CONSTRUCTION PLANS

FOR

KEWANEE MUNICIPAL AIRPORT

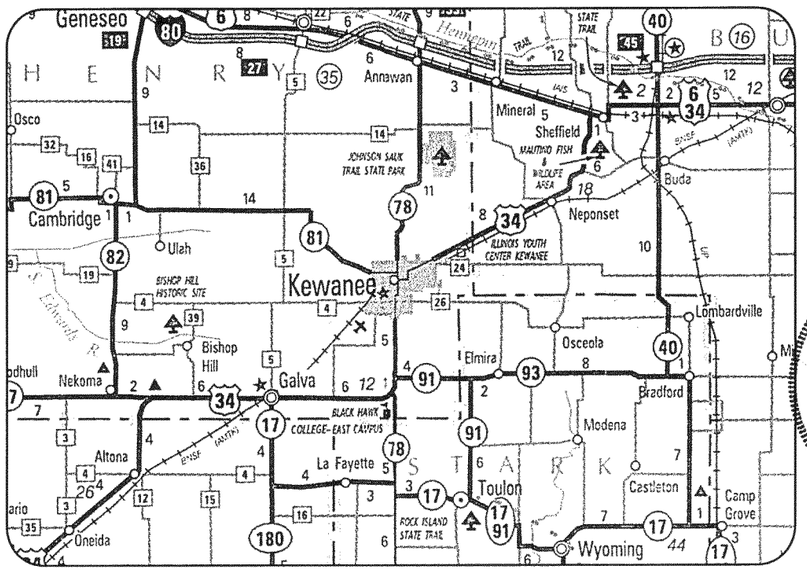
KEWANEE, HENRY COUNTY, ILLINOIS

OVERLAY EAST SIDE OF APRON, TAXIWAYS "A" AND "A1"

SCOPE OF WORK

BASE BID:
THIS PROJECT CONSISTS OF CRACK CLEANING AND SEALING, CONSTRUCTION OF A BITUMINOUS OVERLAY, PAVEMENT REPAIRS. SHOULDER ADJUSTMENT, SEEDING, MULCHING AND PAVEMENT MARKING TO THE EAST HALF OF THE AIRCRAFT APRON AND REHABILITATE TAXIWAY "A" AND "A-1" WITH A POROUS FRICTION COURSE, 0.10' DEPTH.

ADDITIVE ALTERNATE NO. 1:
REMOVE AND REPLACE A 4-WAY CONCRETE ENCASED ELECTRICAL DUCT. ASSOCIATED WORK ITEMS INCLUDE PAVEMENT REMOVAL AND REPLACEMENTS, SPLICE CANS AND CABLING.



LOCATION

ILL. PROJ.:	EZI-3971
A.I.P. PROJ.:	3-17-0058-B14
LATITUDE:	41° 12' 19"
LONGITUDE:	89° 57' 50"
ELEVATION:	858.0' M.S.L.
DATE:	MAY 07, 2010

LOCATION OF COUNTY

LICENSED PROFESSIONAL ENGINEER
CHARLES A. HAGLOCH
062-37821
STATE OF ILLINOIS

Revised 6/23/10

HANSON
Hanson Professional Services Inc.
CIVIL ENGINEER
Submitted by: Charles A. Hagloch ENG'R
Date Submitted June 24, 2010
Lics. Exp. Date Nov. 30, 2011

KEWANEE AIRPORT AUTHORITY
Approved _____ CHAIRMAN
Date June 23, 2010
Approved _____ SECRETARY
Date June 23, 2010

DATE	REVISION	BY
6/23/10	REVISED PER IDA REVIEW	CAH

KEWANEE MUNICIPAL AIRPORT
KEWANEE, ILLINOIS
IL. PROJ.: EZI-3971 A.I.P. PROJ.: 3-17-0058-B14

Hanson Project No. 09A0151D_0001
Filename R-001CVR.DWG
Scale NOT TO SCALE
Date 05/12/10

LAYOUT	CAH	04/26/10
DRAWN	BAK	04/26/10
REVIEWED	CAH	05/10/10

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

RECONSTRUCT EAST APRON

COVER SHEET

1
1 of 38 sheets

KE010

SUMMARY OF QUANTITIES

BASE BID

ITEM NO.	DESCRIPTION	UNIT	TOTAL QUANTITIES	AS BUILT QUANTITIES
AR150510	ENGINEER'S FIELD OFFICE	L.S.	1	
AR150530	TRAFFIC MAINTENANCE	L.S.	1	
AR150540	HAUL ROUTE	L.S.	1	
AR152480	SHOULDER ADJUSTMENT	S.Y.	860	
AR156531	EROSION CONTROL BLANKET	S.Y.	335	
AR201661	CLEAN & SEAL BITUMINOUS CRACKS	L.F.	982	
AR401610	BITUMINOUS SURFACE COURSE	TON	1,002	
AR401620	BIT. SURFACE COURSE, LEVELING	TON	702	
AR401655	BUTT JOINT CONSTRUCTION	S.Y.	1,065	
AR401910	REMOVE & REPLACE BIT. PAVEMENT	S.Y.	744	
AR402622	POROUS FRICTION COURSE, 0.10'	S.Y.	14,058	
AR501506	6" PCC PAVEMENT	S.Y.	231	
AR501600	PCC SIDEWALK	S.F.	25	
AR501690	PCC SIDEWALK REMOVAL	S.F.	25	
AR501900	REMOVE PCC PAVEMENT	S.Y.	240	
AR510510	TIE DOWN	EACH	18	
AR510900	REMOVE TIE DOWN	EACH	4	
AR603510	BITUMINOUS TACK COAT	GAL.	7,305	
AR620520	PAVEMENT MARKING-WATERBORNE	S.F.	3,440	
AR620525	PAVEMENT MARKING-BLACK BORDER	S.F.	441	
AR701006	6" PVC STORM SEWER	L.F.	62	
AR751940	ADJUST INLET	EACH	2	
AR752850	SPECIAL STRUCTURE	EACH	1	
AR754710	CONCRETE FLUME	L.F.	8	
AR800501	FUEL ISLAND ADJUSTMENT	L.S.	1	
AR901510	SEEDING	ACRE	0.18	
AR908510	MULCHING	ACRE	0.11	
	ADDITIVE ALTERNATE NO. 1			
AS108158	1/C #8 5 KV UG CABLE IN UD	L.F.	45	
AS108084	1/C #4 XLP-USE	L.F.	1,340	
AS108086	1/C #6 XLP-USE	L.F.	1,005	
AS110504	4-WAY CONCRETE ENCASED DUCT	L.F.	331	
AS110901	CONCRETE DUCT REMOVAL	L.F.	331	
AS125565	SPLICE CAN	EACH	2	
AS401910	REMOVE & REPLACE BIT. PAVEMENT	S.Y.	107	

INDEX TO SHEETS

DATE	REVISION	BY

KEWANEE MUNICIPAL AIRPORT
KEWANEE, ILLINOIS

A.I.P. PROJ.: 3-17-0058-B14
IL. PROJ.: EZI-3971

Hanson Project No. 09A0151D 0001
Filename R-002FLP.DWG
Scale NOT TO SCALE
Date 05/12/10

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HANSON
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1525 South Sixth Street
Springfield, Illinois 62703-2886
Offices Nationwide

RECONSTRUCT EAST APRON

SUMMARY OF QUANTITIES AND INDEX TO SHEETS

JUN 23, 2010 8:09 AM KINCA00394
I:\AIRPORTS\KEWANEE\09A0151\CADD\AIRPORT\SHEETS\R-002FLP.DWG - SUMMARY OF QUANTITIES AND INDEX TO SHEETS

SCOPE OF WORK

BASE BID:
THIS PROJECT CONSISTS OF CRACK CLEANING AND SEALING, CONSTRUCTION OF A BITUMINOUS OVERLAY, PAVEMENT REPAIRS. SHOULDER ADJUSTMENT, SEEDING, MULCHING AND PAVEMENT MARKING TO THE EAST HALF OF THE AIRCRAFT APRON AND REHABILITATE TAXIWAY "A" AND "A–1" WITH A POROUS FRICTION COURSE, 0.10' DEPTH.

ADDITIVE ALTERNATE NO. 1:
REMOVE AND REPLACE A 4–WAY CONCRETE ENCASED ELECTRICAL DUCT. ASSOCIATED WORK ITEMS INCLUDE PAVEMENT REMOVAL AND REPLACEMENTS, SPLICE CANS AND CABLING.

CONTRACTOR'S RESPONSIBILITIES

GENERAL :
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 REQUIRED 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 CONSTRUCTION CREW.

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 ARE ON THE AIRPORT PROPERTY.

EQUIPMENT PARKING AND STORAGE – THE CONTRACTOR'S EQUIPMENT PARKING, MATERIAL STORAGE, AND EMPLOYEE PARKING WILL BE AT THE LOCATIONS 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 EQUIPMENT.

HORIZONTAL AND VERTICAL DATA

NO.	DESCRIPTION	NORTHING	EASTING	ELEV.
1	KEWPORT AZ (NGS) MARKER, ALUM. ROD	1,652,491.649	2,349,792.846	850.62
2	CHISELED "□" ON INSPECTION HOLE	–	–	848.87
3	KEWPORT (NGS) MARKER, ALUM. ROD	1,652,431.715	2,352,728.103	854.13
4	CHISELED "□" ON EAST END OF CONC. SIGN BASE	–	–	854.76
5	CHISELED "□" ON WEST END OF CONC. SIGN BASE	–	–	851.21

150–ENGINEER'S FIELD OFFICE NOTES

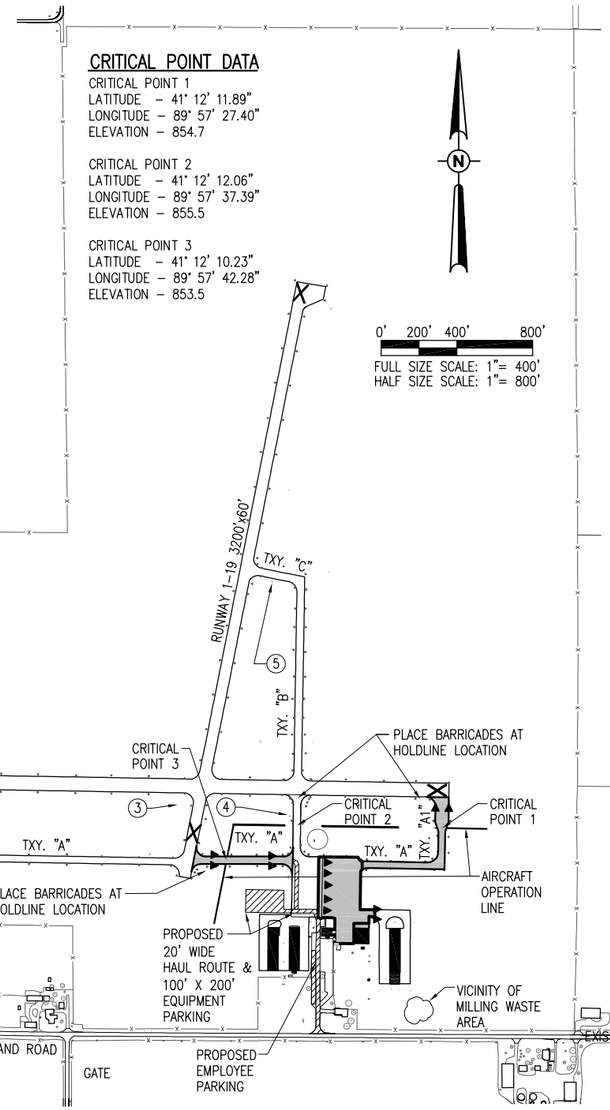
THE PROPOSED ENGINEER'S FIELD OFFICE WILL BE FURNISHED, MAINTAINED, AND REMOVED IN ACCORDANCE WITH ITEM AR150510 "ENGINEER'S FIELD OFFICE" AS STATED ON PAGE 49 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION OF AIRPORTS NOV. 2, 2009.

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 CONTRACTOR WILL FURNISH A WIRELESS PHONE TO THE RESIDENT ENGINEER FOR HIS EXCLUSIVE USE FOR THE DURATION OF THIS PROJECT. THE RESIDENT ENGINEER WILL USE THIS PHONE FOR PROJECT BUSINESS ONLY. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL CHARGES ASSOCIATED WITH THIS CELL PHONE.

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



BARRICADES AND TRAFFIC CONES

IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO PLACE AND MAINTAIN BARRICADES AND TRAFFIC CONES AS SHOWN ON THIS SHEET OR AS DIRECTED BY THE RESIDENT ENGINEER. THE BARRICADES WILL BE EQUIPPED WITH RED STEADY BURN LIGHTS AND 20 INCH SQUARE ORANGE FLAGS. THE BARRICADES AND CONES, THEIR MAINTENANCE, PLACEMENT AND REMOVAL WITHIN THE RECONSTRUCTION AREA WILL BE PAID FOR UNDER ITEM:

AR150530 "TRAFFIC MAINTENANCE"____ PER LUMP SUM.

TRAFFIC CONES WILL BE USED ON A CLOSED RUNWAY FOR TRAFFIC CONTROL IN LIEU OF BARRICADES.

AIRCRAFT OPERATION LINE

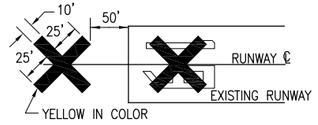
THE RESIDENT ENGINEER WILL ESTABLISH THE AIRCRAFT OPERATIONAL AREA FOR EACH OF THE AIRPORT RUNWAYS BY PLACING A ROW OF LATH, 200 FT. FROM EACH OF THE RUNWAY CENTERLINES. NO PERSONNEL OR EQUIPMENT WILL CROSS THE LATH ROW WITHOUT CLOSING THE RESPECTIVE RUNWAY.

HEIGHT OF CONSTRUCTION EQUIPMENT

THE MAXIMUM ANTICIPATED HEIGHT OF THE CONSTRUCTION EQUIPMENT WILL BE 25 FT. THE TALLEST EQUIPMENT IS EXPECTED TO BE A SEMI–TRACTOR AND TRAILER.

TEMPORARY RUNWAY CLOSURE NOTE

COST OF CONSTRUCTING, PLACING, MAINTAINING AND REMOVING CROSSES WILL BE PAID FOR UNDER ITEM AR150530 "TRAFFIC MAINTENANCE" PER LUMP SUM. 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 RESPONSIBLE FOR THE PLACEMENT AND REMOVAL OF THE CROSSES.



DETAIL OF CROSS FOR CLOSED RUNWAY

"NOT TO SCALE"

RUNWAY AND TAXIWAY CLOSURE NOTE:

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 "A", "A1" AND "B", AS WELL AS THE PORTION OF THE RAMP AFFECTED BY THE PROJECT, WILL BE CLOSED FOR THE DURATION OF THE PROJECT.

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.

RUNWAY RE–OPENING PROCEDURES:
* REMOVE CROSSES.
* REMOVE LIGHTED BARRICADES.
* 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.

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 THE ENTRANCE ROAD AND EXISTING FENCE GATE AT APRON ACCESS. 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.

UTILITY NOTE

THE LOCATION, SIZE, AND TYPE OF MATERIAL OF EXISTING UNDERGROUND AND/OR ABOVEGROUND UTILITIES INDICATED ON THE PLANS ARE NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. NEITHER THE OWNER NOR THE ENGINEER ASSUMES ANY RESPONSIBILITY WHATEVER IN RESPECT TO THE ACCURACY, COMPLETENESS, OR SUFFICIENCY OF THE INFORMATION. THERE IS NO GUARANTEE, EITHER EXPRESSED OR IMPLIED, THAT THE LOCATIONS, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ARE REPRESENTATIVE OF THOSE TO BE ENCOUNTERED IN THE CONSTRUCTION. 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 OWNER'S REPRESENTATIVE AND/OR THE RESIDENT ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY DAMAGE TO SUCH MAINS AND SERVICES SHALL BE RESTORED TO SERVICE AT ONCE AND PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT. ALL UTILITY CABLES AND LINES SHALL BE LOCATED BY THE RESPECTIVE UTILITY. **CONTACT JULIE (JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS) FOR UTILITY INFORMATION, PHONE: 1–800–892–0123.** CONTACT THE FAA (FEDERAL AVIATION ADMINISTRATION) FOR ASSISTANCE IN LOCATING FAA CABLES AND UTILITIES. LOCATION OF FAA POWER, CONTROL, AND COMMUNICATION CABLES SHALL BE COORDINATED WITH AND/OR LOCATED BY THE FAA. ALSO CONTACT AIRPORT DIRECTOR/MANAGER AND AIRPORT PERSONNEL FOR ASSISTANCE IN LOCATING UNDERGROUND AIRPORT CABLES AND/OR UTILITIES. ALSO COORDINATE WORK WITH ALL ABOVEGROUND UTILITIES.

EROSION CONTROL

THE PROPOSED CONSTRUCTION WILL DISTURB LESS THAN 1 ACRE OF LAND, THEREFORE AN EROSION CONTROL PLAN AND AN NPDES PERMIT ARE NOT REQUIRED.

J.U.L.I.E. INFORMATION

COUNTY	HENRY
CITY	KEWANEE
TOWNSHIP	WETHERSFIELD
SECTION NO.	17
ADDRESS	KEWANEE MUNICIPAL AIRPORT 3761 MIDLAND ROAD KEWANEE, ILLINOIS 61443

LEGEND

- EXISTING IMPROVEMENTS
- EXISTING BUILDING
- PROPOSED CONSTRUCTION IMPROVEMENTS
- PROPOSED EQUIPMENT/VEHICLE PARKING AREA & HAUL ROUTE
- EXISTING AIRPORT PROPERTY LINE
- LIGHTED BARRICADES
- ① HORIZONTAL/VERTICAL CONTROL

DATE	REVISION	BY
6/23/10	REVISED PER IDA REVIEW	CAH

KEWANEE MUNICIPAL AIRPORT
KEWANEE, ILLINOIS

A.I.P. PROJ.: 3–17–0058–B14
IL. PROJ.: EZI–3971

Hanson Project No. 09A0151D 0001
Filename R–003SFY.DWG
Scale NOT TO SCALE
Date 05/12/10

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DRAWN	BBR	04/26/10
REVIEWED	CAH	05/10/10

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

RECONSTRUCT EAST APRON

PROPOSED SAFETY PLAN

JUN 23, 2010 4:50 PM HAGLOOO382
I:\AIRPORTS\KEWANEE\09A0151\CADD\AIRPORT\SHEETS\R–003SFY.DWG – PROPOSED SAFETY PLAN

REMOVE PCC PAVEMENT

THE AREA DESIGNATED AS ▨ ON THIS SHEET WILL HAVE THE EXISTING PCC PAVEMENT REMOVED TO THE AGGREGATE SUB-BASE. THE SUB-BASE WILL BE GRADED TO ACCOMMODATE THE PROPOSED PAVEMENT DEPTH AND COMPACTED TO THE SATISFACTION OF THE RESIDENT ENGINEER. ALL EXCESS MATERIAL WILL BE REMOVED AND DISPOSED OF OFF THE AIRPORT SITE. ANY ADDITIONAL CA-6 MATERIAL REQUIRED WILL BE INCIDENTAL TO THE PCC PAVEMENT REMOVAL.

ANY ADJACENT PAVEMENT DAMAGED BY THE PCC PAVEMENT REMOVAL OPERATIONS WILL BE REPAIRED AT THE CONTRACTOR'S OWN EXPENSE.

THIS ITEM OF WORK SHALL BE PAID FOR UNDER ITEM:
AR501900 "REMOVE PCC PAVEMENT" – PER S.Y.

REMOVE AND REPLACE BITUMINOUS PAVEMENT

THE AREA(S) DESIGNATED AS ▬ ON THIS SHEET WILL HAVE THE EXISTING BITUMINOUS PAVEMENT REMOVED (FULL DEPTH) AND REPLACED WITH BITUMINOUS SURFACE COURSE. THE EXISTING PAVEMENT IN THIS AREA TO BE REMOVED CONSIST OF 11" OF BITUMINOUS PAVEMENT. THE BITUMINOUS SURFACE COURSE USED IN THE REPLACEMENT WILL BE CONSIDERED AS AN INCIDENTAL ITEM TO THE PROPOSED REMOVAL AND REPLACEMENT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED. ALL REMOVED MATERIAL WILL BE DISPOSED OF OFF THE AIRPORT SITE.

WHERE THE PROPOSED REMOVAL AND REPLACEMENT AREA ABUTS THE EXISTING PAVEMENT, THE PAVEMENT WILL BE SAWED. THE SAWING WILL BE CONSIDERED AS AN INCIDENTAL ITEM TO THE PROPOSED PAVEMENT REMOVAL AND REPLACEMENT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

ANY ADJACENT PAVEMENT DAMAGED BY THE PAVEMENT REMOVAL AND REPLACEMENT OPERATIONS WILL BE REPAIRED AT THE CONTRACTOR'S OWN EXPENSE.

THIS ITEM OF WORK SHALL BE PAID FOR UNDER ITEM:
AR401910 "REMOVE AND REPLACE BITUMINOUS PAVEMENT" – PER S.Y.

AR401655 BUTT JOINT CONSTRUCTION NOTES

THE PROPOSED BUTT JOINTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ITEM AR401655 "BUTT JOINT CONSTRUCTION" AS STATED ON PAGE 154 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION OF AIRPORTS, ADOPTED NOVEMBER 2, 2009.

THIS ITEM SHALL CONSISTS OF REMOVING THE EXISTING BITUMINOUS PAVEMENT SURFACE BY MILLING IN ORDER TO CONSTRUCT A BUTT JOINT FOR THE TRANSITION OF THE PROPOSED BITUMINOUS OVERLAY AT THE LOCATIONS AS SHOWN ON THE PLANS.

WHERE THE PROPOSED BUTT JOINT CONSTRUCTION AREA ABUTS THE EXISTING PAVEMENT, THE PAVEMENT WILL BE SAWED AS SHOWN ON THIS SHEET. THE SAWING WILL BE CONSIDERED AS AN INCIDENTAL ITEM TO THE PROPOSED BUTT JOINT CONSTRUCTION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED

THE PAVEMENT SURFACE WILL BE MILLED TO A DEPTH OF 0.125 FT. AT THE BUTT END AND WILL TAPER TO 0 IN. AT THE OPPOSITE END. THE PLANER MUST BE CAPABLE OF MILLING THE SURFACE TO THE DESIRED ELEVATIONS AND GRADES.

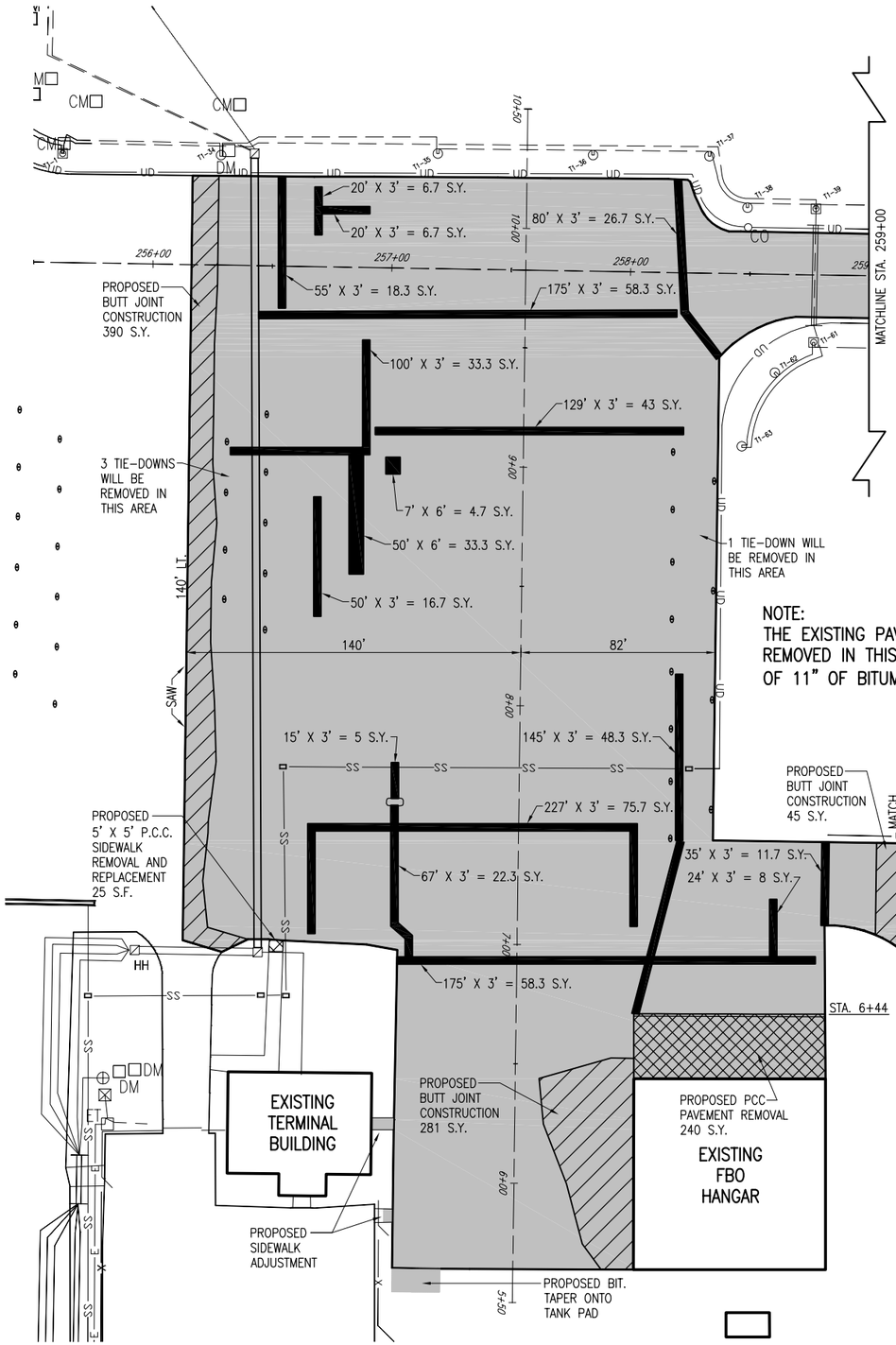
ANY ADJACENT PAVEMENT DAMAGED BY THE MILLING OPERATIONS WILL BE REPAIRED AT THE CONTRACTOR'S OWN EXPENSE.

ALL BITUMINOUS PAVEMENT MILLING AREAS WILL BE LOCATED AND MARKED BY THE RESIDENT ENGINEER.

THE MILLED MATERIAL WILL BE DISPOSED OF ON THE AIRPORT SITE JUST EAST OF THE FRONTAL AREA AS DESIGNATED BY THE AIRPORT MANAGER. THE CONTRACTOR WILL SHAPE TO DRAIN AND COMPACT THE MILLED MATERIAL. COMPACTION WILL BE OBTAINED BY TWO PASSES WITH A ROLLER.

THE SHAPING AND COMPACTING OF THE PLACED MILLED MATERIAL WILL BE CONSIDERED AS AN INCIDENTAL ITEM TO THE BUTT JOINT CONSTRUCTION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

THE PAVEMENT MILLING WILL BE PAID FOR UNDER ITEM:
AR401655 "BUTT JOINT CONSTRUCTION"____ PER S.Y.



P.C.C. SIDEWALK REMOVAL AND REPLACEMENT KE010

THE AREA LABELED AS P.C.C. SIDEWALK REMOVAL AND REPLACEMENT ON THIS SHEET WILL HAVE THE EXISTING P.C.C. SIDEWALK ADJUSTED TO MATCH THE PROPOSED PAVEMENT. ALL REMOVED MATERIAL WILL BE DISPOSED OF OFF THE AIRPORT SITE.

THE CONCRETE USED FOR THIS PAY ITEM WILL MEET THE SPECIFICATIONS FOR ITEM 610 STRUCTURAL CEMENT CONCRETE.

THE EXISTING P.C.C. SIDEWALK WILL BE REMOVED TO THE JOINT THAT IS NEAREST TO THE DIMENSIONS SHOWN ON THIS SHEET.

THESE ITEMS OF WORK SHALL BE PAID FOR UNDER ITEM:
AR501690 "P.C.C. SIDEWALK REMOVAL" _____ PER S.F.
AR501600 "P.C.C. SIDEWALK"_____ PER S.F.

TIE DOWN REMOVAL NOTES

THE RESIDENT ENGINEER WILL LOCATE AND IDENTIFY THE EXISTING TIE DOWNS THAT WILL BE REMOVED.

THE DESIGNATED TIE DOWNS WILL BE REMOVED IN ACCORDANCE WITH THE SPECIAL PROVISIONS.

THE NUMBER OF TIE DOWNS REMOVED AND DISPOSED OF OFF THE AIRPORT SITE WILL BE PAID FOR UNDER:

AR510900 "REMOVE TIE DOWN"_____ PER EACH.

CRACK CLEAN & SEAL NOTES

THE CRACKS TO BE CLEAN & SEALED WILL BE IDENTIFIED AND LOCATED BY THE RESIDENT ENGINEER.

THE CRACKS WERE IDENTIFIED DURING A SURVEY DURING MARCH 2010.

THE CRACK WILL BE CLEANED & SEALED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

BACKER ROD WILL NOT BE REQUIRED.

THERE ARE APPROXIMATELY 335 L.F. OF CRACKS ON THE APRON AND 647 L.F. ON THE EASTERLY PORTION OF TAXIWAY "A" THAT WILL BE CLEANED AND SEALED.

THE DESIGNATED CRACK CLEANING & SEALING WILL BE PAID FOR UNDER ITEM:

AR201661 "CLEAN & SEAL BITUMINOUS CRACKS"_____ PER LIN. FT.

SIDEWALK ADJUSTMENT NOTES

THE TWO SIDEWALKS ON THE EAST SIDE OF THE EXISTING TERMINAL BUILDING WILL BE ADJUSTED USING BITUMINOUS SURFACE COURSE MIX.

THE NORTHERN SIDEWALK WILL BE OVERLAID TO A SUFFICIENT DEPTH TO INSURE WATER WILL FLOW AWAY FROM THE BUILDING. THE SIDEWALK WILL BE OVERLAID FROM THE BUILDING STEPS TO THE EDGE OF THE APRON.

THE SOUTHERN SIDEWALK WILL BE OVERLAID HALF WAY TO THE EXISTING CHAIN LINK FENCE. THE CONTRACTOR WILL FORM A FEATHERED EDGE WHERE THE BITUMINOUS OVERLAY ENDS ON THE SIDEWALK.

THE SIDEWALK ADJUSTMENTS WILL BE CONSIDERED AS AN INCIDENTAL ITEM OF THE BITUMINOUS SURFACE COURSE AND THE BITUMINOUS SURFACE COURSE USED FOR THE SIDEWALK ADJUSTMENT WILL BE PAID FOR UNDER ITEM:
AR401610 "BITUMINOUS SURFACE COURSE"___ PER TON.

LEGEND

- EXISTING IMPROVEMENTS
- EXISTING BUILDINGS
- PROPOSED CONSTRUCTION IMPROVEMENTS
- PROPOSED PCC PAVEMENT REMOVAL
- PROPOSED BUTT JOINT CONSTRUCTION
- PROPOSED BITUMINOUS PAVEMENT REMOVAL AND REPLACEMENT
- SS — EXISTING STORM SEWER
- UD — EXISTING UNDERDRAIN

N

0' 15' 30' 60'
HALF SIZE SCALE: 1"= 60'
FULL SIZE SCALE: 1"= 30'

DATE	REVISION	BY

KEWANEE MUNICIPAL AIRPORT
KEWANEE, ILLINOIS

IL. PROJ.: EZI-3971 A.I.P. PROJ.: 3-17-0058-B14

Hanson Project No. 09A0151D 0001
Filename R-111PRP.DWG
Scale 1"= 30'
Date 05/12/10

LAYOUT	BAK	04/26/10
DRAWN	MDR	04/27/10
REVIEWED	CAH	05/10/10

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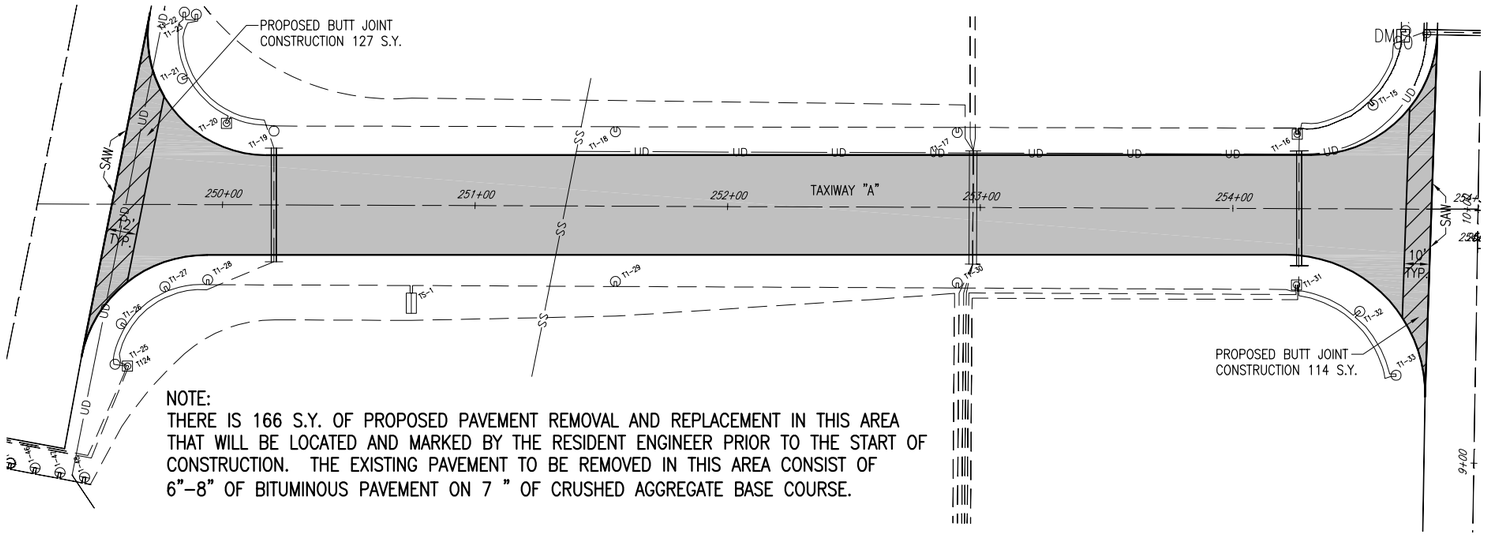
RECONSTRUCT EAST APRON

PROPOSED PAVEMENT PREPARATION PLAN FOR EAST SIDE OF APRON

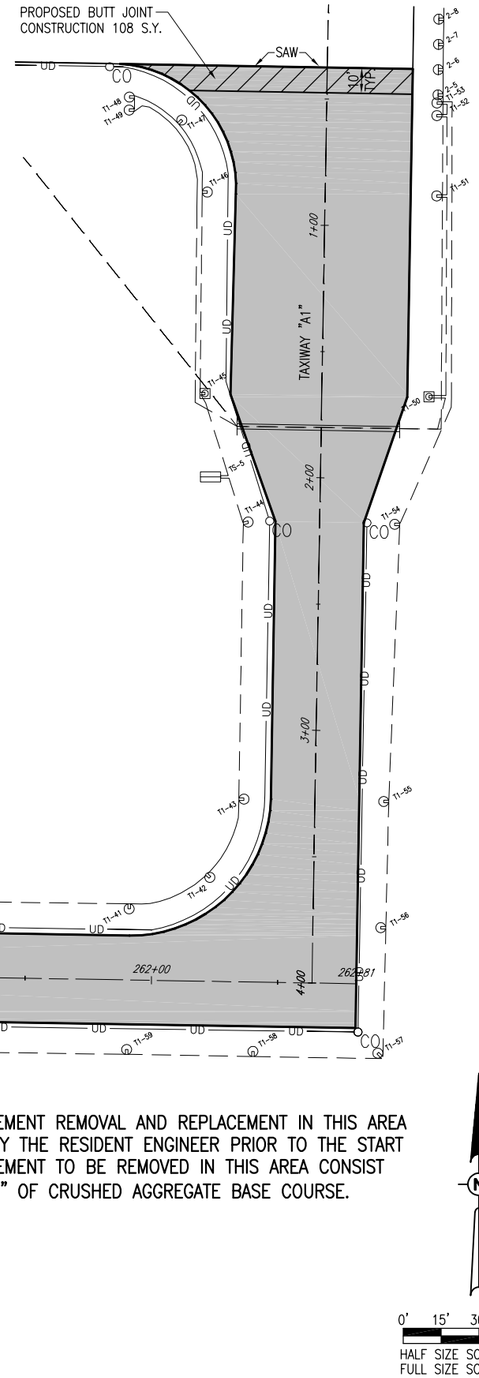
4
4 of 38 sheets

JUN 23, 2010 8:32 AM KINCA00394
I:\AIRPORTS\KEWANEE\09A0151\CADD\AIRPORT\SHEETS\R-111PRP.DWG – PROPOSED PAVEMENT PREPARATION PLAN FOR EAST SIDE OF APRON

KE010



NOTE:
THERE IS 166 S.Y. OF PROPOSED PAVEMENT REMOVAL AND REPLACEMENT IN THIS AREA THAT WILL BE LOCATED AND MARKED BY THE RESIDENT ENGINEER PRIOR TO THE START OF CONSTRUCTION. THE EXISTING PAVEMENT TO BE REMOVED IN THIS AREA CONSIST OF 6"–8" OF BITUMINOUS PAVEMENT ON 7 " OF CRUSHED AGGREGATE BASE COURSE.



NOTE:
THERE IS 101 S.Y. OF PROPOSED PAVEMENT REMOVAL AND REPLACEMENT IN THIS AREA THAT WILL BE LOCATED AND MARKED BY THE RESIDENT ENGINEER PRIOR TO THE START OF CONSTRUCTION. THE EXISTING PAVEMENT TO BE REMOVED IN THIS AREA CONSIST OF 6" OF BITUMINOUS PAVEMENT ON 4" OF CRUSHED AGGREGATE BASE COURSE.

LEGEND

- EXISTING IMPROVEMENTS
- PROPOSED CONSTRUCTION IMPROVEMENTS
- PROPOSED BUTT JOINT CONSTRUCTION
- EXISTING ELECTRICAL CABLES
- UD — EXISTING UNDERDRAIN
- CO — EXISTING UNDERDRAIN CLEANOUT
- EXISTING STAKE MOUNTED TAXIWAY LIGHT
- EXISTING BASE MOUNTED TAXIWAY LIGHT
- EXISTING TAXI GUIDANCE SIGN

0' 15' 30' 60'
HALF SIZE SCALE: 1"= 60'
FULL SIZE SCALE: 1"= 30'

DATE	REVISION	BY

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KEWANEE, ILLINOIS

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RECONSTRUCT EAST APRON

PROPOSED PAVEMENT PREPARATION PLAN FOR TAXIWAY A

5
5 of 38 sheets

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AR401611 BITUMINOUS SURFACE COURSE–METHOD 1, SUPERPAVE

THE BITUMINOUS SURFACE COURSE (401) SHALL BE PLACED IN ACCORDANCE WITH ITEM AR401003 "BITUMINOUS SURFACE COURSE–METHOD 1, SUPERPAVE" AS STATED ON PAGE 129 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION OF AIRPORTS, ADOPTED NOVEMBER 2. 2009

THIS ITEM OF WORK SHALL CONSIST OF CONSTRUCTING 2 LIFTS OF BITUMINOUS SURFACE COURSE–METHOD 1, SUPERPAVE (1–1/2 INCH DEPTH BITUMINOUS SURFACE COURSE AND VARIABLE DEPTH BITUMINOUS LEVELING COURSE.).

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE QUALITY CONTROL IN THE PRODUCTION AND CONSTRUCTION OF THE BITUMINOUS SURFACE COURSE METHOD 1, SUPERPAVE.

PRIOR TO STARTING THE BITUMINOUS SURFACE COURSE–METHOD 1, SUPERPAVE OPERATION, THE CONTRACTOR SHALL SUBMIT TO THE RESIDENT ENGINEER A DETAILED OUTLINE SHOWING AREAS AND ORDER OF PAVING WIDTHS OF PAVING LANES, AND REQUIRED OFFSETS FOR ELECTRONIC GRADE.

THE PROPOSED BITUMINOUS SURFACE COURSE METHOD 1, SUPERPAVE WILL BE DESIGNED TO A SUPERPAVE DESIGN OF (LESS) THAN 60,000 POUNDS.

401–4.9 ADD THE FOLLOWING TO THIS SECTION:

WHEN HAND SPREADING IS PERMITTED, THE MIXTURE WILL BE DISTRIBUTED AND SPREAD USING HAND TOOLS. WHEN THE WORK IS COMPLETED, THE LAYER WILL HAVE THE REQUIRED THICKNESS AND CONFORM TO THE GRADE AND SURFACE CONTOUR SHOWN ON THE PLANS.

401–4.12 ADD THE FOLLOWING TO THIS PARAGRAPH:

ALL PAVEMENT EDGES (LONGITUDINAL, RADIUS, AND PAVEMENT ENDS) MUST BE LEFT IN PROPER ALIGNMENT AS SHOWN ON THE PLANS. THIS MAY BE ACCOMPLISHED BY THE TRIMMING METHOD OUTLINED ABOVE OR AT THE CONTRACTOR'S OPTION BY SAWING AFTER THE PAVING HAS BEEN COMPLETED. NO ADDITIONAL COMPENSATION WILL BE MADE IF THE SAWING METHOD IS USED.

POROUS FRICTION COURSE

THE PROPOSED POROUS FRICTION COURSE WILL BE CONSTRUCTED IN ONE LAYER, HAVING A COMPACTED NOMINAL THICKNESS OF 0.10 FOOT.

POROUS FRICTION COURSE SHALL BE PLACED ON A CLEAN AND PREPARED SURFACE ONLY AFTER THE APPROVAL OF THE RESIDENT ENGINEER.

POROUS FRICTION COURSE WILL BE CONSTRUCTED IN THE LOCATIONS SHOWN ON THE CONSTRUCTION PLANS AND IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

THE PROPOSED POROUS FRICTION COURSE WILL BE PAID FOR UNDER ITEM:
AR402622 "POROUS FRICTION COURSE, 0.10' "_____ PER S.Y.

603–BITUMINOUS TACK COAT NOTES:

THE BITUMINOUS TACK COAT (603) SHALL BE PLACED IN ACCORDANCE WITH ITEM AR603 "BITUMINOUS TACK COAT" AS STATED ON PAGE 254 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION OF AIRPORTS, ADOPTED NOVEMBER 2, 2009.

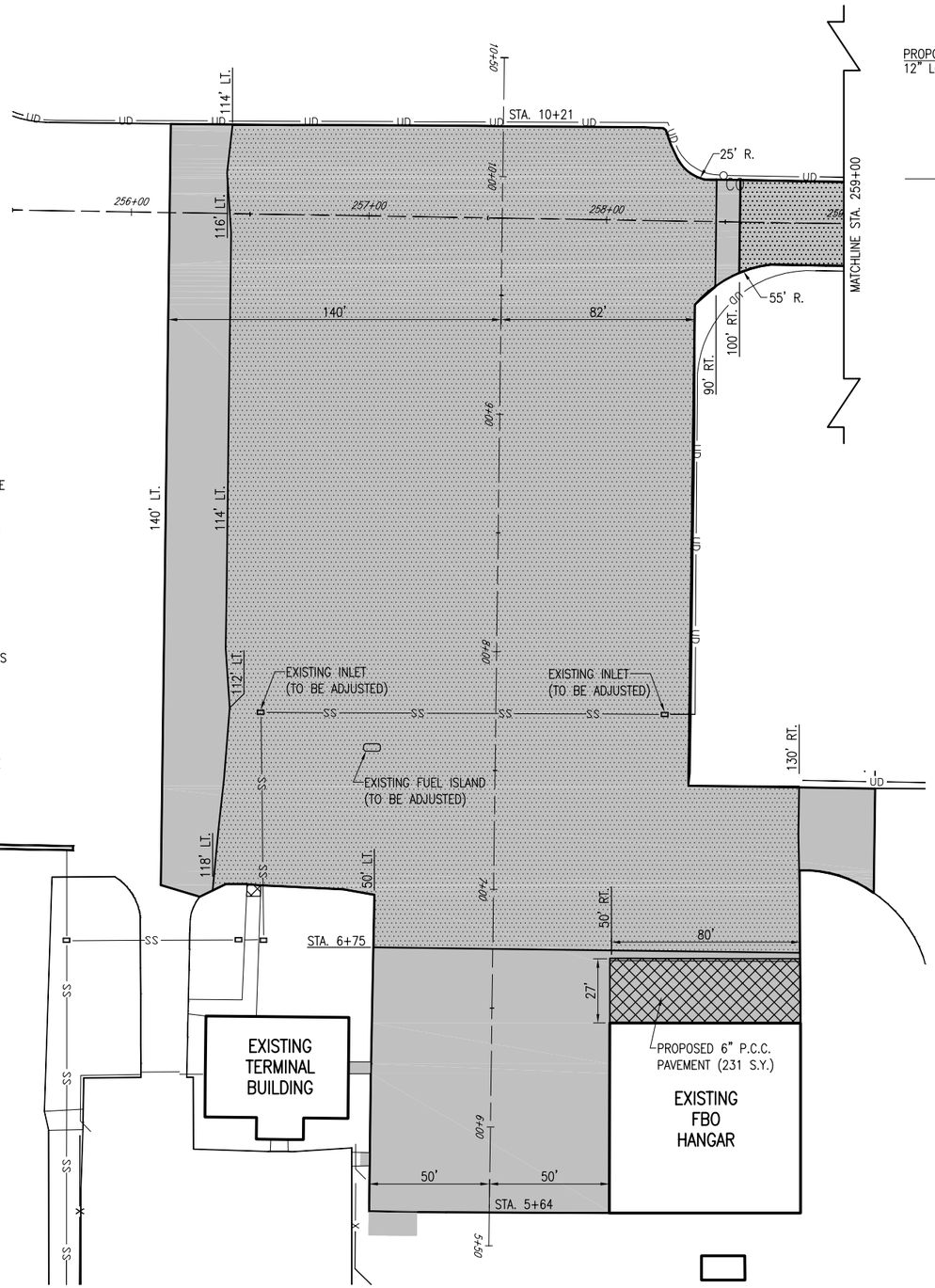
THE PROPOSED BITUMINOUS TACK COAT SHALL BE PLACED ON THE EXISTING BITUMINOUS PAVEMENT AND THE PROPOSED BITUMINOUS PAVEMENT PRIOR TO THE PLACEMENT OF THE NEXT LIFT OF PROPOSED POROUS FRICTION COURSE AND BITUMINOUS SURFACE COURSE. THE PROPOSED BITUMINOUS PAVEMENT SHALL HAVE A TACK COAT OF BITUMINOUS MATERIAL APPLIED IN ACCORDANCE WITH THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS.

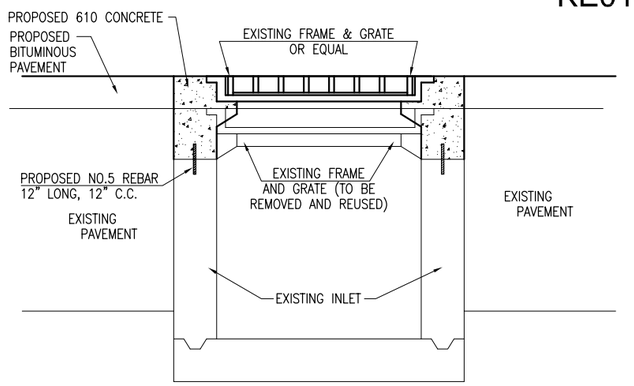
THE PROPOSED BITUMINOUS TACK COAT WILL BE PAID FOR UNDER ITEM:
AR603510 BITUMINOUS TACK COAT ____ PER GAL.

603–FUEL ISLAND ADJUSTMENT NOTES:

THE EXISTING FUEL ISLAND WILL BE ADJUSTED IN ACCORDANCE WITH THE SPECIAL PROVISIONS.

THE FUEL ISLAND ADJUSTMENT WILL BE PAID FOR UNDER ITEM:
AR800501 "FUEL ISLAND ADJUSTMENT"_____ PER LUMP SUM.





PROPOSED INLET ADJUSTMENT DETAIL
"NOT TO SCALE"

NOTES

THE EXISTING INLETS WILL BE ADJUSTED AS SHOWN ON THE DETAIL ON THIS SHEET AND IN ACCORDANCE TO THE STANDARD SPECIFICATIONS.

THE EXISTING FRAME SHALL BE JACKHAMMERED FROM THE EXISTING INLET AND RESET AS SHOWN IN THE DETAIL ON THIS SHEET.

IF THE FRAME AND/OR GRATE IS DAMAGED AND CAN'T BE REUSED, THEN THE CONTRACTOR WILL FURNISH A NEW FRAME AND/OR GRATE AT HIS OWN EXPENSE.

THE PROPOSED INLET ADJUSTMENT WILL BE PAID FOR UNDER THE FOLLOWING:
AR751940 "ADJUST INLET"_____ 1 EACH.

LEGEND

- EXISTING IMPROVEMENTS
- EXISTING BUILDINGS
- PROPOSED CONSTRUCTION IMPROVEMENTS
- PROPOSED POROUS FRICTION COURSE LIMITS
- PROPOSED 6" PCC PAVEMENT
- SS — EXISTING STORM SEWER
- UD — EXISTING UNDERDRAIN

0' 15' 30' 60'
HALF SIZE SCALE: 1"= 60'
FULL SIZE SCALE: 1"= 30'

DATE	REVISION	BY

KEWANEE MUNICIPAL AIRPORT
KEWANEE, ILLINOIS

A.I.P. PROJ.: 3-17-0058-B14
IL. PROJ.: EZI-3971

Hanson Project No. 09A0151D 0001
Filename R-121CON.DWG
Scale 1"= 30'
Date 05/12/10

LAYOUT	CAH	04/26/10
DRAWN	BAK	04/26/10
REVIEWED	CAH	05/10/10

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RECONSTRUCT EAST APRON

PROPOSED CONSTRUCTION PLAN FOR EAST SIDE OF APRON

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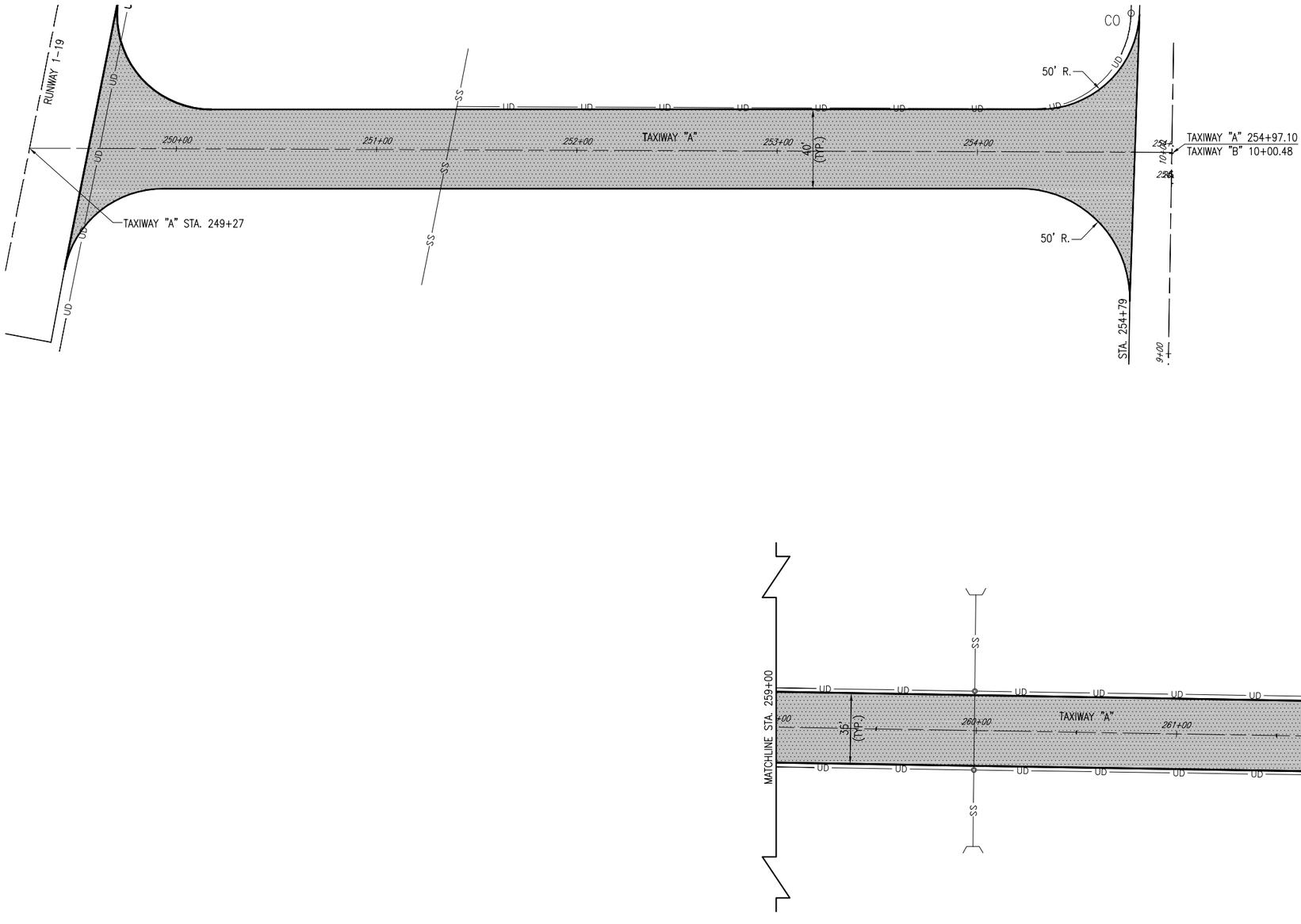

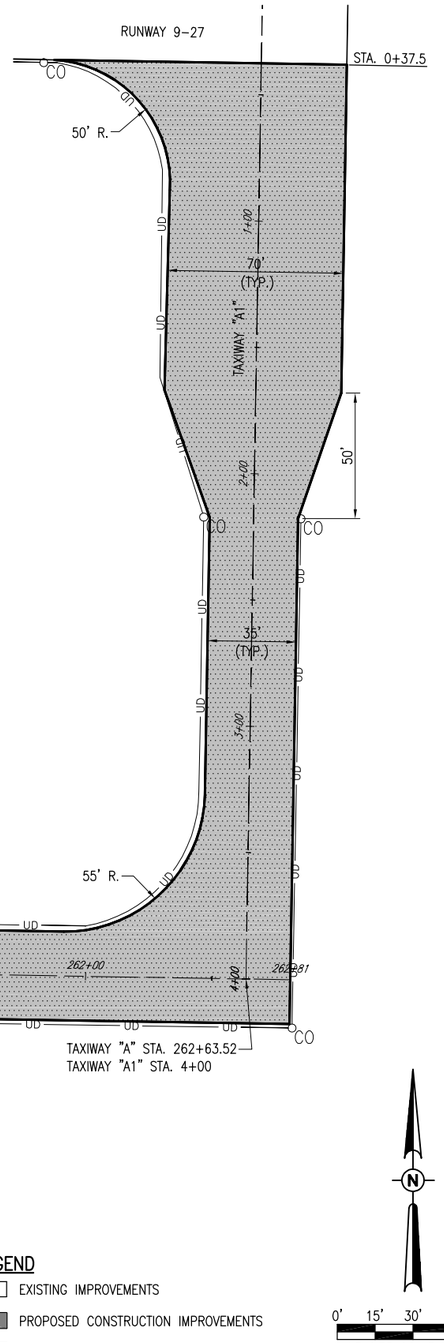

LEGEND

- EXISTING IMPROVEMENTS
- PROPOSED CONSTRUCTION IMPROVEMENTS
- PROPOSED POROUS FRICTION COURSE LIMITS

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PROPOSED CONSTRUCTION PLAN FOR TAXIWAY A

7
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901 SEEDING NOTES

THE PROPOSED SEEDING SHALL BE ACCOMPLISHED IN ACCORDANCE WITH ITEM 901 "SEEDING" AS STATED ON PAGE 324 OF THE STANDARD SPECIFICATIONS FOR, CONSTRUCTION OF AIRPORTS, ADOPTED NOVEMBER 2, 2009.

ALL DISTURBED AREAS LOCATED WITHIN THE PROPOSED GRADING AND SEEDING LIMITS WILL BE SEEDED IN ACCORDANCE WITH THE ABOVE NOTED SPECIFICATION. ALL AREAS OUTSIDE THE DESIGNATED GRADING AND SEEDING LIMITS WILL ALSO BE SEEDED BUT AT THE CONTRACTOR'S OWN EXPENSE.

ALL MATERIALS AND/OR DEBRIS RESULTING FROM THE SEEDING OPERATIONS WILL BE REMOVED FROM THE PAVEMENTS AND MISCELLANEOUS STRUCTURES PRIOR TO OPENING THE RUNWAY.

901-3.4 MAINTENANCE OF SEEDED AREAS. DELETE THE SECOND PARAGRAPH OF THIS SECTION AND ADD THE FOLLOWING:

"THE CONTRACTOR WILL BE REQUIRED TO ESTABLISH A GOOD STAND OF GRASS OF UNIFORM COLOR AND DENSITY TO THE SATISFACTION OF THE ENGINEER. IF AT THE TIME WHEN THE CONTRACT HAS BEEN OTHERWISE COMPLETED, IT IS NOT POSSIBLE TO MAKE AN ADEQUATE DETERMINATION OF COLOR, DENSITY, AND UNIFORMITY OF SUCH STAND OF GRASS, THE ITEM OF WORK WILL BE REVIEWED AT A LATER DATE DETERMINED BY THE ILLINOIS DIVISION OF AERONAUTICS."

DATE SEEDING COMPLETED_____.

THE PROPOSED SEEDING WILL BE PAID FOR UNDER ITEMS:
AR901510 SEEDING ____ PER ACRES

908 MULCHING NOTES

THE PROPOSED MULCHING SHALL BE ACCOMPLISHED IN ACCORDANCE WITH ITEM 908 "MULCHING" AS STATED ON PAGE 334 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION OF AIRPORTS, ADOPTED NOVEMBER 2, 2009.

THIS ITEM SHALL CONSIST OF THE FURNISHING, TRANSPORTING, AND PLACING MULCH OVER THE SEEDED AREA. DISTURBED AREAS OUTSIDE THE GRADING LIMITS SHALL ALSO BE MULCHED AND PARTICIPATION WILL BE THE SAME AS FOR SEEDED AREAS.

908-2.1 MULCH MATERIAL: THE CONTRACTOR MAY EITHER FURNISH STRAW OR HYDROMULCH AS THE TYPE OF MULCH MATERIAL TO BE USED ON THIS PROJECT.

908-3.1 MULCHING: THE HYDRAULIC MULCH SHALL BE APPLIED AS A SLURRY OF 2,500 POUNDS OF MULCH AND NOT LESS THAN 2,500 GALLONS OF WATER PER ACRE.

908-3.4 STRUCTURE CLEANING: AFTER THE PROPOSED MULCH HAS BEEN APPLIED, THE CONTRACTOR WILL CLEAN THE MULCH OFF ALL STRUCTURES (DRAINAGE, ELECTRICAL, LIGHTS, ETC.).

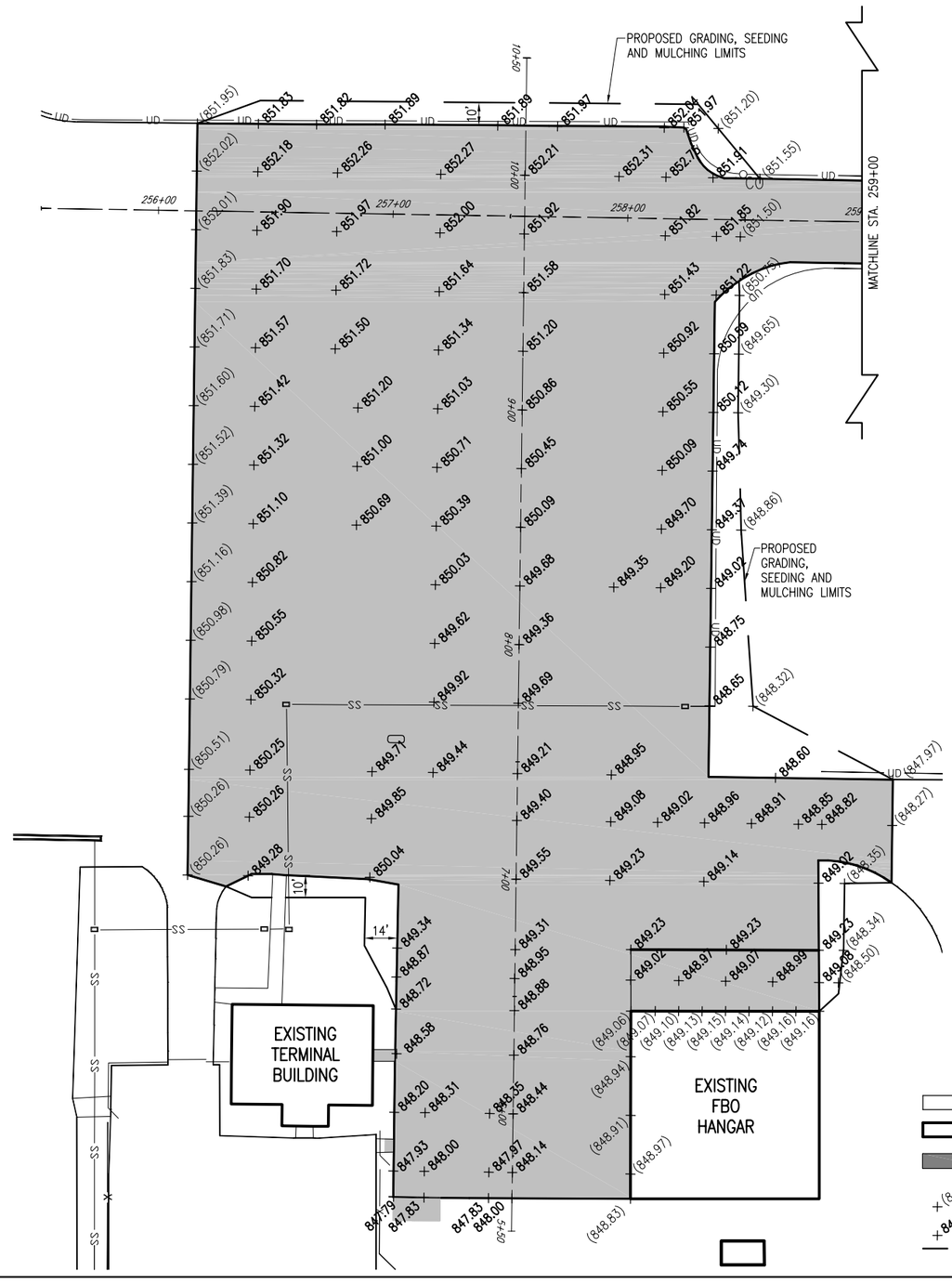
DATE MULCHING COMPLETED_____.

THE PROPOSED MULCHING WILL BE PAID FOR UNDER ITEMS:
AR908510 MULCHING ____ PER ACRES

EROSION CONTROL BLANKET NOTES

AN EROSION CONTROL MATERIAL (EXCELSIOR BLANKET) WILL BE INSTALLED ALONG THE EDGE OF THE APRON OVERLAY AREA FOR A DISTANCE OF 4 FEET FROM THE PAVEMENT EDGE.

THIS ITEM OF WORK SHALL BE PAID FOR UNDER ITEMS:
AR156531 "EROSION CONTROL BLANKET"____ PER S.Y.



SHOULDER ADJUSTMENT NOTE

THE GRADING WILL HAVE A 1-1/2" DROP FROM THE PAVEMENT EDGE AND TAPERING TO THE EXISTING GROUND IN FIVE FEET. THIS WILL BE THE FINAL GRADE UPON COMPLETION OF THE SEEDING & MULCHING. THE EARTH FILLETS WILL NOT REQUIRE COMPACTING OR GRADING, OTHER THAN LIGHT ROLLING AND SHAPING. THE MATERIAL FOR THE PROPOSED EARTH FILLETS WILL BE TOPSOIL OBTAINED FROM OFF-SITE. THE OFF-SITE MATERIAL WILL BE APPROVED BY THE RESIDENT ENGINEER PRIOR TO HAULING TO THE PROJECT SITE. THE REQUIREMENTS FOR PH, ORGANIC MATTER AND GRADATION WILL BE WAIVED PROVIDED THE TOPSOIL MATERIAL WILL SUSTAIN THE GROWTH OF GRASS.

THE EXISTING SHOULDER AREA WILL BE MOWED AND DISKED/TILLED PRIOR TO PLACING THE EARTH MATERIAL. THE AREA WILL BE DISKED/TILLED UNTIL THE SOD HAS BEEN COMPLETELY CUT UP. ANY CHUNKS OF SOD WILL BE REMOVED PRIOR TO THE PLACEMENT OF THIS EARTH MATERIAL.

THE CONTRACTOR SHALL TAKE SPECIAL PRECAUTIONS WHEN HAULING BORROW MATERIAL SO AS NOT TO CREATE RUTS IN ADJACENT EARTH AREAS. ALL EXISTING GRADED OR TURFED AREAS OUTSIDE THE GRADING LIMITS WHICH ARE DISTURBED OR RUTTED BY THE CONTRACTOR DURING THE HAULING OPERATION SHALL BE REGRADED AND RETURFED AT HIS OWN EXPENSE TO THE SATISFACTION OF THE ENGINEER.

THE MATERIAL FOR THE PROPOSED EARTH FILLETS WILL BE PAID FOR UNDER ITEM:
AR152480 "SHOULDER ADJUSTMENT" PER S.Y.

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RECONSTRUCT EAST APRON

PROPOSED STAKING PLAN FOR EAST SIDE OF APRON

8
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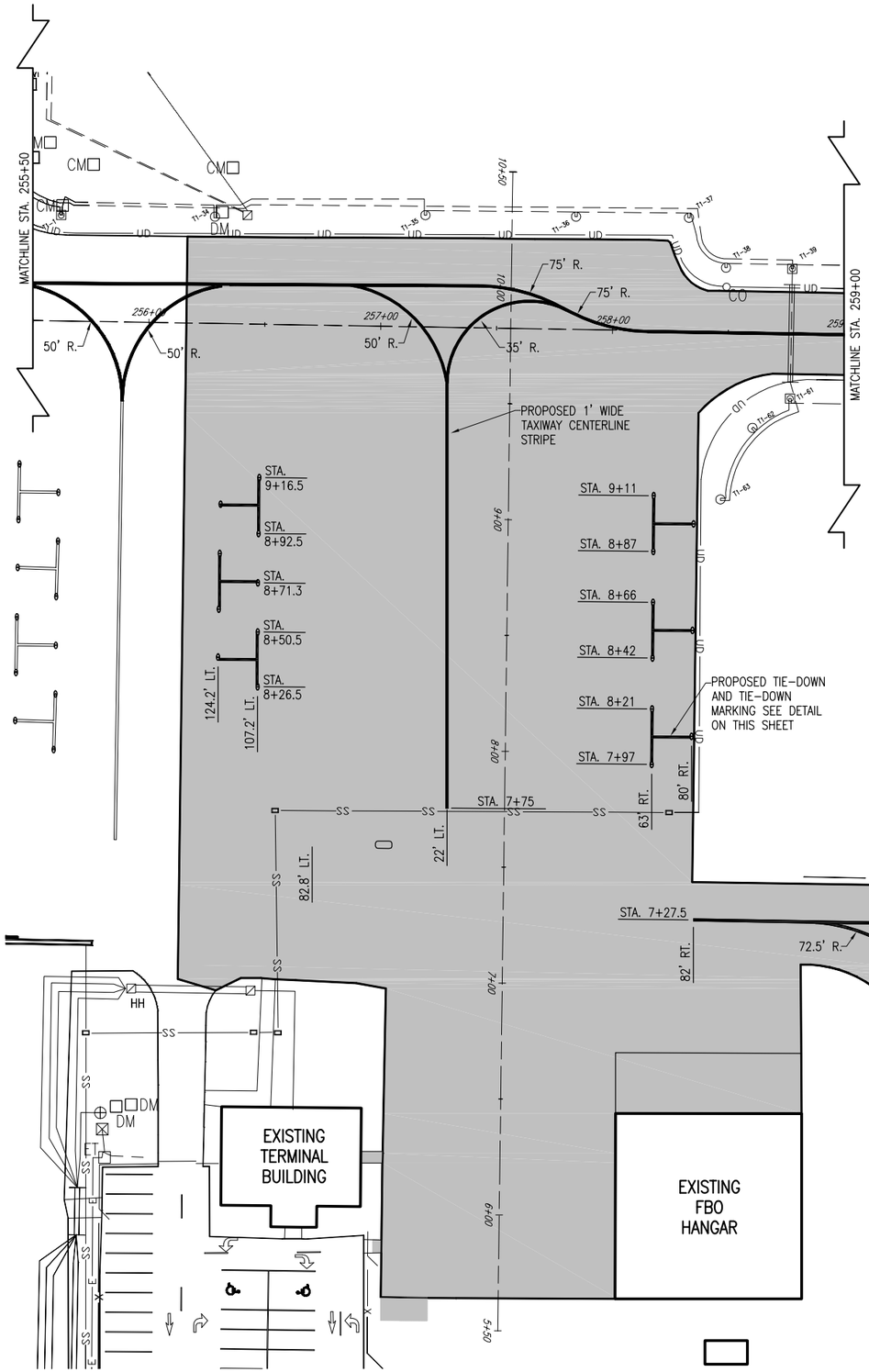
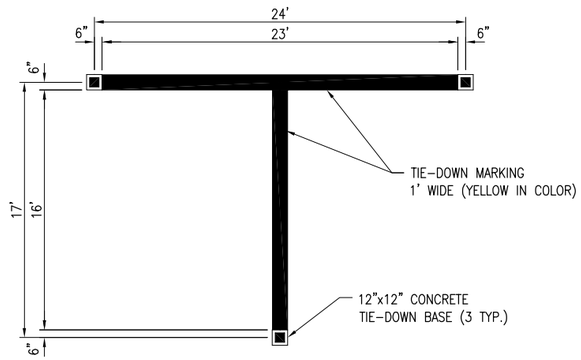




TIE DOWN MARKING DETAIL "A"
"NOT TO SCALE"

TIE DOWN NOTES

NEW TIE DOWNS WILL BE INSTALLED IN ACCORDANCE WITH DETAIL "B" AT THE LOCATIONS SHOWN ON THIS SHEET.

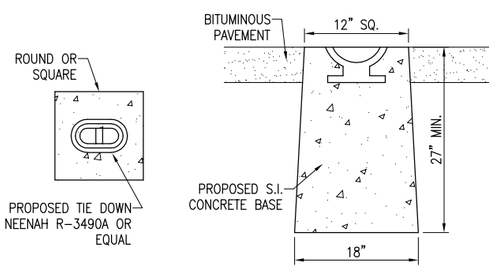
THE PERIMETER OF EACH PROPOSED TIE DOWN SHALL BE SAWED.

TIE DOWN CASTINGS SHALL BE NEENAH R-3490A OR EQUAL.

CONCRETE SHALL MEET THE REQUIREMENTS OF 610 - STRUCTURAL CONCRETE.

THE PROPOSED TIE DOWN MARKING WILL BE IN ACCORDANCE WITH DETAIL "A" ON THIS SHEET AND THE SPECIFICATIONS.

THE TIE DOWNS WILL BE PAID FOR UNDER ITEM:
AR510510 "TIE DOWN"_____ PER EA.



TIE DOWN DETAIL "B"
"NOT TO SCALE"

LEGEND
- EXISTING IMPROVEMENTS
- EXISTING BUILDING
- PROPOSED CONSTRUCTION IMPROVEMENTS
- EXISTING MARKING
- PROPOSED MARKING

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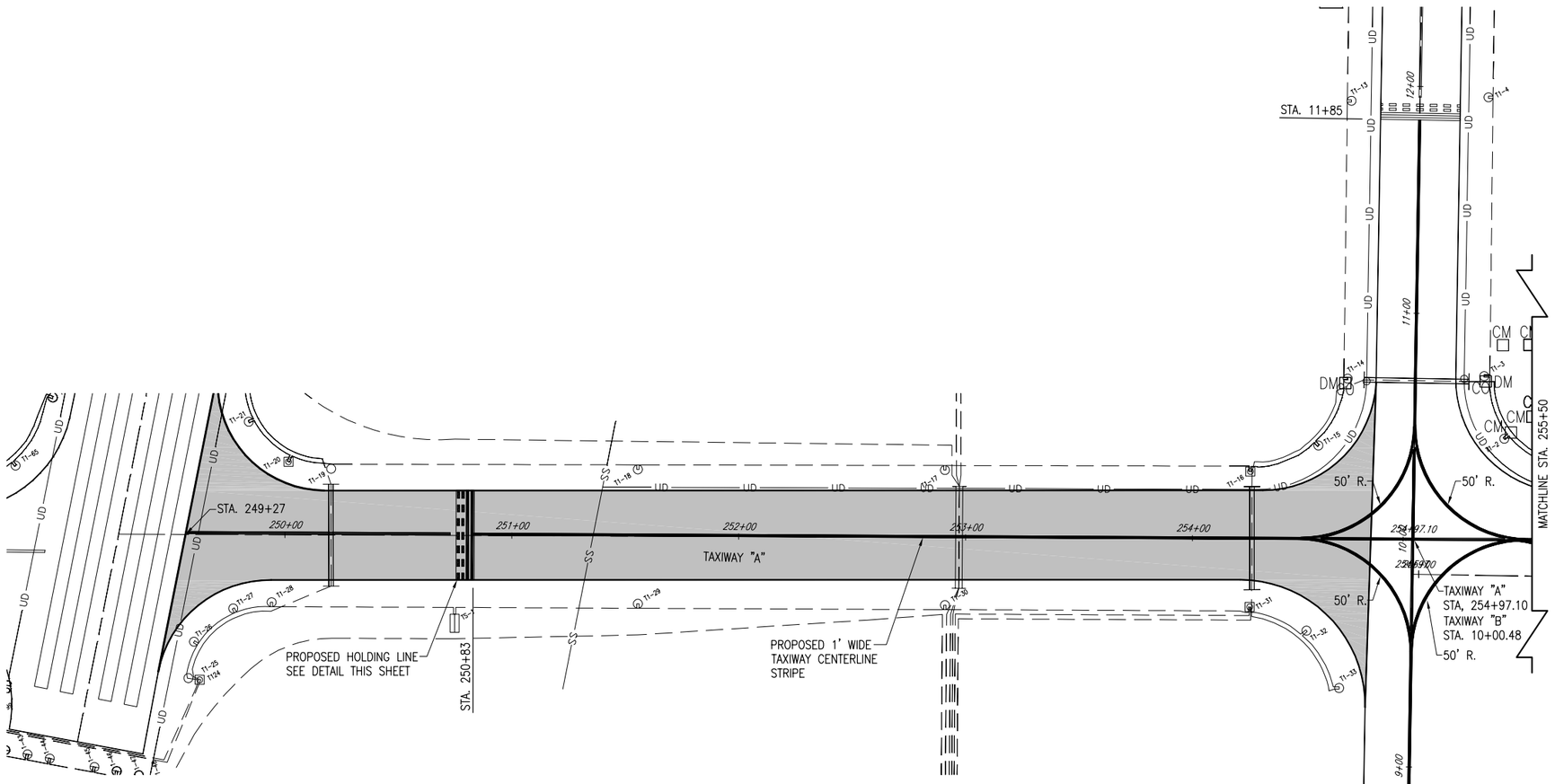
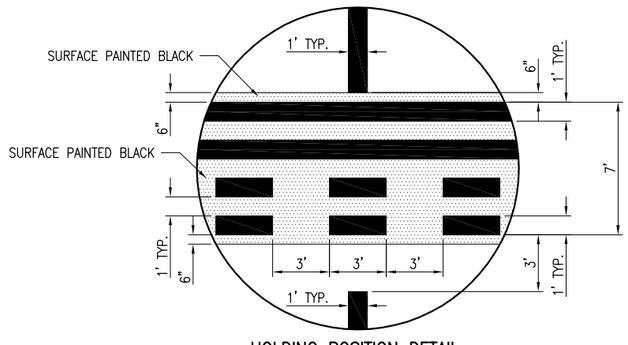
RECONSTRUCT EAST APRON

PROPOSED MARKING PLAN FOR EAST SIDE OF APRON

KE010





HOLDING POSITION DETAIL
"NOT TO SCALE"

LEGEND

- EXISTING IMPROVEMENTS
- PROPOSED CONSTRUCTION IMPROVEMENTS
- EXISTING MARKING
- PROPOSED MARKING

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RECONSTRUCT EAST APRON

PROPOSED MARKING PLAN FOR TAXIWAY A CENTER PORTION

10
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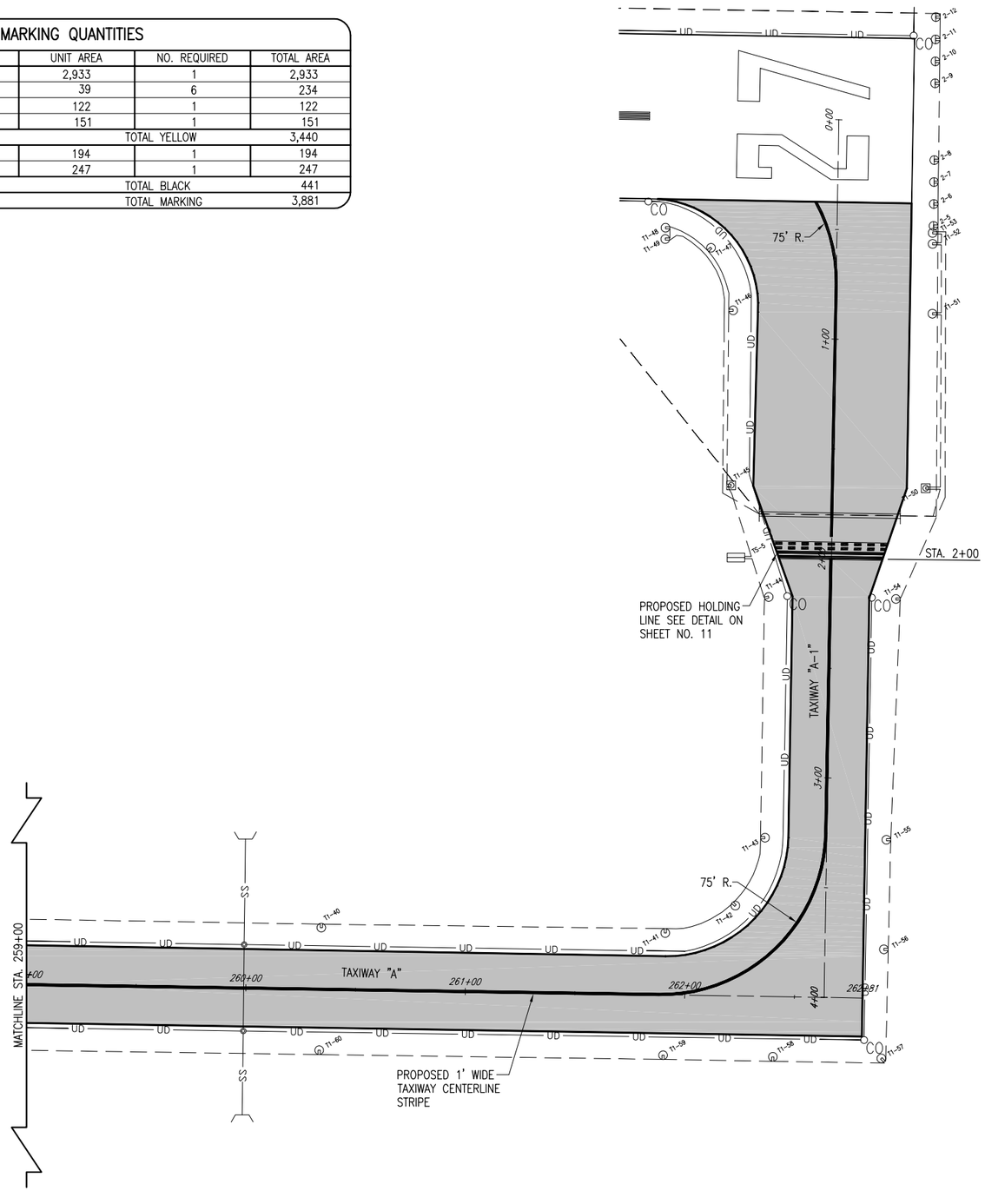
MARKING QUANTITIES

DESCRIPTION	UNIT AREA	NO. REQUIRED	TOTAL AREA
TAXIWAY CENTERLINE STRIPE	2,933	1	2,933
TIE–DOWNS	39	6	234
HOLDING LINE (NEAR RWY. END 1)	122	1	122
HOLDING LINE (NEAR RWY. END 21)	151	1	151
TOTAL YELLOW			3,440
HOLDING LINE (NEAR RWY. END 1)	194	1	194
HOLDING LINE (NEAR RWY. END 21)	247	1	247
TOTAL BLACK			441
TOTAL MARKING			3,881



620–PAVEMENT MARKING–WATERBORNE NOTES

THE PAVEMENT MARKING–WATERBORNE (620) SHALL BE PLACED IN ACCORDANCE WITH ITEM 620 "PAVEMENT MARKING" AS STATED ON PAGE 277 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION OF AIRPORTS, ADOPTED NOV. 2, 2009.

THIS ITEM SHALL CONSIST OF TAXIWAY CENTERLINE, AND TIEDOWN MARKING IN ACCORDANCE WITH THESE SPECIFICATIONS AND AT THE LOCATIONS SHOWN ON THE CONSTRUCTION PLANS. ALL MARKING WILL BE YELLOW IN COLOR WITH A 6–IN BLACK BORDER. THE PROPOSED PAVEMENT MARKING WILL BE APPLIED IN TWO APPLICATIONS.

ANY MATERIAL DELIVERED THAT FAILS TO MEET THE SPECIFICATIONS SHALL BE DISPOSED OF BY THE VENDOR AND IMMEDIATELY REPLACED WITH ACCEPTABLE MATERIAL ENTIRELY AT THE VENDOR'S EXPENSE, INCLUDING HANDLING AND TRANSPORTATION CHARGES.

ALL CURING COMPOUND WILL BE CLEANED FROM CONCRETE PAVEMENT PRIOR TO APPLYING PAINT. NO EXCEPTIONS.

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

GLASS BEADS SHALL BE REQUIRED ONLY ON THE SECOND APPLICATION OF YELLOW MARKING.

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.
AR620525 PAVEMENT MARKING–BLACK BORDER ___ PER S.F.

LEGEND
- EXISTING IMPROVEMENTS
- PROPOSED CONSTRUCTION IMPROVEMENTS
- EXISTING MARKING
- PROPOSED MARKING

0' 15' 30' 60'
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PROPOSED MARKING PLAN TAXIWAY A EAST PORTION

11
11 of 38 sheets

JUN 23, 2010 9:10 AM KINCAO0394
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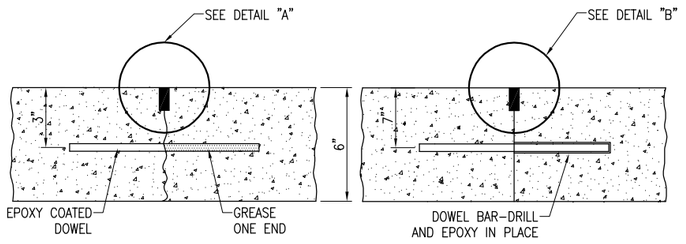
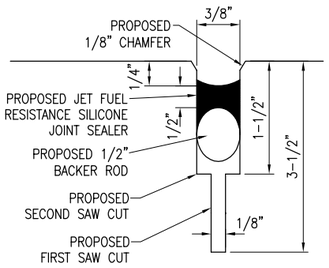


TYPE F DOWELED

CONTRACTION JOINTS

TYPE D – DOWELED

CONSTRUCTION JOINTS



DETAIL "A"
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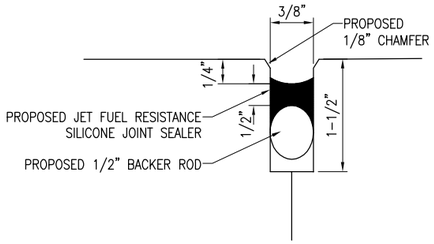

DETAIL "B"
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JOINTING NOTES

ALL EXPOSED JOINT EDGES SHALL BE EDGED WITH AN APPROVED TOOL HAVING A RADIUS OF ¼" OR STONED TO PRODUCE THE ⅛" CHAMFER.

ALL LONGITUDINAL AND TRANSVERSE CONTRACTION AND CONSTRUCTION JOINTS SHALL BE SAWED.

ALL DOWEL BARS SHALL BE SECURELY HELD IN PLACE BY MEANS OF A DOWEL BAR ASSEMBLY WHICH WILL INSURE THAT THEY WILL REMAIN PARALLEL TO THE SURFACE OF THE PAVEMENT AND TO THE CENTERLINES OF THE PAVEMENT LANES. THE DOWEL BAR ASSEMBLIES SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. DOWELS FOR THE 6" PAVEMENT SHALL BE 3/4" DIA., 18" LENGTH AND 12" SPACING.

ALL TIE-BARS SHALL BE SECURELY HELD IN PLACE BY SUPPORT PINS OR OTHER METHODS TO PREVENT SHIFTING DURING AND AFTER CONCRETE PLACEMENT. SUPPORT PINS SHALL BE OF SUFFICIENT LENGTH TO PENETRATE AT LEAST 6" INTO THE SUBGRADE.

ALL TIE-BARS SHALL BE PLACED AT A POINT NOT EXCEEDING 15" OR CLOSER THAN 6" FROM A TRANSVERSE, CONTRACTION, EXPANSION, OR CONSTRUCTION JOINT AND SPACED 30" ON CENTERS AND SHALL BE NO. 5 DEFORMED BARS, 30" IN LENGTH. TIE-BARS DRILLED AND EPOXIED INTO THE EXISTING CONCRETE SHALL BE 18" IN LENGTH.

DOWELS IN TRANSVERSE, CONTRACTION, AND CONSTRUCTION JOINTS SHALL BE EPOXY COATED AND HALF THE LENGTH GREASED WITH A HEAVY GREASE.

ALLOWABLE TOLERANCES FOR GROOVE DEPTH WILL BE +⅛" FOR CONSTRUCTION JOINTS AND +¼" FOR CONTRACTION JOINTS.

DOWELS AND TIE-BARS LOCATED IN THE CONSTRUCTION JOINTS WILL BE DRILLED AND EPOXY IN PLACE. THE EPOXY MATERIAL MUST BE APPROVED BY THE ILLINOIS DIVISION OF AERONAUTICS

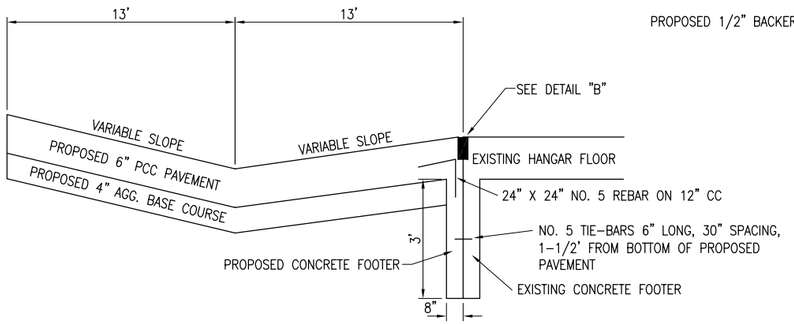
THE COST OF ALL DOWEL BARS, TIE-BARS, SAWING AND SEALING SHALL BE INCLUDED IN THE COST OF THE P.C.C. PAVEMENT.

PRIOR TO PLACING ADJACENT PAVEMENT SECTIONS, THE VERTICAL EDGE SHALL BE CHECKED FOR TRUENESS IF THE FACE IS BURRED OR IRREGULAR, THE CONTRACTOR SHALL GRIND, STONE OR SAW THE FACE A MINIMUM OF 2" IN DEPTH TO PRODUCE A SMOOTH AND STRAIGHT EDGE.

JOINT SEALANT SHALL BE AS SPECIFIED IN THE STANDARD SPECIFICATIONS ITEM 501-2.5.

CURING COMPOUND WILL BE AS SPECIFIED IN THE STANDARD SPECIFICATIONS, ITEM 501-3.17 AND SHALL BE APPROVED PRIOR TO THE PAVING OPERATION BY THE ENGINEER.

ALL NON-ALIGNED EDGES WILL BE SAWED FULL DEPTH.



TYPICAL SECTIONS "A-A"
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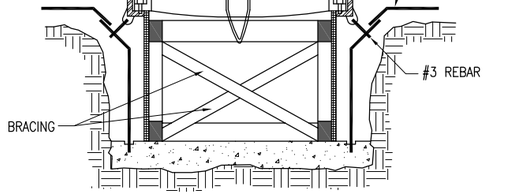

TRENCH DRAIN BRACING CROSS SECTION
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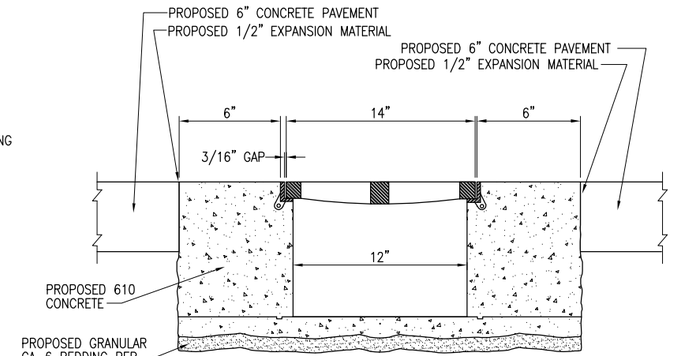

TRENCH DRAIN CONCRETE CROSS SECTION
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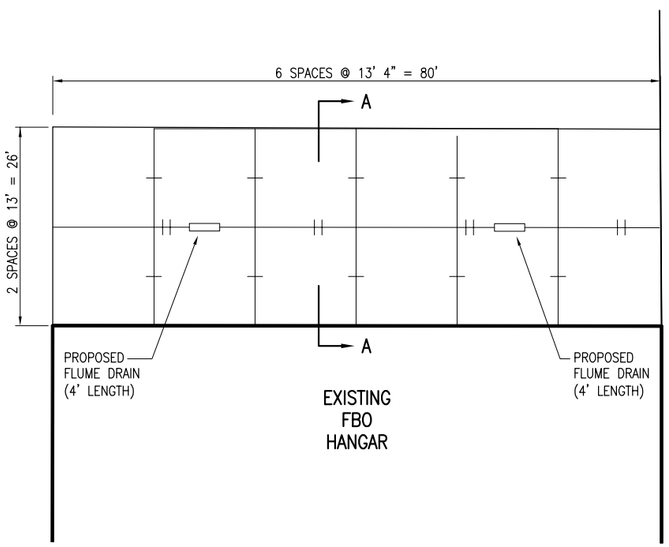

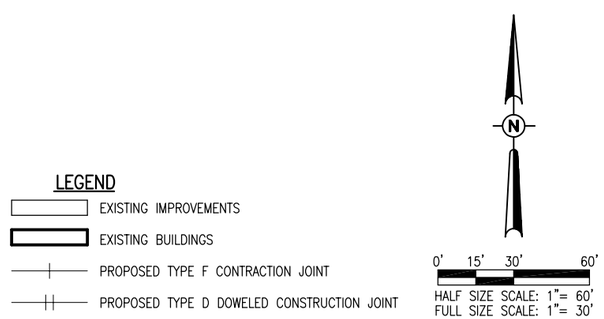

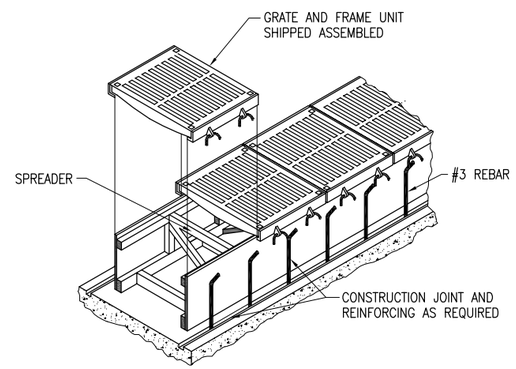

TRENCH DRAIN ISOMETRIC
(NOT TO SCALE)

TRENCH DRAIN FORMING DETAILS

DATE	REVISION	BY
6/23/10	REVISED PER IDA REVIEW	CAH

KEWANEE MUNICIPAL AIRPORT
KEWANEE, ILLINOIS

A.I.P. PROJ.: 3-17-0058-B14
IL. PROJ.: EZI-3971

Hanson Project No. 09A0151D 0001
Filename R-16JNT.DWG
Scale 1"= 10'
Date 05/12/10

LAYOUT	CAH	04/26/10
DRAWN	BAK	04/26/10
REVIEWED	CAH	05/10/10

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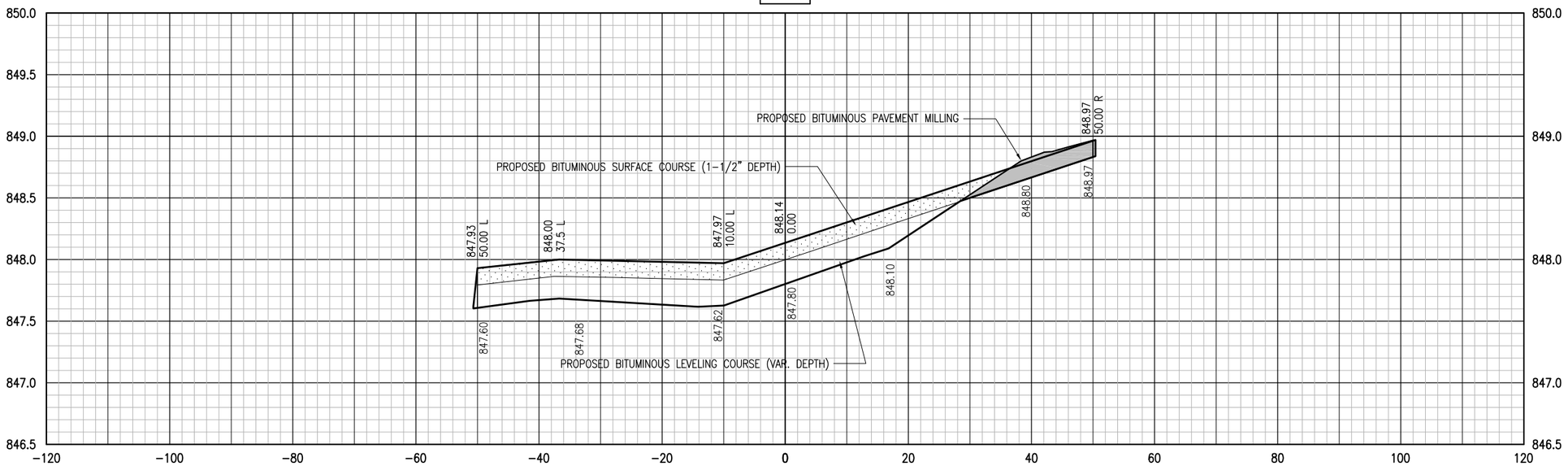
RECONSTRUCT EAST APRON

PROPOSED JOINTING PLAN AND DETAILS

5+75



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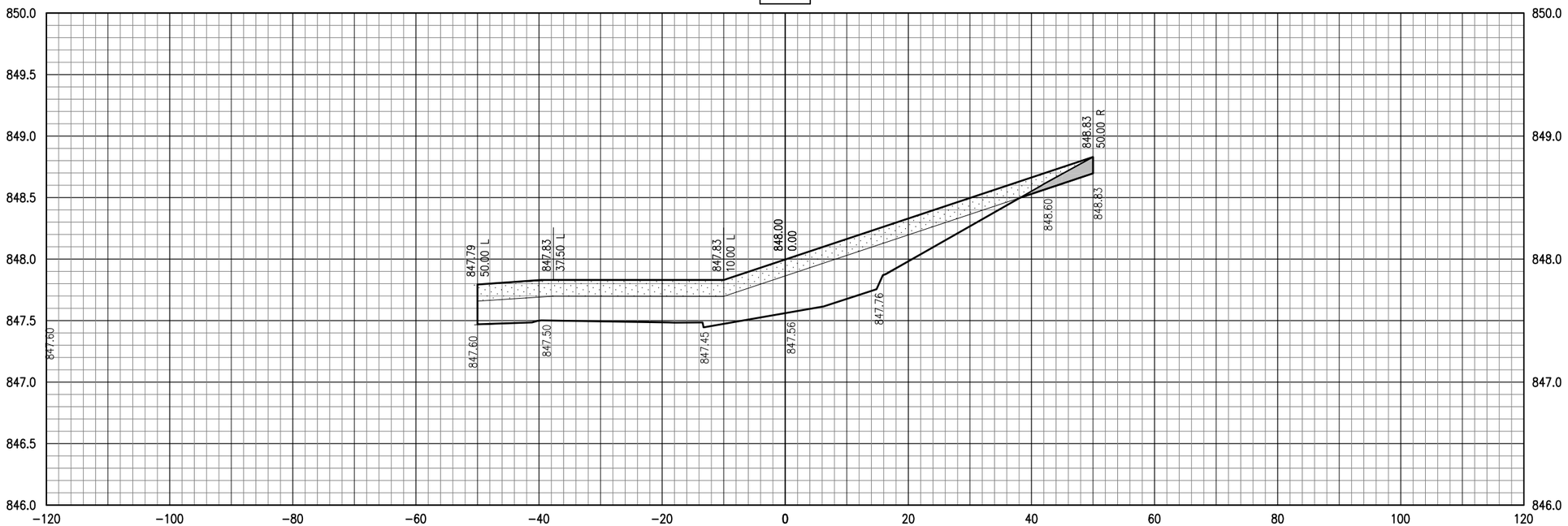

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DATE	REVISION	BY

KEWANEE MUNICIPAL AIRPORT
KEWANEE, ILLINOIS

IL. PROJ.: EZI-3971 A.I.P. PROJ.: 3-17-0058-B14

Hanson Project No. 09A0151D 0001
Filename R-301-APNXS.DWG
Scale V. 1" = 0.5', H. 1" = 10'
Date 05/12/10

LAYOUT	MDR	04/30/10
DRAWN	MDR	04/30/10
REVIEWED	CAH	05/05/10

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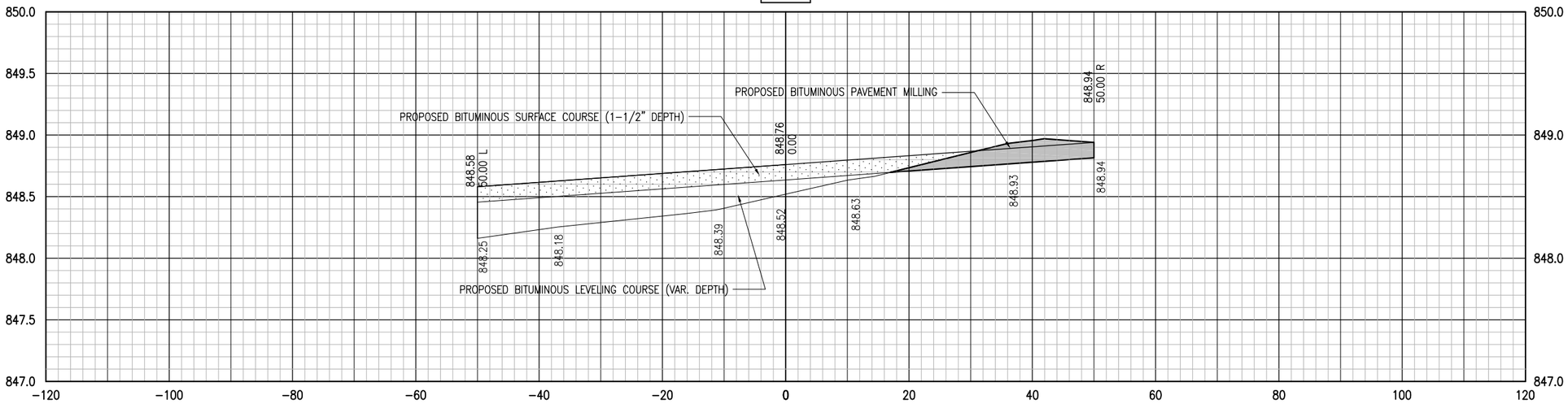
RECONSTRUCT EAST APRON

PROPOSED APRON
CROSS-SECTIONS STA. 5+64 TO STA. 5+75

6+25



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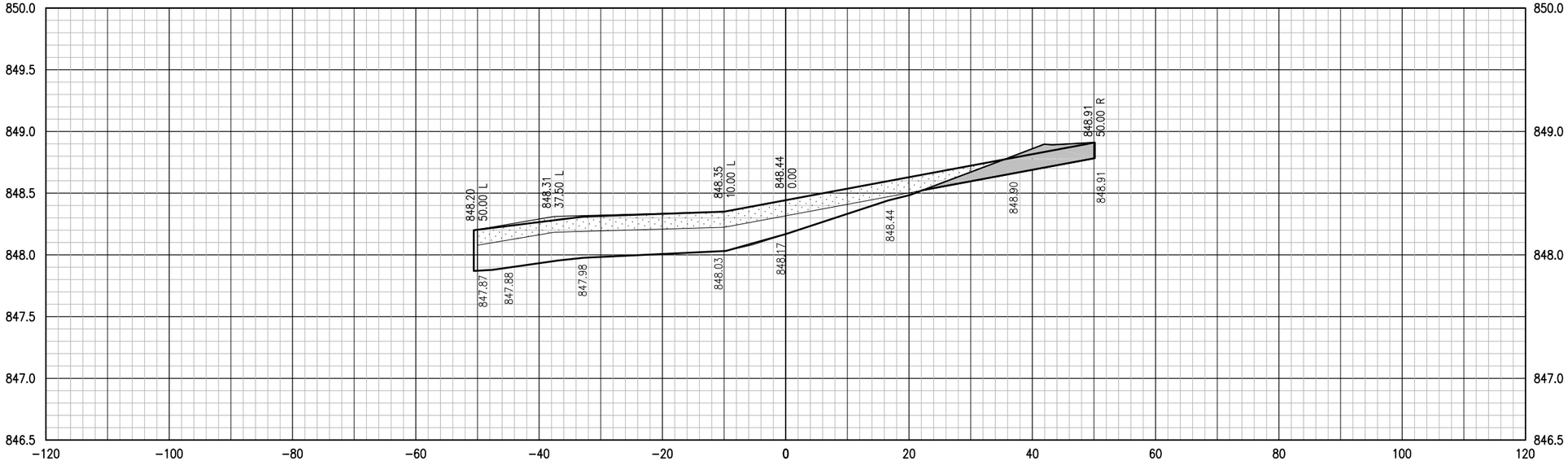

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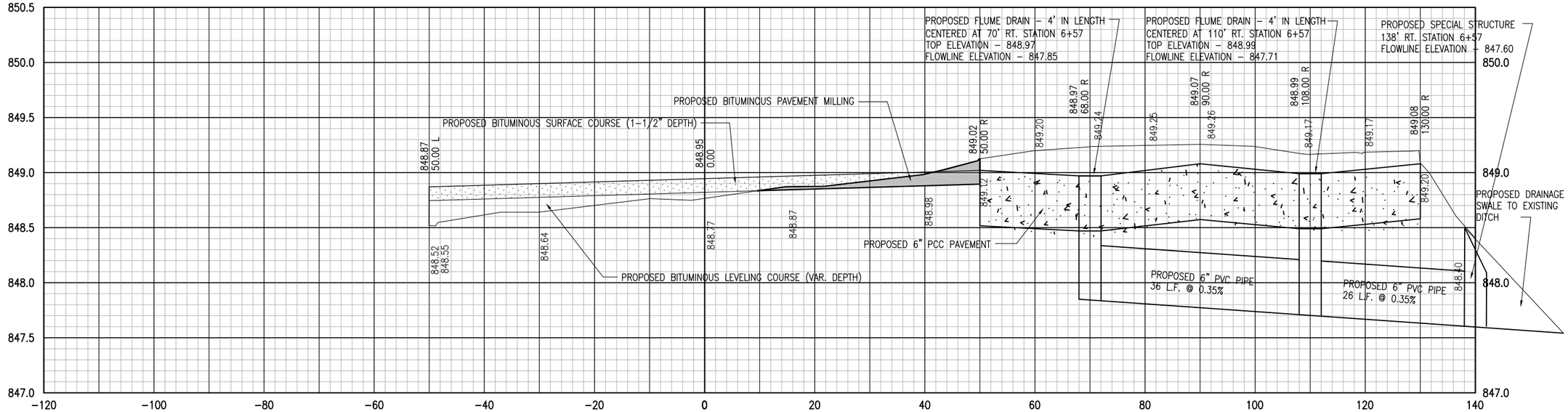
PROPOSED APRON CROSS-SECTIONS STA. 6+00 TO STA. 6+25

KE010

6+57



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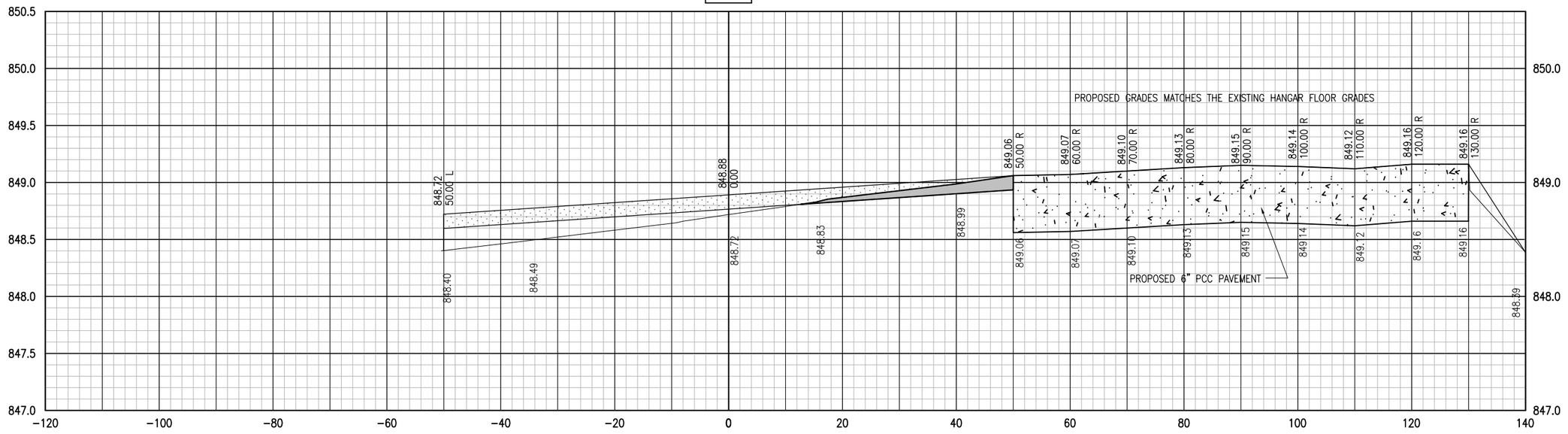

BY	REVISION	DATE

KEWANEE MUNICIPAL AIRPORT
KEWANEE, ILLINOIS

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REVIEWED	CAH	05/10/10

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PROPOSED APRON CROSS-SECTIONS STA. 6+44 TO STA. 6+57

15
15 of 38 sheets

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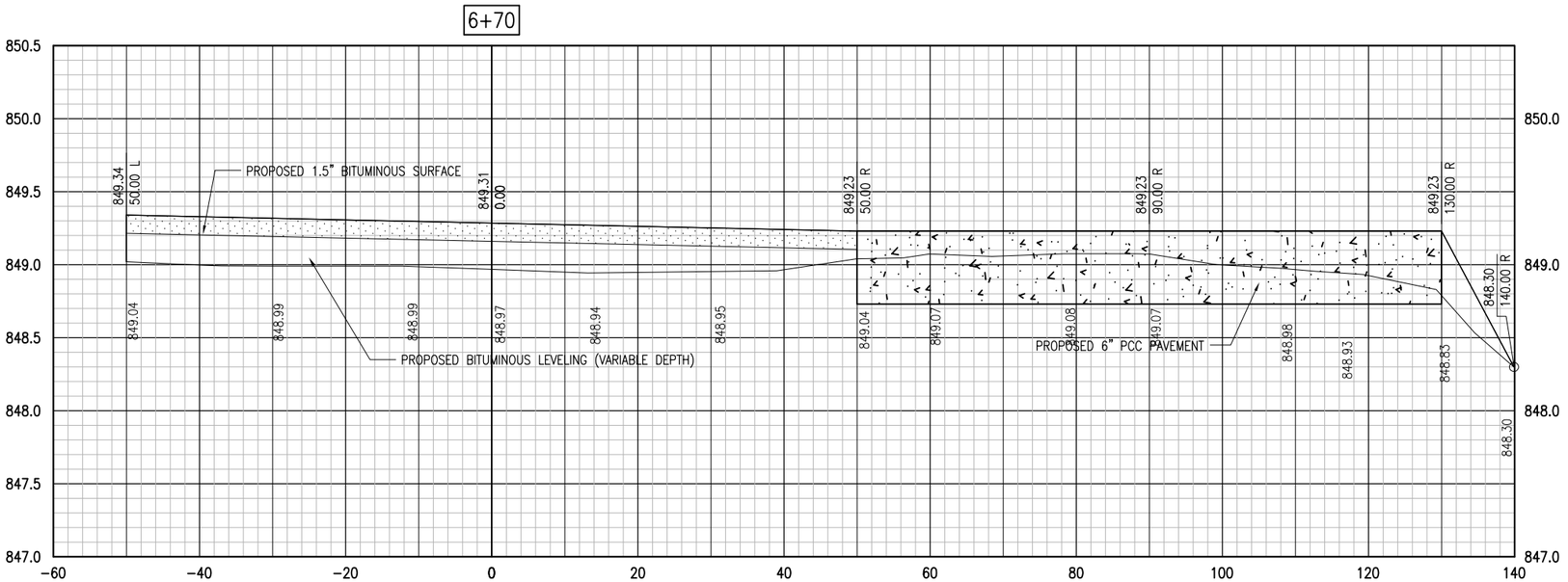

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KEWANEE, ILLINOIS

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DRAWN	MDR	04/30/10
REVIEWED	CAH	05/10/10

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PROPOSED APRON
CROSS-SECTIONS STA. 6+70

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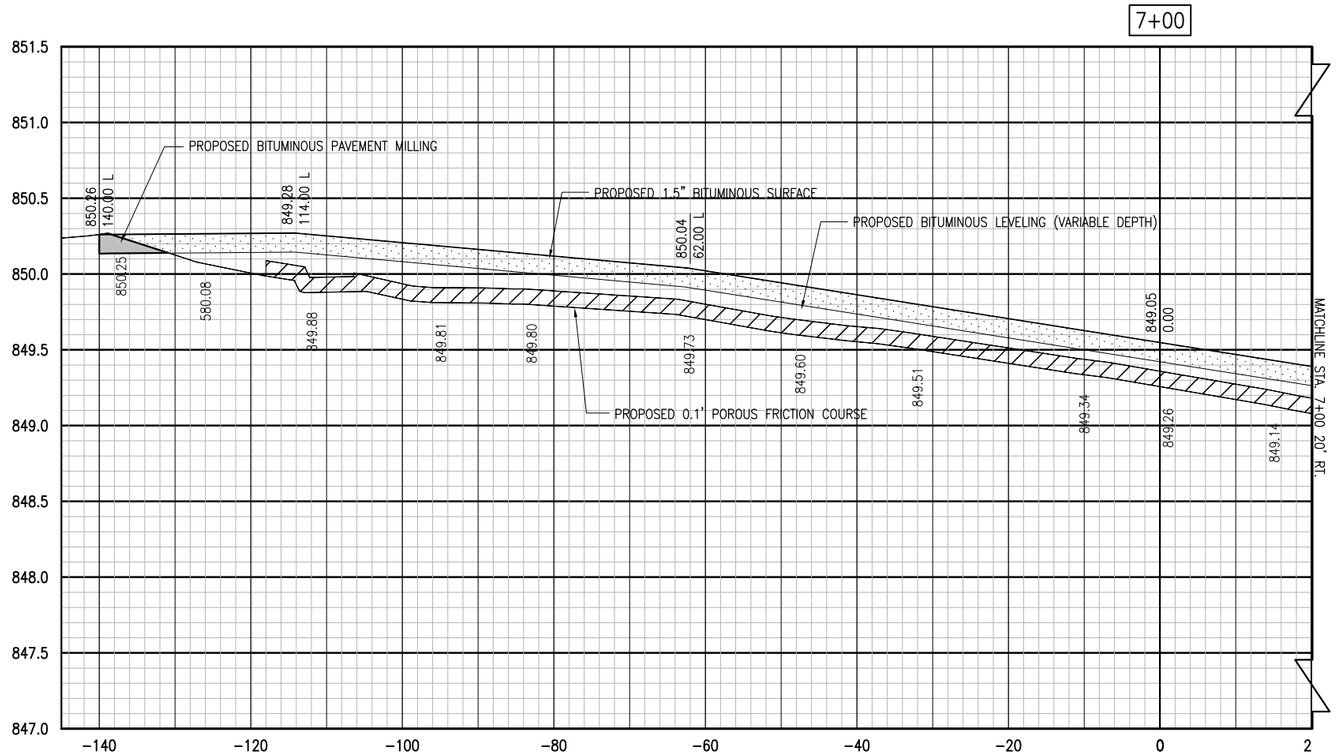

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DRAWN	MDR	04/30/10
REVIEWED	CAH	05/10/10

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RECONSTRUCT EAST APRON

PROPOSED APRON
CROSS-SECTIONS STA.
7+00 140 LT. TO 20 RT.

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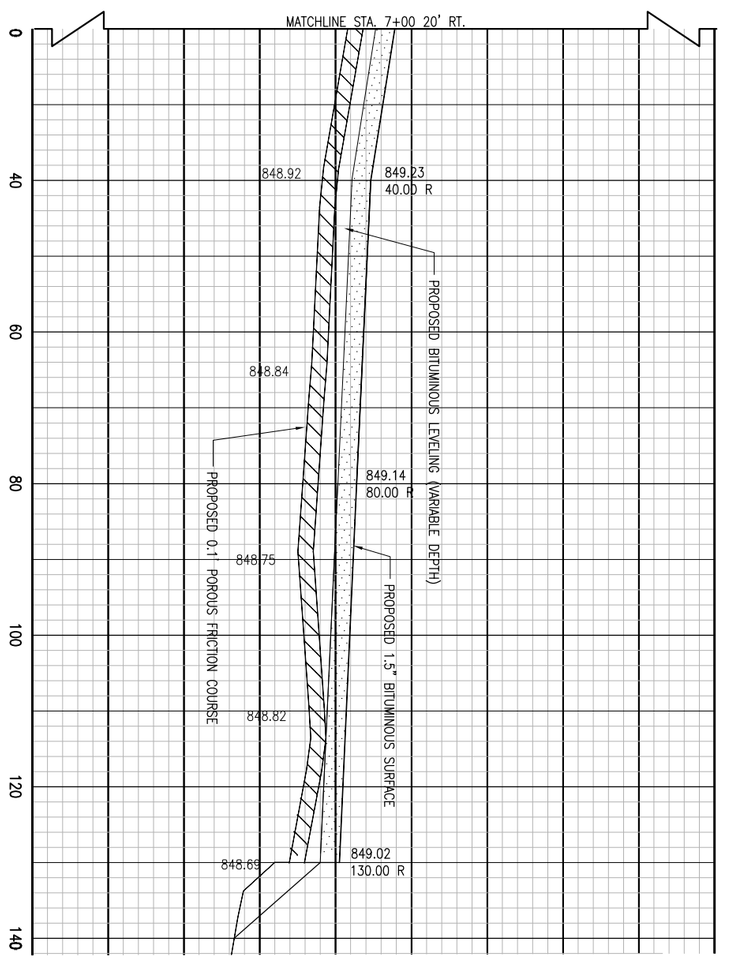

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18 of 38 sheets

18

RECONSTRUCT EAST APRON

PROPOSED APRON CROSS-SECTIONS STA. 7+00 20 RT. TO 140 RT.

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Filename R-302-APNXS.DWG
Scale V. 1" = 0.5', H. 1" = 10'
Date 05/12/10

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REVIEWED	CAH	05/10/10

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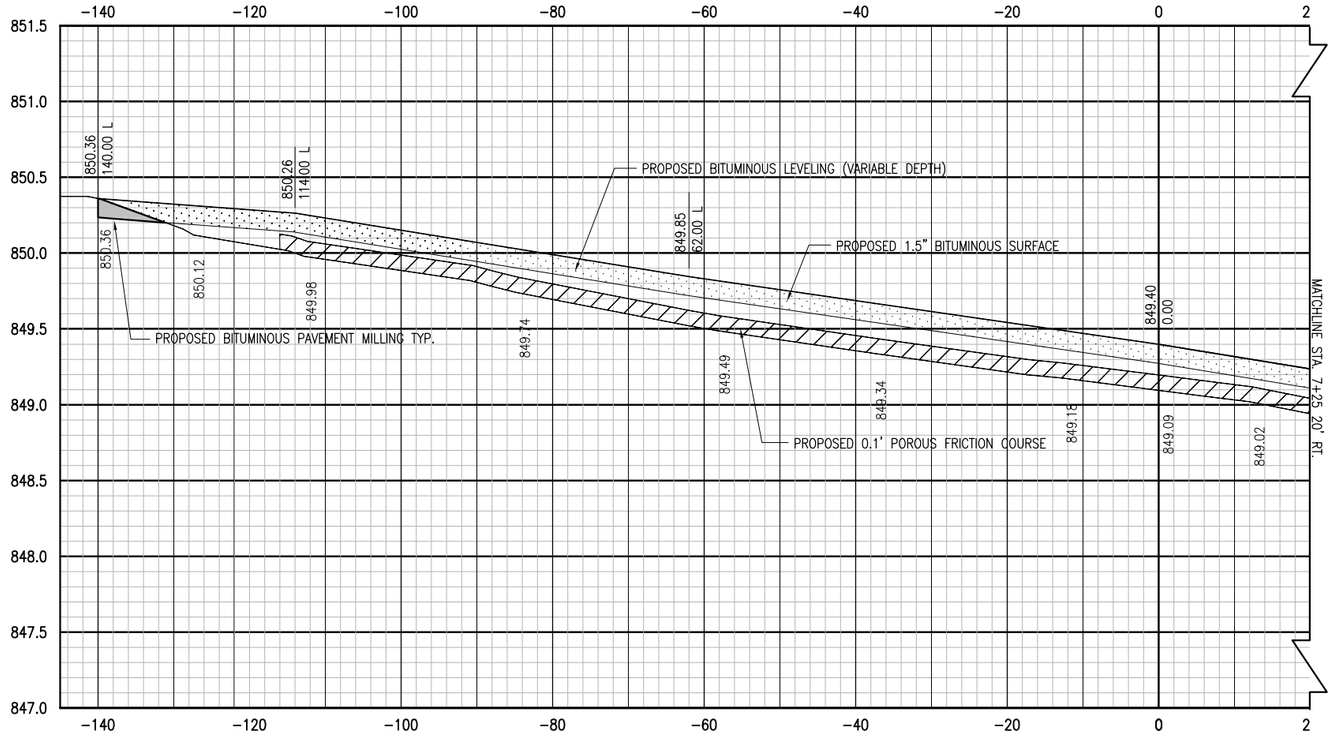
IL. PROJ.: EZI-3971 A.I.P. PROJ.: 3-17-0058-B14

DATE	REVISION	BY

7+25



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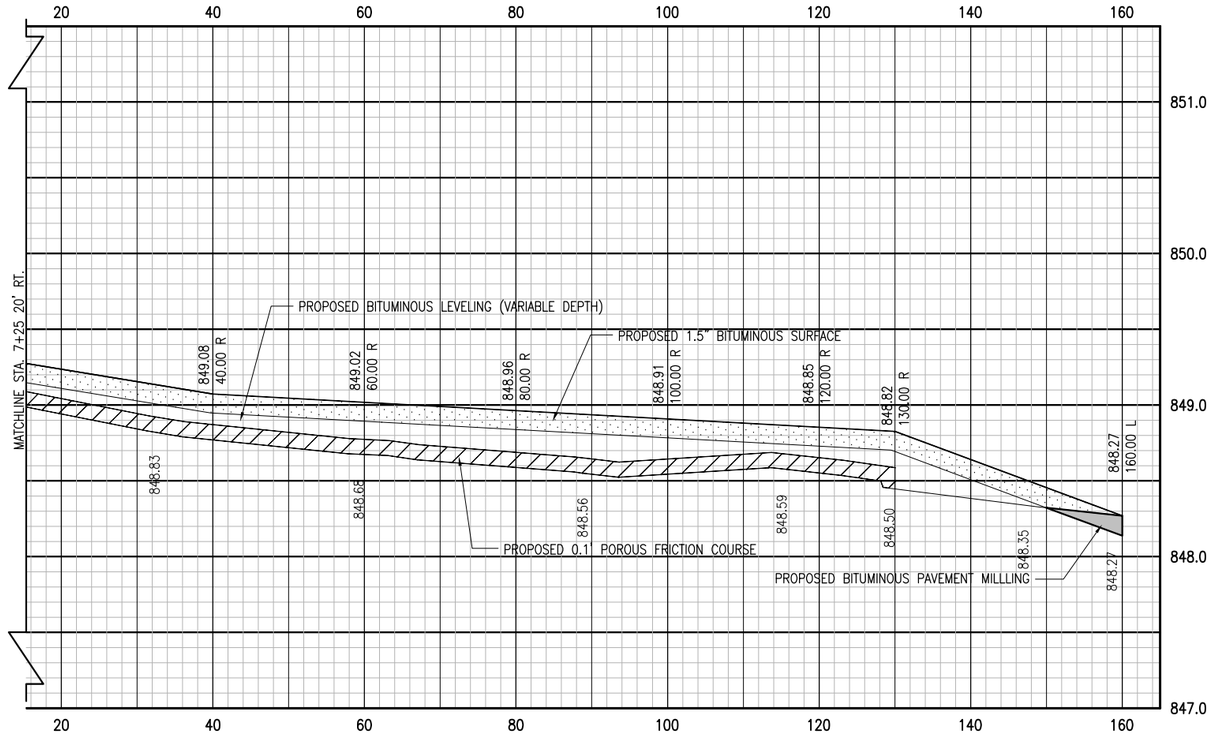

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DATE	REVISION	BY

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KEWANEE, ILLINOIS

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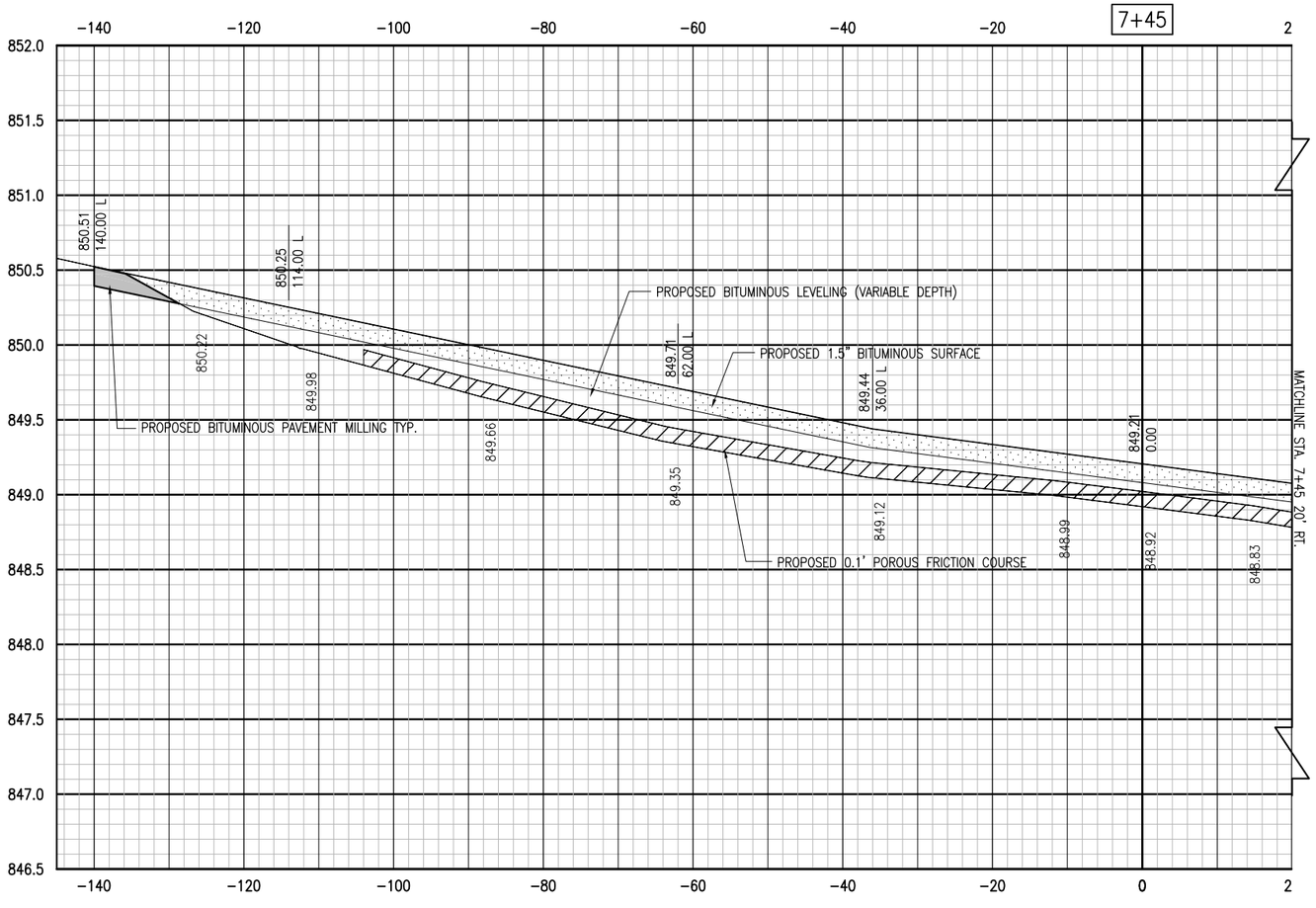
RECONSTRUCT EAST APRON

PROPOSED APRON
CROSS-SECTIONS STA.
7+25 20 RT. TO 160 RT.

20



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DATE | REVISION | BY

KEWANEE MUNICIPAL AIRPORT
KEWANEE, ILLINOIS

IL. PROJ.: EZI-3971
A.I.P. PROJ.: 3-17-0058-B14

Hanson Project No. 09A0151D 0001
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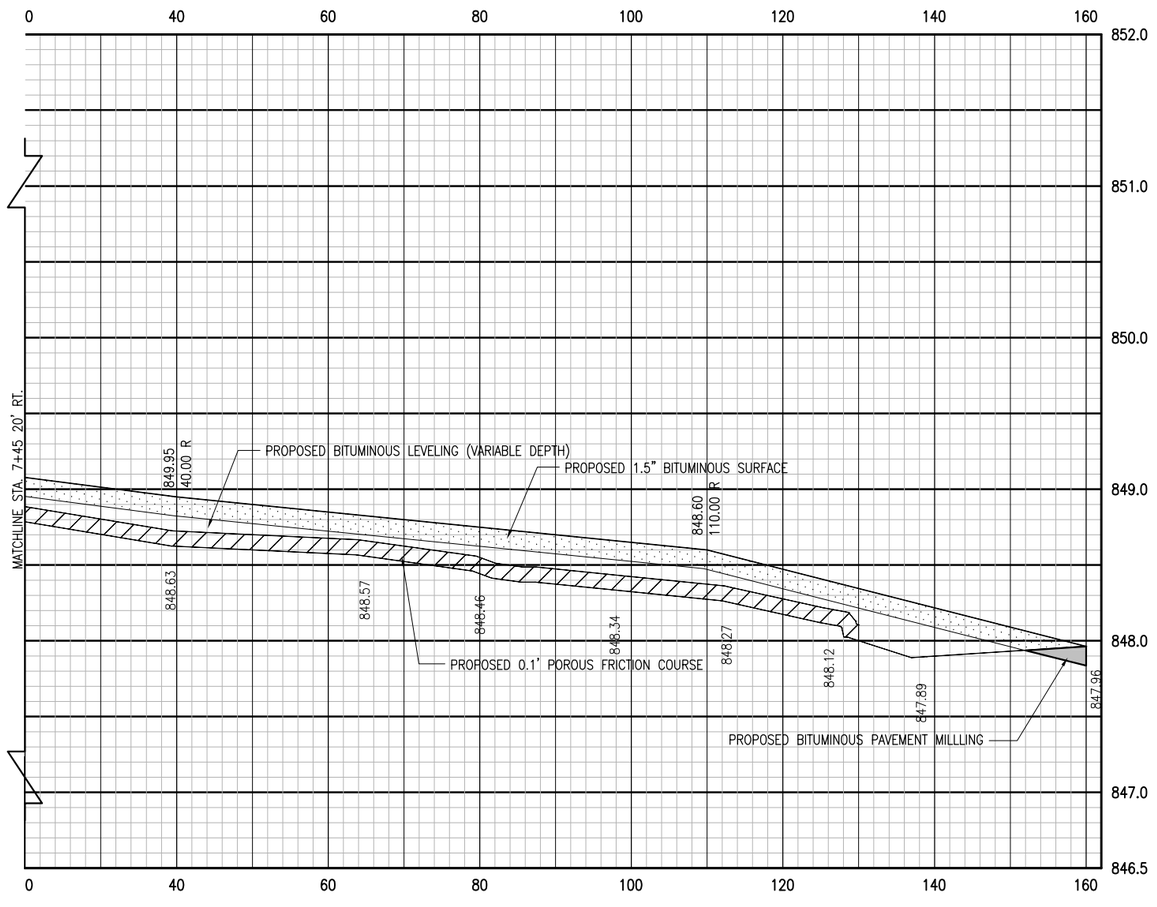
RECONSTRUCT EAST APRON

PROPOSED APRON
CROSS-SECTIONS STA.
7+45 140 LT. TO 20 RT.



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KEWANEE MUNICIPAL AIRPORT
KEWANEE, ILLINOIS

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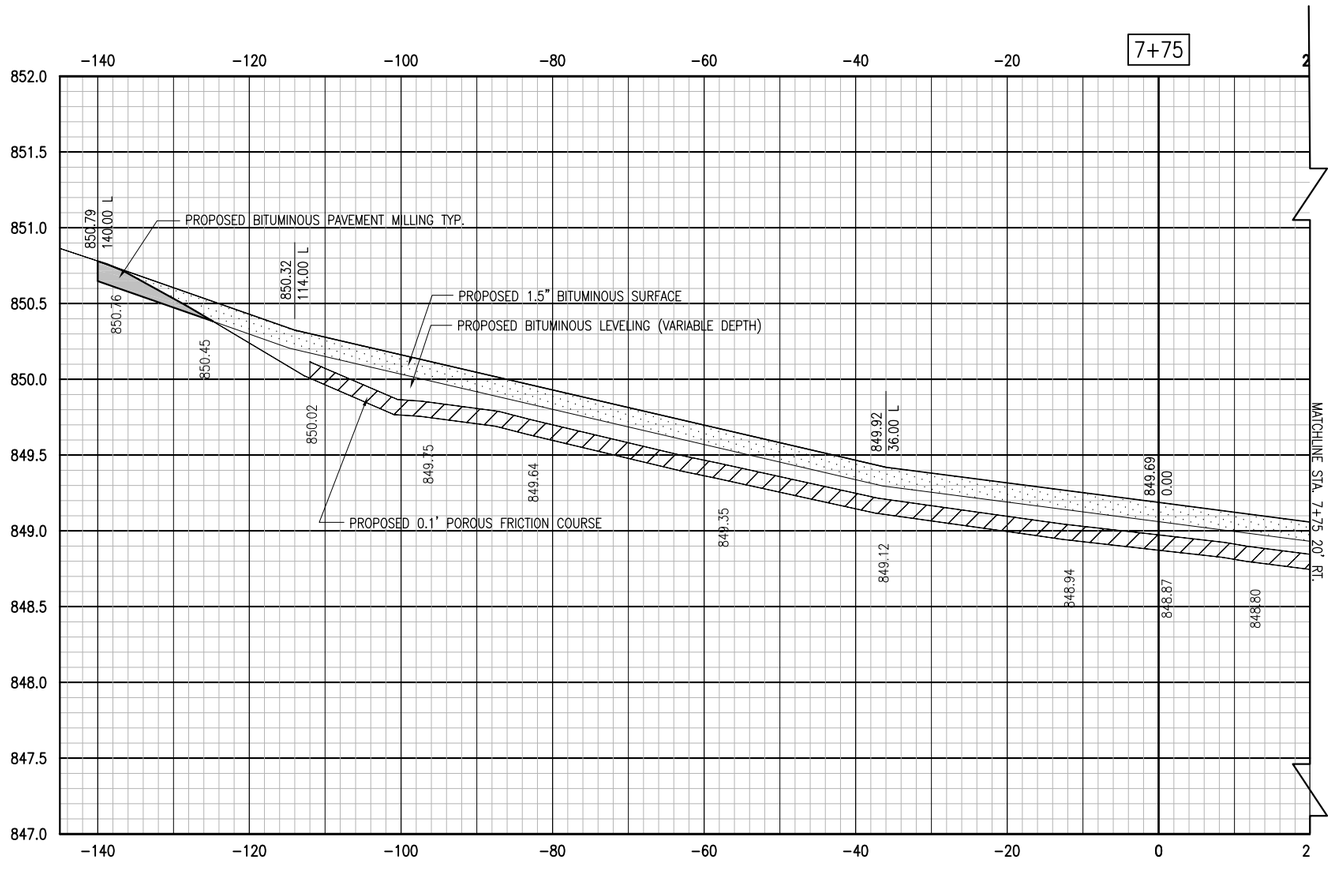
RECONSTRUCT EAST APRON

PROPOSED APRON
CROSS-SECTIONS STA.
7+45 20 RT. TO 160 RT.

22



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DATE	REVISION	BY

KEWANEE MUNICIPAL AIRPORT
KEWANEE, ILLINOIS

A.I.P. PROJ.: 3-17-0058-B14
IL. PROJ.: EZI-3971

Hanson Project No. 09A0151D 0001
Filename R-303-APNXS.DWG
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Date 05/12/10

LAYOUT	MDR	04/30/10
DRAWN	MDR	04/30/10
REVIEWED	CAH	05/10/10

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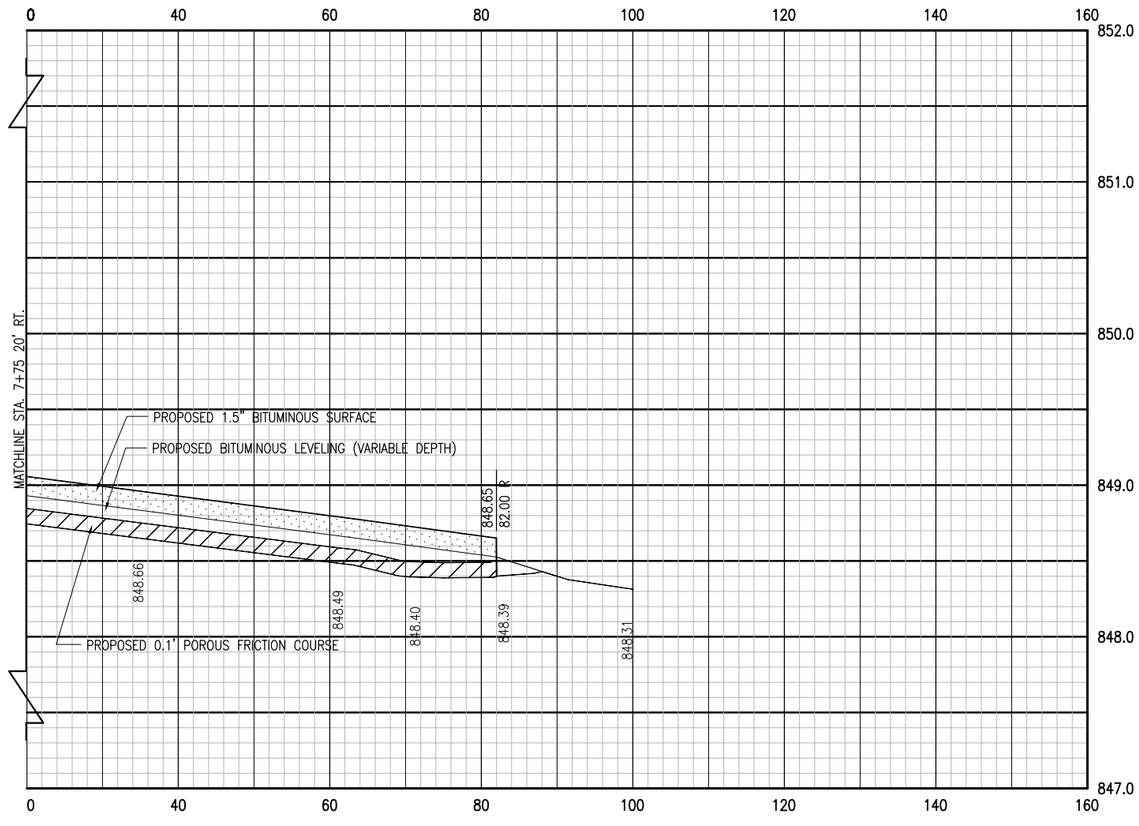
RECONSTRUCT EAST APRON

PROPOSED APRON
CROSS-SECTIONS STA.
7+75 140 LT. TO 20 RT.



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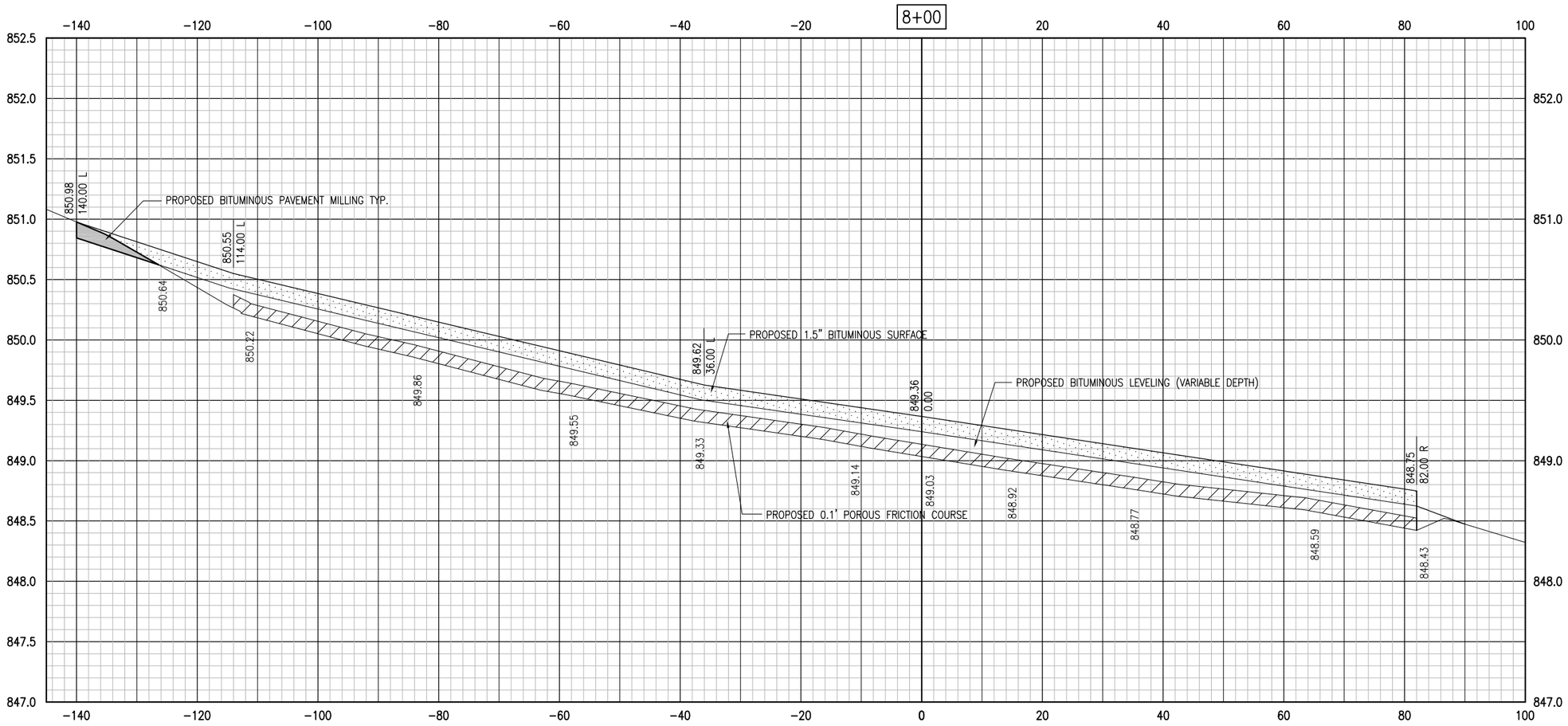

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DATE	REVISION	BY

KEWANEE MUNICIPAL AIRPORT
KEWANEE, ILLINOIS

IL. PROJ.: EZI-3971 A.I.P. PROJ.: 3-17-0058-B14

Hanson Project No. 09A0151D 0001
Filename R-303-APNXS.DWG
Scale V. 1" = 0.5" H. 1" = 10'
Date 05/12/10

LAYOUT	MDR	04/30/10
DRAWN	MDR	04/30/10
REVIEWED	CAH	05/10/10

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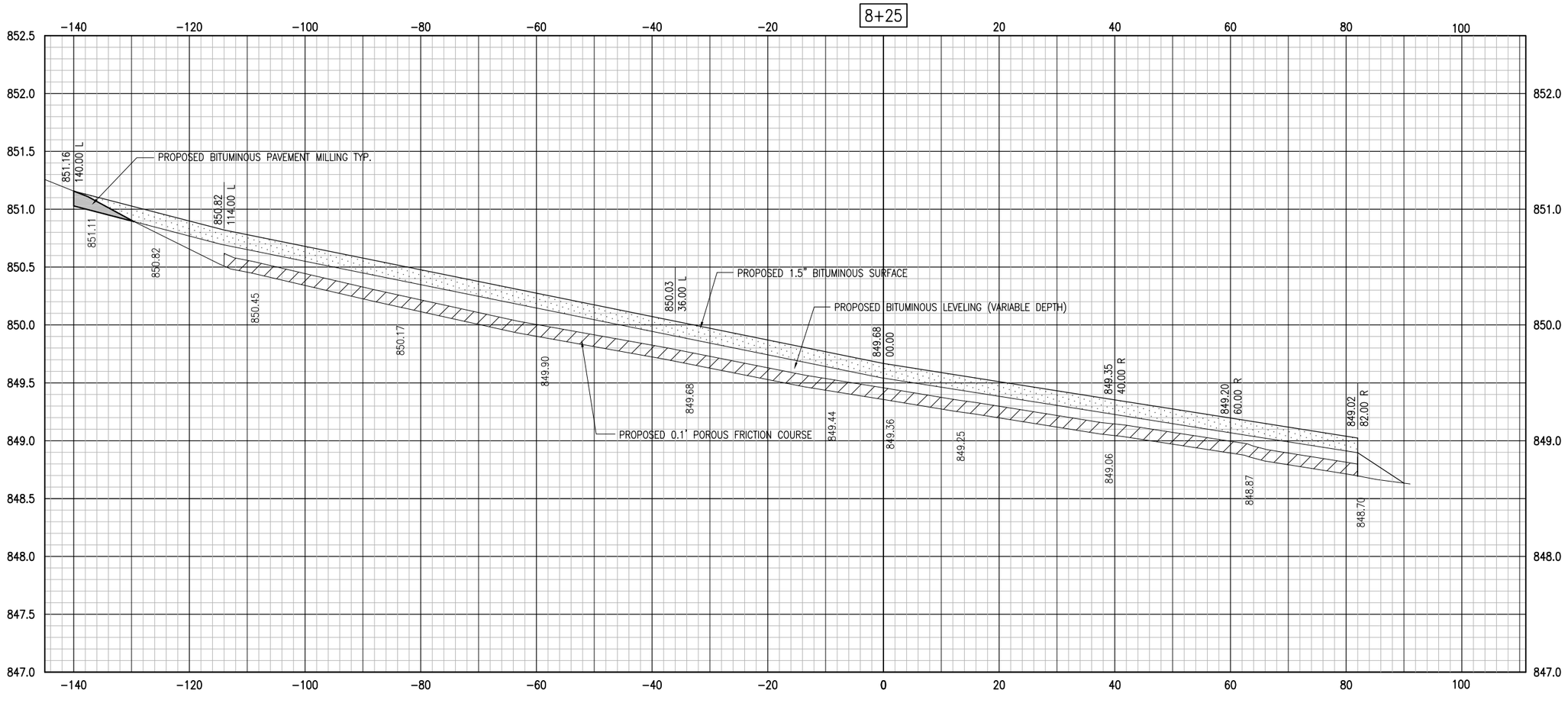
Offices Nationwide

RECONSTRUCT EAST APRON

PROPOSED APRON CROSS-SECTIONS STA. 8+00

25
25 of 38 sheets



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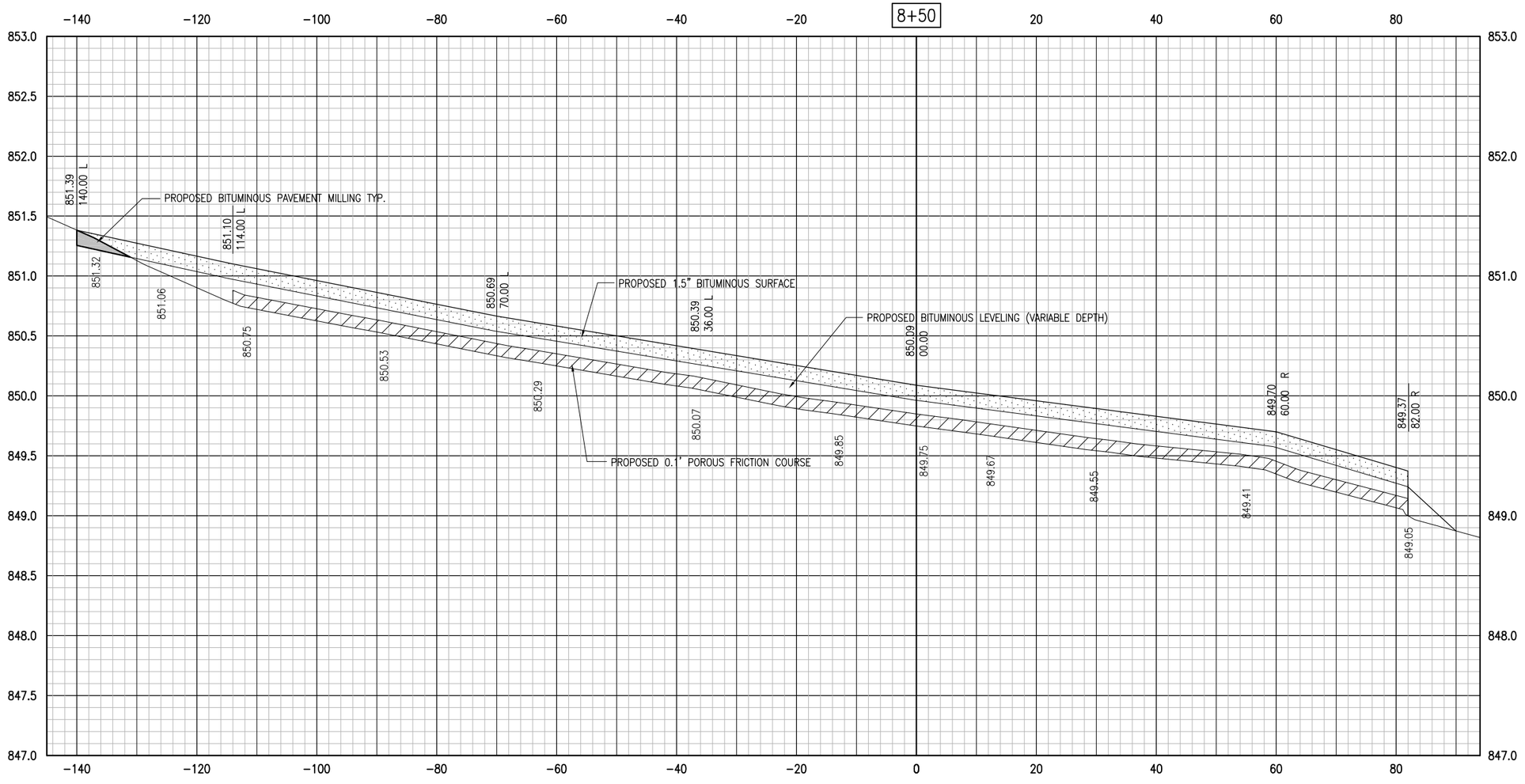

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A.I.P. PROJ.: 3-17-0058-B14
IL PROJ.: EZI-3971

Hanson Project No. 09A0151D 0001
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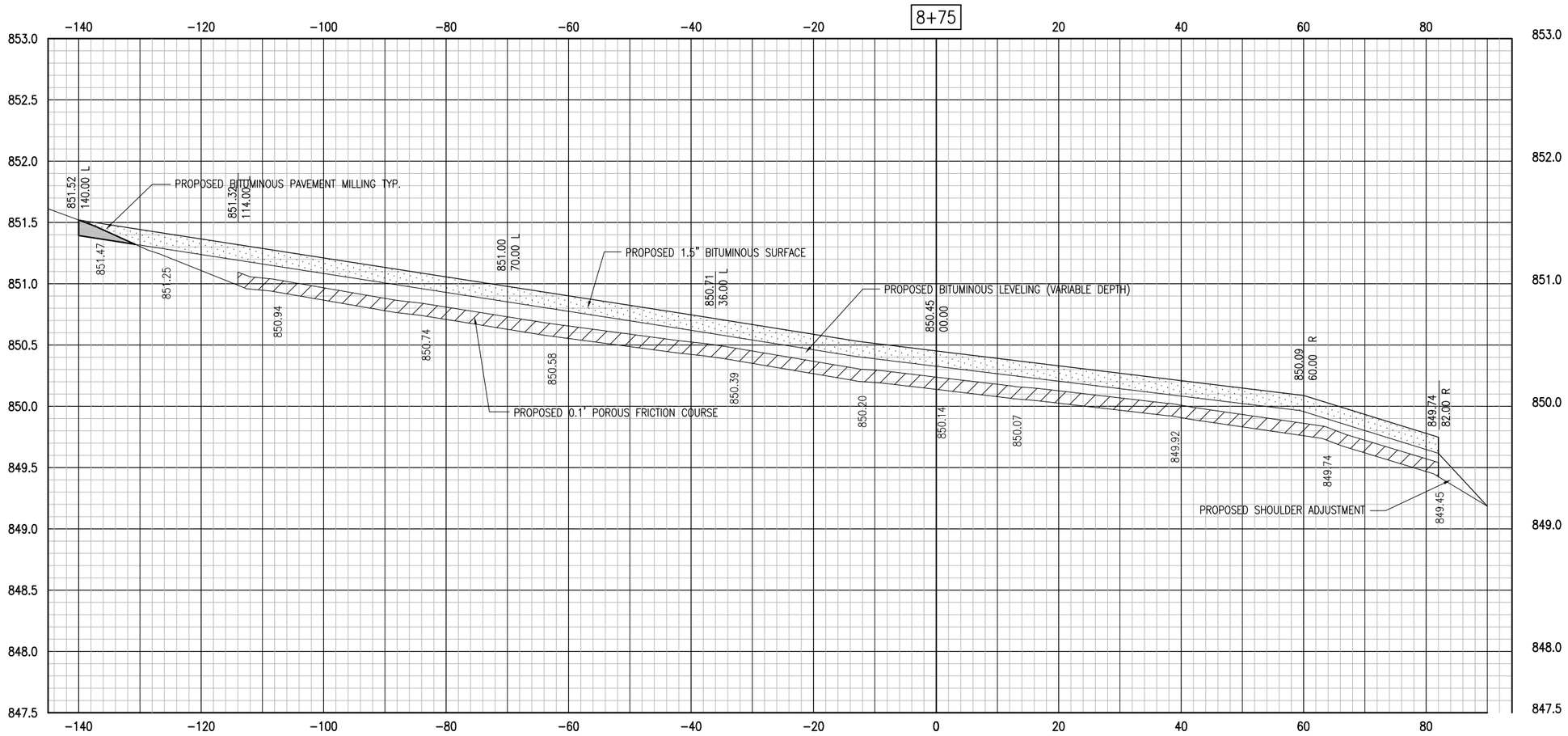
KE010

8+75



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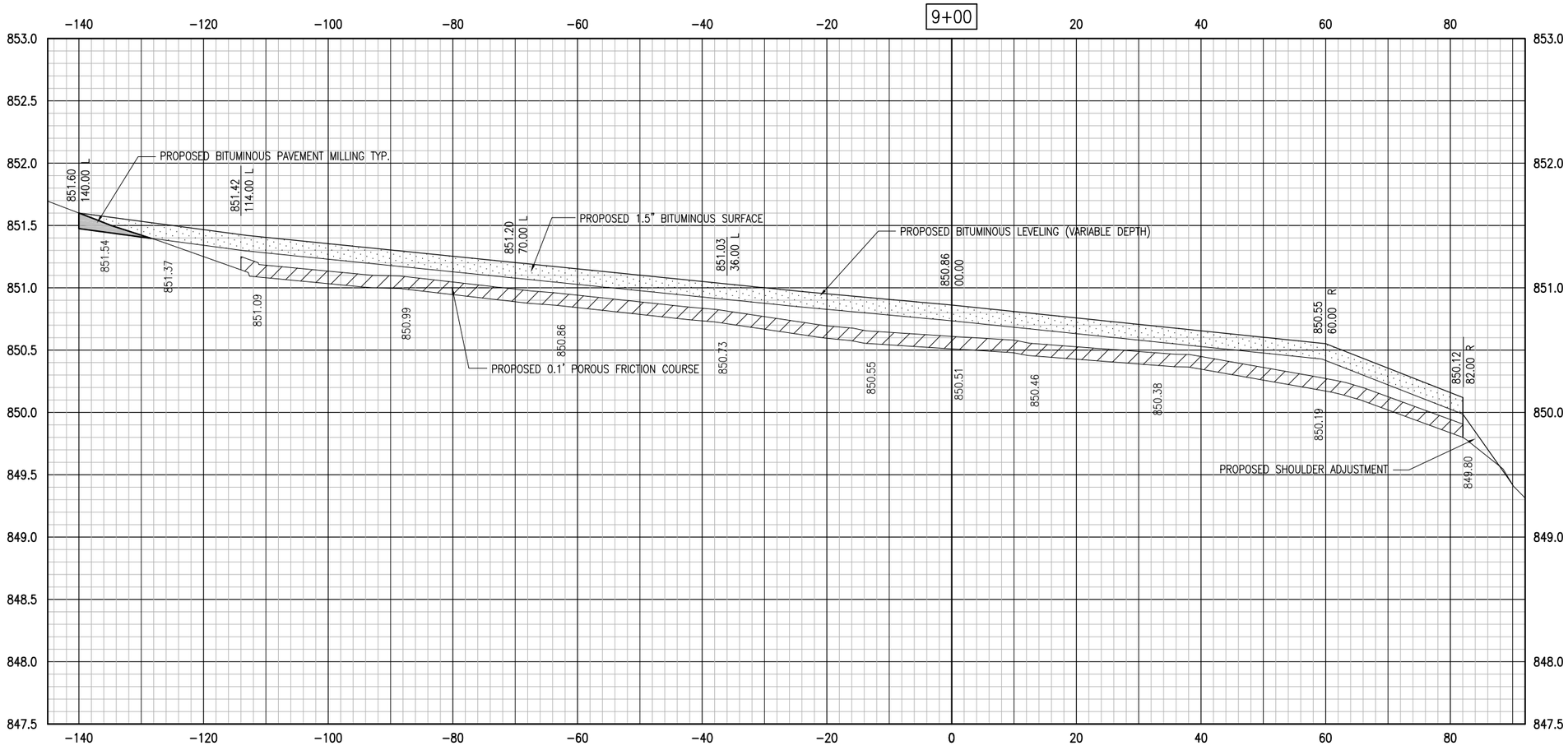

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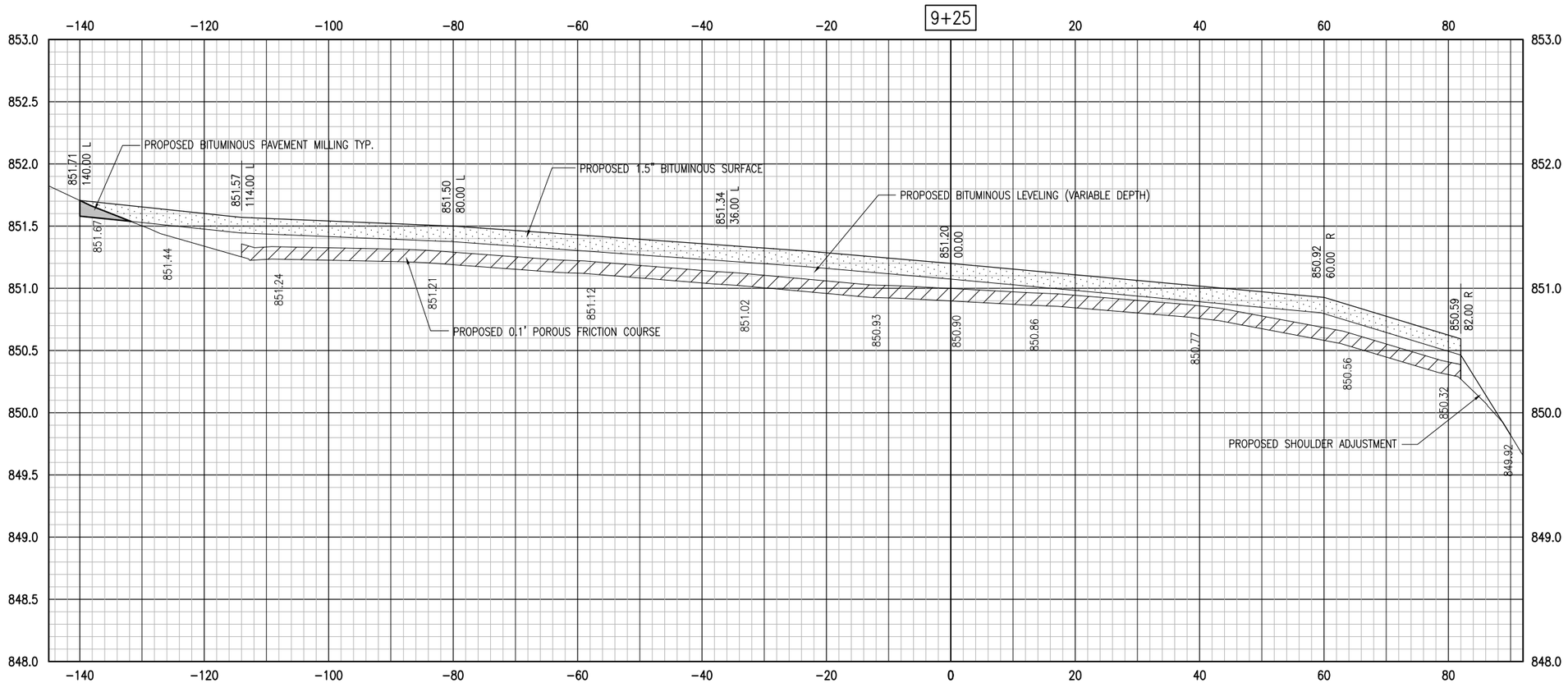

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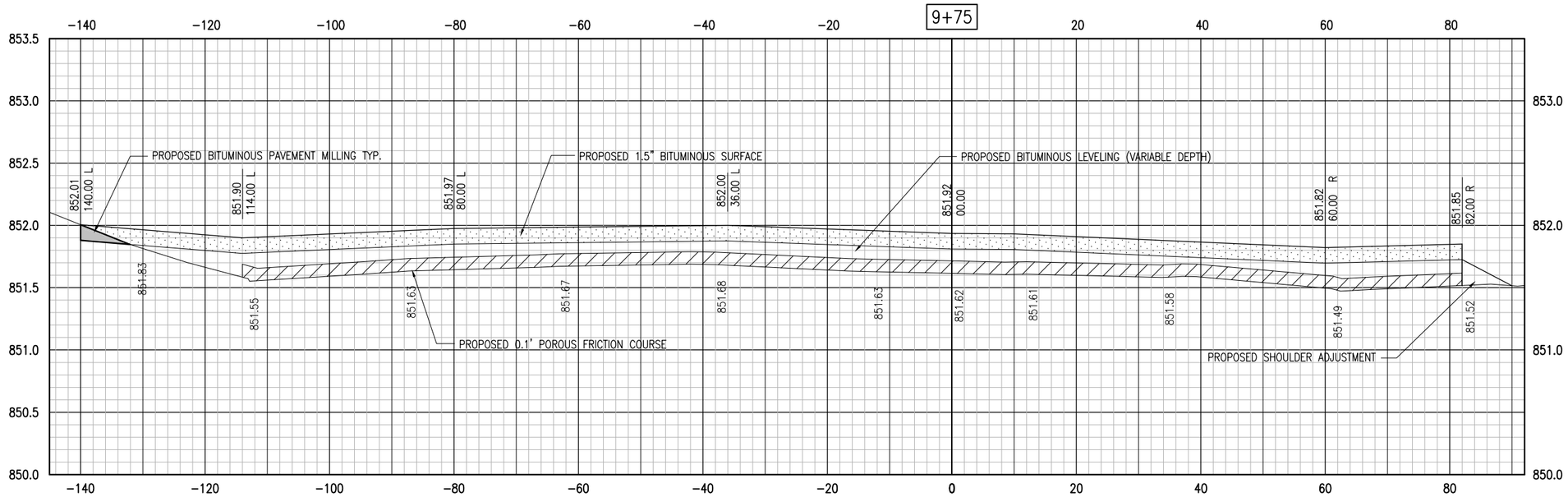

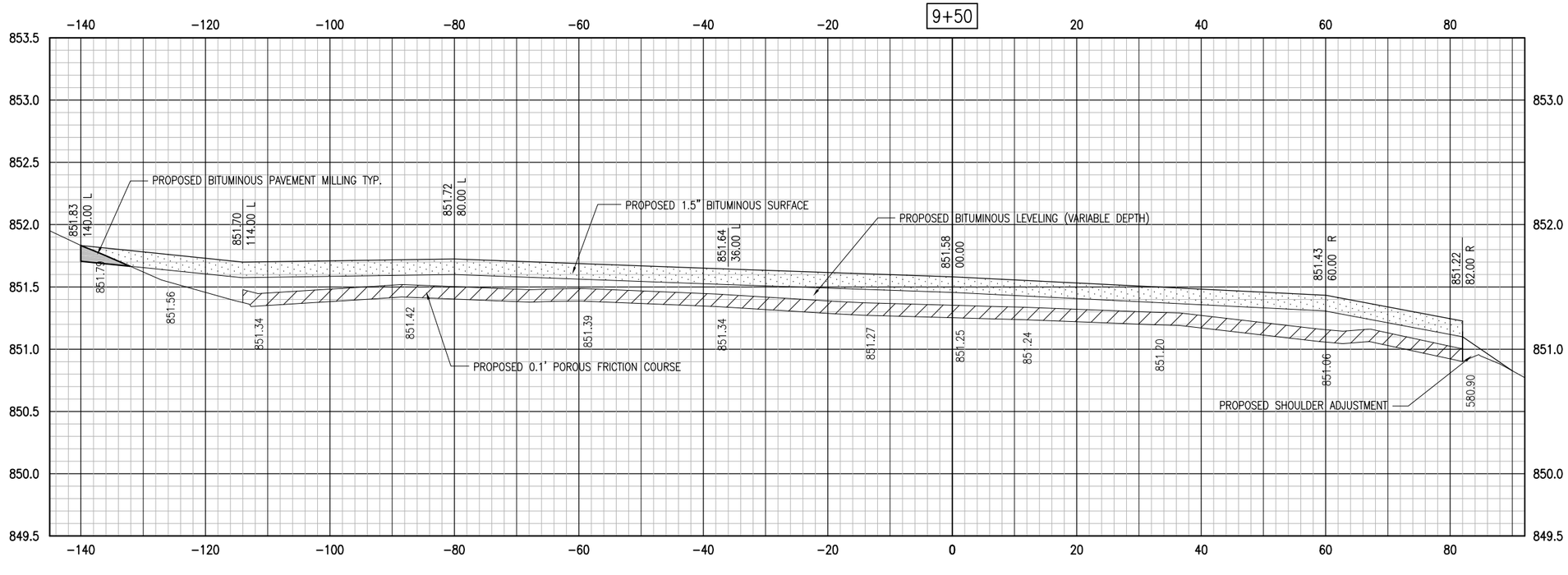

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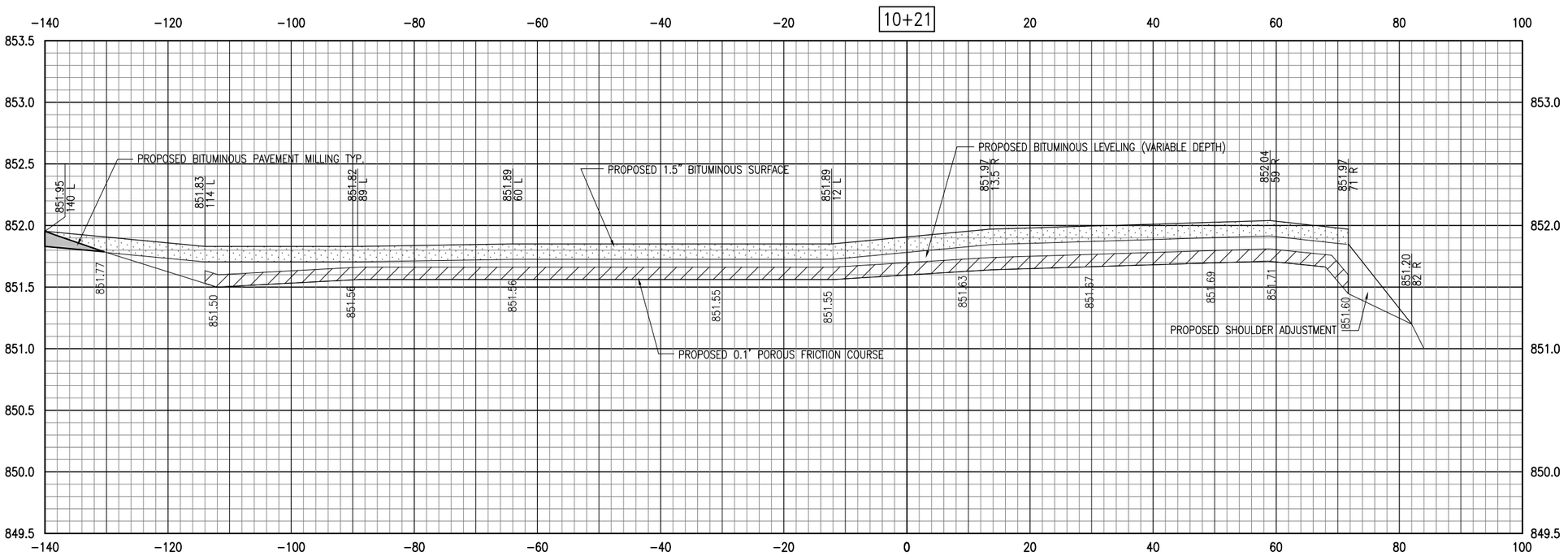

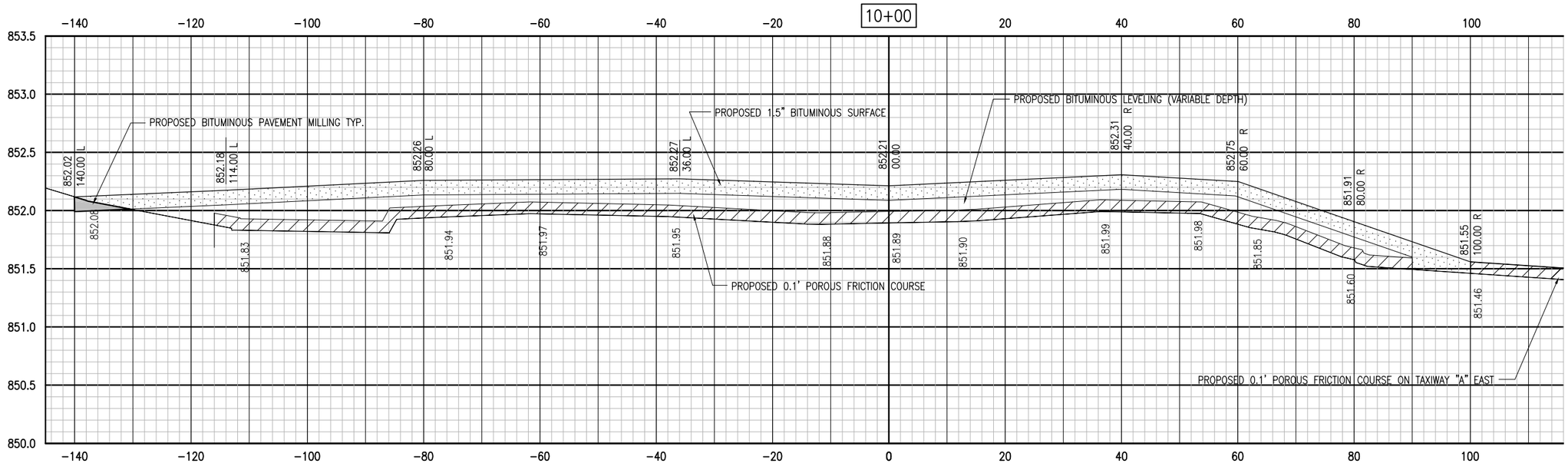

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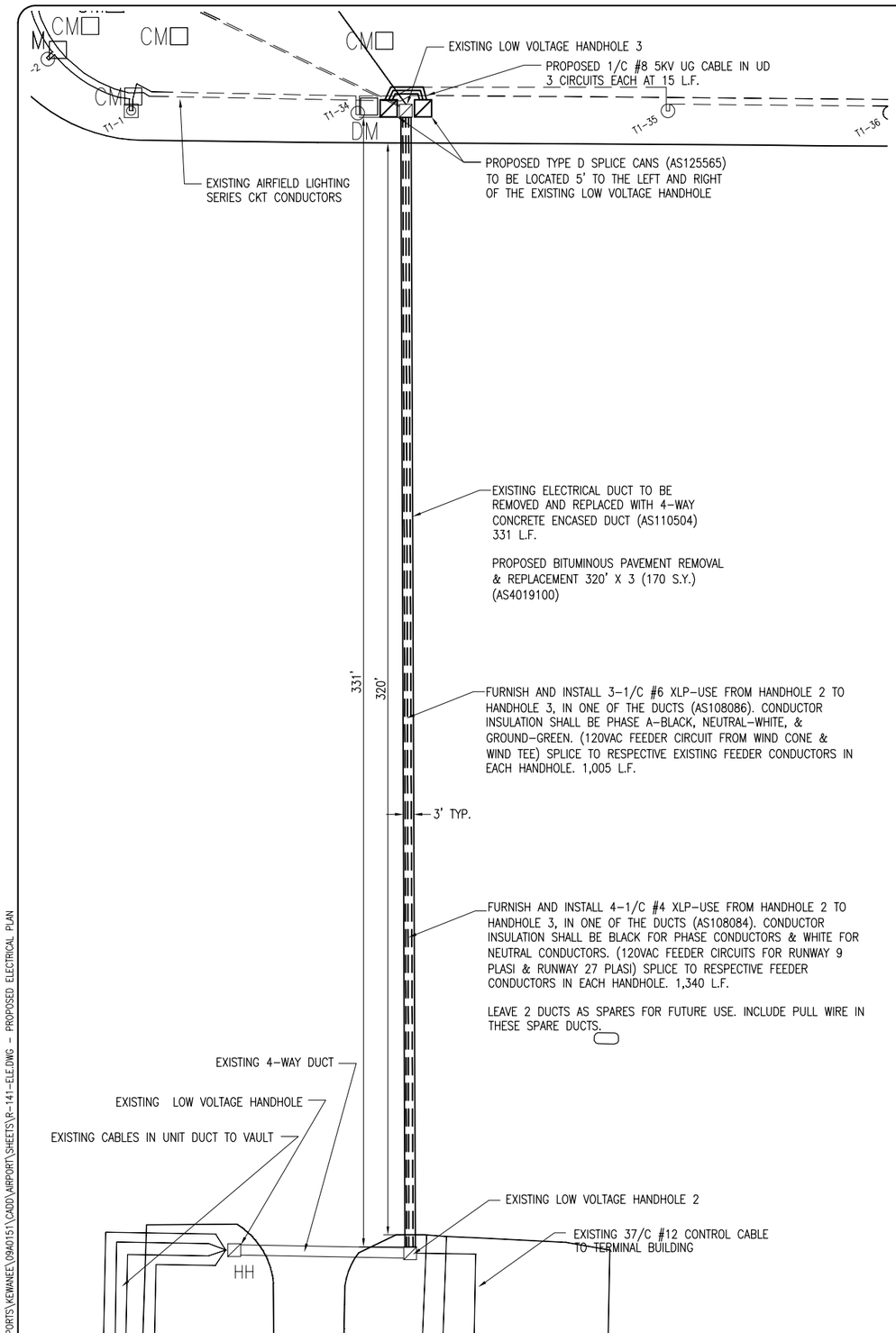
32 of 38 sheets



ELECTRICAL CABLE NOTES

PRIOR TO REMOVING THE EXISTING 4-WAY CONCRETE ENCASED ELECTRICAL DUCT, THE AIRPORT MANAGER WILL ISSUE A NOTICE TO AIRMEN (NOTAM) STATING THE PLASI UNITS, WIND CONE AND WIND TEE WILL BE OUT OF ORDER.

ALL VAULT WORK, POWER OUTAGES, AND/OR SHUT DOWN OF EXISTING SYSTEMS SHALL BE COORDINATED WITH THE AIRPORT MANAGER. ONCE SHUT DOWN, THE CIRCUITS SHALL BE LABELED AS SUCH TO PREVENT ACCIDENTAL ENERGIZING OF THE RESPECTIVE CIRCUITS. ALL PERSONNEL SHALL FOLLOW U.S. DEPARTMENT OF LABOR OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION (OSHA) 29 CFR PART 1910 OCCUPATIONAL SAFETY & HEALTH STANDARDS FOR ELECTRICAL SAFETY AND LOCKOUT/TAGOUT PROCEDURES INCLUDING, BUT NOT LIMITED TO, 29 CFR SECTION 1910.147 THE CONTROL OF HAZARDOUS ENERGY (LOCKOUT/TAGOUT).

PRIOR TO REMOVING THE 4-WAY CONCRETE ENCASED ELECTRICAL DUCT, THE CONTRACTOR WILL CUT THE LOW VOLTAGE CABLES INSIDE EXISTING HANDHOLES 2 AND 3. THE CABLES WILL BE CUT A SUFFICIENT LENGTH TO ALLOW FUTURE SPLICING TO THE PROPOSED CABLES.

AFTER THE PROPOSED 4-WAY CONCRETE ENCASED ELECTRICAL DUCT HAS BEEN INSTALLED AND ALL REPAIRS TO HANDHOLES 2 AND 3 HAVE BEEN COMPLETED, THE CONTRACTOR WILL INSTALL NEW LOW VOLTAGE CABLE THROUGH THE PROPOSED 4-WAY CONCRETE ENCASED DUCT.

ALL CABLES INSTALLED THROUGH THE PROPOSED 4-WAY CONCRETE ENCASED DUCT WILL NOT BE ENCASED IN UNIT DUCT.

THE PROPOSED CABLES WILL BE:
PLASI UNITS – 2-1/C #4 XLP-USE 600 VOLT UNDERGROUND CABLE
WIND CONE/TEE – 3-1/C #6 XLP-USE 600 VOLT UNDERGROUND CABLE

THE PROPOSED CABLES WILL BE SPLICED TO THE EXISTING CABLES USING APPROVED SPLICE KITS.

THE PROPOSED CABLES WILL BE PAID FOR UNDER ITEM:
AS108084 "1/C #4 XLP-USE"_____PER L.F.
AS108086 "1/C #6 XLP-USE"_____PER L.F.

THE LOCATION, SIZE, AND TYPE OF MATERIAL OF EXISTING UNDERGROUND AND/OR ABOVEGROUND UTILITIES INDICATED ON THE PLANS ARE NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. NEITHER THE OWNER NOR THE ENGINEER ASSUMES ANY RESPONSIBILITY WHATEVER IN RESPECT TO THE ACCURACY, COMPLETENESS, OR SUFFICIENCY OF THE INFORMATION. THERE IS NO GUARANTEE, EITHER EXPRESSED OR IMPLIED, THAT THE LOCATIONS, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ARE REPRESENTATIVE OF THOSE TO BE ENCOUNTERED IN THE CONSTRUCTION. 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 OWNER'S REPRESENTATIVE AND/OR THE RESIDENT ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY DAMAGE TO SUCH MAINS AND SERVICES SHALL BE RESTORED TO SERVICE AT ONCE AND PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT.

ALL UTILITY CABLES AND LINES SHALL BE LOCATED BY THE RESPECTIVE UTILITY. **CONTACT JULIE (JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS) FOR UTILITY INFORMATION, PHONE: 1-800-892-0123.** CONTACT THE FAA (FEDERAL AVIATION ADMINISTRATION) FOR ASSISTANCE IN LOCATING FAA CABLES AND UTILITIES. LOCATION OF FAA POWER, CONTROL, AND COMMUNICATION CABLES SHALL BE COORDINATED WITH AND/OR LOCATED BY THE FAA. ALSO CONTACT AIRPORT DIRECTOR/MANAGER AND AIRPORT PERSONNEL FOR ASSISTANCE IN LOCATING UNDERGROUND AIRPORT CABLES AND/OR UTILITIES. ALSO COORDINATE WORK WITH ALL ABOVEGROUND UTILITIES.

REMOVE & REPLACE 4-WAY ELECTRICAL DUCT

IN ORDER TO REMOVE AND INSTALL A 4-WAY CONCRETE ENCASED ELECTRICAL DUCT THE CONTRACTOR WILL BE REQUIRED TO REMOVE AND REPLACE THE BITUMINOUS PAVEMENTS THAT LIE DIRECTLY OVER THE DUCT. THE AREAS DESIGNATED FOR REMOVAL AND REPLACEMENT ARE SHOWN ON THIS SHEET.

WHERE THE PROPOSED REMOVAL AND REPLACEMENT AREA ABUTS THE EXISTING PAVEMENT, THE PAVEMENT WILL BE SAWED FULL DEPTH AND AT A WIDTH OF 3' CENTERED ON EXISTING HANDHOLES 2 AND 3. THE SAWING WILL BE CONSIDERED AS AN INCIDENTAL ITEM TO THE PAVEMENT REMOVAL AND REPLACEMENT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

ANY ADJACENT PAVEMENT DAMAGED BY THE PAVEMENT REMOVAL AND REPLACEMENT OPERATION WILL BE REPAIRED TO THE SATISFACTION OF THE RESIDENT ENGINEER AT THE CONTRACTOR'S OWN EXPENSE.

THE EXISTING 4-WAY ELECTRICAL DUCT WILL BE REMOVED AS PART OF THIS PROJECT. THIS SECTION OF DUCT RUNS FROM EXISTING LOW VOLTAGE HANDHOLE 2 TO EXISTING LOW VOLTAGE HANDHOLE 3.

THE CONTRACTOR WILL CAREFULLY SEPARATE THE 4-WAY ELECTRICAL DUCT TO BE REMOVED FROM EXISTING LOW VOLTAGE HANDHOLE NO. 2 AND NO 3. ANY DAMAGE TO THE EXISTING HANDHOLE WILL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE. AFTER SEPARATING THE ELECTRICAL DUCT FROM THE HANDHOLE THE CONTRACTOR WILL REMOVE THE ELECTRICAL DUCT IN MANAGEABLE SECTIONS, PLACE THE SECTIONS ON A TRUCK AND DISPOSE OF THEM OFF THE AIRPORT SITE IN A LEGAL MANNER.

THE CONTRACTOR WILL THEN INSTALL THE PROPOSED 4-WAY CONCRETE ENCASED DUCT AND CONNECT IT TO THE EXISTING LOW VOLTAGE HANDHOLES ON EACH END.

ONCE THE EXISTING ELECTRICAL DUCT HAS BEEN REMOVED AND THE PROPOSED ELECTRICAL DUCT INSTALLED, THE CONTRACTOR WILL BACKFILL THE TRENCH FROM THE TOP OF THE ELECTRICAL DUCT WITH CA-14 OR CA-16 AT A DEPTH OF 1'. THE CA-14/CA-16 WILL BE CONSOLIDATED TO THE SATISFACTION OF THE RESIDENT ENGINEER. THE CONTRACTOR WILL THEN BACKFILL IN NOT MORE THAN 6" LIFTS WITH AGGREGATE BASE COURSE (CA-6) COMPACTED TO THE SATISFACTION OF THE RESIDENT ENGINEER. ONCE THE AGGREGATE BASE HAS BEEN PROPERLY INSTALLED THE CONTRACTOR WILL SPRAY THE TOP OF THE AGGREGATE BASE AND THE SIDES OF THE BITUMINOUS PAVEMENT WITH A BITUMINOUS TACK COAT. HE THEN WILL REPLACE THE BITUMINOUS PAVEMENT USING 401 – BITUMINOUS SURFACE COURSE. THE BITUMINOUS PAVEMENT WILL BE INSTALLED IN 3" MAXIMUM LIFTS. EACH LIFT WILL BE COMPACTED TO THE SATISFACTION OF THE RESIDENT ENGINEER. THE LAST LIFT WILL BE COMPACTED WITH A ROLLER AND COMPACTED TO 92%.

ALL MATERIAL FROM THE REMOVAL PROCESS WILL BE DISPOSED OF OFF AIRPORT PROPERTY UNLESS OTHERWISE DIRECTED BY THE AIRPORT MANAGER.

FURNISHING AND INSTALLING ALL AGGREGATE AND BITUMINOUS MATERIAL WILL BE CONSIDERED INCIDENTAL TO THIS ITEM OF WORK AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

THIS ITEM OF WORK WILL BE PAID FOR UNDER ITEM:
AS110504 "4-WAY CONCRETE ENCASED DUCT"_____ PER L.F.
AS110901 "CONCRETE DUCT REMOVAL"_____ PER L.F.
AS401910 "REMOVE & REPLACE BIT. PAVEMENT"_____ PER S.Y.

PROPOSED 1/C #8 5KV UG CABLE IN UD

THE EXISTING LOW VOLTAGE HANDHOLE 3 HAS 3 1/C #8 5KV UG CABLES SPLICED IN IT. THESE SPLICES WILL BE DISCONNECTED AND REMOVED FROM THE LOW VOLTAGE HANDHOLE. THE CONTRACTOR WILL EXPOSE EACH END OF THE EXISTING CABLES A SUFFICIENT LENGTH TO ALLOW THEM TO BE PLACED IN THE PROPOSED TYPE D SPLICE CANS TO THE LEFT AND RIGHT OF THE EXISTING LOW VOLTAGE HANDHOLE.

THE CONTRACTOR WILL THEN TRENCH IN THE 3 PROPOSED 1/C #8 5KV UG CABLES IN UD AND CONNECT THEM TO EACH OF THE EXISTING 1/C #8 5KV UG CABLES IN UD

LEGEND

- EXISTING IMPROVEMENTS
- EXISTING BITUMINOUS PAVEMENT AND DUCT REMOVAL
- EXISITNG ELECTRICAL DUCT
- EXISTING AIRFIELD POWER CABLE
- PROPOSED LOW VOLTAGE POWER CABLE
- PROPOSED 1/C #8 5KV UG CABLE IN UD
- HH# EXISTING ELECTRICAL HANDHOLE
- PROPOSED TYPE D SPLICE CAN
- CM EXISTING CABLE MARKER
- DM EXISTING DUCT MARKER
- EXISTING BASE MOUNTED TAXIWAY LIGHT
- EXISTING STAKE MOUNTED TAXIWAY LIGHT

N

0' 10' 20' 40'
HALF SIZE SCALE: 1"= 40'
FULL SIZE SCALE: 1"= 20'

ADDITIVE ALTERNATE NO. 1

DATE	REVISION	BY

KEWANEE MUNICIPAL AIRPORT
KEWANEE, ILLINOIS

A.I.P. PROJ.: 3-17-0058-B14
IL. PROJ.: EZI-3971

Hanson Project No. 09A0151D 0001
Filename R-141-ELE.DWG
Scale 1"= 20'
Date 05/12/10

LAYOUT	CAH	04/26/10
DRAWN	MDR	04/26/10
REVIEWED	CAH	05/10/10

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PROPOSED ELECTRICAL PLAN

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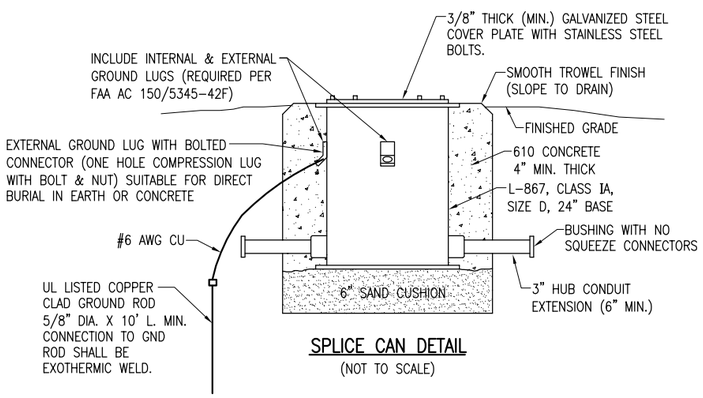


SPLICE CAN DETAIL
(NOT TO SCALE)

NOTES:
1. FOR THE PURPOSE OF ENHANCING SAFETY, EACH BASE MUST HAVE INSTALLED, BY THE MANUFACTURER, AN INTERNAL AND EXTERNAL GROUND STRAP THAT IS AVAILABLE FOR THE PURPOSE OF ATTACHING A GROUND LUG THAT IS CONNECTED TO AN EARTH GROUND OR A SAFETY GROUND CONDUCTOR INSTALLED WITH THE RESPECTIVE CIRCUIT. FOR AIRPORT PROJECTS RECEIVING FEDERAL FUNDS THIS REQUIREMENT IS MANDATORY PER FAA AC 150/5345-42F.
2. PROVIDE HEAT SHRINKABLE TUBING WITH INTERNAL ADHESIVE AT CABLE ENTRANCE TO SPLICE CAN HUB.
3. GROUND ROD IS INCIDENTAL TO INSTALLATION OF SPLICE CAN.

PER FAA AC 150/5340-30D DESIGN AND INSTALLATION DETAILS FOR AIRPORT VISUAL AIDS, A SAFETY GROUND MUST BE INSTALLED AT EACH LIGHT FIXTURE. A SAFETY GROUND SHALL BE INSTALLED AT EACH STAKE MOUNTED LIGHT AND EACH TRANSFORMER BASE/LIGHT CAN ASSOCIATED WITH RUNWAY LIGHTS, TAXIWAY LIGHTS, AND LIGHTED TAXI GUIDANCE SIGNS. THE SAFETY GROUND SHALL BE A #6 AWG BARE COPPER CONDUCTOR CONNECTED TO THE GROUND LUG ON THE RESPECTIVE L-867 TRANSFORMER BASE/LIGHT CAN OR MOUNTING STAKE AND A UL LISTED COPPER CLAD GROUND ROD. THE GROUND RODS SHALL BE 5/8 INCH MINIMUM DIAMETER BY 8-FOOT MINIMUM LONG.

ELECTRICAL ABBREVIATIONS	
A.F.F.	ABOVE FINSHED 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
DPDT	DOUBLE POLE DOUBLE THROW
DPST	DOUBLE POLE SINGLE THROW
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
NTS	NOT TO SCALE
OHE	OVERHEAD ELECTRIC
OL	OVERLOAD

ELECTRICAL ABBREVIATIONS (CONTINUED)	
PB	PULL BOX
PC	PHOTO CELL
PDB	POWER DISTRIBUTION BLOCK
PNL	PANEL
RCPT	RECEPTACLE
R	RELAY
S	STARTER
SPD	SURGE PROTECTION DEVICE
SPST	SINGLE POLE SINGLE THROW
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
TYP	TYPICAL
UG	UNDERGROUND
UGE	UNDERGROUND ELECTRIC
UL	UNDERWRITER'S LABORATORIES
V	VOLTS
W/	WITH
W/O	WITHOUT
WP	WEATHER PROOF
XFER	TRANSFER
XFMR	TRANSFORMER

AIRPORT EQUIPMENT/FACILITY ABBREVIATIONS	
ASOS	AUTOMATED SURFACE OBSERVING SYSTEM
ATCT	AIR TRAFFIC CONTROL TOWER
AWOS	AUTOMATED WEATHER OBSERVING SYSTEM
CCR	CONSTANT CURRENT REGULATOR
DME	DISTANCE MEASURING EQUIPMENT
FAR	FEDERAL AVIATION REGULATION
GS	GLIDE SLOPE FACILITY
HIRL	HIGH INTENSITY RUNWAY LIGHT
ILS	INSTRUMENT LANDING SYSTEM
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
VOR	VERY HIGH FREQUENCY OMNIDIRECTIONAL RANGE FACILITY
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. ALL VAULT WORK, POWER OUTAGES, AND/OR SHUT DOWN OF EXISTING SYSTEMS SHALL BE COORDINATED WITH THE AIRPORT MANAGER. ONCE SHUT DOWN, THE CIRCUITS SHALL BE LABELED AS SUCH TO PREVENT ACCIDENTAL ENERGIZING OF THE RESPECTIVE CIRCUITS. ALL PERSONNEL SHALL FOLLOW U.S. DEPARTMENT OF LABOR OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION (OSHA) 29 CFR PART 1910 OCCUPATIONAL SAFETY & HEALTH STANDARDS FOR ELECTRICAL SAFETY AND LOCKOUT/TAGOUT PROCEDURES INCLUDING, BUT NOT LIMITED TO, 29 CFR SECTION 1910.147 THE CONTROL OF HAZARDOUS ENERGY (LOCKOUT/TAGOUT).
3. 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 TO COMPLY WITH NEC 250.119. NEUTRAL CONDUCTORS SHALL HAVE WHITE COLORED INSULATION FOR NO. 6 AWG AND SMALLER TO MEET THE REQUIREMENTS OF NEC 200.6. 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

4. SEE RESPECTIVE SITE PLANS FOR SITE LEGEND INFORMATION..

DATE	REVISION	BY

KEWANEE MUNICIPAL AIRPORT
KEWANEE, ILLINOIS

IL. PROJ.: EZI-3971 A.I.P. PROJ.: 3-17-0058-B14

Hanson Project No. 09A0151D 0001
Filename R-541ELE.DWG
Scale NOT TO SCALE
Date 05/12/10

LAYOUT	CAH	05/10/10
DRAWN	BAK	05/10/10
REVIEWED	CAH	05/10/10

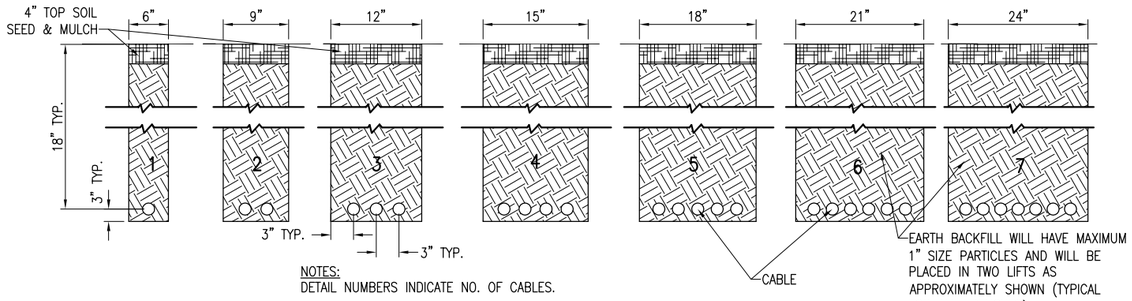
HANSON
Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62703-2886
Offices Nationwide

ADDITIVE ALTERNATE NO. 1

RECONSTRUCT EAST APRON

PROPOSED ELECTRICAL ABBREVIATIONS & DETAILS

34
34 of 38 sheets



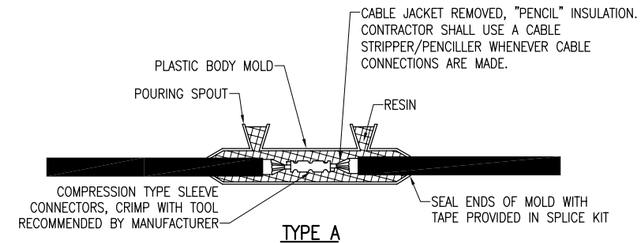
NOTES:
DETAIL NUMBERS INDICATE NO. OF CABLES.

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.

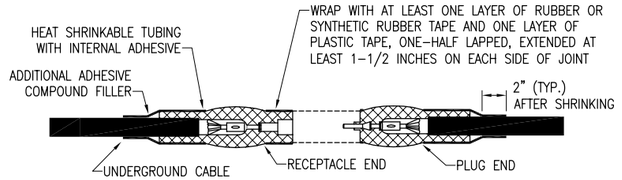
DEPTH OF TRENCHES SHALL BE AS SHOWN ABOVE UNLESS OTHERWISE SPECIFIED ON THE PLANS.

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

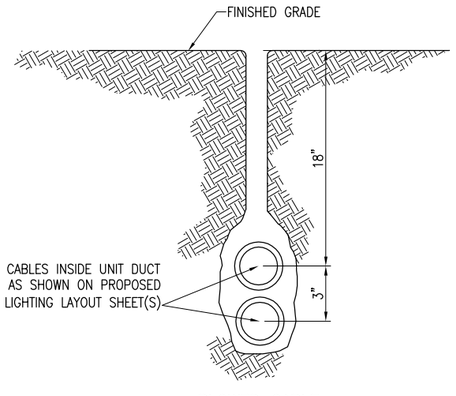
CABLE TRENCHES
(NOT TO SCALE)



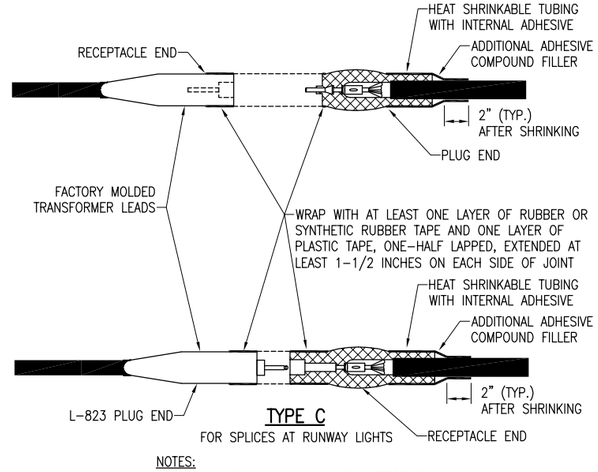
TYPE A
FOR SPLICES IN LOW VOLTAGE (600V) CABLE HOMERUNS FOR EXTENSIONS TO EXISTING CABLES ONLY. TYPE A SPLICES SHALL BE MADE IN SPLICE CANS, HANDHOLES, MANHOLES, OR JUNCTION BOXES.



TYPE B
FOR SPLICES AT JUNCTION OF HOMERUN WITH LOOP CIRCUIT AND FOR SPLICES IN HOMERUNS TO EXISTING CABLES



PLOWED CABLE
(NOT TO SCALE)



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)

ADDITIVE ALTERNATE NO. 1

DATE	REVISION	BY

KEWANEE MUNICIPAL AIRPORT
KEWANEE, ILLINOIS

A.I.P. PROJ.: 3-17-0058-B14
IL. PROJ.: EZI-3971

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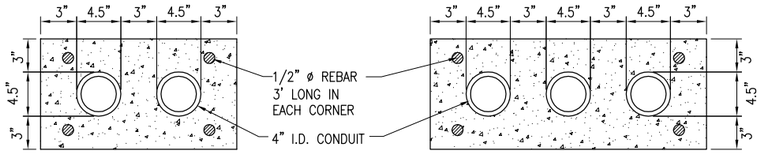
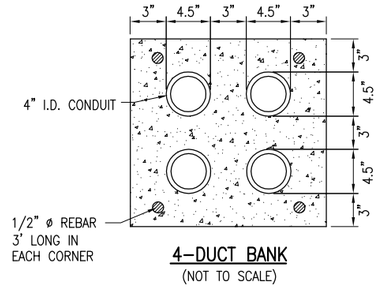
RECONSTRUCT EAST APRON

PROPOSED ELECTRICAL DETAILS SHEET 2



2-DUCT BANK
(NOT TO SCALE)

3-DUCT BANK
(NOT TO SCALE)



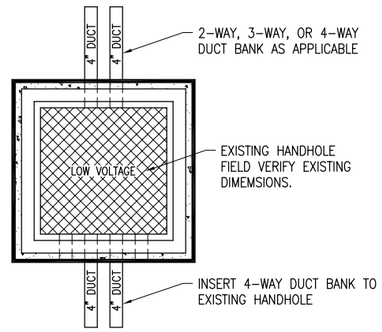
4-DUCT BANK
(NOT TO SCALE)

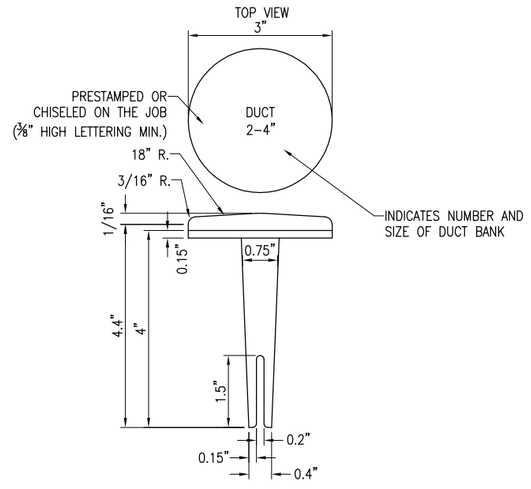
DUCT BANK NOTES:

1. ALL DIMENSION ARE MINIMUM.
2. INCLUDE DUCT SPACERS AS MANUFACTURED BY UNDERGROUND DEVICES INC., TO MAINTAIN PROPER SEPARATION OF CONDUITS.
3. REBAR IS REQUIRED TO ACCOMMODATE INTERFACE TO HANDHOLDS AT DUCT BANK TERMINATIONS.
4. CONDUITS FOR CONCRETE ENCASED DUCT SHALL BE SCHEDULE 40 PVC CONFORMING TO ITEM 110.
5. MINIMUM DEPTH OF TOP OF DUCT ENCASEMENT SHALL BE 18" BELOW FINISHED GRADE.
6. HIGH VOLTAGE AND LOW VOLTAGE CIRCUITS SHALL NOT BE INSTALLED IN THE SAME RACEWAY, CONDUIT, DUCT, HANDHOLE, OR MANHOLE.
7. HOMERUN CABLES FOR A RESPECTIVE CIRCUIT SHALL BE INSTALLED IN THE SAME RACEWAY OR DUCT.
8. DUCT INTERFACE TO HANDHOLES OR MANHOLES WILL BE CONSIDERED INCIDENTAL TO THE RESPECTIVE DUCT PAY ITEM.

CABLE & DUCT MARKER NOTES:

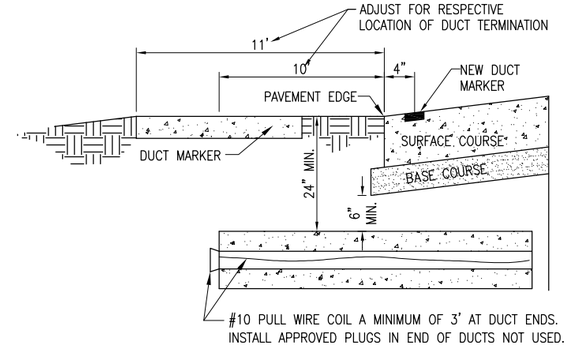
1. THE COST OF ALL TURF AND PAVEMENT DUCT MARKERS SHALL BE INCIDENTAL TO THE DUCT. THE COST OF ALL CABLE MARKERS SHALL BE INCIDENTAL TO THE CABLE.
2. BITUMINOUS PAVEMENT DUCT MARKER AND CONCRETE DUCT MARKER TO BE PROVIDED AT EACH END OF EACH DUCT AS SHOWN ON THE LOCATION PLAN. FOR CONCRETE PAVEMENT, THE LETTER "D" SHALL BE IMPRESSED IN THE PAVEMENT INSTEAD OF THE MARKER. THE LETTER SHALL BE FORMED AS DESCRIBED IN NOTE 4.
3. CABLE MARKERS SHALL BE PLACED AT CHANGES OF DIRECTION AND APPROXIMATELY EVERY 200' ALONG CABLE RUNS.
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.



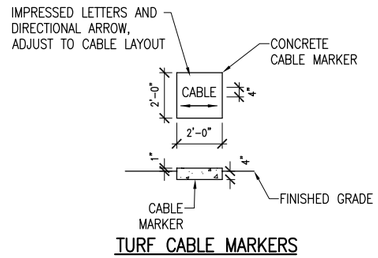


BITUMINOUS PAVEMENT DUCT MARKERS
"NOT TO SCALE"

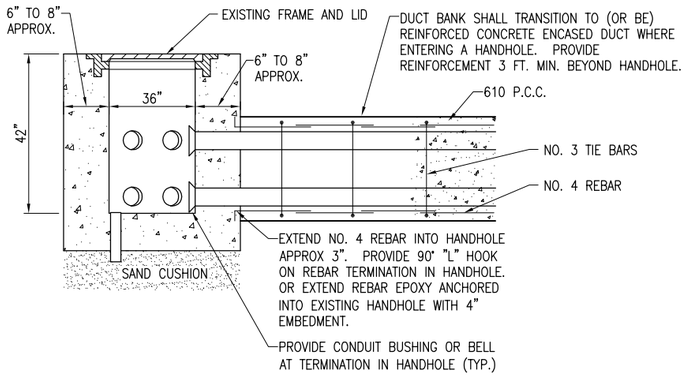
NOTE:
TOP OF MARKER SHALL BE FLUSH WITH FINISHED PAVEMENT SURFACE. MARKER MAY BE INSTALLED IN A DRILLED HOLE AND SECURED WITH EPOXY GLUE.



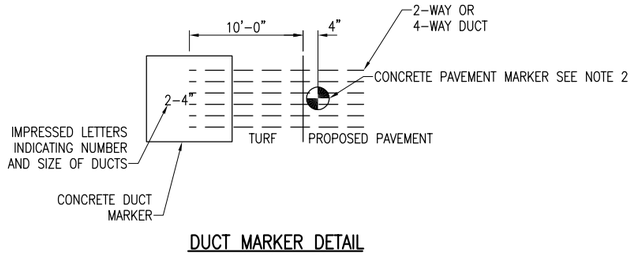
UNDERGROUND ELECTRICAL DUCT
(NOT TO SCALE)



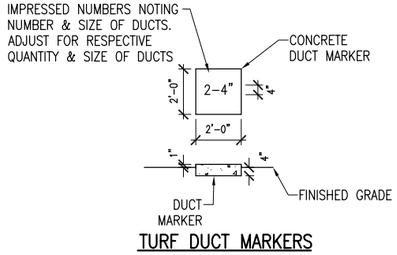
TURF CABLE MARKERS
"NOT TO SCALE"



DUCT BANK TO HANDHOLE INTERFACE DETAIL
"NOT TO SCALE"



DUCT MARKER DETAIL
"NOT TO SCALE"



TURF DUCT MARKERS
"NOT TO SCALE"

ADDITIVE ALTERNATE NO. 1

RECONSTRUCT EAST APRON

PROPOSED ELECTRICAL DETAILS SHEET 3

KEWANEE MUNICIPAL AIRPORT
KEWANEE, ILLINOIS

A.I.P. PROJ.: 3-17-0058-B14
IL. PROJ.: EZI-3971

DATE	REVISION	BY

Hanson Project No. 09A0151D 0001
Filename R-543ELE.DWG
Scale NOT TO SCALE
Date 05/12/10

LAYOUT	CAH	05/10/10
DRAWN	BAK	05/10/10
REVIEWED	CAH	05/10/10

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

GENERAL 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 AND/OR SHUT DOWN OF SYSTEMS WITH THE RESPECTIVE FACILITY OWNER PERSONNEL AND THE AIRPORT MANAGER/DIRECTOR. ONCE SHUT DOWN, THE CIRCUITS SHALL BE LABELED AS SUCH TO PREVENT ACCIDENTAL ENERGIZING OF THE RESPECTIVE CIRCUITS. ALL PERSONNEL SHALL FOLLOW U.S. DEPARTMENT OF LABOR OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION (OSHA) 29 CFR PART 1910 OCCUPATIONAL SAFETY & HEALTH STANDARDS FOR ELECTRICAL SAFETY AND LOCKOUT/TAGOUT PROCEDURES INCLUDING, BUT NOT LIMITED TO, 29 CFR SECTION 1910.147 THE CONTROL OF HAZARDOUS ENERGY (LOCKOUT/TAGOUT).

4. 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.

5. 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.

6. 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.

7. 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.

8. 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.

9. 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 INSTRUCTION.

   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 NOTES

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 PHASE CONDUCTORS ON 120/240VAC SINGLE–PHASE, THREE WIRE SYSTEMS AND BLACK, ORANGE (FOR HIGH LEG) AND BLUE SHALL BE USED FOR PHASE CONDUCTORS ON 240/120VAC THREE–PHASE, FOUR WIRE 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. INSULATED GROUND CONDUCTORS SHALL HAVE GREEN COLORED INSULATION FOR ALL CONDUCTOR SIZES (AWG OR KCMIL).

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 INTERIOR WALL MOUNTED EQUIPMENT ENCLOSURES SHALL BE MOUNTED ON HOT DIPPED GALVANIZED STEEL STRUT SUPPORT, OR STAINLESS STEEL STRUT SUPPORT, WITH CORROSION RESISTANT HARDWARE.

14. SUPPORT FOR EXTERIOR MOUNTED EQUIPMENT SHALL USE HOT DIPPED GALVANIZED STEEL STRUT SUPPORT OR STAINLESS STEEL STRUT SUPPORT WITH STAINLESS STEEL HARDWARE. PROVIDE ZINC RICH PAINT APPLIED TO FIELD CUTS OF GALVANIZED STEEL SUPPORT TO MINIMIZE THE POTENTIAL FOR CORROSION PER THE RESPECTIVE STRUT SUPPORT MANUFACTURER'S RECOMMENDATIONS.

15. CONDUITS FOR ELECTRIC SERVICE ENTRANCE AND FEEDERS SHALL BE AS DETAILED HEREIN ON THE PLANS. WHERE GALVANIZED RIGID STEEL CONDUIT IS SPECIFIED IT SHALL HAVE THREADED FITTINGS. SET SCREW TYPE FITTINGS WILL NOT BE ACCEPTABLE. 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.

16. 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, & CONSTANT CURRENT REGULATORS) 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. CONFIRM LIQUID–TIGHT FLEXIBLE METAL CONDUIT BEARS THE UL LABEL PRIOR TO INSTALLING IT.

17. 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.

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

20. USE DOUBLE LOCK NUTS AT EACH CONDUIT TERMINATION.

21. WRAP ALL PRIMARY AND SECONDARY POWER TRANSFORMER CONNECTIONS WITH SUFFICIENT LAYERS OF INSULATING TAPE (3M SCOTCH 23 ALL–VOLTAGE SPLICING TAPE, 3M SCOTCH 130C LINERLESS RUBBER SPLICING TAPE, OR APPROVED EQUAL) AND COVER WITH VINYL ELECTRICAL TAPE (3M SCOTCH 88 VINYL ELECTRICAL TAPE OR APPROVED EQUAL) FOR FULL VALUE OF CABLE INSULATION VOLTAGE.

22. UNLESS OTHERWISE NOTED, ALL SINGLE CONDUCTOR CONTROL WIRING SHALL BE NO. 12 AWG. COPPER MINUMUM.

23. THE FOLLOWING SHALL APPLY TO RELAY/CONTACTOR PANELS/ENCLOSURES:

   A. FOR INTERIOR LOCATIONS ALL COMPONENTS SHALL BE MOUNTED IN NEMA 12 (DUST TIGHT) ENCLOSURE(S) WITH VERTICALLY HINGED COVERS. FOR EXTERIOR/OUTDOOR LOCATIONS ALL COMPONENTS SHALL BE MOUNTED IN NEMA 4X STAINLESS STEEL ENCLOSURE(S) WITH VERTICALLY HINGED COVERS. ALL CONDUIT ENTRIES INTO NEMA 4, 4X ENCLOSURES SHALL HAVE NEMA 4 HUBS LISTED SUITABLE FOR THE RESPECTIVE ENCLOSURE TO MAINTAIN THE NEMA 4, 4X RATING OF THE ENCLOSURE.

   B. THE ENCLOSURE(S) SHALL HAVE AMPLE SPACE FOR THE CIRCUIT COMPONENTS, TERMINAL BLOCKS AND INCOMING AND INTERNAL WIRING.

   C. ALL CONTROL CONDUCTOR TERMINATIONS SHALL BE OF THE OPEN–EYE CONNECTOR/SCREW TYPE. SOLDERED CLOSED–EYE TERMINATIONS, OR TERMINATIONS WITHOUT CONNECTORS ARE NOT ACCEPTABLE.

   D. 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.

   E. ACCESS TO, OR REMOVAL OF A CIRCUIT COMPONENT OR TERMINAL BLOCK WILL NOT REQUIRE THE REMOVAL OF ANY OTHER CIRCUIT COMPONENT OR TERMINAL BLOCK.

   F. EACH CIRCUIT COMPONENT SHALL BE CLEARLY IDENTIFIED INDICATING ITS CORRESPONDING NUMBER SHOWN ON THE DRAWINGS AND ITS FUNCTION.

   G. A COMPLETE WIRING DIAGRAM SHALL BE MOUNTED ON THE INSIDE OF THE COVER. THE DIAGRAM SHALL REPRESENT EACH CONDUCTOR BY A SEPARATE LINE.

   H. THE DIAGRAM SHALL IDENTIFY EACH CIRCUIT COMPONENT AN NUMBERING AND COLOR OF EACH TERMINAL CONDUCTOR AND TERMINAL.

   I. ALL WIRING SHALL BE NEATLY TRAINED AND LACED.

   J. MINIMUM WIRE SIZE SHALL BE NO. 12 AWG.

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

ADDITIVE ALTERNATE NO. 1

DATE	REVISION	BY

KEWANEE MUNICIPAL AIRPORT
KEWANEE, ILLINOIS

IL. PROJ.: EZI–3971 A.I.P. PROJ.: 3–17–0058–B14

Hanson Project No. 09A0151D_0001
Filename R–544ELE.DWG
Scale NOT TO SCALE
Date 05/12/10

LAYOUT	CAH	05/10/10
DRAWN	BAK	05/10/10
REVIEWED	CAH	05/10/10

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

RECONSTRUCT EAST APRON

PROPOSED ELECTRICAL NOTES SHEET 1

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. 9.
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. 9.
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 BE TAPED.
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 HAVE CONDUIT COUPLINGS OR REDUCERS TO INTERFACE UNIT DUCT/CONDUIT TO L-867 BASE HUBS, OR SHALL BE SEALED WITH HEAT SHRINK AS SHOWN IN DETAIL "B" ON SHEET NO. 8.
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 3500 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 AND/OR ABOVEGROUND UTILITIES INDICATED ON THE PLANS IS NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. NEITHER THE OWNER NOR THE ENGINEER ASSUMES ANY RESPONSIBILITY WHATEVER IN RESPECT TO ACCURACY, COMPLETENESS, OR SUFFICIENCY OF THE INFORMATION. THERE IS NO GUARANTEE EITHER EXPRESSED OR IMPLIED, THAT THE LOCATIONS, SIZE AND TYPE OF MATERIAL OF EXISTING uNDERGROUND UTILITIES INDICATED ARE REPRESENTATIVE OF THOSE TO BE ENCOUNTERED IN THE CONSTRUCTION. 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 OWNER'S REPRESENTATIVE AND/OR THE RESIDENT ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY DAMAGE TO SUCH MAINS AND SERVICES SHALL BE RESTORED TO SERVICE AT ONCE AND PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT. ALL UTILITY CABLES AND LINES SHALL BE LOCATED BY THE RESPECTIVE UTILITY. **CONTACT JULIE (JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS) FOR UTILITY INFORMATION, PHONE: 1-800-892-0123.** CONTACT THE FAA (FEDERAL AVIATION ADMINISTRATION) FOR ASSISTANCE IN LOCATING FAA CABLES AND UTILITIES. LOCATION OF FAA POWER, CONTROL AND COMMUNICATION CABLES SHALL BE COORDINATED WITH AND/OR LOCATED BY THE FAA. ALSO CONTACT AIRPORT DIRECTOR/MANAGER AND AIRPORT PERSONNEL FOR ASSISTANCE IN LOCATING UNDERGROUND AIRPORT CABLES AND/OR UTILITIES. ALSO COORDINATE WORK WITH ALL ABOVE GROUND UTILITIES.
32. WHEN PREPARING CABLE FOR SPLICES, THE CONTRACTOR SHALL USE A CABLE STRIPPER/PENCILLER WHENEVER CABLE CONNECTIONS ARE MADE.

GROUNDING NOTES FOR AIRFIELD LIGHTING

1. GROUNDING FOR RUNWAY LIGHTS, TAXIWAY LIGHTS, AND LIGHTED TAXI GUIDANCE SIGNS SHALL BE AS DETAILED ON THE PLANS AND AS SPECIFIED HEREIN. PER FAA AC 150/5340-30D DESIGN AND INSTALLATION DETAILS FOR AIRPORT VISUAL AIDS, CHAPTER 12, PART 12.6; A SAFETY GROUND MUST BE INSTALLED AT EACH LIGHT FIXTURE. THE PURPOSE OF THE SAFETY GROUND IS TO PROTECT PERSONNEL FROM POSSIBLE CONTACT WITH AN ENERGIZED LIGHT BASE OR MOUNTING STAKE AS THE RESULT OF A SHORTED CABLE OR ISOLATION TRANSFORMER. A SAFETY GROUND SHALL BE INSTALLED AT EACH TRANSFORMER BASE/LIGHT CAN ASSOCIATED WITH RUNWAY LIGHTS, TAXIWAY LIGHTS, AND LIGHTED TAXI GUIDANCE SIGNS. A SAFETY GROUND SHALL ALSO BE INSTALLED AT EACH STAKE MOUNTED LIGHT FIXTURE. THE SAFETY GROUND SHALL BE A #6 AWG BARE COPPER CONDUCTOR CONNECTED TO THE GROUND LUG ON THE RESPECTIVE L-867 TRANSFORMER BASE/LIGHT CAN OR MOUNTING STAKE AND A 5/8-INCH DIAMETER BY 8-FOOT LONG (MINIMUM) UL LISTED COPPER CLAD GROUND ROD. CONNECTIONS TO GROUND LUGS ON THE L-867 TRANSFORMER BASE/LIGHT CAN OR MOUNTING STAKE SHALL BE WITH A UL LISTED GROUNDING CONNECTOR. CONNECTIONS TO GROUND RODS SHALL BE MADE WITH EXOTHERMIC WELD TYPE CONNECTORS, CADWELD BY ERICO PRODUCTS, INC., SOLON, OHIO, (PHONE: 800-248-9353), THERMOWELD BY CONTINENTAL INDUSTRIES, INC., TULSA, OKLAHOMA (PHONE: 918-663-1440) OR ULTRAWELD BY HARGER, GRAYSLAKE, ILLINOIS (PHONE: 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. TOP OF GROUND RODS SHALL BE BURIED 12 INCHES MINIMUM BELOW GRADE, UNLESS SPECIFIED OTHERWISE HEREIN, FOR RESPECTIVE APPLICATIONS.
2. CLEAN ALL METAL SURFACES BEFORE MAKING GROUND CONNECTIONS. METALLIC SURFACES TO BE JOINED SHALL BE PREPARED BY THE REMOVAL OF ALL NON-CONDUCTIVE MATERIAL PER 2008 NATIONAL ELECTRICAL CODE ARTICLE 250-12.
3. PER FAA 150/5340-30D THE RESISTANCE TO GROUND OF THE RESPECTIVE MOUNTING STAKE OR LIGHT BASE (WITH GROUND ROD CONNECTED) MUST BE 25 OHMS OR LESS.

ADDITIVE ALTERNATE NO. 1

RECONSTRUCT EAST APRON

PROPOSED ELECTRICAL NOTES SHEET 2

38

38 of 38 sheets

DATE	REVISION	BY

KEWANEE MUNICIPAL AIRPORT
KEWANEE, ILLINOIS

IL. PROJ.: EZI-3971 A.I.P. PROJ.: 3-17-0058-B14

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