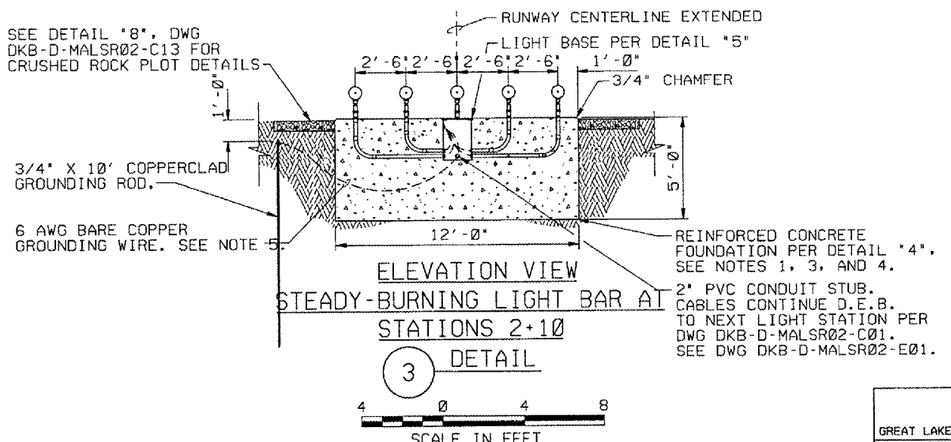
CONCRETE FOUNDATION REINFORCEMENT DETAILS

SEE NOTES 3 AND 4

4 DETAIL

2 0 2 4

SCALE IN FEET



ELEVATION VIEW
STEADY-BURNING LIGHT BAR AT STATIONS 2+10

3 DETAIL

4 0 4 8

SCALE IN FEET

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
GREAT LAKES REGION — CHICAGO, ILLINOIS

MALSR

FOUNDATION DETAILS FOR STEADY-BURNING LIGHT BAR AT STATION 2+10
RUNWAY 02

DEKALB — DEKALB TAYLOR MUNICIPAL AIRPORT — IL

REVIEWED BY	SUBMITTED BY	APPROVED BY
	PROJ. ENGR.	PLATFORM MGR.
	DATE TAD	DATE JCN
	DRAWN TAD	ISSUED BY CHICAGO NAS IMPLEMENTATION CENTER
	DRAWN EGS	DRAWING NO. DKB-D-MALSR02-C05 REV

DATE	DESCRIPTION	JCN	REDLINE DATE	APVD

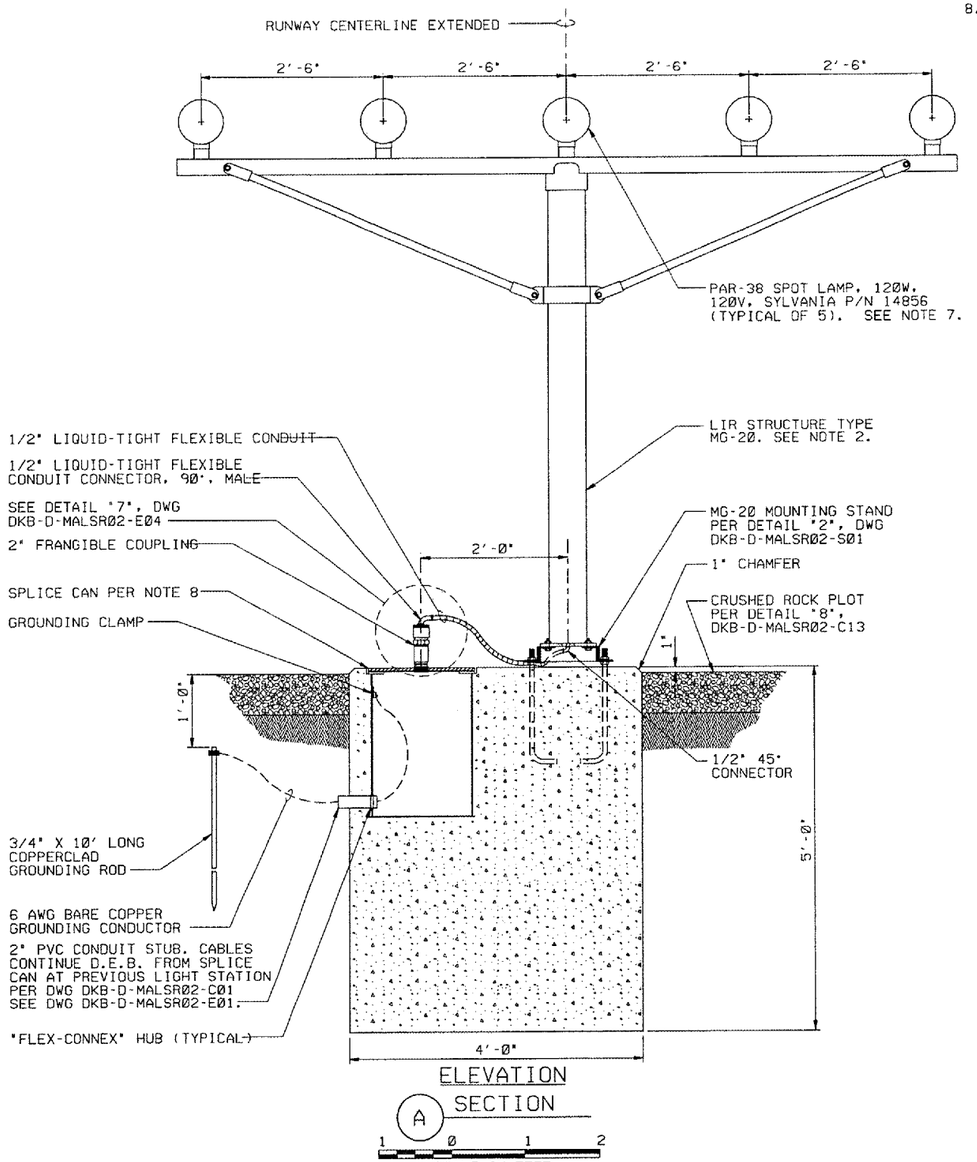
SHEET 13 OF 48

PLOT DATE = 03/28/2007 - 10:29 AM
FILE NAME = I:\AIRPORTS\DEKALB\803-08ELEC\AIRPORT\SHEETS\MICRO-STATION SHEETS\MALSR\EMT BARS ON CONCRETE FOR MALSR D.E.B.DGN
PLOT SCALE = 1.75 '= 5/16 " / IN.
USER NAME = JLA

CONTRACT NO.

NOTES:

1. SEE PLAN AND PROFILE DWG FOR LAMP CENTERLINE AND FOUNDATION TOP ELEVATIONS.
2. LIR TOWER SHALL PIVOT TOWARD THE RUNWAY THRESHOLD. SEE NOTE 1, DWG DKB-D-MALSR02-S01 FOR LIR TUBE CUTTING LENGTH CALCULATION AND STRUCTURE ASSEMBLY DETAILS.
3. SEE PROJECT SPECIAL PROVISIONS FOR EXCAVATION AND BACKFILL REQUIREMENTS. EXCAVATION SHALL BE SHORED OR SHAPED PER OSHA REQUIREMENTS.
4. SEE PROJECT SPECIAL PROVISIONS FOR CONCRETE FORM WORK, REINFORCEMENT, MATERIAL, PLACEMENT, AND CURING SPECIFICATIONS.
5. ALL CONNECTIONS TO GROUNDING RODS SHALL BE MADE USING EXOTHERMIC WELDS PER SPECIFICATIONS.
6. FOUNDATION SHALL BE CONSTRUCTED SUCH THAT LIR MAST IS CENTERED AT THE RUNWAY STATION SHOWN ON DWG DKB-D-MALSR02-C01.
7. SEE DETAILS '3', DWG DKB-D-MALSR02-E03 AND '6', DWG DKB-D-MALSR02-E04 FOR LIR LIGHT BAR WIRING AND LAMPHOLDER INSTALLATION DETAILS.
8. THE SSPLICE CAN SHALL BE SPECIFICATION FAA-E-1315A, L867D LIGHT BASE, CLASS I, 16 1/4" I. D., 24" DEEP, JAQUITH CAT. NO. AC63242Q100301 WITH 3/8" COVER PLATE, JAQUITH CAT NO. AK2002-06 OR CAT NO. AP2832 AND GASKET, JAQUITH CAT NO. 10530281. THE PLYWOOD SHIPPING COVER SHALL BE USED AS CONCRETE FORM TO PROVIDE 5/16" WIDE AIR GAP IN CONCRETE AROUND BASE PLATE. TOP OF COVER SHALL BE FLUSH WITH TOP OF CONCRETE FOUNDATION CONFIRM ALL PART NUMBERS WITH MANUFACTURER.

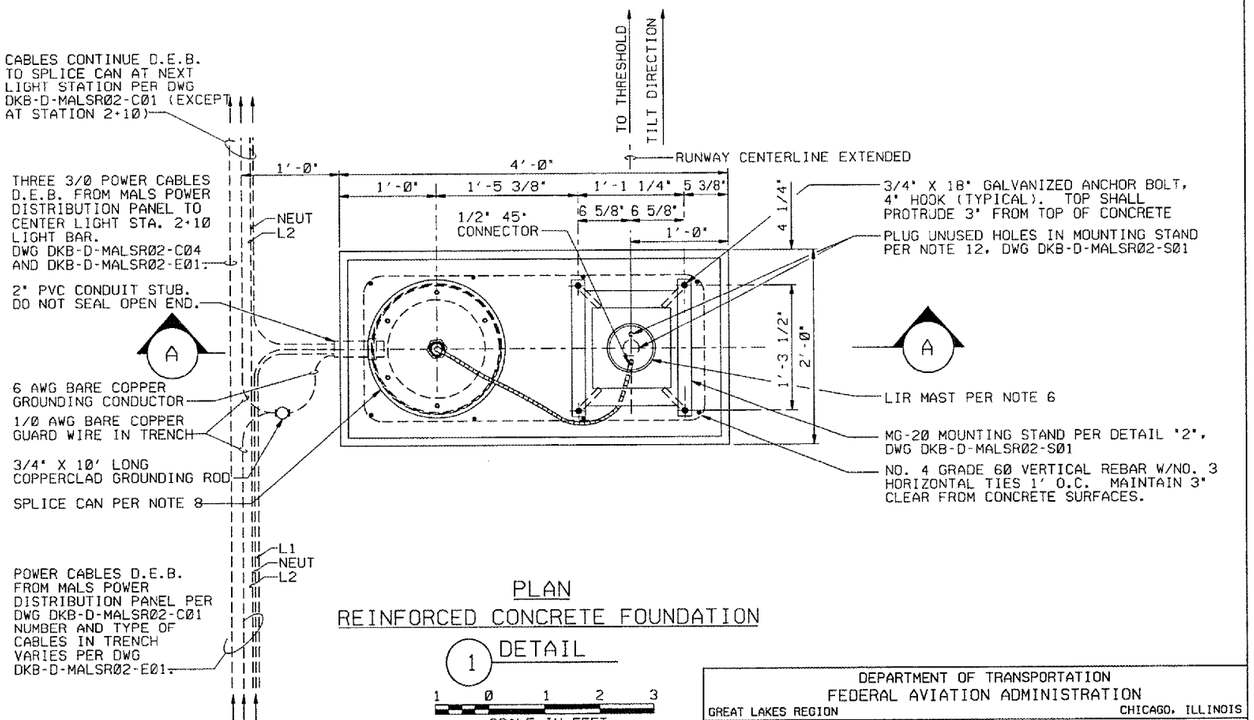


ELEVATION

A SECTION

1 0 1 2

SCALE IN FEET



PLAN

REINFORCED CONCRETE FOUNDATION

1 DETAIL

1 0 1 2 3

SCALE IN FEET

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
GREAT LAKES REGION — CHICAGO, ILLINOIS

MALSR

FOUNDATION DETAILS FOR STEADY-BURNING LIGHT BAR AT STATION 4+20 RUNWAY 02

DEKALB — DEKALB TAYLOR MUNICIPAL AIRPORT — IL

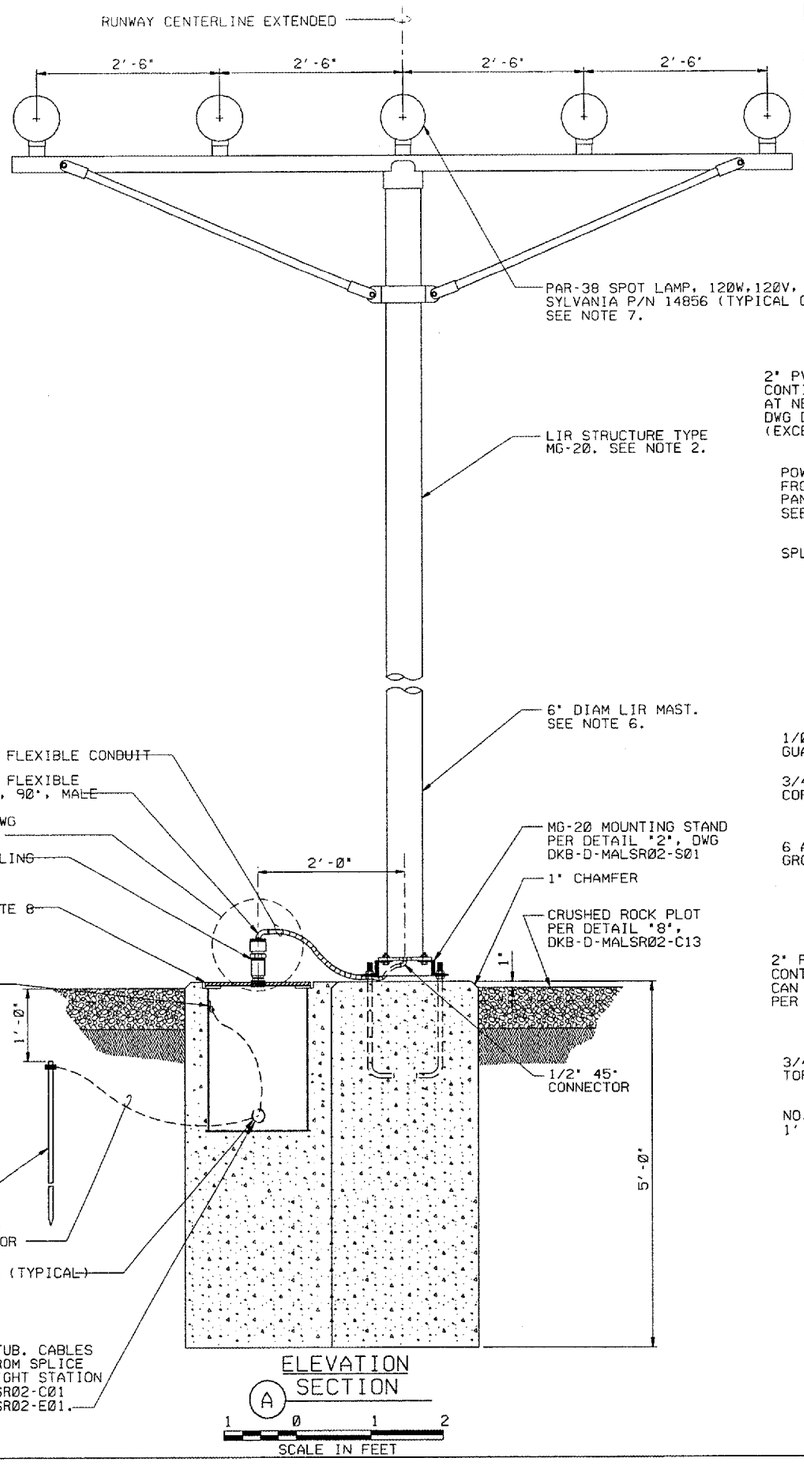
REVIEWED BY	SUBMITTED BY	APPROVED BY

PROJ. ENGR.		PLATFORM MGR.	
DATE	TAD	DATE	JCN
DRAWN	TAD	ISSUED BY: CHICAGO NAS IMPLEMENTATION CENTER	DRAWING NO. DKB-D-MALSR02-C06
DRAWN	EGS		REV

DATE	DESCRIPTION	JCN	REDLINE DATE	APVD

PLOT DATE = 03/26/2007, 10:51 AM
FILE NAME = I:\AIRPORTS\DEKALB\803-06ELEC\AIRPORT\SHEETS\MICRO-STATION SHEETS\MALSR\MG-20 STDY BRNG ON CONC FOR MALSR D.E.B NO WINCH.DGN
PLOT SCALE = 2:0 13/16 '=' / IN.
USER NAME = JLA

CONTRACT NO.

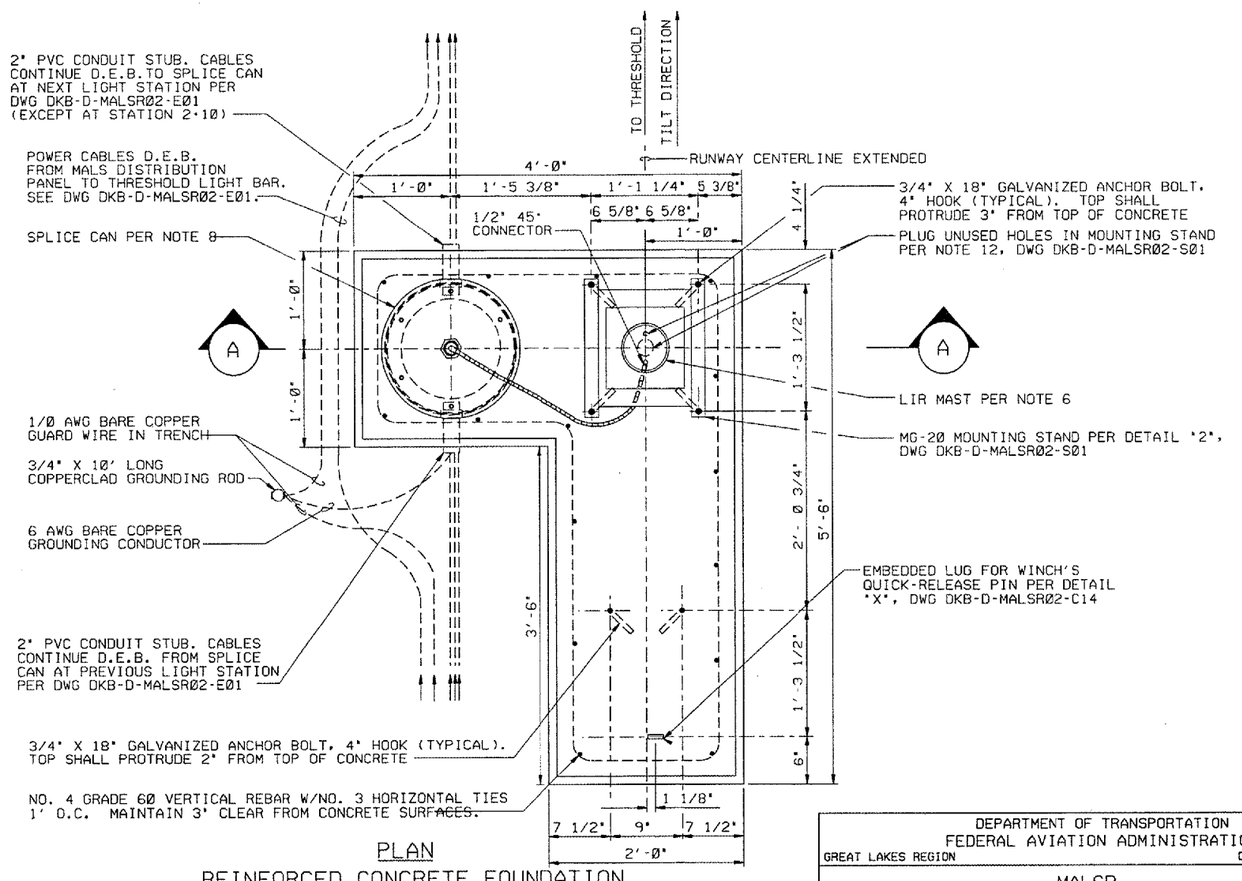


ELEVATION
(A) SECTION

1 0 1 2
SCALE IN FEET

NOTES:

1. SEE PLAN AND PROFILE DRAWING FOR LAMP CENTERLINE AND FOUNDATION TOP ELEVATIONS.
2. LIR TOWER SHALL PIVOT TOWARD THE RUNWAY THRESHOLD. SEE NOTE 1, DWG DKB-D-MALSR02-S01 FOR LIR TUBE CUTTING LENGTH CALCULATION AND STRUCTURE ASSEMBLY DETAILS.
3. SEE PROJECT SPECIAL PROVISIONS FOR EXCAVATION AND BACKFILL REQUIREMENTS. EXCAVATION SHALL BE SHORED OR SHAPED PER OSHA REQUIREMENTS.
4. SEE PROJECT SPECIAL PROVISIONS FOR CONCRETE FORM WORK. REINFORCEMENT, MATERIAL, PLACEMENT, AND CURING SPECIFICATIONS.
5. ALL CONNECTIONS TO GROUNDING RODS SHALL BE MADE USING EXOTHERMIC WELDS PER SPECIFICATIONS.
6. FOUNDATION SHALL BE CONSTRUCTED SUCH THAT LIR MAST IS CENTERED AT THE RUNWAY STATION SHOWN ON DWG DKB-D-MALSR02-C01.
7. SEE DETAILS "3", DWG DKB-D-MALSR02-E-03 AND "6", DWG DKB-D-MALSR02-E04 FOR LIR LIGHT BAR WIRING AND LAMPHOLDER INSTALLATION DETAILS.
8. THE SPLICE CAN SHALL BE A SPECIFICATION FAA-E-1315A, L867D LIGHT BASE, CLASS I, 16 1/4" I. D., 24" DEEP, JAQUITH CAT. NO. AC632420200301 WITH 3/8" COVER PLATE, JAQUITH CAT. NO. AK2002-06 OR CAT NO. AP2832 AND GASKET, JAQUITH CAT. NO. 10530201. THE PLYWOOD SHIPPING COVER SHALL BE USED AS CONCRETE FORM TO PROVIDE 5/16" WIDE AIR GAP IN CONCRETE AROUND BASE PLATE. TOP OF COVER SHALL BE FLUSH WITH TOP OF CONCRETE FOUNDATION.



PLAN
REINFORCED CONCRETE FOUNDATION
(1) DETAIL

1 0 1 2 3
SCALE IN FEET

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
GREAT LAKES REGION — CHICAGO, ILLINOIS

MALSR

FOUNDATION DETAILS FOR STEADY-BURNING LIGHT BAR AT STATIONS 6+30, AND 8+40 RUNWAY 02

DEKALB — DEKALB TAYLOR MUNICIPAL AIRPORT — IL

DATE	DESCRIPTION	JCN	REDLINE DATE	APVD

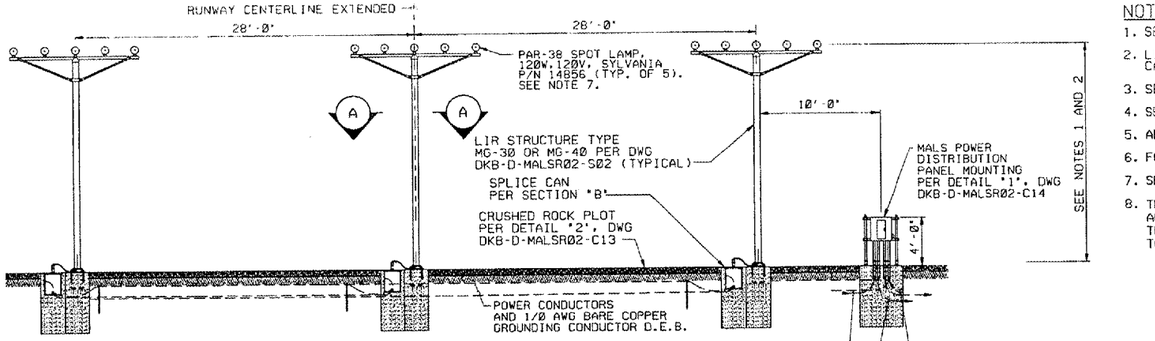
REVIEWED BY	SUBMITTED BY	APPROVED BY
	PROJ. ENGR.	PLATFORM MGR.
	DATE TAD	DATE JCN
	DRAWN TAD	ISSUED BY CHICAGO NAS IMPLEMENTATION CENTER
	DRAWN EGS	DRAWING NO. DKB-D-MALSR02-C07 REV

SHEET 15 OF 48

CITY

PLOT DATE = 03\28\2007, 11:02 AM
FILE NAME = I:\AIRPORTS\DEKALB\803-06ELEC\AIRPORT\SHEETS\MICRO-STATION SHEETS\MALSR\MG-20 STDY BRNG ON CONC FOR MALSR D.E.B.DGN
PLOT SCALE = 2:0 13/16 "," / IN.
USER NAME = JLA

CONTRACT NO.

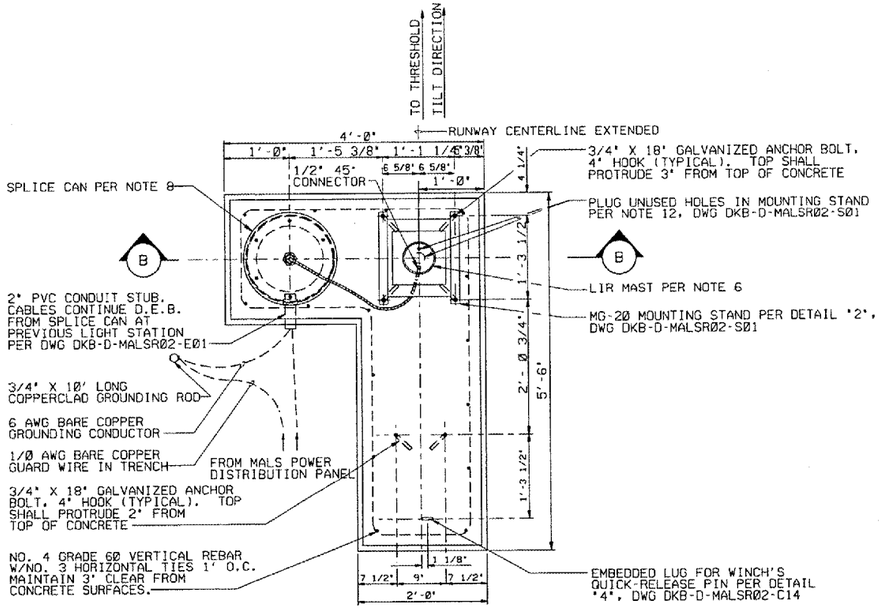


ELEVATION
(LOOKING TOWARD THRESHOLD)
STEADY-BURNING LIGHT BAR MOUNTED ON MG-30 OR MG-40 LIR TOWER

4 0 4 8 12
SCALE IN FEET

NOTES:

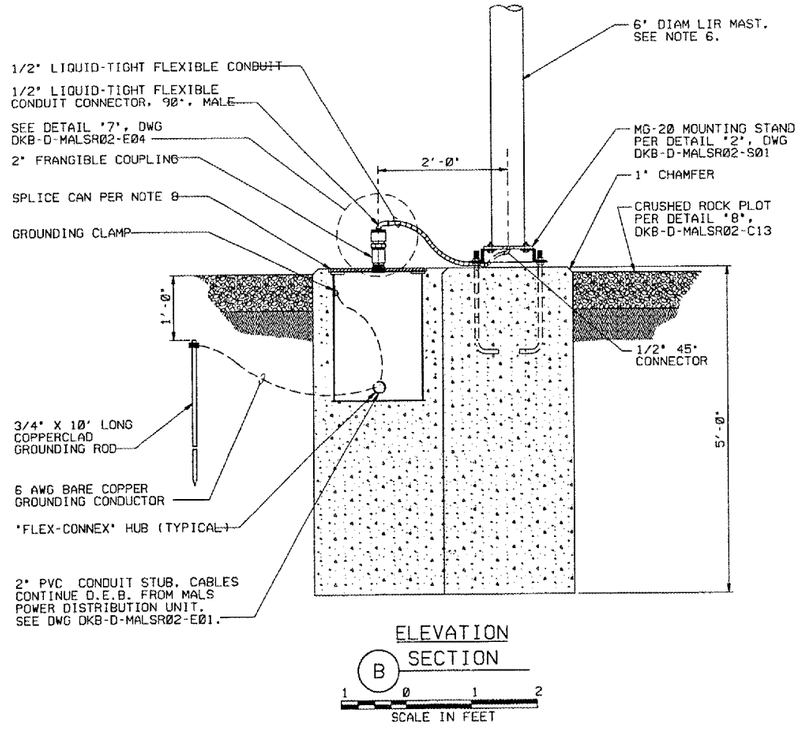
1. SEE PLAN AND PROFILE DRAWING FOR LAMP CENTERLINE AND FOUNDATION TOP ELEVATIONS.
2. LIR TOWERS SHALL PIVOT TOWARD THE RUNWAY THRESHOLD. SEE NOTE 1, DWG DKB-D-MALSR02-S01 FOR LIR TUBE CUTTING LENGTH CALCULATION AND STRUCTURE ASSEMBLY DETAILS.
3. SEE PROJECT SPECIAL PROVISIONS FOR EXCAVATION AND BACKFILL REQUIREMENTS. EXCAVATION SHALL BE SHORED OR SHAPED PER OSHA REQUIREMENTS.
4. SEE PROJECT SPECIAL PROVISIONS FOR CONCRETE FORM WORK, REINFORCEMENT, PLACEMENT, AND CURING SPECIFICATIONS.
5. ALL CONNECTIONS TO GROUNDING RODS SHALL BE MADE USING EXOTHERMIC WELDS PER SPECIFICATIONS.
6. FOUNDATION SHALL BE CONSTRUCTED SUCH THAT LIR MAST IS CENTERED AT THE RUNWAY STATION SHOWN ON PLAN AND PROFILE DWG.
7. SEE DETAILS "3", DWG DKB-D-MALSR02-E03 AND "6", DWG DKB-D-MALSR02-E04 FOR LIR LIGHT BAR WIRING AND LAMPHOLDER INSTALLATION DETAILS.
8. THE SPLICE CAN SHALL BE A SPECIFICATION FAA-E-1315A, L867D LIGHT BASE, CLASS I, 16 1/4" I. D., 24" DEEP, JAQUITH CAT. NO. AC63242Q100301 WITH 3/8" COVER PLATE, JAQUITH CAT. NO. AK2002-06 OR CAT NO. AP2832 AND GASKET, JAQUITH CAT. NO. 10530281. THE PLYWOOD SHIPPING COVER SHALL BE USED AS CONCRETE FORM TO PROVIDE 5/16" WIDE AIR GAP IN CONCRETE AROUND BASE PLATE. TOP OF COVER SHALL BE FLUSH WITH TOP OF CONCRETE FOUNDATION CONFIRM ALL PART NUMBERS WITH MANUFACTURER.



REINFORCED CONCRETE FOUNDATION

A SECTION

1 0 1 2
SCALE IN FEET



ELEVATION
B SECTION

1 0 1 2
SCALE IN FEET

DATE	DESCRIPTION	JCN	REDLINE DATE	APVD

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
GREAT LAKES REGION — CHICAGO, ILLINOIS

MALSR

FOUNDATION DETAILS FOR STEADY-BURNING LIGHT BARS AT STATION 10+50 RUNWAY Ø2

DEKALB — DEKALB TAYLOR MUNICIPAL AIRPORT — IL

REVIEWED BY	SUBMITTED BY	APPROVED BY
PROJ. ENGR.		PLATFORM MGR.
DATE TAD	ISSUED BY CHICAGO NAS IMPLEMENTATION CENTER	DATE JCN
DRAWN TAD		DRAWING NO. DKB-D-MALSR02-C08 REV
DRAWN EGS		

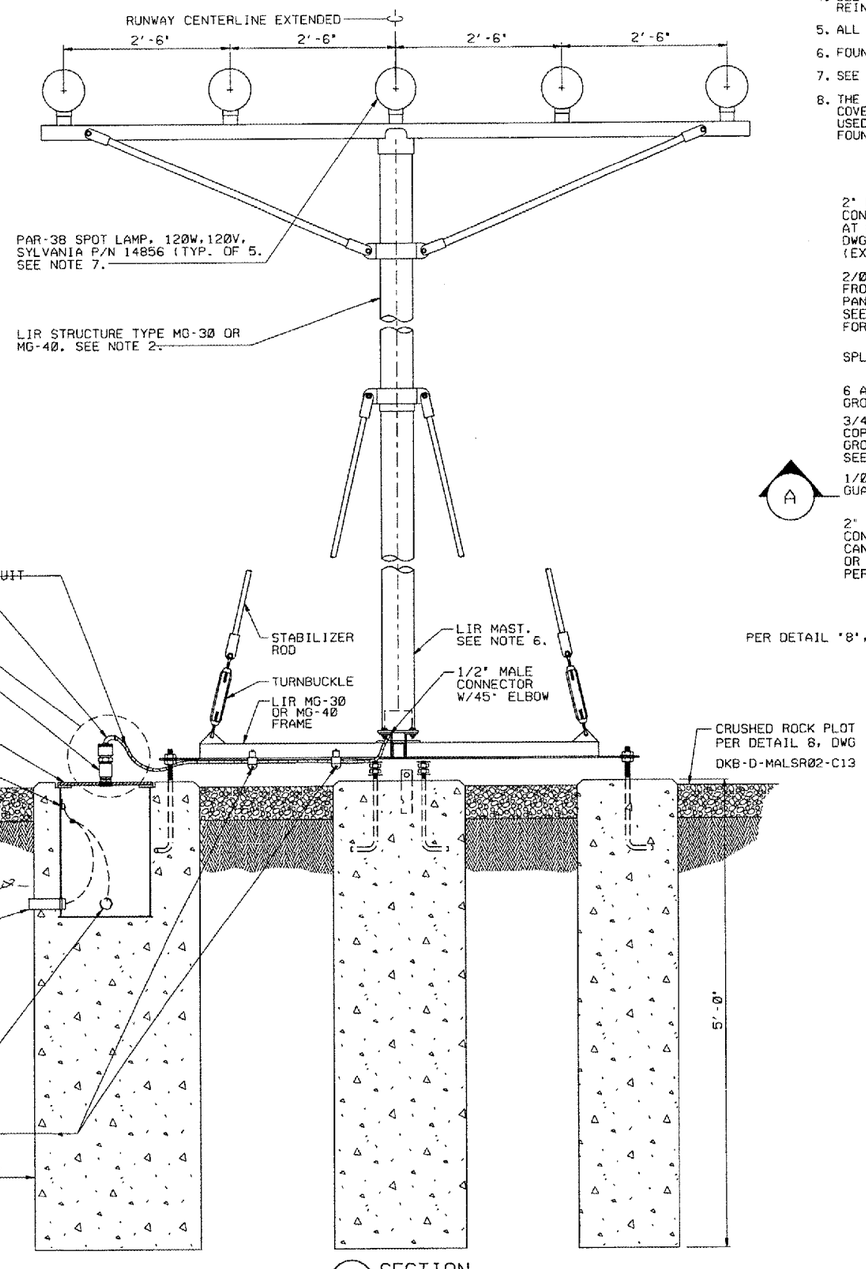
SHEET 16 OF 48

PLOT DATE = 03/29/2007, 11:41 AM
FILE NAME = I:\AIRPORTS\DEKALB\003-06ELEC\AIRPORT\SHEETS\MICRO-STATION SHEETS\MALSR\MG-20 STDY-BRNG STA 10 ON CONCRETE FOR MALSR D.E.B.DGN
PLOT SCALE = 1.141875 '/ IN.
USER NAME = JLA

CONTRACT NO.

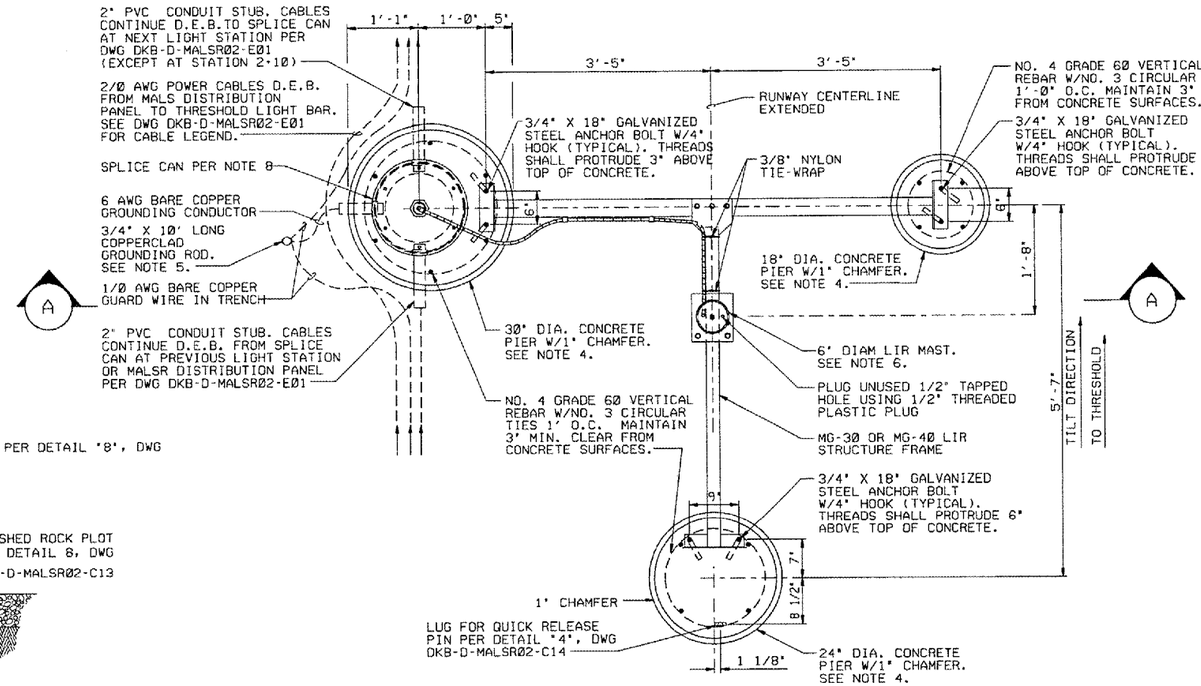
NOTES:

1. SEE PLAN AND PROFILE DWG FOR LAMP CENTERLINE AND FOUNDATION TOP ELEVATIONS.
2. LIR TOWER SHALL PIVOT TOWARD THE RUNWAY THRESHOLD. SEE NOTE 1, DWG DKB-D-MALSR02-S01 FOR LIR TUBE CUTTING LENGTH CALCULATION AND STRUCTURE ASSEMBLY DETAILS.
3. SEE PROJECT SPECIAL PROVISIONS FOR EXCAVATION AND BACKFILL REQUIREMENTS. EXCAVATION SHALL BE SHORED OR SHAPED PER OSHA REQUIREMENTS..
4. SEE PROJECT SPECIAL PROVISIONS FOR CONCRETE FORM WORK, REINFORCEMENT, MATERIAL, PLACEMENT, AND CURING SPECIFICATIONS.
5. ALL CONNECTIONS TO GROUNDING RODS SHALL BE MADE USING EXOTHERMIC WELDS PER SPECIFICATIONS.
6. FOUNDATION SHALL BE CONSTRUCTED SUCH THAT LIR MAST IS CENTERED AT THE RUNWAY STATION SHOWN ON PLAN AND PROFILE DWG.
7. SEE DETAILS '3', DWG DKB-D-MALSR02-E03 AND '6', DWG DKB-D-MALSR02-E04 FOR LIR LIGHT BAR WIRING AND LAMPHOLDER INSTALLATION DETAILS,
8. THE SPLICE CAN SHALL BE A SPECIFICATION FAA-E-1315A, L867D LIGHT BASE, CLASS I, 16 1/4" I. D., 24" DEEP, JAQUITH CAT. NO. AC632420300301 WITH 3/8" COVER PLATE, JAQUITH CAT. NO. AK2002-06 OR CAT NO. AP2832 AND GASKET, JAQUITH CAT. NO. 12530281. THE PLYWOOD SHIPPING COVER SHALL BE USED AS CONCRETE FORM TO PROVIDE 5/16" WIDE AIR GAP IN CONCRETE AROUND BASE PLATE. TOP OF COVER SHALL BE FLUSH WITH TOP OF CONCRETE FOUNDATION.



A SECTION

ELEVATION VIEW



PLAN

FOUNDATION LAYOUT FOR STEADY-BURNING LIGHT BAR

1 DETAIL

1 0 1 2

SCALE IN FEET

	DATE	DESCRIPTION	JCN	RECD./INC DATE	APVD

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
GREAT LAKES REGION — CHICAGO, ILLINOIS

MALSR

FOUNDATION DETAILS FOR STEADY-BURNING LIGHT BAR AT STATION 12+50 RUNWAY 02

DEKALB — DEKALB TAYLOR MUNICIPAL AIRPORT — IL

REVIEWED BY	SUBMITTED BY	APPROVED BY

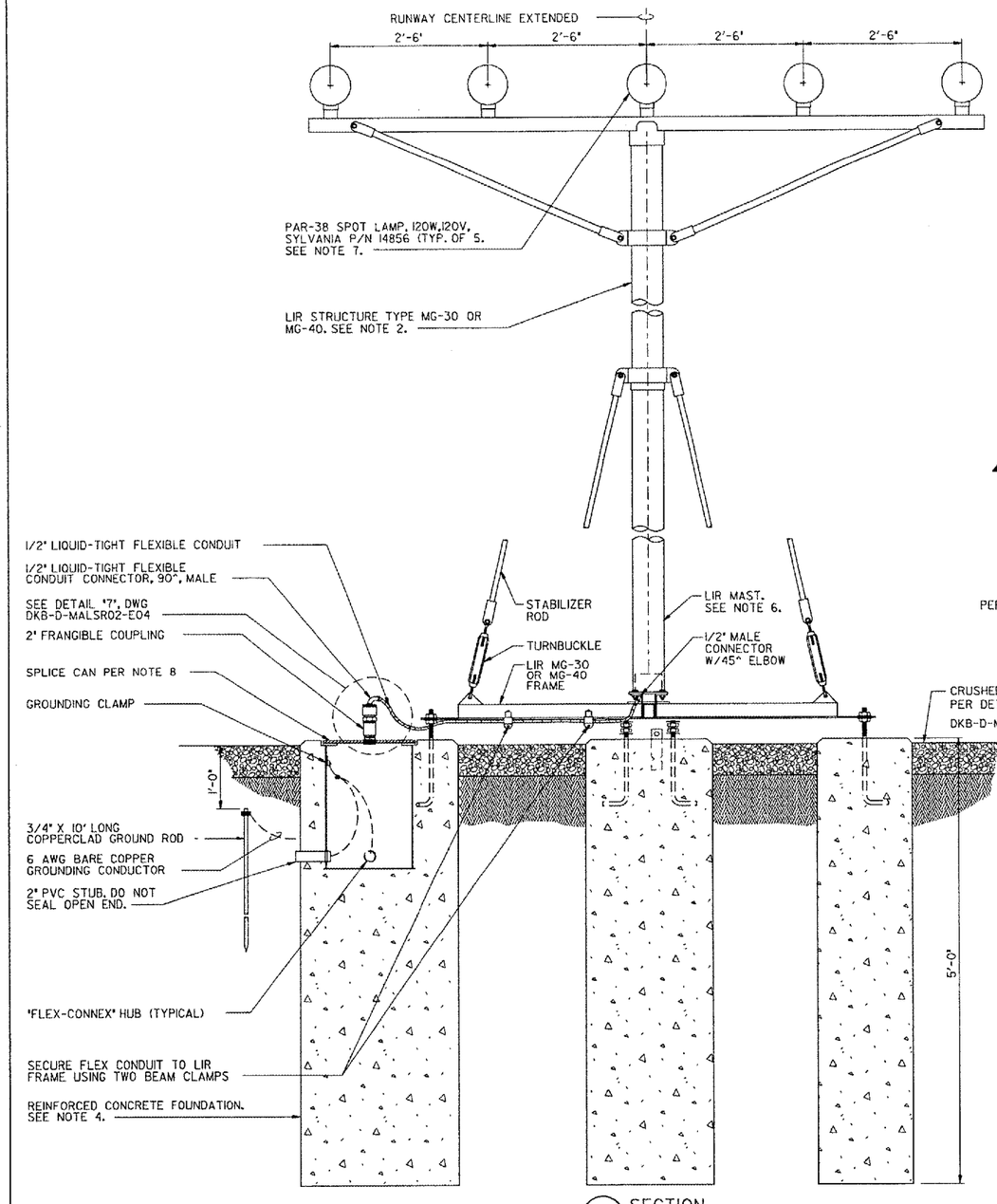
PROJ. ENGR. — PLATFORM MGR.

DATE	TAD	ISSUED BY	DATE JCN
DRAWN	TAD	CHICAGO NAS IMPLEMENTATION CENTER	DRAWING NO. DKB-D-MALSR02-C09 REV
DRAWN	EGS		

SHEET 17 OF 48

PLOT DATE = 03\28\2007, 11:54 AM
FILE NAME = I:\AIRPORTS\DEKALB\03-06ELEC\AIRPORT\SHEETS\MICRO-STATION SHEETS\MALSR\MG-30 OR MG-40 STDY BRNG ON CONC FOR MALSR D.E.B.DGN
PLOT SCALE = 2:3 5/16 "=" / IN.
USER NAME = JLA

CONTRACT NO.

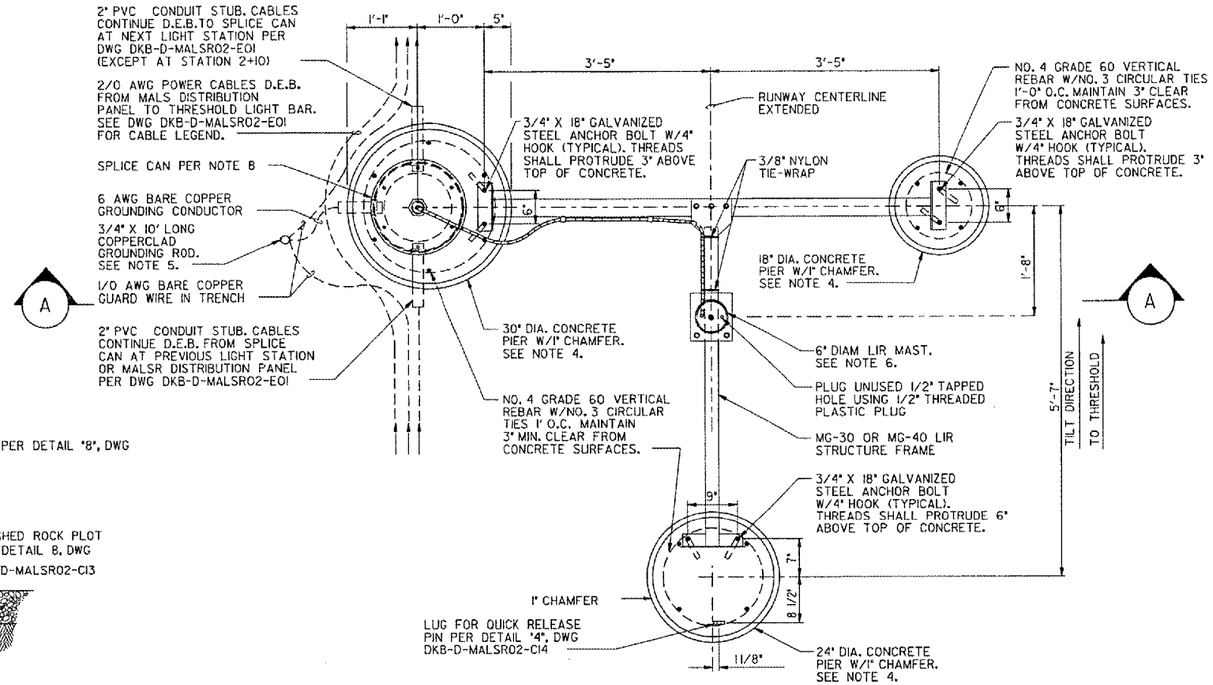


A SECTION

ELEVATION VIEW

NOTES:

1. SEE PLAN AND PROFILE DWG FOR LAMP CENTERLINE AND FOUNDATION TOP ELEVATIONS.
2. LIR TOWER SHALL PIVOT TOWARD THE RUNWAY THRESHOLD. SEE NOTE 1, DWG DKB-D-MALSR02-S01 FOR LIR TUBE CUTTING LENGTH CALCULATION AND STRUCTURE ASSEMBLY DETAILS.
3. SEE PROJECT SPECIAL PROVISIONS FOR EXCAVATION AND BACKFILL REQUIREMENTS. EXCAVATION SHALL BE SHORED OR SHAPED PER OSHA REQUIREMENTS..
4. SEE PROJECT SPECIAL PROVISIONS FOR CONCRETE FORM WORK, REINFORCEMENT, MATERIAL, PLACEMENT, AND CURING SPECIFICATIONS.
5. ALL CONNECTIONS TO GROUNDING RODS SHALL BE MADE USING EXOTHERMIC WELDS PER SPECIFICATIONS.
6. FOUNDATION SHALL BE CONSTRUCTED SUCH THAT LIR MAST IS CENTERED AT THE RUNWAY STATION SHOWN ON PLAN AND PROFILE DWG.
7. SEE DETAILS "3", DWG DKB-D-MALSR02-E03 AND "6", DWG DKB-D-MALSR02-E04 FOR LIR LIGHT BAR WIRING AND LAMPHOLDER INSTALLATION DETAILS,
8. THE SPLICE CAN SHALL BE A SPECIFICATION FAA-E-1315A, L867D LIGHT BASE, CLASS 1, 16 1/4" I. D., 24" DEEP, JAQUITH CAT. NO. AC6324203003011 WITH 3/8" COVER PLATE, JAQUITH CAT. NO. AK2002-06 OR CAT NO. AP2832 AND GASKET, JAQUITH CAT. NO. 105302BL. THE PLYWOOD SHIPPING COVER SHALL BE USED AS CONCRETE FORM TO PROVIDE 5/16" WIDE AIR GAP IN CONCRETE AROUND BASE PLATE. TOP OF COVER SHALL BE FLUSH WITH TOP OF CONCRETE FOUNDATION.



PLAN

FOUNDATION LAYOUT FOR STEADY-BURNING LIGHT BAR

1 DETAIL

1 0 1 2

SCALE IN FEET

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
GREAT LAKES REGION — CHICAGO, ILLINOIS

MALSR

FOUNDATION DETAILS FOR STEADY-BURNING LIGHT BAR AT STATION 14+50 RUNWAY 02

DEKALB — DEKALB TAYLOR MUNICIPAL AIRPORT — IL

REVIEWED BY	SUBMITTED BY	APPROVED BY
	PROJ. ENGR.	PLATFORM MGR.
	DATE TAD	DATE JCH
	DRAWN TAD	ISSUED BY CHICAGO NAS IMPLEMENTATION CENTER
	DRAWN EGS	DRAWING NO. DKB-D-MALSR02-C10 REV

DATE	DESCRIPTION	JCH	REVISED DATE	APVD

SHEET 18 OF 48

PLOT DATE = 03\29\2007, 10:00 AM
FILE NAME = I:\Airports\DEKALB\803-06ELEC\Airport\Sheets\Micro-Station Sheets\MALSR\MG-30 OR MG-40 STDY BRNG ON CONC FOR MALSR D.E.B 14+50.dgn
PLOT SCALE = 2:3 5/16 '1' / IN.
USER NAME = JJo

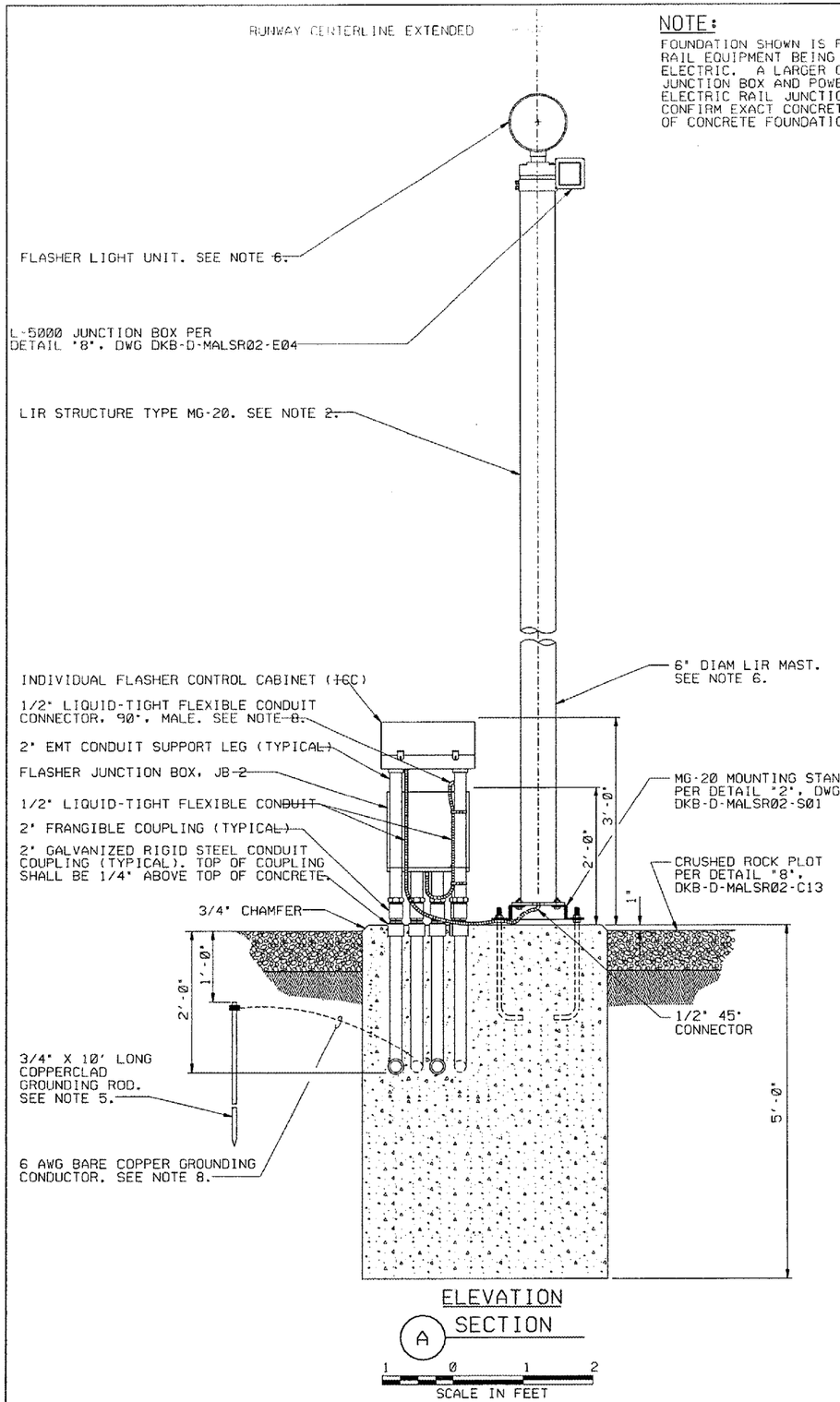
CONTRACT NO.

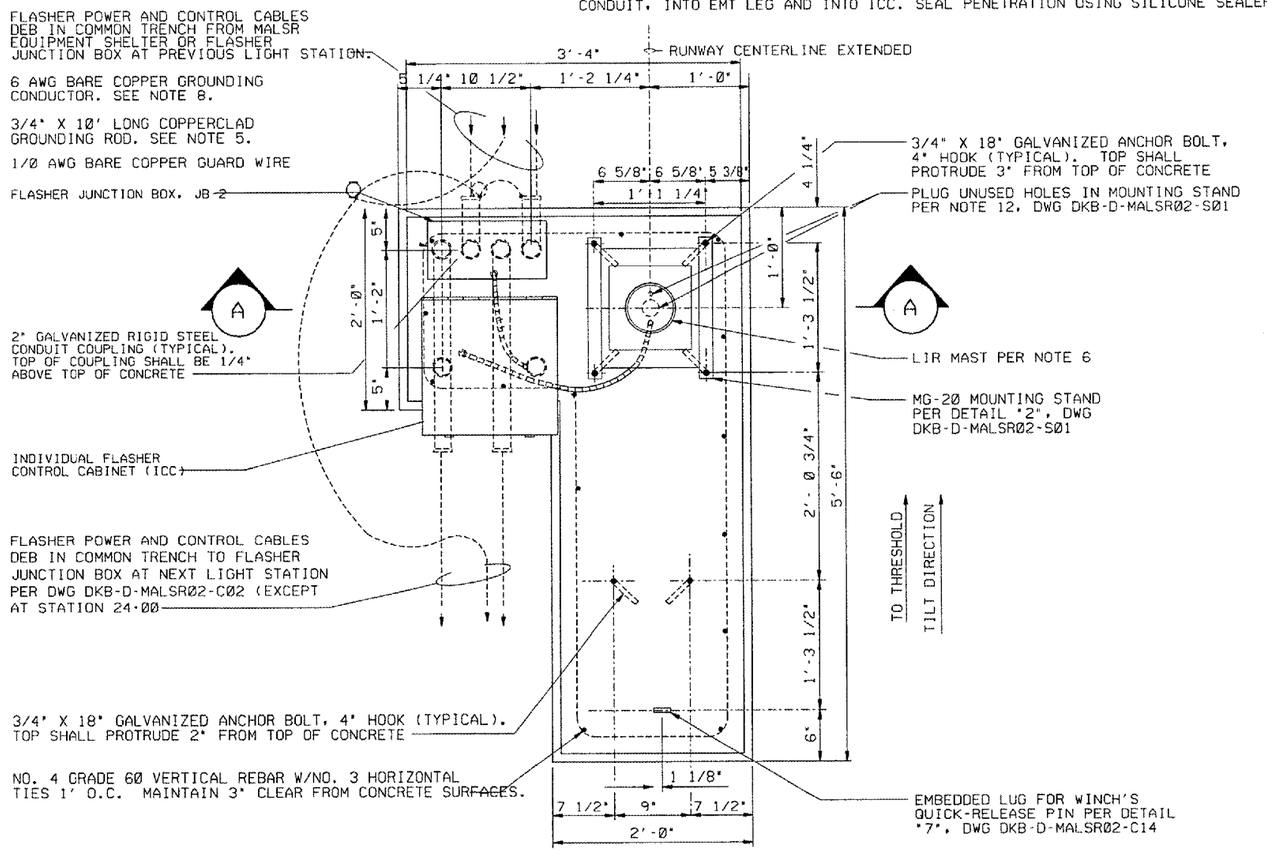
NOTE:

FOUNDATION SHOWN IS FOR DME RAIL TOWER AND ASSOCIATED EQUIPMENT. RAIL EQUIPMENT BEING FURNISHED BY THE OWNER IS MANUFACTURED BY MULTI ELECTRIC. A LARGER CONCRETE FOUNDATION WILL BE REQUIRED TO MOUNT THE JUNCTION BOX AND POWER SUPPLY CABINET. SEE SHEET 46 FOR REFERENCE MULTI ELECTRIC RAIL JUNCTION BOX AND POWER SUPPLY CABINET MOUNTING DETAILS. CONFIRM EXACT CONCRETE FOUNDATION DIMENSIONS WITH MULTI ELECTRIC. DEPTH OF CONCRETE FOUNDATION WILL BE 5'-0".

NOTES:

1. SEE DWG DKB-D-MALSR02-C01 FOR LAMP CENTERLINE AND FOUNDATION TOP ELEVATIONS.
2. LIR STRUCTURES SHALL PIVOT TOWARD THE RUNWAY THRESHOLD. SEE NOTE 1, DWG DKB-D-MALSR02-S01 FOR LIR TUBE CUTTING LENGTH CALCULATION AND MG-20 LIR STRUCTURE ASSEMBLY DETAILS
3. SEE PROJECT SPECIAL PROVISIONS FOR EXCAVATION AND BACKFILL REQUIREMENTS. EXCAVATION SHALL BE SHORED AND SHAPED PER OSHA REQUIREMENTS.
4. SEE PROJECT SPECIAL PROVISIONS FOR CONCRETE FROM WORK, REINFORCED, MATERIAL, PLACEMENT, AND CURING SPECIFICTIONS.
5. ALL CONNECTIONS TO GROUNDING RODS SHALL BE MADE USING EXOTHERMIC WELDS PER SPECIFICATIONS.
6. FOUNDATION SHALL BE CONSTRUCTED SUCH THAT LIR MAST IS CENTERED AT THE RUNWAY STATION SHOWN ON DWG DKB-D-MALSR02-C02.
7. SEE DWG DKB-D-MALSR02-E02 FOR FLASHER ICC WIRING.
8. DRILL HOLE IN SIDE OF 2" EMT CONDUIT LEG OF ICC AND INSTALL 90° 1/2" FLEX CONDUIT CONNECTOR WITH 1/2" FLEX CONDUIT FROM JUNCTION BOX. ROUTE POWER AND CONTROL CABLES THROUGH FLEX CONDUIT, INTO EMT LEG AND INTO ICC. SEAL PENETRATION USING SILICONE SEALER.





DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
GREAT LAKES REGION — CHICAGO, ILLINOIS

MALSR

FOUNDATION DETAILS FOR FLASHER AT STATIONS 16+40 THRU 20+20 RUNWAY 02

DEKALB — DEKALB TAYLOR MUNICIPAL AIRPORT — IL

REVIEWED BY	SUBMITTED BY	APPROVED BY

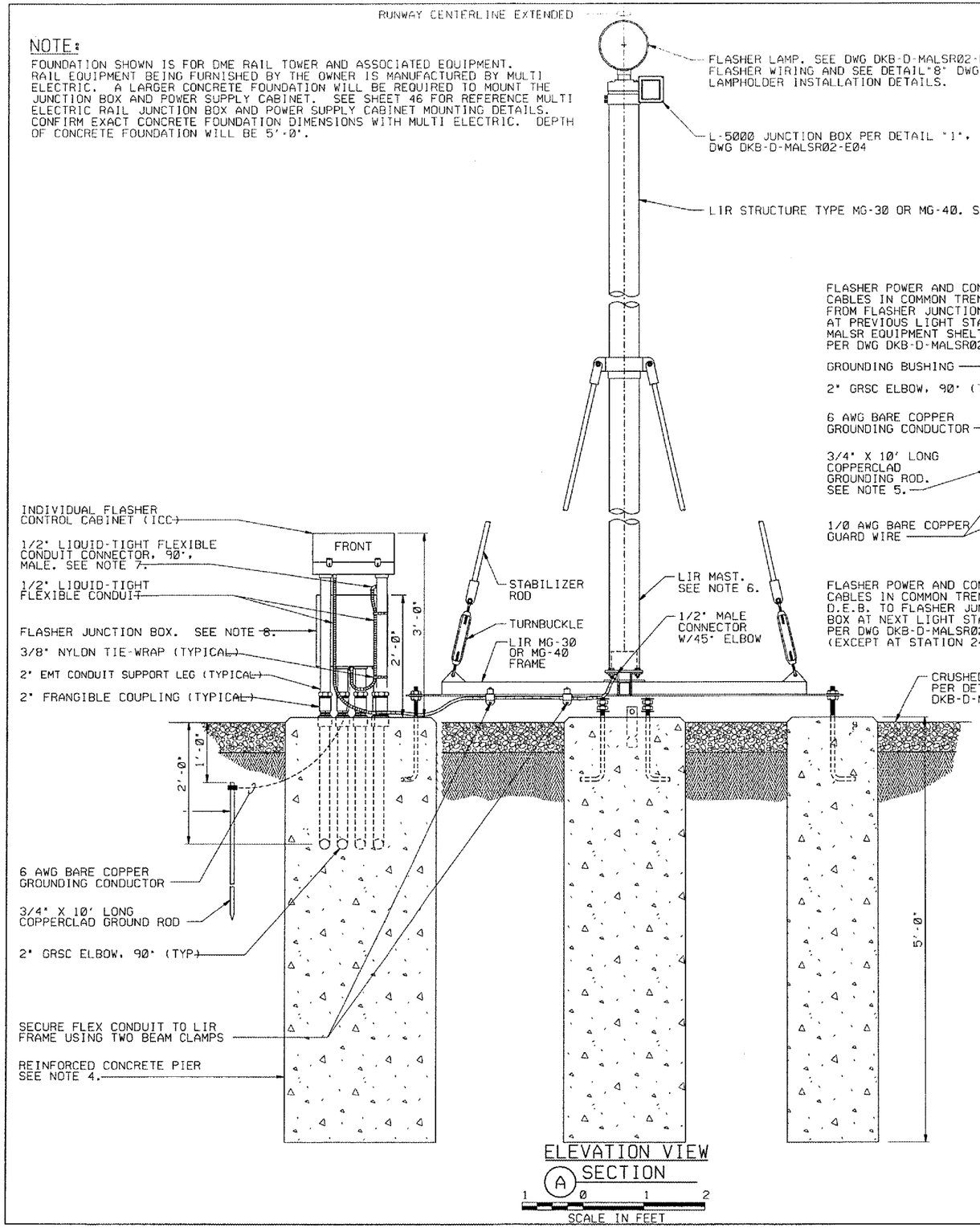
PROJ. ENGR.			PLATFORM MGR.	
DATE	TAD	ISSUED BY: CHICAGO NAS IMPLEMENTATION CENTER	DATE	JCN
DRAWN	TAD		DRAWING NO.	REV
DRAWN	EGS		DKB-D-MALSR02-C11	

DATE	DESCRIPTION	JCN	REDLINE DATE	APVD

PLOT DATE - 04\19\2007, 11:56 AM
FILE NAME - I:\AIRPORTS\DEKALB\900-BEELEC\AIRPORT\SHEETS\MICRO-STATION SHEETS\MALSR\MG-20 FLSHR ON CONC FOR MALSR D.E.B.DGN
PLOT SCALE - 2.1 '/ IN.
USER NAME - BAK#

NOTE:

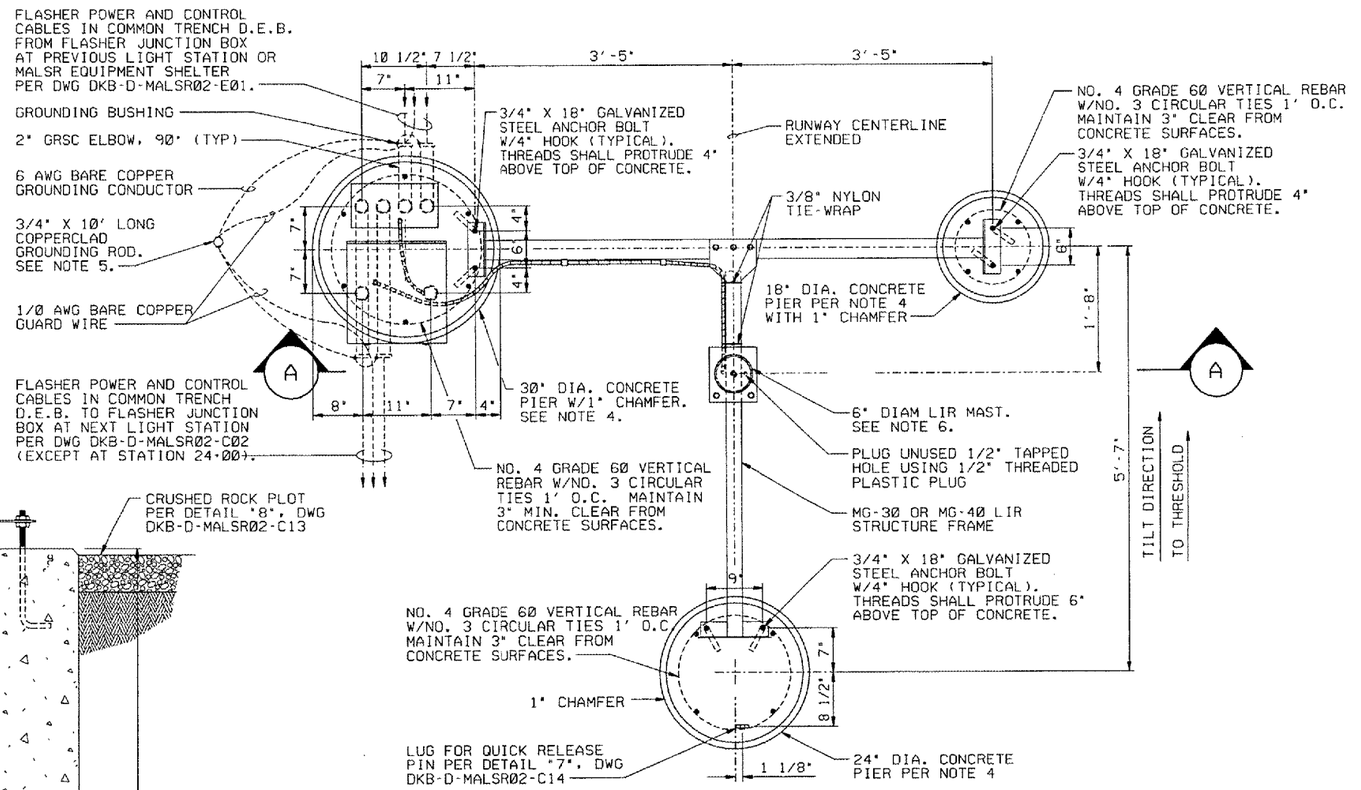
FOUNDATION SHOWN IS FOR DME RAIL TOWER AND ASSOCIATED EQUIPMENT. RAIL EQUIPMENT BEING FURNISHED BY THE OWNER IS MANUFACTURED BY MULTI ELECTRIC. A LARGER CONCRETE FOUNDATION WILL BE REQUIRED TO MOUNT THE JUNCTION BOX AND POWER SUPPLY CABINET. SEE SHEET 46 FOR REFERENCE MULTI ELECTRIC RAIL JUNCTION BOX AND POWER SUPPLY CABINET MOUNTING DETAILS. CONFIRM EXACT CONCRETE FOUNDATION DIMENSIONS WITH MULTI ELECTRIC. DEPTH OF CONCRETE FOUNDATION WILL BE 5'-0".



ELEVATION VIEW
SECTION A

NOTES:

1. SEE PLAN AND PROFILE DWG FOR LAMP CENTERLINE AND FOUNDATION TOP ELEVATIONS.
2. LIR STRUCTURE SHALL PIVOT TOWARD THE RUNWAY THRESHOLD SEE NOTE 1, DWG DKB-D-MALSR02-S01 FOR LIR TUBE CUTTING LENGTH CALCULATION AND STRUCTURE ASSEMBLY DETAILS
3. SEE PROJECT SPECIAL PROVISIONS FOR EXCAVATION AND BACKFILL REQUIREMENTS. EXCAVATION SHALL BE SHORED OR SHAPED PER OSHA REQUIREMENTS.
4. SEE PROJECT SPECIAL PROVISIONS FOR CONCRETE FORM WORK, REINFORCEMENT, MATERIAL, PLACEMENT, AND CURING SPECIFICATIONS.
5. ALL CONNECTIONS TO GROUNDING RODS SHALL BE MADE USING EXOTHERMIC WELDS PER SPECIFICATIONS.
6. FOUNDATION SHALL BE CONSTRUCTED SUCH THAT LIR MAST IS CENTERED AT THE RUNWAY STATION SHOWN ON DWG DKB-D-MALSR02-C02.
7. DRILL HOLE IN SIDE OF 2" EMT CONDUIT LEG OF ICC AND INSTALL 90° 1/2" FLEX CONDUIT CONNECTOR WITH 1/2" FLEX CONDUIT FROM JUNCTION BOX. ROUTE POWER AND CONTROL CABLES THROUGH FLEX CONDUIT, INTO EMT LEG AND INTO ICC. SEAL PENETRATION USING SILICONE SEALER.



PLAN
FOUNDATION LAYOUT FOR MG-30 OR MG-40 LIR TOWER W/FLASHER
1 DETAIL

1 0 1 2
SCALE IN FEET

DATE	DESCRIPTION	JCN	REDLINE DATE	APVD

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
GREAT LAKES REGION — CHICAGO, ILLINOIS

MALSR

FOUNDATION DETAILS FOR FLASHER AT STATIONS 22+10 AND 24+00 RUNWAY 02

DEKALB — DEKALB TAYLOR MUNICIPAL AIRPORT — IL

REVIEWED BY	SUBMITTED BY	APPROVED BY
PROJ. ENGR.		PLATFORM MGR.
DATE	TAD	ISSUED BY: CHICAGO NAS IMPLEMENTATION CENTER
DRAWN	TAD	DRAWING NO. DKB-D-MALSR02-C12
DRAWN	EGS	REV

PLOT DATE = 04\19\2007, 01:20 PM
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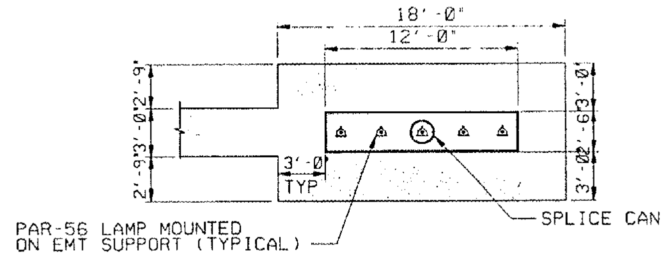
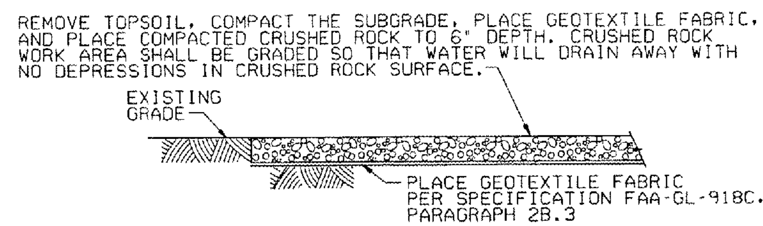
PLOT SCALE = 2.0 ' / IN.
USER NAME = DAKA

CONTRACT NO.



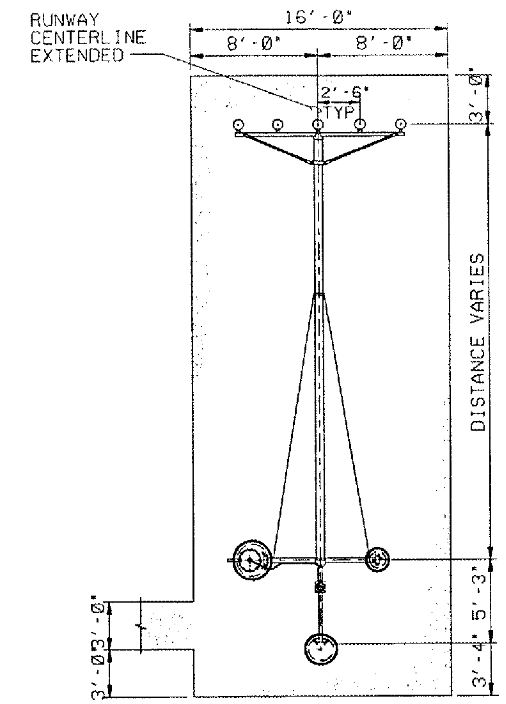
TYPICAL CRUSHED ROCK WORK AREA FOR STEADY-BURNING LIGHT BARS MOUNTED ON EMT SUPPORTS

(1) DETAIL



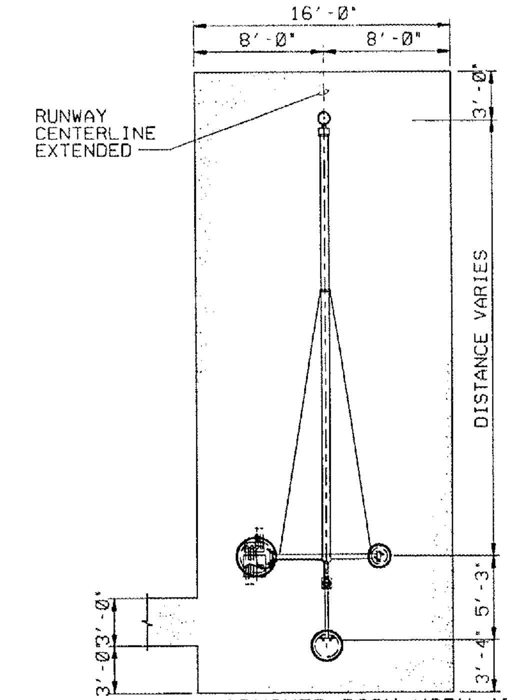
TYPICAL SECTION FOR CRUSHED ROCK PLOT, WORK AREAS, ACCESS ROADS AND WALKWAYS

(8) DETAIL
NOT TO SCALE



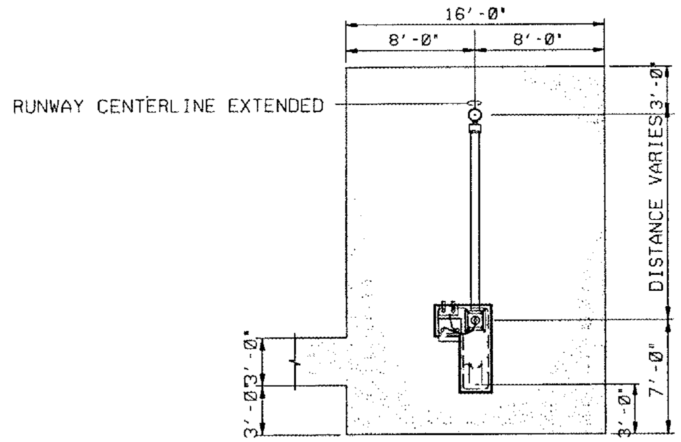
TYPICAL CRUSHED ROCK WORK AREA FOR STEADY-BURNING LIGHT BAR ON TYPE MG-30 OR TYPE MG-40 LIR STRUCTURE

(6) DETAIL



TYPICAL CRUSHED ROCK WORK AREA FOR TYPE MG-30 OR TYPE MG-40 LIR STRUCTURE WITH FLASHER

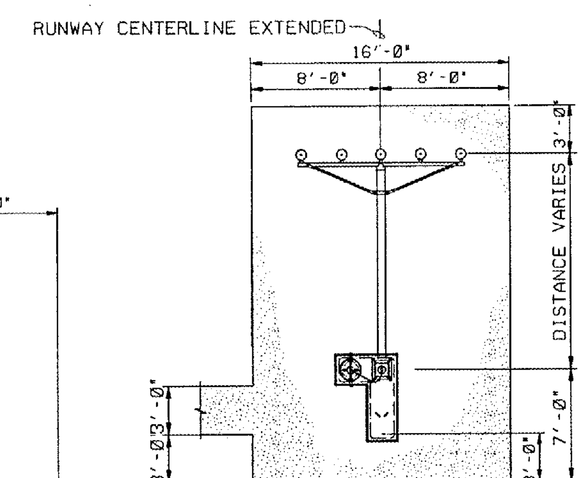
(7) DETAIL



TYPICAL CRUSHED ROCK WORK AREA FOR TYPE MG-20 LIR STRUCTURE WITH FLASHER

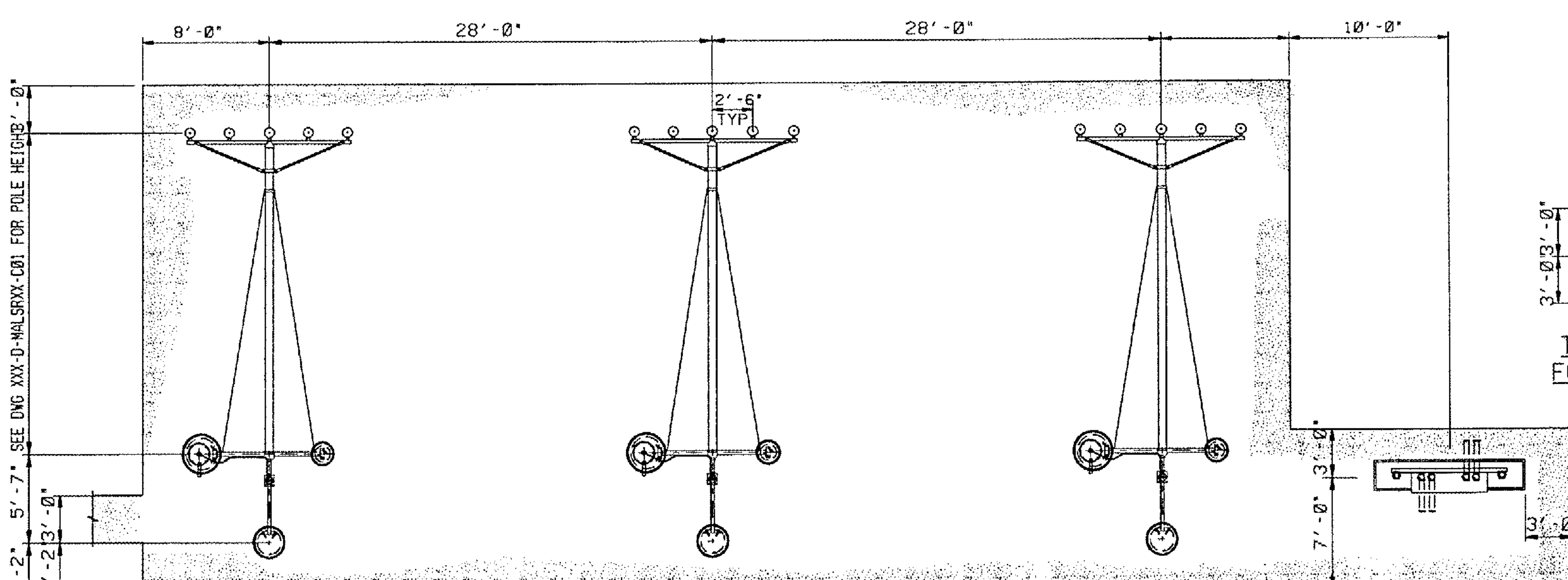
(5) DETAIL

MASTER FILE: CRUSHED ROCK PLOT DETAILS FOR MALSR BARS ON CONCRETE.DGN



TYPICAL CRUSHED ROCK WORK AREA FOR STEADY-BURNING LIGHT BAR ON TYPE MG-20 LIR STRUCTURE

(4) DETAIL



CRUSHED ROCK WORK AREA FOR STEADY-BURNING LIGHT BARS ON TYPE MG-30 OR MG-40 LIR STRUCTURES AT STA 10+50

(3) DETAIL

GRAPHIC SCALE:

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
GREAT LAKES REGION — CHICAGO, ILLINOIS

MALSR
CRUSHED ROCK PLOT DETAILS

DEKALB — DEKALB TAYLOR MUNICIPAL AIRPORT — IL

REVIEWED BY	SUBMITTED BY	APPROVED BY
	PROJ. ENGR.	PLATFORM MGR.

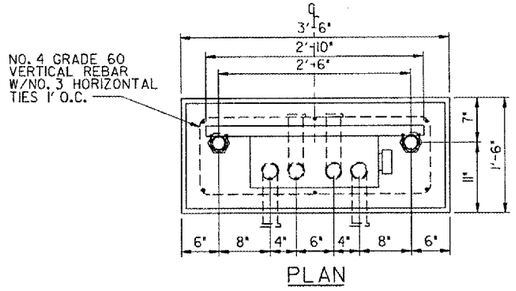
DATE TAD	ISSUED BY CHICAGO NAS IMPLEMENTATION CENTER	DATE	JCN
DRAWN TAD		DRAWING NO. DKB-D-MALSR02-C13	REV
DRAWN EGS			

DATE	DESCRIPTION	JCN	REDLINE DATE	APVD

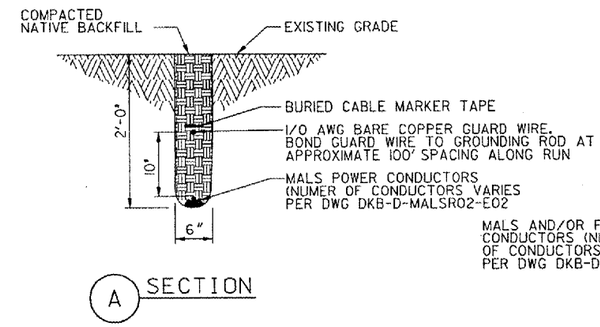
SHEET 21 OF 48

PLOT DATE : 03/27/2007, 10:00 AM
FILE NAME : I:\AIRPORTS\DEKALB\003-06ELEC\AIRPORT\SHEETS\MICRO-STATION SHEETS\MALSR\CRUSHED ROCK PLOT DETAILS FOR MALSR BARS ON CONCRETE.DGN
PLOT SCALE : 11:10 15/16 '1' / IN.
USER NAME : JLA

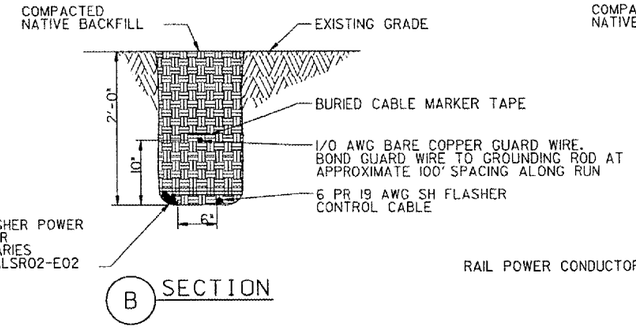
CONTRACT NO.



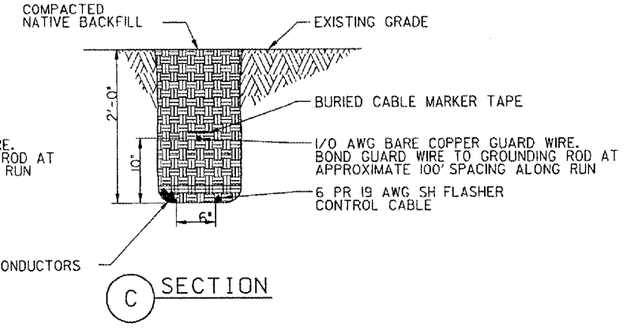
PLAN



A SECTION



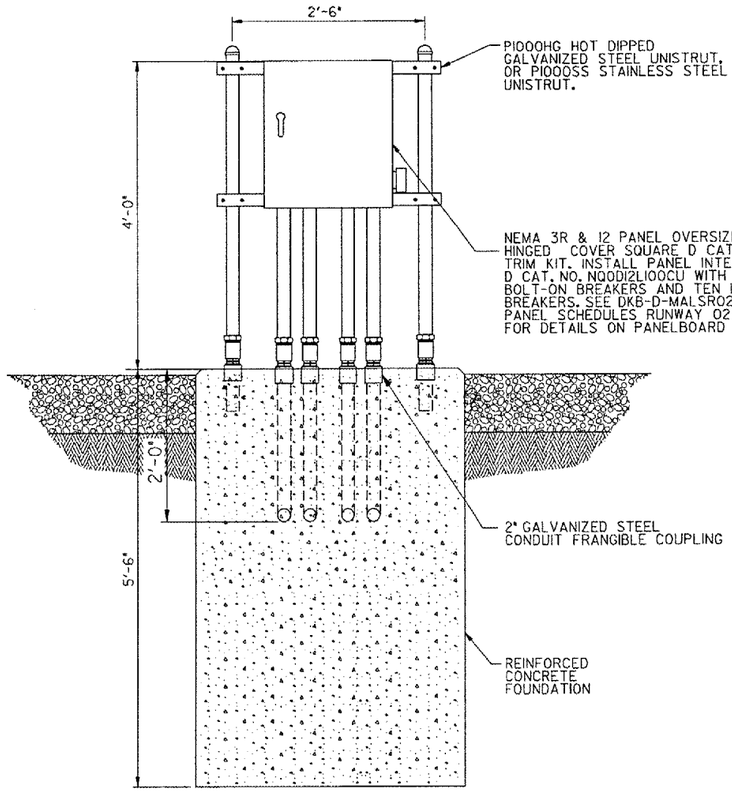
B SECTION



C SECTION

TYPICAL D.E.B. TRENCH CROSS-SECTIONS

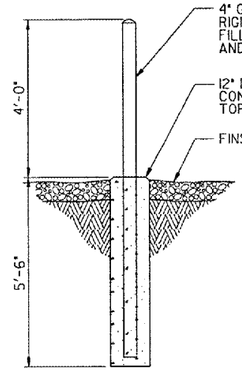
SCALE IN FEET 1 0 1 2



ELEVATION
MALS POWER DISTRIBUTION PANEL INSTALLATION DETAILS

1 DETAIL

SCALE IN FEET 1 0 1 2



GUARD POST

2 DETAIL

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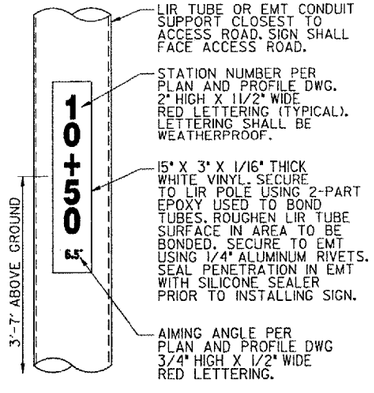

STATION NUMBER AND AIMING ANGLE IDENTIFICATION

3 DETAIL

NOT TO SCALE

LUG FOR QUICK RELEASE PIN

4 DETAIL

NOT TO SCALE

PLAN

ELEVATION
WINCH OPERATION ILLUSTRATION

5 DETAIL

NOT TO SCALE

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
GREAT LAKES REGION — CHICAGO, ILLINOIS

MALSR

MISCELLANEOUS DETAILS
RUNWAY 02

DEKALB — DEKALB TAYLOR MUNICIPAL AIRPORT — IL

DATE	DESCRIPTION	JCN	REDLINE DATE	APVD

REVIEWED BY	SUBMITTED BY	APPROVED BY
		CLELAND MICHEEL

PROJ. ENGR. TAD			PLATFORM/MGR.
DATE TAD	ISSUED BY CHICAGO NAS IMPLEMENTATION CENTER	DATE	JCN
DRAWN TAD		DRAWING NO. DKB-D-MALSR02-C14	REV
DRAWN EGS			

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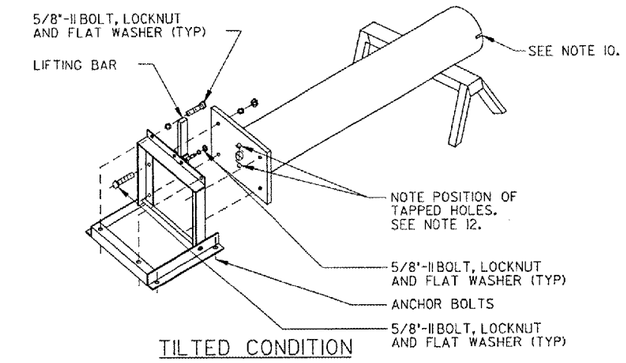

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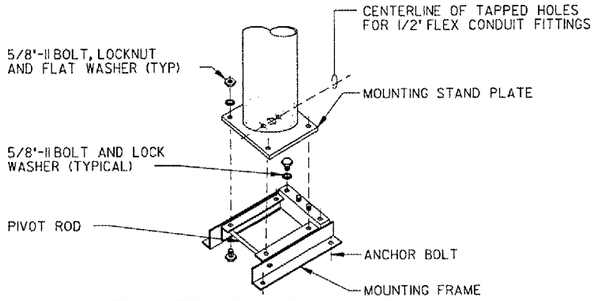

MOUNTING STAND ASSEMBLY DETAILS

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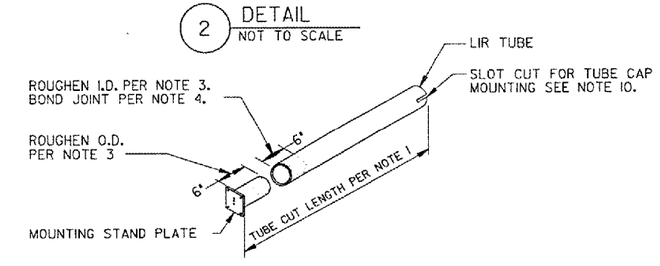
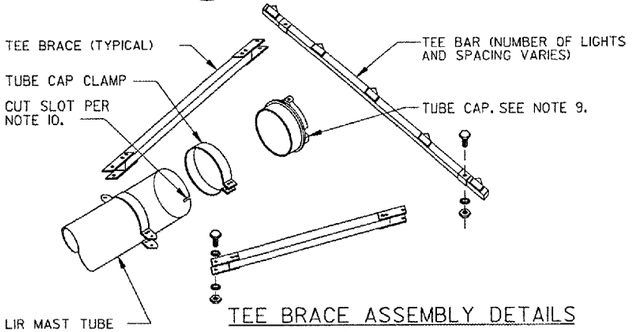


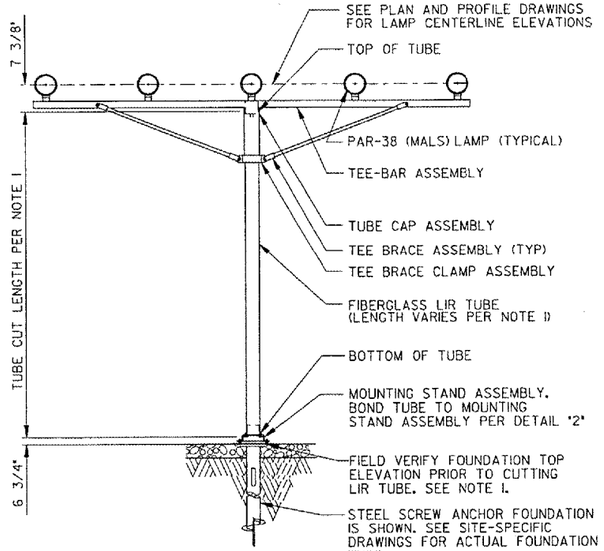
LIR MAST BONDING DETAILS

3 DETAIL NOT TO SCALE



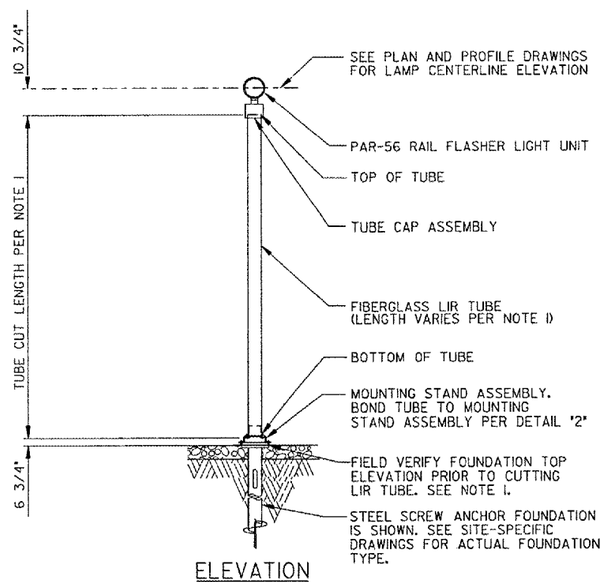
TEE BRACE ASSEMBLY DETAILS

4 DETAIL NOT TO SCALE



ELEVATION
ALSF-2 OR MALSR LIGHT BAR
ON MG-20 LIR STRUCTURE

1 DETAIL NOT TO SCALE



ELEVATION
MALSR FLASHER ON
MG-20 LIR STRUCTURE

6 DETAIL NOT TO SCALE

NOTES:

1. THE CONTRACTOR SHALL ESTABLISH TOP OF FOUNDATION ELEVATION PER PLAN AND PROFILE DRAWINGS. FOR EACH LIR TOWER TO BE INSTALLED, THE CONTRACTOR SHALL FIELD-VERIFY THE ACTUAL FOUNDATION TOP ELEVATION PRIOR TO CUTTING LIR TUBE. THE REQUIRED TUBE CUT LENGTH SHALL BE DETERMINE AS FOLLOWS:

   FOR MALS STEADY-BURNING LIGHT BARS
   TUBE CUT LENGTH = LAMP C/L ELEVATION - FDN TOP ELEVATION (FIELD-VERIFIED) - 1.2 FT.

   FOR RAIL FLASHERS:
   TUBE CUT LENGTH = LAMP C/L ELEVATION - FDN TOP ELEVATION (FIELD-VERIFIED) - 1.5 FT.

2. CUT TUBE LENGTH FROM THE 20 FOOT TUBE "A" STOCK AS REQUIRED, USING A TABLE SAW WITH A DIAMOND OR CARBIDE ABRASIVE BLADE. ALL SAW CUTS SHALL BE PERPENDICULAR TO THE TUBE'S LONGITUDINAL AXIS. DEBURR CUT EDGES.

3. USE SAND PAPER TO ROUGHEN THE SURFACES TO BE BONDED TO THE STAND PLATE PER DETAIL "3". CLEAN THE ROUGHENED SURFACES WITH A SOLVENT (TRICHLOROETHYLENE, ACETONE, OR METHYL ETHYL KETONE).

4. CONTRACTOR SHALL BOND EACH JOINT BY SPREADING A LIGHT COAT OF MIXED ADHESIVE ON BOTH SURFACES TO BE BONDED. SLOWLY SLIDE THE TUBE ONTO THE STAND PLATE, WHILE ROTATING IT TO EXCLUDE AIR. THE BONDING ADHESIVE MATERIALS, 2-PART EPOXY, FUSOR 304-1 RESIN AND 304-2 HARDENER. FUSOR 304-1 AND 304-2 ARE AVAILABLE FROM LORD CORP CHEMICAL PRODUCTS GROUP, ERIE PA. THE ADHESIVE MUST BE MIXED AND CURED IN AIR TEMPERATURES WHICH DO NOT DROP BELOW 67°F. CURING IS COMPLETE AFTER 48 HOURS. FOLLOW MANUFACTURER'S INSTRUCTIONS.

5. ASSEMBLE LIR STRUCTURES IN HORIZONTAL POSITION PER DETAIL "2". WHEN LOWERING TOWER, SECURE MOUNTING STAND ON ANCHOR BOLTS, REMOVE TWO 5/8" BOLTS AT REAR OF MOUNTING STAND ASSEMBLY, AND PIVOT INNER SECTION UP TO VERTICAL POSITION. PLACE STAND PLATE (BOTTOM OF MAST) OVER FOUR 5/8" STUDS IN MOUNTING STAND, AND FASTEN WITH HEX NUTS. NOTE POSITION OF TAPPED HOLES IN STAND PLATE. HOLES MUST BE POSITIONED TO ACCOMMODATE INSTALLATION OF TUBE CAP AND TEE BAR ASSEMBLY PER DETAIL "5".

6. SEE INSTRUCTION BOOK TI 6850.77 FOR ADDITIONAL ASSEMBLY INSTRUCTIONS.

7. TWO SPARE "A" TUBES SHALL REMAIN IN STORAGE. RETURN TO STORAGE ANY TUBE SECTION GREATER THAN 10' LONG.

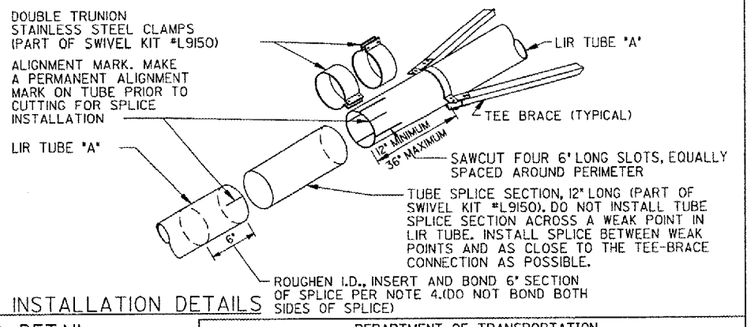
8. TEE BAR SHALL BE ALIGNED PEPENDICULAR TO RUNWAY CENTERLINE +/- 1°.

9. A SMALL HOLE MUST BE CUT IN THE RUBBER LINER OF TUBE CAP TO ALLOW ACCESS FOR TEE BAR WIRING INSTALLATION. DO NOT REMOVE RUBBER LINER.

10. SAWCUT FOUR 2" LONG SLOTS, EQUALLY SPACED AROUND PERIMETER, IN TOP OF LIR TUBE TO ALLOW EASY INSERTION OF TUBE CAP.

11. LIR SWIVEL IS REQUIRED ONLY FOR STATIONS WHICH PIVOT AT AN ANGLE TO RUNWAY CENTERLINE. SPLICE SECTION ALLOWS CROSSBAR ASSEMBLY (WHEN CLAMPS ARE LOOSENED) TO BE ROTATED 90° TO ALLOW COMPLETE LOWERING OF TOWER.

12. THE CONTRACTOR SHALL COVER THE 2" CENTER HOLE OF THE MG-20 MOUNTING STAND PLATE ASSEMBLY WITH A 2"-DIA PLASTIC OR ALUMINUM MINI-LOUVER. McMASTER-CARR CAT. NO. 2016K23, 2016K13, AND 2016K3 MINI-LOUVERS MEET THIS REQUIREMENT. SEAL UNUSED HOLE IN THE MOUNTING STAND PLATE WITH A 1/2" THREADED PLASTIC PLUG.



LIR SWIVEL KIT INSTALLATION DETAILS

5 DETAIL NOT TO SCALE

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DATE	DESCRIPTION	JCN	REVISED DATE	APVD

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
GREAT LAKES REGION — CHICAGO, ILLINOIS

MALSR

STRUCTURE ASSEMBLY DETAILS
FOR LIR TOWER, TYPE MG-20
RUNWAY 02

DEKALB — DEKALB TAYLOR MUNICIPAL AIRPORT — IL

REVIEWED BY	SUBMITTED BY	APPROVED BY

PROJ. ENGR.		PLATFORM MGR.	
DATE	TAD	DATE	JCN
DRAWN	TAD	ISSUED BY CHICAGO NAS IMPLEMENTATION CENTER	DRAWING NO. DKB-D-MALSR02-S01 REV
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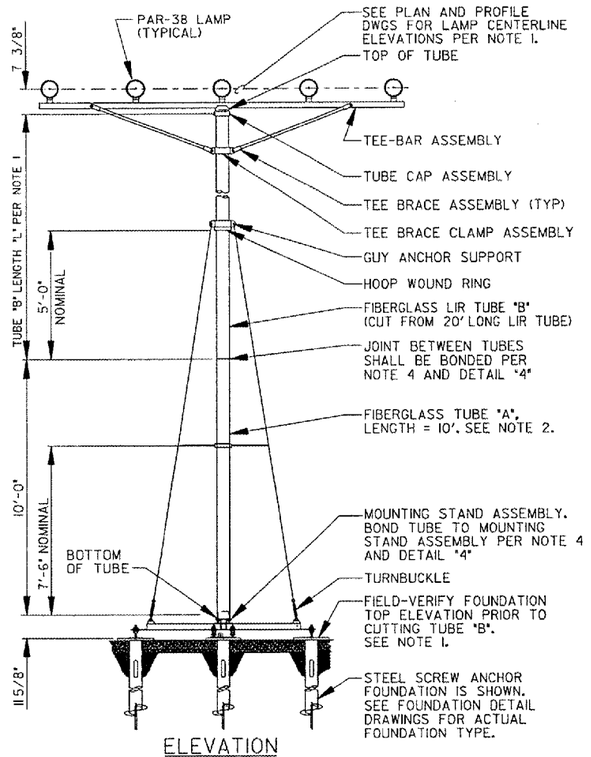
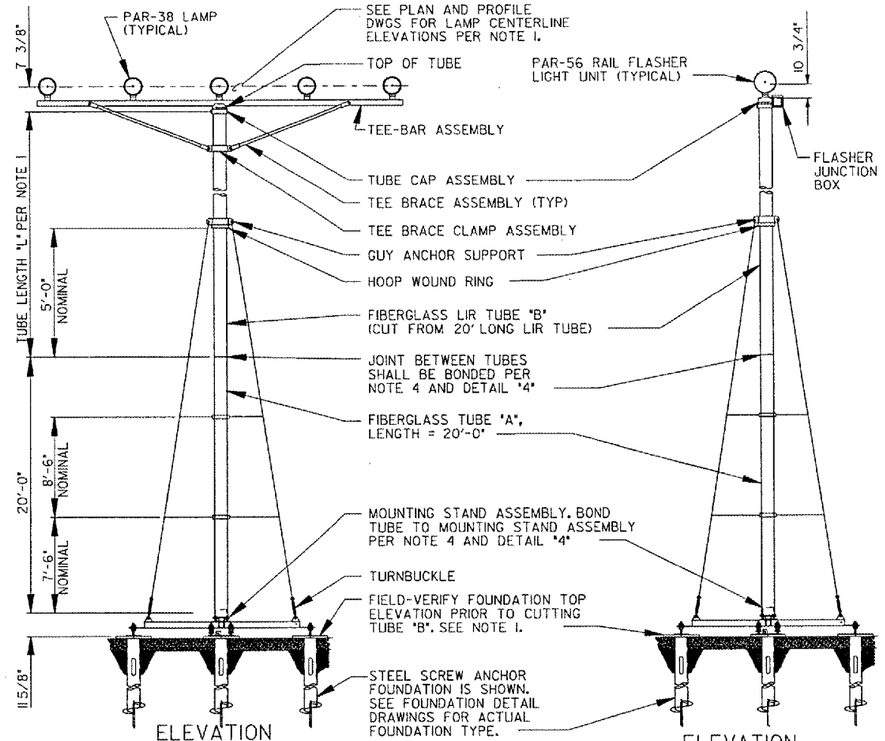
CONTRACT NO.



ELEVATION
MALSR STEADY-BURNING LIGHT BAR ON MG-30 LIR STRUCTURE

1 DETAIL
NOT TO SCALE



ELEVATION
MALSR STEADY-BURNING LIGHT BAR ON MG-40 LIR STRUCTURE

2 DETAIL
NOT TO SCALE

ELEVATION
MALSR FLASHER ON MG-40 LIR STRUCTURE

3 DETAIL
NOT TO SCALE

NOTE: MG-30 MOUNTING IS SIMILAR TO DETAIL "1", EXCEPT THE T-BAR ASSEMBLY IS REPLACED WITH THE FLASHER HEAD.

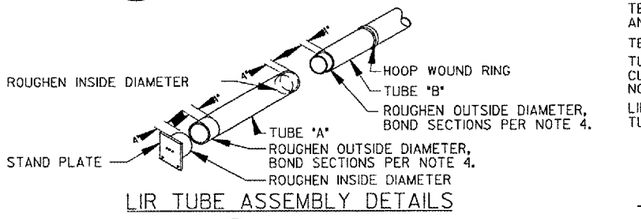
NOTES:

1. THE CONTRACTOR SHALL ESTABLISH TOP OF FOUNDATION ELEVATION PER PLAN AND PROFILE DWGS. FOR EACH LIR TOWER PER LIGHT STATION, THE CONTRACTOR SHALL FIELD-VERIFY THE ACTUAL FOUNDATION TOP ELEVATION PRIOR TO CUTTING LIR TUBE "B". THE CONTRACTOR SHALL DETERMINE THE REQUIRED TUBE "B" LENGTH "L" AS FOLLOWS:

   FOR MALSR STEADY-BURNING:
   L = LAMP ℄ ELEVATION - FOUNDATION TOP ELEVATION (FIELD-VERIFIED) - TUBE "A" LENGTH - 1.6 FT.

   FOR RAIL FLASHER:
   L = LAMP ℄ ELEVATION - FOUNDATION TOP ELEVATION (FIELD-VERIFIED) - TUBE "A" LENGTH - 1.9 FT.

2. CUT TUBE LENGTH FROM THE 20 FOOT TUBE "A" STOCK AS REQUIRED, USING A TABLE SAW WITH A DIAMOND OR CARBIDE ABRASIVE BLADE. ALL SAW CUTS SHALL PERPENDICULAR TO THE TUBE AXIS. DEBURR CUT EDGES.
3. USE EMERY CLOTH TO ROUGHEN THE SURFACES TO BE BONDED TO THE STAND PLATE PER DETAIL "4". CLEAN THE ROUGHENED SURFACES WITH A SOLVENT (TRICHLOROETHYLENE, ACETONE, OR METHYL ETHYL KETONE).
4. CONTRACTOR SHALL BOND EACH JOINT BY SPREADING A LIGHT COAT OF MIXED ADHESIVE ON BOTH SURFACES TO BE BONDED. SLOWLY SLIDE THE TUBE ONTO THE STAND PLATE, WHILE ROTATING IT TO EXCLUDE AIR. THE BONDING ADHESIVE MATERIALS, 2-PART EPOXY, FUSOR 304-1 RESIN AND 304-2 HARDENER. FUSOR 304-1 AND 304-2 ARE AVAILABLE FROM LORD CORP CHEMICAL PRODUCTS GROUP, ERIE PA. THE ADHESIVE MUST BE MIXED AND CURED IN AIR TEMPERATURES WHICH DO NOT DROP BELOW 67°F. CURING IS COMPLETE AFTER 48 HOURS. FOLLOW MANUFACTURER'S INSTRUCTIONS.
5. ASSEMBLE LIR STRUCTURES IN HORIZONTAL POSITION PER DETAIL "7". INSERT HINGE PINS WHICH ARE ATTACHED TO BASE CHANNEL, INTO LEFT AND RIGHT ANCHOR PLATES. PLACE THE FRONT, THE LEFT, AND THE RIGHT ANCHOR PLATES OVER THE 3/4" ANCHOR BOLTS. CONNECT BASE TUBE TO BASE CHANNEL, MAKING SURE MOUNTING FRAME ASSEMBLY SWINGS FREELY ON HINGE PINS. SECURE ANCHOR PLATES TO FOUNDATION AND RAISE MOUNTING FRAME ARM TO VERTICAL (VERIFY). ATTACH THE GUY ANCHOR SUPPORT ABOVE THE HOOP WOUND RING. ATTACH STABILIZER RODS TO THREE GUY ANCHOR ENDS. BOLT TWO GUIDE BRACKETS TO BOTTOM OF MAST STAND PLATE WITH THE 5/8" X 2 1/4" STAINLESS STEEL BOLTS AND NUTS. DO NOT TIGHTEN. POSITION STAND PLATE WITH TAPPED HOLES ALIGNED PER DETAIL "6". SET STAND PLATE OVER ADJUSTING POST. POST IS INSERTED INTO HOLE IN CENTER OF STAND PLATE. ADJUST NUT FOR PROPERHEIGHT. SUPPORT UPPER END OF MAST SO IT IS APPROXIMATELY PARALLEL WITH GROUND. CLAMP GUIDE BRACKETS TO BASE TUBE, AND SECURE. FASTEN TURNBUCKLES (ATTACHED TO STABILIZER RODS) TO GUY BRACKETS "X" AND "Y". TIGHTEN TURNBUCKLE AT GUY BRACKET "X" UNTIL MAST IS EXACTLY PERPENDICULAR TO MOUNTING FRAME. TIGHTEN THE OTHER TWO TURNBUCKLES AT GUY BRACKETS "Y". ATTACH HORIZONTAL STABILIZER ASSEMBLY. USE THE APPROPRIATE NUMBER AND SIZE OF STABILIZER RODS DEPENDING ON THE TOWER TYPE (MG-30 OR MG-40). SEE DETAIL "7".
6. SEE INSTRUCTION BOOK TI6850.77 FOR ADDITIONAL ASSEMBLY INSTRUCTIONS.
7. TWO SPARE "A" TUBES SHALL REMAIN IN STORAGE. RETURN TO STORAGE ANY TUBE REMNANT GREATER THAN 10' LONG.
8. TEE BAR SHALL BE ALIGNED PEPENDICULAR TO RUNWAY CENTERLINE +/- 1°.
9. A SMALL HOLE MUST BE CUT IN THE RUBBER LINER OF TUBE CAP TO ALLOW ACCESS FOR TEE BAR WIRING INSTALLATION. DO NOT REMOVE RUBBER LINER.
10. SAWCUT FOUR 2" LONG SLOTS, EQUALLY SPACED AROUND PERIMETER, IN TOP OF LIR TUBE TO ALLOW EASY INSERTION OF TUBE CAP.
11. SPLICE IS REQUIRED ONLY FOR STATIONS WHICH PIVOT PERPEDICULAR TO RUNWAY CENTERLINE. SPLICE SECTION ALLOWS CROSSBAR ASSEMBLY (WHEN CLAMPS ARE LOOSENED) TO BE ROTATED 90° TO ALLOW COMPLETE LOWERING OF TOWER. SEE PLAN AND PROFILE DRAWINGS AND DETAIL "8".
12. AFTER LEVELING AND PLUMBING THE MAST, LIFT THE MAST BY ONE COMPLETE TURN OF THE LEVELING NUT. THIS IS INTENDED TO CREATE UNIFORM TENSION IN (200-500 LBS) IN ALL STABILIZER RODS.
13. WHEN LIFTING OR LOWERING THE TOWER, THE TILT DEVICE HOOK SHALL BE CONNECTED TO THE SLOTTED PLATE ON THE END OF THE LIFTING FRAME AND SHALL NOT BE CONNECTED TO THE LIFTING HANDLE.



LIR TUBE ASSEMBLY DETAILS

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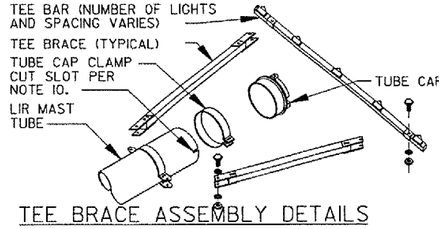

TEE BRACE ASSEMBLY DETAILS

5 DETAIL
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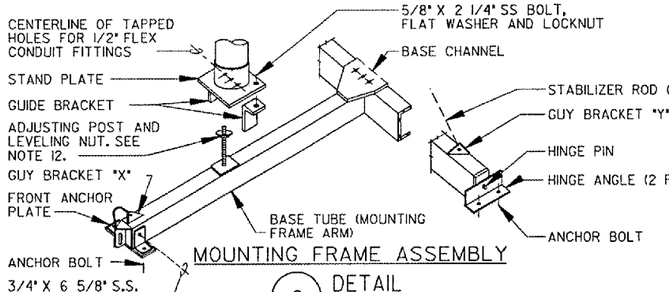

MOUNTING FRAME ASSEMBLY

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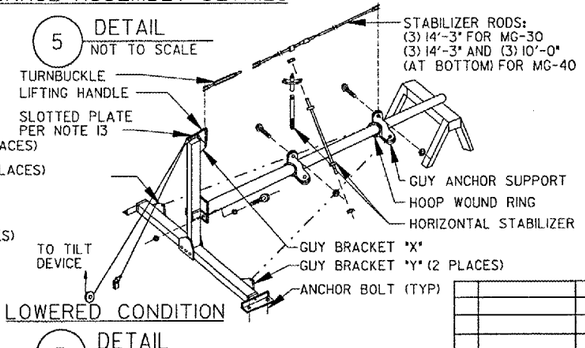

LOWERED CONDITION

7 DETAIL
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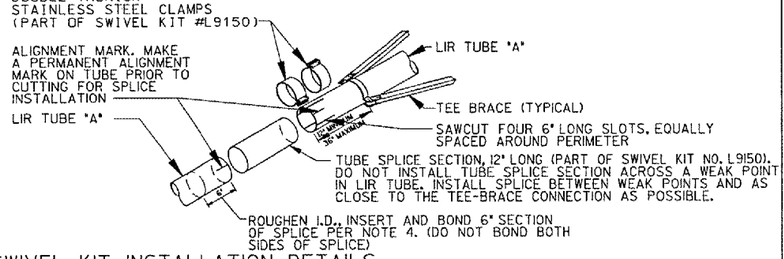

TUBE SWIVEL KIT INSTALLATION DETAILS

8 DETAIL
NOT TO SCALE

DATE	DESCRIPTION	JCN	REDLINE DATE	APVD

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
GREAT LAKES REGION — CHICAGO, ILLINOIS

MALSR

STRUCTURE ASSEMBLY DETAILS FOR LIR TOWER, TYPES MG-30 AND MG-40 RUNWAY 02

DEKALB — DEKALB TAYLOR MUNICIPAL AIRPORT — IL

REVIEWED BY	SUBMITTED BY	APPROVED BY
	PROJ. ENGR.	PLATFORM MGR.

DATE TAD — DRAWN TAD — DRAWN EGS — ISSUED BY CHICAGO NAS IMPLEMENTATION CENTER

DATE — JCN

DRAWING NO. DKB-D-MALSR02-S02 — REV

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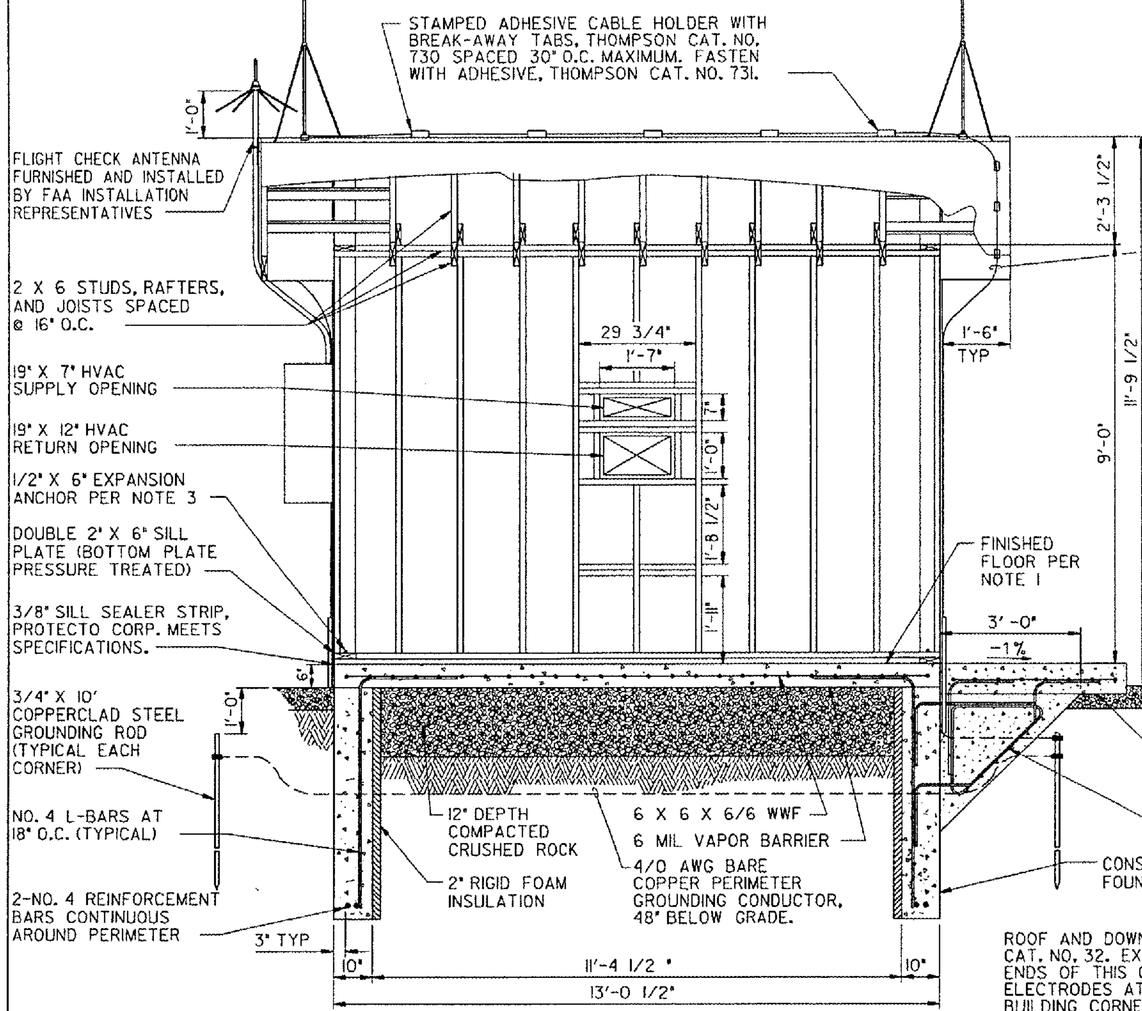
CONTRACT NO.

NOTES:

1. 12" SQUARE X 1/8" THICK VINYL FLOOR TILE, ARMSTRONG IMPERIAL OR APPROVED EQUAL, SHALL BE INSTALLED OVER CONCRETE FLOOR SLAB. INSTALL COMPLEMENTING 4" VINYL BASE.
2. INTERIOR FACE OF PLYWOOD SHEATHING ON CEILING AND WALLS SHALL BE 3/4" THICK APA PANEL GRADE "B". SECURE PLYWOOD TO EACH STUD USING WOOD SCREWS SPACED 16" O.C. BUTT JOINTS SHALL BE BEVELED AND FILLED FLUSH WITH PAINTABLE CAULK. COVER CEILING-TO-WALL SEAMS WITH 1X 2 WOOD TRIM. INTERIOR SURFACES SHALL BE SANDED SMOOTH AND PAINTED WHITE USING ONE OIL-BASED PRIMER COAT AND TWO COATS OF SEMI-GLOSS LATEX INTERIOR PAINT.
3. EXTERIOR WALLS SHALL BE SHEATHED WITH 1/2" ORIENTED STRAND BOARD (OSB) SHEATHING. SECURE PLYWOOD TO EACH STUD USING RING-SHANK NAILS SPACED 16" O.C. SECURE WALLS TO FOUNDATION USING 1/2" X 6" CONCRETE EXPANSION ANCHORS 3' O.C. MAX. AROUND PERIMETER.
4. SUBSTITUTIONS FOR BEST LOCK CORPORATION LOCK SETS WILL BE PERMITTED FOR LOCK SETS THAT ACCEPT BEST CORPORATION'S CORES.
5. PAINT DOOR AND FRAME LIGHT GRAY USING EXTERIOR LATEX PAINT. REFER TO DOOR MANUFACTURER'S FINISHING INSTRUCTIONS.
6. STANDING SEAM METAL ROOFING PANELS, SIDING PANELS, AND SOFFIT, FASCIA, AND TRIM SYSTEM SHALL BE FABRICATED BY ONE MANUFACTURER AS A COMPLETE SYSTEM WITH WARRANTY. MATERIAL SHALL BE PROVIDED BY THE MANUFACTURER WITH A DETAILED LIST OF MATERIAL AND AN INSTALLATION INSTRUCTION BOOK. SUBMIT SUBSTITUTIONS PER SPECIAL SPECIFICATIONS.
7. CONTRACTOR SHALL SEAL ALL PENETRATIONS THROUGH BUILDING WALLS WITH SILICONE SEALER.
8. INSTALL TINNED BRONZE BONDING PLATE, THOMPSON CAT. NO. 702, ON HVAC FRAME AND DOOR FRAME AND BONDING CONDUCTOR, 6 AWG BARE COPPER OR THOMPSON CAT. NO. 14X OR 509X. CONNECT BONDING CONDUCTOR TO ROOF AND DOWN CONDUCTOR USING PARALLEL CLAMP, THOMPSON CAT. NO. 565.
9. ALL CLAMPS AND BONDING DEVICES SHALL BE BRONZE, ALL CABLES AND STRAPS SHALL BE COPPER, AND ALL BOLTS, SCREWS, AND FASTENING HARDWARE SHALL BE BRONZE OR BRASS UNLESS OTHERWISE SHOWN.



LEFT SIDE ELEVATION

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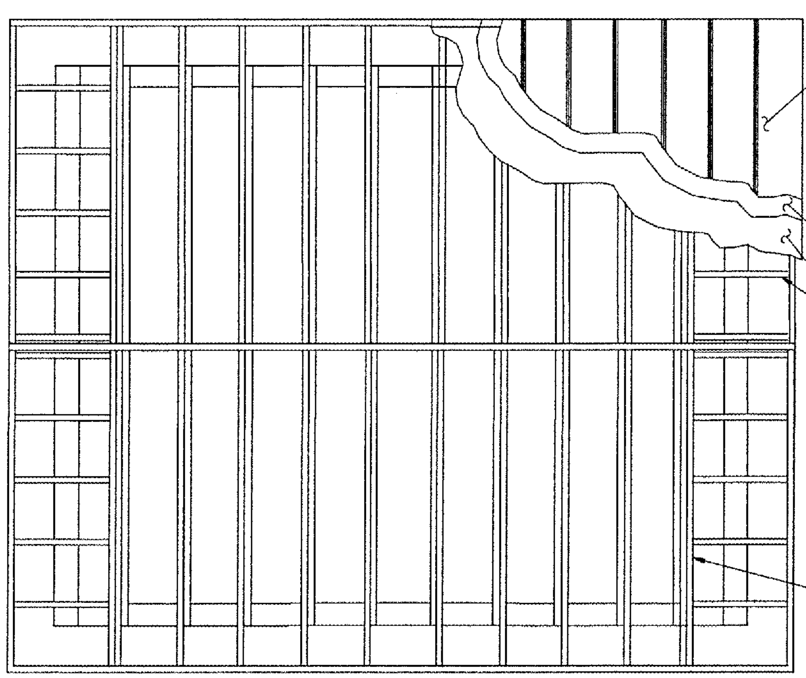
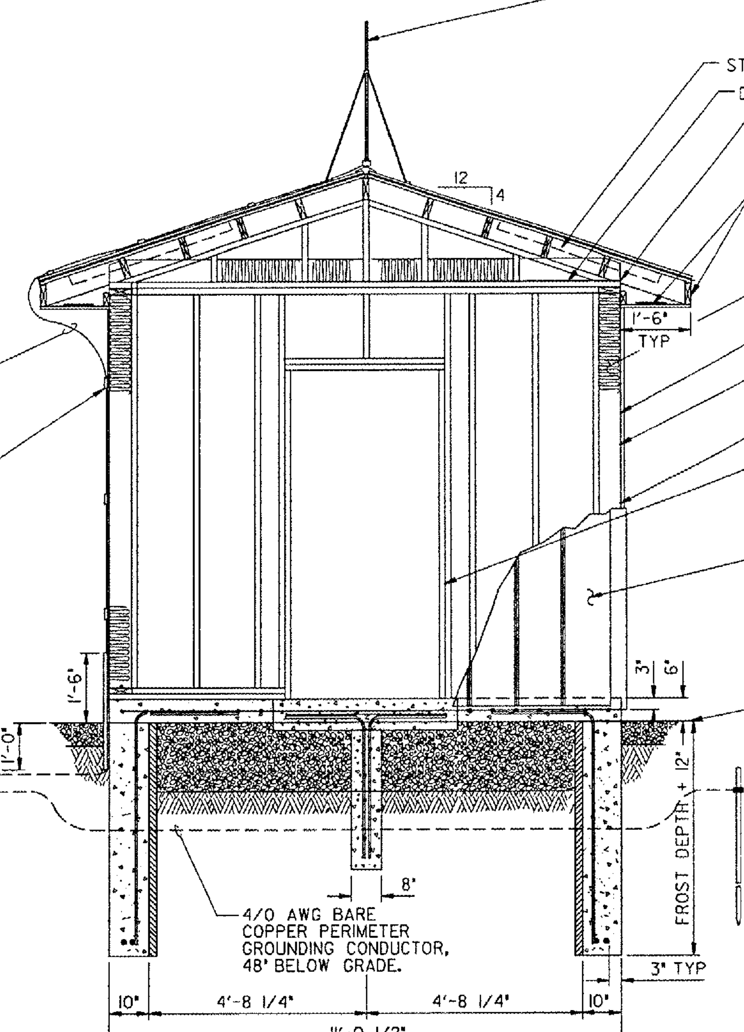


ROOF PLAN



FRONT ELEVATION

MASTER FILE: 10' X 12' WOOD FRAME MALSR EQUIP SHLTR FRAMING.DGN

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
GREAT LAKES REGION — CHICAGO, ILLINOIS

MALSR

FOUNDATION, FRAMING AND LIGHTING PROTECTION DETAILS FOR 10'X12' WOOD FRAME EQUIPMENT SHELTER
RUNWAY 02

DEKALB — DEKALB TAYLOR MUNICIPAL AIRPORT — IL

REVIEWED BY	SUBMITTED BY	APPROVED BY
	PROJ. ENGR.	PLATFORM MGR.

DATE	TAD	ISSUED BY CHICAGO NAS IMPLEMENTATION CENTER	DATE / JCN
DRAWN	TAD		DRAWING NO. DKB-D-MALSR02-A01
DRAWN	EGS		REV

DATE	DESCRIPTION	JCN	REDLINE DATE	APVD

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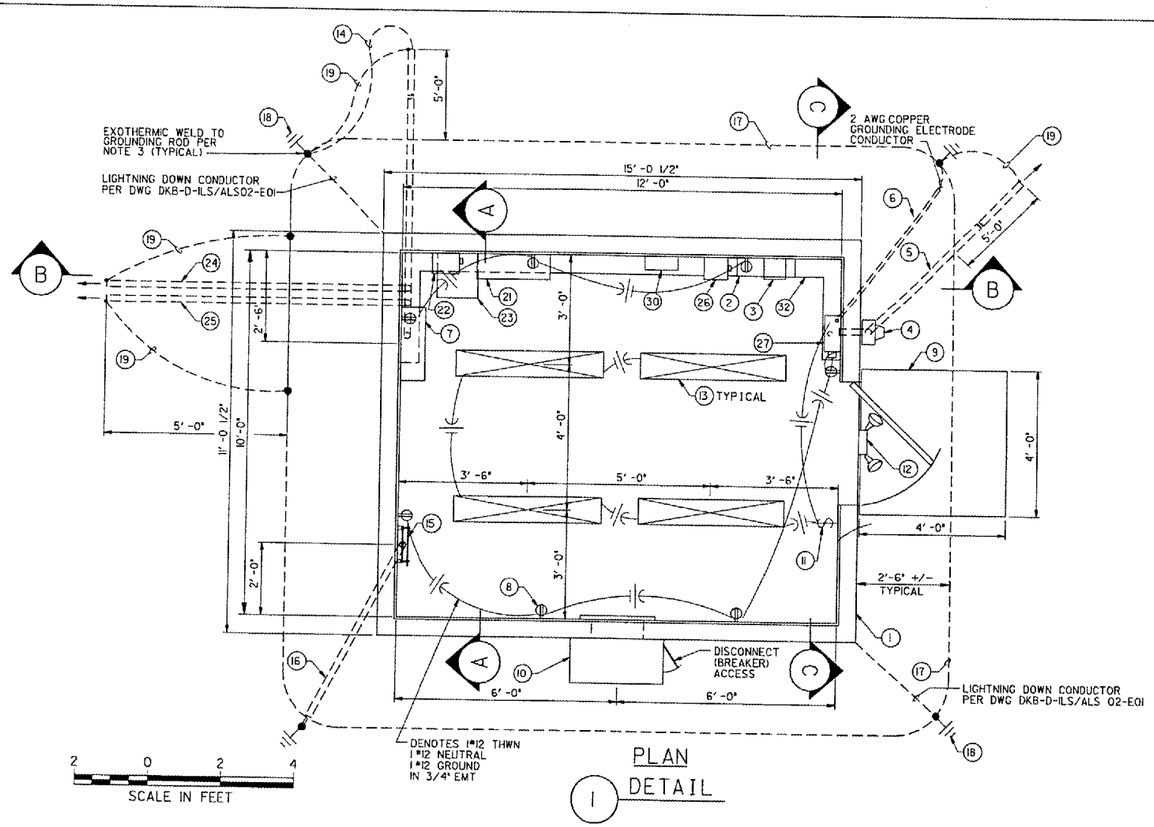
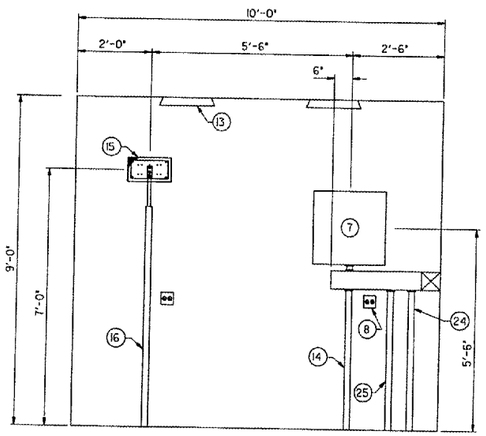


2 0 2 4

SCALE IN FEET

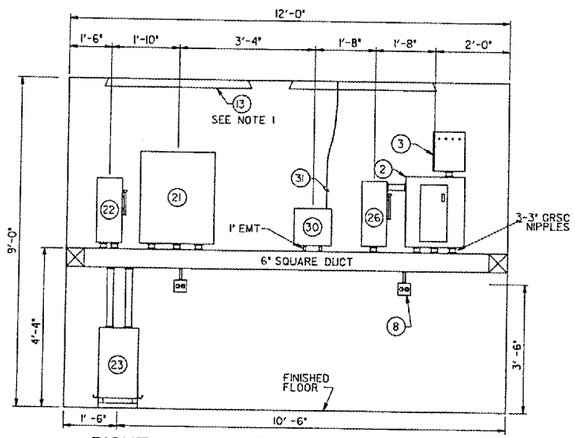
PLAN

1 DETAIL



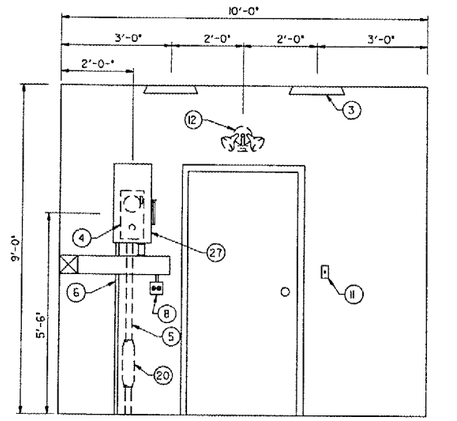
REAR WALL INTERIOR ELEVATION

A SECTION



RIGHT WALL INTERIOR ELEVATION

B SECTION



FRONT WALL INTERIOR ELEVATION

C SECTION

NUMBERED LEGEND:

(F&I = FURNISH & INSTALL, I = INSTALL, BO = INSTALLED BY FAA INSTALLATION PERSONNEL

F&I (1) REINFORCED CONCRETE FOUNDATION AND WOOD FRAME EQUIPMENT SHELTER PER DWG DKB-D-MALSR02-A01.

F&I (2) POWER PANEL, SQUARE "D" CAT NO NQOD30L225CU IN NEMA 1ENCLOSURE WITH BOLT-ON BREAKERS. SEE DRAWING DKB-D-MALSR02-E06 FOR BREAKER ASSIGNMENTS.

F&I (3) AC SURGE ARRESTER, LIGHTING PROTECTION CORP, CAT. NO. LPC 2020-8U-G.

F&I (4) ELECTRIC POWER METER. SEE SITE PLAN FOR POWER PROVISION DETAILS.

F&I (5) 3-1/C # 3/0 TYPE U.S.E. POWER CABLES IN 3" GALVANIZED RIGID STEEL CONDUIT. SEE SITE PLAN FOR POWER SOURCE LOCATION AND POWER PROVISION DETAILS.

F&I (6) 1" SCHEDULE 40 PVC CONDUIT WITH #2 BARE STRANDED COPPER GROUNDING CONDUCTOR FROM SERVICE DISCONNECT TO GROUND ROD.

F&I (7) 24" X 24" X 8" CONTROL CABLE JUNCTION BOX, NEMA 1, HOFFMAN A24N24BLP WITH PANEL, HOFFMAN A-24N24MP MEETS SPECIFICATIONS.

F&I (8) DUPLEX RECEPTACLE PER NOTE 1.

F&I (9) 4' X 4' CONCRETE STOOP

F&I (10) HVAC THRU-WALL UNIT, 11,100 BTU A/C, 3.6 KW HEAT, BARD CAT. NO. WA12I-AO3EX4XXJ MEETS SPECIFICATIONS. PROVIDE SHOP DRAWINGS FOR SUBSTITUTIONS.

F&I (11) LIGHT SWITCH PER NOTE 1.

F&I (12) SECURITY FLOODLIGHT WITH DIE-CAST METAL LAMP COVERS, 75 W, 120V PAR-38 INCANDESCENT LAMPS (2), PHOTO AND MOTION CONTROLLED, ADJUSTABLE TIME AND SENSITIVITY SETTINGS, REGENT MODEL #SV275RW (WHITE FINISH) BY COOPER LIGHTING PRODUCTS MEETS SPECIFICATIONS.

F&I (13) 4'-LONG 2-LAMP-TUBE FLUORESCENT LIGHT FIXTURE, SURFACE-MOUNTED, 120-VOLT, WITH WRAPAROUND ACRYLIC LENS ENCLOSURE AND TWO 48"-LONG, 32-WATT, T-8 FLUORESCENT LAMP TUBES, TYPE F32. HOLOPHANE MODEL NO. HW-S-M-4-D-S-H7I-042-LP-I-I-RIFI MEETS SPECIFICATIONS.

F&I (14) #2/0 GROUNDING CONDUCTOR. GREEN THWN WITH RED STRIPE IN 2" GRS CONDUIT THROUGH FLOOR. CONNECT TO GROUNDING COUNTERPOISE AT GROUNDING ROD USING AN EXOTHERMIC WELD. LEAVE 3' LENGTH OF CONDUCTOR IN CONTROL CABLE JUNCTION BOX FOR TERMINATION BY OTHERS.

F&I (15) MAIN COPPER GROUNDING PLATE WITH PLASTIC COVER. SEE NOTE 4.

F&I (16) 2" PVC CONDUIT WITH TWO #4/0 THWN GROUNDING CONDUCTORS FROM MAIN GROUNDING PLATE. SEE NOTE 3.

F&I (17) #4/0 BARE COPPER COUNTERPOISE 4'-0" BELOW GRADE. SEE NOTE 3.

F&I (18) 3/4" X 10' COPPERCLAD GROUNDING ROD.

F&I (19) #6 BARE COPPER GROUNDING CONDUCTOR.

F&I (20) EXPANSION COUPLING, 4" MIN TRAVEL. APPLETON EXPANSION COUPLINGS MEET SPECIFICATIONS

I (21) MALSR POWER AND CONTROL CABINET

F&I (22) MALS DISCONNECT SWITCH

I (23) MALSR POWER TRANSFORMER

F&I (24) MALS POWER CABLES IN 3" GRS CONDUIT

F&I (25) RAIL POWER AND CONTROL CABLES IN 2" GRS CONDUIT

F&I (26) MALSR DISCONNECT SWITCH

F&I (27) SERVICE DISCONNECT SWITCH

I (28) (RESERVED)

I (29) (RESERVED)

I (30) AIR-TO-GROUND RADIO RECEIVER/CONTROLLER

I (31) AIR-TO-GROUND RADIO RECEIVER/CONTROLLER ANTENNA

NOTES:

1. LIGHT FIXTURES, POWER PANEL, SURGE ARRESTER, RECEPTACLES, AND LIGHT SWITCHES SHALL BE SURFACE MOUNTED. CONDUIT RUNS SHALL BE INSTALLED PLUMB OR HORIZONTAL WITH MINIMUM NUMBER OF BENDS.
2. EXTERIOR WALL PENETRATIONS SHALL BE SEALED WITH WATERPROOF SILICONE CAULK.
3. ALL GROUNDING CONDUCTORS AND GROUND RODS SHALL BE ATTACHED TO COUNTERPOISE USING EXOTHERMIC WELDS PER SPECIFICATIONS.
4. SEE DWG ST-D-19888 (DKB-D-ILS/ALS02-E01) FOR GROUNDING PLATE INSTALLATION DETAILS.

MASTER FILE: 10' X 12' WOOD FRAME MALSR SHELTER FLOOR PLAN.DGN

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
GREAT LAKES REGION — CHICAGO, ILLINOIS

MALSR

FLOOR PLAN AND INTERIOR ELEVATIONS 10' X 12' WOOD FRAME EQUIPMENT SHELTER RUNWAY 02

DEKALB — DEKALB TAYLOR MUNICIPAL AIRPORT — IL

DATE	DESCRIPTION	JCN	REVIEWED DATE	APVD

REVIEWED BY	SUBMITTED BY	APPROVED BY

PROJ. ENGR.
DATE TAD
DRAWN TAD
DRAWN EGS
ISSUED BY CHICAGO NAS IMPLEMENTATION CENTER

PLATFORM MGR.
DATE JCN
DRAWING NO. DKB-D-LOC-MALSR-A02 REV

SHEET 26 OF 48

PLOT DATE = 83\29\2007, 01:21 PM
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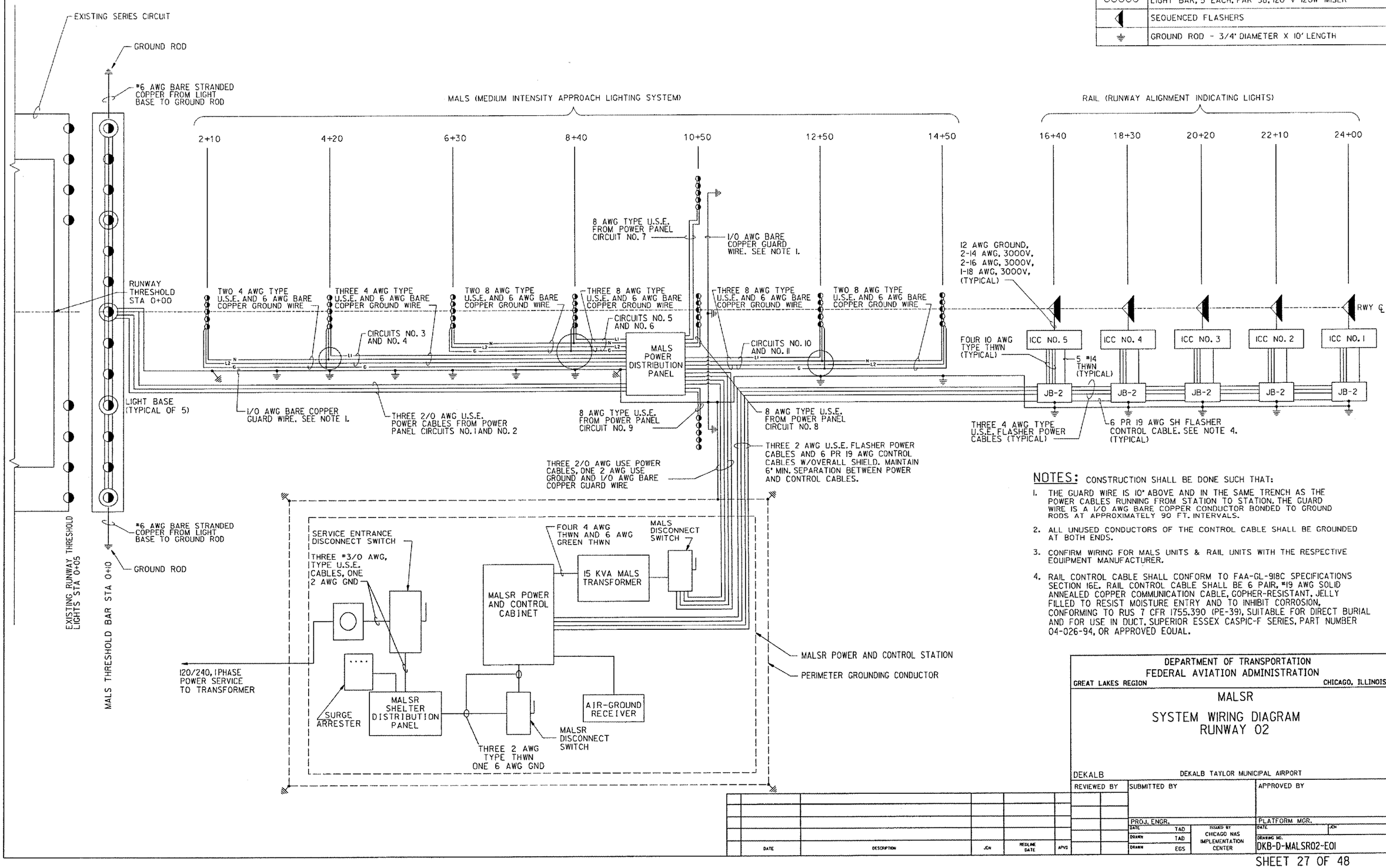
PLOT SCALE = 4:1 3/4 "=" / IN.
USER NAME = kdw

CONTRACT NO.

SYMBOL	DESCRIPTION
●●●●●	LIGHT BAR, 5 EACH, PAR 38, 120 V 120W MISER
◀	SEQUENCED FLASHERS
⏚	GROUND ROD - 3/4" DIAMETER X 10' LENGTH



NOTES: CONSTRUCTION SHALL BE DONE SUCH THAT:

1. THE GUARD WIRE IS 10" ABOVE AND IN THE SAME TRENCH AS THE POWER CABLES RUNNING FROM STATION TO STATION. THE GUARD WIRE IS A I/O AWG BARE COPPER CONDUCTOR BONDED TO GROUND RODS AT APPROXIMATELY 90 FT. INTERVALS.
2. ALL UNUSED CONDUCTORS OF THE CONTROL CABLE SHALL BE GROUNDED AT BOTH ENDS.
3. CONFIRM WIRING FOR MALS UNITS & RAIL UNITS WITH THE RESPECTIVE EQUIPMENT MANUFACTURER.
4. RAIL CONTROL CABLE SHALL CONFORM TO FAA-GL-918C SPECIFICATIONS SECTION 16E. RAIL CONTROL CABLE SHALL BE 6 PAIR, #19 AWG SOLID ANNEALED COPPER COMMUNICATION CABLE, COPHER-RESISTANT, JELLY FILLED TO RESIST MOISTURE ENTRY AND TO INHIBIT CORROSION, CONFORMING TO RUS 7 CFR 1755.390 (PE-39), SUITABLE FOR DIRECT BURIAL AND FOR USE IN DUCT. SUPERIOR ESSEX CASPIC-F SERIES, PART NUMBER 04-026-94, OR APPROVED EQUAL.

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
GREAT LAKES REGION — CHICAGO, ILLINOIS

MALSR
SYSTEM WIRING DIAGRAM
RUNWAY 02

DEKALB — DEKALB TAYLOR MUNICIPAL AIRPORT — IL

REVIEWED BY	SUBMITTED BY	APPROVED BY

PROJ. ENGR.			PLATFORM MGR.
DATE	TAD	ISSUED BY CHICAGO NAS IMPLEMENTATION CENTER	DATE JCN
DRAWN	TAD		DRAWING NO. DKB-D-MALSR02-E01 REV
DRAWN	EGS		

DATE	DESCRIPTION	JCN	REDLINE DATE	APVD

PLOT DATE = 04\20\2007, 01:32 PM
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PLOT SCALE = 2.0000 '/ IN.
USER NAME = Bak●

CONTRACT NO.

GROUNDING ELECTRODE IN PERIMETER GROUNDING SYSTEM AROUND MALSR SHELTER

2 AWG COPPER GROUNDING ELECTRODE CONDUCTOR

2 AWG GREEN INSULATED COPPER GROUND

SERVICE ENTRANCE DISCONNECT SWITCH

HEAVY DUTY, 240 VAC, 2-WIRE, 200A, SQUARE D CAT NO H224AWK FUSED AT 200A WITH DUAL-ELEMENT BUSSMANN FUSETRON FUSES. SEE NOTE 7.

200A

THREE 3/0 AWG THWN AND 2 AWG THWN GREEN GROUND

FOUR 2 AWG THWN ONE 6 AWG GROUND

AC POWER ARRESTER PER SPECIFICATIONS

GROUND NEUTRAL

125A, 2 P

	20A	2		INT. LTS.
	20A	4		REC.
RECEPTACLES	20A	6	15A	EX. LTS.
SPARE	20A	8	10A	L-854
SPARE	20A	10	15A	SPARE
SPARE	20A	12	15A	SPARE
	20A	14	30A	SPARE
HVAC UNIT		16		
SPACE		28		
SPACE		30		

SHELTER POWER PANEL

225A, 120/240V, 3-WIRE, S/N PANELBOARD, MAIN LUGS ONLY SQ D CAT. NO. NQOD30L225CU AND QOB STYLE BREAKERS IN A SURFACE-MOUNTED NEMA 1 ENCLOSURE, 32"H X 20"W X 5 3/4"D, SQ D CAT. NO. MH32.

MALSR DISCONNECT SWITCH

SQUARE D CAT. NO. H223AWK WITH 100A BUSSMAN FUSETRON FUSES. SEE NOTE 7.

100A

THREE 2AWG THWN AND 6AWG THWN GREEN GROUND

THREE 2AWG THWN AND 6AWG THWN GREEN GROUND

WIRING IS BASED ON MULTIELECTRIC MFG. MALSR. CONFIRM WIRING WITH THE RESPECTIVE MALSR MANUFACTURER.

3-WIRE SERVICE LATERAL TO POWER COMPANY'S TRANSFORMER (25KVA, PRIMARY TO 120/240V, SINGLE PHASE, PAD-MOUNTED)

GND S/N M

THREE 3/0 AWG TYPE U.S.E. CABLES

METER BASE

6 AWG GREEN

FOUR 4 AWG THWN AND 6 AWG GREEN

2 AWG GREEN WITH YELLOW STRIPE, DIRECTLY TO GROUNDING ELECTRODE

GND GND. LUG

GND RING AT SHELTER

MALSR CONTROL CABINET MULTI ELECTRIC TYPE FA-9994

INPUT POWER
1 LI
2 N
3 L2

REMOTE INPUT
1 120VAC
2 SPARE
3 LOW
4 MED
5 HIGH
6 FL CONT
7 FL ON
8 NEUT.
9 SPARE

MASTER TIMER

GND H2 HI H3 3 SH SM SL H M N L2 L1

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

CONFIRM TERMINAL NUMBERING WITH MANUFACTURER

INSTALL 14 AWG THWN JUMPERS

FIVE 14 AWG THWN SOLID

AIR-GROUND L-854 RECEIVER/CONTROLLER MODEL RC-IT5A

TBI
- CONTROL 1
- CONTROL 2
- CONTROL 3
- 120 VAC
- NEUTRAL
- GND LUG

NOTES: CONSTRUCTION SHALL BE DONE SUCH THAT:

1. THE FLASHERS FIRE IN SEQUENCE TOWARD THE RUNWAY, STARTING AT THE OUTERMOST UNIT. CONTROL TERMINALS M (MEDIUM INTENSITY STEP) AND H (HIGH INTENSITY STEP) ARE COMMON FOR ALL FLASHERS. EACH FLASHER REQUIRES AN INDIVIDUAL CONDUCTOR FOR THE TRIGGER CIRCUIT.
2. WHERE THIS DRAWING DIFFERS FROM THE MANUFACTURER'S INSTRUCTION BOOK, CONTACT THE PROJECT ENGINEER FOR FURTHER DIRECTION.
3. THE WIRES RUNNING FROM EACH FLASHER INDIVIDUAL CONTROL CABINET (ICC) TO THE FLASHER SPADE LUG CONNECTORS ARE 1/C, 3000V WIRES WHICH COME WITH THE FLASHER EQUIPMENT. IF ADDITIONAL WIRE QUANTITIES ARE NEEDED, THE CONTRACTOR SHALL FURNISH THEM. THE WIRES MUST MEET MILITARY SPECIFICATION MIL-16878/3. THE WIRES SUPPLIED WITH THE EQUIPMENT HAVE FEMALE SPADE LUGS. THE FLASHER LIGHT UNITS COME WIRED WITH FIVE 48"-LONG PIGTAILS HAVE MALE SPADE LUGS. WIRE THE FLASHER PER MANUFACTURER INSTRUCTIONS.

NOTES ARE CONTINUED.

THREE 4 AWG THWN AND 6 AWG THWN GREEN GROUND

15 KVA MALS TRANSFORMER

GND HI H2 H3 1 2 3 4 5 6 7 8 EI X1 X2 X3

SEE NOTE 5.

6 AWG GREEN PER NOTE 4

MALS DISCONNECT SWITCH

SQUARE D CAT NO H223AWK WITH 80A BUSSMANN FUSETRON FUSES. SEE NOTE 7.

80A

THREE 2 AWG, TYPE U.S.E. FLASHER POWER CABLES

6 PR 19 AWG SHIELDED FLASHER CONTROL CABLE

THREE 4 AWG, TYPE U.S.E. POWER CABLES TO REMAINING FLASHERS

6 PR 19 AWG SHIELDED FLASHER CONTROL CABLE TO REMAINING FLASHERS

I/O AWG BARE COPPER GUARD WIRE 10" ABOVE POWER AND CONTROL CABLES IN TRENCH BETWEEN STATIONS

H M 8 7 6 5 4 3 2 1 TB2 — TR5 — 1 2 3 4 TBI — LI N L2 EI

JB-2 BOX

10 AWG THWN
14 AWG THWN

10 AWG THWN GREEN GND

+ - H M TR LI N L2 EI

INDIVIDUAL FLASHER CONTROL CABINET

N TR HV 2 1

14 AWG	3000V	WHT	CONFIRM WIRING WITH RAIL MANUFACTURER INCLUDE GRND. WIRE
18 AWG	3000V		
14 AWG	3000V	BLK	
16 AWG	3000V		

SPADE LUG CONNECTION (TYPICAL OF 5)

L-5000 JUNCTION BOX AT TOP OF TOWER. SEE NOTE 3.

RAIL FLASHER UNIT

FLASHER NO. 5

MALS POWER DISTRIBUTION PANEL

100A, 120/240V, 3-WIRE, S/N PANELBOARD, MAIN LUGS. SQUARE D CAT. NO. NQOD12L100CU WITH QOB STYLE BREAKERS IN A NEMA 3R PANEL ENCLOSURE, SQUARE D CAT. NO. MH32WP. SEE MALS POWER DISTRIBUTION PANEL SCHEDULE.

MALS STEADY-BURNING LIGHT BAR CIRCUITS

SEE NOTE 6	30A		
CIRCUITS NO. 1 AND NO. 2	30A		
SEE NOTE 6	15A	15A	CIRCUIT NO. 7
CIRCUITS NO. 3 AND NO. 4	15A	15A	CIRCUIT NO. 8
CIRCUITS NO. 5 AND NO. 6	15A	15A	CIRCUIT NO. 9
	15A	15A	CIRCUIT NO. 10
SPARE	15A	15A	CIRCUIT NO. 11

MALS STEADY-BURNING LIGHT BAR CIRCUITS

LIGHTNING ARRESTER

MAIN LUGS

GND

I/O AWG BARE COPPER GUARD WIRE TO NEAREST LIGHT BAR GROUNDING ELECTRODE

2 AWG COPPER GND

THREE 2/0 AWG TYPE U.S.E. CABLES AND ONE 2 AWG GREEN USE GROUND

I/O AWG BARE COPPER GUARD WIRE TO SHELTER GROUNDING ELECTRODE

NOTES: CONTINUED:

4. 6 AWG GREEN INSULATED GROUNDING CONDUCTOR IS INSTALLED IN SCHEDULE 40 PVC CONDUIT TO A PERIMETER GROUNDING ROD DIRECTLY FROM MALS TRANSFORMER.
5. CONNECTION IS MADE TO THE TRANSFORMER TAP WHICH GIVES THE VOLTAGE CLOSEST TO 120/240V AT THE MALS DISTRIBUTION PANEL WHEN LAMPS ARE BURNING AT THE HIGH BRIGHTNESS STEP.
6. THE #2/0 AWG MALS THRESHOLD BAR CABLE SHALL BE SPLICED TO AN 8 AWG STRANDED CABLE, TO FIT THE LUGS OF THE 30A BREAKER. THE #4 AWG MALS CABLE SHALL BE SPLICED TO AN 8 AWG STRANDED CABLE TO FIT THE LUGS OF THE 15 AMP BREAKER. AN APPROVED SPLICE IS A TAPE-WRAPPED SPLICE, USING COMPACT COMPRESSION CONNECTORS DESIGNED TO TAP SMALL LIGHTING WIRES FROM SECONDARIES. BURNDY CRIMPIT STREET LIGHTING TAP, CAT. NO. YPC26R8U IS APPROVED FOR #2/0 AWG TO #8 AWG APPLICATION AND CAT. NO. YPC2A8U IS APPROVED FOR #4 AWG TO #8 AWG APPLICATION.
7. A FIELD-INSTALLED SOLID NEUTRAL KIT IS INSTALLED IN THIS DISCONNECT SWITCH.

MASTER FILE: WIRING DIAGRAM FOR MALSR TYPE FA-9994.DGN

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
GREAT LAKES REGION — CHICAGO, ILLINOIS

MALSR
EQUIPMENT WIRING DIAGRAM FOR TYPE FA-9994
RUNWAY 02

DEKALB — DEKALB TAYLOR MUNICIPAL AIRPORT — IL

REVIEWED BY	SUBMITTED BY	APPROVED BY
	PROJ. ENGR.	PLATFORM MGR.
	DATE TAD	DATE JCN IL
	DRAWN TAD	ISSUED BY CHICAGO NAS IMPLEMENTATION CENTER
	DRAWN EGS	DRAWING NO. DKB-D-MALSR02-E02 REV

DATE	DESCRIPTION	JCN	REDLINE DATE	APVD

PLOT DATE = 06\26\2007, 11:03 AM
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PLOT SCALE = 111.7592 '/ IN.
USER NAME = AMC

CONTRACT NO.

GROUNDING ELECTRODE IN PERIMETER GROUNDING SYSTEM AROUND MALSR SHELTER

2 AWG COPPER GROUNDING ELECTRODE CONDUCTOR

2 AWG GREEN INSULATED COPPER GROUND

3-WIRE SERVICE LATERAL TO POWER COMPANY'S TRANSFORMER (25KVA, PRIMARY TO 120/240V, SINGLE PHASE, PAD-MOUNTED)

THREE 3/0 AWG TYPE U.S.E. CABLES

METER BASE

SERVICE ENTRANCE DISCONNECT SWITCH

HEAVY DUTY, 240 VAC, 2-WIRE, 200A, SQUARE D CAT NO H224AWK FUSED AT 200A WITH DUAL-ELEMENT BUSSMANN FUSETRON FUSES. SEE NOTE 7.

200A

2 AWG GREEN WITH YELLOW STRIPE, DIRECTLY TO GROUNDING ELECTRODE

GROUND RING AT SHELTER

6 AWG GREEN

THREE 3/0 AWG THWN AND 2 AWG THWN GREEN GROUND

FOUR 2 AWG THWN ONE 6 AWG GROUND

AC POWER ARRESTER PER SPECIFICATIONS

MALSR CONTROL CABINET DME CORP. TYPE FA-1150I

ITBI: 1 LI, 2 N, 3 L2

IP2 IAIJ2: 1 120VAC, 2 SPARE, 3 LOW, 4 MED, 5 HIGH, 6 FL CONT, 7 FL ON, 8 NEUT., 9 SPARE

ITB2: 1 2 3 4 5 6 7 8 9 10 11 12

NOT USED

INSTALL 14 AWG THWN JUMPERS

FIVE 14 AWG THWN SOLID

FOUR 4 AWG THWN AND 6 AWG GREEN

ITBI: 4 5 6 7 10 11 12

IAIJI IPI: 1 2 3 4 5 9 10

SHELTER POWER PANEL

225A, 120/240V, 3-WIRE, S/N PANELBOARD, MAIN LUGS ONLY SQ D CAT. NO. NQOD30L225CU AND QOB STYLE BREAKERS IN A SURFACE-MOUNTED NEMA 1 ENCLOSURE, 32"H X 20"W X 5 3/4"D, SQ D CAT. NO. MH32.

125A, 2 P				
	20A	2		INT. LTS.
	20A	4		REC.
RECEPTACLES	20A	5	15A 6	EX. LTS.
SPARE	20A	7	10A 8	L-854
SPARE	20A	9	15A 10	SPARE
SPARE	20A	11	15A 12	SPARE
	20A	13	30A 14	SPARE
HVAC UNIT		15	16	
SPACE		27	28	
SPACE		29	30	

MALSR DISCONNECT SWITCH

SQUARE D CAT. NO. H223AWK WITH 100A BUSSMAN FUSETRON FUSES. SEE NOTE 7.

100A

THREE 2AWG THWN AND 6AWG THWN GREEN GROUND

THREE 2AWG THWN AND 6AWG THWN GREEN GROUND

WIRING IS BASED ON DME CORP. MALSR. CONFIRM WIRING WITH THE RESPECTIVE MALSR MANUFACTURER.

AIR-GROUND L-854 RECEIVER/CONTROLLER MODEL RC-IT5A

TBI: CONTROL 1, CONTROL 2, CONTROL 3, 120 VAC, NEUTRAL, GND LUG

NOTES: CONSTRUCTION SHALL BE DONE SUCH THAT:

1. THE FLASHERS FIRE IN SEQUENCE TOWARD THE RUNWAY, STARTING AT THE OUTERMOST UNIT. CONTROL TERMINALS 9 (MEDIUM INTENSITY STEP) AND 10 (HIGH INTENSITY STEP) ARE COMMON FOR ALL FLASHERS. EACH FLASHER REQUIRES AN INDIVIDUAL CONDUCTOR FOR THE TRIGGER CIRCUIT.
2. WHERE THIS DRAWING DIFFERS FROM THE MANUFACTURER'S INSTRUCTION BOOK, CONTACT THE PROJECT ENGINEER FOR FURTHER DIRECTION.
3. THE WIRES RUNNING FROM EACH FLASHER INDIVIDUAL CONTROL CABINET (ICC) TO THE FLASHER SPADE LUG CONNECTORS ARE I/C, 3000V WIRES WHICH COME WITH THE FLASHER EQUIPMENT. IF ADDITIONAL WIRE QUANTITIES ARE NEEDED, THE CONTRACTOR SHALL FURNISH THEM. THE WIRES MUST MEET MILITARY SPECIFICATION MIL-16878/3. THE WIRES SUPPLIED WITH THE EQUIPMENT HAVE FEMALE SPADE LUGS. THE FLASHER LIGHT UNITS COME WIRED WITH FIVE 48"-LONG PIGTAILS HAVE MALE SPADE LUGS. WIRE THE FLASHER PER MFR INSTRUCTIONS.

NOTES ARE CONTINUED.

15 KVA MALS TRANSFORMER

THREE 4 AWG THWN AND 6 AWG THWN GREEN GROUND

HI H2 H3 1 2 3 4 5 6 7 8; EI; XI X2 X3

SEE NOTE 5.

6 AWG GREEN PER NOTE 4

MALS DISCONNECT SWITCH

SQUARE D CAT NO H223AWK WITH 80A BUSSMANN FUSETRON FUSES. SEE NOTE 7.

80A

THREE 2 AWG, TYPE U.S.E. FLASHER POWER CABLES

6 PR 19 AWG SHIELDED FLASHER CONTROL CABLE

THREE 4 AWG, TYPE U.S.E. POWER CABLES TO REMAINING FLASHERS

6 PR 19 AWG SHIELDED FLASHER CONTROL CABLE TO REMAINING FLASHERS

I/O AWG BARE COPPER GUARD WIRE 10" ABOVE POWER AND CONTROL CABLES IN TRENCH BETWEEN STATIONS

10 9 5 4 3 2 1 TB2; 3 2 1 TBI; TR5; L2 N; LI EI

JB-2 BOX

10 AWG THWN

14 AWG THWN

10 AWG THWN GREEN GND

2TBI 9 8 7 6 5 4 3 2 1

EI

INDIVIDUAL FLASHER CONTROL CABINET

2PI 5 4 3 2 1

12 AWG 3000V BLK
20 AWG 3000V RED
12 AWG 3000V WHT
20 AWG 3000V BLK

CONFIRM WIRING WITH RAIL MANUFACTURER INCLUDE GRND. WIRE

SPADE LUG CONNECTION (TYPICAL OF 5)

L-5000 JUNCTION BOX AT TOP OF TOWER. SEE NOTE 3.

RAIL FLASHER UNIT

FLASHER NO. 5

MALS POWER DISTRIBUTION PANEL

100A, 120/240V, 3-WIRE, S/N PANELBOARD, MAIN LUGS, SQUARE D CAT. NO. NQOD12L100CU WITH QOB STYLE BREAKERS IN A NEMA 3R PANEL ENCLOSURE, SQUARE D CAT. NO. MH32WP. SEE MALS POWER DISTRIBUTION PANEL SCHEDULE.

MALS STEADY-BURNING LIGHT BAR CIRCUITS

SEE NOTE 6	30A		
CIRCUITS NO. 1 AND NO. 2	30A		
SEE NOTE 6	15A	15A	CIRCUIT NO. 7
CIRCUITS NO. 3 AND NO. 4	15A	15A	CIRCUIT NO. 8
CIRCUITS NO. 5 AND NO. 6	15A	15A	CIRCUIT NO. 9
SPARE	15A	15A	CIRCUIT NO. 10
		15A	CIRCUIT NO. 11

MALS STEADY-BURNING LIGHT BAR CIRCUITS

LIGHTNING ARRESTER

MAIN LUGS

I/O AWG BARE COPPER GUARD WIRE TO NEAREST LIGHT BAR GROUNDING ELECTRODE

THREE 2/0 AWG TYPE U.S.E. CABLES AND ONE 2 AWG GREEN USE GROUND

2 AWG COPPER GND

I/O AWG BARE COPPER GUARD WIRE TO SHELTER GROUNDING ELECTRODE

NOTES: CONTINUED:

4. 6 AWG GREEN INSULATED GROUNDING CONDUCTOR IS INSTALLED IN SCHEDULE 40 PVC CONDUIT TO A PERIMETER GROUNDING ROD DIRECTLY FROM MALS TRANSFORMER.
5. CONNECTION IS MADE TO THE TRANSFORMER TAP WHICH GIVES THE VOLTAGE CLOSEST TO 120/240V AT THE MALS DISTRIBUTION PANEL WHEN LAMPS ARE BURNING AT THE HIGH BRIGHTNESS STEP.
6. THE #2/0 AWG MALS THRESHOLD BAR CABLE SHALL BE SPLICED TO AN 8 AWG STRANDED CABLE, TO FIT THE LUGS OF THE 30A BREAKER. THE #4 AWG MALS CABLE SHALL BE SPLICED TO AN 8 AWG STRANDED CABLE TO FIT THE LUGS OF THE 15 AMP BREAKER. AN APPROVED SPLICE IS A TAPE-WRAPPED SPLICE, USING COMPACT COMPRESSION CONNECTORS DESIGNED TO TAP SMALL LIGHTING WIRES FROM SECONDARIES. BURNDY CRIMPIT STREET LIGHTING TAP, CAT. NO. YPC26R8U IS APPROVED FOR #2/0 AWG TO #8 AWG APPLICATION AND CAT. NO. YPC2A8U IS APPROVED FOR #4 AWG TO #8 AWG APPLICATION.
7. A FIELD-INSTALLED SOLID NEUTRAL KIT IS INSTALLED IN THIS DISCONNECT SWITCH.

MASTER FILE: WIRING DIAGRAM FOR MALSR TYPE FA-[illegible]

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
GREAT LAKES REGION — CHICAGO, ILLINOIS

MALSR
EQUIPMENT WIRING DIAGRAM FOR TYPE FA-1150I
RUNWAY 02

DEKALB — DEKALB TAYLOR MUNICIPAL AIRPORT — IL

REVIEWED BY	SUBMITTED BY	APPROVED BY
	PROJ. ENGR.	PLATFORM MGR.

DATE	TAD	ISSUED BY: CHICAGO NAS IMPLEMENTATION CENTER	DATE JCN IL
DRAWN	TAD		DRAWING NO. DKB-D-MALSR02-E02 REV
DRAWN	EGS		

DATE	DESCRIPTION	JCN	REDLINE DATE	APVD

PLOT DATE = 06\26\2007, 11:03 AM
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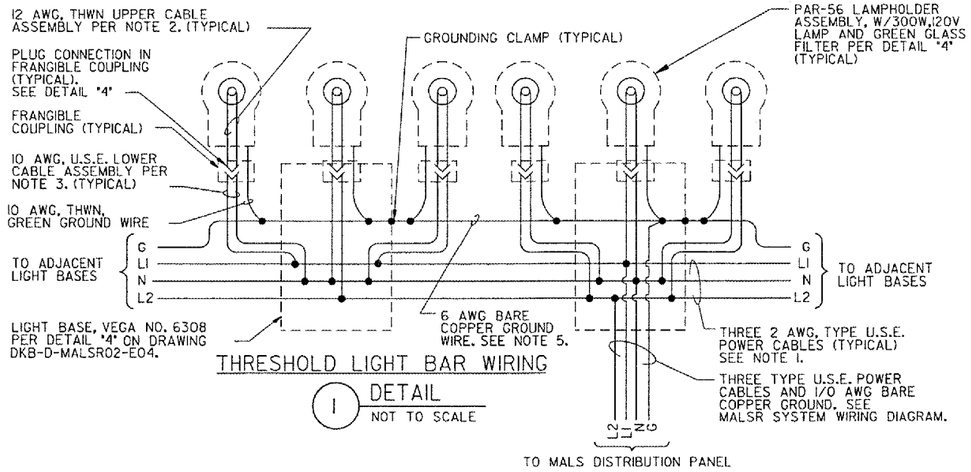
USER NAME = ANC

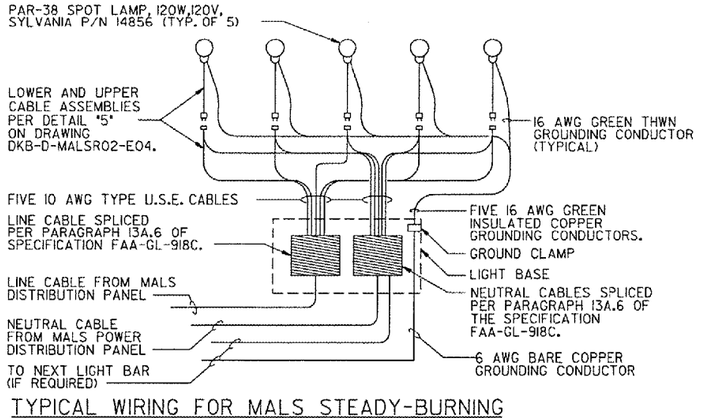


THRESHOLD LIGHT BAR WIRING

1 DETAIL
NOT TO SCALE

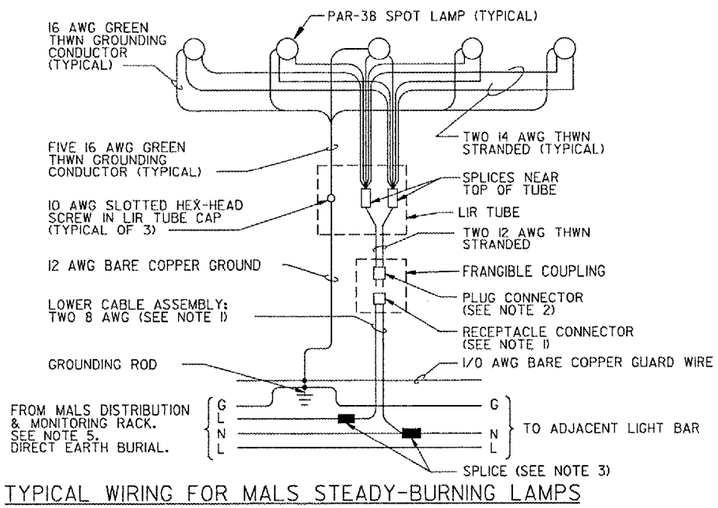
NOTES:

1. EACH CURRENT-CARRYING CABLE MAKING A CONNECTION IN THE LIGHT BASE SHALL HAVE A MINIMUM 4' SLACK LOOP COILED NEATLY INSIDE THE LIGHT BASE. (SLACK LOOP NOT REQUIRED FOR CABLE PASSING THROUGH LIGHT BASE WITHOUT CONNECTION).
2. THE UPPER CABLE ASSEMBLY SHALL BE TWO 14 AWG STRANDED THWN CABLES AND ELASTIMOLD WATERTIGHT PLUG CONNECTOR, STYLE 90P-SB FOR LIGHT BARS MOUNTED ON EMT SUPPORTS (EXCEPT THRESHOLD BAR). AT THE THRESHOLD BAR AND FOR STEADY-BURNING LAMPS MOUNTED ON LIR TOWERS. THE UPPER CABLE ASSEMBLY SHALL BE TWO 12 AWG STRANDED THWN CABLES AND ELASTIMOLD WATERTIGHT PLUG CONNECTOR, STYLE 90P-S6.
3. THE LOWER CABLE ASSEMBLY SHALL BE TWO 10 AWG TYPE U.S.E. CABLES WITH ELASTIMOLD RECEPTACLE CONNECTOR, STYLE NO. 90R-B6 AT LIGHT BARS MOUNTED ON EMT SUPPORTS (INCLUDING THE THRESHOLD BAR). FOR STEADY-BURNING LIGHT BARS MOUNTED ON LIR TOWERS, THE LOWER CABLE ASSEMBLY SHALL BE TWO 8 AWG TYPE U.S.E. CABLES WITH ELASTIMOLD RECEPTACLE CONNECTOR, STYLE NO. 90R-C4
4. CONNECTIONS OF 10 AWG CABLES TO 2 AWG CABLES ARE MADE WITH BURNDY CAT. NO. YPC2A8U STREET LIGHTING TAPS. CONNECTIONS OF 2 AWG CABLES TO 1/0 AWG CABLES, IN FEED-THROUGH SPLICES ONLY, ARE MADE WITH BURNDY CAT. NO. YC26C2 COPPER CRIMPITS. SPLICE BODIES ARE MADE WITH 3M SCOTCHCAST MULTI-MOLD SPLICING KITS, 3M NO. 85-16.
5. ALL CONNECTIONS TO GROUNDING RODS SHALL BE MADE USING EXOTHERMIC WELDS PER SPECIFICATIONS.
6. ALL THREADS ON BOLTS SHALL BE COATED WITH ANTI-SEIZE COMPOUND.
7. A SILICONE RUBBER INSULATOR DISK (GFM) SHALL BE SECURELY INSTALLED BETWEEN THE LAMPHOLDER AND THE PAR-56 LAMP (THRESHOLD BAR ONLY).
8. EACH GREEN GLASS FILTER (THRESHOLD BAR ONLY) IS SECURED WITH THREE STAINLESS STEEL FILTER CLIPS. THE CONTRACTOR SHALL BEND THE FILTER CLIPS SUCH THAT THEY HOLD THE FILTER SECURELY WHEN THEY ARE BOLTED.
9. THE CONTRACTOR SHALL FURNISH AND INSTALL AN NBP PAR-56 LAMPHOLDER RING ON EACH PAR-56 LAMPHOLDER (THRESHOLD BAR ONLY). THIS RING FITS OVER THE LAMP-RETAINING CLIPS, AND HOLDS THE LAMP POSITIVELY IN PLACE. THE RING COMES WITH AN ATTACHED CHAIN HAVING A SS BOLT AT THE FREE END. REPLACE THE LAMPHOLDER'S EXISTING STAINLESS STEEL GROUNDING BOLT WITH THE CHAIN'S BOLT.
10. WHEN INSTALLING PAR-38 LAMPHOLDER, FEED PIGTAIL ENDS OF CABLE INTO LAMPHOLDER AND CONNECT TO TERMINALS IN LAMPHOLDER SOCKET. USE CARE TO PREVENT THE SOCKET RETENTION BOLTS FROM DAMAGING CABLE INSULATION.
11. SEE PLAN AND PROFILE DRAWING FOR LAMP CENTERLINE ELEVATION TO DETERMINE LENGTH OF 2" EMT REQUIRED AT EACH EMT LIGHT BAR. AT THE THRESHOLD BAR, THE CONDUIT SHALL BE SIZED SO THAT THE BOTTOM OF THE PAR-56 LAMPHOLDER BASE IS IN CONTACT WITH THE TOP OF THE FRANGIBLE COUPLING. THE LAMP CENTERLINE ELEVATION SHALL FOLLOW THE CROWN ELEVATION AT THE THRESHOLD BAR.



TYPICAL WIRING FOR MALS STEADY-BURNING LAMPS MOUNTED ON EMT SUPPORTS

2 DETAIL
NOT TO SCALE



TYPICAL WIRING FOR MALS STEADY-BURNING LAMPS MOUNTED ON LIR STRUCTURE

3 DETAIL
NOT TO SCALE

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
GREAT LAKES REGION — CHICAGO, ILLINOIS

MALSR

WIRING DIAGRAMS FOR STEADY-BURNING LIGHT BARS RUNWAY 02

DEKALB — DEKALB TAYLOR MUNICIPAL AIRPORT — IL

DATE	DESCRIPTION	JCN	RESUME DATE	APVD

REVIEWED BY	SUBMITTED BY	APPROVED BY
	PROJ. ENGR.	PLATFORM MGR.
	DATE TAD	DATE JCN
	DRAWN TAD	ISSUED BY CHICAGO NAS IMPLEMENTATION CENTER
	DRAWN EGS	DRAWING NO. DKB-D-MALSR02-E03 REV

PLOT DATE = 8/3/2007, 01:04 PM
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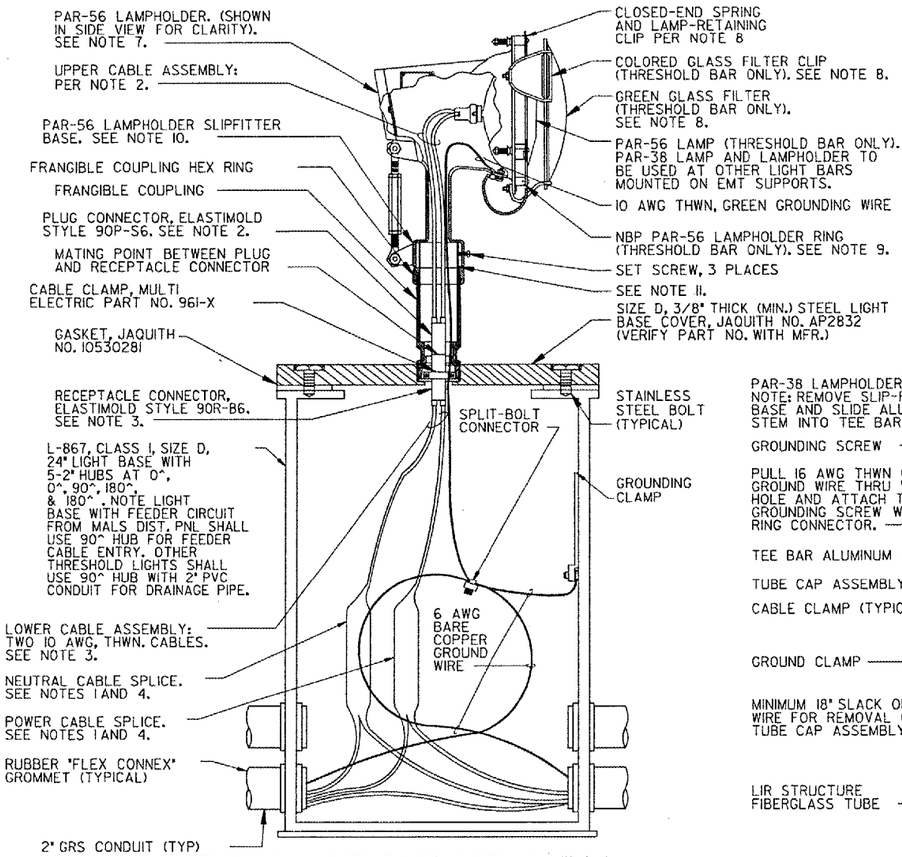
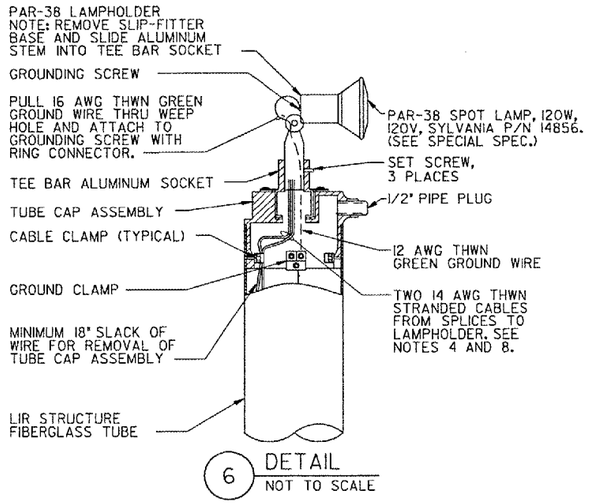


TYPICAL LIGHT BASE INSTALLATION

4 DETAIL NOT TO SCALE



TYPICAL PAR-38 LAMPHOLDER MOUNTED ON LIR TOWER

6 DETAIL NOT TO SCALE

NOTES:

1. EACH CURRENT-CARRYING CABLE MAKING A CONNECTION IN THE LIGHT BASE SHALL HAVE A MINIMUM 4' SLACK LOOP COILED NEATLY INSIDE THE LIGHT BASE. (SLACK LOOP NOT REQUIRED FOR CABLE PASSING THROUGH LIGHT BASE WITHOUT CONNECTION).
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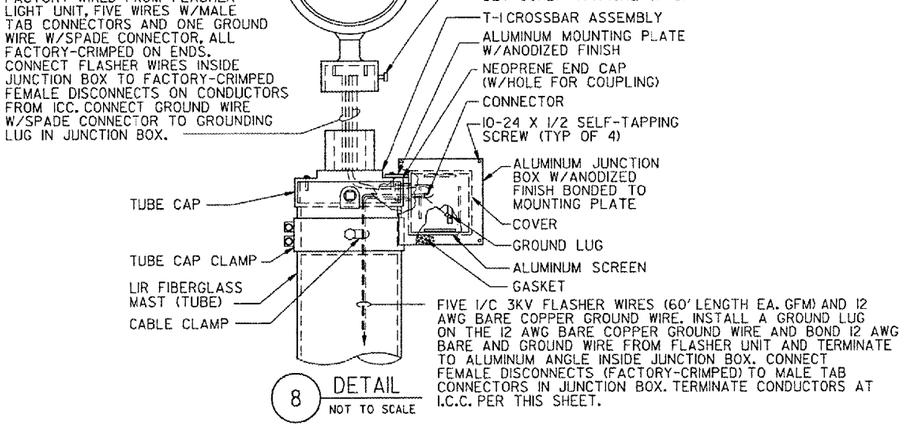
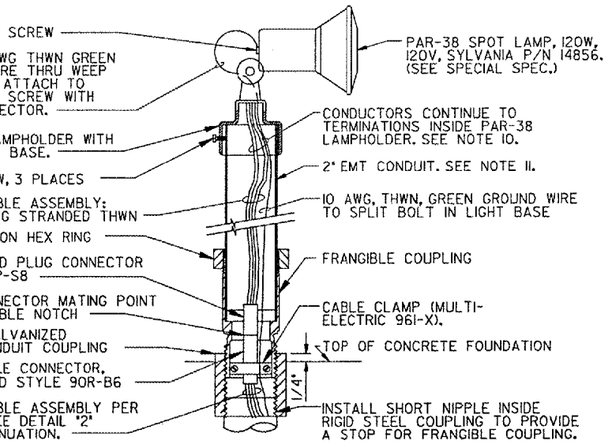


8 DETAIL NOT TO SCALE

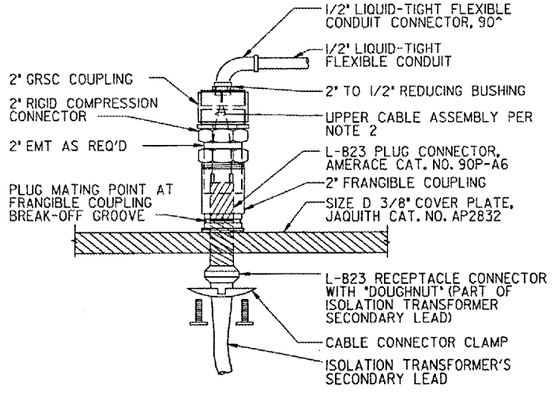
RAIL FLASHER LAMP AND L-5000 JUNCTION BOX ASSEMBLY

NOTE: CONTRACTOR SHALL FURNISH AND INSTALL JAQUITH P/N L-5000 JUNCTION BOX ASSEMBLY, CONSISTING OF BOX, COVER, GASKET, SCREWS, T-1 CROSSBAR ASSEMBLY, AND MOUNTING PLATE.



TYPICAL PAR-38 LAMPHOLDER MOUNTED ON EMT SUPPORT

5 DETAIL NOT TO SCALE



PLUG CONNECTION

7 DETAIL NOT TO SCALE

CONFIRM ALL PART NUMBERS WITH RESPECTIVE MANUFACTURER

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
GREAT LAKES REGION — CHICAGO, ILLINOIS

MALSR

LIGHT MOUNTING DETAILS
RUNWAY 02

DEKALB — DEKALB TAYLOR MUNICIPAL AIRPORT — IL

REVIEWED BY	SUBMITTED BY	APPROVED BY
	PROJ. ENGR.	PLATFORM MGR.
	DATE TAD	DATE JCN
	DRAWN TAD	ISSUED BY CHICAGO NAS IMPLEMENTATION CENTER
	DRAWN EGS	DRAWING NO. DKB-D-MALSR02-E04 REV

DATE	DESCRIPTION	JCN	REDLINE DATE	APVD

PLOT DATE = 05\26\2007, 10:27 AM
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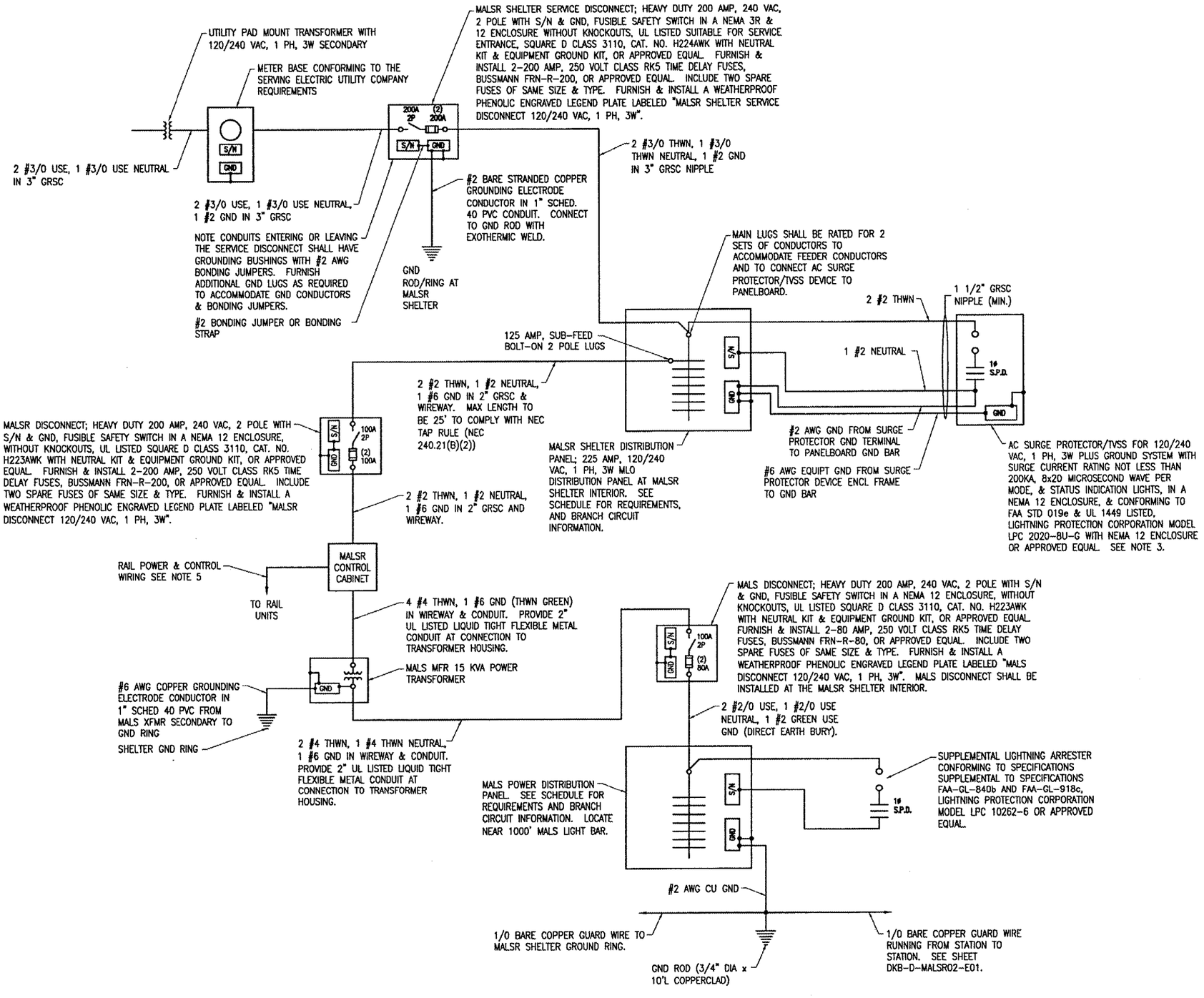
PLOT SCALE = 1.980 ' / IN.
USER NAME = AMC



RUNWAY 2 MALSR ELECTRICAL ONE LINE DIAGRAM

NOTES

1. ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN CONFORMANCE WITH NFPA 70 (NEC MOST CURRENT ISSUE IN FORCE), THE RESPECTIVE EQUIPMENT MANUFACTURER'S DIRECTIONS AND ALL OTHER APPLICABLE LOCAL CODES, LAWS, ORDINANCES AND REQUIREMENTS IN FORCE. ANY INSTALLATIONS WHICH VOID THE U.L. LISTING, ETL LISTING, (OR OTHER THIRD PARTY LISTING) AND/OR THE MANUFACTURER'S WARRANTY OF A DEVICE WILL NOT BE PERMITTED.
2. CONTRACTOR SHALL COORDINATE ELECTRIC SERVICE WITH THE SERVING ELECTRIC UTILITY & THE AIRPORT MANAGER. THE SERVING ELECTRIC UTILITY COMPANY IS COMMONWEALTH EDISON COMPANY, 17028 SOUTH ROUTE 23, PO BOX 646, DEKALB, ILLINOIS 60115, ATTN. MR. JIM ACKERT, PHONE 815-748-2271, FAX: 815-748-2267. THE AIRPORT MANAGER IS MR. TOM CLEVELAND, CITY OF DEKALB AIRPORT DIVISION, 3232 PLEASANT STREET, DEKALB, IL 60115, PHONE: 815-748-2020, FAX 815-748-2022.
3. SURGE ARRESTER WIRING SHALL BE AS SHORT & AS STRAIGHT AS POSSIBLE BETWEEN THE PANELBOARD & THE SURGE ARRESTER PER FAA STD 019e, PART 4.2.2.2, 2005 NEC 285 & MANUFACTURER'S RECOMMENDATIONS. FOR TOP FEED MAIN LUG PANELBOARD THE SURGE PROTECTIVE DEVICE SHALL BE MOUNTED DIRECTLY ABOVE THE PANELBOARD. FOR TOP FEED MAIN LUG PANELBOARD THE SURGE PROTECTIVE DEVICE SHALL BE MOUNTED DIRECTLY ABOVE THE PANELBOARD. PANELBOARD SHALL BE TOP FEED MAIN LUG TYPE WITH SUB-FEED LUG KIT TO ACCOMMODATE 2 SETS OF CONDUCTORS.
4. PROVIDE DUCT SEAL IN CONDUIT NIPPLE BETWEEN PANELBOARD & SURGE PROTECTIVE DEVICE.
5. SEE FAA DRAWINGS DKB-D-MALSR-02-E01 & DKB-D-MALSR-02-E02 FOR ADDITIONAL INFORMATION & REQUIREMENTS. REFER TO THE RESPECTIVE DKB-D-MALSR-02-E02 DRAWING CORRESPONDING TO THE RESPECTIVE MALSR MANUFACTURER'S EQUIPMENT FURNISHED (MULTI-ELECTRIC MFG., INC. TYPE FA-9994 OR DME CORPORATION TYPE FA-11501).

DTMA

DEKALB TAYLOR MUNICIPAL AIRPORT

IL. PROJ.: DKB-3225 A.I.P. PROJ.: 3-17-0139-837

DATE	REVISION	BY

HANSON PROJECT No. 803-06ELEC
Filename E-602.DWG
Scale NONE
Date 06/27/07

LAYOUT	KNL	03/19/07
DRAWN	MV	03/19/07
REVIEWED	CAH	03/29/07

HANSON

Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62703-2888
Offices Nationwide

INSTALL MALSR & GLIDE SLOPE

MALSR ELECTRICAL ONE LINE, RUNWAY 02
DKB-D-MALSR02-E05

31
31 of 48 sheets

JUN 26, 2007 10:02 AM DMV
I:\AIRPORTS\DEKALB\803-06ELEC\AIRPORT\SHEETS\AUTO-CADD SHEETS\E-602.DWG - Work

RUNWAY 2 MALSR SHELTER PANEL SCHEDULE

CKT #	DUTY	SIZE
1	SUB FEED BOLT-ON	125A 2P
3	2 POLE LUGS FOR MALSR	---
5	CONVENIENCE RECEPTACLES	20A 1P
7	SPARE	20A 1P
9	SPARE	20A 1P
11	SPARE	20A 1P
13	HVAC UNIT	20A 2P
15		---
17	BLANK	
19	BLANK	
21	BLANK	
23	BLANK	
25	BLANK	
27	BLANK	
29	BLANK	

SIZE	DUTY	CKT #
15A 1P	INTERIOR LIGHTS	2
20A 1P	CONVENIENCE RECEPTACLES	4
15A 1P	EXTERIOR LIGHTS	6
10A 1P	AIR TO GROUND RADIO RECEIVER	8
15A 1P	SPARE	10
15A 1P	SPARE	12
30A 1P	SPARE	14
	BLANK	16
	BLANK	18
	BLANK	20
	BLANK	22
	BLANK	24
	BLANK	26
	BLANK	28
	BLANK	30

GND S/N

225 AMP, 120/240 VAC, 1 PHASE, 3 WIRE, 30 CIRCUIT PANELBOARD WITH TOP FEED MAIN LUGS SUITABLE FOR TWO SETS OF CONDUCTORS, IN A NEMA 1 ENCLOSURE. INCLUDE SEPARATE GROUND BAR KITS. ALL CIRCUIT BREAKERS SHALL BE BOLT-ON TYPE WITH 10,000 AIC AT 120/240 VAC. PANELBOARD SHALL BE SQUARE D COMPANY CAT. NO. NQOD30L225CU, WITH NQOD225SFL SUB-FEED LUG KIT, WITH NEMA 1 SURFACE MOUNT ENCLOSURE, OR APPROVED EQUAL.

NOTES

1. PANELBOARD BUS SHALL BE COPPER. NEUTRAL BUS SHALL BE COPPER. EQUIPMENT GROUND BARS SHALL BE COPPER.
2. INCLUDE ENGRAVED PHENOLIC LEGEND PLATE LABELED "RWY 2 MALSR PANEL, 120/240 VAC, 1 PHASE, 3 WIRE".
3. CONTRACTOR SHALL CONFIRM POWER REQUIREMENTS WITH THE RESPECTIVE EQUIPMENT NAMEPLATE DATA AND ADJUST CIRCUIT BREAKER SIZES TO CONFORM WITH NEC & MANUFACTURER'S RECOMMENDATIONS WHERE APPLICABLE.
4. 15 AMP & 20 AMP, BRANCH CIRCUITS LOCATED INSIDE THE MALSR SHELTER SHALL USE #12 AWG THWN COPPER CONDUCTORS (MINIMUM). FOR 20 AMP BRANCH CIRCUITS NO MORE THAN 9 #12 AWG CURRENT CARRYING CONDUCTORS SHALL BE INSTALLED IN THE SAME RACEWAY. ADJUST/INCREASE CABLE SIZES WHERE MORE THAN 3 CURRENT CARRYING CONDUCTORS ARE INSTALLED IN A SINGLE RACEWAY, PER THE REQUIREMENTS OF NEC 310.15(B)(2).
5. BRANCH CIRCUITS SHALL INCLUDE EQUIPMENT GROUND WIRES.
6. 120/240 VAC BRANCH CIRCUIT CONDUCTORS SHALL BE COLOR CODED PHASE A – BLACK, PHASE B – RED, NEUTRAL – WHITE, GROUND – GREEN.

RUNWAY 2 MALS POWER DISTRIBUTION PANEL SCHEDULE

CKT #	DUTY	SIZE
1	THRESHOLD LIGHTS CKT NO. 1	30A 1P
3	THRESHOLD LIGHTS CKT NO. 2	30A 1P
5	MALS CIRCUIT NO. 3	15A 1P
7	MALS CIRCUIT NO. 4	15A 1P
9	MALS CIRCUIT NO. 5	15A 1P
11	MALS CIRCUIT NO. 6	15A 1P

SIZE	DUTY	CKT #
15A 1P	MALS CIRCUIT NO. 7	2
15A 1P	MALS CIRCUIT NO. 8	4
15A 1P	MALS CIRCUIT NO. 9	6
15A 1P	MALS CIRCUIT NO. 10	8
15A 1P	MALS CIRCUIT NO. 11	10
15A 1P	SPARE	12

GND S/N

100 AMP, 120/240 VAC, 1 PHASE, 3 WIRE, 12 CIRCUIT (MINIMUM) PANELBOARD WITH BOTTOM FEED MAIN LUGS SUITABLE FOR TWO SETS OF CONDUCTORS, IN AN OVERSIZED NEMA 3R (RAIN PROOF) & NEMA 12 (DUST-TIGHT) ENCLOSURE WITH HINGED COVER. INCLUDE SEPARATE GROUND BAR KITS. ALL CIRCUIT BREAKERS SHALL BE BOLT-ON TYPE WITH 10,000 AIC AT 120/240 VAC. PANELBOARD SHALL BE SQUARE D COMPANY CAT. NO. NQOD12L100CU, WITH NQOD100SFL SUB-FEED LUG KIT, & MH32WP ENCLOSURE WITH TRIM KIT, OR APPROVED EQUAL. SEE NOTE 4.

NOTES

1. PANELBOARD BUS SHALL BE COPPER. NEUTRAL BUS SHALL BE COPPER. EQUIPMENT GROUND BARS SHALL BE COPPER.
2. INCLUDE ENGRAVED PHENOLIC LEGEND PLATE LABELED "RWY 2 MALS POWER DIST. PANEL, 120/240 VAC, 1 PHASE, 3 WIRE".
3. THE 2/0 AWG MALS THRESHOLD BAR CABLES SHALL BE SPLICED TO 8 AWG STRANDED CABLE TO FIT THE LUGS OF THE 30 AMP BREAKERS. THE 4 AWG CABLES FOR THE RESPECTIVE MALS CIRCUITS SHALL BE SPLICED TO 8 AWG STRANDED CABLE TO FIT THE LUGS OF THE 15 AMP BREAKERS. SEE FAA DRAWING DKB-D-MALSR-02-E02 FOR SPLICING REQUIREMENTS.
4. ENCLOSURE SHALL HAVE AN ADDITIONAL 12" OF GUTTER SPACE AT THE BOTTOM TO ACCOMMODATE RESPECTIVE FEEDER & BRANCH CIRCUIT CONDUCTORS. ENCLOSURE SHALL BE SQUARE D CAT. NO. MH32WP, OR APPROVED EQUAL, WITH THE FOLLOWING SQUARE D HARDWARE:

   CAT. NO. 8011028804 12" RAIL EXTENSIONS (TWO ARE REQUIRED)
   CAT. NO. 8011029104 12" DEAD FRONT EXTENSION
   CAT. NO. 8011028901 DEAD FRONT MOUNTING BRACKETS (TWO ARE REQUIRED)
   CAT. NO. 8002506701 SCREWS FOR DEAD FRONT EXTENSION (TWO ARE REQUIRED)
   CAT. NO. 2159017081 SCREWS FOR RAIL EXTENSION (FOUR ARE REQUIRED)

   CONFIRM ALL CATALOG NUMBERS WITH THE RESPECTIVE EQUIPMENT MANUFACTURER.

BY | REVISION | DATE

DEKALB TAYLOR MUNICIPAL AIRPORT
A.I.P. PROJ.: 3-17-0139-B37
IL. PROJ.: DKB-3225

HANSON PROJECT No. 803-06ELEC
Filename E-603.DWG
Scale NONE
Date 06/27/07

LAYOUT	KNL	03/19/07
DRAWN	MV	03/19/07
REVIEWED	CAH	03/29/07

HANSON

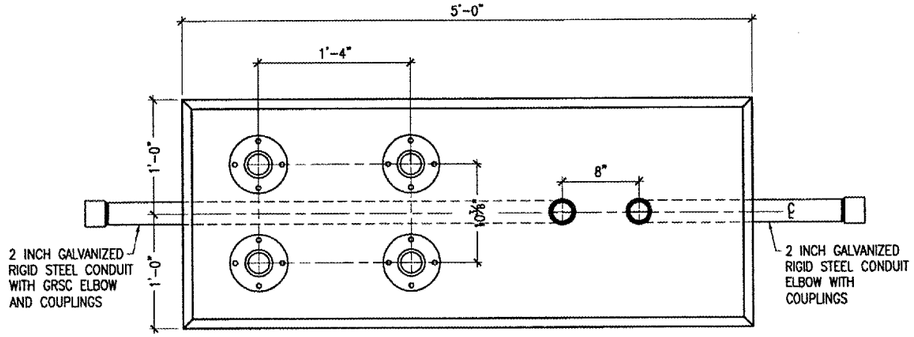
Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62703-2888
Offices Nationwide

INSTALL MALSR & GLIDE SLOPE

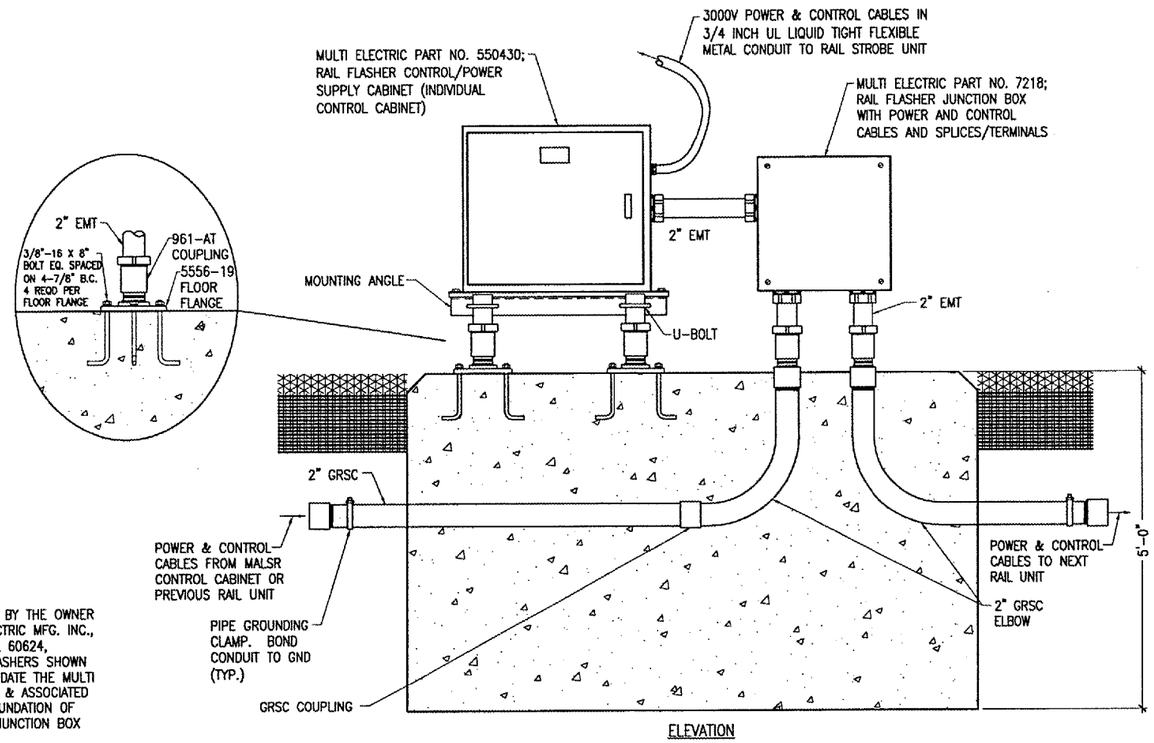
MALSR PANEL SCHEDULES
RUNWAY 02
DKB-D-MALSR02-E06

32
32 of 48 sheets

DK051



FOUNDATION DETAIL



ELEVATION

NOTES

1. WHERE THE RAIL UNITS FURNISHED BY THE OWNER ARE MANUFACTURED BY MULTI ELECTRIC MFG. INC., 4223 W. LAKE STREET, CHICAGO, IL 60624, ADJUST FOUNDATIONS FOR RAIL FLASHERS SHOWN ON SHEETS 19 & 20 TO ACCOMMODATE THE MULTI ELECTRIC POWER SUPPLY CABINETS & ASSOCIATED JUNCTION BOXES. COORDINATE FOUNDATION OF RAIL TOWER WITH FOUNDATION OF JUNCTION BOX & POWER SUPPLY CABINET.
2. CONFIRM DIMENSIONS WITH MFR & RESPECTIVE EQUIPMENT.

MULTI ELECTRIC RAIL JUNCTION BOX AND POWER SUPPLY CABINET MOUNTING DETAILS

DATE | REVISION | BY

DMAX

DEKALB TAYLOR MUNICIPAL AIRPORT

IL. PROJ.: DKB-3225 A.I.P. PROJ.: 3-17-0139-B37

HANSON PROJECT No. 803-06ELEC
Filename E-505.DWG
Scale NONE
Date 06/27/07

LAYOUT	KNL	06/26/07
DRAWN	MV	06/26/07
REVIEWED	CAH	03/29/07

HANSON

Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62703-2886
Offices Nationwide

INSTALL MALSR & GLIDE SLOPE

MULTI ELECTRIC RAIL DETAILS RUNWAY 02
DKB-D-MALSR02-E07

32A
46 of 48 sheets

JUN 26, 2007 10:02 AM DMV
I:\AIRPORTS\DEKALB\803-06ELEC\AIRPORT\SHEETS\AUTO-CADD SHEETS\E-505.DWG - Work

INSTALLATION OF GLIDE SLOPE

SUMMARY OF QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	AS AWARDED	AS BUILT QUANTITIES
AR110014	4" DIRECTIONAL BORE	L.F.	486	
AR127420	GLIDE SLOPE	L.S.	1	
AR127432	10' X 14' SHELTER BUILDING	EA.	1	
AR152410	UNCLASSIFIED EXCAVATION	C.Y.	8	
AR209510	CRUSHED AGGREGATE BASE COURSE	TON	16	
AR800432	TELEPHONE CABLE	L.F.	1,964	

DATE | REVISION | BY

DITMAX

DEKALB TAYLOR MUNICIPAL AIRPORT

IL. PROJ.: DKB-3225 A.I.P. PROJ.: 3-17-0139-837

INSTALL GLIDE SLOPE RUNWAY END 2

SUMMARY OF QUANTITIES FOR GLIDE SLOPE INSTALLATION

33

33 of 48 sheets

HANSON

Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62703-2888
Offices Nationwide

HANSON PROJECT No. 803-06ELEC
Filename R-003FLP.DWG
Scale NOT TO SCALE
Date 04/20/07

LAYOUT	CAH	03/20/07
DRAWN	BAK	03/20/07
REVIEWED	CAH	03/29/07

IL. PROJ.: DKB-3225

APR 06, 2007 10:06 AM BAK
I:\AIRPORTS\DEKALB\803-06ELEC\AIRPORT\SHEETS\AUTO-CADD SHEETS\R-003FLP.DWG - TOTAL QUANTITIES

DK051

NOTES:

1. COORDINATE ELECTRIC SERVICE WITH THE SERVING ELECTRIC UTILITY AND THE AIRPORT MANAGER. UTILITY CONTACT IS MR. JIM ACKERT, COM ED, 17028 S. STATE RT 23, DEKALB, IL 60115, PHONE 815-748-2271, FAX 815-748-2267. AIRPORT MANAGER IS MR. TOM CLEVELAND, CITY OF DEKALB AIRPORT DIVISION, 3232 PLEASANT STREET, DEKALB, IL 60115, PHONE 815-748-2020, FAX. 815-748-2022.
2. CONTRACTOR SHALL FURNISH & INSTALL UTILITY TRANSFORMER PAD PER SERVING ELECTRIC UTILITY CO. REQUIREMENTS. SEE "UTILITY TRANSFORMER PAD DETAIL" ON SHEET 42 FOR REQUIREMENTS.
3. SEE GLIDE SLOPE ELECTRICAL ONE LINE, RUNWAY 02, DKB-D-GS02-E02 FOR ADDITIONAL REQUIREMENTS ON ELECTRIC SERVICE.
4. FURNISH & INSTALL TELEPHONE SERVICE CABLE FROM THE PHONE SERVICE DEMARCATION POINT AT THE FBO/TERMINAL BUILDING TO THE GLIDE SLOPE SHELTER. SEE PROPOSED UTILITY PLAN FOR CABLE ROUTE. TELEPHONE CABLE SHALL BE 6 PAIR #19 AWG SOLID ANNEALED COPPER COMMUNICATIONS CABLE, GOPHER RESISTANT, JELLY FILLED TO RESIST MOISTURE ENTRY AND TO INHIBIT CORROSION, SUITABLE FOR DIRECT BURIAL AND FOR USE IN DUCT, COMPLYING WITH ANSI/ICEA S-84-608-2002 AND RDUP 7 CFR 1755.390 (PE-39); SUPERIOR ESSEX PART NO. 04-026-94 OR APPROVED EQUAL. PROVIDE GRSC WHERE EMERGING FROM GRADE. PROVIDE SUFFICIENT SLACK CABLE TO TERMINATE IN GLIDE SLOPE REMOTE MAINTENANCE MONITOR AT G.S. SHELTER.

EXISTING SANITARY SEWER

UTILITY PAD MOUNT TRANSFORMER WITH 120/240 VAC, 1PH, 3W SECONDARY LOCATE 15' MIN. NORTH OF SHELTER. GROUND RING FOR UTILITY TRANSFORMER SHALL MAINTAIN 10' MIN. SEPARATION FROM GROUND RING FOR SHELTER.

CONCRETE STEP

ELECTRIC SERVICE CONDUCTORS IN 2" GRSC FROM UTILITY XFMR TO ELECTRIC METER

TELEPHONE SERVICE TO FBO/TERMINAL BLDG. SEE NOTE 4.

ET

50.0'

15.0'

3.0'

5.0'

UGE

5.0' TYP.

12.0'

20.0'

NEW 10'x14' (INTERIOR DIMENSIONS) GLIDE SLOPE EQUIPMENT SHELTER. SEE SHEET DKB-D-GS02-A01.

SW CORNER OF SHELTER AT RUNWAY STA. 113+81.5, 424.5 RT

GND ROD (TYP.)

GROUND RING; SEE GLIDE SLOPE SHELTER FLOOR PLAN SHEET DKB-D-GS02-A02 FOR REQUIREMENTS.

OVERHEAD CONDUITS TO GLIDE SLOPE ANTENNA

GLIDE SLOPE ANTENNA TOWER RUNWAY STA. 113+75, 430' RT.

ELECTRIC UTILITY PRIMARY SERVICE BY UTILITY CO. COORDINATE WITH SHELTER & GROUND RING TO AVOID INTERFENENCES.

EXISTING ACCESS ROAD

EXISTING TAXIWAY A1

EXISTING 4-WAY CONCRETE ENCASED DUCT STA. 4+50 TAXIWAY A1 - 60 L.F.

5+00

113+00

114+00

4+00

UGE

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 THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES OF HIS OPERATIONAL PLANS AND SHALL OBTAIN FROM THE 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. THE ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY SUCH MAINS AND 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 1-800-892-0123.

LEGEND

- EXISTING PAVEMENT
- PROPOSED 209-CRUSHED AGGREGATE BASE COURSE (6" DEPTH)
- EXISTING SANITARY SEWER
- EXISTING UNDERDRAIN
- T — PROPOSED TELEPHONE SERVICE
- UGE — PROPOSED UNDERGROUND ELECTRIC UTILITY PRIMARY
- EXISTING SANITARY SEWER MANHOLE
- EXISTING UNDERDRAIN INSPECTION HOLE
- PROPOSED DUCT
- ET UTILITY PAD MOUNT TRANSFORMER

N

0' 5' 10' 20'
FULL SIZE SCALE: 1"= 10'
HALF SIZE SCALE: 1"= 20'

DATE	REVISION	BY

DITMAX

DEKALB TAYLOR MUNICIPAL AIRPORT

IL. PROJ.: DKB-3225 A.I.P. PROJ.: 3-17-0139-B37

HANSON PROJECT No. 803-06ELEC
Filename R-121CON.DWG
Scale 1"= 10'
Date 04/20/07

LAYOUT	KNL	03/23/07
DRAWN	MV	03/25/07
REVIEWED	C.A.H.	03/29/07

HANSON

Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62703-2886
Offices in Nationwide

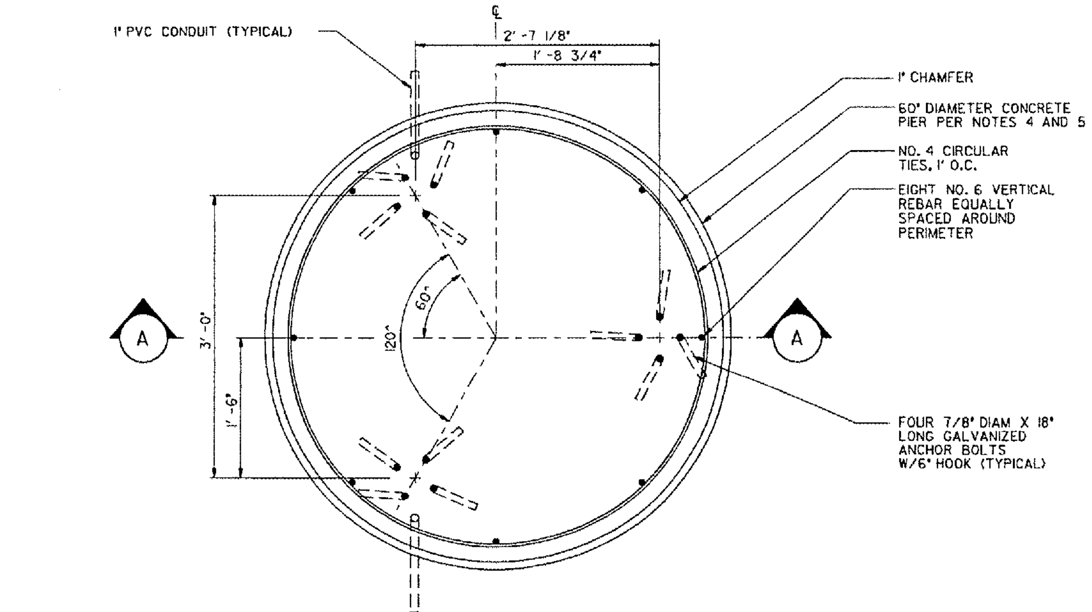
INSTALL MALSR & GLIDE SLOPE

GLIDE SLOPE
PROP. SITE PLAN, RUNWAY 02
DKB-D-GS02-C01

34
34 of 48 sheets

JUN 22, 2007 2:08 PM CAH
I:\AIRPORTS\DEKALB\803-06ELEC\AIRPORT\SHEETS\AUTO-CADD SHEETS\R-121CON.DWG - Layout1

CONTRACT NO.

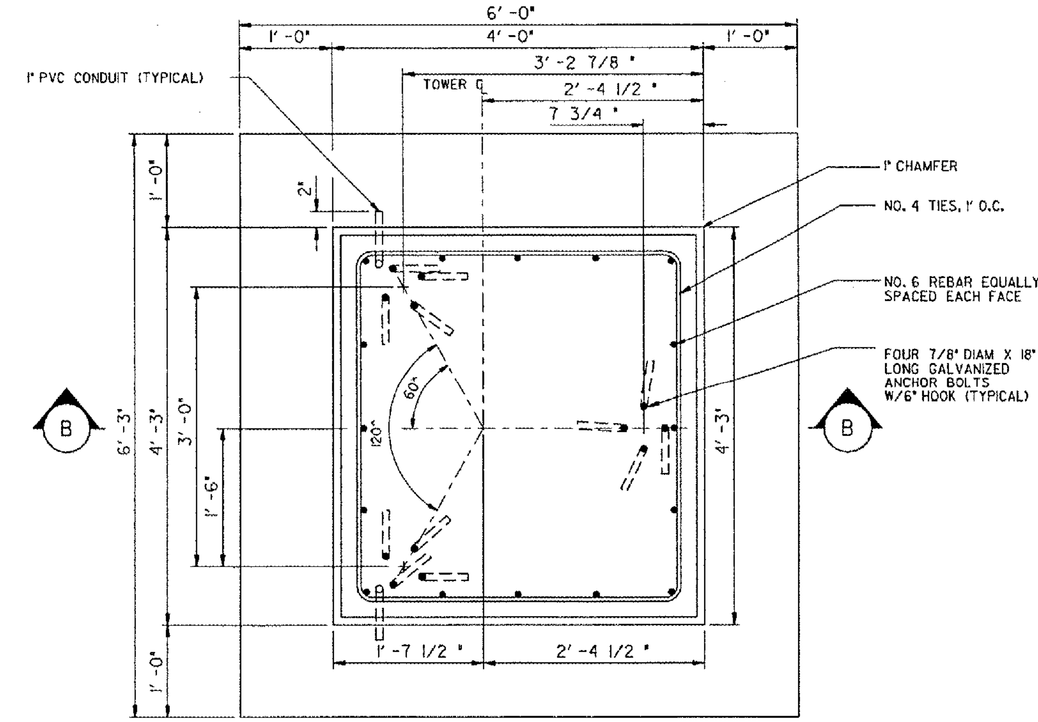


PLAN

OPTIONAL CONCRETE PIER FOUNDATION

1 DETAIL

SCALE IN FEET

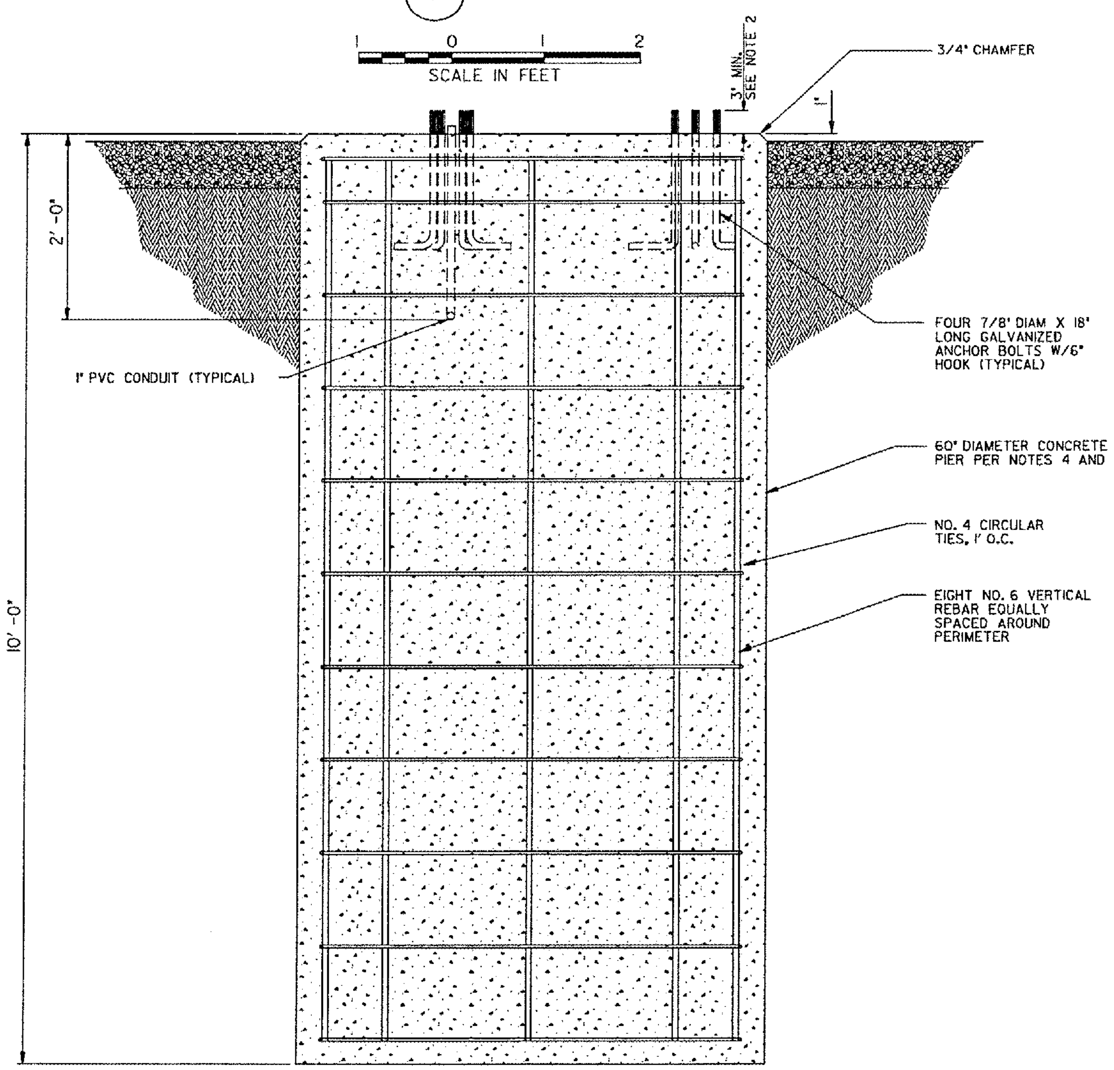


PLAN

OPTIONAL CONCRETE BLOCK FOUNDATION

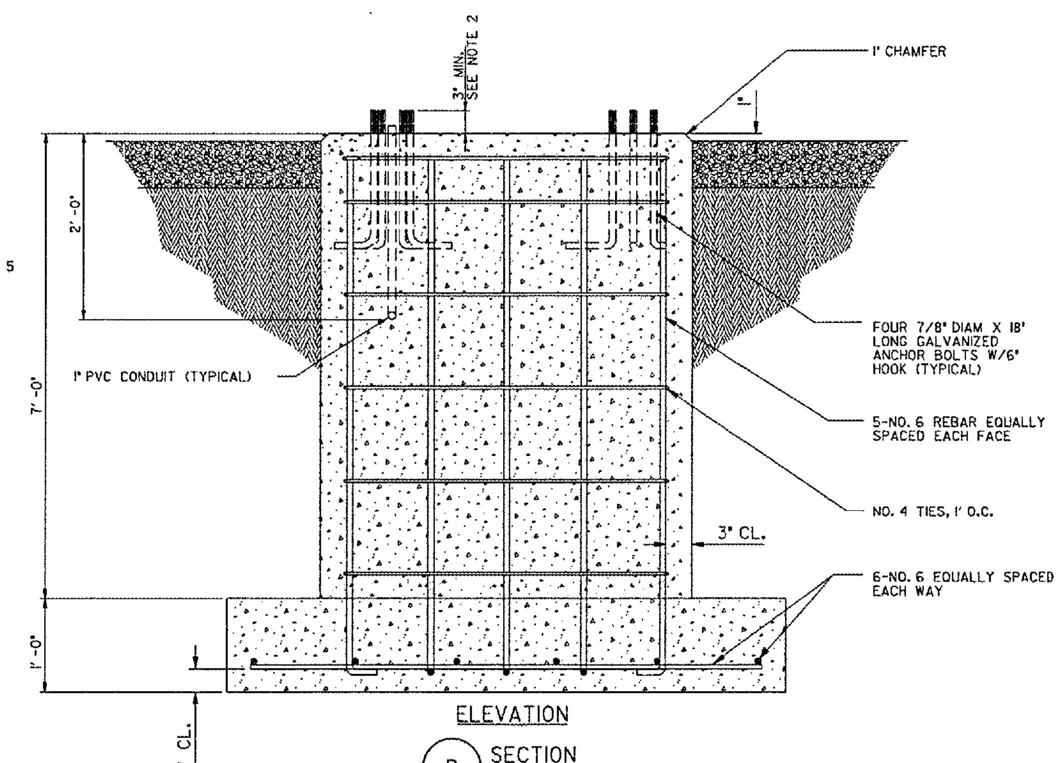
2 DETAIL

SCALE IN FEET



ELEVATION

A SECTION

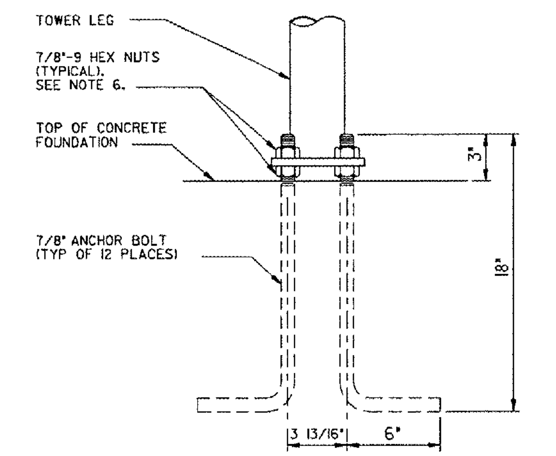


ELEVATION

B SECTION

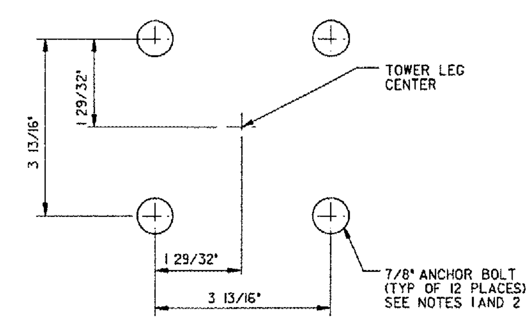
NOTES:

1. SEE DWG DKB-D-GS02-C01 FOR FOUNDATION LOCATION AND TOP ELEVATION.
2. HORIZONTAL TOLERANCES FOR GLIDE SLOPE ANTENNA MAST ANCHOR BOLTS ARE +/1/16" OF DIMENSIONS SHOWN. VERIFY ANCHOR BOLT TEMPLATE WITH REFERENCE TO TOWER BASE PRIOR TO PLACING CONCRETE.
3. SEE SECTION 2A OF THE SPECIFICATION FAA-GL-918C FOR EXCAVATION AND BACKFILL REQUIREMENTS. EXCAVATION SHALL BE SHORED OR SHAPED PER OSHA REQUIREMENTS.
4. CONCRETE SHALL HAVE A MAXIMUM SLUMP OF 3", 3/4" MAXIMUM AGGREGATE SIZE, AND SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AFTER 28 DAYS. FOUNDATION TOP SHALL BE LEVEL +/1/8" AND BROOM FINISHED. SEE SECTIONS 3A AND 3B OF THE SPECIFICATION FAA-GL-918C FOR CONCRETE FORM WORK, REINFORCEMENT, MATERIAL, PLACEMENT, AND CURING SPECIFICATIONS.
5. TOP TWO FEET OF CONCRETE PIER SHALL BE FORMED IN A CIRCULAR FIBER FORM. FORM SHALL BE REMOVED TO 12" BELOW GRADE AFTER CURING FOR 24 HOURS MIN.
6. TOWER IS GROUTED UNDER ALL ANCHOR PLATES AFTER FINAL LEVELING ADJUSTMENT.



ANCHOR BOLT LAYOUT

3 DETAIL SCALE: NONE



ANCHOR BOLT LAYOUT

4 DETAIL SCALE: NONE

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
GREAT LAKES REGION — CHICAGO, ILLINOIS

GLIDE SLOPE

ANTENNA TOWER FOUNDATION DETAILS
RUNWAY 02

DEKALB — DEKALB TAYLOR MUNICIPAL AIRPORT — IL

REVIEWED BY	SUBMITTED BY	APPROVED BY
	PROJ. ENGR.	PLATFORM MGR.

DATE	TAD	ISSUED BY CHICAGO NAS IMPLEMENTATION CENTER	DATE
DRAWN	TAD		DRAWING NO. DKB-D-GS02-C02
DRAWN	EGS		REV

DATE	DESCRIPTION	JCN	REDLINE DATE	APVD

SHEET 35 OF 48

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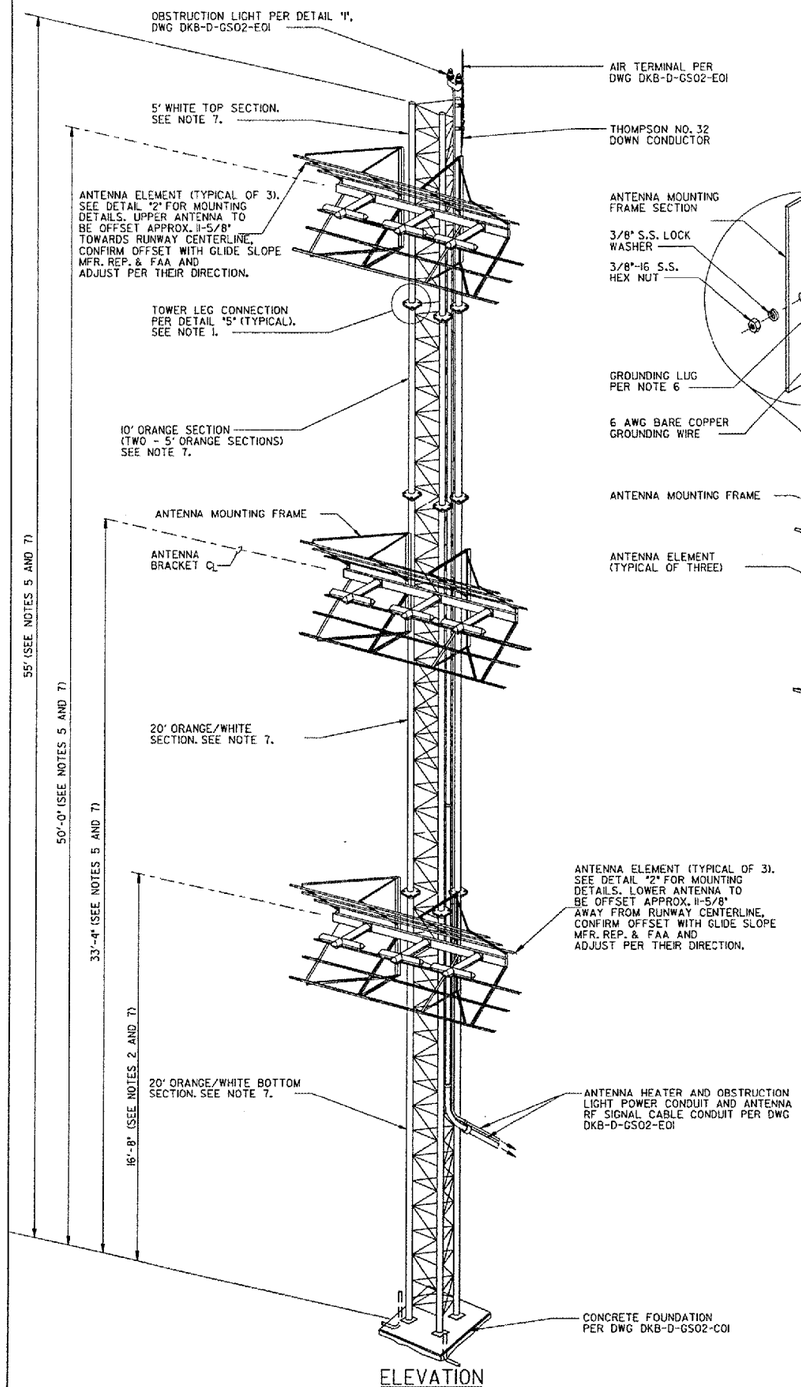
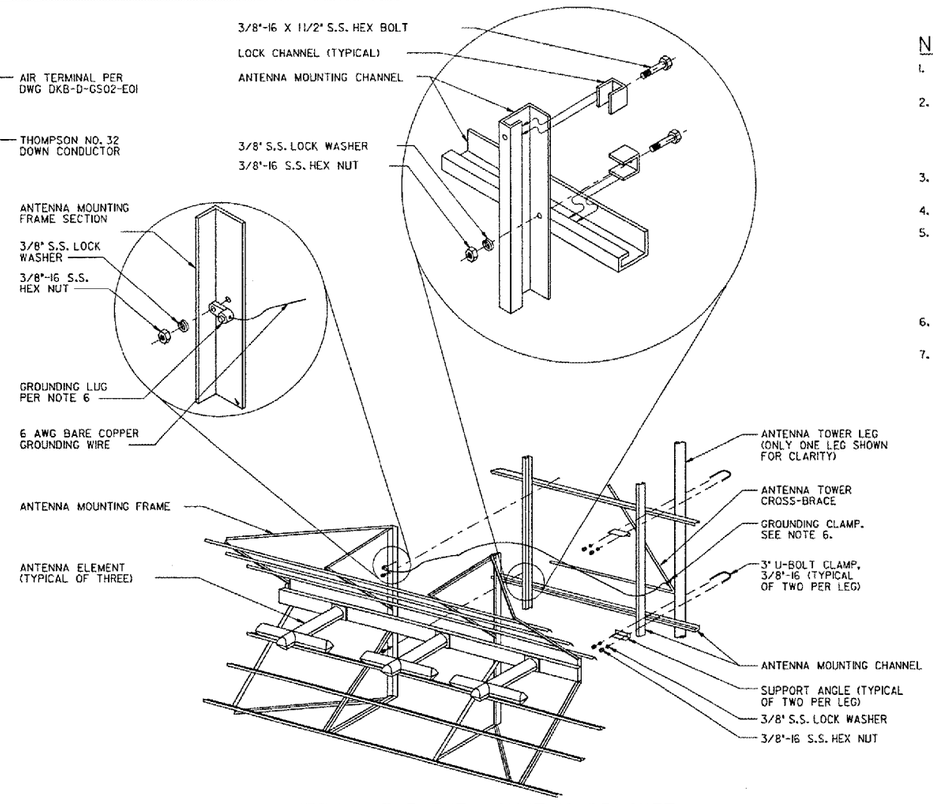
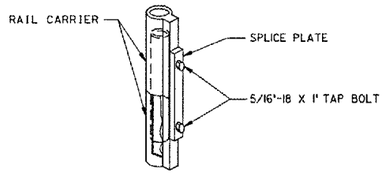


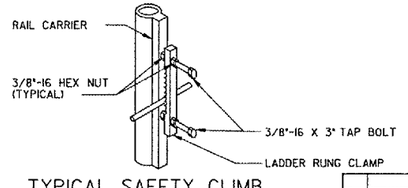
ELEVATION
55' GLIDE SLOPE ANTENNA TOWER
1 DETAIL SCALE: NONE



ANTENNA ELEMENT MOUNTING BRACKET AND ANTENNA TOWER CONNECTIONS
2 DETAIL SCALE: NONE



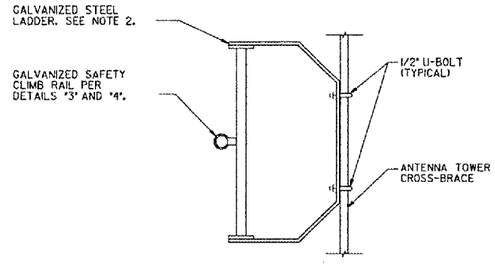
TYPICAL SAFETY CLIMB RAIL SPLICE JOINT
3 DETAIL SCALE: NONE



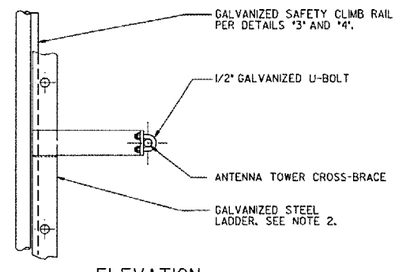
TYPICAL SAFETY CLIMB RAIL LADDER RUNG
4 DETAIL SCALE: NONE

NOTES:

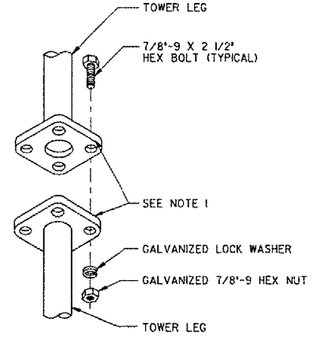
1. ANTENNA TOWER LEG TO WHICH GROUNDING ASSEMBLY IS BONDED, SHALL BE TACK-WELDED AT THE BOLTED CONNECTIONS TO PROVIDE ELECTRICAL CONTINUITY BETWEEN THE TOWER SECTIONS.
2. THE LADDER SHALL BE INSTALLED ON RIGHT SIDE OF ANTENNA TOWER WHEN LOOKING TOWARD RUNWAY THRESHOLD. CENTERLINE OF LADDER SHALL BE COINCIDENT WITH THE CENTERLINE OF THE ANTENNA TOWER FACE TO WHICH IT IS BEING ATTACHED. IN THE EVENT THE GLIDE SLOPE ANTENNA, LADDER AND SAFETY CLIMBING DEVICE IS PURCHASED FROM ANTENNA PRODUCTS (OF MINERAL WELLS, TX.) THE CONTRACTOR SHALL NOTIFY ANTENNA PRODUCTS OF THE LOCATION OF THE NEW INSTALLATION SO THAT SCE-2 SAFETY SLEEVES CAN BE REPLACED ONCE REPLACEMENT PARTS ARE AVAILABLE.
3. THE CONTRACTOR SHALL INSTALL ANTENNA BRACKET ASSEMBLIES (3 REQUIRED) AT HEIGHTS SHOWN PER DETAIL "I". HORIZONTAL ITEMS SHALL BE LEVEL AND VERTICAL ITEMS SHALL BE PLUMB.
4. TOWER SHALL BE ASSEMBLED WITH ALTERNATING ORANGE AND WHITE COLORED SECTIONS.
5. CONTRACTOR SHALL ERECT TOWER TO FULL 55' HEIGHT. ANTENNA ELEMENT LOCATIONS WILL BE ADJUSTED BY FAA INSTALLATION PERSONNEL TO ACHIEVE BEST SIGNAL GENERATION. CONTRACTOR SHOULD INCLUDE IN THE BID A SEPARATE TENATIVE COST ESTIMATE TO RETURN TO THE SITE AND SHORTEN THE TOWER TO 5"-0" MAXIMUM HEIGHT ABOVE CENTERLINE OF TOP ANTENNA ELEMENT. THIS WILL REQUIRE THE CONTRACTOR TO CUT ANTENNA TOWER STRUCTURE, LADDER, AND SAFETY CLIMB RAIL AND RELOCATE AIR TERMINAL, DOWN CONDUCTOR, AND OBSTRUCTION LIGHT TO TOP OF SHORTENED TOWER. TOWER LEGS SHALL BE CAPPED WITH PIPE CAPS WELDED OR THREADED IN PLACE. NON-CONTINUOUS CROSS-BRACING SHALL BE CUT AT ITS ORIGIN.
6. FIELD-DRILL 3/8" DIAM. HOLE IN ANTENNA MOUNTING FRAME, SCRAPE PAINT FROM BONDING AREA AND INSTALL GROUNDING LUG AND 6 AWG BARE COPPER GROUNDING WIRE. CONNECT 6 AWG BARE TO ANTENNA TOWER STRUCTURE USING GROUNDING CLAMP.
7. SEE THE OWNER-FURNISHED PROPERTY LIST FOR ITEMS PROVIDED BY THE DEKALB AIRPORT. CONFIRM TOWER COLORS AND ARRANGEMENT CONFORM TO FAA AC 70/7460-1K OBSTRUCTION MARKING AND LIGHTING.



PLAN



ELEVATION
LADDER ATTACHMENT TO ANTENNA TOWER
6 DETAIL SCALE: NONE



5 DETAIL SCALE: NONE

	DATE	DESCRIPTION	JCH	REDLINE DATE	APVD

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
GREAT LAKES REGION — CHICAGO, ILLINOIS

GLIDE SLOPE
ANTENNA TOWER ASSEMBLY DETAILS
RUNWAY 02

DEKALB — DEKALB TAYLOR MUNICIPAL AIRPORT — IL

REVIEWED BY	SUBMITTED BY	APPROVED BY
	PROJ. ENGR.	PLATFORM MGR.
	DATE TAD	DATE JCH
	DRAWN TAD	ISSUED BY CHICAGO NAS IMPLEMENTATION CENTER
	DRAWN EGS	DRAWING NO. DKB D-GS02-S01 REV

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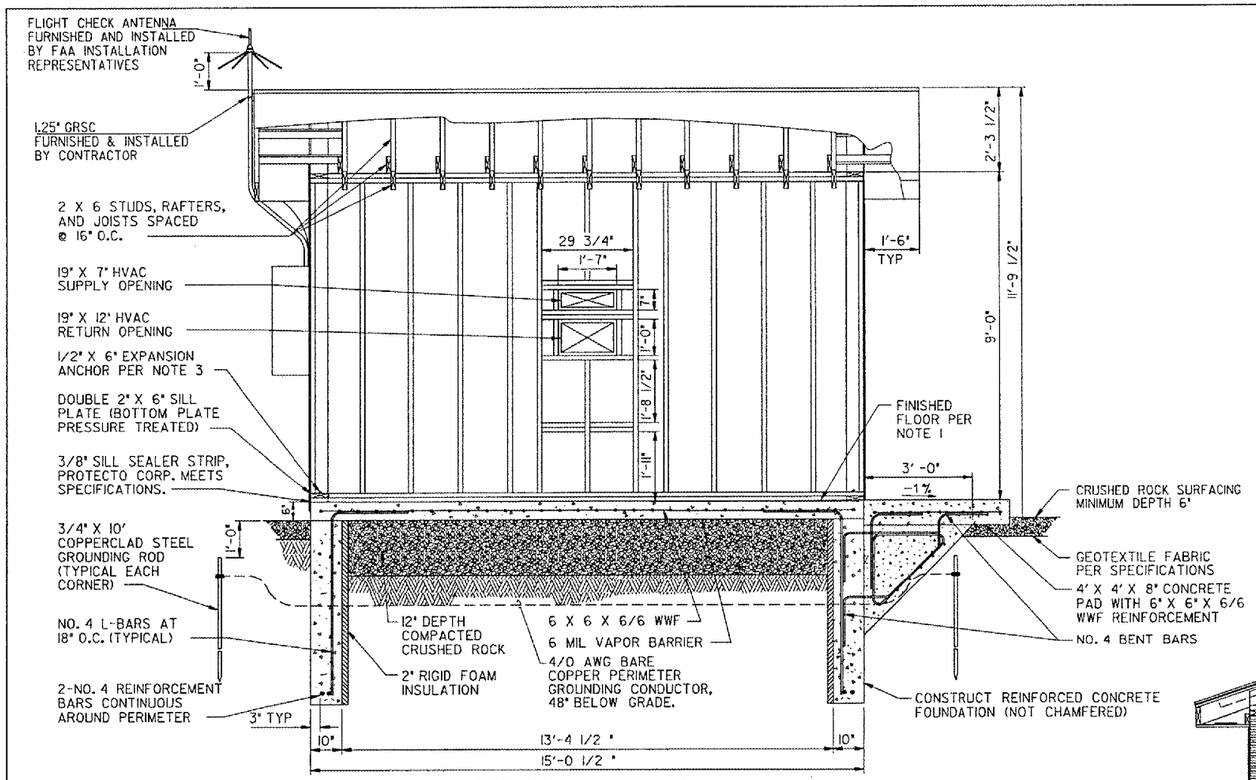
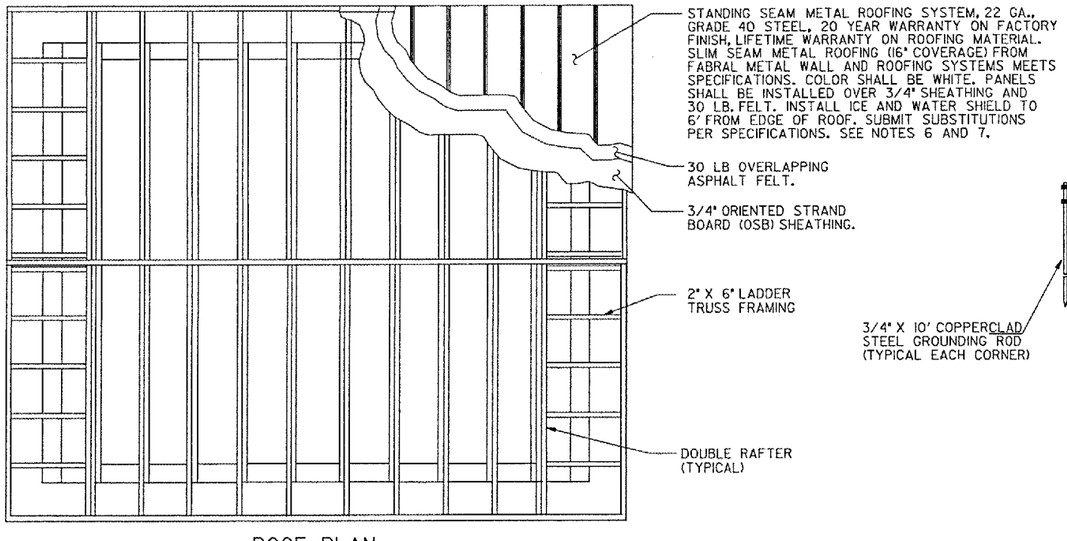


LEFT SIDE ELEVATION

2 0 2 4

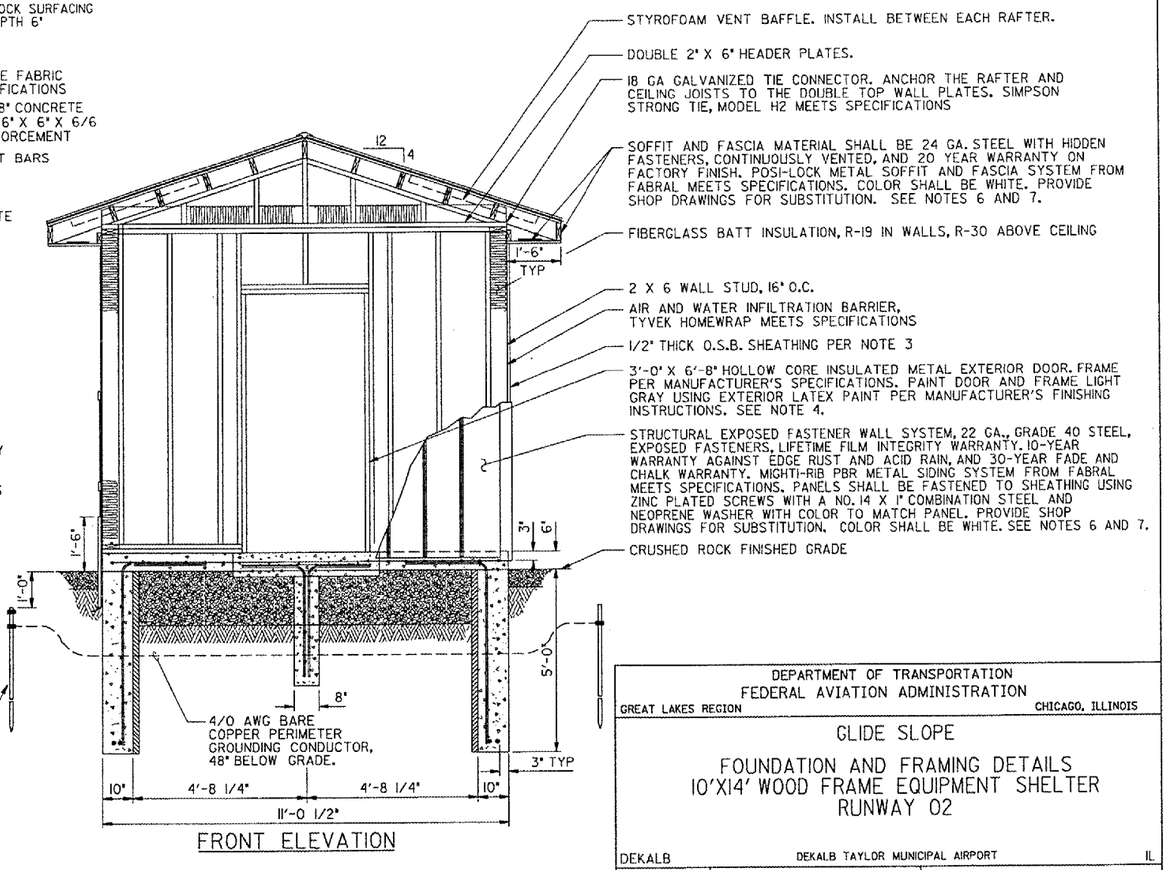
SCALE IN FEET



ROOF PLAN

NOTES:

1. 12" SQUARE X 1/8" THICK VINYL FLOOR TILE, ARMSTRONG IMPERIAL OR APPROVED EQUAL, SHALL BE INSTALLED OVER CONCRETE FLOOR SLAB. INSTALL COMPLEMENTING 4" VINYL BASE.
2. INTERIOR FACE OF PLYWOOD SHEATHING ON CEILING AND WALLS SHALL BE 3/4" THICK APA PANEL GRADE "B". SECURE PLYWOOD TO EACH STUD USING WOOD SCREWS SPACED 16" O.C. BUTT JOINTS SHALL BE BEVELED AND FILLED FLUSH WITH PAINTABLE CAULK. COVER CEILING-TO-WALL SEAMS WITH 1 X 2 WOOD TRIM. INTERIOR SURFACES SHALL BE SANDED SMOOTH AND PAINTED WHITE USING ONE OIL-BASED PRIMER COAT AND TWO COATS OF SEMI-GLOSS LATEX INTERIOR PAINT.
3. EXTERIOR WALLS SHALL BE SHEATHED WITH 1/2" ORIENTED STRAND BOARD (OSB) SHEATHING. SECURE PLYWOOD TO EACH STUD USING RING-SHANK NAILS SPACED 16" O.C. SECURE WALLS TO FOUNDATION USING 1/2" X 6" CONCRETE EXPANSION ANCHORS 3' O.C. MAX. AROUND PERIMETER.
4. SUBSTITUTIONS FOR BEST LOCK CORPORATION LOCK SETS WILL BE PERMITTED FOR LOCK SETS THAT ACCEPT BEST CORPORATION'S CORES.
5. PAINT DOOR AND FRAME LIGHT GRAY USING EXTERIOR LATEX PAINT. REFER TO DOOR MANUFACTURER'S FINISHING INSTRUCTIONS.
6. STANDING SEAM METAL ROOFING PANELS, SIDING PANELS, AND SOFFIT, FASCIA, AND TRIM SYSTEM SHALL BE FABRICATED BY ONE MANUFACTURER AS A COMPLETE SYSTEM WITH WARRANTY. MATERIAL SHALL BE PROVIDED BY THE MANUFACTURER WITH A DETAILED LIST OF MATERIAL AND AN INSTALLATION INSTRUCTION BOOK. SUBMIT SUBSTITUTIONS PER SPECIAL SPECIFICATIONS.
7. CONTRACTOR SHALL SEAL ALL PENETRATIONS THROUGH BUILDING WALLS WITH SILICONE SEALER.
8. LIGHTNING PROTECTION IS NOT REQUIRED FOR THIS SHELTER IF IT IS CONSTRUCTED WITHIN 25' OF GLIDE SLOPE ANTENNA TOWER DUE TO LIGHTNING PROTECTION COVERAGE PROVIDED BY THE ANTENNA TOWER'S AIR TERMINAL.
9. 2" RIGID FOAM INSULATION SHALL NOT BE USED AS FORMS FOR CONCRETE FOUNDATIONS.



FRONT ELEVATION

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
GREAT LAKES REGION — CHICAGO, ILLINOIS

GLIDE SLOPE

FOUNDATION AND FRAMING DETAILS
10'X14' WOOD FRAME EQUIPMENT SHELTER
RUNWAY 02

DEKALB — DEKALB TAYLOR MUNICIPAL AIRPORT — IL

REVIEWED BY	SUBMITTED BY	APPROVED BY
	PROJ. ENGR.	PLATFORM MGR.
	DATE TAD	DATE JCN
	DRAWN TAD	ISSUED BY CHICAGO NAS IMPLEMENTATION CENTER
	DRAWN EGS	DRAWING NO. DKB-D-GS02-A01 REV

DATE	DESCRIPTION	JCN	REDLINE DATE	APVD

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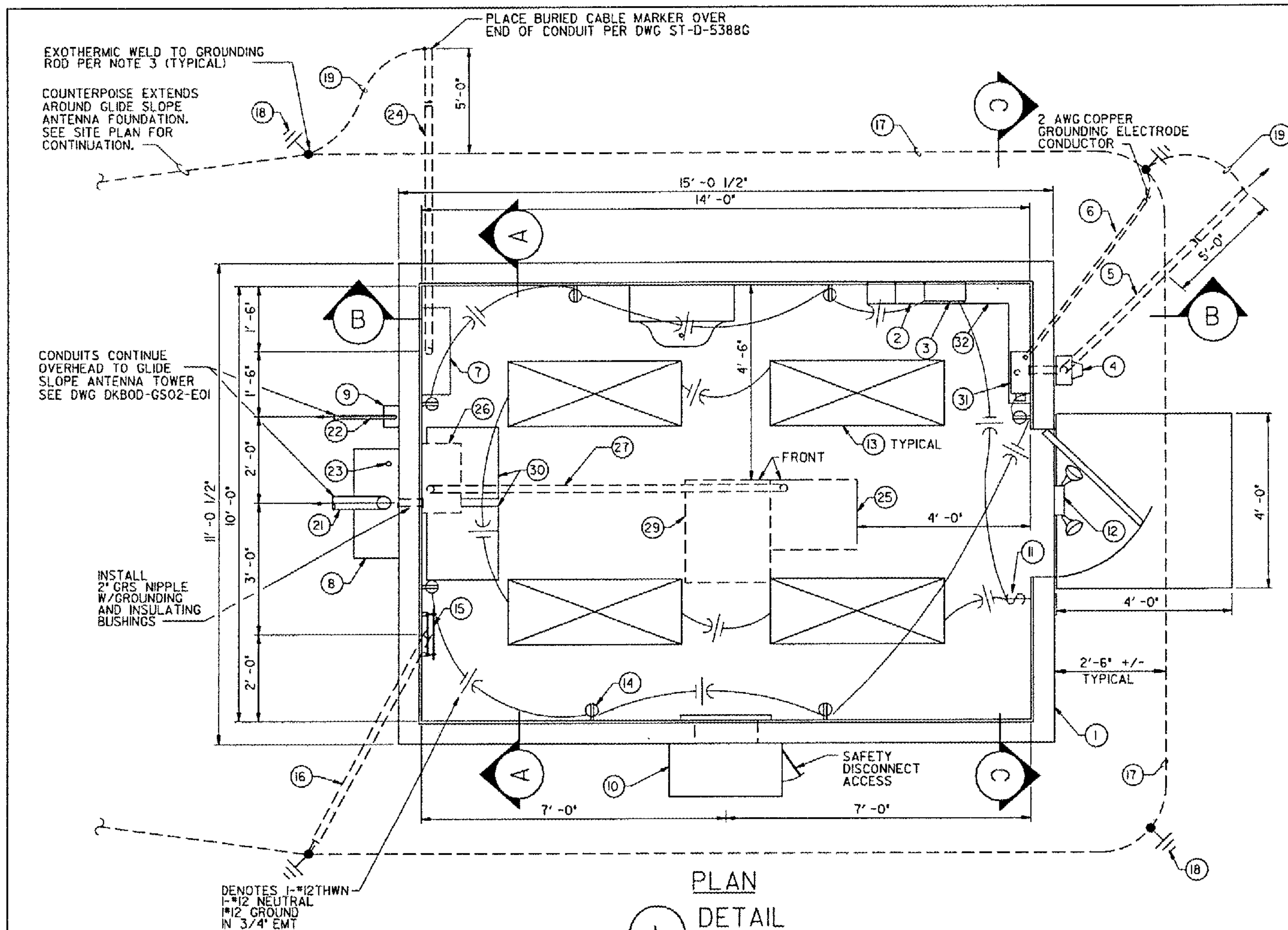
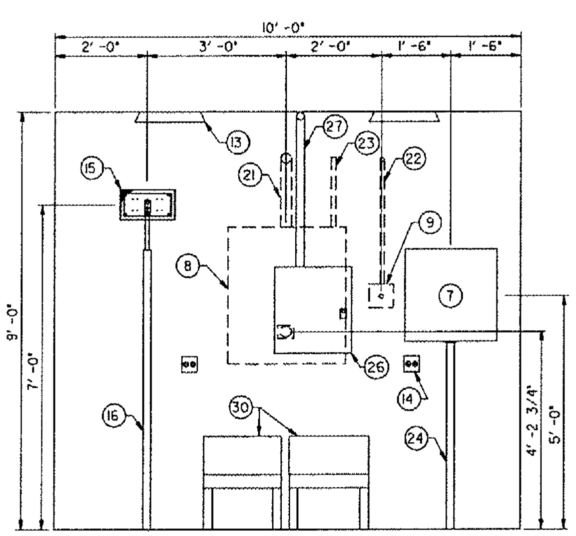
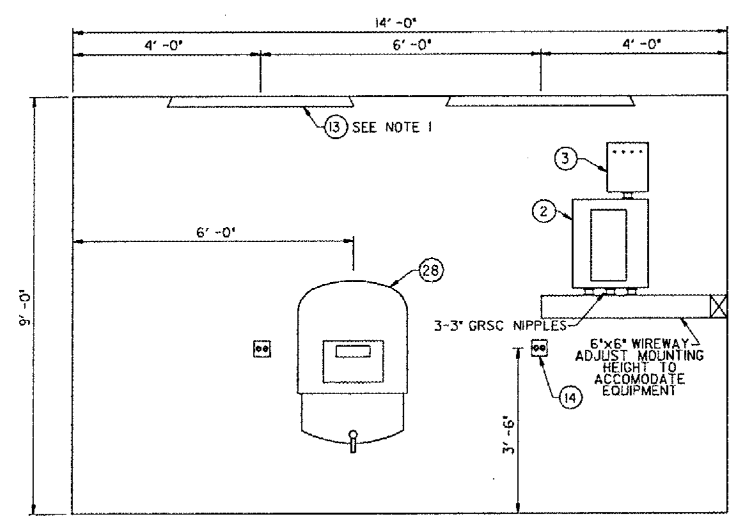


PLAN
DETAIL
(1)

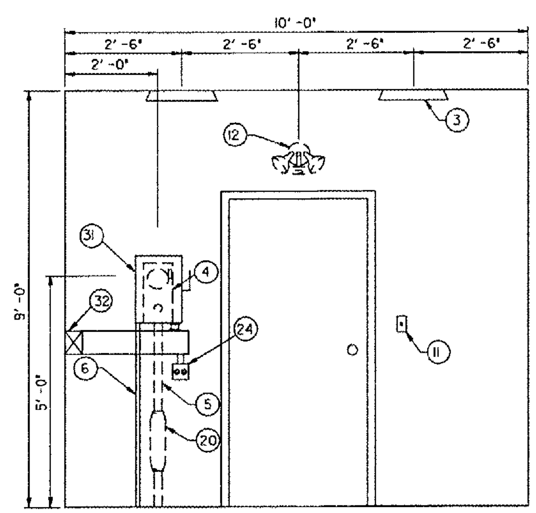
2 0 2 4
SCALE IN FEET



REAR WALL INTERIOR ELEVATION
(A) SECTION



RIGHT WALL INTERIOR ELEVATION
(B) SECTION



FRONT WALL INTERIOR ELEVATION
(C) SECTION

NUMBERED LEGEND:

(F&I = FURNISH & INSTALL, I = INSTALL,
BO = INSTALLED BY FAA INSTALLATION PERSONNEL

- F&I (1) REINFORCED CONCRETE FOUNDATION AND WOOD FRAME EQUIPMENT SHELTER
- F&I (2) POWER PANEL, SQUARE "D" CAT NO NQOD20M100CU IN NEMA 1 ENCLOSURE WITH BOLT-ON BREAKERS. SEE DRAWING DKB-D-GS02-E02 FOR BREAKER ASSIGNMENTS.
- F&I (3) AC SURGE ARRESTER, LIGHTING PROTECTION CORP. CAT. NO. LPC 2020-8U-G.
- F&I (4) ELECTRIC POWER METER. SEE SITE PLAN FOR POWER PROVISION DETAILS.
- F&I (5) THREE 2 AWG TYPE U.S.E. POWER CABLES IN 2" GALVANIZED RIGID STEEL CONDUIT. SEE SITE PLAN FOR POWER SOURCE LOCATION AND POWER PROVISION DETAILS.
- F&I (6) 1" SCHEDULE 40 PVC CONDUIT WITH 2 AWG BARE STRANDED COPPER GROUNDING ELECTRODE CONDUCTOR FROM SERVICE DISCONNECT GROUND BUS TO GROUND ROD.
- F&I (7) 24" X 24" X 8" CONTROL CABLE JUNCTION BOX, NEMA 1, HOFFMAN A24N24BLP WITH PANEL, HOFFMAN A-24N24MP MEETS SPECIFICATIONS.
- F&I (8) 36" x 30" x 12" RF JUNCTION BOX, NEMA 3R, HOFFMAN A36R3012HCR WITH PANEL, HOFFMAN A36P30 MEETS SPECIFICATIONS.
- F&I (9) 6" X 6" X 4" POWER JUNCTION BOX, NEMA 3R, HOFFMAN A6R64HCR WITH PANEL, HOFFMAN A-6N6P MEETS SPECIFICATIONS.
- F&I (10) HVAC THRU-WALL UNIT. 11,100 BTU A/C, 3.6 KW HEAT. BARD CAT. NO. WA121-A03EX4XXJ MEETS SPECIFICATIONS. PROVIDE SHOP DRAWINGS FOR SUBSTITUTIONS.
- F&I (11) LIGHT SWITCH PER NOTE 1.
- F&I (12) SECURITY FLOODLIGHT WITH DIE-CAST METAL LAMP COVERS, 75 W, 120V PAR-38 INCANDESCENT LAMPS (2), PHOTO AND MOTION CONTROLLED, ADJUSTABLE TIME AND SENSITIVITY SETTINGS, REGENT MODEL NO. SV275RW (WHITE FINISH) BY COOPER LIGHTING PRODUCTS MEETS SPECIFICATIONS.
- F&I (13) 4'-LONG 2-LAMP-TUBE FLUORESCENT LIGHT FIXTURE, SURFACE-MOUNTED, 120-VOLT, WITH WRAPAROUND ACRYLIC LENS ENCLOSURE AND TWO 48"-LONG, 32-WATT, T-8 FLUORESCENT LAMP TUBES, TYPE F32. HOLOPHANE MODEL NO. HW-S-M-4-D-S-H71-042-LP-1-1-RIF1 MEETS SPECIFICATIONS.
- F&I (14) DUPLEX RECEPTACLE PER NOTE 1.
- F&I (15) MAIN COPPER GROUNDING PLATE WITH PLASTIC COVER. SEE NOTE 4.
- F&I (16) 2" PVC CONDUIT WITH TWO 4/0 AWG THWN GROUNDING CONDUCTORS FROM MAIN GROUNDING PLATE. SEE NOTE 3.
- F&I (17) 4/0 AWG BARE COPPER COUNTERPOISE 4'-0" BELOW GRADE. SEE NOTE 3.
- F&I (18) 3/4" X 10' COPPERCLAD GROUNDING ROD.
- F&I (19) 6 AWG BARE COPPER GROUNDING CONDUCTOR BONDED TO BOTH ENDS OF GRS CONDUIT. SEE NOTE 3.
- F&I (20) EXPANSION COUPLING, 4" MIN TRAVEL. APPLETON EXPANSION COUPLINGS MEET SPECIFICATIONS
- F&I (21) 2 1/2" PVC CONDUIT TO GLIDE SLOPE ANTENNA TOWER WITH SIGNAL CABLES TO ANTENNAS.
- F&I (22) 1" GRS CONDUIT TO GLIDE SLOPE ANTENNA TOWER WITH POWER CONDUCTORS FOR OBSTRUCTION LIGHT AND ANTENNA HEATERS.
- F&I (23) 1 1/4" GALVANIZED RIGID STEEL CONDUIT FOR FLIGHT CHECK ANTENNA. CONDUIT SHALL EXTEND TO 12" ABOVE ROOF PEAK. SECURE CONDUIT TO SHELTER USING 2-HOLE STRAPS.
- F&I (24) 2" GRS CONDUIT FOR FUTURE USE. CAP END BELOW GRADE AND MARK LOCATION WITH A BURIED CABLE MARKER.
- I (25) GLIDE SLOPE ELECTRONIC SUBSYSTEM RACK.
- I (26) GLIDE SLOPE DISTRIBUTION UNIT AND COMBINING UNIT.
- F&I (27) 2" EMT CONDUIT.
- F&I (28) EYE WASH STATION, FEND-ALL NO. 6J-D83 OR EQUAL.
- BO (29) FIBER OPTICS EQUIPMENT RACK (FUTURE)
- I (30) FLOOR-MOUNTED BATTERY BOXES (2 REQUIRED).
- F&I (31) SERVICE DISCONNECT. LOCATE ON SHELTER INTERIOR WALL.
- F&I (32) 6"x6" WIREWAY.

NOTES:

1. LIGHT FIXTURES, POWER PANEL, SURGE ARRESTER, RECEPTACLES, AND LIGHT SWITCHES SHALL BE SURFACE MOUNTED. CONDUIT RUNS SHALL BE INSTALLED PLUMB OR HORIZONTAL WITH MINIMUM NUMBER OF BENDS.
2. EXTERIOR WALL PENETRATIONS SHALL BE SEALED WITH WATERPROOF SILICONE CAULK.
3. ALL GROUNDING CONDUCTORS AND GROUND RODS SHALL BE ATTACHED TO COUNTERPOISE USING EXOTHERMIC WELDS PER SPECIFICATIONS.
4. SEE DWG DKB-D-ILS/ALS02-E01 FOR GROUNDING PLATE INSTALLATION DETAILS.
5. FURNISH AND INSTALL TELEPHONE SERVICE TO SHELTER.

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
GREAT LAKES REGION — CHICAGO, ILLINOIS

GLIDE SLOPE

FLOOR PLAN AND INTERIOR ELEVATIONS
10' X 14' WOOD FRAME EQUIPMENT SHELTER
RUNWAY 02

DEKALB — DEKALB TAYLOR MUNICIPAL AIRPORT — IL

REVIEWED BY	SUBMITTED BY	APPROVED BY
	PROJ. ENGR.	PLATFORM MGR.

DATE	TAD	ISSUED BY CHICAGO NAS IMPLEMENTATION CENTER	DATE / JCH
DRAWN	TAD		DRAWING NO. DKB-D-GS02-A02
DRAWN	EGS		REV

DATE	DESCRIPTION	JCH	REDLINE DATE	APVD

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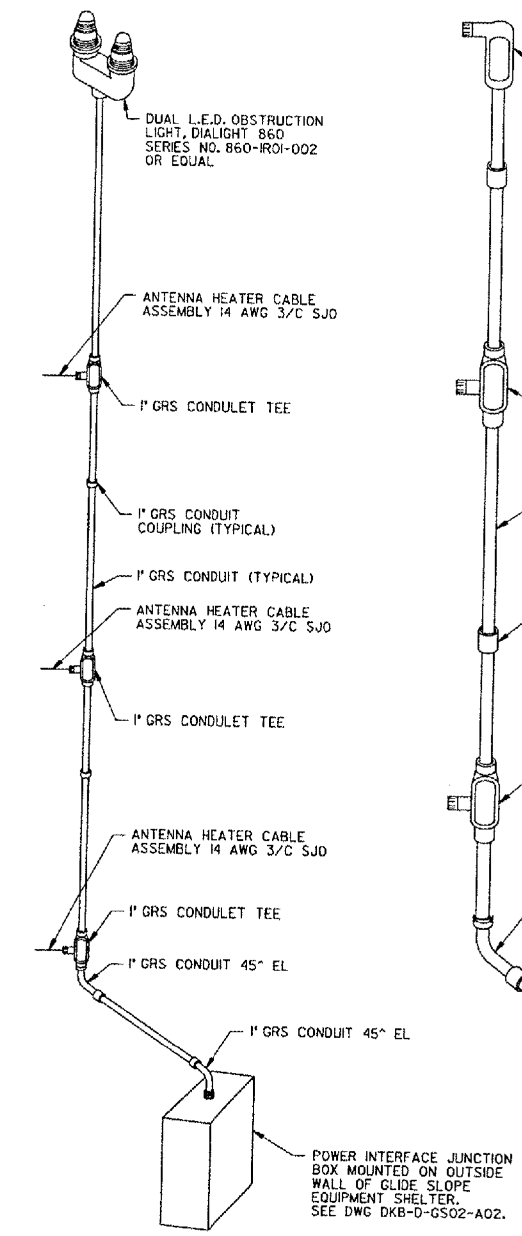
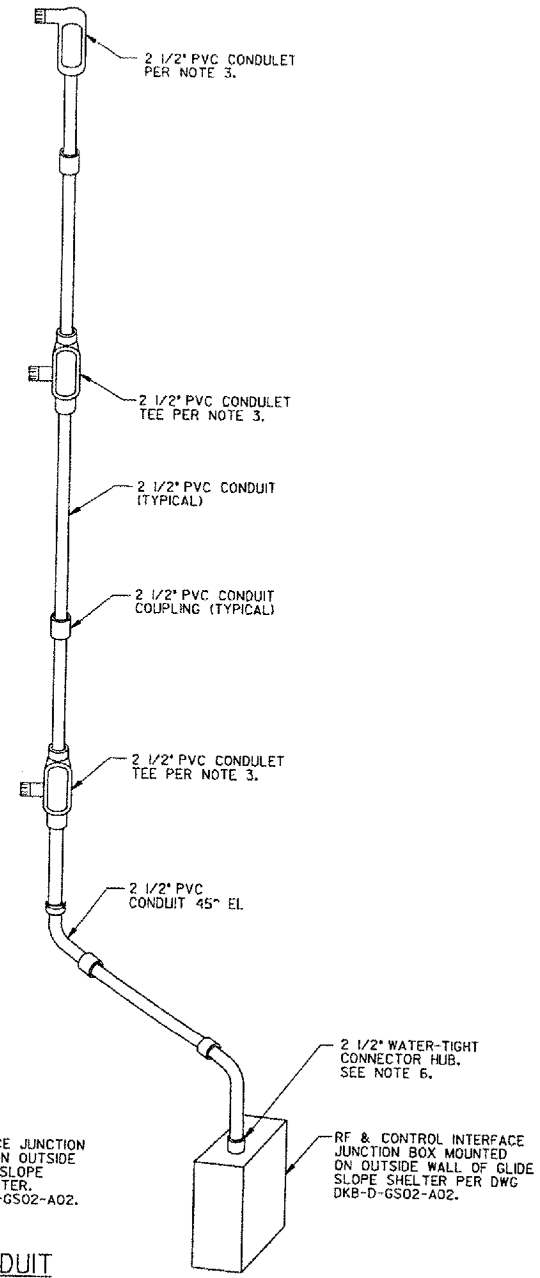
CONTRACT NO.



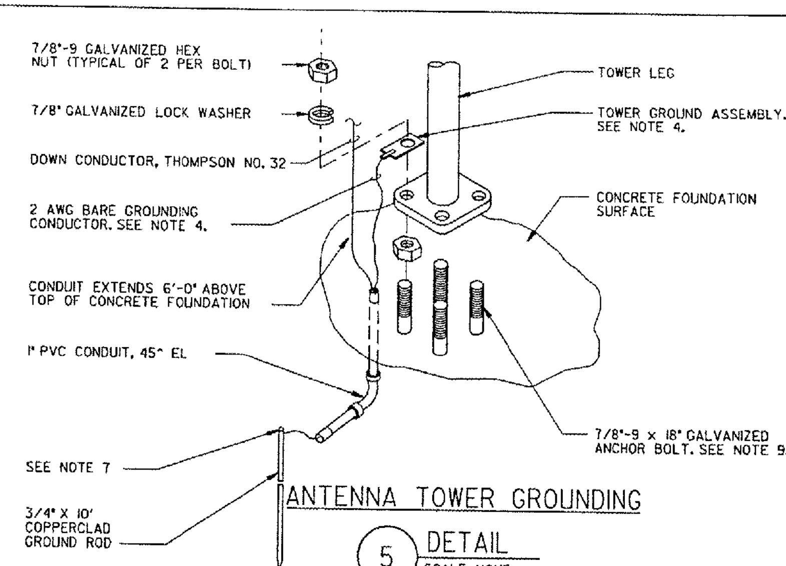
ANTENNA TOWER POWER CABLE CONDUIT

1 DETAIL
SCALE: NONE



ANTENNA TOWER RF CABLE CONDUIT

2 DETAIL
SCALE: NONE

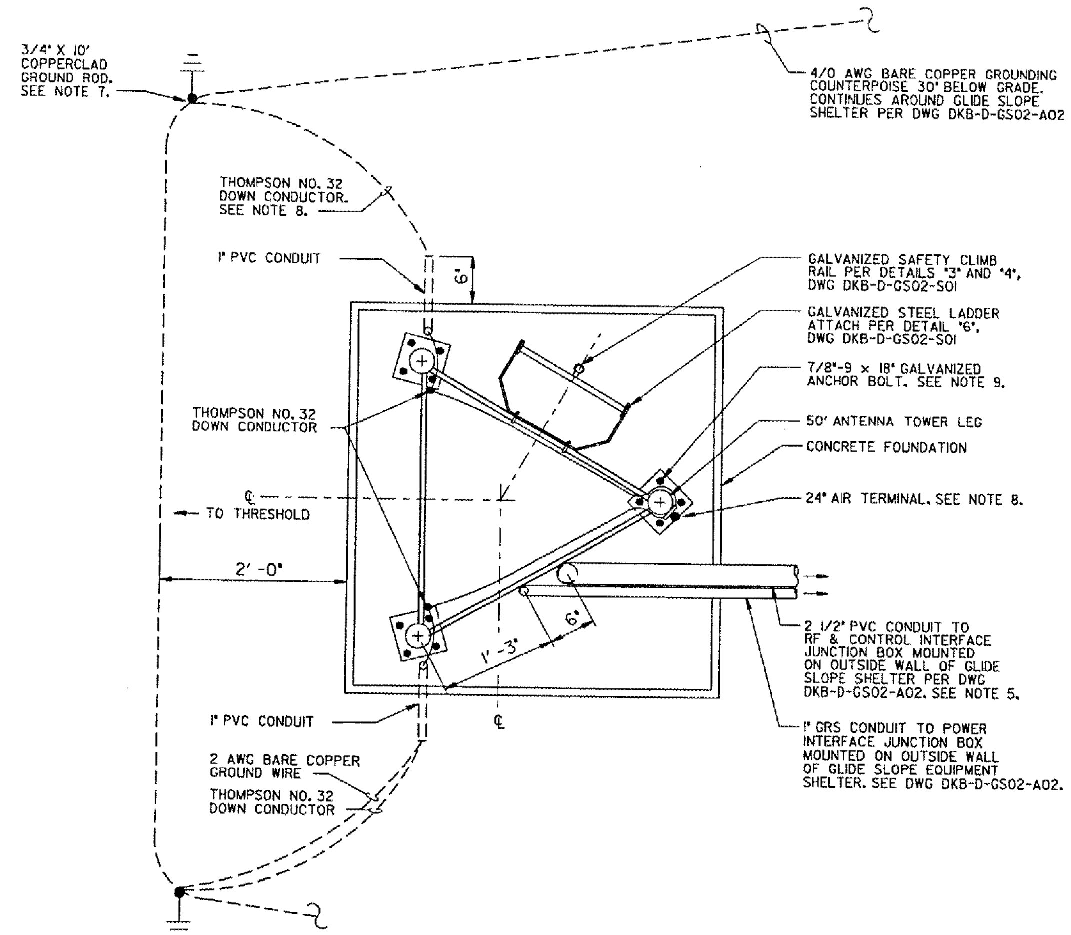


ANTENNA TOWER GROUNDING

5 DETAIL
SCALE: NONE

NOTES:

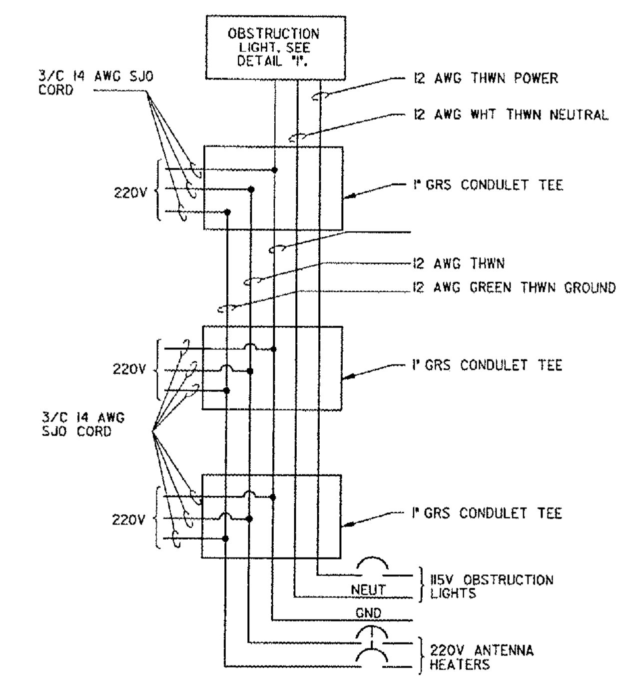
1. THE OBSTRUCTION LIGHT SHALL BE OPERATIONAL BEFORE DUSK OF THE FIRST DAY THAT THE ANTENNA TOWER IS ERECTED.
2. CONDUITS SHALL BE CLAMPED TO ANTENNA TOWER STRUCTURAL MEMBERS ON TOWER FACE OPPOSITE FACE WITH LADDER AT 5'-0" O.C. MAX.
3. 1" RIGID GALVANIZED STEEL CONDUIT AND 2 1/2" PVC CONDUIT SHALL BE INSTALLED PER DETAIL "6". A 2 1/2" PVC CONDULET SHALL BE INSTALLED ON THE 2 1/2" PVC CONDUIT FOR EACH GLIDE SLOPE ANTENNA, CENTERED AT THE ANTENNA'S HEIGHT ABOVE GRADE. THE TEE OF EACH CONDULET SHALL BE ORIENTED TOWARD THE ANTENNA. INSTALL REDUCING BUSHINGS IN THE TEE TO FACILITATE INSTALLATION OF A 1" CONDUIT.
4. TOWER GROUND ASSEMBLY IS PROVIDED WITH A 6 AWG BARE COPPER WIRE ATTACHED. THE 6 AWG BARE COPPER SHALL BE REMOVED AND REPLACED WITH A 2 AWG BARE COPPER WIRE. SEE NOTE 7.
5. ANTENNA RF CABLES WILL BE FURNISHED AND INSTALLED BY FAA INSTALLATION PERSONNEL.
6. THE CONDUIT SHALL ENTER THE TOP OF THE RF AND CONTROL INTERFACE JUNCTION BOX AS CLOSE TO THE SIDE AS POSSIBLE, CENTERED 4" FROM THE BACK.
7. ALL CONNECTIONS TO GROUNDING RODS SHALL BE MADE USING EXOTHERMIC WELDS PER SPECIFICATIONS.
8. ANTENNA TOWER LIGHTNING PROTECTION SHALL BE INSTALLED PER THE REQUIREMENTS OF NFPA 780. CONTRACTOR SHALL INSTALL A 48" LONG AIR TERMINAL, THOMPSON NO. 661BT, AND THOMPSON NO. 32 DOWN CONDUCTOR ON THE INSIDE OF TWO TOWER LEGS, SECURED TO THE TOWER USING THOMPSON CLAMPS @ 3' O.C. MAX. DOWN CONDUCTORS SHALL TERMINATE AT SEPARATE GROUNDING RODS. SEE NOTE 7. SEE SHEET 44 "ELECTRICAL DETAILS 2" FOR AIR TERMINAL MOUNTING DETAIL.
9. REFER TO GOVERNMENT-FURNISHED PROPERTY LIST (GFPL) FOR ITEMS FURNISHED BY THE FAA.



ANTENNA TOWER LIGHTNING PROTECTION

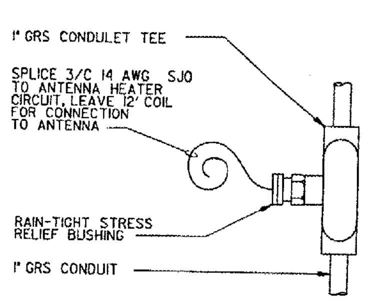
6 DETAIL

0 1 2
SCALE IN FEET



ANTENNA HEATER AND OBSTRUCTION LIGHT WIRING

7 DETAIL
SCALE: NONE



3 DETAIL
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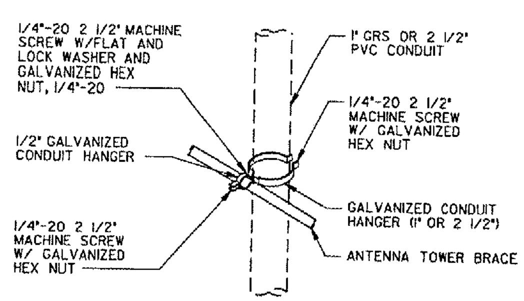

TYP CONDUIT MOUNTING

4 DETAIL
SCALE: NONE

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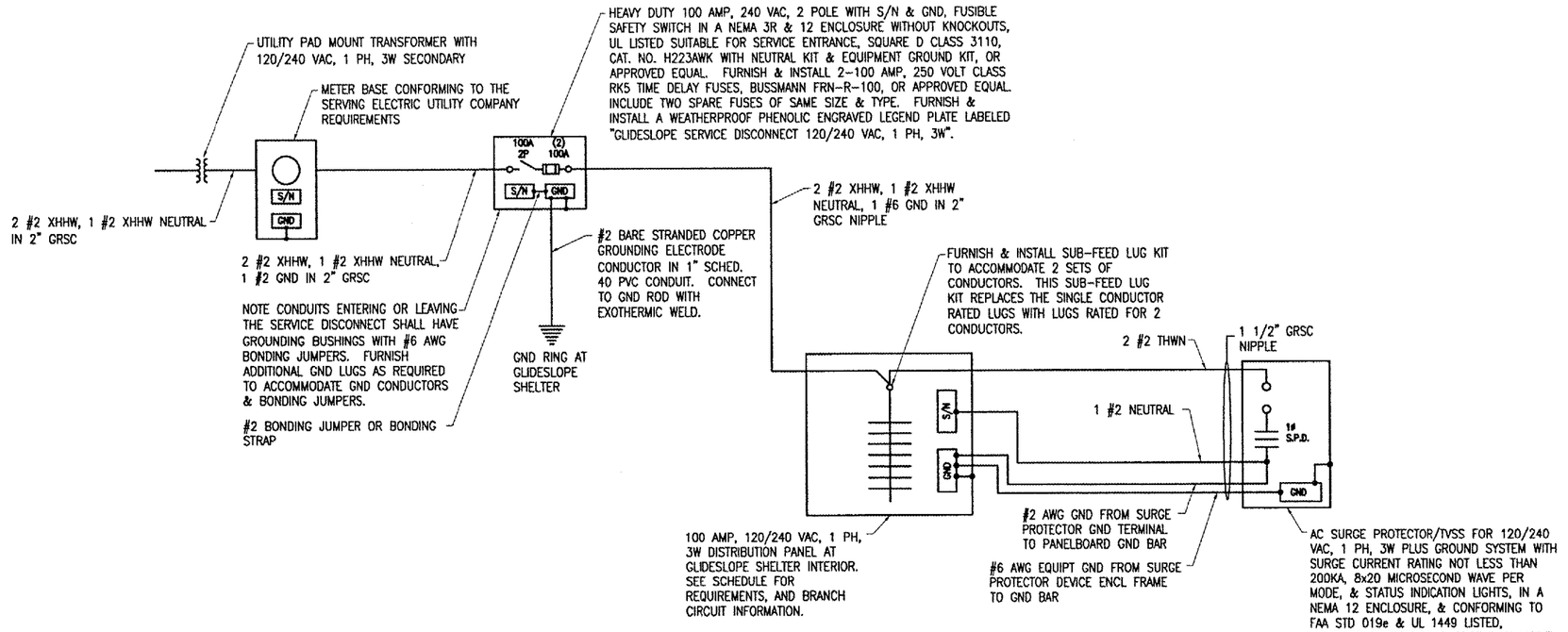
DATE	DESCRIPTION	JCN	REDLINE DATE	APVD

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
GREAT LAKES REGION — CHICAGO, ILLINOIS

GLIDE SLOPE
ANTENNA TOWER ELECTRICAL
AND GROUNDING DETAILS
RUNWAY 02

DEKALB — DEKALB TAYLOR MUNICIPAL AIRPORT — IL

REVIEWED BY	SUBMITTED BY		APPROVED BY
	PROJ. ENGR.		PLATFORM MGR.
	DATE TAD	ISSUED BY CHICAGO NAS IMPLEMENTATION CENTER	DATE / JCN
	DRAWN TAD		DRAWING NO. DKB-D-GS02-E01
	DRAWN EGS		REV



NOTES

1. ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN CONFORMANCE WITH NFPA 70 (NEC MOST CURRENT ISSUE IN FORCE), THE RESPECTIVE EQUIPMENT MANUFACTURER'S DIRECTIONS AND ALL OTHER APPLICABLE LOCAL CODES, LAWS, ORDINANCES AND REQUIREMENTS IN FORCE. ANY INSTALLATIONS WHICH VOID THE U.L. LISTING, ETL LISTING, (OR OTHER THIRD PARTY LISTING) AND/OR THE MANUFACTURER'S WARRANTY OF A DEVICE WILL NOT BE PERMITTED.
2. CONTRACTOR SHALL COORDINATE ELECTRIC SERVICE WITH THE SERVING ELECTRIC UTILITY & THE AIRPORT MANAGER. THE SERVING ELECTRIC UTILITY COMPANY IS COMMONWEALTH EDISON COMPANY, 17028 SOUTH ROUTE 23, PO BOX 646, DEKALB, ILLINOIS 60115, ATTN. MR. JIM ACKERT, PHONE 815-748-2271, FAX: 815-748-2267. THE AIRPORT MANAGER IS MR. TOM CLEVELAND, CITY OF DEKALB AIRPORT DIVISION, 3232 PLEASANT STREET, DEKALB, IL 60115, PHONE: 815-748-2020, FAX 815-748-2022.
3. SURGE ARRESTER WIRING SHALL BE AS SHORT & AS STRAIGHT AS POSSIBLE BETWEEN THE PANELBOARD & THE SURGE ARRESTER PER FAA STD 019e, PART 4.2.2.2, 2005 NEC 285 & MANUFACTURER'S RECOMMENDATIONS. FOR TOP FEED MAIN LUG PANELBOARD THE SURGE PROTECTIVE DEVICE SHALL BE MOUNTED DIRECTLY ABOVE THE PANELBOARD. FOR BOTTOM FEED MAIN LUG PANELBOARD THE SURGE PROTECTIVE DEVICE SHALL BE MOUNTED DIRECTLY BELOW THE PANELBOARD.
4. PROVIDE DUCT SEAL IN CONDUIT NIPPLE BETWEEN PANELBOARD & SURGE PROTECTIVE DEVICE.

RUNWAY 2 GLIDESLOPE SHELTER
ELECTRICAL ONE LINE DIAGRAM

RUNWAY 2 GLIDE SLOPE PANEL SCHEDULE

CKT #	DUTY	SIZE		SIZE	DUTY	CKT #
1	LIGHTS	15A 1P		20A 2P	HVAC UNIT	2
3	CONVENIENCE OUTLETS	20A 1P		----		4
5	CONVENIENCE OUTLETS	20A 1P		20A 1P	GLIDE SLOPE RACK OUTLETS	6
7	GLIDE SLOPE RACK	20A 1P		15A 2P	ANTENNA HEATERS	8
9	GLIDE SLOPE RACK	20A 1P		----		10
11	SPARE	20A 1P		15A 1P	OBSTRUCTION LIGHTS	12
13	SPARE	20A 1P		20A 2P	SPARE	14
15	SPARE	20A 1P		----		16
17	BLANK				BLANK	18
19	BLANK				BLANK	20

GND S/N GND

100 AMP, 120/240 VAC, 1 PHASE, 3 WIRE, 20 CIRCUIT PANELBOARD WITH MAIN LUGS SUITABLE FOR TWO SETS OF CONDUCTORS, IN A NEMA 1 ENCLOSURE. INCLUDE SEPARATE GROUND BAR KITS. ALL CIRCUIT BREAKERS SHALL BE BOLT-ON TYPE WITH 10,000 AIC AT 120/240 VAC. PANELBOARD SHALL BE SQUARE D COMPANY CAT. NO. NQOD20L100CU, WITH NQOD100SFL SUB-FEED LUG KIT, OR APPROVED EQUAL.

NOTES

1. PANELBOARD BUS SHALL BE COPPER. NEUTRAL BUS SHALL BE COPPER. EQUIPMENT GROUND BARS SHALL BE COPPER.
2. INCLUDE ENGRAVED PHENOLIC LEGEND PLATE LABELED "RWY 2 GLIDESLOPE PANEL, 120/240 VAC, 1 PHASE, 3 WIRE".
3. CONTRACTOR SHALL CONFIRM POWER REQUIREMENTS WITH THE RESPECTIVE GLIDESLOPE MANUFACTURER & OTHER ASSOCIATED EQUIPMENT NAMEPLATE DATA AND ADJUST CIRCUIT BREAKER SIZES TO CONFORM WITH NEC & MANUFACTURER'S RECOMMENDATIONS WHERE APPLICABLE.
4. 15 AMP & 20 AMP, BRANCH CIRCUITS SHALL USE #12 AWG THWN COPPER CONDUCTORS (MINIMUM). FOR 20 AMP BRANCH CIRCUITS NO MORE THAN 9 #12 AWG CURRENT CARRYING CONDUCTORS SHALL BE INSTALLED IN THE SAME RACEWAY. ADJUST/INCREASE CABLE SIZES WHERE MORE THAN 3 CURRENT CARRYING CONDUCTORS ARE INSTALLED IN A SINGLE RACEWAY, PER THE REQUIREMENTS OF NEC 310.15(B)(2).
5. BRANCH CIRCUITS SHALL INCLUDE EQUIPMENT GROUND WIRES.
6. 120/240 VAC BRANCH CIRCUIT CONDUCTORS SHALL BE COLOR CODED PHASE A - BLACK, PHASE B - RED, NEUTRAL - WHITE, GROUND - GREEN.

DATE	REVISION	BY

DEKALB TAYLOR MUNICIPAL AIRPORT
IL. PROJ.: DKB-3225 A.I.P. PROJ.: 3-17-0139-B37

HANSON PROJECT No. 803-06ELEC
Filename E-601.DWG
Scale NONE
Date 04/20/07

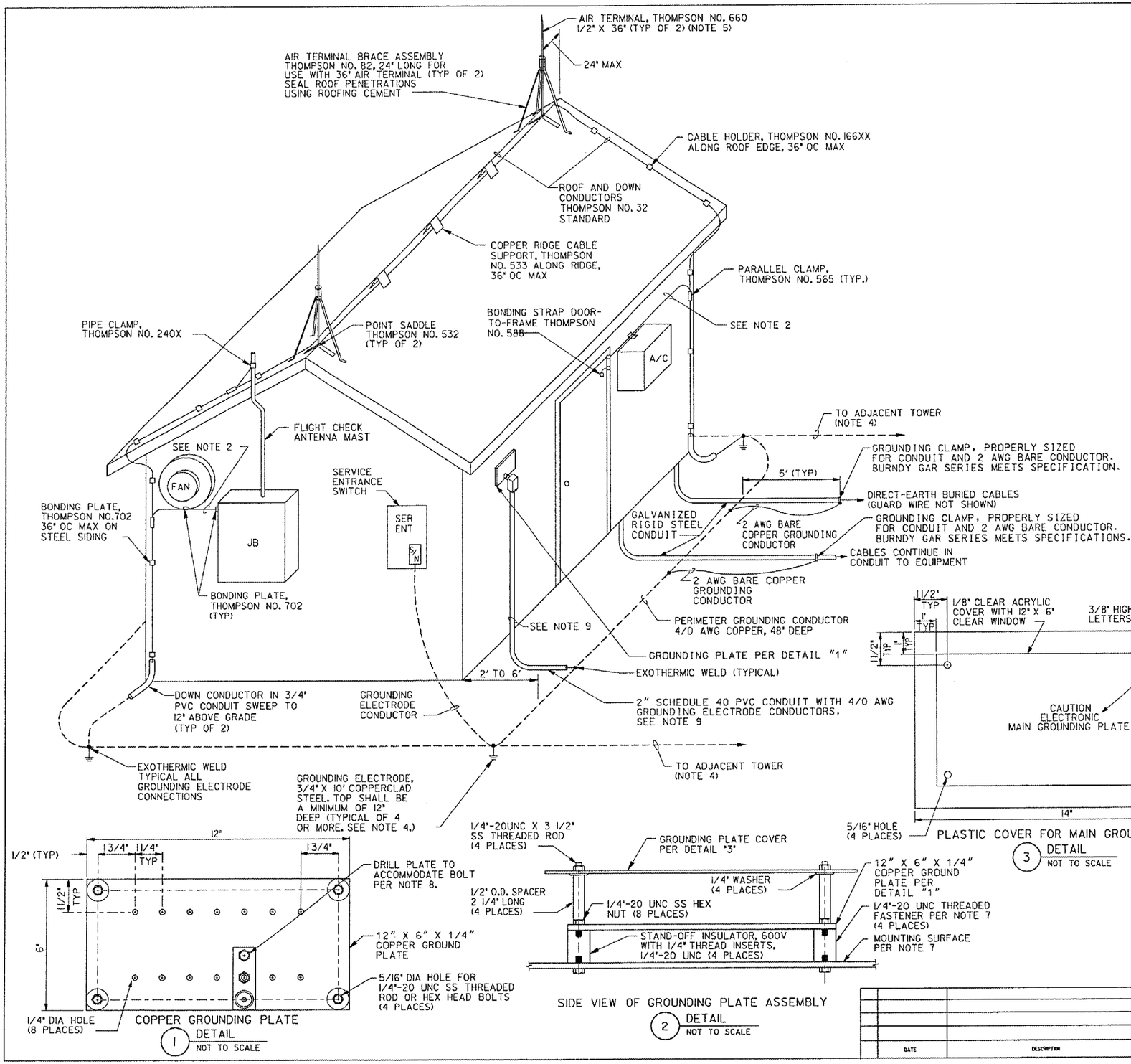
LAYOUT	KNL	03/14/07
DRAWN	MV	03/15/07
REVIEWED	CAH	03/29/07

HANSON
Hanson Professional Services Inc.
525 South Sixth Street
Springfield, Illinois 62703-2886
Offices Nationwide

INSTALL MALSR & GLIDE SLOPE

GLIDE SLOPE ELECTRICAL ONE LINE, RUNWAY 02
DKB-D-GS02-E02

CONTRACT NO.

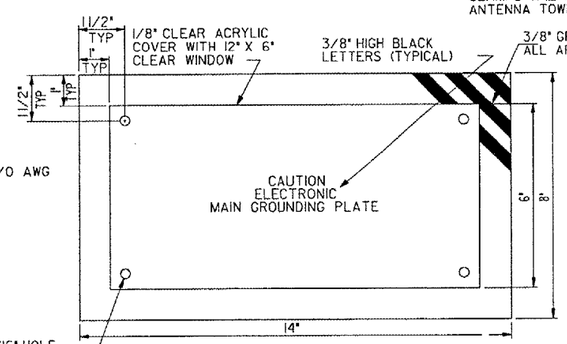


NOTES:

1. ALL CLAMPS AND BONDING DEVICES SHALL BE BRONZE. ALL CABLES AND STRAPS SHALL BE COPPER, AND ALL BOLTS, SCREWS, AND FASTENING HARDWARE SHALL BE BRONZE OR BRASS UNLESS OTHERWISE SHOWN.
2. BOND A/C, VENT FAN, HOOD, FLIGHT CHECK ANTENNA MAST, DOOR FRAME, JUNCTION BOXES, AND ANY MISC EXTERIOR METAL OBJECTS TO DOWN CONDUCTORS WITH MIN 6 AWG BARE - THOMPSON NO.14X OR NO. 509X.
3. NO CONDUCTOR SHALL BE BENT TO LESS THAN AN 8" RADIUS NOR SHALL BE BENT TO LESS THAN A 90^ ANGLE.
4. WHERE TOWERS OR MASTS SUCH AS GLIDE SLOPE, MIDDLE MARKER, OUTER MARKER, OR FAR FIELD MONITOR TOWERS OR MASTS ARE LOCATED WITHIN 30 FEET OF THE NEAREST PART OF THE BUILDING, THE PERIMETER 4/0 AWG GROUNDING CONDUCTOR SHALL EXTEND AROUND THE ASSOCIATED TOWER OR MAST AND CONNECT TO TWO ADDITIONAL GROUNDING ELECTRODES PLACED ON EITHER SIDE OF THE ASSOCIATED STRUCTURE. ASSOCIATED TOWERS OR MASTS LOCATED FARTHER THAN 30 FEET FROM THE BUILDING SHALL HAVE THEIR OWN PERIMETER GROUNDING SYSTEM CONSISTING OF FOUR GROUNDING ELECTRODES AND SURROUNDING 4/0 AWG COUNTERPOISE. THE SEPARATE PERIMETER GROUNDING SYSTEM SHALL BE CONNECTED TO THE BUILDING SYSTEM BY A BARE CONDUCTOR OF MINIMUM 4/0 AWG SIZE.
5. BUILDINGS WITH FLAT ROOFS REQUIRE A THOMPSON NO. 660LA AIR TERMINAL ON NO. 688F-4 ADHESIVE BASE AND NO. 82 TRIPOD BRACE WITH ADHESIVE FEET AT EACH CORNER AND A PERIMETER ROOF CONDUCTOR (THOMPSON NO. 32) CONNECTING ALL TERMINALS IN PLACE OF RIDGE TERMINALS AND CONDUCTOR AS SHOWN.
6. GROUNDING BUSHINGS SHALL BE INSTALLED AT EACH END OF METALLIC CONDUITS. A NO. 6 BARE COPPER GROUNDING CONDUCTOR SHALL BE ROUTED INSIDE CONDUIT AND SHALL BE BONDED TO EACH GROUNDING BUSHING. CONNECT CONDUCTOR TO A GROUNDING ROD USING AN EXOTHERMIC WELD.
7. THE STAND-OFF INSULATORS SHALL BE SECURED TO THE WALL USING A PAINTED PLYWOOD PANEL SHIMMED OUT FROM THE WALL, GALVANIZED CHANNEL OR METAL MOUNTING BRACKET SCREWED TO THE WALL, OR AS SHOWN ON THE EQUIPMENT SHELTER DRAWING. THE FASTENERS SHALL BE OF SUFFICIENT LENGTH TO PASS THROUGH THE MOUNTING CHANNEL, BRACKET, OR OTHER MOUNTING BODY (INCLUDING WASHERS OR OTHER SHIMS), AND BE SNUG WHEN FULLY ENGAGED IN THE STAND-OFF INSULATOR.
8. TWO-BOLT CONNECTORS WITH SILICON BRONZE 3/8"-16UNC X 11/2" HEX HEAD BOLT, NUT, AND LOCK WASHER ARE REQUIRED FOR ALL CONDUCTORS TO BE CONNECTED TO THE GROUNDING PLATES. ONE-BOLT CONNECTORS ARE NOT ACCEPTABLE. NOTE THAT ONLY ONE OF THE HOLES REQUIRED FOR INSTALLING EACH 2-BOLT CONNECTOR IS SPECIFIED IN DETAIL "1". THE INSTALLER OF THE CONNECTOR SHALL DRILL THE SECOND HOLE TO MATCH THE BOLT PATTERN OF THE SELECTED CONNECTOR.
9. CONDUIT SHALL BE INSTALLED ON THE OUTSIDE WALL OF EXISTING BUILDINGS. FOR NEW SHELTER CONSTRUCTION, THE CONDUIT SHALL BE INSTALLED ON THE INSIDE WALL AND ROUTED THROUGH THE FLOOR.
10. AIR TERMINALS, ROOF AND DOWN CONDUCTORS, LIGHTNING PROTECTION BONDING CONDUCTORS, BONDING PLATES, BONDING STRAPS, AND PIPE CLAMPS ARE NOT REQUIRED FOR A GLIDE SLOPE FACILITY HAVING AN ANTENNA TOWER.

COPPER GROUNDING PLATE DETAIL 1 — NOT TO SCALE

SIDE VIEW OF GROUNDING PLATE ASSEMBLY — DETAIL 2 — NOT TO SCALE



PLASTIC COVER FOR MAIN GROUND PLATE — DETAIL 3 — NOT TO SCALE

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
GREAT LAKES REGION — CHICAGO, ILLINOIS

ILS/ALS EQUIPMENT SHELTERS

LIGHTING PROTECTION AND ELECTRONIC GROUNDING PLATE DETAILS

DEKALB — DEKALB TAYLOR MUNICIPAL AIRPORT — IL

REVIEWED BY	SUBMITTED BY	APPROVED BY
	PROJ. ENGR.	PLATFORM MGR.
	DATE TAD — DRAWN TAD — DRAWN EGS	ISSUED BY CHICAGO NAS IMPLEMENTATION CENTER
	DATE JCN	DRAWING NO. DKB-D-ILS/ALS02-E01 REV

DATE	DESCRIPTION	JCN	REDLINE DATE	APVD

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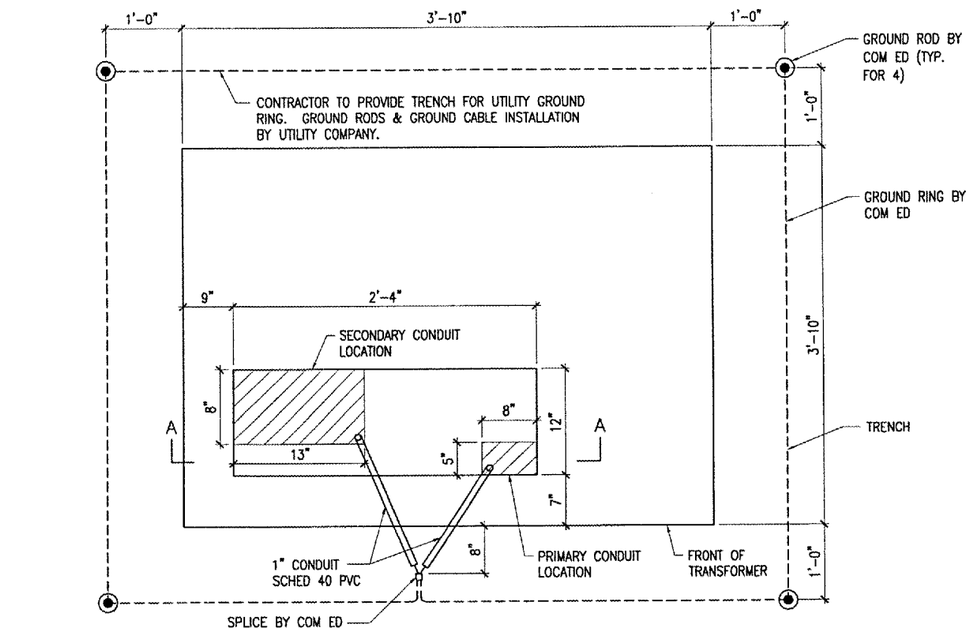

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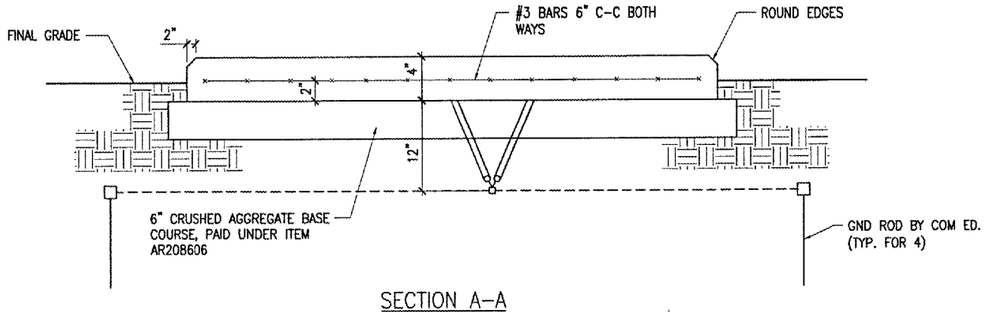

SECTION A-A

CONCRETE UTILITY TRANSFORMER PAD

NOTES:

1. TRANSFORMER PAD SHALL CONFORM TO THE SERVING ELECTRIC UTILITY COMPANY'S REQUIREMENTS. REFER TO EXELON SYSTEM STANDARDS C5288 "1-PH COMPT TR PAD-ESS/RSS 167 KVA MAXIMUM CAPACITY" AND C5285 "ESS INSTALLATION REQUIREMENTS USING COMPARTMENTAL TRANSFORMERS". CONTRACTOR SHALL CONFIRM TRANSFORMER PAD REQUIREMENTS WITH THE SERVING ELECTRIC UTILITY COMPANY AND FURNISH & INSTALL A PAD CONFORMING TO THOSE REQUIREMENTS.
2. UTILITY CONTACT IS MR. JIM ACKERT, COMMONWEALTH EDISON COMPANY, 17028 SOUTH STATE ROUTE 23, DEKALB, ILLINOIS 60115, PHONE: 815-748-2271, CELL PHONE: 815-409-6175, FAX: 815-748-2267, EMAIL: james.ackert@exeloncorp.com.
3. TRANSFORMER PAD AND ALL ASSOCIATED WORK SHALL BE PAID FOR UNDER THE RESPECTIVE SHELTER PAY ITEM (AR127431 10' x 12' SHELTER BUILDING AND AR127432 10' x 14' SHELTER BUILDING).
4. CONCRETE PAD MAY BE CAST IN PLACE OR PRECAST. COM ED APPROVED SUPPLIERS OF PRE-CAST PADS INCLUDE THE FOLLOWING:

A.	ELLER & WILLEY BLOCK CO. PALMYRA ROAD DIXON, IL. 61021	PHONE FAX	815-284-7761 815-284-9888
B.	CRAFT CONCRETE PRODUCTS, IN.C 134 SOUTH HIGHWAY 14 CARY, IL. 60013	PHONE	847-639-7411
C.	UNIT STEP COMPANY, INC. 1515 CHANNAHON ROAD (RT. 6) JOILET, IL. 60436	PHONE	815-744-1263
D.	UTILITY CONCRETE PRODUCTS CO. 1801 N. VAN DYKE ROAD PLAINFIELD, IL. 60544	PHONE	815-436-7880 630-355-3552
E.	WELCH BROS., INC.		
	OFFICE 105 ST. CHARLES ST. ELGIN, IL. 60120	PHONE	847-741-6134
	PLANTS 3402 NORTHWEST HWY. CARY, IL. 60013	PHONE	847-639-6134
	1000 TOWNHALL RD. BELVIDERE, IL. 61008	PHONE	815-547-3000

5. TRANSFORMER SHALL PROVIDE 120/240 VAC, 1 PHASE, 3 WIRE SECONDARY SERVICE.
6. CONTRACTOR SHALL COORDINATE NEW ELECTRIC SERVICES WITH THE SERVING ELECTRIC UTILITY AND THE AIRPORT MANAGER; MR. TOM CLEVELAND, CITY OF DEKALB-AIRPORT DIVISION, 3232 PLEASANT STREET, DEKALB, ILLINOIS 60115, PHONE: 815-748-2020, CELL PHONE: 815-739-3100, FAX: 815-748-2022, EMAIL: tcleveland@cityofdekalb.com
7. COM ED WILL PROVIDE AND INSTALL THE GROUND WIRE AND GRID. CONTRACTOR SHALL FURNISH AND INSTALL TRANSFORMER FOUNDATION, 1 INCH SCHED 40 PVC CONDUITS, AND TRENCH FOR COM ED GROUND WIRE.
8. CONTRACTOR SHALL FURNISH, INSTALL & COORDINATE PRIMARY CONDUIT INSTALLATION INTO THE TRANSFORMER PAD. PRIMARY UTILITY SERVICE CONDUCTORS WILL BE FURNISHED & INSTALLED BY THE SERVING UTILITY CO. CONTRACTOR SHALL FURNISH, INSTALL, & COORDINATE SECONDARY SERVICE CONDUCTORS AND CONDUIT INTO THE TRANSFORMER PAD.
9. GRADE AWAY FROM TRANSFORMER SUCH THAT FINAL GRADE WILL BE WELL DRAINED AT ALL TIMES.
10. SEE RESPECTIVE SITE PLANS FOR PROPOSED LOCATIONS OF UTILITY TRANSFORMERS.
11. TRANSFORMERS SHALL NOT BE LOCATED WITHIN THE GLIDE SLOPE CRITICAL AREA, (IN FRONT OF THE GLIDE SLOPE ANTENNA). TRANSFORMERS SHALL BE PROTECTED FROM VEHICLE DAMAGE WITH BOLLARDS WHERE SHOWN ON THE SITE PLANS AND/OR AS REQUIRED BY THE SERVING ELECTRIC UTILITY CO.

BY	REVISION	DATE

DTMA

DEKALB TAYLOR MUNICIPAL AIRPORT

IL. PROJ.: DKB-3225 A.I.P. PROJ.: 3-17-0139-837

HANSON PROJECT No. 803-06ELEC
Filename E-503.DWG
Scale NONE
Date 04/20/07

LAYOUT	KNL	03/20/07
DRAWN	MV	03/21/07
REVIEWED	CAH	03/29/07

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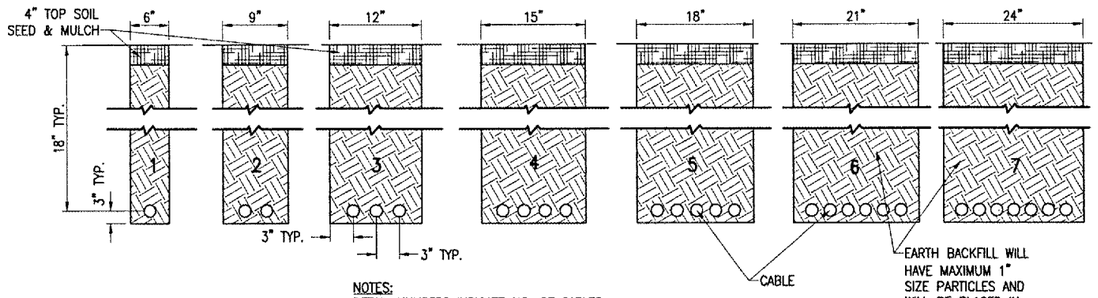
INSTALL MALSR & GLIDE SLOPE

UTILITY TRANSFORMER PAD DETAILS

42

DK051



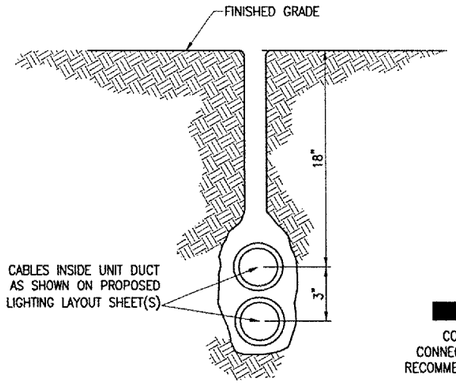
NOTES:
DETAIL NUMBERS INDICATE NO. OF CABLES.

TRENCHES WITH MORE THAN SEVEN CABLES SHALL BE INCREASED 3" IN WIDTH FOR EACH ADDITIONAL CABLE; IF SPECIFIED ON PLANS TWO PARALLEL TRENCHES MAY BE CONSTRUCTED.

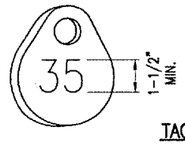
DEPTH OF TRENCHES SHALL BE AS SHOWN ABOVE UNLESS OTHERWISE SPECIFIED ON THE PLANS.

ALL DISTURBED SURFACES SHALL BE RESTORED TO THEIR ORIGINAL CONDITION. COST IS INCIDENTAL TO TRENCH.

CABLE TRENCHES
(NOT TO SCALE)

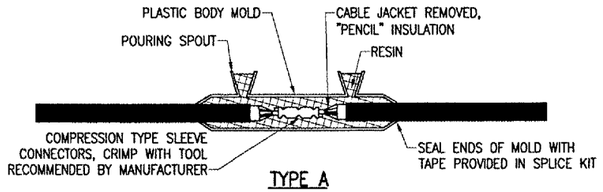


PLOWED CABLE
(NOT TO SCALE)

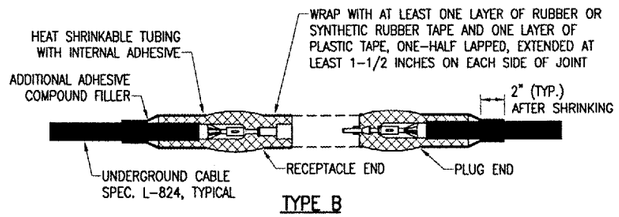


NOTE:
AFFIX NON-CORROSIVE TAG TO FIXTURE FACING RUNWAY WITH SET SCREW, WIRE TIE, OR METAL BAND. NUMERALS SHALL BE ENGRAVED FOR PERMANENT READABILITY.

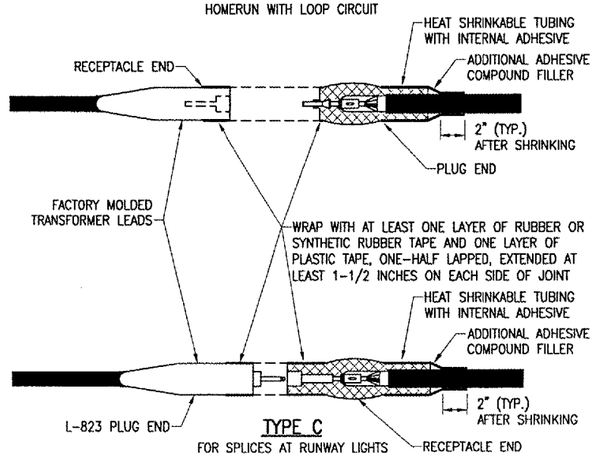
TAG DETAIL
(NOT TO SCALE)



TYPE A
FOR SPLICES IN HOMERUNS FOR EXTENSIONS TO EXISTING CABLES ONLY



TYPE B
FOR SPLICES AT JUNCTION OF HOMERUN WITH LOOP CIRCUIT

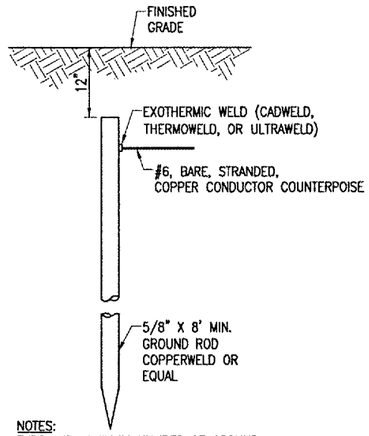


TYPE C
FOR SPLICES AT RUNWAY LIGHTS

NOTES:
SEE PROPOSED LIGHTING LAYOUT SHEET(S) FOR SPLICE TYPE.

INSIDE DIAMETER OF CONNECTOR SHALL PROPERLY MATCH THE OUTSIDE DIAMETER OF CABLE.

CABLE SPLICES
(NOT TO SCALE)



NOTES:
TYPE AND MINIMUM NUMBER OF GROUND RODS SHALL BE AS SPECIFIED ON THE PLAN.

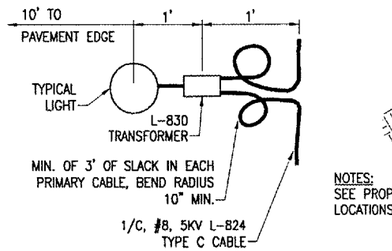
THE RESISTANCE TO GROUND OF THE COUNTERPOISE GROUNDING SYSTEM SHALL NOT EXCEED 25 OHMS.

COST OF GROUND RODS IS INCIDENTAL TO THE ASSOCIATED ITEMS REQUIRING GROUNDING UNLESS OTHERWISE SPECIFIED.

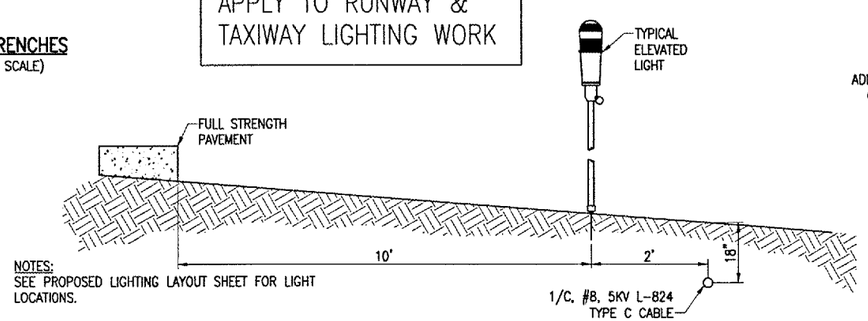
GROUND RODS SHALL NOT BE SPACED LESS THAN ONE RODS LENGTH APART.

GROUND ROD
(NOT TO SCALE)

DETAILS ON THIS SHEET APPLY TO RUNWAY & TAXIWAY LIGHTING WORK



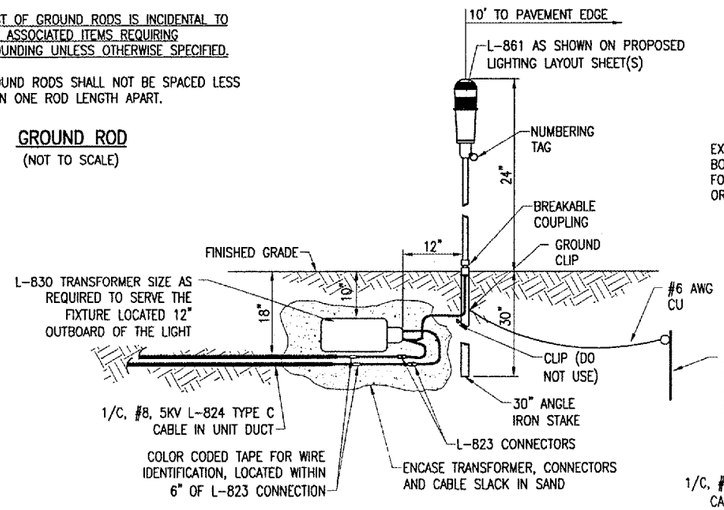
PLAN VIEW



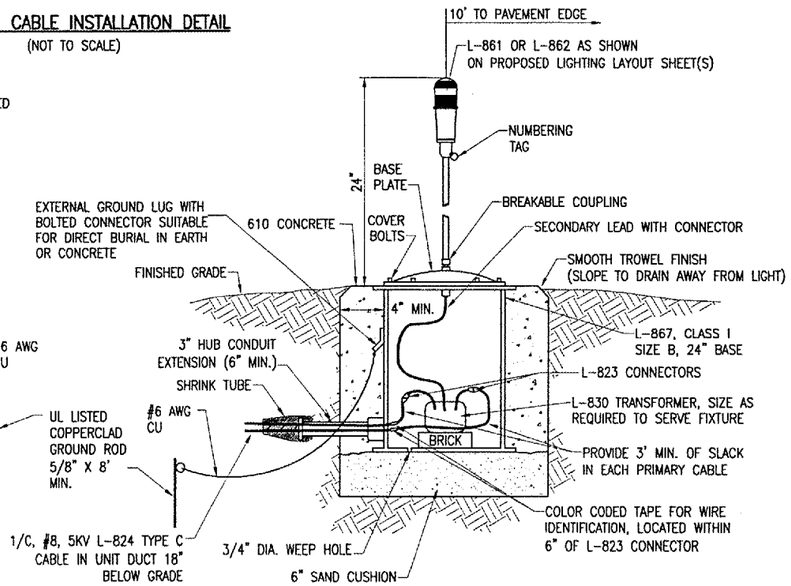
NOTES:
SEE PROPOSED LIGHTING LAYOUT SHEET FOR LIGHT LOCATIONS.

PROFILE VIEW

LIGHT AND CABLE INSTALLATION DETAIL
(NOT TO SCALE)



MEDIUM INTENSITY LIGHT - STAKE MOUNTED
(NOT TO SCALE)



MEDIUM/HIGH INTENSITY LIGHT - BASE MOUNTED
(NOT TO SCALE)

BY	REVISION	DATE

DMAX
DEKALB TAYLOR MUNICIPAL AIRPORT
IL. PROJ.: DKB-3225 A.I.P. PROJ.: 3-17-0139-837

HANSON PROJECT No. 803-06ELEC		
Filename E-504.DWG		
Scale NONE		
Date 04/20/07		
LAYOUT	KNL	03/23/07
DRAWN	MV	03/26/07
REVIEWED	CAH	03/29/07

HANSON
Hanson Professional Services Inc.
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Springfield, Illinois 62703-2886
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INSTALL MALSR & GLIDE SLOPE

ELECTRICAL DETAILS 1

43
43 of 48 sheets

APR 06, 2007 10:30 AM BAK
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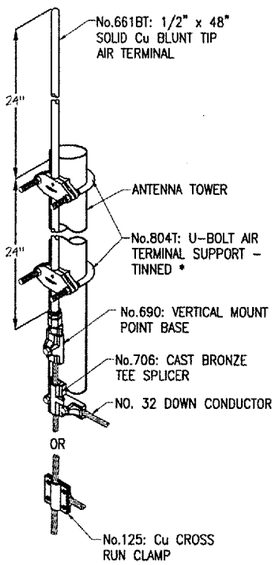
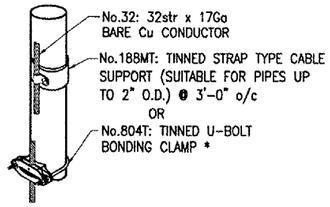


AIR TERMINAL MOUNTING

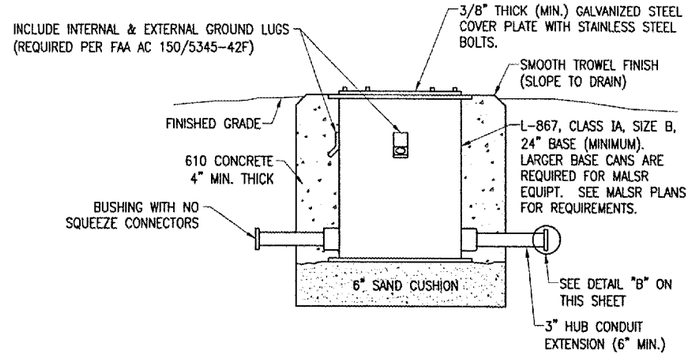
U-BOLTS:
DEPENDS ON THE SIZE OF THE PIPE:
802T: MAX. OD 1-7/16"
803T: MAX. OD 2-1/8"
804T: MAX. OD 3-3/16"
805T: MAX. OD 4-3/16"

ALL PART NUMBERS ARE THOMPSON LIGHTNING PROTECTION INC., 901 SIBLEY HIGHWAY, ST. PAUL, MN 55118-1792, MANUFACTURERS, CONTRACTORS & ENGINEERS, 1-800-777-1230, (P) 651-455-7661, (F) 651-455-2545

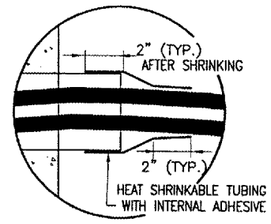


DOWNLEAD CABLE SUPPORT OPTIONS

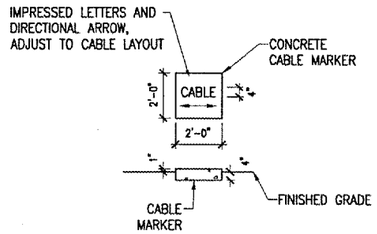
LIGHTNING PROTECTION DETAIL FOR GLIDE SLOPE ANTENNA TOWER



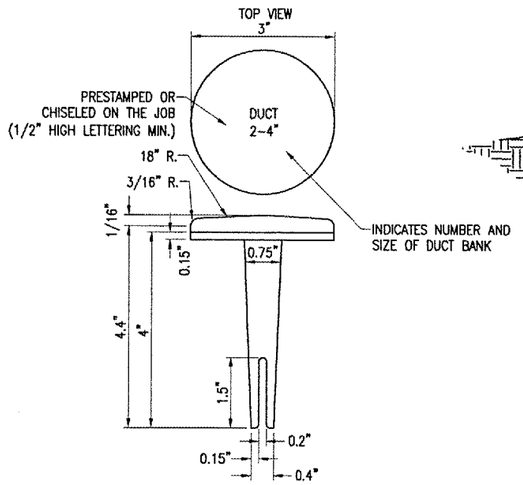
SPLICE CAN DETAIL
(NOT TO SCALE)



DETAIL "B"
(NOT TO SCALE)

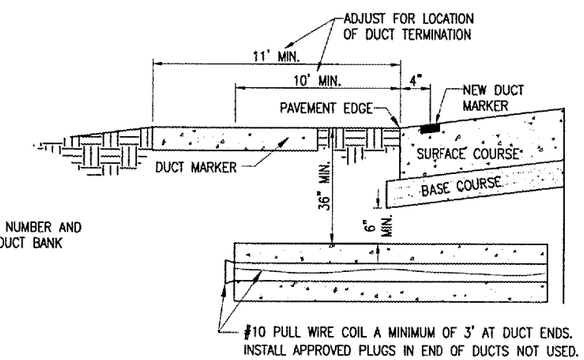


TURF CABLE MARKERS
"NOT TO SCALE"

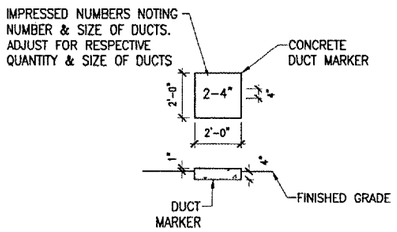


BITUMINOUS PAVEMENT DUCT MARKERS
"NOT TO SCALE"

NOTE:
TOP OF MARKER SHALL BE FLUSH WITH FINISHED PAVEMENT SURFACE. MARKER MAY BE INSTALLED IN A DRILLED HOLE AND SECURED WITH EPOXY GLUE.



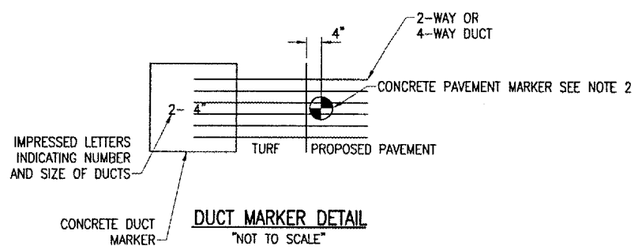
UNDERGROUND ELECTRICAL DUCT
(NOT TO SCALE)



TURF DUCT MARKERS
"NOT TO SCALE"

NOTES:

1. THE COST OF ALL TURF AND PAVEMENT DUCT MARKERS SHALL BE INCIDENTAL TO THE DUCT. THE COST OF ALL CABLE MARKERS SHALL BE INCIDENTAL TO THE CABLE.
2. CONCRETE DUCT MARKER TO BE PROVIDED AT CHANGES OF DIRECTION AND AT EACH END OF EACH DUCT AS SHOWN ON THE LOCATION PLAN. FOR CONCRETE PAVEMENT, THE LETTER "D" SHALL BE IMPRESSED IN THE PAVEMENT INSTEAD OF THE MARKER. THE LETTER SHALL BE IMPRESSED AS DESCRIBED IN NOTE 4.
3. CABLE MARKERS SHALL BE PLACED AT CHANGES OF DIRECTION AND EVERY 200' ALONG CABLE RUNS. CABLE MARKERS SHALL BE INSTALLED IMMEDIATELY ABOVE THE CABLE.
4. CONCRETE CABLE MARKERS AND DUCT MARKERS SHALL HAVE LETTERS 4" HIGH, 3" WIDE WITH WIDTH OF STROKE ½" AND ¼" DEEP. ALL LETTERS, NUMBERS AND ARROWS TO BE IMPRESSED.



DUCT MARKER DETAIL
"NOT TO SCALE"

DTMA
DEKALB TAYLOR MUNICIPAL AIRPORT
A.I.P. PROJ.: 3-17-0139-837
IL. PROJ.: DKB-3225

DATE	REVISION	BY

HANSON PROJECT No. 803-06ELEC
Filename E-502.DWG
Scale NONE
Date 04/20/07

LAYOUT	KNL	03/20/07
DRAWN	MV	03/21/07
REVIEWED	C4H	03/29/07

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Springfield, Illinois 62703-2888
Offices Nationwide

INSTALL MALSR & GLIDE SLOPE

ELECTRICAL DETAILS 2

44
44 of 48 sheets

APR 06, 2007 11:05 AM BAK
I:\AIRPORTS\DEKALB\803-06ELEC\AIRPORT\SHEETS\AUTO-CADD SHEETS\E-502.DWG - Work

GENERAL

1. THE ELECTRICAL INSTALLATION, AS A MINIMUM, SHALL MEET THE NATIONAL ELECTRICAL CODE (LATEST RECOGNIZED VERSION) AND LOCAL REGULATIONS.

2. THE CONTRACTOR SHALL ASCERTAIN THAT ALL LIGHTING SYSTEM COMPONENTS FURNISHED BY HIM, INCLUDING FAA APPROVED EQUIPMENT, ARE COMPATIBLE IN ALL RESPECTS WITH EACH OTHER AND THE REMAINDER OF THE NEW/EXISTING SYSTEM. ANY NONCOMPATIBLE COMPONENTS FURNISHED BY THIS CONTRACTOR SHALL BE REPLACED BY HIM AT NO ADDITIONAL COST TO THE AIRPORT SPONSOR WITH A SIMILAR UNIT, APPROVED BY THE ENGINEER (DIFFERENT MODEL OR DIFFERENT MANUFACTURER) THAT IS COMPATIBLE WITH THE REMAINDER OF THE AIRPORT LIGHTING SYSTEM.

3. IN CASE THE CONTRACTOR ELECTS TO FURNISH AND INSTALL AIRPORT LIGHTING EQUIPMENT REQUIRING ADDITIONAL WIRING, TRANSFORMERS, ADAPTORS, MOUNTINGS, ETC., TO THOSE SHOWN ON THE DRAWINGS AND/OR LISTED IN THE SPECIFICATION, ANY COST FOR THESE ITEMS SHALL BE INCIDENTAL TO THE EQUIPMENT COST.

4. THE CONTRACTOR INSTALLED EQUIPMENT (INCLUDING FAA APPROVED) SHALL NOT GENERATE ANY ELECTROMAGNETIC INTERFERENCE IN THE EXISTING AND/OR NEW COMMUNICATIONS, WEATHER, AIR NAVIGATION, AND AIR TRAFFIC CONTROL EQUIPMENT. ANY EQUIPMENT GENERATING SUCH INTERFERENCE SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST WITH THE EQUIPMENT MEETING THE APPLICABLE SPECIFICATIONS AND NOT GENERATING ANY INTERFERENCE.

5. WHEN A SPECIFIC TYPE, STYLE, CLASS, ETC. OF FAA APPROVED EQUIPMENT IS SPECIFIED ONLY THAT TYPE, STYLE, CLASS, WILL BE ACCEPTABLE, EVEN THOUGH EQUIPMENT OF OTHER TYPES STYLES, CLASSES, ETC. MAY BE APPROVED.

6. ANY AND ALL INSTRUCTIONS FROM THE ENGINEER TO THE CONTRACTOR REGARDING CHANGES IN OR DEVIATIONS FROM THE PLANS AND SPECIFICATIONS SHALL BE IN WRITING WITH COPIES SENT TO THE AIRPORT SPONSOR AND THE FAA FIELD OFFICE (ADO/AFO). THE CONTRACTOR SHALL NOT ACCEPT ANY VERBAL INSTRUCTIONS FROM THE RESIDENT ENGINEER REGARDING ANY CHANGES FROM THE PLANS AND SPECIFICATIONS.

7. A MINIMUM OF THREE COPIES OF THE INSTRUCTION BOOK SHALL BE SUPPLIED WITH EACH DIFFERENT TYPE OF EQUIPMENT. THE BOOKS DESCRIBING A MORE SOPHISTICATED TYPE OF EQUIPMENT, SUCH AS REGULATORS, PAPI, REIL, ETC. AS A MINIMUM SHALL CONTAIN THE FOLLOWING:

   A. A DETAILED DESCRIPTION OF THE OVERALL EQUIPMENT AND ITS INDIVIDUAL COMPONENTS.

   B. THEORY OF OPERATION INCLUDING THE FUNCTION OF EACH COMPONENT.

   C. INSTALLATION INSTRUCTIONS.

   D. START-UP INSTRUCTIONS.

   E. PREVENTATIVE MAINTENANCE REQUIREMENTS.

   F. CHART FOR TROUBLE-SHOOTING.

   G. COMPLETE POWER AND CONTROL DETAILED WIRING DIAGRAM(S), SHOWING EACH CONDUCTOR/CONNECTION/COMPONENT – "BLACK" BOXES ARE NOT ACCEPTABLE. THE DIAGRAM OF THE NARRATIVE SHALL SHOW VOLTAGE/CURRENTS/WAVE SHAPES AT STRATEGIC LOCATIONS TO BE USED WHEN CHECKING AND/OR TROUBLE-SHOOTING THE EQUIPMENT. WHEN THE EQUIPMENT HAS SEVERAL MODES OF OPERATION, SUCH AS SEVERAL BRIGHTNESS STEPS, THESE PARAMETERS SHALL BE INDICATED FOR ALL DIFFERENT MODES.

   H. PARTS LIST WHICH WILL INCLUDE ALL MAJOR AND MINOR COMPONENTS SUCH AS RESISTORS, DIODES, ETC. IT SHALL INCLUDE A COMPLETE NOMENCLATURE OF EACH COMPONENT AND, IF APPLICABLE, THE NAME OF ITS MANUFACTURER AND THE CATALOG NUMBER.

   I. SAFETY INSTRUCTIONS.

POWER AND CONTROL

1. PROVIDE LEGEND PLATES FOR ALL ELECTRICAL EQUIPMENT TO IDENTIFY FUNCTION, CIRCUIT VOLTAGE AND PHASE. WHERE THE EQUIPMENT CONTAINS FUSES, ALSO IDENTIFY THE FUSE OR FUSE LINK AMPERE RATING. WHERE THE EQUIPMENT DOES NOT HAVE SUFFICIENT AREA TO INSTALL LEGEND PLATES, THE LEGEND PLATES SHALL BE INSTALLED ON THE WALL NEXT TO THE UNIT. LEGEND PLATES SHALL BE WEATHERPROOF ENGRAVED PLASTIC OR PHENOLIC MATERIAL, 1/4" HIGH BLACK LETTERS ON A WHITE BACKGROUND UNLESS NOTED OTHERWISE. SECURE WITH WEATHERPROOF ADHESIVE AND MACHINE SCREWS. FURNISH ADDITIONAL LEGEND PLATES WHERE REQUIRED BY CODE, FOR ADDITIONAL EQUIPMENT, AS DETAILED HEREIN ON THE PLANS, AND AS NOTED IN THE SPECIAL PROVISION SPECIFICATIONS.

2. COLOR CODE ALL PHASE WIRING BY THE USE OF COLORED WIRE INSULATION AND/OR COLORED TAPE. WHERE TAPE IS USED, THE WIRE INSULATION SHALL BE BLACK. BLACK AND RED SHALL BE USED FOR SINGLE-PHASE, THREE WIRE SYSTEMS AND BLACK, RED AND BLUE SHALL BE USED FOR THREE-PHASE SYSTEMS. NEUTRAL CONDUCTORS, SIZE NO. 6 AWG OR SMALLER, SHALL BE IDENTIFIED BY A CONTINUOUS WHITE OR NATURAL GRAY OUTER FINISH ALONG ITS ENTIRE LENGTH. NEUTRAL CONDUCTORS LARGER THAN NO. 6 AWG SHALL BE IDENTIFIED EITHER BY A CONTINUOUS WHITE OR NATURAL GRAY OUTER FINISH ALONG ITS ENTIRE LENGTH OR BY THE USE OF WHITE TAPE AT ITS TERMINATIONS AND INSIDE ACCESSIBLE WIREWAYS.

3. ALL BRANCH CIRCUIT CONDUCTORS CONNECTED TO A PARTICULAR PHASE SHALL BE IDENTIFIED WITH THE SAME COLOR. THE COLOR CODING SHALL BE EXTENDED TO THE POINT OF UTILIZATION.

4. IN CONTROL WIRING THE SAME COLOR SHALL BE USED THROUGHOUT THE SYSTEM FOR THE SAME FUNCTION, SUCH AS 10%, 30%, 100% BRIGHTNESS CONTROL, ETC.

5. LOW VOLTAGE (600 V.) AND HIGH VOLTAGE (5000 V.) CONDUCTORS SHALL BE INSTALLED IN SEPARATE WIREWAYS.

6. NEATLY LACE WIRING IN DISTRIBUTION PANELS, WIREWAYS, SWITCHES AND JUNCTION/PULL BOXES.

7. THE MINIMUM SIZE OF PULL/JUNCTION BOXES, REGARDLESS OF THE QUANTITY AND SIZE OF THE CONDUCTORS SHOWN, SHALL BE AS FOLLOWS:

   A. IN STRAIGHT PULLS THE LENGTH OF THE BOX SHALL NOT BE LESS THAN EIGHT TIMES THE TRADE DIAMETER OF THE LARGER CONDUIT. THE TOTAL AREA (INCLUDING THE CONDUIT CROSS-SECTIONAL AREA) OF A BOX END SHALL BE AT LEAST 3 TIMES GREATER THAN THE TOTAL TRADE CROSS-SECTIONAL AREA OF THE CONDUITS TERMINATING AT THE END.

   B. IN ANGLE PULLS OR 'U' PULLS THE DISTANCE BETWEEN EACH CONDUIT ENTRY INSIDE THE BOX AND THE OPPOSITE WALL OF THE BOX SHALL NOT BE LESS THAN SIX (6) TIMES THE TRADE DIAMETER OF THE LARGEST CONDUIT. THIS DISTANCE SHALL BE INCREASED FOR ADDITIONAL ENTRIES BY THE AMOUNT OF THE SUM OF THE DIAMETERS OF ALL OTHER CONDUIT ENTRIES ON THE SAME WALL AS THE BOX. THE DISTANCE BETWEEN CONDUIT ENTRIES ENCLOSING THE SAME CONDUCTOR SHALL NOT BE LESS THAN SIX TIMES THE TRADE DIAMETER OF THE LARGEST CONDUIT.

8. A RUN OF CONDUIT BETWEEN TERMINATIONS AT EQUIPMENT ENCLOSURES, SQUARE DUCTS AND PULL/JUNCTION BOXES, SHALL NOT CONTAIN MORE THAN THE EQUIVALENT OF FOUR QUARTER BENDS (360 DEGREES TOTAL), INCLUDING THOSE BENDS LOCATED IMMEDIATELY AT THE TERMINATIONS, CAST, CONDUIT TYPE OUTLETS SHALL NOT BE TREATED AS PULL/JUNCTION BOXES.

9. EQUIPMENT CABINETS SHALL NOT BE USED AS PULL/JUNCTION BOXES. ONLY WIRING TERMINATING AT THE EQUIPMENT SHALL BE BROUGHT INTO THESE ENCLOSURES.

10. SPLICES AND JUNCTION POINTS SHALL BE PERMITTED ONLY IN JUNCTION BOXES, DUCTS EQUIPPED WITH REMOVABLE COVERS, AND AT EASILY ACCESSIBLE LOCATIONS.

11. CIRCUIT BREAKERS IN POWER DISTRIBUTION PANEL(S) SHALL BE THERMAL-MAGNETIC MOLDED CASE, PERMANENT TRIP WITH 100 AMPERE, MINIMUM FRAME.

12. DUAL LUGS SHALL BE USED WHERE TWO (2) WIRES, SIZE NO. 6 OR LARGER, ARE TO BE CONNECTED TO THE SAME TERMINAL.

13. ALL WALL MOUNTED EQUIPMENT ENCLOSURES SHALL BE MOUNTED ON GALVANIZED STEEL STRUT SUPPORT OR STAINLESS STEEL STRUT SUPPORT.

14. CONDUITS FOR ELECTRIC SERVICE ENTRANCE AND FEEDERS SHALL BE GALVANIZED RIGID STEEL. CONDUITS LOCATED INSIDE THE ILS/ALS SHELTERS SHALL BE GALVANIZED RIGID STEEL OR ELECTRICAL METALLIC TUBING AS DETAILED HEREIN ON THE PLANS. CONDUITS FOR UNDERGROUND APPLICATIONS SHALL BE AS DETAILED HEREIN. CONDUITS FOR GROUNDING ELECTRODE CONDUCTORS OR INDIVIDUAL GROUNDING CONDUCTORS SHALL BE SCHEDULE 40 OR SCHEDULE 80 PVC. CONDUITS FOR MALSR AND GLIDE SLOPE FACILITIES SHALL BE AS DETAILED HEREIN ON THE PLANS.

15. UNLESS OTHERWISE SHOWN, ALL EXPOSED CONDUITS SHALL BE RUN PARALLEL TO OR AT RIGHT ANGLES WITH THE LINES OF THE STRUCTURE.

16. ALL STEEL CONDUITS, FITTINGS. NUTS, BOLTS, ETC. SHALL BE GALVANIZED.

17. USE CONDUIT BUSHINGS AT EACH CONDUIT TERMINATION. WHERE NO. 4 AWG OR LARGER UNDERGROUND WIRE IS INSTALLED, USE INSULATED BUSHINGS.

18. USE DOUBLE LOCK NUTS AT EACH CONDUIT TERMINATION.

19. UNLESS OTHERWISE NOTED, ALL INDOOR SINGLE CONDUCTOR CONTROL WIRING SHALL BE NO. 12 AWG. MINIMUM.

BY	REVISION	DATE

DTMA

DEKALB TAYLOR MUNICIPAL AIRPORT

IL. PROJ.: DKB-3225 A.I.P. PROJ.: 3-17-0139-837

HANSON PROJECT No. 803-06ELEC
Filename E-003.DWG
Scale NONE
Date 04/20/07

LAYOUT	KNL	03/20/07
DRAWN	MV	03/21/07
REVIEWED	CAH	03/29/07

HANSON

Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62703-2886
Offices Nationwide

INSTALL MALSR & GLIDE SLOPE

ELECTRICAL NOTES SHEET 1

DK051

AIRFIELD LIGHTING NOTES

1. UNLESS OTHERWISE NOTED, ALL UNDERGROUND AIRFIELD LIGHTING SERIES CIRCUIT CONDUCTORS WHETHER DEB OR IN DUCT/CONDUIT SHALL BE FAA APPROVED 5000 VOLT L-824 TYPE. ALL UNDERGROUND FIELD POWER LOW VOLTAGE (600 VOLT & BELOW) CIRCUIT CONDUCTORS WHETHER DEB OR IN DUCT/CONDUIT SHALL BE UL LISTED 600 VOLT, TYPE XLP-USE-2 COPPER CONDUCTORS. CONDUCTOR SIZES SHALL BE AS SPECIFIED, HEREIN.

2. NO COMPONENTS OF PRIMARY CIRCUIT SUCH AS CABLE, CONNECTORS AND TRANSFORMERS SHALL BE BROUGHT ABOVE GROUND AT EDGE LIGHTS, SIGNS, REIL, PAPI, ETC.

3. THERE SHALL BE NO EXPOSED POWER/CONTROL CABLES BETWEEN THE POINT WHERE THEY LEAVE THE UNDERGROUND (DEB OR L-867 BASES) AND WHERE THEY ENTER THE EQUIPMENT (SUCH AS TAXIWAY SIGNS, PAPI, REIL, ETC.) ENCLOSURES. THESE CABLES SHALL BE ENCLOSED IN RIGID CONDUIT OR IN FLEXIBLE, WATERTIGHT CONDUIT WITH BREAKABLE COUPLING(S) AT THE GRADE OR THE HOUSING COVER, AS SHOWN IN APPLICABLE DETAILS.

4. THE JOINTS OF THE L-823 PRIMARY CONNECTORS SHALL BE WRAPPED WITH AT LEAST ONE LAYER OF RUBBER OR SYNTHETIC RUBBER TAPE AND ONE LAYER OF PLASTIC TAPE, ONE-HALF LAPPED, EXTENDING AT LEAST 1-1/2 INCHES ON EACH SIDE OF THE JOINT, AS SHOWN ON SHEET NO. 43.

5. THE CABLE ENTRANCE INTO THE FIELD-ATTACHED L-823 CONNECTORS SHALL BE ENCLOSED BY A HEAT-SHRINKABLE TUBING WITH CONTINUOUS INTERNAL ADHESIVE, AS SHOWN ON SHEET NO. 43.

6. L-823 TYPE II, TWO-CONDUCTOR SECONDARY CONNECTORS SHALL BE CLASS 'A' (FACTORY MOLDED).

7. THERE SHALL BE NO SPLICES IN THE SECONDARY CABLE(S) WITHIN THE STEMS OF A RUNWAY/TAXIWAY EDGE/THRESHOLD LIGHTING FIXTURE AND THE WIREWAYS LEADING TO TAXIWAY SIGNS AND PAPI/REIL EQUIPMENT.

8. ELECTRICAL INSULATING GREASE SHALL BE APPLIED WITHIN THE L-823, SECONDARY, TWO CONDUCTOR CONNECTORS TO PREVENT WATER ENTRANCE. THESE CONNECTORS SHALL NOT BETAPED.

9. DEB ISOLATION TRANSFORMERS SHALL BE BURIED AT A DEPTH OF TEN (10") INCHES ON A LINE CROSSING THE LIGHT AND PERPENDICULAR TO THE RUNWAY/TAXIWAY CENTERLINE AT A LOCATION TWELVE (12") INCHES FROM THE LIGHT OPPOSITE FROM THE RUNWAY/TAXIWAY.

10. A SLACK OF THREE (3') FEET, MINIMUM, SHALL BE PROVIDED IN THE PRIMARY CABLE AT EACH TRANSFORMER/CONNECTOR TERMINATION. AT STAKE-MOUNTED LIGHTS, THE SLACK SHALL BE LOOSELY COILED IMMEDIATELY BELOW THE ISOLATION TRANSFORMER.

11. DIRECTION OF PRIMARY CABLES SHALL BE IDENTIFIED BY COLOR CODING AS FOLLOWS: WHEN FACING LIGHT WITH BACK TO PAVEMENT, CABLE TO THE LEFT IS CODED RED AND CABLE TO RIGHT IS CODED BLUE. THIS APPLIES TO STAKE MOUNTED LIGHTS AND BASE MOUNTED LIGHTS WHERE THE BASE HAS ONLY ONE ENTRANCE.

12. L-867 BASES SHALL BE SIZE B, 24" DEEP, CLASS I, UNLESS OTHERWISE NOTED.

13. BASE MOUNTED BREAKABLE COUPLINGS SHALL NOT HAVE WEEP HOLES TO THE OUTSIDE. PLUGGED UP HOLES SHALL NOT BE ACCEPTABLE. IT SHALL BE A 1/4" DIAMETER, MINIMUM, OR EQUIVALENT OPENING FOR DRAINAGE FROM THE SPACE AROUND THE SECONDARY CONNECTOR INTO THE L-867 BASE.

14. THE ELEVATION OF THE BREAKABLE COUPLING GROOVE SHALL NOT EXCEED 1-1/2" ABOVE THE EDGE OF THE COVER IN CASE OF BASE MOUNTED COUPLINGS, OR THE TOP OF THE STAKE IN CASE OF STAKE MOUNTED COUPLINGS.

15. WHERE THE BREAKABLE COUPLING IS NOT AN INTEGRAL PART OF THE LIGHT FIXTURE STEM OR MOUNTING LEG, A BEAD OF SILICON SEAL SHALL BE APPLIED COMPLETELY AROUND LIGHT STEM OR WIREWAY AT BREAKABLE COUPLING TO PROVIDE A WATERTIGHT SEAL.

16. TOPS OF THE STAKES SUPPORTING LIGHT FIXTURES SHALL BE FLUSH WITH THE SURROUNDING GRADE.

17. PLASTIC LIGHTING FIXTURE COMPONENTS, SUCH AS LAMP HEADS, STEMS, BREAKABLE COUPLINGS, BASE COVERS, BRACKETS, STAKES, SHALL NOT BE ACCEPTABLE.

18. THE TOLERANCE FOR THE HEIGHT OF RUNWAY/TAXIWAY EDGE LIGHTS SHALL BE: ONE (1) INCH. IN CASE OF STAKE MOUNTED LIGHTS, THE SPECIFIED LIGHTING FIXTURE HEIGHT SHALL BE MEASURED BETWEEN THE TOP OF THE STAKE AND THE TOP OF THE LENS. IN CASE OF BASE MOUNTED LIGHTS, THE SPECIFIED LIGHTING FIXTURE HEIGHT SHALL BE MEASURED BETWEEN THE TOP OF THE BASE FLANGE AND THE TOP OF THE LENS, THUS INCLUDING THE BASE COVER, THE FRANGIBLE COUPLING, THE STEM, THE LAMP HOUSING AND THE LENS.

19. THE TOLERANCE FOR THE LATERAL SPACING (LIGHT LANE TO RUNWAY/TAXIWAY CENTERLINE) OF RUNWAY/TAXIWAY EDGE LIGHTS SHALL BE ONE (1) INCH. THIS ALSO APPLIES AT INTERSECTIONS TO LATERAL SPACING BETWEEN LIGHTS OF A RUNWAY/TAXIWAY AND THE INTERSECTING RUNWAY/TAXIWAY.

20. ENTRANCES INTO L-867 BASES SHALL BE SEALED WITH HEAT SHRINK AS SHOWN IN DETAIL "B" ON SHEET NO. 44.

21. GALVANIZED/PAINTED EQUIPMENT/COMPONENT SURFACES SHALL NOT BE DAMAGED BY DRILLING, FILING, ETC. DRAIN HOLES IN METAL TRANSFORMER HOUSINGS SHALL BE MADE BEFORE GALVANIZING.

22. EDGE LIGHT NUMBERING TAGS SHALL BE FACING THE PAVEMENT.

23. CABLE/SPLICE/DUCT MARKERS SHALL BE PRECAST CONCRETE OF THE SIZE SHOWN. LETTERS/NUMBERS/ARROWS FOR THE LEGEND TO BE IMPRESSED INTO THE TOPS OF THE MARKERS SHALL BE PRE-ASSEMBLED AND SECURED IN THE MOLD BEFORE THE CONCRETE IS POURED. LEGEND INSCRIBED BY HAND IN WET CONCRETE SHALL NOT BE ACCEPTABLE.

24. ALL UNDERGROUND CABLE RUNS SHALL BE IDENTIFIED BY CABLE MARKERS AT 200 FEET MAXIMUM SPACING, WITH AN ADDITIONAL MARKER AT EACH CHANGE OF DIRECTION OF THE CABLE RUN. CABLE MARKERS SHALL BE INSTALLED IMMEDIATELY ABOVE THE CABLES.

25. THERE SHALL BE NO SPLICES BETWEEN THE ISOLATION TRANSFORMERS. L-823 CONNECTORS ARE ALLOWED AT TRANSFORMER CONNECTIONS ONLY, UNLESS OTHERWISE SHOWN.

26. APPLY AN OXIDE INHIBITING, ANTI-SEIZING COMPOUND TO ALL SCREWS, NUTS AND BREAKAGE COUPLING THREADS.

27. LOCATIONS OF ENDS OF ALL UNDERGROUND DUCTS SHALL BE IDENTIFIED BY DUCT MARKERS.

28. WHERE A PARALLEL, CONSTANT VOLTAGE PAPI SYSTEM IS PROVIDED, THE "T" SPLICES SHALL BE OF THE CAST TYPE.

29. CONCRETE USED FOR SLABS, FOOTINGS, BACKFILL AROUND TRANSFORMER HOUSINGS, MARKINGS, ETC. SHALL BE 3000 PSI, AIR-ENTRAINED.

30. ALL POWER AND CONTROL CABLES IN MAN/HAND HOLES SHALL BE TAGGED. USE EMBOSSED COPPER STRIPS TO BE ATTACHED AT BOTH ENDS TO THE CABLE BY THE USE OF PLASTIC STRAPS. MINIMUM OF TWO TAGS SHALL BE PROVIDED ON EACH CABLE IN A MAN/HAND HOLE-ONE AT THE CABLE ENTRANCE AND ONE AT THE CABLE EXIT.

31. 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 THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES OF HIS OPERATIONAL PLANS AND SHALL OBTAIN FROM THE 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. THE ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY SUCH MAINS AND 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 1-800-892-0123. ALSO CONTACT AIRPORT MANAGER AND/OR RESPECTIVE AIRPORT PERSONNEL FOR ASSISTANCE IN LOCATING UNDERGROUND AIRPORT CABLES AND/OR UTILITIES. CONTACT FAA FOR ASSISTANCE IN LOCATING THEIR CABLES.

DATE	REVISION	BY

DMA

DEKALB TAYLOR MUNICIPAL AIRPORT

IL. PROJ.: DKB-3225 A.I.P. PROJ.: 3-17-0139-837

HANSON PROJECT No. 803-06ELEC
Filename E-004.DWG
Scale NONE
Date 06/27/07

LAYOUT	KNL	03/26/07
DRAWN	MV	03/21/07
REVIEWED	CAH	03/29/07

HANSON

Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62703-2888
Offices Nationwide

INSTALL MALSR & GLIDE SLOPE

ELECTRICAL NOTES SHEET 2

46

46 of 48 sheets

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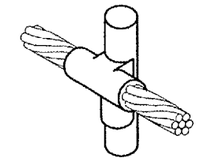
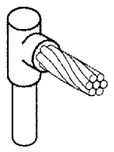


CABLE TO GROUND ROD



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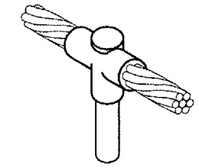
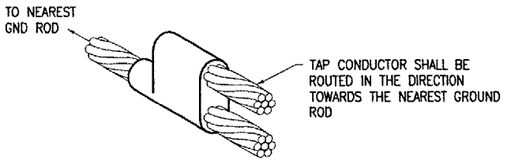
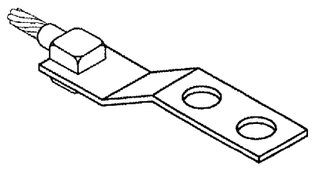


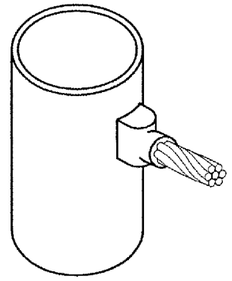
CABLE TO GROUND ROD



CABLE TO CABLE HORIZONTAL PARALLEL TAP



CABLE TO LUG



CABLE TO PIPE OR STEEL POLE

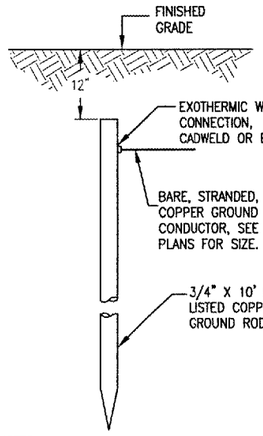
DETAIL NOTES

1. ALL BELOW GRADE CONNECTIONS TO GROUND RODS & GROUND RING CONDUCTORS SHALL BE EXOTHERMIC WELD TYPE CONNECTIONS. EXOTHERMIC WELDS SHALL BE CADWELD AS MANUFACTURED BY ERICO PRODUCTS, SOLON, OHIO, ULTRAWELD AS MANUFACTURED BY HARGER LIGHTNING PROTECTION & GROUNDING EQUIPMENT, GRAYSLAKE, IL, OR THERMOWELD AS MANUFACTURED BY CONTINENTAL INDUSTRIES, TULSA, OKLAHOMA. VERIFY PROPER SIZES, MOLDS, TYPES, AND REQUIREMENTS FOR THE RESPECTIVE APPLICATION WITH THE MANUFACTURER, AND INSTALL PER THEIR DIRECTIONS.

2. FOR APPLICATIONS TO GALVANIZED STEEL OR PAINTED STEEL, REMOVE GALVANIZING AND/OR PAINT & CLEAN THE SURFACE TO EXPOSE BARE STEEL BEFORE MAKING EXOTHERMIC WELD CONNECTION.

3. INDIVIDUAL GROUNDING ELECTRODE CONDUCTORS SHALL NOT BE INSTALLED IN METAL CONDUIT. INSTALL GROUNDING ELECTRODE CONDUCTORS IN SCHED 40 PVC CONDUIT AS REQUIRED IN FOUNDATIONS, FOR PROTECTION, WHERE ENTERING ENCLOSURES, ETC. WHERE PLASTIC CONDUIT IS USED FOR INDIVIDUAL GROUND WIRES, DO NOT COMPLETELY ENCIRCLE THE CONDUIT WITH FERROUS AND/OR MAGNETIC MATERIALS. WHERE METAL CLAMPS ARE INSTALLED USE NYLON BOLTS, NUTS, WASHERS, & SPACERS TO INTERRUPT A COMPLETE METALLIC PATH FROM ENCIRCLING THE CONDUIT.

EXOTHERMIC WELD DETAILS



NOTES:

1. TYPE AND MINIMUM NUMBER OF GROUND RODS SHALL BE AS SPECIFIED ON THE PLAN.

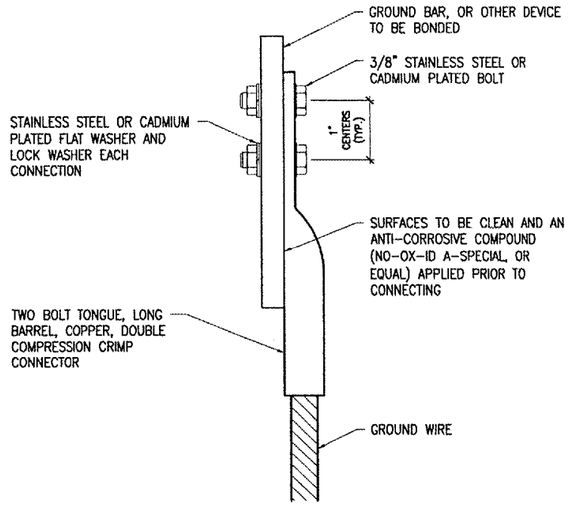
2. THE RESISTANCE TO GROUND OF THE GROUNDING SYSTEM SHALL NOT EXCEED 10 OHMS.

3. COST OF GROUND RODS IS INCIDENTAL TO THE ASSOCIATED ITEMS REQUIRING GROUNDING UNLESS OTHERWISE SPECIFIED.

4. GROUND RODS SHALL BE SPACED AS DETAILED ON THE PLANS AND SHALL NOT BE SPACED LESS THAN ONE ROD LENGTH APART.

GROUND ROD

(NOT TO SCALE)



2 HOLE LONG BARREL COMPRESSION LUG TABLE		
WIRE SIZE	BURNDY CAT. NO.	THOMAS & BETTS CAT. NO.
#8 AWG STRANDED	YA8C-2TC38	256-30695-1157
#6 AWG STRANDED	YA6C-2TC38	256-30695-1158
#2 AWG STRANDED	YA2C-2TC38	256-30695-1160
#2 AWG SOLID	YA3C-2TC38	256-30695-1160
#1/0 AWG STRANDED	YA25-2TC38	256-30695-1162
#2/0 AWG STRANDED	YA26-2TC38	256-30695-1116
#3/0 AWG STRANDED	YA27-2TC38	54816BE
#4/0 AWG STRANDED	YA28-2TC38	256-30695-1117

NOTES

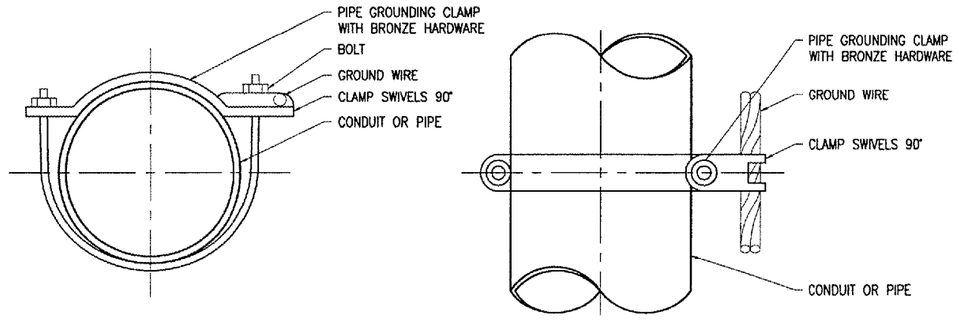
1. ALL CONNECTIONS TO GROUND BUS BAR SHALL BE WITH 2 HOLE TONGUE LONG BARREL COMPRESSION LUGS BOLTED TO THE BUS BAR.

2. GROUND WIRE CONNECTIONS TO EQUIPMENT SHALL BE WITH 2 HOLE TONGUE LONG BARREL COMPRESSION LUGS BOLTED TO THE DEVICE OR WITH THE RESPECTIVE EQUIPT MANUFACTURER'S LUG OR TERMINAL WHERE APPLICABLE.

3. GROUNDING ELECTRODE CONDUCTORS, BONDING JUMPERS, & INDIVIDUAL GROUND WIRES SHALL NOT BE INSTALLED IN METAL CONDUIT. WHERE PLASTIC CONDUIT IS USED FOR INDIVIDUAL GROUND WIRES, DO NOT COMPLETELY ENCIRCLE THE CONDUIT WITH FERROUS AND/OR MAGNETIC MATERIALS. WHERE METAL CLAMPS ARE INSTALLED USE NYLON BOLTS, NUTS, WASHERS, & SPACERS TO INTERRUPT A COMPLETE METALLIC PATH FROM ENCIRCLING THE CONDUIT.

4. ALL CONNECTIONS SHALL BE COATED WITH A CORROSION PREVENTATIVE COMPOUND (SANCHEM INC. NO-OX-ID A-SPECIAL, OR BURNDY PENETROX E, OR APPROVED EQUAL) BEFORE JOINING. ALL COPPER BUS BARS SHALL BE CLEANED PRIOR TO MAKING CONNECTIONS TO REMOVE SURFACE OXIDATION. CLEAN SURFACES, OF RESPECTIVE DEVICES TO BE BONDED, TO BARE METAL, PER NEC 250-12.

GROUNDING LUG CONNECTION DETAIL



PIPE GROUNDING CLAMP TABLE	
BURNDY CAT. NO.	PIPE SIZE
GAR3902-BU	1/2" - 1"
GAR3903-BU	1 1/4" - 2"
GAR3904-BU	2 1/2" - 3 1/2"
GAR3905-BU	4" - 5"
GAR3906-BU	6"

NOTES

1. PIPE GROUNDING CLAMPS SHALL HAVE BRONZE HARDWARE, BE CORROSION RESISTANT, SUITABLE FOR DIRECT BURIAL IN EARTH OR CONCRETE, & UL467 LISTED.

PIPE/CONDUIT GROUNDING CLAMP DETAIL

DATE | REVISION | BY

DMAX

DEKALB TAYLOR MUNICIPAL AIRPORT

IL. PROJ.: DKB-3225 A.I.P. PROJ.: 3-17-0139-B37

HANSEN PROJECT No. 803-06ELEC
Filename E-501.DWG
Scale NONE
Date 04/20/07

LAYOUT	KNL	03/14/07
DRAWN	MV	03/15/07
REVIEWED	CAH	03/29/07

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INSTALL MALSR & GLIDE SLOPE

GROUNDING DETAILS

47

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GROUNDING NOTES

1. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL GROUNDING AS MAY BE NECESSARY OR REQUIRED TO MAKE A COMPLETE GROUNDING SYSTEM AS REQUIRED BY THE LATEST NATIONAL ELECTRICAL CODE (NFPA 70) IN FORCE AND FAA-STD-019e (LIGHTNING AND SURGE PROTECTION, GROUNDING, BONDING, AND SHEILDING REQUIREMENTS FOR FACILITIES AND ELECTRONIC EQUIPMENT). THE RELIABILITY OF THE GROUNDING SYSTEM IS DEPENDENT ON CAREFUL, PROPER INSTALLATION AND CHOICE OF MATERIALS. IMPROPER PREPARATION OF SURFACES TO BE JOINED TO MAKE AN ELECTRICAL PATH, LOOSE JOINTS OR CORROSION CAN INTRODUCE IMPEDANCE THAT WILL SERIOUSLY IMPAIR THE ABILITY OF THE GROUND PATH TO PROTECT PERSONNEL AND EQUIPMENT AND TO ABSORB TRANSIENTS THAT CAN CAUSE NOISE IN COMMUNICATIONS CIRCUITS. THE FOLLOWING FUNCTIONS ARE PARTICULARLY IMPORTANT TO ENSURE A RELIABLE GROUND SYSTEM:

2. FURNISH AND INSTALL A GROUND RING AROUND THE ILS/ALS FACILITIES AS DETAILED HEREIN. GROUND RING SHALL CONSIST OF GROUND RODS CONNECTED TOGETHER WITH #4/0 AWG (MINIMUM) BARE COPPER CONDUCTOR BURIED 30 INCHES BELOW FINISHED GRADE OR BELOW FROST LINE WHICHEVER IS DEEPER. GROUND RODS SHALL BE 3/4-IN. DIAMETER BY 10-FT LONG, UL-LISTED, COPPER CLAD WITH 10-MIL MINIMUM COPPER COATING. GROUND RODS SHALL BE SPACED APPROXIMATELY ONE AND A HALF TO TWO AND A HALF ROD LENGTHS APART AND IN NO CASE SPACED LESS THAN ONE ROD LENGTH APART. ALL CONNECTIONS TO GROUND RODS AND THE GROUND RING SHALL BE MADE WITH EXOTHERMIC WELD TYPE CONNECTORS, CADWELD BY ERICO PRODUCTS, INC., SOLON, OHIO, (PHONE 1-800-248-9353), THERMOWELD BY CONTINENTAL INDUSTRIES, INC., TULSA, OKLAHOMA (PHONE 918-663-1440) OR ULTRAWELD BY HARGER, GRAYSLAKE, ILLINOIS (PHONE 1-800-842-7437). EXOTHERMIC WELD CONNECTIONS SHALL BE INSTALLED IN CONFORMANCE WITH THE RESPECTIVE MANUFACTURER'S DIRECTIONS USING MOLDS AS REQUIRED FOR EACH RESPECTIVE APPLICATION. BOLTED CONNECTIONS WILL NOT BE PERMITTED AT GROUND RODS OR AT BURIED GROUNDING ELECTRODE CONDUCTORS.

3. FURNISH AND INSTALL LIGHTNING PROTECTION SYSTEMS IN ACCORDANCE WITH NFPA 780-LIGHTNING PROTECTION SYSTEMS AND AS DETAILED HEREIN.

4. CONTRACTOR SHALL TEST THE MADE ELECTRODE GROUND ROD/GROUND FIELD/GROUND RING WITH AN INSTRUMENT SPECIFICALLY DESIGNED FOR TESTING GROUND FIELD SYSTEMS. IF GROUND RESISTANCE EXCEEDS 10 OHMS, CONTACT THE RESIDENT ENGINEER FOR FURTHER DIRECTION. COPIES OF GROUND FIELD TEST RESULTS SHALL BE FURNISHED TO THE RESIDENT ENGINEER, UPON REQUEST, FOR REVIEW AND RECORD PURPOSES.

5. ALL PRODUCTS ASSOCIATED WITH THE GROUNDING SYSTEM SHALL BE UL-LISTED AND LABELED.

6. ALL BOLTED OR MECHANICAL CONNECTIONS SHALL BE COATED WITH A CORROSION PREVENTATIVE COMPOUND BEFORE JOINING, SANCHEM INC. "NO-OX-ID "A-SPECIAL" COMPOUND, OR EQUAL.

7. METALLIC SURFACES TO BE JOINED SHALL BE PREPARED BY THE REMOVAL OF ALL NON-CONDUCTIVE MATERIAL, PER 2005 NATIONAL ELECTRICAL CODE ARTICLE 250-12. ALL COPPER BUS BARS MUST BE CLEANED PRIOR TO MAKING CONNECTIONS TO REMOVE SURFACE OXIDATION.

8. METALLIC RACEWAY FITTINGS SHALL BE MADE UP TIGHT TO PROVIDE A PERMANENT LOW IMPEDANCE PATH FOR ALL CIRCUITS. METAL CONDUIT TERMINATIONS IN ENCLOSURES SHALL BE BONDED TO THE ENCLOSURE WITH UL-LISTED FITTINGS SUITABLE FOR GROUNDING. PROVIDE GROUNDING BUSHINGS WITH BONDING JUMPERS FOR ALL METAL CONDUITS ENTERING SERVICE EQUIPMENT (METER BASE, CT CABINET, MAIN SERVICE BREAKER ENCLOSURE, ETC.). PROVIDE GROUNDING BUSHINGS WITH BONDING JUMPERS FOR ALL METAL CONDUITS ENTERING AN ENCLOSURE THROUGH CONCENTRIC OR ECCENTRIC KNOCKOUTS THAT ARE PUNCHED OR OTHERWISE FORMED SO AS TO IMPAIR THE ELECTRICAL CONNECTION TO GROUND. STANDARD LOCKNUTS OR BUSHINGS SHALL NOT BE THE SOLE MEANS FOR BONDING WHERE A CONDUIT ENTERS AN ENCLOSURE THROUGH A CONCENTRIC OR ECCENTRIC KNOCKOUT

9. ALL CONNECTIONS, LOCATED ABOVE GRADE, BETWEEN THE DIFFERENT TYPES OF GROUNDING CONDUCTORS SHALL BE MADE USING UL-LISTED DOUBLE COMPRESSION CRIMP TYPE CONNECTORS OR UL-LISTED BOLTED GROUND CONNECTORS. FOR GROUND CONNECTIONS TO ENCLOSURES, CASES AND FRAMES OF ELECTRICAL EQUIPMENT NOT SUPPLIED WITH GROUND LUGS THE CONTRACTOR SHALL DRILL REQUIRED HOLES FOR MOUNTING A BOLTED GROUND CONNECTOR. ALL BOLTED GROUND CONNECTORS SHALL BE BURNDY, THOMAS AND BETTS, OR EQUAL. TIGHTEN CONNECTIONS TO COMPLY WITH TIGHTENING TORQUES IN UL STANDARD 486A TO ASSURE PERMANENT AND EFFECTIVE GROUNDING.

10. ALL METAL EQUIPMENT ENCLOSURES, CONDUITS, CABINETS, BOXES, RECEPTACLES, MOTORS, ETC. SHALL BE BONDED TO THE RESPECTIVE GROUNDING SYSTEM.

11. PROVIDE ALL BOXES FOR PROPOSED OUTLETS, SWITCHES, CIRCUIT BREAKERS, ETC. WITH GROUNDING SCREWS. PROVIDE ALL PANELBOARD, SWITCHGEAR, ETC., ENCLOSURES WITH GROUNDING BARS WITH INDIVIDUAL SCREWS, LUGS, CLAMPS, ETC., FOR EACH OF THE GROUNDING CONDUCTORS THAT ENTER THEIR RESPECTIVE ENCLOSURES.

12. EACH FEEDER CIRCUIT AND/OR BRANCH CIRCUIT SHALL INCLUDE AN EQUIPMENT GROUND WIRE. METAL RACEWAY OR CONDUIT SHALL NOT MEET THIS REQUIREMENT. THE EQUIPMENT GROUND WIRE FROM EQUIPMENT SHALL NOT BE SMALLER THAN ALLOWED BY 2005 NEC TABLE 250-122 "MINIMUM SIZE CONDUCTORS OR GROUNDING RACEWAY AND EQUIPMENT." WHEN CONDUCTORS ARE ADJUSTED IN SIZE TO COMPENSATE FOR VOLTAGE DROP, EQUIPMENT-GROUNDING CONDUCTORS SHALL BE ADJUSTED PROPORTIONATELY ACCORDING TO CIRCULAR MIL AREA. ALL EQUIPMENT GROUND WIRES SHALL BE COPPER, EITHER BARE OR INSULATED GREEN IN COLOR. WHERE THE EQUIPMENT GROUNDING CONDUCTORS ARE INSULATED, THEY SHALL BE IDENTIFIED BY THE COLOR GREEN, AND SHALL BE THE SAME INSULATION TYPE AS THE PHASE CONDUCTORS.

13. ALL EXTERIOR METAL CONDUIT, WHERE NOT ELECTRICALLY CONTINUOUS BECAUSE OF MANHOLES, HANDHOLES, NON-METALLIC JUNCTION BOXES, ETC., SHALL BE BONDED TO ALL OTHER METAL CONDUIT IN THE RESPECTIVE DUCT RUN, AND AT EACH END, WITH A COPPER-BONDING JUMPER SIZED IN CONFORMANCE WITH 2005 NEC 250-102. WHERE METAL CONDUITS TERMINATE IN AN ENCLOSURE (SUCH AS A MOTOR CONTROL CENTER, SWITCHBOARD, ETC) WHERE THERE IS NOT ELECTRICAL CONTINUITY WITH THE CONDUIT AND THE RESPECTIVE ENCLOSURE, PROVIDE A BONDING JUMPER FROM THE RESPECTIVE ENCLOSURE GROUND BUS TO THE CONDUIT SIZED PER 2005 NEC 250-102.

14. IT IS THE INTENT OF THIS SPECIFICATION THAT ALL MOTOR FRAMES, PUMP BASES ELECTRICAL EQUIPMENT ENCLOSURES, PANEL HOUSINGS, CONDUITS, BOXES, ETC. HAVE A CONTINUOUS COPPER WIRE GROUND CONNECTION AND SHALL BE POSITIVELY BONDED TO THE RESPECTIVE GROUNDING SYSTEM. CONDUIT CONNECTORS WILL NOT BE CONSIDERED AS ADEQUATE GROUNDING.

15. PROVIDE A POSITIVE GROUND BOND FOR ALL OUTLET BOXES, ELECTRICAL EQUIPMENT ENCLOSURES, GROUNDING RECEPTACLES, TOGGLE SWITCHES, ETC. INSTALL A GROUNDING CONDUCTOR IN ALL WIRE AND CABLE RACEWAYS. GROUND CONDUCTOR TO HAVE 600-VOLT INSULATION AND BE IDENTIFIED BY A CONTINUOUS GREEN COLOR COATING. THEY SHALL BE USED SOLELY FOR GROUNDING PURPOSES AND BE ENTIRELY SEPARATE FORM WHITE GROUNDED NEUTRAL CONDUCTOR, EXCEPT AT SUPPLY SIDE OF SERVICE DISCONNECTING MEANS, WHERE GROUNDING AND NEUTRAL SYSTEMS ARE TO BE CONNECTED TO SERVICE GROUND.

16. EACH AND ALL GROUNDED CASED AND METAL PARTS ASSOCIATED WITH ELECTRICAL EQUIPMENT SHALL BE TESTED FOR CONTINUITY OF CONNECTION WITH GROUND BUS SYSTEM BY CONTRACTOR IN PRESENCE OF OWNER'S REPRESENTATIVE.

17. ALL CONNECTIONS BETWEEN THE DIFFERENT TYPES OF GROUNDING CONDUCTORS ABOVE GRADE SHALL BE MADE USING BOLTED GROUND CONNECTORS. GROUND LUGS SHALL BE PROVIDED IN ALL ENCLOSURES AND WIRING TERMINATION JUNCTION BOXES. EQUIPMENT GROUNDS AND GROUNDING CONDUCTOR SHALL BE CONNECTED TO THESE GROUND LUGS. FOR GROUND CONNECTIONS TO ENCLOSURES, CASES AND FRAMES OF ELECTRICAL EQUIPMENT NOT SUPPLIED WITH GROUND LUGS THE CONTRACTOR SHALL DRILL REQUIRED HOLES FOR MOUNTING A BOLTED GROUND CONNECTOR. ALL BOLTED GROUND CONNECTORS SHALL BE BURNDY, OR EQUAL.

18. BOND ALL NONCURRENT-CARRYING PARTS OF METAL EQUIPMENT TO GROUND SYSTEM.

19. BUILDING STRUCTURAL STEEL SYSTEM SHALL BE BONDED TO ELECTRICAL GROUND SYSTEM.

20. INSTALL GROUNDING ELECTRODE CONDUCTORS, LIGHTNING PROTECTION DOWN CONDUCTORS AND SEPARATE GROUND CONDUCTORS IN SCHEDULE 40 OR SCHEDULE 80 PVC CONDUIT OR EXPOSED WHERE ACCEPTABLE TO LOCAL CODES. WHERE GROUNDING ELECTRODE CONDUCTORS, LIGHTNING PROTECTION DOWN CONDUCTORS OR INDIVIDUAL GROUND CONDUCTORS ARE RUN IN PVC CONDUIT, DO NOT COMPLETELY ENCIRCLE CONDUIT WITH FERROUS AND/OR MAGNETIC MATERIALS. USE NON-METALLIC REINFORCED FIBERGLASS STRUT SUPPORT. WHERE METAL CONDUIT CLAMPS ARE INSTALLED, USE NYLON BOLTS, NUTS, WASHERS AND SPACERS TO INTERRUPT A COMPLETE METALLIC PATH FROM ENCIRCLING THE CONDUIT. THIS IS REQUIRED TO AVOID GIRDLING OF GROUND CONDUCTORS. GIRDLING OF A GROUND CONDUCTOR IS THE RESULT OF PLACING THE CONDUCTOR IN A RING OF MAGNETIC MATERIAL. THIS RING COULD BE A METALLIC CONDUIT, U-BOLT OR STRUT SUPPORT PIPE CLAMP, OR OTHER SUPPORT HARDWARE. THE RESULT OF GIRDLING GROUND CONDUCTORS SIGNIFICANTLY INCREASES THE INDUCTIVE IMPEDANCE OF THE GROUND CONDUCTOR. INDUCTIVE AND CAPACITIVE IMPEDANCE IS A TYPE OF RESISTANCE THAT OPPOSES THE FLOW OF ALTERNATING CURRENT. ANY INCREASE IN THE IMPEDANCE OF A GROUND CONDUCTOR REDUCES ITS ABILITY TO EFFECTIVELY MITIGATE RADIO FREQUENCY NOISE IN THE GROUND SYSTEM. THE CONDITION WHERE A GROUND CONDUCTOR IS GIRDLED DURING A LIGHTNING STRIKE RESULTS IN PHENOMENA KNOWN AS SURGE IMPEDANCE LOADING. SURGE IMPEDANCE LOADING IS A RESULT OF VOLTAGE AND CURRENT REACHING 500,000 VOLTS AND 10,000 AMPS FOR A SHORT DURATION. GIRDLING FURTHER INCREASES THE IMPEDANCE AT LIGHTNING FREQUENCIES OF 100 KILOHERTZ TO 100 MEGAHERTZ. AT THESE POWER AND FREQUENCY LEVELS ANY INCREASE IN THE IMPEDANCE OF THE GROUND CONDUCTOR MUST BE CONTROLLED. DURING LIGHTNING DISCHARGE CONDITIONS A LOW INDUCTIVE IMPEDANCE PATH IS MORE IMPORTANT THAN A LOW DC RESISTANCE PATH.

21. IF LOCAL CODES DICTATE THAT INDIVIDUAL GROUNDING CONDUCTORS MUST BE RUN IN METAL CONDUIT OR RACEWAY, THEN THE CONDUIT OR RACEWAY MUST BE BONDED AT EACH END OF THE RUN WITH A BONDING JUMPER SIZED EQUAL TO THE INDIVIDUAL GROUNDING CONDUCTOR OR AS REQUIRED BY 2005 NEC 250-102. NOTE THIS DOES NOT APPLY TO AC EQUIPMENT GROUNDING CONDUCTORS RUN WITH AC CIRCUITS.

22. ALL MOTOR FRAMES SHALL HAVE AUXILIARY EXTERNAL GROUND BONDING CONDUCTORS (#4 COPPER MINIMUM) INSTALLED BETWEEN THE FRAME AND CONDUIT SYSTEM.

23. WHERE A CONFLICT IS DETERMINED WITH RESPECT TO GROUNDING REQUIREMENTS PER MANUFACTURER INSTALLATION INSTRUCTIONS, NEC, FAA-STD-19e, AND/OR THE CONTRACT DOCUMENTS, CONTACT THE RESIDENT ENGINEER FOR FURTHER DIRECTIONS.

BY	REVISION	DATE

DTMA

DEKALB TAYLOR MUNICIPAL AIRPORT

IL. PROJ.: DKB-3225 A.I.P. PROJ.: 3-17-0139-B37

HANSON PROJECT No. 803-06ELEC
Filename E-002.DWG
Scale NONE
Date 04/20/07

LAYOUT	KNL	03/20/07
DRAWN	MV	03/21/07
REVIEWED	CAH	03/29/07

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1525 S. Sixth Street
Springfield, Illinois 62703-2886
Offices Nationwide

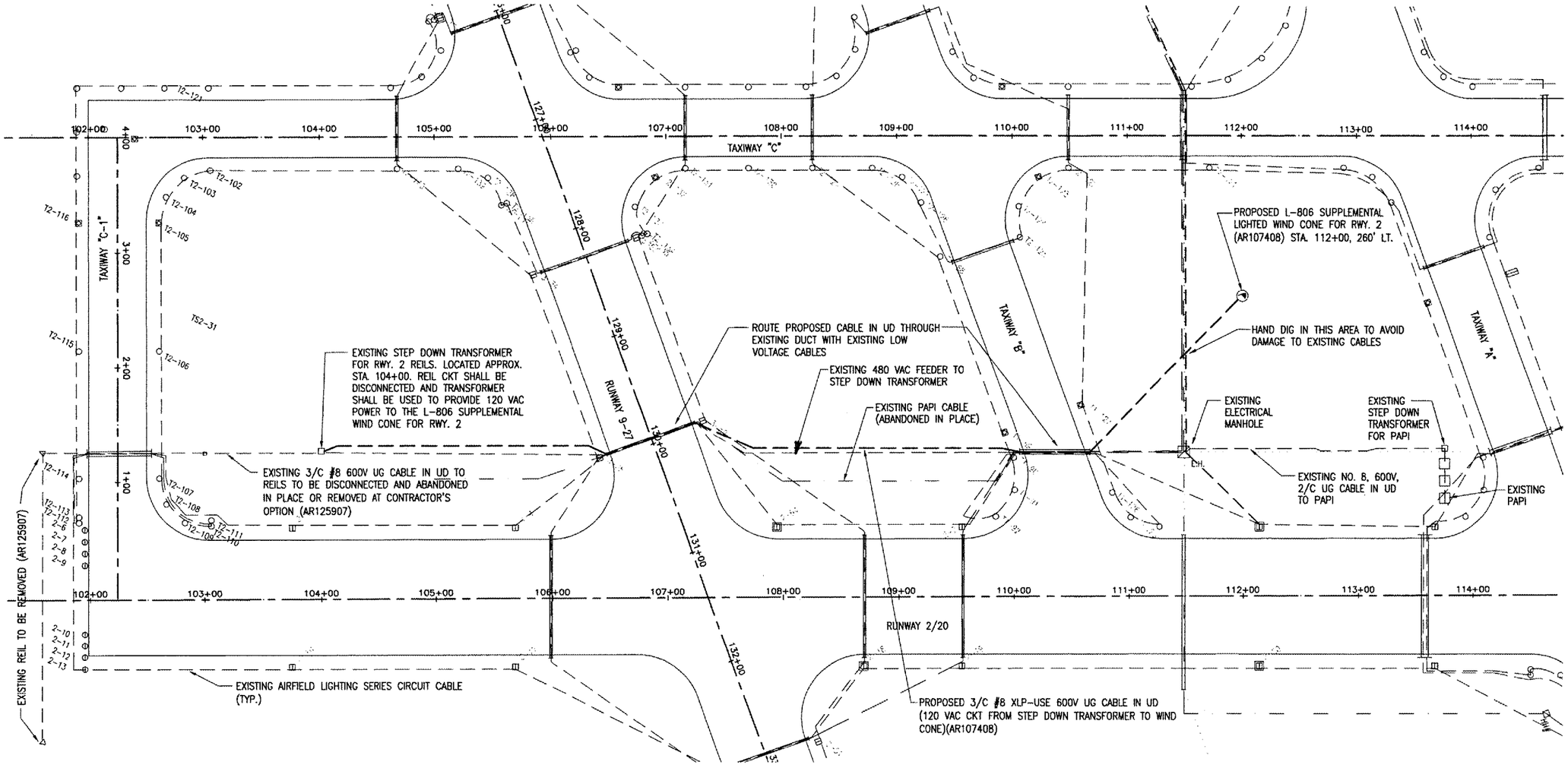
INSTALL MALSR & GLIDE SLOPE

GROUNDING NOTES

48

48 of 48 sheets

DK051



LEGEND

- EXISTING PAVEMENT
- EXISTING ELECTRICAL CABLES
- EXISTING REIL CABLE
- PROPOSED ELECTRICAL CABLES
- EXISTING BASE MOUNTED RUNWAY LIGHT
- EXISTING STAKE MOUNTED RUNWAY LIGHT
- EXISTING BASE MOUNTED TAXIWAY LIGHT
- EXISTING STAKE MOUNTED TAXIWAY LIGHT
- EXISTING THRESHOLD LIGHT
- EXISTING REILS
- PROPOSED WIND CONE
- EXISTING TAXI GUIDANCE SIGN
- EXISTING P.A.P.I.
- EXISTING ELECTRICAL DUCT

NOTES

1. THE EXISTING REILS ON RUNWAY END 2 SHALL BE REMOVED AND TURNED OVER TO THE AIRPORT. REIL REMOVAL SHALL BE COORDINATED WITH THE AIRPORT MANAGER. THE HOLES LEFT FROM THE REIL REMOVAL SHALL BE FILLED WITH EARTH AND COMPACTED TO PREVENT FUTURE SETTLEMENT. THE DISTURBED AREAS SHALL BE RESTORED, FERTILIZED, AND SEEDED IN ACCORDANCE WITH THE SUPPLEMENTAL SPECIFICATIONS & RECURRING SPECIAL PROVISIONS.

2. REMOVAL OF THE EXISTING REILS WILL BE PAID FOR UNDER ITEM AR125907 REMOVE REILS PER PAIR.

3. THE PROPOSED SUPPLEMENTAL LIGHTED WIND CONE SHALL BE INSTALLED AS SHOWN ON THIS SHEET, THE "WIND CONE DETAILS" SHEET AND IN ACCORDANCE WITH THE SPECIAL PROVISIONS.

4. THE INSTALLATION OF THE PROPOSED WIND CONE WILL BE COORDINATED WITH THE AIRPORT MANAGER.

5. THE INSTALLATION OF THE PROPOSED SUPPLEMENTAL LIGHTED WIND CONE AND ASSOCIATED CABLE IN UNIT DUCT WILL BE PAID FOR UNDER ITEM AR107408 L-806 WIND CONE 8' LIGHTED PER EACH.

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 THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES OF HIS OPERATIONAL PLANS AND SHALL OBTAIN FROM THE 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. THE ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY SUCH MAINS AND 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 1-800-892-0123.

0' 25' 50' 100'
SCALE: 1"= 50'

DATE | REVISION | BY

DEKALB TAYLOR MUNICIPAL AIRPORT
IL PROJ.: DKB-3225 A.I.P. PROJ.: 3-17-0139-837

HANSON PROJECT No. 803-06ELEC
Filename R-141ELE.DWG
Scale 1"= 50'
Date 07/24/07

LAYOUT	CAH	07/24/07
DRAWN	BAK	07/24/07
REVIEWED	CAH	07/24/07

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1525 South Sixth Street
Springfield, Illinois 62703-2888
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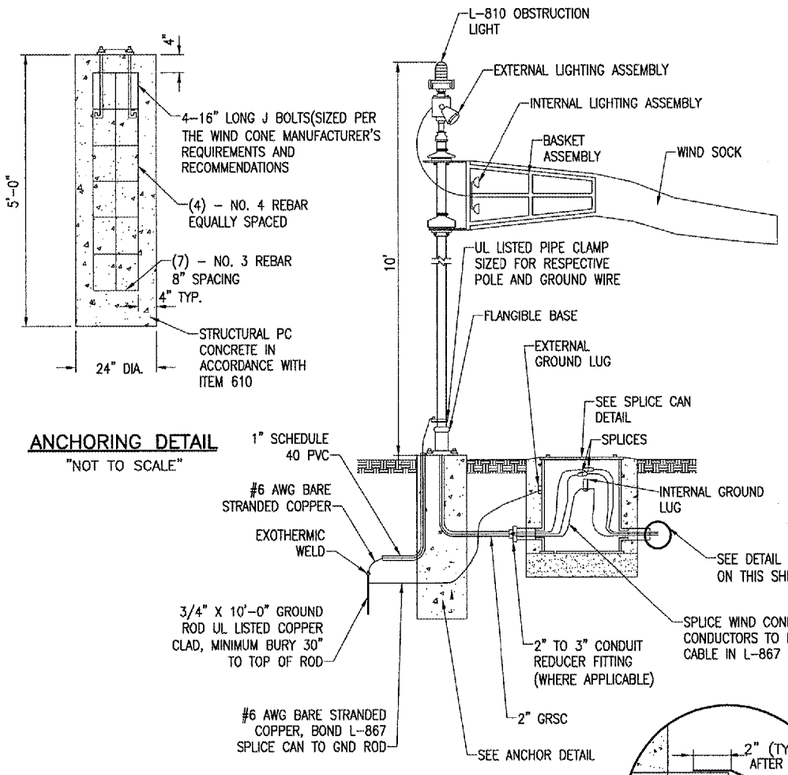
INSTALL MALSR & GLIDE SLOPE

PROPOSED WIND CONE ON RUNWAY END 2

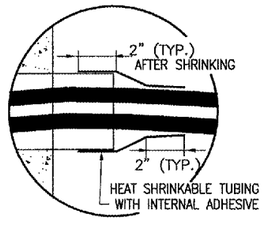
48A
48A of 48 sheets

JUL 25, 2007 9:46 AM BAK
I:\AIRPORTS\DEKALB\803-06ELEC\AIRPORT\SHEETS\AUTO-CADD SHEETS\R-141ELE.DWG - PROPOSED

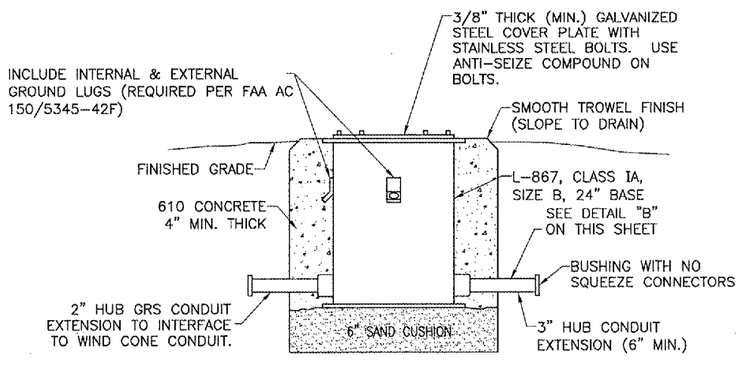


EXTERNALLY LIGHTED L806 WIND CONE
"NOT TO SCALE"

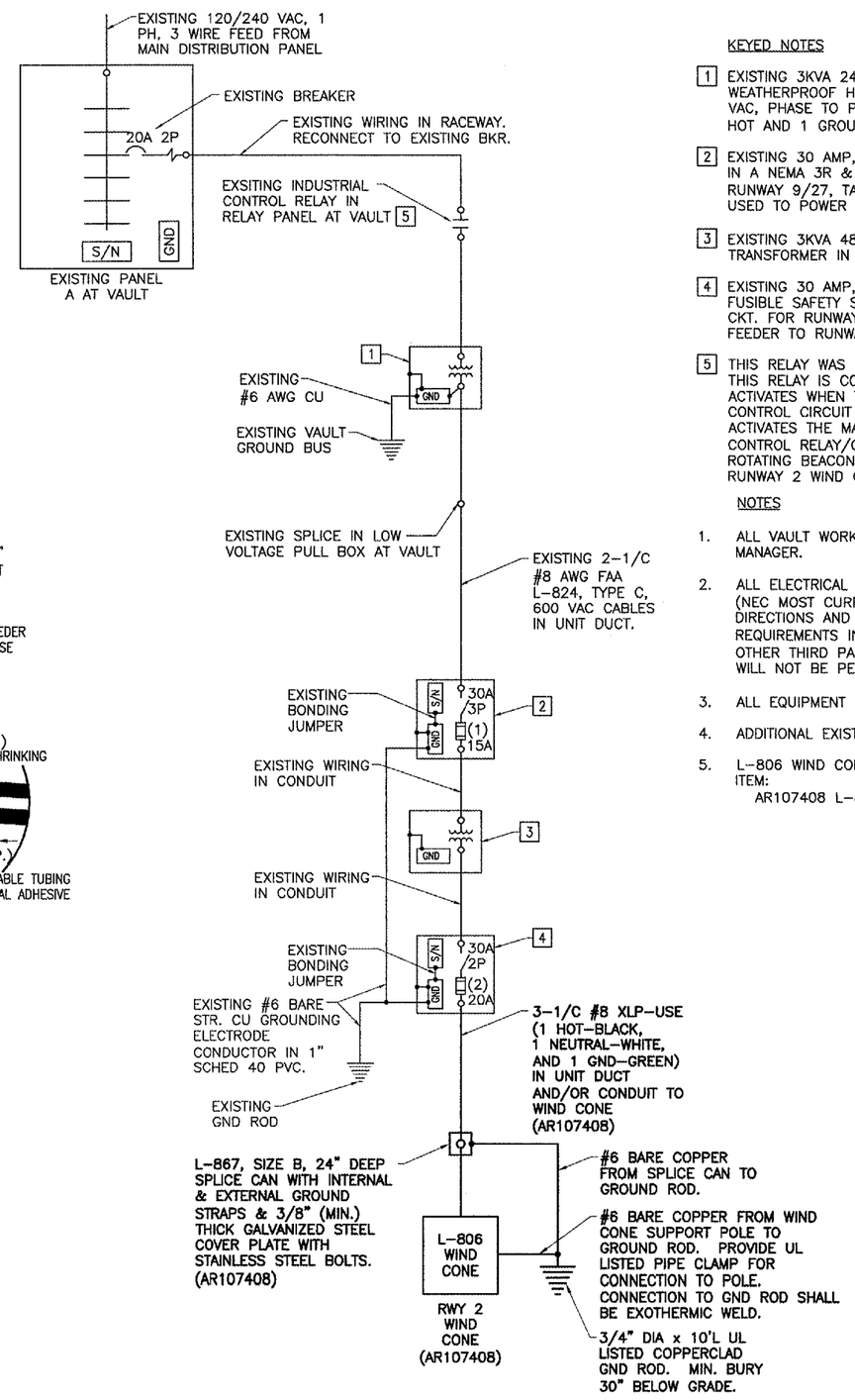
NOTE:
WIND CONE SHALL ALSO INCLUDE INTERNAL LIGHTING OPTION



DETAIL "B"
(NOT TO SCALE)



SPLICE CAN DETAIL FOR WIND CONE
(NOT TO SCALE)



ELECTRICAL ONE LINE DIAGRAM
RWY 2 SUPPLEMENTAL WIND CONE

KEYED NOTES

[1] EXISTING 3KVA 240 VAC TO 480 VAC, 1 PHASE, 2 WIRE STEP UP TRANSFORMER IN A WEATHERPROOF HOUSING, ACME CAT. NO. T-2-53013-S. SECONDARY IS WIRED 480 VAC, PHASE TO PHASE WITH ONE SECONDARY LEAD BONDED TO GROUND. OUTPUT IS 1 HOT AND 1 GROUNDED (NEUTRAL) CONDUCTOR. (PREVIOUSLY FOR RUNWAY 2 REILS)

[2] EXISTING 30 AMP, 3 POLE, 600 VAC, UL LISTED HEAVY DUTY FUSIBLE SAFETY SWITCH IN A NEMA 3R & 12 ENCLOSURE, LOCATED IN THE AREA BETWEEN TAXIWAY C-1, RUNWAY 9/27, TAXIWAY C, & RUNWAY 2/20. THIS SAFETY SWITCH WAS PREVIOUSLY USED TO POWER THE REILS ON RUNWAY END 2.

[3] EXISTING 3KVA 480 VAC TO 120/240 VAC, 1 PHASE, 3 WIRE, 60HZ STEP DOWN TRANSFORMER IN A WEATHERPROOF HOUSING, ACME CAT. NO. T-2-53013-S.

[4] EXISTING 30 AMP, 2 POLE WITH SOLID NEUTRAL, 240VAC, UL LISTED HEAVY DUTY FUSIBLE SAFETY SWITCH IN A NEMA 3R & 12 ENCLOSURE. DISCONNECT EXISTING 240V CKT. FOR RUNWAY 2 REILS. CONNECT PHASE A, NEUTRAL, & GROUND TO 120 VAC FEEDER TO RUNWAY 2 WIND CONE.

[5] THIS RELAY WAS PREVIOULSY USED TO CONTROL THE RUNWAY 2 REILS. CONTROL FOR THIS RELAY IS CONNECTED TO THE INTERFACE PANEL FOR RUNWAY 2-20 AND ACTIVATES WHEN THE RUNWAY LIGHTS ARE AT 100% BRIGHTNESS. RECONNECT THE CONTROL CIRCUIT TO ACTIVATE THE RUNWAY 2 WIND CONE BY THE PHOTOCELL THAT ACTIVATES THE MAIN L-807 WIND CONE AND THE AIRPORT ROTATING BEACON. THE CONTROL RELAY/CONTACTOR FOR THE MAIN L-807 WIND CONE & THE AIRPORT ROTATING BEACON ARE LOCATED IN THE SAME RELAY PANEL AS THE RELAY FOR THE RUNWAY 2 WIND CONE.

NOTES

1. ALL VAULT WORK AND/OR POWER OUTAGES SHALL BE COORDINATED WITH THE AIRPORT MANAGER.
2. ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN CONFORMANCE WITH NFPA 70 (NEC MOST CURRENT ISSUE IN FORCE), THE RESPECTIVE EQUIPMENT MANUFACTURER'S DIRECTIONS AND ALL OTHER APPLICABLE LOCAL CODES, LAWS, ORDINANCES AND REQUIREMENTS IN FORCE. ANY INSTALLATIONS WHICH VOID THE U.L. LISTING (OR OTHER THIRD PARTY LISTING) AND/OR THE MANUFACTURER'S WARRANTY OF A DEVICE WILL NOT BE PERMITTED.
3. ALL EQUIPMENT NOT LABELED AS "EXISTING" IS NEW.
4. ADDITIONAL EXISTING CIRCUITS NOT SHOWN FOR CLARITY.
5. L-806 WIND CONE AND ASSOCIATED CABLE & VAULT WORK WILL BE PAID FOR UNDER ITEM:
   AR107408 L-806 WIND CONE-8' LIGHTED ____ PER EACH.

LEGEND PLATE SCHEDULE	
DEVICE	**LABEL**
INDUSTRIAL CONTROL RELAY AT THE VAULT THAT CONTROLS RUNWAY 2 WIND CONE (PREVIOUSLY FOR RUNWAY 2 REILS)	RUNWAY 2 WIND CONE
STEP-UP TRANSFORMER IN THE VAULT FOR THE RUNWAY 2 WIND CONE (PREVIOUSLY FOR RUNWAY 2 REILS)	STEP-UP XFMR RUNWAY 2 WIND CONE 240V TO 480V
PRIMARY DISCONNECT FOR STEP-DOWN TRANSFORMER THAT SERVES THE RUNWAY 2 WIND CONE (PREVIOUSLY FOR RUNWAY 2 REILS)	STEP-DOWN XFMR DISCONNECT, 480V FED FROM VAULT
STEP-DOWN TRANSFORMER FOR THE RUNWAY 2 WIND CONE (PREVIOUSLY FOR RUNWAY 2 REILS)	STEP-DOWN XFMR RUNWAY 2 WIND CONE 480V TO 120/240V
SECONDARY DISCONNECT FOR STEP-DOWN TRANSFORMER THAT SERVES THE RUNWAY 2 WIND CONE (PREVIOUSLY FOR RUNWAY 2 REILS)	RUNWAY 2 WIND CONE DISCONNECT 120/240 VAC

NOTE: LEGEND PLATES SHALL BE WEATHERPROOF ENGRAVED PLASTIC OR PHENOLIC MATERIAL, 1/4" HIGH WHITE LETTERS ON A RED BACKGROUND UNLESS NOTED OTHERWISE. SECURE WITH WEATHERPROOF ADHESIVE OR MACHINE SCREWS. FURNISH ADDITIONAL LEGEND PLATES WHERE REQUIRED BY CODE, FOR ADDITIONAL EQUIPMENT, AS DETAILED HEREIN ON THE PLANS, AND AS NOTED IN THE SPECIAL PROVISION SPECIFICATIONS.

BY	REVISION	DATE

DEKALB TAYLOR MUNICIPAL AIRPORT
A.I.P. PROJ.: 3-17-0139-B37
IL. PROJ.: DKB-3225

HANSON PROJECT No. 803-06ELEC
Filename R-541ELE.DWG
Scale NOT TO SCALE
Date 07/24/07

LAYOUT	KNL	07/24/07
DRAWN	BAK	07/24/07
REVIEWED	CAH	07/24/07

HANSON
Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62703-2886
Offices Nationwide

DEKALB AIRPORT IMPROVEMENTS

WIND CONE DETAILS

48B
48B of 48 sheets

JUL 25, 2007 10:32 AM BAK
I:\AIRPORTS\DEKALB\803-06ELEC\AIRPORT\SHEETS\AUTO-CADD SHEETS\R-541ELE.DWG - PROPOSED