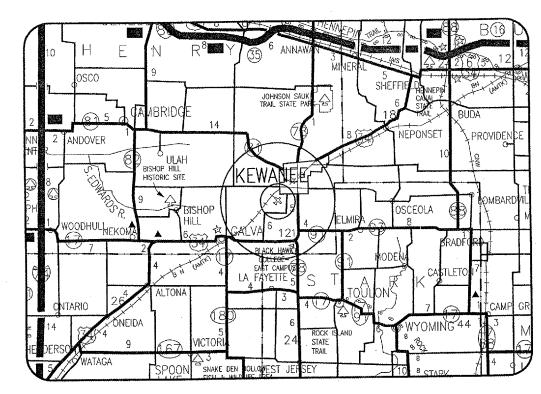
KE007 TOTAL SHEETS: 47

CONSTRUCTION PLANS FOR KEWANEE MUNICIPAL AIRPORT KEWANEE, HENRY COUNTY, ILLINOIS OVERLAY TAXIWAY "B", "C", AND THE APRON

SCOPE OF WORK

THE PROPOSED IMPROVEMENTS INCLUDE THE CONSTRUCTION OF A BITUMINOUS OVERLAY TO TAXIWAY "B" AND "C" AND THE WESTERN HALF OF THE AIRCRAFT APRON, INSTALLATION OF EDGE DRAINS ADJACENT TO THE SOUTHERN PORTION OF TAXIWAY "B", AND THE REHABILITATION OF THE TAXIWAY "B" AND "C" MEDIUM INTENSITY TAXIWAY LIGHTING (MITL) SYSTEM.



LOCATION

ILL. PROJ. EZI-3533 A.I.P. PROJ. 3-17-0058-B10

LATITUDE: 41° 12' 19" LONGITUDE: 89' 57' 50" ELEVATION: 858.0' M.S.L. DATE: APRIL 28, 2006



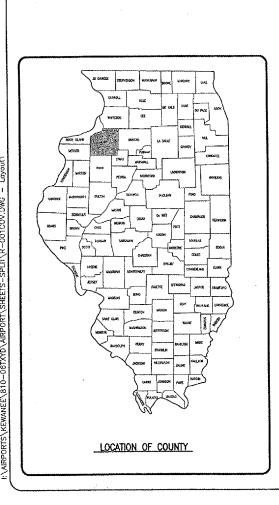
1	PLANS PREPARED BY:
	HANSON
ı	Hanson Professional Services Inc.
	AIRPORT ENGINEER
	Submitted by: A. C. ENG'R
	Date Submitted 4/27/06
	Lics. Exp. Date

KEWANEE AIRPORT AUTHORITY
Approved Kioland Deaburg CHAIRMAN
Date 1/19/06
Approved Joseph Wallman SECRETARY PRO TEM
Date 9/8/06
`



HANSON

OVERLAY TAXIWAYS AND APRON



SUMMARY OF QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	AS AWARDED QUANTITIES	AS BUILT QUANTITIES
AR108158	1/C #8 5KV UG CABLE IN UD	LF	5600	
AR110014	4" DIRECTIONAL BORE	LF	50	
AR125410	MITL-STAKE MOUNTED	EA	42	
AR125415	MITL-BASE MOUNTED	EA	8	
AR125445	TAXI GUIDANCE SIGN, 5 CHARACTER	EA	1	
AR125446	TAXI GUIDANCE SIGN, 6 CHARACTER	E,A	2	
AR125901	REMOVE STAKE MOUNTED LIGHT	EA	42	
AR125902	REMOVE BASE MOUNTED LIGHT	EA	8	
AR125904	REMOVE TAXI GUIDANCE SIGN	ΕA	3	
AR150510	ENGINEER'S FIELD OFFICE	LS	1	
AR150540	HAUL ROUTE	LS	1	
AR156511	DITCH CHECK	EA	2	
AR156520	INLET PROTECTION	EA	3	
AR201660	BITUMINOUS CRACK REPAIR	LF	2812	
AR401610	BITUMINOUS SURFACE COURSE	TON	1246	
AR401620	BIT. SURFACE COURSE, LEVELING	TON	800	
AR401655	BUTT JOINT CONSTRUCTION	SY	1778	
AR401910	REMOVE & REPLACE BIT. PAVEMENT	SY	489	
AR402622	POROUS FRICTION COURSE, 0.10'	SY	10,389	
AR501900	REMOVE PCC PAVEMENT	SY	29	
AR510510	TIE DOWN	EA	16	
AR510900	REMOVE TIE DOWN	EA	24	
AR603510	BITUMINOUS TACK COAT	GAL	4848	
AR620520	PAVEMENT MARKING - WATERBORNE	SF	3820	
AR620525	PAVEMENT MARKING - BLACK BORDER	SF	588	
AR705410	POROUS BACKFILL	CY	224	
AR705526	6" PERFORATED UNDERDRAIN W/SOCK	LF	1339	
AR705630	UNDERDRAIN INSPECTION HOLE	EA	5	
AR751909	REMOVE INSPECTION HOLE	EA	3	
AR751949	ADJUST INSPECTION HOLE	EA	9	
AR901510	SEEDING	AC	1,4	
AR905520	TOPSOILING (FROM OFF SITE)	CY	440	
AR908510	MULCHING	AC	1.4	

INDEX TO SHEETS DESCRIPTION NO. COVER SHEET SUMMARY OF QUANTITIES, INDEX TO SHEETS PROPOSED SAFETY PLAN PROPOSED PAVEMENT PREPARATION PLAN STA. 4+00 TO STA. 12+00 PROPOSED PAVEMENT PREPARATION PLAN STA. 12+00 TO STA. 20+00 KEWANEE MUNICIPAL AIRPORT KEWANEE, HENRY COUNTY, ILLINOIS PROPOSED PAVEMENT PREPARATION PLAN STA. 20+00 TO STA. 26+00 PROPOSED TYPICAL SECTIONS PROPOSED PLAN AND PROFILE TAXIWAY B STA. 7+00 TO STA. 21+00 PROPOSED PLAN AND PROFILE TAXIWAY B STA. 21+00 TO STA. 24+81.11 PROPOSED PLAN AND PROFILE TAXIWAY C STA. 100+00 TO STA. 102+96.21 PROPOSED STAKING PLAN STA. 4+00 TO STA, 12+00 PROPOSED STAKING PLAN STA. 12+00 TO STA. 20+00 PROPOSED STAKING PLAN STA. 20+00 TO STA. 26+00 PROPOSED DRAINAGE PLAN UNDERDRAIN NOTES AND DETAILS PROPOSED STORMWATER POLLUTION PREVENTION PLAN EXISTING TIE DOWN REMOVAL AND MARKING PLAN PROPOSED MARKING PLAN STA 4+00 TO STA. 12+00 PROPOSED MARKING PLAN STA. 12+00 TO STA. 20+00 PROPOSED MARKING PLAN STA, 20+00 TO STA, 26+00 EXISTING ELECTRICAL PLAN STA. 4+00 TO STA. 12+00 EXISTING ELECTRICAL PLAN STA. 12+00 TO STA. 20+00 EXISTING ELECTRICAL PLAN STA. 20+00 TO STA. 26+00 23 PROPOSED ELECTRICAL PLAN STA. 4+00 TO STA. 12+00 PROPOSED ELECTRICAL PLAN STA. 12+00 TO STA. 20+00 PROPOSED ELECTRICAL PLAN STA. 20+00 TO STA. 26+00 ELECTRICAL DETAILS 28 ELECTRICAL DETAILS ELECTRICAL NOTES ELECTRICAL NOTES PROPOSED APRON CROSS-SECTIONS STA. 7+02.28 TO STA. 7+18.12 PROPOSED APRON CROSS-SECTIONS STA. 7+50 TO STA. 8+00 PROPOSED APRON CROSS-SECTIONS STA. 8+50 TO STA. 9+00 PROPOSED APRON CROSS-SECTIONS STA. 9+29.35 TO STA. 9+64.87 PROPOSED APRON CROSS-SECTIONS STA. 9+79.35 TO STA. 10+19.35 PROPOSED TAXIWAY "B" CROSS-SECTIONS STA. 10+21.20 TO STA. 10+71.20 PROPOSED TAXIWAY "B" CROSS-SECTIONS STA. 11+00 TO STA. 12+50 38 PROPOSED TAXIWAY "B" CROSS—SECTIONS STA. 12+97.64 TO STA. 13+47.72
39 PROPOSED TAXIWAY "B" CROSS—SECTIONS STA. 14+22.72 TO STA. 15+00 HANSON 40 PROPOSED TAXIWAY "B" CROSS-SECTIONS STA. 15+50 TO STA. 17+00 PROPOSED TAXIWAY "B" CROSS-SECTIONS STA. 17+50 TO STA. 18+50 PROPOSED TAXIWAY "B" CROSS-SECTIONS STA. 19+00 TO STA. 20+50 PROPOSED TAXIWAY "B" CROSS-SECTIONS STA. 21+00 TO STA. 22+50 PROPOSED TAXIWAY "B" CROSS-SECTIONS STA. 23+00 TO STA. 24+22.63 PROPOSED TAXIWAY "B" CROSS-SECTIONS STA. 24+50 TO STA. 24+81.11 PROPOSED TAXIWAY "C" CROSS-SECTIONS STA. 100+30 TO STA. 101+00 PROPOSED TAXIWAY "C" CROSS-SECTIONS STA. 101+50 TO STA. 102+96.21 OVERLAY TAXIWAYS AND APRON SUMMARY OF QUANTITIES, INDEX TO SHEETS

KE007

O6TXYD\AIRPORT\SHEETS-SPLIT

2

2 of 47 sheet

SCOPE OF WORK

THE PROPOSED IMPROVEMENTS INCLUDE THE CONSTRUCTION OF A BITUMINOUS OVERLAY TO TAXIWAY "B" AND "C" AND THE WESTERN HALF OF THE AIRCRAFT APRON, INSTALLATION OF EDGE DRAINS ADJACENT TO THE SOUTHERN PORTION OF TAXIWAY "B", AND THE REHABILITATION OF THE TAXIWAY "B" AND "C" MEDIUM INTENSITY TAXIWAY LIGHTING (MITL)

CONTRACTOR'S RESPONSIBILITIES

THE CONTRACTOR MUST FOLLOW PROCEDURES ON THIS SHEET THAT ASSURES SAFE OPERATING CONDITIONS FOR AIRCRAFT AS WELL AS HIS PERSONNEL AND EQUIPMENT. THE AIRPORT MANAGER WILL AT ALL TIMES HAVE JURISDICTION OVER THE SAFETY OF AIR TRAFFIC DURING CONSTRUCTION.

IDENTIFICATION - THE CONTRACTOR IS REQUÍRED TO MARK ALL VEHICLES AND EQUIPMENT USED FOR CONSTRUCTION WITH 3 FT. SQUARE, INTERNATIONAL ORANGE AND WHITE CHECKERED FLAGS ANYTIME THEY ARE ON AIRPORT PROPERTY.

ALL CONTRACTOR PERSONNEL SHALL HAVE IDENTIFICATION MAKING IT OBVIOUS THAT THEY ARE A PART OF THE

THE CONTRACTOR, HIS EMPLOYEES, AND EQUIPMENT SHALL BE RESTRICTED TO THE PROJECT WORK AREA.

RADIO CONTROL - THE CONTRACTOR IS REQUIRED TO BE IN TWO-WAY RADIO CONTACT WITH THE KEWANEE MUNICIPAL AIRPORT UNICOM (122.80 MHZ) WHENEVER HIS PERSONNEL IS ON THE AIRPORT PROPERTY.

EQUIPMENT PARKING AND STORAGE - THE CONTRACTOR'S EQUIPMENT PARKING, MATERIAL STORAGE, AND EMPLOYEE PARKING WILL BE AT THE LOCATION SHOWN ON THIS DRAWING. ONLY VEHICLES AND EQUIPMENT NECESSARY FOR CONSTRUCTION WILL BE PERMITTED TO LEAVE THESE AREAS.

THE CONTRACTOR IS REQUIRED TO LIMIT THE USE OF CONSTRUCTION EQUIPMENT ON THE EXISTING PAVEMENTS. ONLY EQUIPMENT NEEDED TO COMPLETE THE SPECIFIC WORK ON THE EXISTING PAVEMENT WILL BE PERMITTED. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE TO EXISTING PAVEMENTS CAUSED BY HIS PERSONNEL OR

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 DETERMINED AT THE PRE-CONSTRUCTION MEETING.

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 ITEM: AR150510 ENGINEER'S FIELD OFFICE _____ 1 L.S.

WHEN RUNWAY 1-19 IS CLOSED AND CONSTRUCTION TRAFFIC IS REQUIRED TO CROSS THE OPEN RUNWAY, RUNWAY 9-27, THE CONTRACTOR WILL USE FLAG-MEN, EQUIPPED WITH RADIOS, TO DIRECT TRUCK TRAFFIC ACROSS RUNWAY THE FLAG-MEN MUST HAVE THE COMMUNICATION EQUIPMENT CAPABLE OF CHANGING FREQUENCIES TO CONTACT EACH OTHER AND THE AIRPORT UNICOM (122.80 MHZ). THE REQUIRED USE OF FLAGMEN WILL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

BARRICADES AND TRAFFIC CONES

ADDITIONAL COMPENSATION WILL BE ALLOWED.

J.U.L.I.E. INFORMATION

HENRY

KEWANEE

WETHERSFIELD

KEWANEE MUNICIPAL AIRPORT

KEWANEE, ILLINOIS 61443

3761 MIDLAND ROAD

COUNTY

TOWNSHIP

ADDRESS

SECTION NO. 17

EXISTING AIRPORT PROPERTY LINE

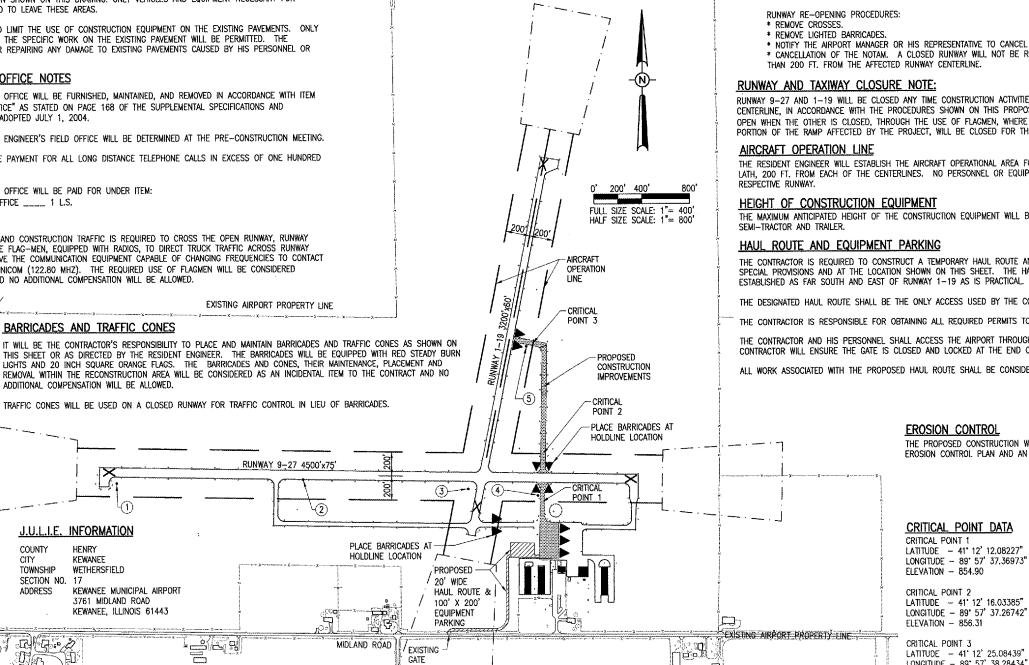
RUNWAY 9-27 4500'x75

GATE

HORIZONTAL AND VERTICAL DATA EASTING ELEV. 850.62 1,652,491,649 2,349,792.846 KEWPORT AZ (NGS) MARKER, ALUM. ROD 848.87 2 CHISELED "O" ON INSPECTION HOLE 854.13 1,652,431.715 2,352,728.103 3 KEWPORT (NGS) MARKER, ALUM. ROD 854,76 4 CHISELED "□" ON EAST END OF CONC. SIGN BASE 851.21 5 CHISELED "LI" ON WEST END OF CONC. SIGN BASE

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 INTERFRENCE 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.

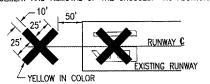
CALL J.U.L.I.E. FOR LITILITY INFORMATION AT 1-800-892-0123.



10°2 D

TEMPORARY RUNWAY CLOSURE NOTE

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 AS SHOWN ON THIS SHEET 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 RESPONSIBILE FOR THE PLACEMENT AND REMOVAL OF THE CROSSES. NO ADDITIONAL COMPENSATION TO THE CONTRACT WILL BE ALLOWED.



CROSSES MAY BE PLACED OVER THE NUMERALS OR OFF THE RUNWAY END

KE007

DETAIL OF CROSS FOR CLOSED RUNWAY

"NOT TO SCALE"

RUNWAY CLOSURE PROCEDURES:

- * CONTACT THE AIRPORT MANAGER OR HIS ASSIGNED REPRESENTATIVE.
- * ISSUANCE OF NOTAM BY THE AIRPORT MANAGER OR HIS ASSIGNED REPRESENTATIVE.
- * PLACEMENT OF CROSSES (SEE DETAIL THIS SHEET).
- * PLACEMENT OF LIGHTED BARRICADES. ONLY AT THE TIME THAT ALL OF THE ABOVE ARE COMPLETED MAY ANY CONSTRUCTION OPERATIONS WITHIN 200 FT. OF THE AFFECTED RUNWAY CENTERLINE BEGIN.
- * NOTIFY THE AIRPORT MANAGER OR HIS REPRESENTATIVE TO CANCEL THE NOTAM.
- * CANCELLATION OF THE NOTAM. A CLOSED RUNWAY WILL NOT BE RE-OPENED UNTIL ALL EQUIPMENT AND WORK ARE FURTHER THAN 200 FT. FROM THE AFFECTED RUNWAY CENTERLINE.

RUNWAY 9-27 AND 1-19 WILL BE CLOSED ANY TIME CONSTRUCTION ACTIVITIES ARE REQUIRED WITHIN 200' OF THE RESPECTIVE RUNWAY CENTERLINE, IN ACCORDANCE WITH THE PROCEDURES SHOWN ON THIS PROPOSED SAFETY PLAN. HOWEVER, ONE RUNWAY WILL REMAIN OPEN WHEN THE OTHER IS CLOSED, THROUGH THE USE OF FLAGMEN, WHERE NECESSARY. TAXIWAY "B" AND "C", AS WELL AS THE PORTION OF THE RAMP AFFECTED BY THE PROJECT, WILL BE CLOSED FOR THE DURATION OF THE PROJECT.

THE RESIDENT ENGINEER WILL ESTABLISH THE AIRCRAFT OPERATIONAL AREA FOR EACH OF THE AIRPORT RUNWAYS BY PLACING A ROW OF LATH, 200 FT. FROM EACH OF THE CENTERLINES. NO PERSONNEL OR EQUIPMENT WILL CROSS THE LATH ROW WITHOUT CLOSING THE

HEIGHT OF CONSTRUCTION EQUIPMENT

THE MAXIMUM ANTICIPATED HEIGHT OF THE CONSTRUCTION EQUIPMENT WILL BE 25 FT. THE TALLEST EQUIPMENT IS EXPECTED TO BE A

HAUL ROUTE AND EQUIPMENT PARKING

THE CONTRACTOR IS REQUIRED TO CONSTRUCT A TEMPORARY HAUL ROUTE AND EQUIPMENT PARKING AREA IN ACCORDANCE WITH THE SPECIAL PROVISIONS AND AT THE LOCATION SHOWN ON THIS SHEET. THE HAUL ROUTE AND EQUIPMENT PARKING AREA SHALL BE ESTABLISHED AS FAR SOUTH AND EAST OF RUNWAY 1-19 AS IS PRACTICAL.

THE DESIGNATED HAUL ROUTE SHALL BE THE ONLY ACCESS USED BY THE CONTRACTOR OR HIS EMPLOYEES.

THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS TO USE STATE, CITY, COUNTY, OR TOWNSHIP ROADS.

THE CONTRACTOR AND HIS PERSONNEL SHALL ACCESS THE AIRPORT THROUGH AN EXISTING GATE LOCATED OFF MIDLAND ROAD. THE CONTRACTOR WILL ENSURE THE GATE IS CLOSED AND LOCKED AT THE END OF EACH DAY.

ALL WORK ASSOCIATED WITH THE PROPOSED HAUL ROUTE SHALL BE CONSIDERED INCIDENTAL TO AR150540 - HAUL ROUTE.

LATITUDE - 41' 12' 25.08439"

LONGITUDE - 89° 57' 38.28434"

ELEVATION - 851.59

THE PROPOSED CONSTRUCTION WILL DISTURB MORE THAN 1 ACRES OF LAND, THEREFORE AN EROSION CONTROL PLAN AND AN NPDES PERMIT ARE REQUIRED.

LEGEND EXISTING IMPROVEMENTS **FXISTING BUILDING**

PROPOSED CONSTRUCTION IMPROVEMENTS

> PROPOSED EQUIPMENT/VEHICLE PARKING AREA & HAUL ROUTE

— — — EXISTING AIRPORT PROPERTY LINE LIGHTED BARRICADES

HORIZONTAL/VERTICAL CONTROL

HANSON

COUNTY, ILLINOIS

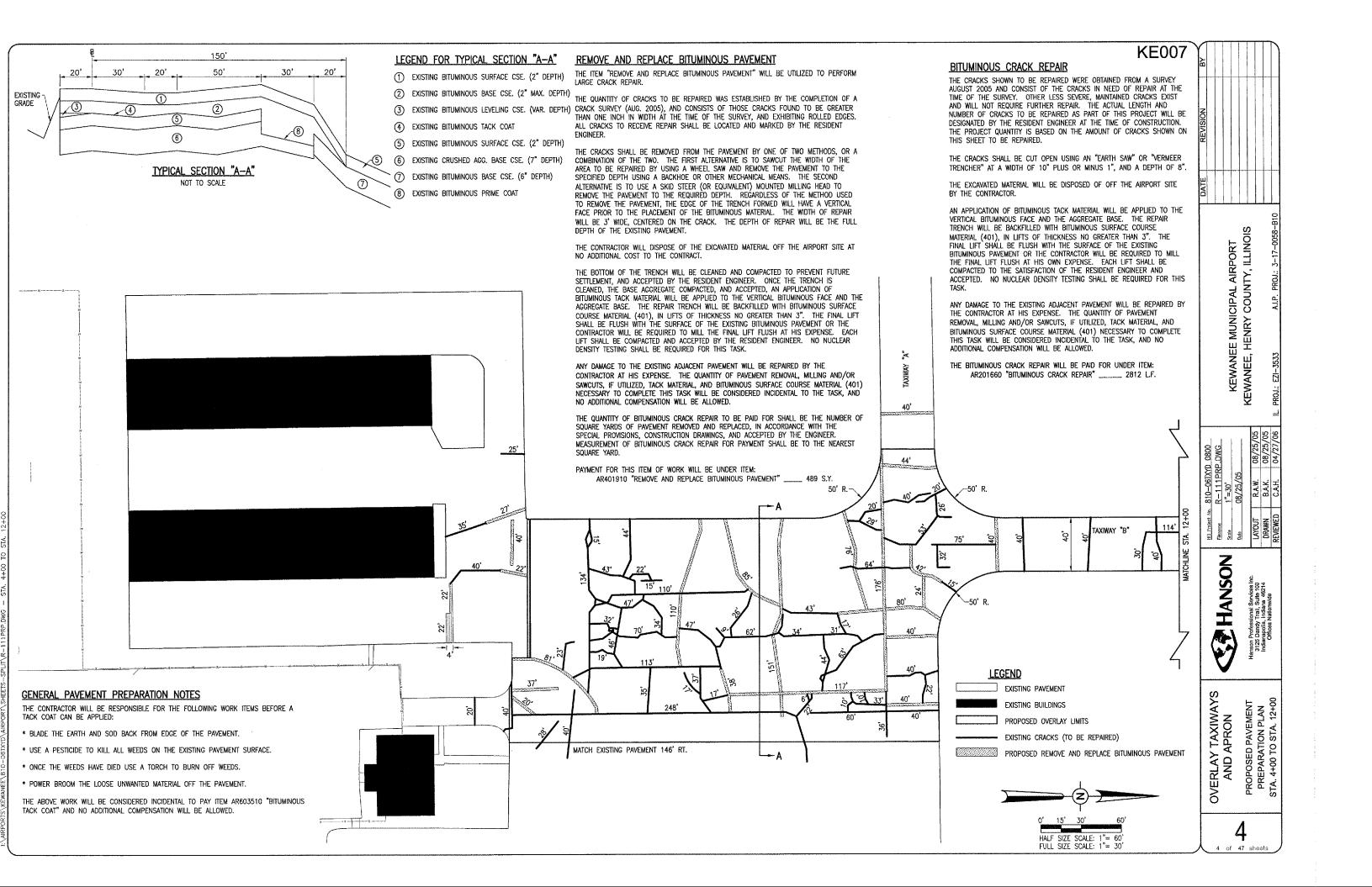
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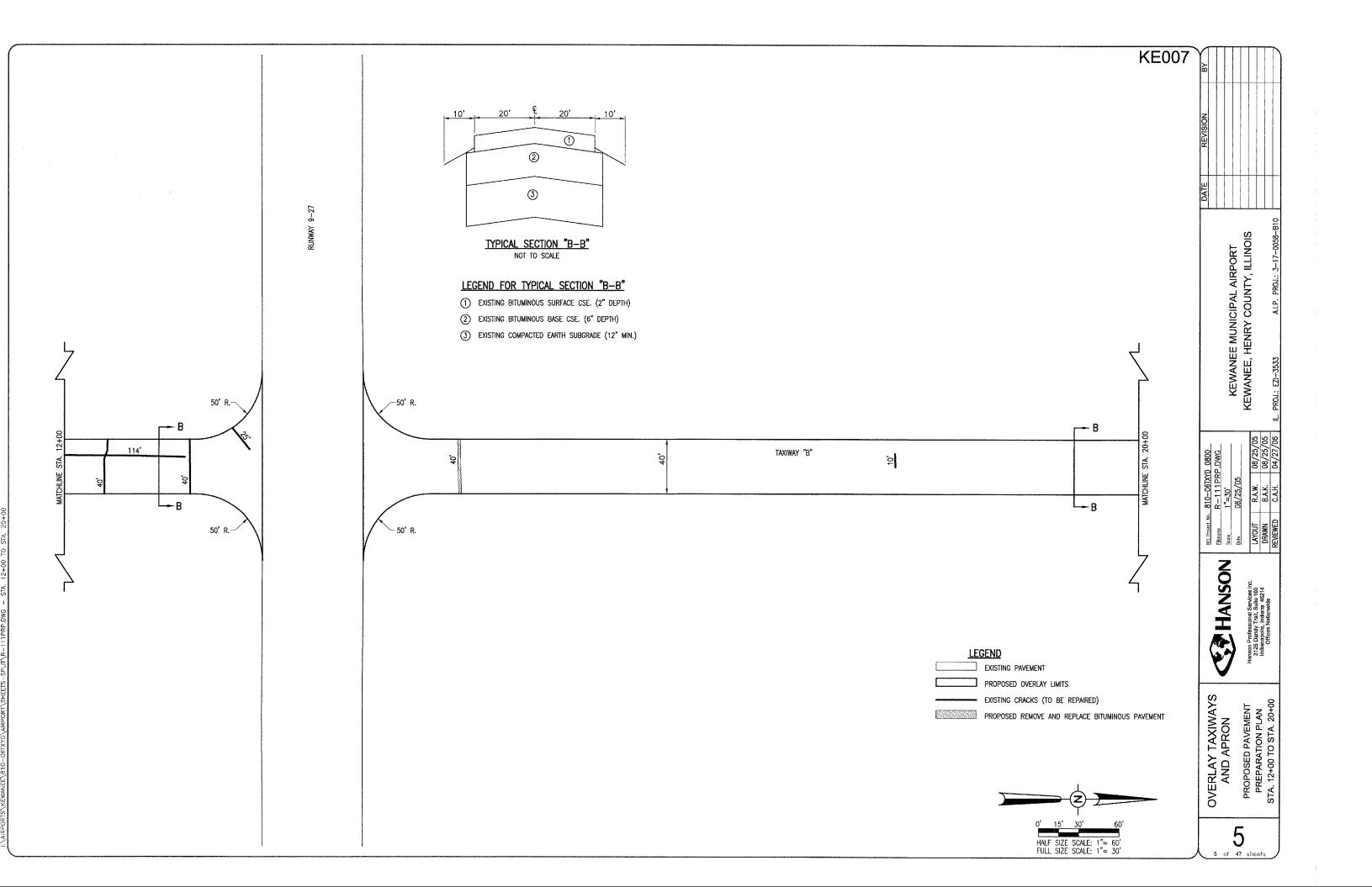
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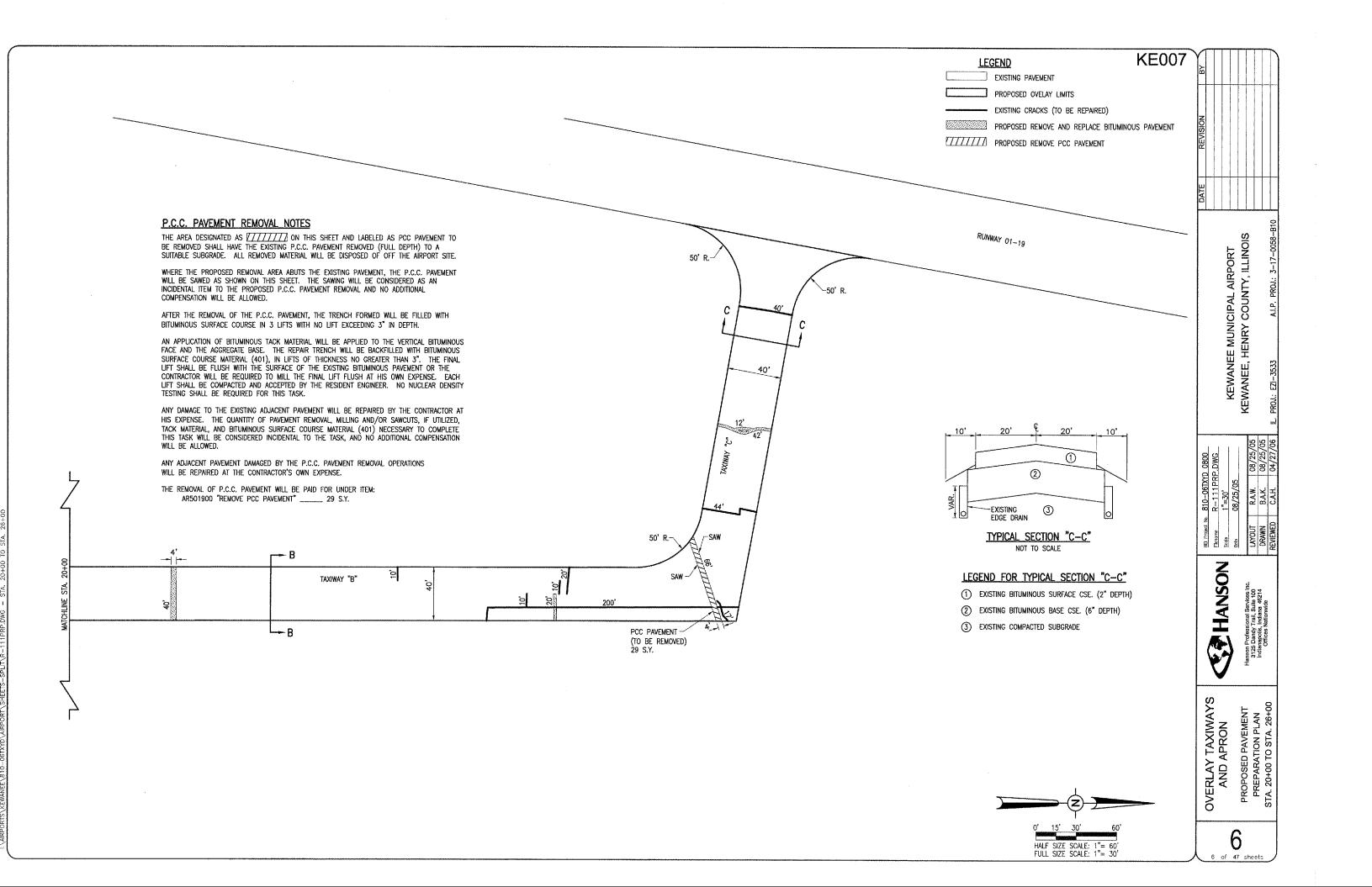
MUNICIPAL

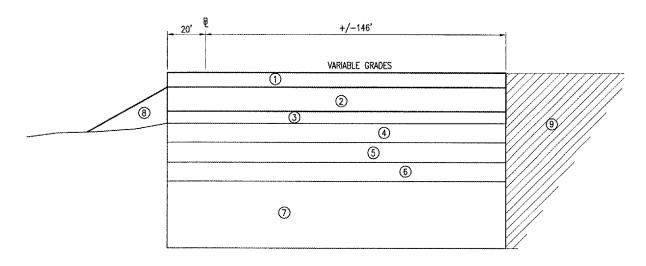
ERLAY TAXIWAYS AND APRON 8

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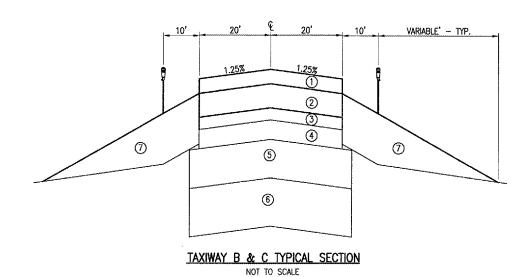


RAMP TYPICAL SECTION

NOT TO SCALE

LEGEND FOR RAMP TYPICAL SECTION

- 1) PROPOSED BITUMINOUS SURFACE CSE. (1.5" DEPTH)
- 2 PROPOSED BITUMINOUS LEVELING CSE. (VARIABLE DEPTH)
- 3 PROPOSED POROUS FRICTION CSE. (0.1' DEPTH)
- 4 EXISTING BITUMINOUS SURFACE CSE. (2" DEPTH)
- (5) EXISTING BITUMINOUS BASE CSE. (2" MAX. DEPTH)
- (6) EXISTING BITUMINOUS SURFACE CSE. (2" DEPTH)
- (7) EXISTING CRUSHED AGG. BASE CSE. (7" DEPTH)
- (8) PROPOSED TOPSOILING (FROM OFF SITE)
- 9 EXISTING RAMP PAVEMENT MATCH GRADE



LEGEND FOR TYPICAL SECTION "B-B"

- 1 PROPOSED BITUMINOUS SURFACE CSE. (1.5" DEPTH)
- (2) PROPOSED BITUMINOUS LEVELING CSE. (VARIABLE DEPTH)
- ③ PROPOSED POROUS FRICTION CSE. (0.1' DEPTH)
- 4 EXISTING BITUMINOUS SURFACE CSE. (2" DEPTH)
- (5) EXISTING BITUMINOUS BASE CSE. (6" DEPTH)
- 6 EXISTING COMPACTED EARTH SUBGRADE (12" MIN.)
- 7 PROPOSED TOPSOILING (FROM OFF SITE)

KEWANEE MUNICIPAL AIRPORT KEWANEE, HENRY COUNTY, ILLINOIS

12/28/05 12/28/05

HE Project No. 810—06D)

Figurence R-521CON.DM
Scale NOT TO SCA.
Date 12/28/05

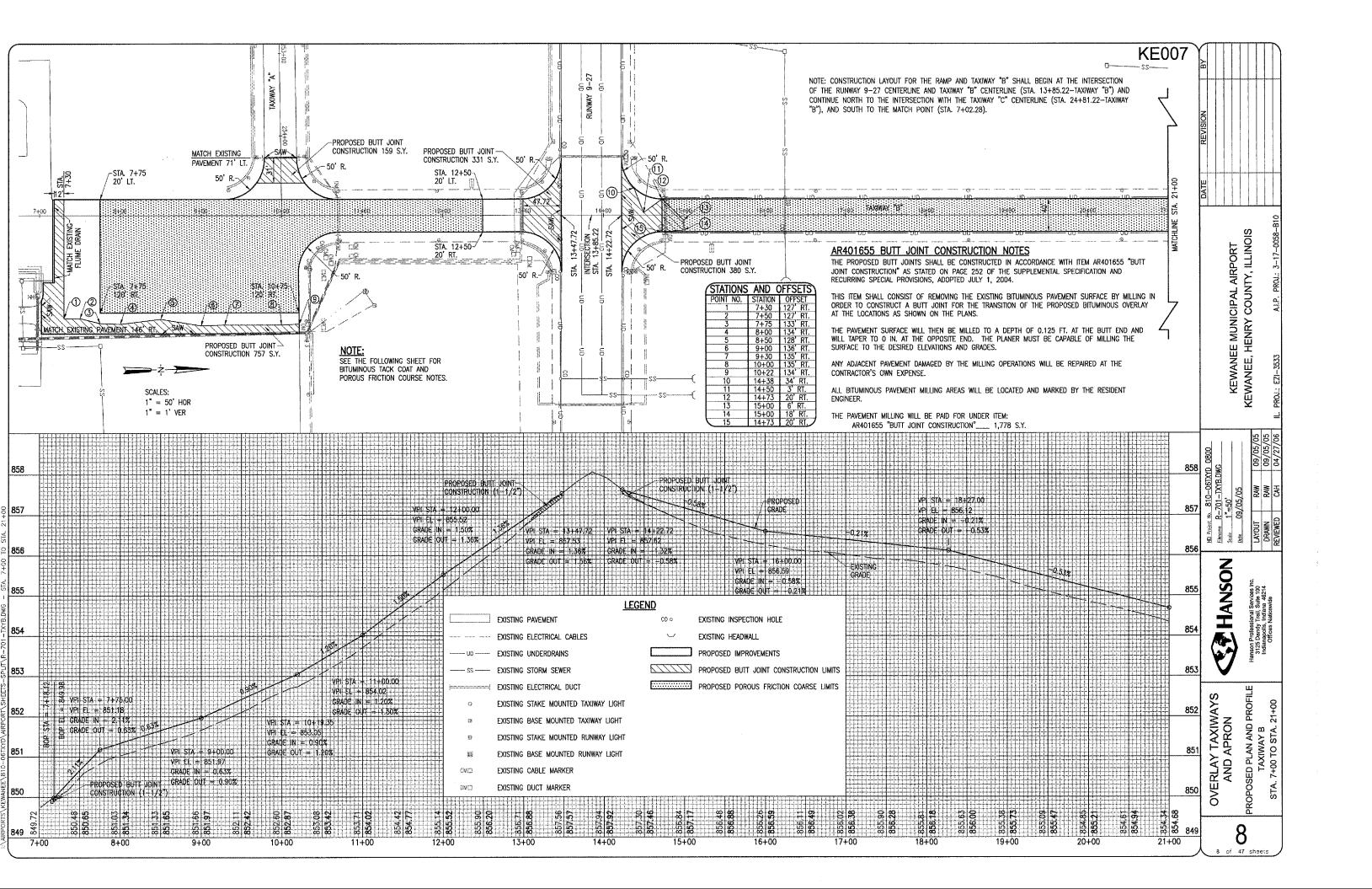
HANSON
HARSON Professional Services Inc.
3125 Danay Trait, Suite 100

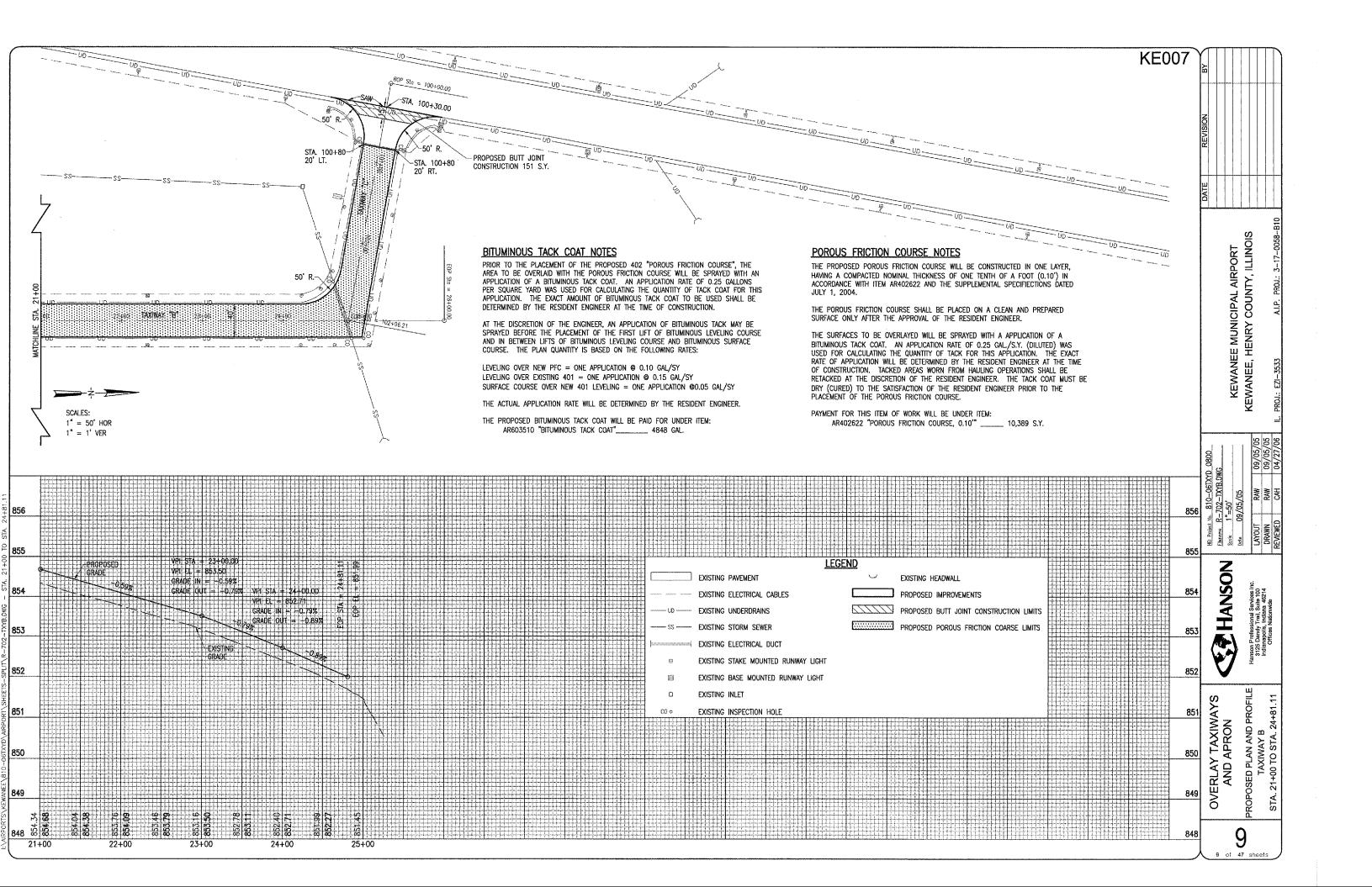
OVERLAY TAXIWAYS AND APRON

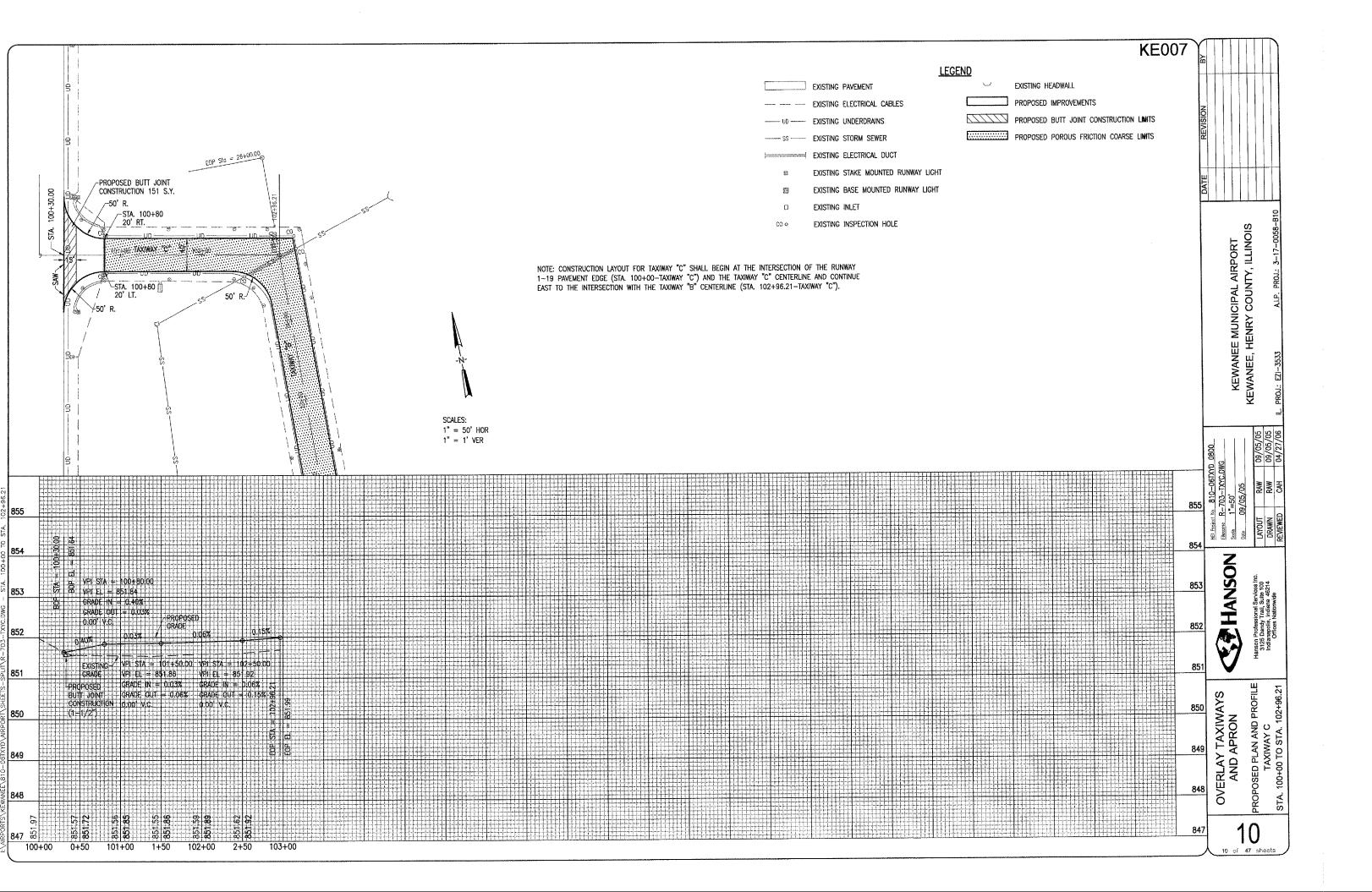
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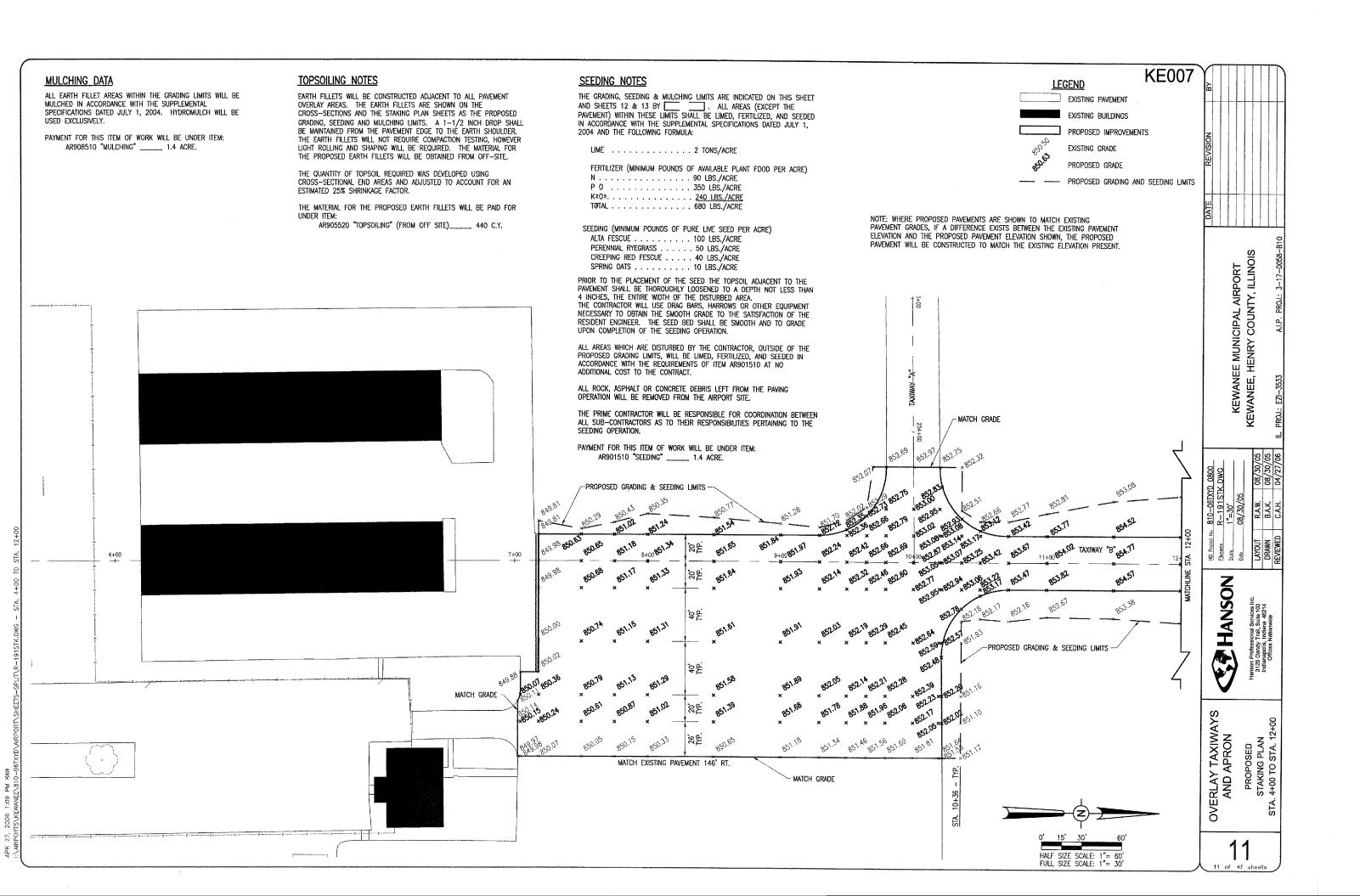
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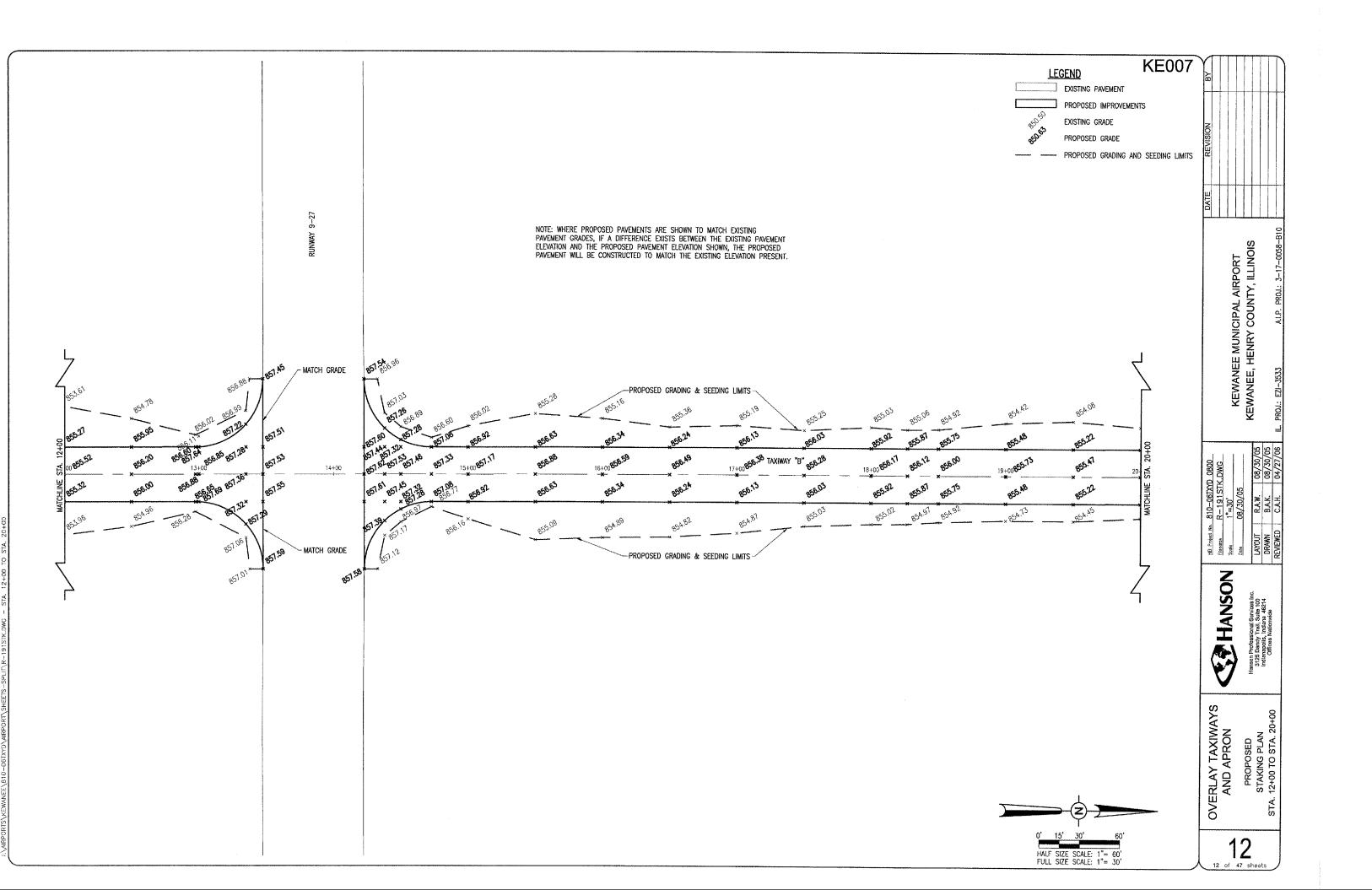
PROPOSED TYPICAL SECTIONS

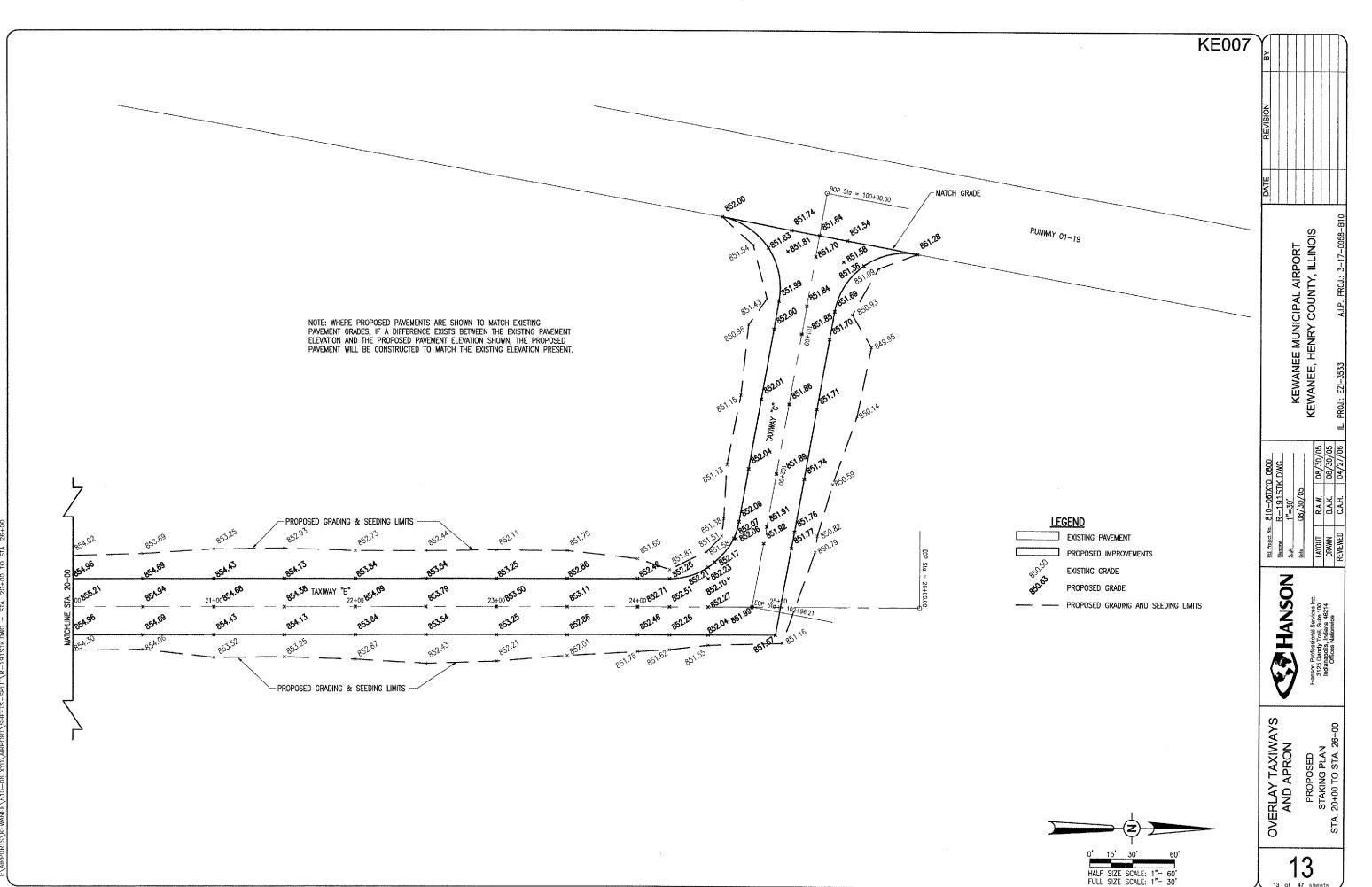


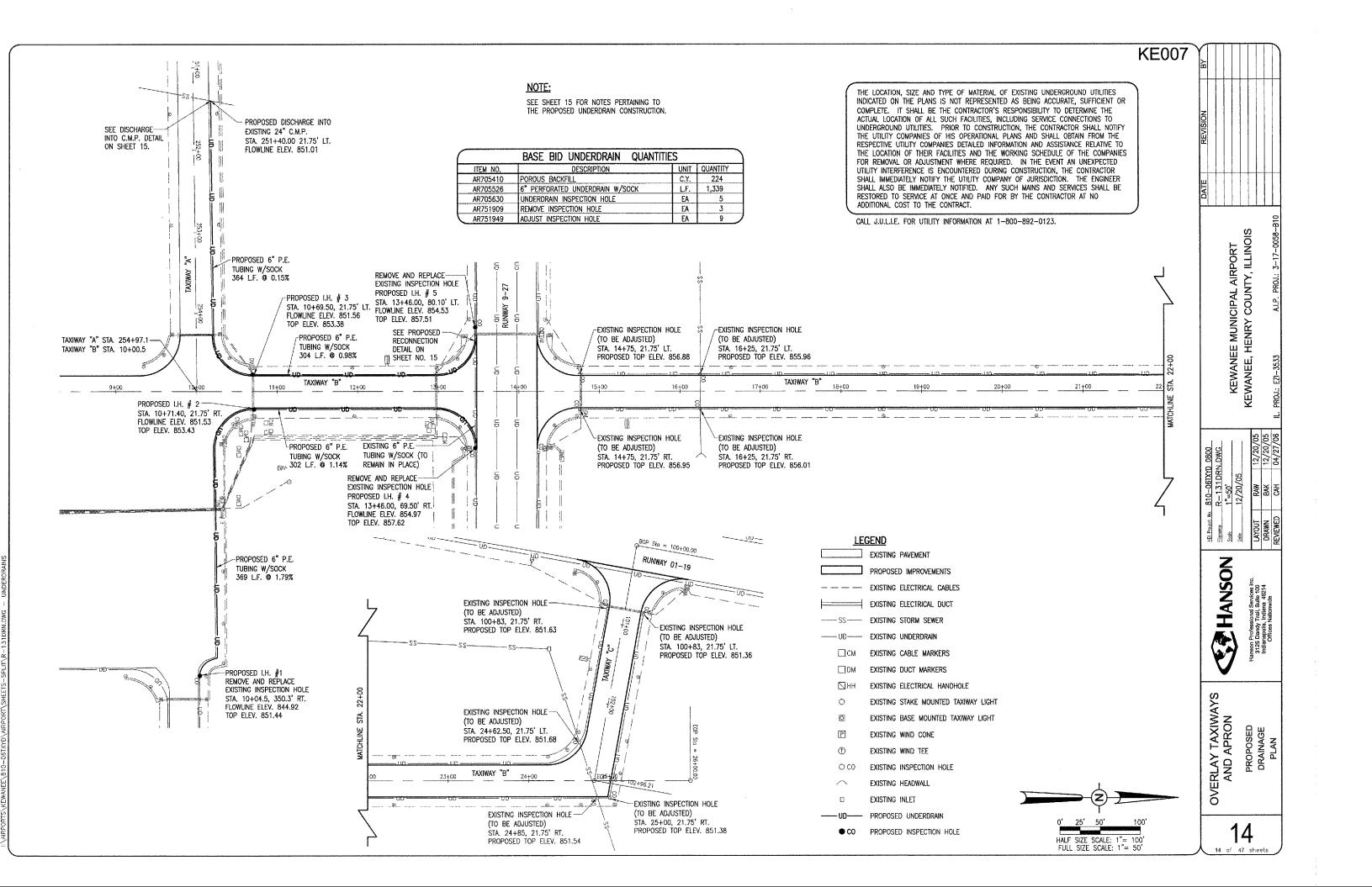












CAST IRON FRAME AND COVER NEENAH R-6013, DEETER 1810. EAST JORDAN 2790-6 OR

6" P.E. TUBING PROPOSED ITEM 610 CONCRETE FLOW 6" PE TUBING WRAPPED FLOW

INSPECTION HOLE-TYPE B

INSPECTION HOLE NOTES

DIAMETER OF PIPE AS SPECIFIED.

TOP OF INSPECTION HOLES SHALL BE 2" ABOVE FINISH GROUND LINE AT LOCATION SHOWN ON PLANS.

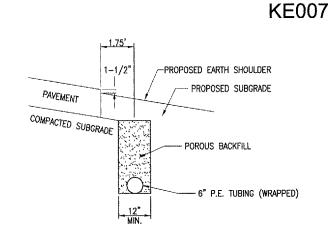
1/2" CHAMFER TO BE USED ON ALL EXPOSED EDGES OF INSPECTION HOLES.

THE CONCRETE SHALL BE STRUCTURAL PORTLAND CEMENT CONCRETE (NON-REINFORCED).

THE PROPOSED UNDERDRAIN INSPECTION HOLES WILL BE PAID FOR UNDER ITEM AR705530 UNDERDRAIN INSPECTION HOLE____ ___5 EACH.

POROUS BACKFILL NOTES

THE QUANTITY OF POROUS BACKFILL WAS CALCULATED USING AN AVERAGE DEPTH OF 36" AND AVERAGE WIDTH OF 18". THE MINIMUM TRENCH WIDTH IS 12".



UNDERDRAIN DETAIL

NOT TO SCALE

705-UNDERDRAIN NOTES:

THE PROPOSED UNDERDRAIN PIPE WILL BE CONSTRUCTED IN ACCORDANCE WITH ITEM 705 "PIPE UNDERDRAINS FOR AIRPORTS" AS STATED ON PAGE 109 OF THE SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS, ADOPTED JULY 1, 2004.

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING AND INSTALLING 6" P.E. TUBING (WRAPPED) AND UNDERDRAIN INSPECTION HOLES AT THE LOCATIONS AND TO THE GRADES SHOWN ON THE CONSTRUCTION PLANS.

705-3.3 LAYING AND INSTALLING PIPE. REVISE THIS SECTION AS FOLLOWS:

"PIPE DRAINS SHALL BE INSTALLED AT THE LOCATIONS SHOWN ON THE PLANS OR AS DIRECTED BY THE RESIDENT ENGINEER. THE PIPE SHALL BE BEDDED IN THE UNDERLYING MATERIAL TO A DEPTH NOT LESS THAN 10 PERCENT OF THE EXTERNAL DIAMETER OF THE PIPE, AND WHERE TRENCHING IS REQUIRED, THE TRENCH SHALL HAVE A WIDTH OF NOT LESS 12 IN. THE BOTTOM OF THE TRENCH SHALL BE COMPACTED IN A MANNER MEETING THE APPROVAL OF THE

JOINTS AND FITTINGS MAY BE ASSEMBLED WITHOUT GASKETS OR SOLVENT CEMENT IF THE JOINT IS SAND TIGHT AND THE SPIGOT ENTERS THE SOCKET NOT LESS THAN 1/3 OF THE SOCKET DEPTH FOR SOLVENT CEMENT JOINTS AND FULL-DEPTH FOR ELASTOMERIC GASKET JOINTS.

NO PIPE SHALL BE PLACED IN THE TRENCH UNTIL IT AND THE PREPARED FOUNDATION HAVE BEEN APPROVED BY THE RESIDENT ENGINEER. THE PIPE SHALL BE LAID SO THAT THE FLOWLINE WILL BE AT THE GRADE SHOWN ON THE PLANS OR ESTABLISHED BY THE RESIDENT ENGINEER. THE PERMISSIBLE MINIMUM COVER OVER A PIPE SHALL BE 6 IN.

LAYING OF PIPES SHALL COMMENCE AT THE OUTLET END AND PROCEED TOWARD THE INLET END WITH THE PIPES TRUE TO LINE AND GRADE

THE ENDS OF THE PIPE SHALL BE CAREFULLY CLEANED BEFORE THEY ARE PLACED, AND SHALL BE PLACED TO AVOID UNNECESSARY HANDLING ON THE FOUNDATION. AS EACH LENGTH OF PIPE IS LAID, THE ENDS OF THE PIPE SHALL BE PROTECTED TO PREVENT THE ENTRANCE OF

LONGITUDINAL LAPS SHALL BE PLACED AT THE SIDES AND SEPARATE SECTIONS OF PIPE SHALL BE JOINED WITH TIGHTLY-DRAWN, APPROVED CONNECTING BANDS.

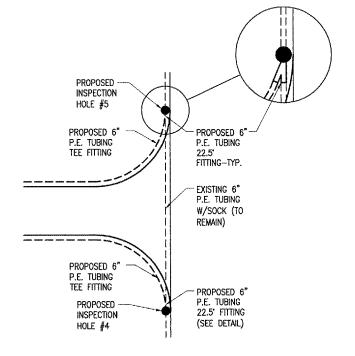
THE TRENCH SHALL BE BACKFILLED WITH SELECT MATERIAL, MEETING THE APPROVAL OF THE ENGINEER, PLACED IN 8 IN. LAYERS, LOOSE MEASUREMENT, AND COMPACTED TO THE ENGINEER'S SATISFACTION *

705-3.6 BACKFILLING: ADD THE FOLLOWING TO THIS SECTION:

THE EDGE DRAIN TRENCH WILL BE BACKFILLED WITH POROUS BACKFILL IDOT (CA-14 OR CA-16) IN ACCORDANCE WITH THE DETAIL ON THE CONSTRUCTION PLANS. THE POROUS BACKFILL WILL BE COMPACTED TO THE SATISFACTION OF THE RESIDENT ENGINEER.

THE PROPOSED UNDERDRAIN PIPE WILL BE PAID FOR UNDER ITEM: AR705526 6" PERFORATED UNDERDRAIN W/SOCK_____ 1,339 L.F.

THE PROPOSED POROUS BACKFILL WILL BE PAID FOR UNDER ITEM: AR705410 POROUS BACKFILL ______ 224 C.Y.



PROP. P.C.C. INSP. HOLE FRAME & CAP CLASS S RUNWAY 5% SLOPE CONCRETE PROP. EMBANKMENT PROP. #4 REBAR-EXISTING EARTH PROP. #4 REBAR EXIST. SQUARE SECTIONAL VIEW

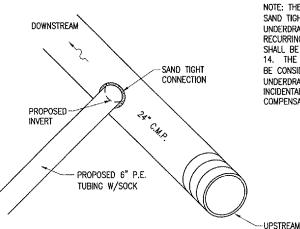
INSPECTION HOLE ADJUSTMENT DETAIL "NOT TO SCALE"

PLAN VIEW

PROPOSED RECONNECTION DETAIL

NOT TO SCALE

NOTE: THE RECONNECTION OF THE UNDERDRAIN SHOWN IN THE DETAIL ABOVE SHALL USE STANDARD PE TUBING FITTINGS. THE CONNECTION OF THE FITTINGS WILL BE IN ACCORDANCE WITH ITEM 705 "PIPE UNDERDRAINS FOR AIRPORTS" INCLUDED IN THE SUPPLEMENTAL AND RECURRING SPECIAL PROVISIONS DATED JULY 1, 2004. THE RECONNECTION OF THE UNDERDRAIN SHALL BE CONSIDERED INCIDENTAL TO ITEM AR705526 - 6" PERFORATED UNDERDRAIN W/SOCK, INCLUDING ALL LABOR, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE TASK, AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.



NOTE: THE CONNECTION OF THE UNDERDRAIN INTO THE 24" CMP WILL BE SAND TIGHT IN NATURE, IN ACCORDANCE WITH ITEM 705 "PIPE UNDERDRAINS FOR AIRPORTS" INCLUDED IN THE SUPPLEMENTAL AND RECURRING SPECIAL PROVISIONS DATED JULY 1, 2004. THE CONNECTION SHALL BE CONSTRUCTED TO THE INVERT ELEVATION SHOWN ON SHEET 14. THE CONNECTION OF THE UNDERDRAIN TO THE EXISTING CMP SHALL BE CONSIDERED INCIDENTAL TO ITEM AR705526 - 6" PERFORATED UNDERDRAIN W/SOCK, INCLUDING ALL LABOR, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE TASK, AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

DISCHARGE INTO C.M.P. DETAIL

NOT TO SCALE

HANSON

COUNTY, ILLINOIS AIRPORT

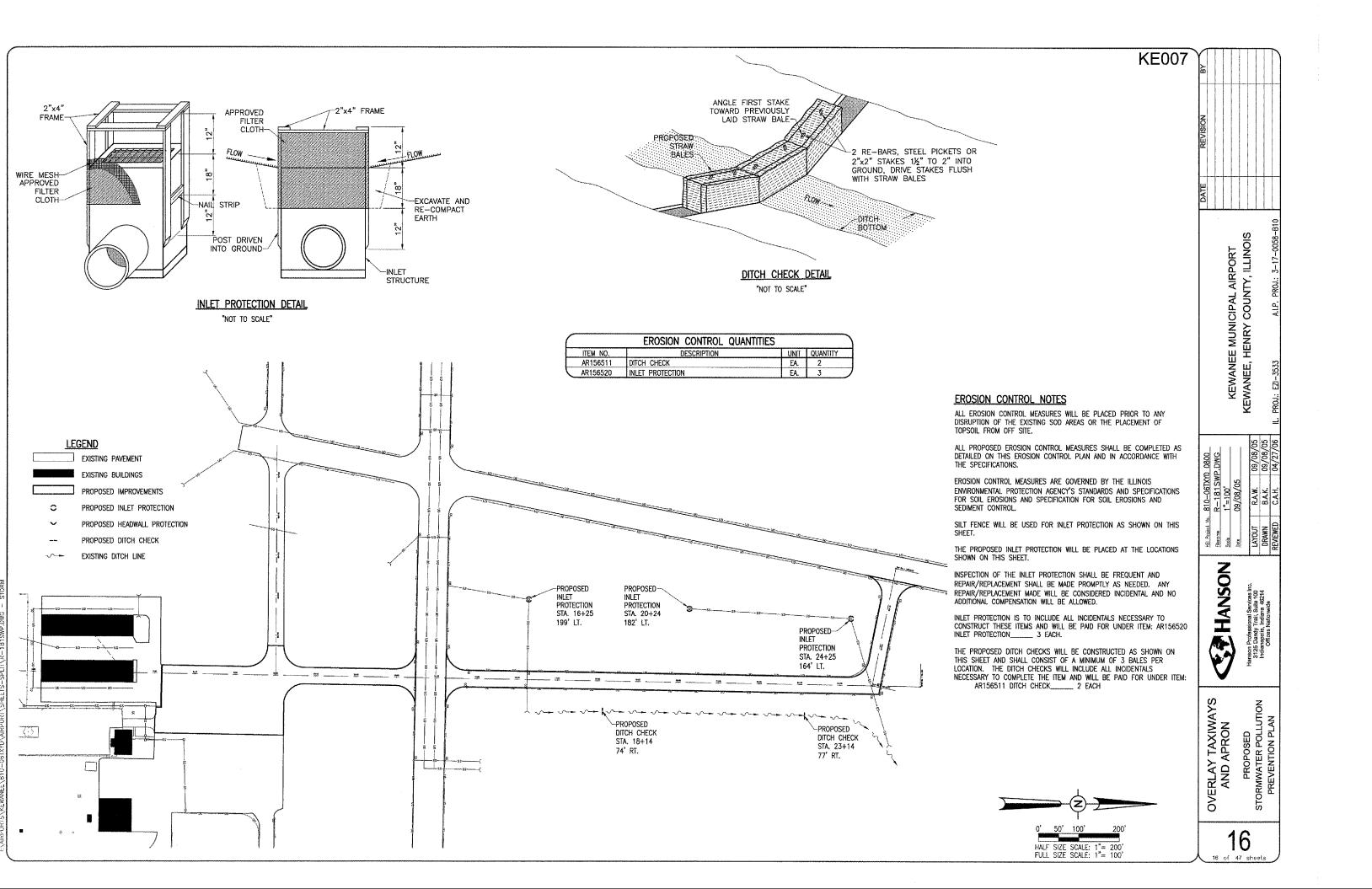
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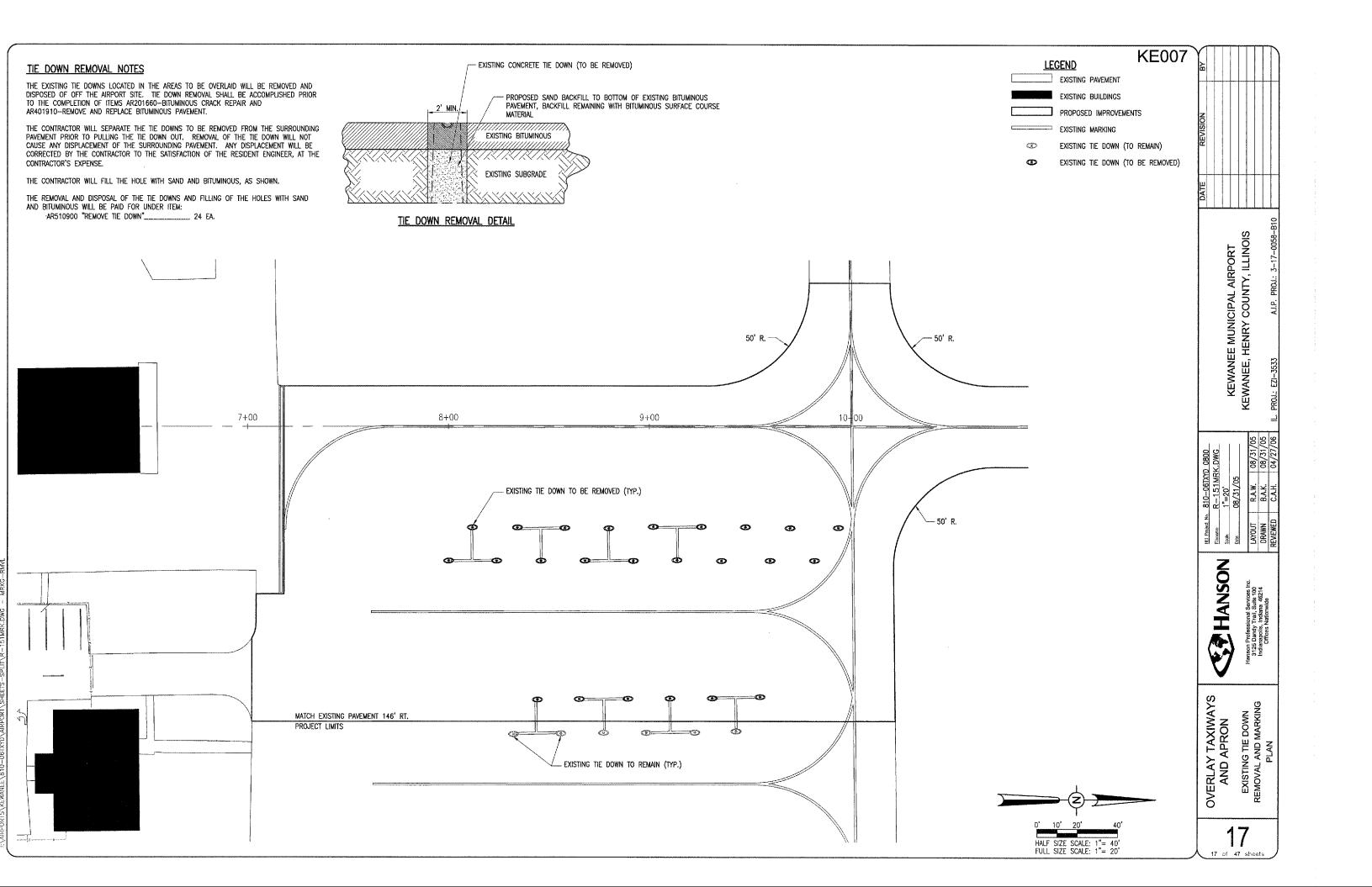
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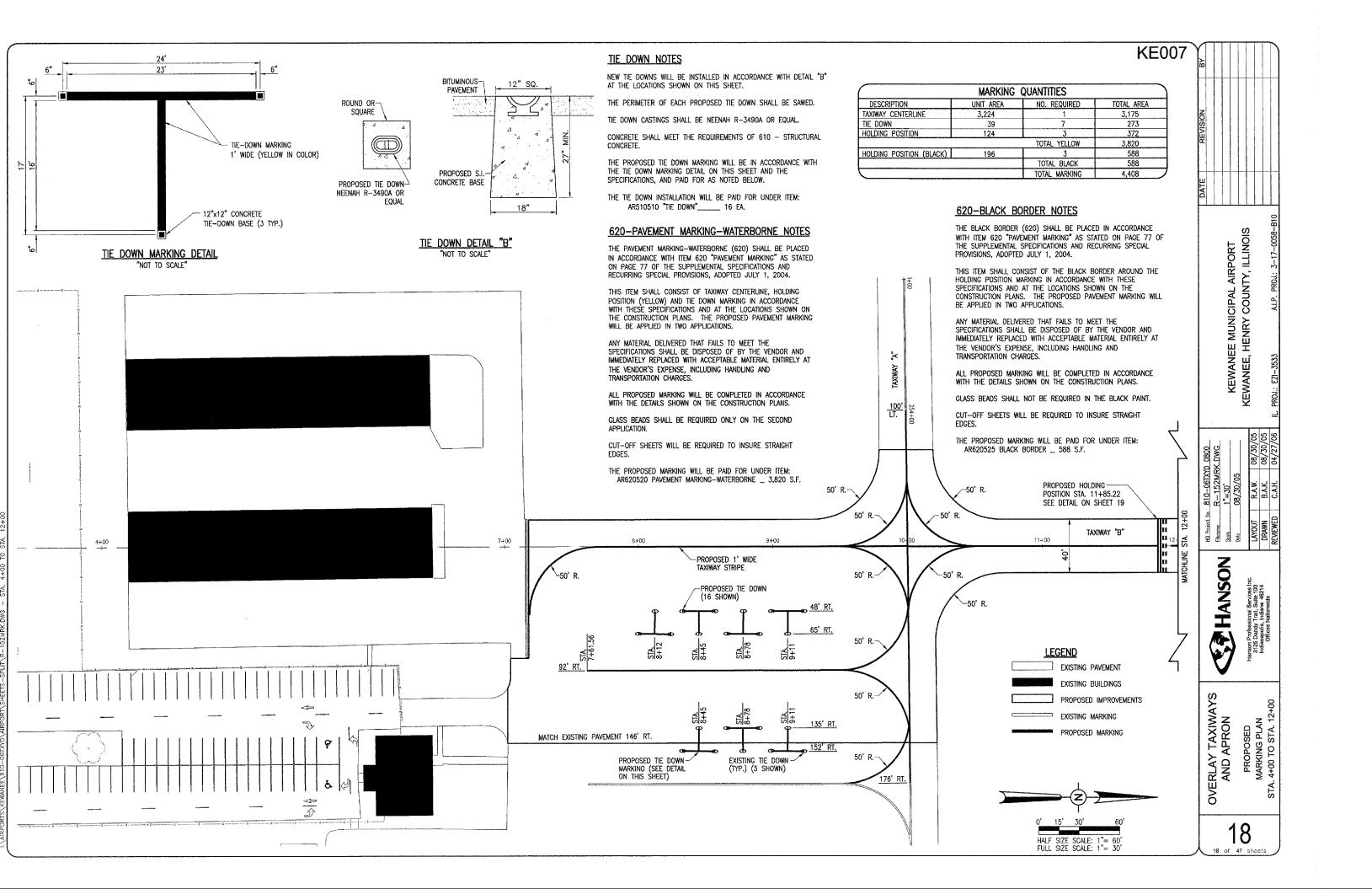
MUNICIPAL

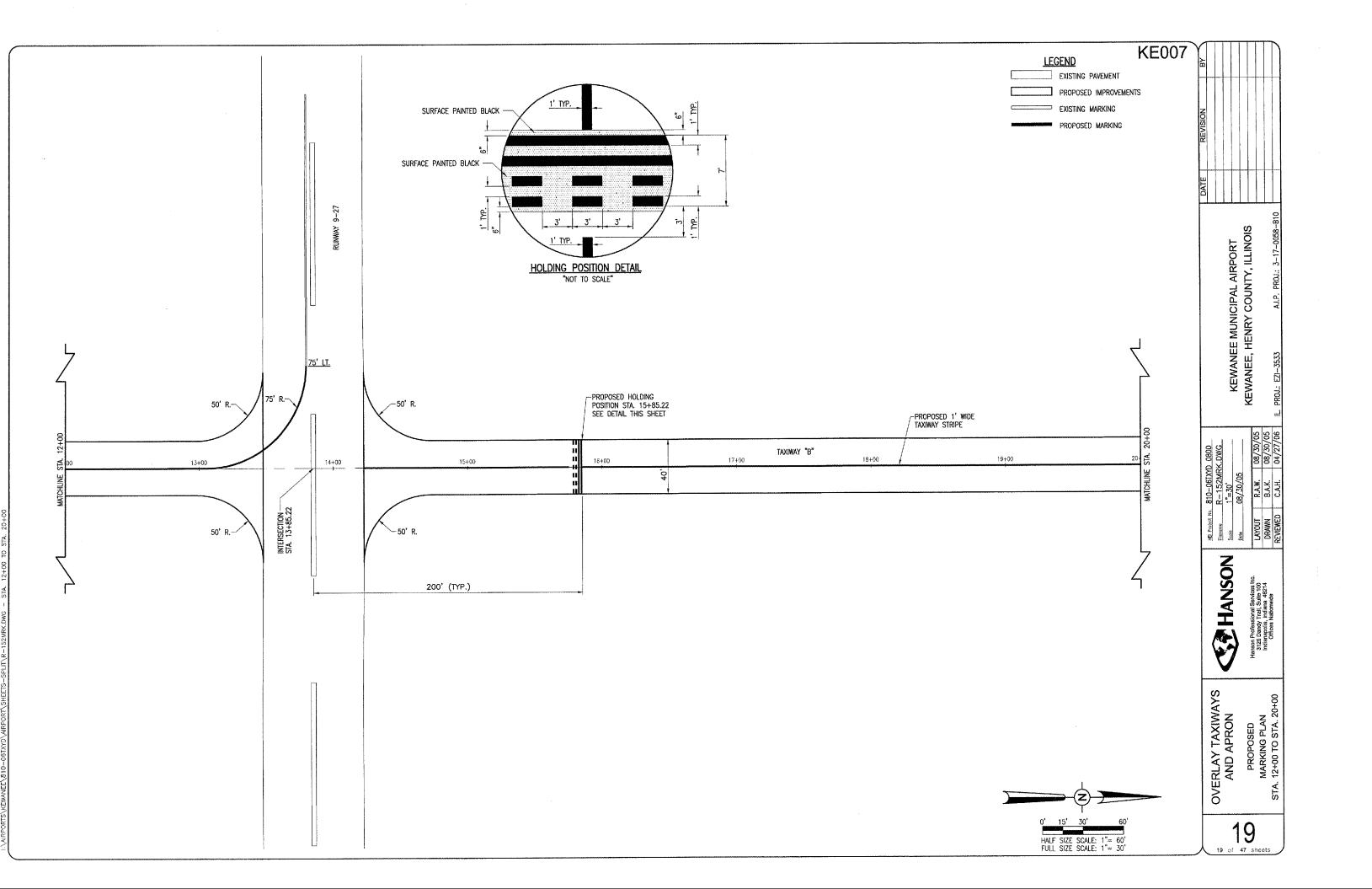
OVERLAY TAXIWAYS AND APRON UNDERDRAIN NOTES AND DETAIL

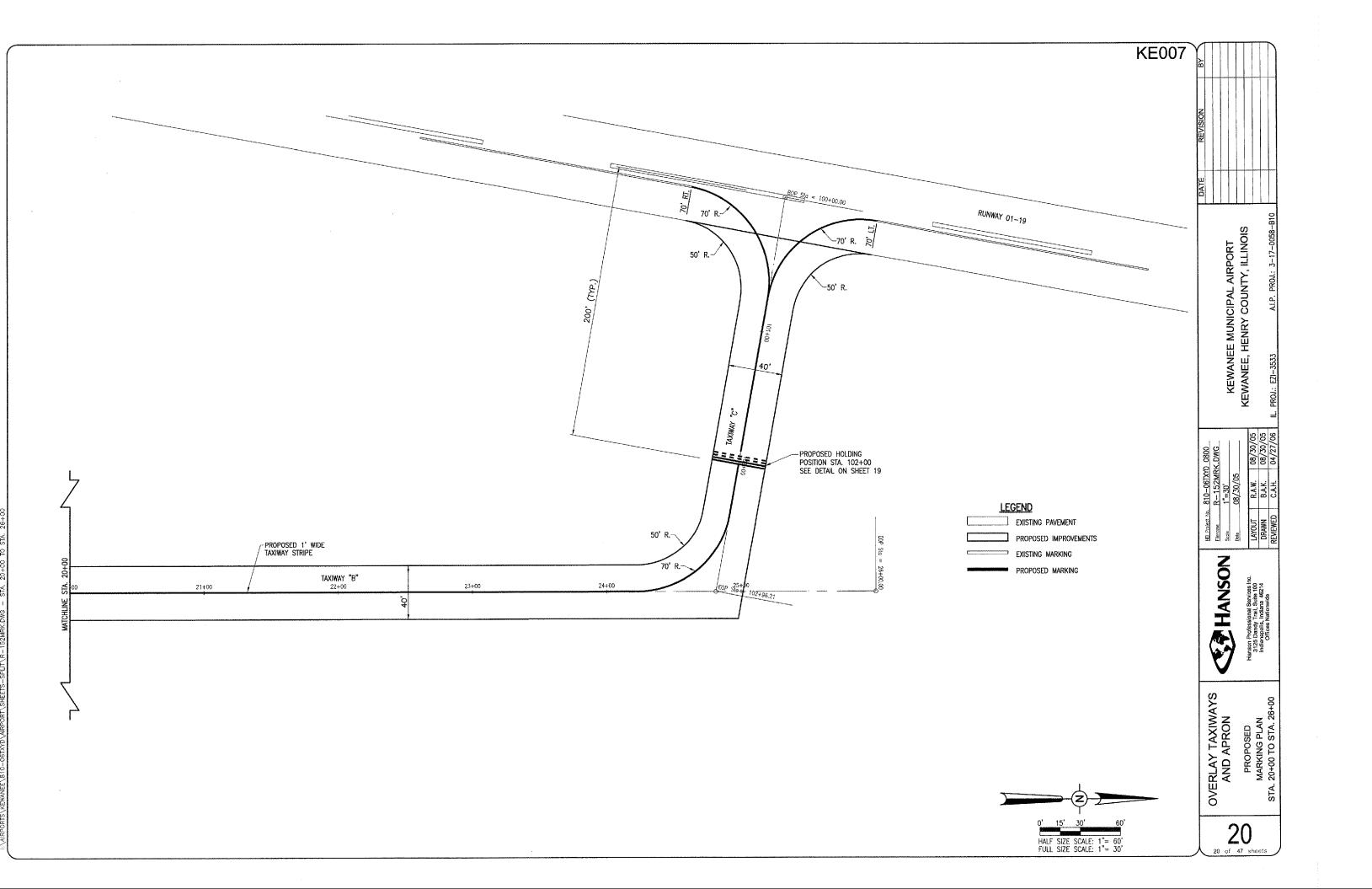
> 15 15 of 47 sheets











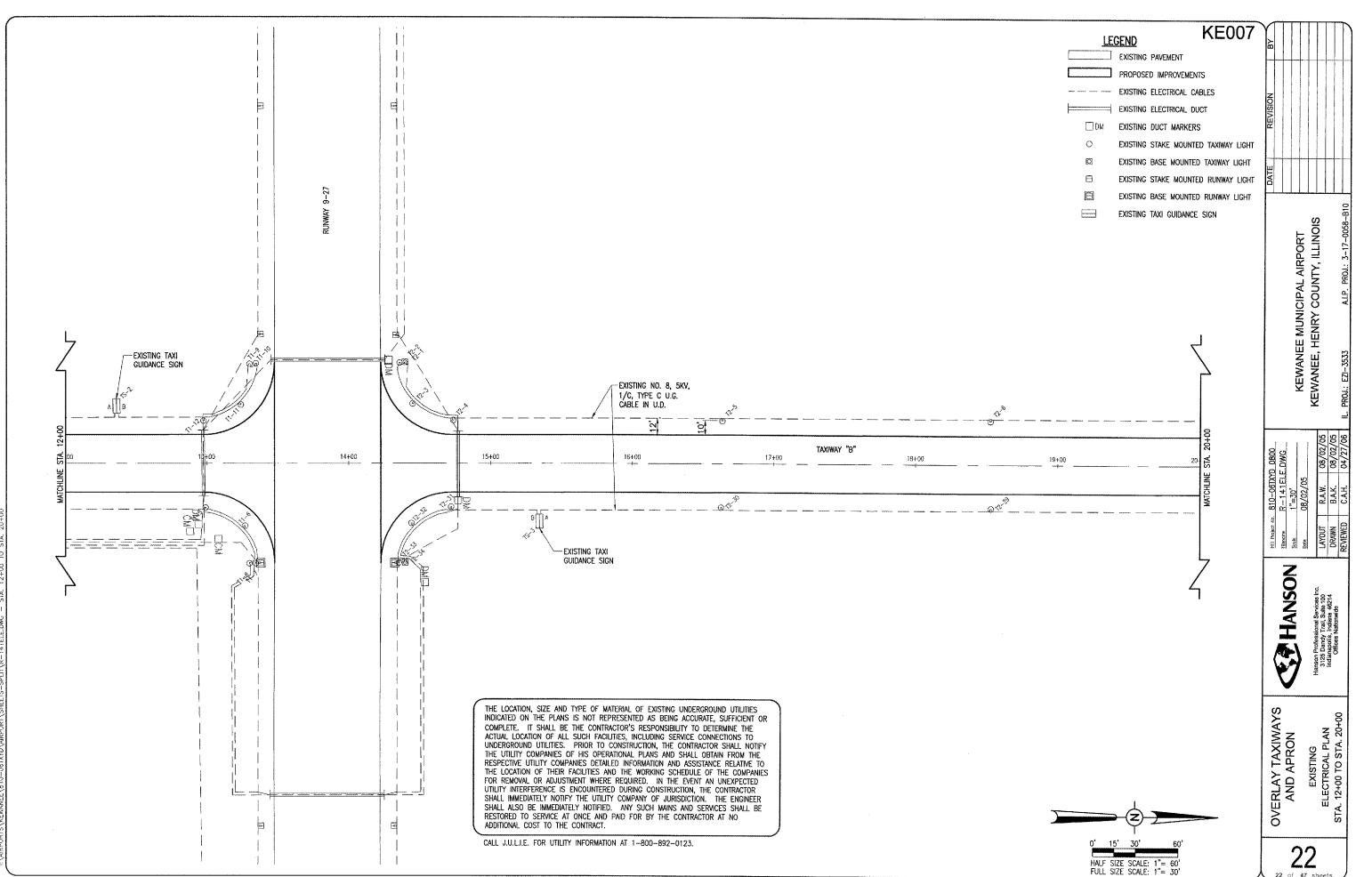
THE LOCATION, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ON THE PLANS IS NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO INDIFFERENTIAL THE CONTRACTOR SHALL MOTIFY.

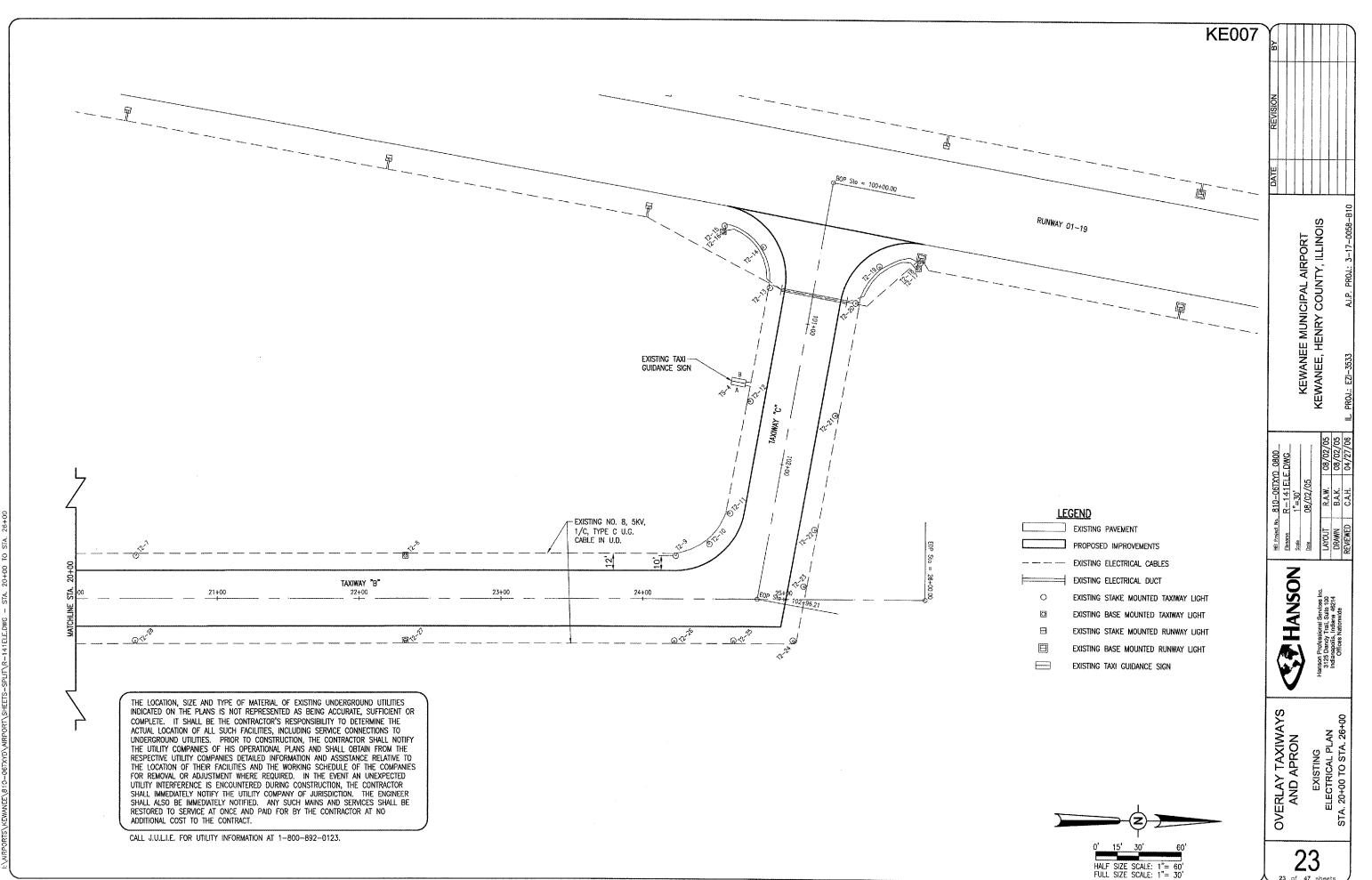
	THE LOCATION, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ON THE PLANS IS NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND 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.		LIGHT AND TAXI GUIDANCE SIGN REMOVAL NOTES THE FOLLOWING LIGHTS WILL BE REMOVED AS PART OF THE LIGHTING IMPROVEMENT PORTION OF THE PROJECT: T1-1 THROUGH T1-16, T2-1 THROUGH T2-34, AND TAXI GUIDANCE SIGNS: TS-2 THROUGH TS-4. THE FIXTURES AND FOUNDATIONS WILL BE REMOVED IN THEIR ENTIRETY AND THE SALVAGEABLE EQUIPMENT TURNED OVER TO THE AIRPORT MANAGER, AT HIS DISCRETION. ALL FIXTURES NOT CLAIMED BY THE AIRPORT WILL BE DISPOSED OF OFF THE AIRPORT SITE AT THE CONTRACTOR'S EXPENSE. ALL LABOR, MATERIALS, DISPOSAL, COORDINATION, AND INCIDENTALS REQUIRED TO COMPLETE THE TASK OF REMOVING THE LIGHTS AND SIGNS WILL BE CONSIDERED INCIDENTAL TO THE ITEMS AND NO ADDITIONAL COMPENSATION WILL BE	MATCHLINE STA. 252+00		REVISION BY
	ELECTRICAL REMOVAL QUANTITIES ITEM NO. DESCRIPTION UNIT QUANTITY AR125901 REMOVE STAKE MOUNTED LIGHT EACH 42 AR125902 REMOVE BASE MOUNTED LIGHT EACH 8 AR125904 REMOVE TAXI GUIDANCE SIGN EACH 3		ALLOWED. THE CONTRACTOR IS REQUIRED TO FILL IN ALL HOLES AND DEPRESSIONS RESULTING FROM THE LIGHT AND SIGN REMOVALS, WITH EARTH FROM OFF SITE. THE AREAS SHALL BE COMPACTED TO PREVENT FUTURE SETTLEMENT. EACH REMOVAL LOCATION SHALL BE FERTILIZED, SEEDED, AND MULCHED IN ACCORDANCE WITH ITEMS 901 AND 908 RESPECTIVELY, IF OUTSIDE THE PROPOSED GRADING LIMITS OF THE PAVING PORTION OF THE PROJECT.	253+00	LEGEND EXISTING PAVEMENT EXISTING BUILDINGS PROPOSED IMPROVEMENTS EXISTING ELECTRICAL CABLES EXISTING ELECTRICAL DUCT ET EXISTING ELECTRICAL TRANSFORMER EXISTING ELECTRICAL PEDESTAL DM EXISTING DUCT MARKERS	MUNICIPAL AIRPORT ENRY COUNTY, ILLINOIS ALP. PROJ.: 3-17-0058-810
	X	EXISTING		*A" YMWYXTT 1 1 1 1 1 1 1 1 1	EXISTING ROTATING BEACON HH EXISTING ELECTRICAL HANDHOLE EXISTING STAKE MOUNTED TAXIWAY LIGHT EXISTING BASE MOUNTED TAXIWAY LIGHT EXISTING WIND CONE EXISTING WIND TEE	KEWANEE, HE KEWANEE, HE KEWANEE, HE KEWANEE, HE KEWANEE, HE KEWANEE, HE KEMANEE, HE KEMANE
- STA. 4+00 TO STA. 12+00	4+00	7+00 ++++++++++++++++++++++++++++++++++	8+00	9+00 10+00	EXISTING NO. 8, 5KV, 1/C, TYPE C U.G. CABLE IN U.D. TAXIMAY "B" 11+00 TAXIMAY "B" 12-4 TAXIMAY "B"	SON Flattere R = 141ELE
ARPORT\SHEETS-SPLIT\R-141ELE.DWG -		Y DEL		EXISTING 4-WAY DUCT CONTAINING HOMERUN CABLES		FTAXIWAYS APRON ISTING RICAL PLAN TO STA. 12+00 TO STA. 12+00
S\KEWANEE\810-08TXYD		2	MATCH EXISTING PAVEMENT 146' RT.	N		OVERLAY TAXI AND APRC EXISTING ELECTRICAL PI STA. 4+00 TO STA

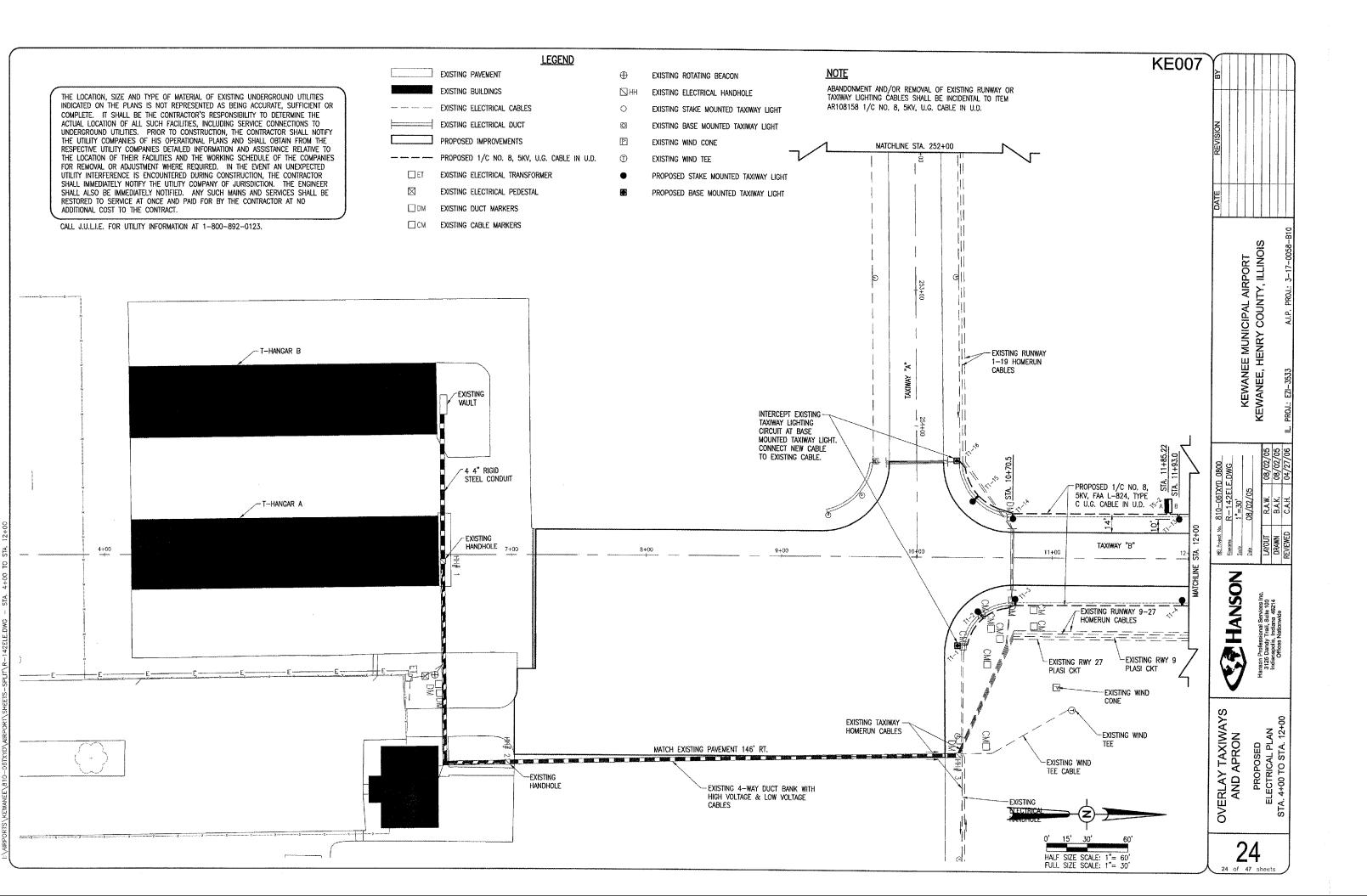
LIGHT AND TAXI GUIDANCE SIGN REMOVAL NOTES

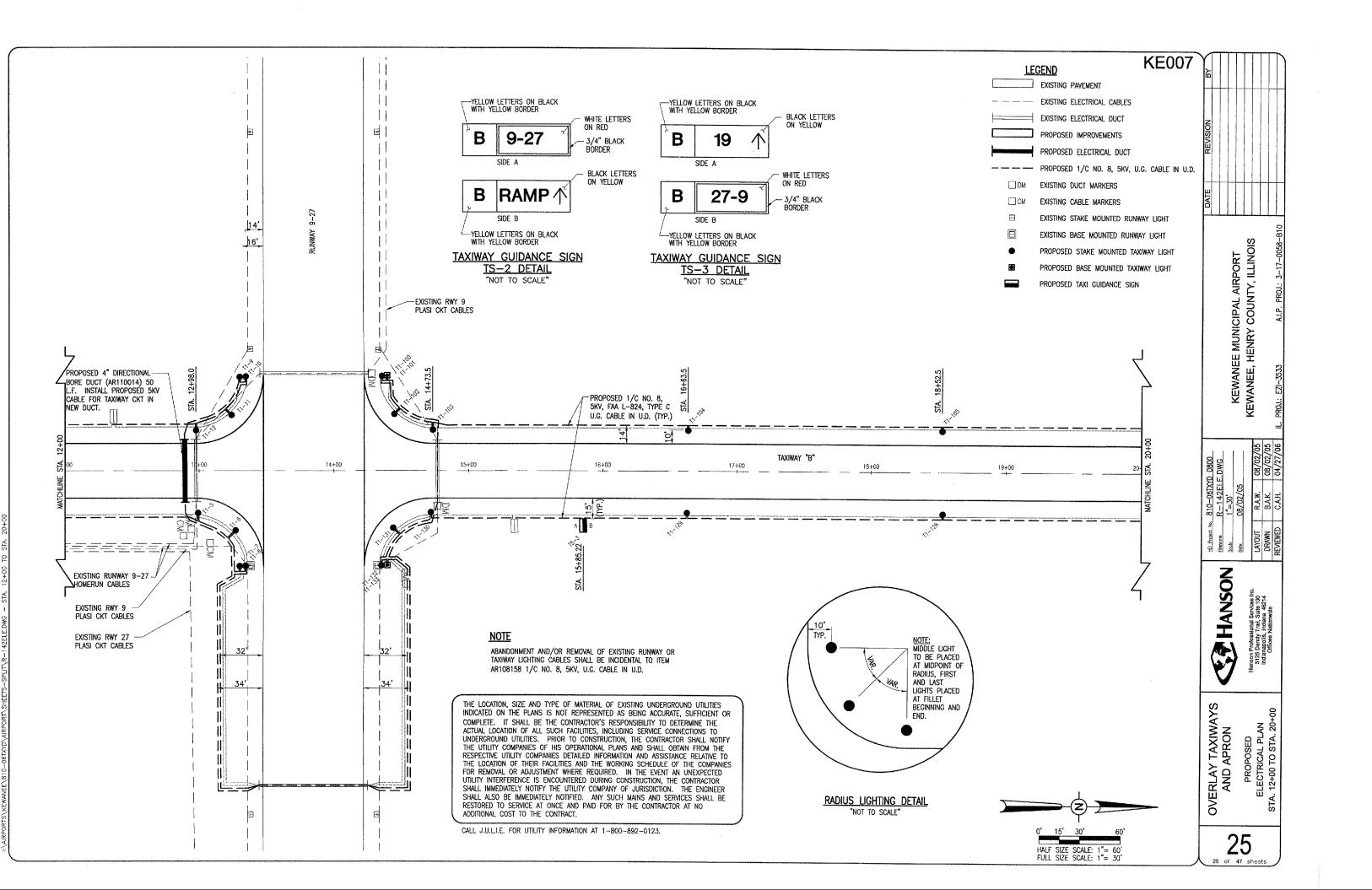
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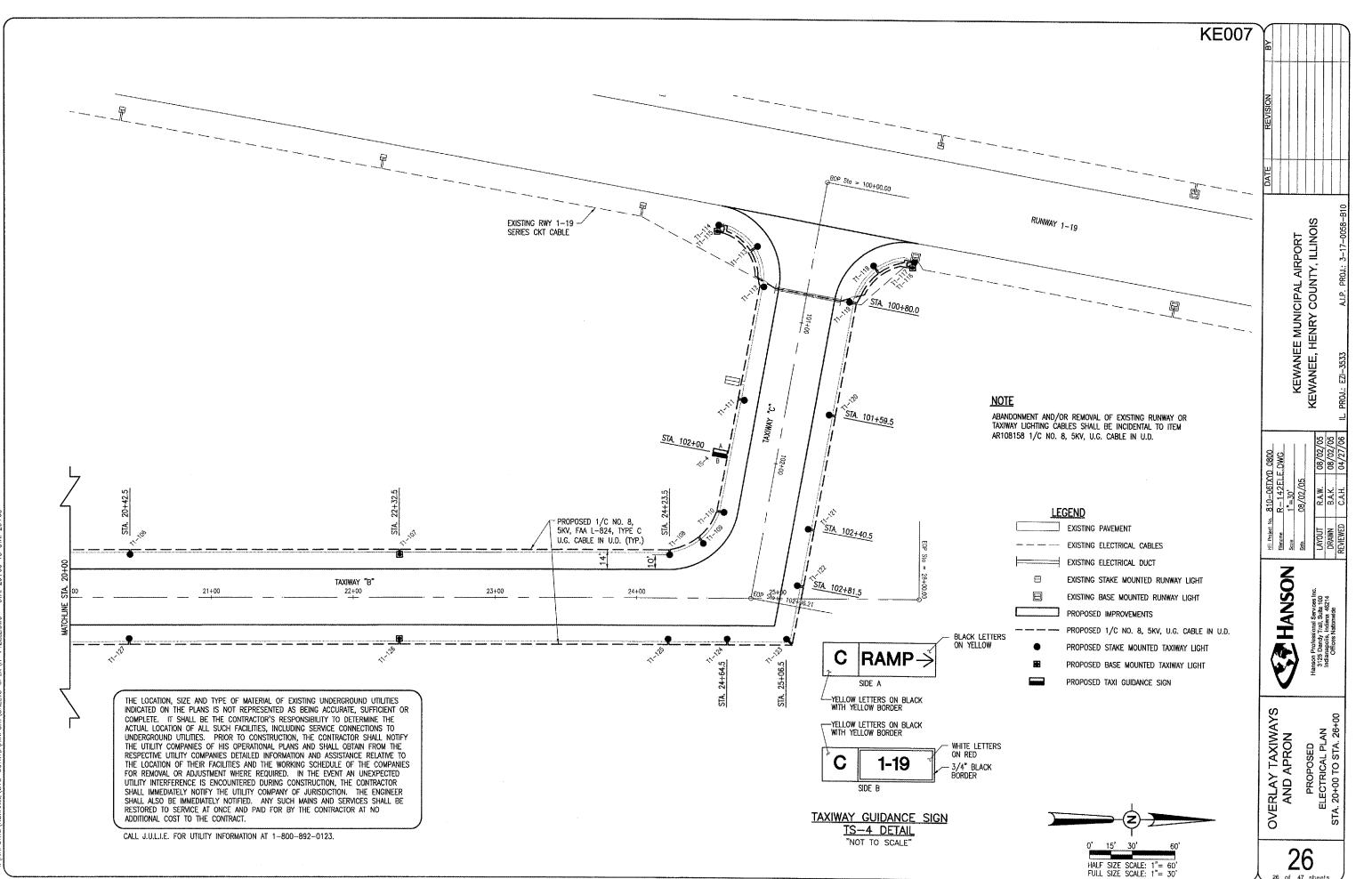
HALF SIZE SCALE: 1"= 60' FULL SIZE SCALE: 1"= 30'

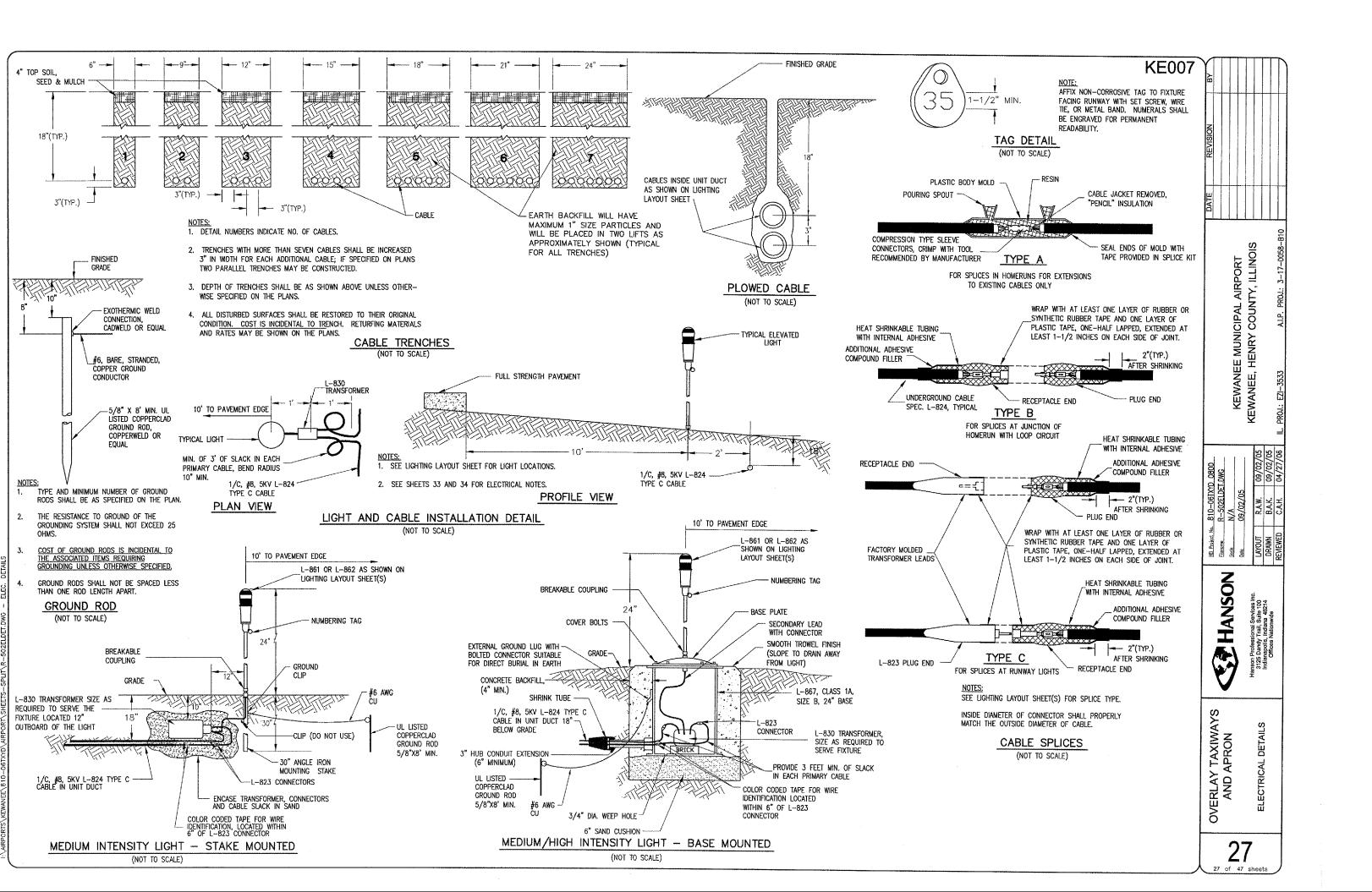


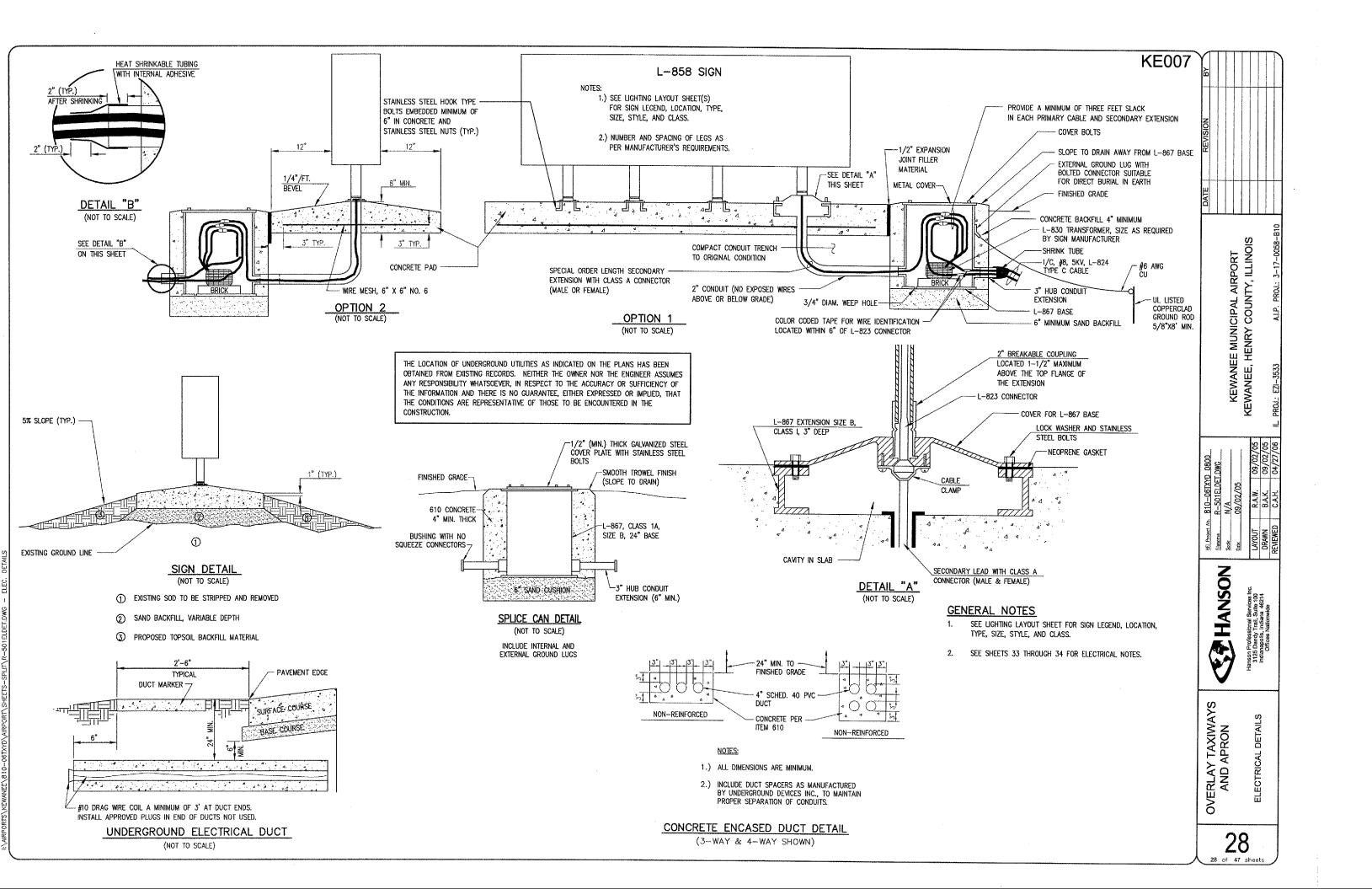












GENERAL

- THE ELECTRICAL INSTALLATION, AS A MINIMUM, SHALL MEET THE NATIONAL ELECTRICAL CODE (LATEST RECOGNIZED VERSION) AND LOCAL REGULATIONS.
- 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 SYSTÉM.
- 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
- 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
- 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
- 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.
- 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
 - A DETAILED DESCRIPTION OF THE OVERALL EQUIPMENT AND ITS INDIVIDUAL COMPONENTS.
 - THEORY OF OPERATION INCLUDING THE FUNCTION OF EACH COMPONENT.
 - INSTALLATION INSTRUCTIONS.
 - START-UP INSTRUCTIONS.
 - PREVENTATIVE MAINTENANCE REQUIREMENTS.
 - CHART FOR TROUBLE-SHOOTING.
 - 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
 - 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
- SAFETY INSTRUCTIONS.

POWER AND CONTROL

- STENCIL ALL ELECTRICAL EQUIPMENT TO IDENTIFY FUNCTION, CIRCUIT VOLTAGE AND PHASE. WHERE THE EQUIPMENT CONTAINS FUSES, ALSO STENCIL. THE FUSE OR FUSE LINK AMPERE RATING. WHERE THE EQUIPMENT DOES NOT HAVE SUFFICIENT STENCILING AREA, THE STENCILING SHALL BE DONE ON THE WALL NEXT TO THE UNIT. THE LETTERS SHALL BE ONE INCH HIGH AND PAINTED IN WHITE OR BLACK TO PROVIDE THE HIGHEST CONTRACT
- 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 FITHER 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.
- ALL BRANCH CIRCUIT CONDUCTORS CONNECTED TO A PARTICULAR PHASE SHALL BE IDENTIFIED WITH THE SAME COLOR. THE COLOR CODING SHALL BE
- IN CONTROL WIRING THE SAME COLOR SHALL BE USED THROUGHOUT THE SYSTEM FOR THE SAME FUNCTION, SUCH AS 10%, 30%, 100% BRIGHTNESS CONTROL, ETC.
- LOW VOLTAGE (600 V.) AND HIGH VOLTAGE (5000 V.) CONDUCTORS SHALL BE INSTALLED IN SEPARATE WIREWAYS.
- NEATLY LACE WIRING IN DISTRIBUTION PANELS, WIREWAYS, SWITCHES AND JUNCTION/PULL BOXES.
- THE MINIMUM SIZE OF PULL/JUNCTION BOXES, REGARDLESS OF THE QUANTITY AND SIZE OF THE CONDUCTORS SHOWN, SHALL BE AS FOLLOWS:
 - 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.
 - 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.
- 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.
- EQUIPMENT CABINETS SHALL NOT BE USED AS PULL/JUNCTION BOXES. ONLY WIRING TERMINATING AT THE EQUIPMENT SHALL BE BROUGHT INTO THESE
- SPLICES AND JUNCTION POINTS SHALL BE PERMITTED ONLY IN JUNCTION BOXES, DUCTS EQUIPPED WITH REMOVABLE COVERS, AND AT EASILY
- 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
- ALL WALL MOUNTED EQUIPMENT ENCLOSURES SHALL BE MOUNTED ON WOODEN MOUNTING BOARDS.
- 14. WOODEN EQUIPMENT MOUNTING BOARDS SHALL BE PLYWOOD, EXTERIOR TYPE. 3/4 INCH, MINIMUM, THICKNESS, BOTH SIDES PAINTED WITH ONE COAT OF PRIMER AND TWO COATS OF GRAY OIL-BASED PAINT.
- RIGID STEEL CONDUIT SHALL BE USED THROUGHOUT THE INSTALLATION UNLESS OTHERWISE SPECIFIED. THE MINIMUM TRADE SIZE SHALL BE 3/4
- ALL RIGID CONDUIT SHALL BE TERMINATED AT CONSTANT CURRENT REGULATORS WITH A SECTION (10" MINIMUM) OF FLEXIBLE CONDUIT.
- UNLESS OTHERWISE SHOWN, ALL EXPOSED CONDUITS SHALL BE RUN PARALLEL TO OR AT RIGHT ANGLES WITH THE LINES OF THE STRUCTURE.
- 18. ALL STEEL CONDUITS, FITTINGS, NUTS, BOLTS, ETC. SHALL BE GALVANIZED.
- USE CONDUIT BUSHINGS AT EACH CONDUIT TERMINATION. WHERE NO. 4 AWG OR LARGER UNDERGROUND WIRE IS INSTALLED, USE INSULATED BUSHINGS.
- USE DOUBLE LOCK NUTS AT EACH CONDUIT TERMINATION.
- WRAP ALL PRIMARY AND SECONDARY POWER TRANSFORMER CONNECTIONS WITH SUFFICIENT LAYERS OF INSULTING TAPE AND COVER WITH INSULATING VARNISH FOR FULL VALUE OF CABLE INSULATION VOLTAGE.
- UNLESS OTHERWISE NOTED, ALL INDOOR SINGLE CONDUCTOR CONTROL WIRING SHALL BE NO. 12 AWG. MINUMUM.
- 23. THE FOLLOWING SHALL APPLY TO RELAY/CONTACTOR PANELS/ENCLOSURES:
 - ALL COMPONENTS SHALL BE MOUNTED IN DUST PROOF ENCLOSURE(S) WITH VERTICALLY HINGED COVERS
 - THE ENCLOSURE(S) SHALL HAVE AMPLE SPACE FOR THE CIRCUIT COMPONENTS, TERMINAL BLOCKS AND INCOMING AND INTERNAL WIRING
 - ALL CONTROL CONDUCTOR TERMINATIONS SHALL BE OF THE OPEN-EYE CONNECTOR/SCREW TYPE. SOLDERED CLOSED-EYE TERMINATIONS, OR TERMINATIONS WITHOUT CONNECTORS ARE NOT ACCEPTABLE.
 - WHEN THE ENCLOSURE COVER IS OPENED, ALL CIRCUIT COMPONENTS, WIRING AND TERMINALS SHALL BE EXPOSED AND ACCESSIBLE WITHOUT REMOVAL OF ANY PANELS, COVERS, ETC., EXCEPT THOSE COVERING HIGH VOLTAGE COMPONENTS.
 - ACCESS TO, OR REMOVAL OF A CIRCUIT COMPONENT OR TERMINAL BLOCK WILL NOT REQUIRE THE REMOVAL OF ANY OTHER CIRCUIT COMPONENT OR TERMINAL BLOCK.
 - EACH CIRCUIT COMPONENT SHALL BE CLEARLY IDENTIFIED INDICATING ITS Corresponding number shown on the drawings and its function.
 - A COMPLETE WIRING DIAGRAM (NOT A SCHEMATIC DIAGRAM) SHALL BE MOUNTED ON THE INSIDE OF THE COVER. THE DIAGRAM SHALL REPRESENT EACH CONDUCTOR BY A SEPARATE LINE.
 - THE DIAGRAM SHALL IDENTIFY EACH CIRCUIT COMPONENT AN NUMBERING AND COLOR OF EACH TERMINAL CONDUCTOR AND TERMINAL
 - ALL WIRING SHALL BE NEATLY TRAINED AND LACED.
 - MINIMUM WIRE SIZE SHALL BE NO. 12 AWG.

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FIELD LIGHTING NOTES

- 1. UNLESS OTHERWISE NOTED, ALL UNDERGROUND FIELD POWER MULTIPLE AND SERIES CIRCUIT CONDUCTORS WHETHER DEB OR IN DUCT/CONDUIT SHALL BE FAA APPROVED L-824 TYPE. INSULATION VOLTAGE AND SIZE SHALL BE AS SPECIFIED.
- 2. NO COMPONENTS OF PRIMARY CIRCUIT SUCH AS CABLE, CONNECTORS AND TRANSFORMERS SHALL BE BROUGHT ABOVE GROUND AT EDGE LIGHTS, SIGNS, REIL, PAPI, ETC.
- 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. 27.
- 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. 27.
- 6. L-823 TYPE II, TWO-CONDUCTOR SECONDARY CONNECTORS SHALL BE CLASS 'A' (FACTORY MOLDED).
- 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.
- ELECTRICAL INSULATING GREASE SHALL BE APPLIED WITHIN THE L-823, SECONDARY, TWO CONDUCTOR CONNECTORS TO PREVENT WATER ENTRANCE, THESE CONNECTORS SHALL NOT BE
- 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
- 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. 27.
- 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
- 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,
- 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.

GROUNDING NOTES

- 1. ALL GROUND CONNECTIONS TO GROUND RODS, BUSSES, PANELS, ETC. SHALL BE MADE WITH PRESSURE TYPE SOLDERLESS LUGS AND GROUND CLAMPS SOLDERED OR BOLT AND WASHER TYPE CONNECTIONS ARE NOT ACCEPTABLE. CLEAN ALL METAL SURFACES BEFORE MAKING GROUND CONNECTIONS. CONNECTIONS TO GROUND RODS SHALL BE EXOTHERMIC WELD WHERE SPECIFIED HEREIN.
- 2. TOP OF GROUND RODS SHALL BE TEN (10) INCHES BELOW GRADE, UNLESS SPECIFIED OTHERWISE HEREIN, FOR RESPECTIVE APPLICATIONS.
- 3. THE RESISTANCE TO GROUND OF THE VAULT GROUNDING SYSTEM WITH THE COMMERCIAL POWER LINE NEUTRAL DISCONNECTED SHALL NOT EXCEED 10 OHMS.

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