6A

GA006
TOTAL SHEETS = 5

CONSTRUCTION PLANS
FOR
GALESBURG MUNICIPAL AIRPORT

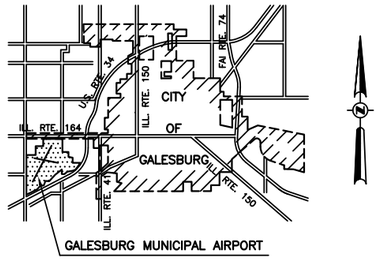
GALESBURG, KNOX COUNTY, ILLINOIS

REPLACE ROTATING BEACON AND BEACON TOWER

SUMMARY OF QUANTITIES				
ITEM NO.	DESCRIPTION	UNIT	AS BID QUANTITY	AS BUILT QUANTITY
AR101510	AIRPORT ROTATING BEACON	EACH	1	
AR101900	BEACON REMOVAL	EACH	1	
AR103651	TUBULAR STEEL TOWER–51'	EACH	1	
AR103900	REMOVE BEACON TOWER	EACH	1	
AR108060	BEACON POWER CABLE INSTALLATION	L. SUM	1	
AR110314	4" STEEL DUCT, JACKED	LIN. FT.	70	

ILLINOIS PROJECT NO. GBG–3954
AIP PROJECT NO. 3–17–0047–B12

MARCH 19, 2010



VICINITY MAP

INDEX OF SHEETS	
NO.	DESCRIPTION
1	COVER SHEET
2	IMPROVEMENT AND SAFETY PLAN
3	BEACON TOWER LOCATION AND SITE PLAN
4–5	TYPICAL BEACON TOWER DETAILS

GARY L. HUTCHISON 36803 REGISTERED PROFESSIONAL ENGINEER STATE OF ILLINOIS

EXPIRES 11/30/2011
ENGINEER'S SEAL

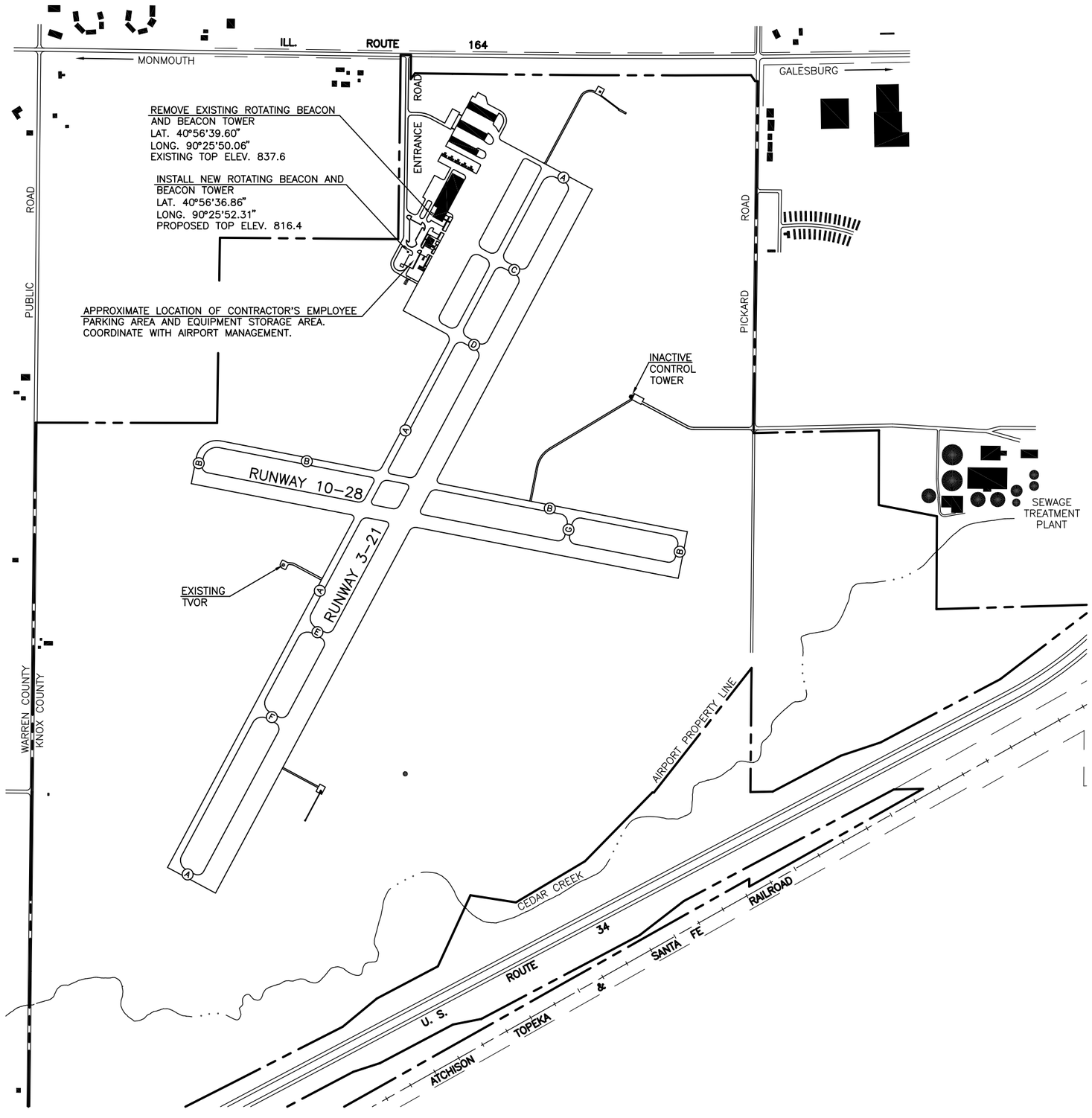
PLANS PREPARED BY :
HUTCHISON ENGINEERING, INC.
JACKSONVILLE, ILLINOIS

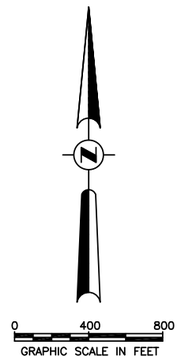
SUBMITTED Gary L Hutchison
DATE February 25, 2010

CITY OF GALESBURG, ILLINOIS

APPROVED Gary Cox — DIRECTOR OF PUBLIC WORKS
DATE MARCH 1, 2010
APPROVED Wayne E Aud — CITY ENGINEER
DATE MARCH 1, 2010

JOB NO. 2819
2819Y001 1=1





GENERAL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITY PROPERTY FROM CONSTRUCTION OPERATIONS. PRIOR TO STARTING WORK, THE CONTRACTOR SHALL CONTACT J.U.L.I.E. (JOINT UTILITY LOCATING INFORMATION FOR EXCAVATORS) PHONE 1-800-892-0123 TO ARRANGE FOR LOCATION OF UTILITIES IN THE WORK AREA. A MINIMUM OF FORTY-EIGHT HOURS ADVANCE NOTICE IS REQUIRED FOR NON-EMERGENCY WORK.

COUNTY	–	KNOX
CITY	–	GALESBURG
TOWNSHIP	–	T. 11 N. , R. 1 E. 4th P.M.
SECTION NO.	–	18 & 19

CONSTRUCTION PROCEDURE NOTES

1. ALL CONTRACTOR EMPLOYEES WILL PARK THEIR PERSONAL VEHICLES IN THE AREA DESIGNATED BY THE AIRPORT MANAGER FOR USE AS A VEHICLE PARKING AREA. ONLY AUTHORIZED CONTRACTOR VEHICLES WILL BE ALLOWED ON THE AIR OPERATIONS AREA OF THE AIRPORT. IT IS NOT ANTICIPATED THAT THE CONTRACTOR VEHICLES WILL BE OPERATING ON THE AIR OPERATIONS AREA WHEN PERFORMING WORK FOR THIS PROJECT.
2. THE CONTRACTOR SHALL FURNISH ALL EMPLOYEES WITH SOME TYPE OF TAG OR GARMENT TO IDENTIFY THEM AS BEING PART OF THE CONSTRUCTION CREW.
3. FLAGS WILL ONLY BE REQUIRED ON ANY CONTRACTOR'S VEHICLES AND EQUIPMENT OPERATED IN THE AIRPORT OPERATIONS AREA. THE FLAGS SHALL BE THREE (3) FOOT SQUARE CHECKERED FLAGS (INTERNATIONAL ORANGE AND WHITE) DISPLAYED IN FULL VIEW ABOVE THE VEHICLE.
4. THE CONTRACTOR WILL USE THE DESIGNATED EQUIPMENT STORAGE AREA SHOWN ON THIS SHEET. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN THE EQUIPMENT STORAGE AREA FOR THE DURATION OF THE PROJECT. ANY DAMAGE TO EXISTING PAVEMENTS USED TO HAUL MATERIAL TO THE CONSTRUCTION SITE WILL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE TO THE SATISFACTION OF THE AIRPORT MANAGER AND THE RESIDENT ENGINEER.
5. THE CONTRACTOR SHALL FURNISH, MAINTAIN, AND REMOVE ALL BARRICADES REQUIRED TO DELINEATE THE WORK AREA AND KEEP VEHICLES FROM ENCROACHING INTO SAID WORK AREA. THIS REQUIREMENT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
6. CONSTRUCTION ACTIVITY CONTROL AND OPERATION AREA PROTECTION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH FAA ADVISORY CIRCULAR NO. 150/5370-2E.
7. THE MAXIMUM CONSTRUCTION EQUIPMENT HEIGHT UTILIZED ON THE AIRPORT FOR THIS PROJECT SHALL BE 85'.
8. THIS PROJECT CONSISTS OF WORK TO REPLACE ROTATING BEACON AND BEACON TOWER.
9. THIS PROJECT WILL DISTURB LESS THAN 1 ACRE OF LAND.

GALESBURG MUNICIPAL AIRPORT
GALESBURG, ILLINOIS

IMPROVEMENT AND SAFETY PLAN

HUTCHISON ENGINEERING, INC.
JACKSONVILLE, ILLINOIS

DRAWN BY: RLR	ILL. PROJ. NO. GBG-3954
DATE : FEBRUARY, 2010	AIP PROJ. NO. 3-17-0047-B12

28191002 1"=400'

CONTRACTOR TO INSTALL 3–NO. 8, 600V. TYPE C DIRECT BURIAL CABLE (POWER, NEUTRAL, GROUND) IN CONDUIT FROM BEACON CONTACTOR IN VAULT TO BELOW GRADE OUTSIDE ELECTRICAL VAULT. THEN CONTINUE UNDERGROUND THROUGH PROPOSED STEEL 4" DUCT TO BEACON TOWER AND UP TO ROTATING BEACON FOR BEACON POWER FEED. TO BE PAID FOR PER LUMP SUM FOR BEACON POWER CABLE INSTALLATION.

EXISTING AIRFIELD LIGHTING CABLES

EXISTING SANITARY SEWER

MAINTENANCE BUILDING

EBOX

AIRFIELD ELECTRICAL VAULT

TERMINAL BUILDING

FBO BUILDING

EXISTING GROUND FIELD

EXISTING UNDERGROUND TELEPHONE LINE

EXISTING UNDERGROUND ELECTRICAL DUCT

EXISTING UNDERGROUND ELECTRICAL DUCT

BITUMINOUS PAVEMENT

EXISTING UNDERGROUND ELECTRICAL DUCT

EXISTING STORM SEWER

EXISTING STORM SEWER

EXIST. PVMT. ELEV. 758.99

10'

16'

4'

4'

CONC. PVMT.

PP

PP

PP

REMOVE EXISTING BEACON AND STRUCTURAL STEEL BEACON TOWER (APPROXIMATE HEIGHT TO TOP OF PLATFORM RAIL = 75'±) SEE APPLICABLE NOTES THIS SHEET FOR DESCRIPTION OF WORK

PROPOSED SINGLE 4" STEEL DUCT JACKED UNDER PAVEMENT W/DUCT MARKERS 70 LIN. FT.

INSTALL NEW TYPE L–802A AIRPORT ROTATING BEACON AND 51' NOMINAL HEIGHT TUBULAR STEEL BEACON TOWER WITH CONCRETE FOOTING FOUNDATION. TOP OF FOOTING ELEVATION 760.00

B.M.
N.E. FLANGE BOLT ON FIRE HYDRANT
ELEV. 758.77

FH

0 20 40
GRAPHIC SCALE IN FEET

EXISTING BEACON AND BEACON TOWER REMOVAL NOTES

1. CONTRACTOR TO REMOVE EXISTING ROTATING BEACON AND TRANSPORT IT TO A STORAGE LOCATION ON THE AIRPORT DESIGNATED BY THE AIRPORT MANAGEMENT. BEACON TO REMAIN PROPERTY OF THE AIRPORT.
2. CONTRACTOR TO REMOVE THE BEACON POWER FEED WIRES AND CONDUIT, METER AND SOCKET, DISCONNECT SWITCH, ETC. FROM SIDE OF FBO BUILDING. COORDINATE WITH AMEREN–IP FOR REMOVAL OF SERVICE CONNECTION BY AMEREN–IP AND RETURN EXISTING METER TO AMEREN–IP. COST OF THIS WORK TO BE CONSIDERED INCIDENTAL TO THE CONTRACT.
3. CONTRACTOR TO REMOVE EXISTING STRUCTURAL STEEL BEACON TOWER AND DISPOSE OF IT OFF THE AIRPORT PROPERTY.
4. CONTRACTOR TO REMOVE THE CONCRETE BASES FOR THE BEACON TOWER LEGS AND ACCESS LADDER TO A DEPTH OF 2'–0" BELOW GRADE, FILL THE HOLES WITH CLEAN DIRT AND RESEED THE FILLED HOLES. COST OF THIS WORK TO BE INCLUDED IN THE COST TO REMOVE BEACON TOWER.

GENERAL NOTES

1. THE APPROXIMATE LOCATION OF UNDERGROUND CABLES AS INDICATED IN THESE PLANS HAS BEEN OBTAINED FROM EXISTING RECORDS. NEITHER THE OWNER NOR THE ENGINEER ASSUMES ANY RESPONSIBILITY IN RESPECT TO THE ACCURACY OR SUFFICIENCY OF THE INFORMATION AND THERE IS NO GUARANTEE, EITHER EXPRESSED OR IMPLIED, THAT THE CONDITIONS INDICATED ARE REPRESENTATIVE OF THOSE TO BE ENCOUNTERED IN THE CONSTRUCTION.
2. THE APPROXIMATE LOCATION OF VARIOUS UNDERGROUND ELECTRICAL CABLES IS SHOWN FOR THE CONTRACTOR'S INFORMATION. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE THE EXISTING CABLES IN THE WORK AREAS AND MAKE HIS OWN DETERMINATION AS TO THE NUMBER OF CABLES EXISTING IN SAID AREAS AND AS TO THE CIRCUIT THAT THE CABLES ARE ASSOCIATED WITH. CAUTION SHALL BE EXERCISED WHEN TRENCHING, EXCAVATING DUCT ENDS, ETC. TO AVOID CUTTING THE EXISTING CIRCUIT CABLES. ANY EXISTING CABLE DAMAGED SHALL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE.
3. ALL WORK AND MATERIALS REQUIRED TO PROVIDE AND INSTALL THE POWER FEED CABLES FROM THE POWER SOURCE IN THE ELECTRICAL VAULT TO THE NEW BEACON SHALL BE INCLUDED IN THE LUMP SUM PRICE FOR BEACON POWER CABLE INSTALLATION. THIS PRICE SHALL INCLUDE ALL CABLE, CONDUIT, CABLE TRENCHES AND INSTALLATION, AND CONNECTIONS.

GALESBURG MUNICIPAL AIRPORT
GALESBURG, ILLINOIS

BEACON TOWER LOCATION AND SITE PLAN

HUTCHISON ENGINEERING, INC.
JACKSONVILLE, ILLINOIS

DRAWN BY: R.L.R.	ILL. PROJ. NO. GBG–3954
DATE : FEBRUARY, 2010	AIP PROJ. NO. 3–17–0047–B12

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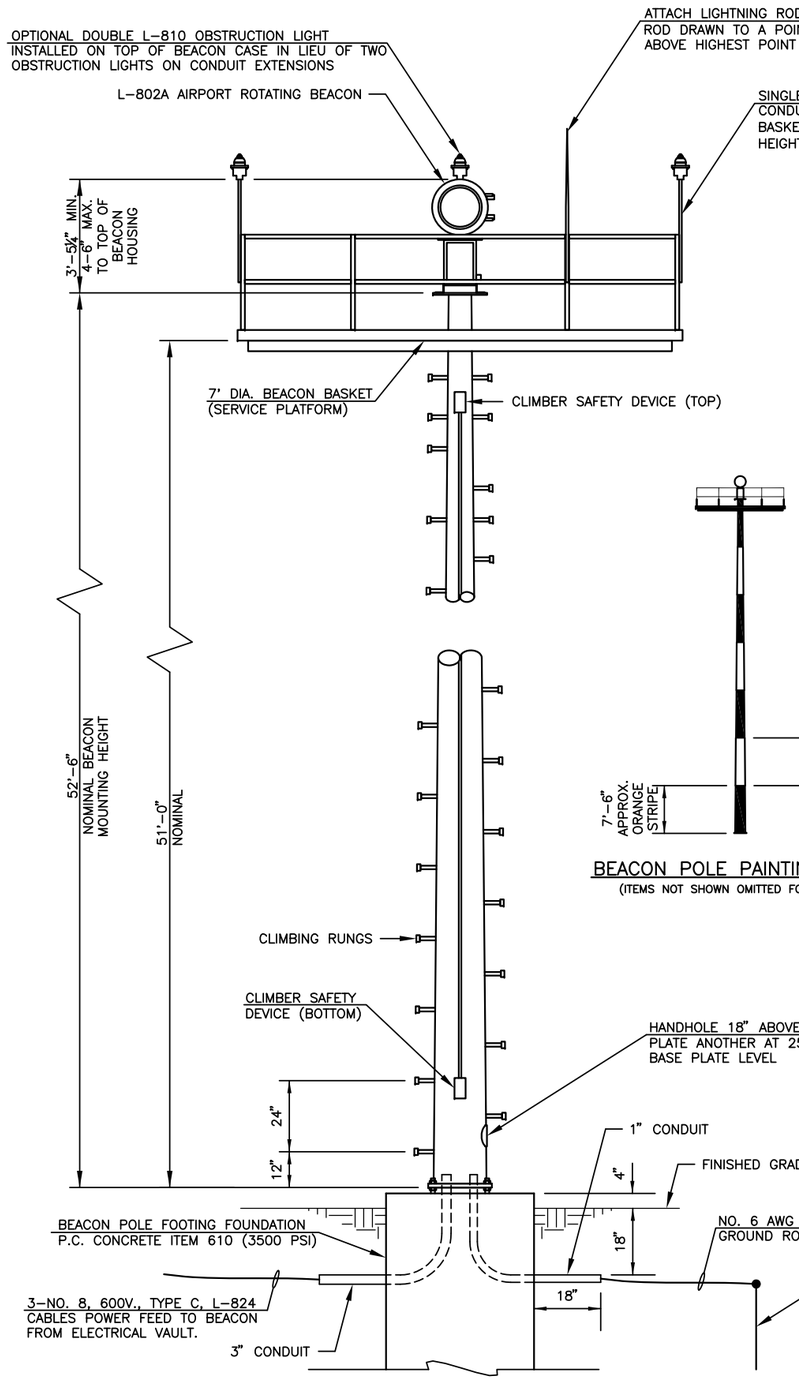
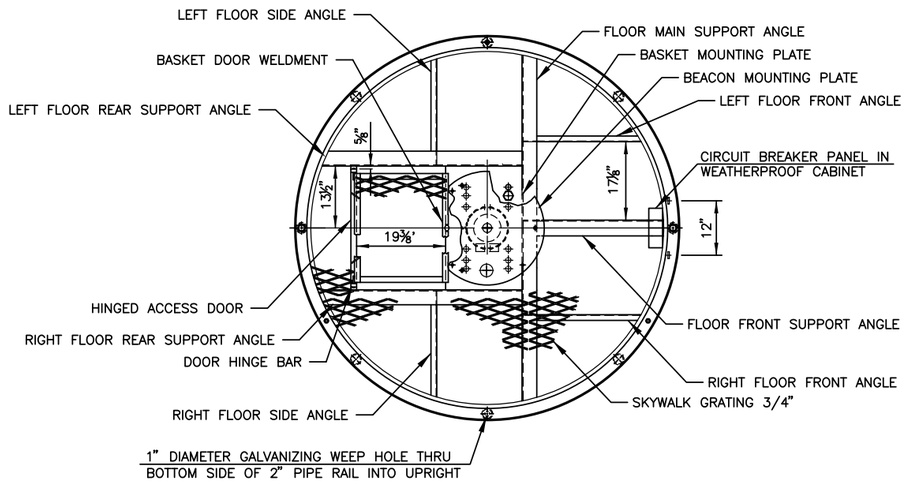


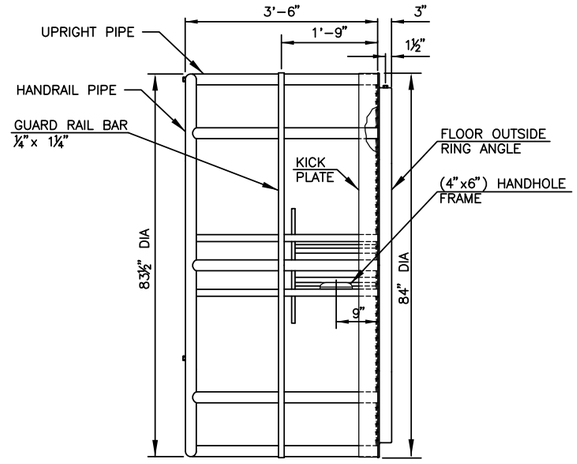
TUBULAR STEEL AIRPORT BEACON TOWER

NOT TO SCALE

BEACON POLE PAINTING DETAIL

(ITEMS NOT SHOWN OMITTED FOR CLARITY)





7' DIAMETER BEACON BASKET (SERVICE PLATFORM)

NOT TO SCALE

NOTES:

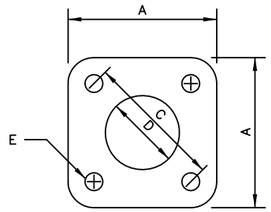
1. BEACON TOWER SHAFT MATERIAL TO BE HIGH STRENGTH, LOW ALLOY STEEL WITH 60,000 PSI MINIMUM YIELD STRENGTH.
2. DESIGN CRITERIA–100 MPH MINIMUM WIND SPEED WITH 1.3 GUST FACTOR.
3. BEACON TOWER FINISH TO BE HOT DIP GALVANIZED, FINISH PAINTED ALTERNATING ORANGE AND WHITE STARTING WITH ORANGE AND ENDING IN ORANGE.
4. INSTALL DOUBLE STEPS AT HEIGHTS OF 5', 2' AND 1' FROM TOWER TOP TO ASSIST ENTRY INTO SERVICE PLATFORM.
5. LIGHTNING ROD INSTALLED ON SERVICE PLATFORM TO BE COPPER OR COPPER–CLAD WITH UPPER END DRAWN TO A POINT.
6. ALL EXPOSED WIRING SHALL BE RUN IN GALVANIZED RIGID STEEL CONDUIT EXCEPT WHERE FLEXIBLE STEEL CONDUIT IS REQUIRED TO MAKE CONNECTION TO THE ELECTRICAL UNIT. NO CONDUIT SHALL BE INSTALLED ON TOP OF THE BEACON BASKET (SERVICE PLATFORM) FLOOR. RUN ALL CONDUIT UNDER THE FLOOR EXCEPT WHERE NECESSARY TO MAKE CONNECTION TO ELECTRICAL UNIT.
7. ALL STEEL USED IN THE CONSTRUCTION OF THIS ITEM SHALL BE OF 100 PERCENT DOMESTIC ORIGIN.
8. CONTRACTOR SHALL CONNECT THE TELL–TALE RELAY MECHANISM IN THE BEACON TO ENERGIZE THE TOWER OBSTRUCTION LIGHT CIRCUIT WHEN FAILURE OF THE BEACON SERVICE (PRIMARY) LAMP OCCURS.
9. BEACON TOWER INSTALLATION SHALL INCLUDE PROVIDING AND INSTALLING SAFETY CABLE AND MOUNTING BRACKET DEVICES, POLE CLIMBER SLEEVE, HOOK HARNESS AND LANYARD, ETC. ON THE TOWER, COMPLETE AND FUNCTIONAL, AS SAFETY CLIMBING KIT.
10. INSTALL CIRCUIT BREAKER PANEL IN WEATHERPROOF CABINET ON THE SERVICE PLATFORM RAILING TO PROVIDE A MEANS OF DISCONNECTING POWER TO THE BEACON AND OBSTRUCTION LIGHTS WHEN PERFORMING EQUIPMENT MAINTENANCE.

GALESBURG MUNICIPAL AIRPORT
GALESBURG, ILLINOIS

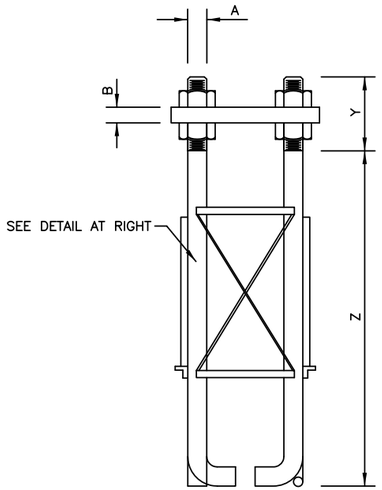
TYPICAL BEACON TOWER DETAILS

HUTCHISON ENGINEERING, INC.
JACKSONVILLE, ILLINOIS

DRAWN BY: R.L.R.	ILL. PROJ. NO. GBG–3954
DATE : FEBRUARY, 2010	AIP PROJ. NO. 3–17–0047–B12

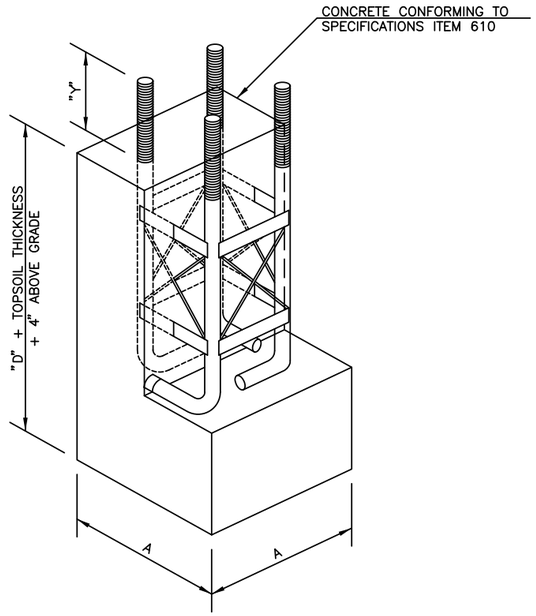


BASE PLATE



TYPICAL ANCHOR BOLT CLUSTER

CONDUITS ARE REQUIRED WITHIN THE FOUNDATION. THEY ARE INTENTIONALLY NOT SHOWN TO KEEP THE PERSPECTIVE VIEW OF THE ANCHOR BOLT CLUSTER LEGIBLE.



TYPICAL FOOTING DETAIL

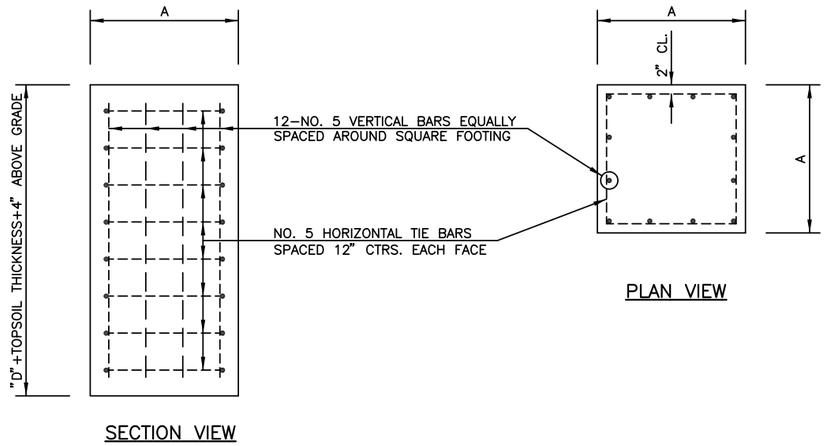
TABLES OF DESIGN REQUIREMENTS									
FOOTINGS					MAXIMUM LOADING CONDITIONS				
TYPE OF SOIL	SQUARE TYPICAL FOOTING DIM.		ROUND TYPICAL FOOTING DIM.			M FT. LBS	UNIT STRESS PSI	O.D. IN.	WALL THK. IN.
	"A"	"D"	"A"	"D"					
SANDY CLAY	2'–0"	5'–0"	27"	5'–0"		0	0	8	0.25"
MEDIUM CLAY	2'–2"	5'–6"	27"	5'–6"		3,635	2,850	9	0.25"
HARD CLAY	1'–10"	4'–0"	27"	4'–0"		8,765	5,265	10	0.25"
SOFT AND SILTY CLAYS	4'–0"	8'–0"	48"	8'–0"	51'–0"	15,580	8,430	11	0.25"
						24,260	11,000	12	0.25"
						34,900	13,400	13	0.25"
						35,920			0.25"

SQUARE FOOTING IN SOFT & SILTY CLAY SOILS APPLICABLE THIS PROJECT

TABLES OF DESIGN REQUIREMENTS									
ANCHORAGE									
HEIGHT OF BEACON	BASE PLATES					ANCHOR BOLTS			
	SIZE SQ "A"	THKN "B"	BOLT CIRCLE "C"	TOWER DIA. "D"	SIZE HOLE "E"	BOLT DIA. "X"	BOLT PROJ. "Y"	BOLT LG. "Z"	BOLT MAX. SPEC.
51'	19"	1–3/4"	19"	13"	1–7/8"	1–1/2"	7"	36"	1020

NOTES :

1. THE "D" DIMENSION SHOWN IN THE TABLE IS TO THE BOTTOM OF TOPSOIL. INCREASE "D" FOR THE THICKNESS OF TOPSOIL AND THE DESIRED HEIGHT OF FOOTING ABOVE GRADE.
2. MOMENT AT BOTTOM OF TOWER=35920 FT.–LBS.
3. DIMENSIONS FOR BASE PLATE, ANCHOR BOLTS, AND FOOTING CONFORM TO DIMENSIONS SHOWN ON THIS SHEET UNLESS SPECIFIED FOR SPECIAL SOIL CONDITIONS.
4. DIMENSIONS FOR FOOTING ARE MINIMUM DIMENSIONS.
5. DO NOT GROUT BETWEEN BASE PLATE AND FOOTING FOUNDATION SO AS TO ALLOW AIR TO FLOW THROUGH THE POLE TO PREVENT MOISTURE INSIDE THE POLE.
6. THE POLE MUST SHOW NO SIGNS OF LOCAL BUCKLING OR EVIDENCE OF FAILURE WHEN 2500 POUNDS IS APPLIED TRANSVERSELY TO THE TOP OF THE POLE WITH THE BOTTOM OF THE POLE SECURED. UPON RELEASE OF THE LOAD, POLE MUST RETURN TO ITS ORIGINAL LOCATION WITH NO PERMANENT SET IN THE POLE, E.G. DEFLECTION UPON RELEASE OF LOAD = 0.
7. THE DETAILS AND DIMENSIONS ON THIS SHEET ARE GENERAL IN NATURE AND MAY HAVE TO BE ADJUSTED IN ORDER TO MEET THE MORE SPECIFIC DIMENSIONS AND ANCHORAGE REQUIREMENTS OF THE BEACON POLE MANUFACTURER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE MORE SPECIFIC INFORMATION THAT WILL BE NECESSARY TO MEET THOSE REQUIREMENTS. THE CONTRACTOR SHALL SUBMIT THE BEACON POLE MANUFACTURER'S REQUIRED CONCRETE FOOTING AND POLE ANCHORAGE DETAILS TO THE PROJECT ENGINEER PRIOR TO COMMENCEMENT OF CONSTRUCTION.



SECTION VIEW

PLAN VIEW

TYPICAL REINFORCEMENT DETAILS
NOT TO SCALE

GALESBURG MUNICIPAL AIRPORT
GALESBURG, ILLINOIS

TYPICAL BEACON TOWER DETAILS

HUTCHISON ENGINEERING, INC.
JACKSONVILLE, ILLINOIS

DRAWN BY: R.L.R.	ILL. PROJ. NO. GBG–3954
DATE : FEBRUARY, 2010	AIP PROJ. NO. 3–17–0047–B12

2819\004 1"=1'