

SCOPE OF WORK

THIS PROJECT CONSISTS OF EXTENDING THE PARTIAL PARALLEL TAXIWAY (1,901' X 35') WITH CONNECTING CROSS-OVER TAXIWAY (185' X 35') TO RUNWAY END 36, WITH ASSOCIATED MARKING, LIGHTING, DRAINAGE, SEEDING AND MULCHING.

AIRPORT SECURITY NOTE

AIRPORT SECURITY WILL BE MAINTAINED AT ALL TIMES. THE CONTRACTOR WILL CLOSE AND LOCK THE EXISTING GATE IN THE HAUL ROUTE AT THE END OF EACH WORKING DAY.

UTILITY NOTE

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

HEIGHT OF CONSTRUCTION EQUIPMENT

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

HAUL ROUTE AND VEHICLE PARKING

THE CONTRACTOR WILL USE THE DESIGNATED HAUL ROUTE AND PARKING AREA AS SHOWN ON THIS SHEET. THE PROPOSED PARKING AREA WILL BE 400' X 100'. THE CONTRACTOR WILL BE REQUIRED TO MAINTAIN THE PROPOSED HAUL ROUTE AND PARKING AREA THROUGHOUT THE COURSE OF THE PROJECT. ANY AREAS DAMAGED OUTSIDE OF THESE AREAS WILL BE REPAIRED BY THE CONTRACTOR AND AT THE CONTRACTOR'S OWN EXPENSE. AT THE CONCLUSION OF THE PROJECT THE CONTRACTOR WILL GRADE, FERTILIZE, SEED AND MULCH THE HAUL ROUTE AND PARKING AREA AS NEEDED TO RESTORE IT TO ITS ORIGINAL STATE. RESTORATION OF THE HAUL ROUTE AND PARKING AREA WILL BE CONSIDERED INCIDENTAL TO THE PROJECT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

CONTRACTOR RESPONSIBILITIES

THE CONTRACTOR'S EQUIPMENT PARKING AND STORAGE AREA WILL BE AS SHOWN ON THIS SHEET. THE CONTRACTOR'S EMPLOYEES WILL PARK THEIR VEHICLES IN THIS AREA. ONLY CONTRACTOR VEHICLES WILL BE ALLOWED OUTSIDE THIS AREA.

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

ALL WORK PERFORMED SHALL BE DONE IN A ORDERLY AND EFFECTIVE MANNER TO MINIMIZE RUNWAY CLOSURE.

NO TRENCHES OR HOLES WILL REMAIN OPEN OVERNIGHT.

NO RUNWAY SHALL BE CLOSED OVERNIGHT.

BARRICADES AND TRAFFIC CONES

IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO PLACE AND MAINTAIN BARRICADES AND TRAFFIC CONES AS DIRECTED BY THE AIRPORT MANAGER. THE BARRICADES WILL BE EQUIPPED WITH RED FLASHING OR RED STEADY-BURN LIGHTS AND 20" SQUARE ORANGE FLAGS. THE BARRICADES, THEIR MAINTENANCE, PLACEMENT AND REMOVAL WILL BE CONSIDERED AS AN INCIDENTAL ITEM TO THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

TEXAS EASTERN TRANSMISSION PIPELINE

TEXAS EASTERN WILL BE INSTALLING STEEL CASING AROUND THEIR TRANSMISSION PIPELINE THAT RUNS UNDER THE PROPOSED CONSTRUCTION SITE. THE CONTRACTOR WILL BE REQUIRED TO CORPORATE WITH TEXAS EASTERN PIPELINE CORP. DURING THIS WORK. HANSON PROFESSIONAL SERVICES WILL ASSIST WITH THIS COORDINATION EFFORT. THE COORDINATION, IMPACT TO THE PROJECT AND SCHEDULING OF THE STEEL CASING WILL BE CONSIDERED AS AN INCIDENTAL ITEM TO THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

EXISTING DRAIN LINE RELOCATION

THE EXISTING DRAIN LINE SHOWN ON THIS SHEET IS TO BE RELOCATED DURING THIS PROJECT. THE DRAIN LINE RELOCATION IS REQUIRED TO BE COMPLETED AT THE START OF CONSTRUCTION. IT WILL ALSO BE NECESSARY FOR THE CONTRACTOR TO PLACE A TEMPORARY PIPE IN THE RELOCATED DRAIN LINE TO BE ABLE TO GAIN ACCESS TO THE PROPOSED CONSTRUCTION SITE. UPON THE COMPLETION OF THIS PROJECT THE CONTRACTOR WILL BE REQUIRED TO REMOVE THE TEMPORARY PIPE, RESHAPE AND SEED THE DRAIN LINE IN THE TEMPORARY PIPE LOCATION. THE TEMPORARY PIPE, MAINTENANCE OF THE PIPE, REMOVAL, SHAPING AND SEEDING WILL BE AN INCIDENTAL ITEM TO THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

BENCHMARK DATA

NO.	DESCRIPTION	ELEV.
1	IRON PIN	382.12
2	CHISELED SQUARE ON THE NW CORNER OF CONCRETE HEADWALL STA. 17+00 120' RT	381.41

MATERIAL CERTIFICATION

COMPLETED WORK CANNOT BE PLACED ON A CONSTRUCTION REPORT UNTIL ALL MATERIAL CERTIFICATIONS FOR THAT PAY ITEM HAVE BEEN RECEIVED, REVIEWED AND ACCEPTED BY THE RESIDENT ENGINEER.

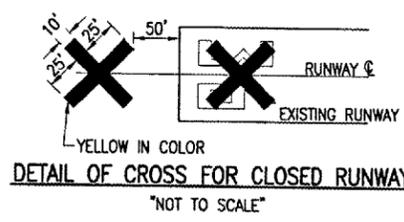
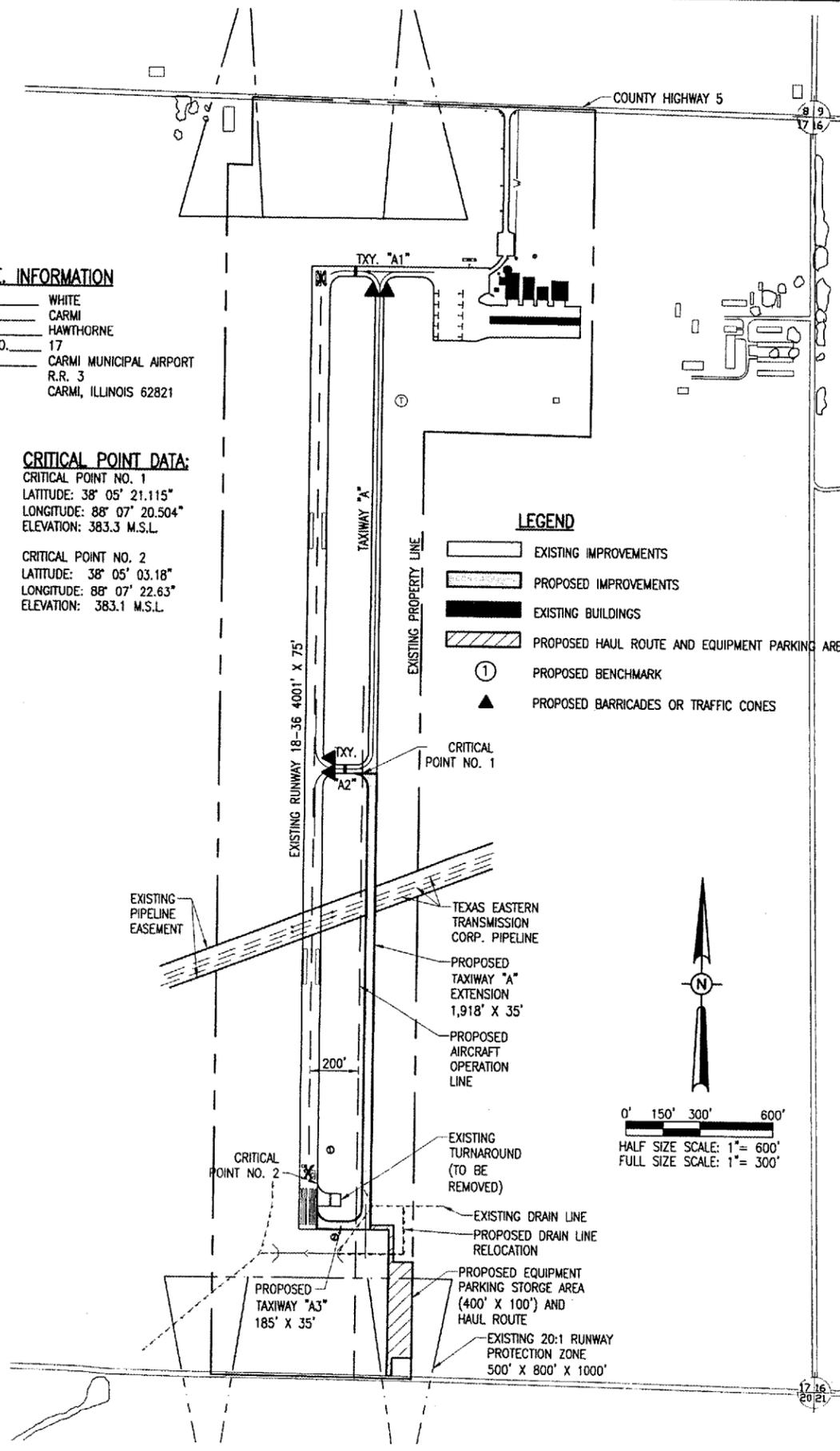
J.U.L.I.E. INFORMATION

COUNTY _____ WHITE
 CITY _____ CARM
 TOWNSHIP _____ HAWTHORNE
 SECTION NO. _____ 17
 ADDRESS _____ CARM MUNICIPAL AIRPORT
 R.R. 3
 CARM, ILLINOIS 62821

CRITICAL POINT DATA:

CRITICAL POINT NO. 1
 LATITUDE: 38° 05' 21.115"
 LONGITUDE: 88° 07' 20.504"
 ELEVATION: 383.3 M.S.L.

CRITICAL POINT NO. 2
 LATITUDE: 38° 05' 03.18"
 LONGITUDE: 88° 07' 22.63"
 ELEVATION: 383.1 M.S.L.



NOTE:

COST OF CONSTRUCTING, PLACING, MAINTAINING AND REMOVING CROSSES WILL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED. THE CROSSES WILL BE YELLOW IN COLOR AND SHALL BE MADE OF A SUITABLE MATERIAL AS APPROVED BY THE AIRPORT MANAGER. THE CROSSES WILL BE PLACED OVER THE NUMERALS AND SECURED IN A MANNER APPROVED BY THE MANAGER. 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. NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

PROPOSED SAFETY PLAN

GENERAL - THE CARM MUNICIPAL AIRPORT IS COMPRISED OF ONE RUNWAY. THE PROPOSED CONSTRUCTION WILL REQUIRE RUNWAY END 36 TO BE TEMPORARILY DISPLACED AT THE START OF CONSTRUCTION ACTIVITIES. ANY TIME THE CONTRACTOR IS WORKING WITHIN 200' OF THE RUNWAY CENTERLINE THE RUNWAY WILL BE CLOSED. THE RUNWAY WILL BE CLOSED ONLY DURING THE CONSTRUCTION DAY. AT THE END OF EACH CONSTRUCTION DAY THE CONTRACTOR WILL SMOOTH GRADE ALL AREAS WITHIN THE SAFETY AREA TO THE SATISFACTION OF THE RESIDENT ENGINEER AND RE-OPEN THE RUNWAY. ALL WORK INCLUDED IN OPENING AND CLOSING THE RUNWAY WILL BE CONSIDERED INCIDENTAL TO THE PROJECT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

IDENTIFICATION - WHEN THE CONTRACTORS VEHICLES AND EQUIPMENT ARE ON THE AIRPORT THEY SHALL BE PROPERLY MARKED WITH THREE (3') FOOT SQUARE CHECKERED FLAGS (INTERNATIONAL ORANGE AND WHITE). THE CONTRACTOR WILL ALSO PROVIDE WORKERS WITH SOME TYPE OF TAG OR GARMENT TO IDENTIFY THE PERSON AS BEING PART OF THE CONSTRUCTION CREW.

RADIO CONTROL - THE CONTRACTOR WILL BE REQUIRED TO BE IN TWO-WAY RADIO CONTACT (122.80 MHz.) WITH THE AIRPORT UNICOM. THIS WILL KEEP THE CONTRACTOR IN CONSTANT CONTACT WITH THE CARM MUNICIPAL AIRPORT AND ENABLE THE AIRPORT TO IMMEDIATELY CONTACT THE CONTRACTOR IN CASE OF AN AERONAUTIC EMERGENCY THAT WOULD REQUIRE ACTION BY THE CONTRACTOR AND/OR HIS PERSONNEL.

150-ENGINEER'S FIELD OFFICE NOTES

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

THE LOCATION OF THE PROPOSED ENGINEER'S FIELD OFFICE WILL BE DETERMINED AT THE PRE-CONSTRUCTION MEETING.

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

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

EROSION CONTROL

THIS PROJECT WILL DISTURB MORE THAN 1 ACRE OF LAND, THEREFORE A N.P.D.E.S. PERMIT WILL BE REQUIRED.

AIRCRAFT OPERATION LINE

THE CONTRACTOR WILL LOCATE THIS LINE AT THE START OF CONSTRUCTION AND WILL PLACE FLAGGED LATHE EVERY 150' ALONG IT. THIS LINE WILL BE THE LIMITS THAT ALL CONTRACTOR PERSONNEL MAY VENTURE WHEN A RUNWAY IS NOT CLOSED. THE CONTRACTOR WILL MAINTAIN THE LATHE LINE.

THE LOCATION, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ON THE PLANS IS NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES OF HIS OPERATIONAL PLANS AND SHALL OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES DETAILED INFORMATION AND ASSISTANCE RELATIVE TO THE LOCATION OF THEIR FACILITIES AND THE WORKING SCHEDULE OF THE COMPANIES FOR REMOVAL OR ADJUSTMENT WHERE REQUIRED. IN THE EVENT AN UNEXPECTED UTILITY INTERFERENCE IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY COMPANY OF JURISDICTION. THE ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY SUCH MAINS AND SERVICES SHALL BE RESTORED TO SERVICE AT ONCE AND PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT.

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

CERTIFIED PAYROLLS

THE RESIDENT ENGINEER CANNOT FORWARD CONSTRUCTION REPORTS TO THE ILLINOIS DIVISION OF AERONAUTICS FOR PROCESSING UNTIL ALL CERTIFIED PAYROLLS FOR THE PERIOD HAVE BEEN RECEIVED.

CR003

DATE	REVISION	BY
05/08/07	REVISED AS PER IDA REVIEW	CAH

CARM MUNICIPAL AIRPORT
 CARM, ILLINOIS
 A.I.P. PROJ.: 3-17-0109-B7
 I.L. PROJ.: CUL-3683

REVISED	CAH	03/27/07
DRAWN	CCC <td>11/14/06</td>	11/14/06
LAYOUT	SEP <td>11/14/06</td>	11/14/06

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

EXTEND PARTIAL
 PARALLEL TAXIWAY
 PROPOSED SAFETY PLAN

MAY 08, 2007 11:05 AM CAH
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DATE	REVISION	BY

CARMi MUNICIPAL AIRPORT
CARMi, ILLINOIS

IL PROJ.: CUL-3683 A.I.P. PROJ.: 3-17-0109-B7

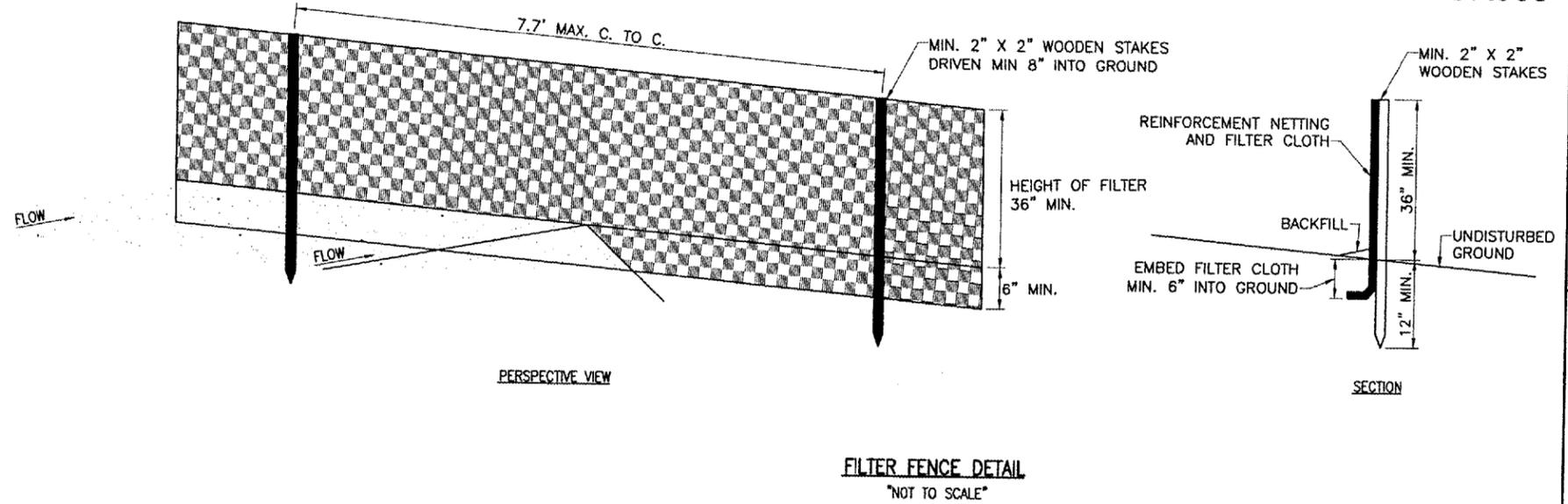
HEL Project No. 801-0713XD_0800	SEP	11/15/06
Program R-181SWP.DWG	CCC	11/15/06
Scale 1" = 200'	CAH	03/27/07
Date 11/15/06		

HANSON

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Springfield, Illinois 62703-2886
Offices Nationwide

EXTEND PARTIAL
PARALLEL TAXIWAY

PROPOSED STORM WATER
POLLUTION PREVENTION
PLAN



EROSION CONTROL NOTES

ALL PROPOSED EROSION CONTROL MEASURES SHALL BE COMPLETED AS DETAILED ON THIS EROSION CONTROL PLAN AND IN ACCORDANCE WITH THE SPECIFICATIONS.

EROSION CONTROL MEASURES ARE GOVERNED BY THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY'S STANDARDS AND SPECIFICATIONS FOR SOIL EROSIONS AND SPECIFICATION FOR SOIL EROSIONS AND SEDIMENT CONTROL.

FILTER FENCE FOR HEADWALL PROTECTION AS SHOWN ON THIS SHEET.

INSPECTION OF THE HEADWALL PROTECTION SHALL BE FREQUENT AND REPAIR/REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.

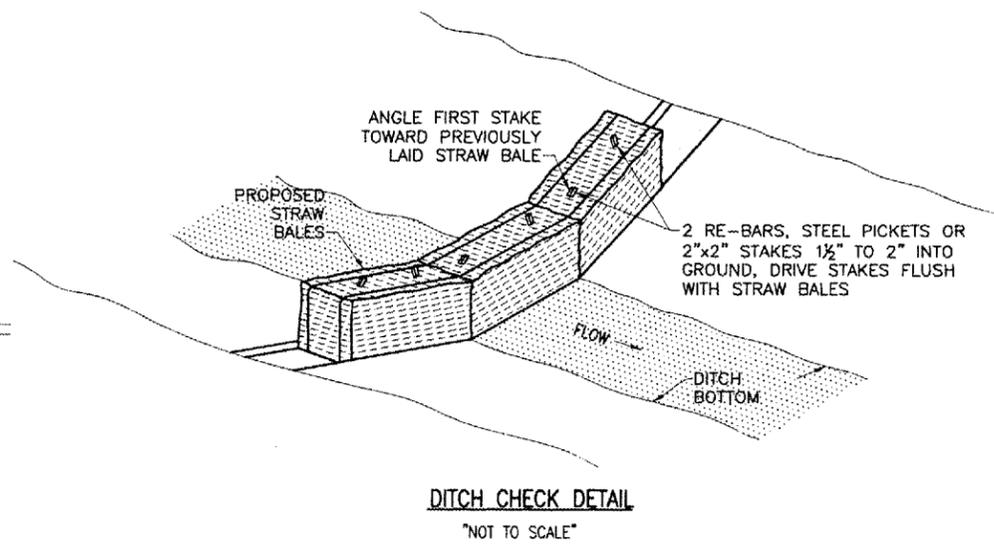
EROSION CONTROL FENCE SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORM WATER DRAINAGE.

COST OF REMOVAL AND REPLACEMENT SHALL BE INCLUDED IN THE UNIT PRICE FOR ITEM AR156510 SILT FENCE.

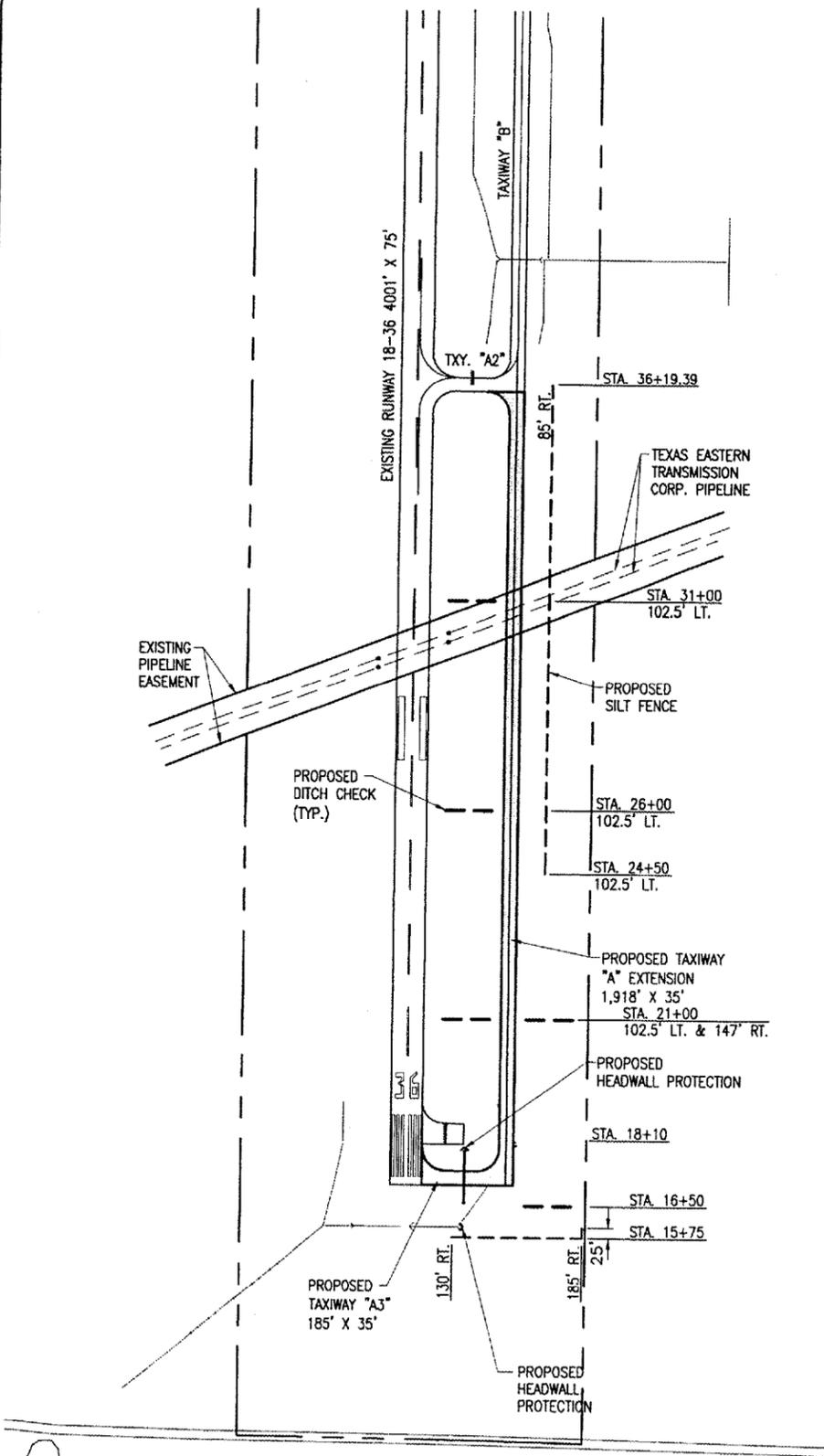
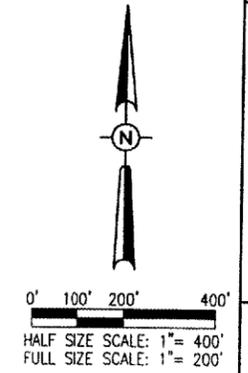
HEADWALL PROTECTION IS TO INCLUDE ALL INCIDENTALS NECESSARY TO CONSTRUCT THESE ITEMS AND WILL BE PAID FOR UNDER ITEM: AR156521 HEADWALL PROTECTION.

EROSION CONTROL QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
AR156510	SILT FENCE	L.F.	1,507
AR156511	DITCH CHECK	EACH	5
AR156521	HEADWALL PROTECTION	EACH	2



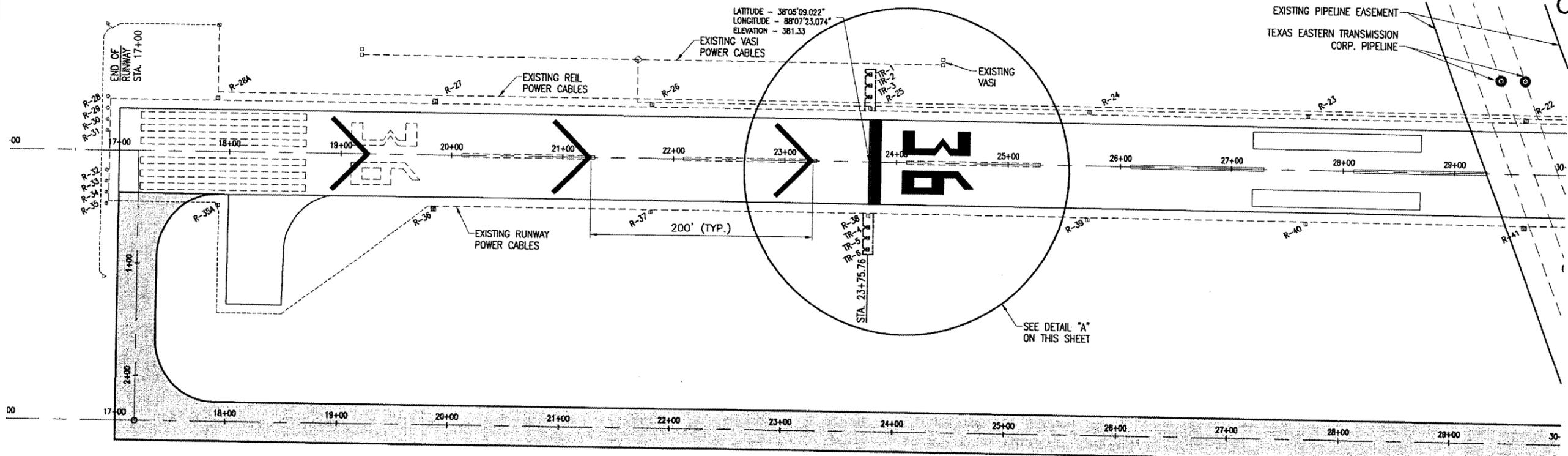
- LEGEND**
- EXISTING IMPROVEMENTS
 - PROPOSED IMPROVEMENTS
 - EXISTING DRAINAGE PIPE
 - EXISTING HEADWALL
 - EXISTING DRAINAGE DITCH
 - EXISTING HEADWALL OR END SECTIONS W/PROTECTION
 - PROPOSED DITCH CHECK
 - PROPOSED SILT FENCE



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CR003

LATITUDE - 38°05'09.022"
 LONGITUDE - 88°07'23.074"
 ELEVATION - 381.33



DATE	REVISION	BY

CARMi MUNICIPAL AIRPORT
 CARMi, ILLINOIS

IL PROJ.: CUL-3663 A.I.P. PROJ.: 3-17-0109-B7

LAYOUT	SEP
	3/20/07
DRAWN	BAK
	3/20/07
REVIEWED	CAH
	03/27/07

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EXTEND PARTIAL
 PARALLEL TAXIWAY

PROPOSED
 TEMPORARY MARKING
 AND LIGHTING PLAN

5

DESCRIPTION	UNIT AREA	NO. REQUIRED	TOTAL AREA
RUNWAY THRESHOLD STRIPES	862.5	6	5,175
RUNWAY CENTERLINE STRIPES	360	3	1,080
RUNWAY NUMERAL 3	634	1	634
RUNWAY NUMERAL 6	712	1	712
*HOLDLINE TAXIWAY "A2"	280	1	280
*HOLDLINE TAXIWAY "A1"	320	1	320
*CENTERLINE TAXIWAY "A2"	12	1	12
*CENTERLINE TAXIWAY "A1"	22	1	22
TOTAL MARKING REMOVAL			8,235

* SEE PROPOSED MARKING SHEETS

LEGEND

- PROPOSED PAVEMENT
- EXISTING PAVEMENT
- EXISTING LIGHTING CABLES
- EXISTING BASE MOUNTED RUNWAY LIGHT
- EXISTING STAKE MOUNTED RUNWAY LIGHT
- EXISTING ELECTRICAL SPLICE CAN
- EXISTING VASI (TO BE DISCONNECTED)
- EXISTING THRESHOLD LIGHTS (TO BE TEMPORARILY RELOCATED)
- EXISTING REILS (TO BE DISCONNECTED)
- EXISTING MARKING (TO REMAIN IN PLACE)
- EXISTING MARKING (TO BE REMOVED)
- PROPOSED TEMPORARY MARKING
- PROPOSED ELECTRICAL CABLES
- PROPOSED TEMPORARILY RELOCATED THRESHOLD LIGHTS

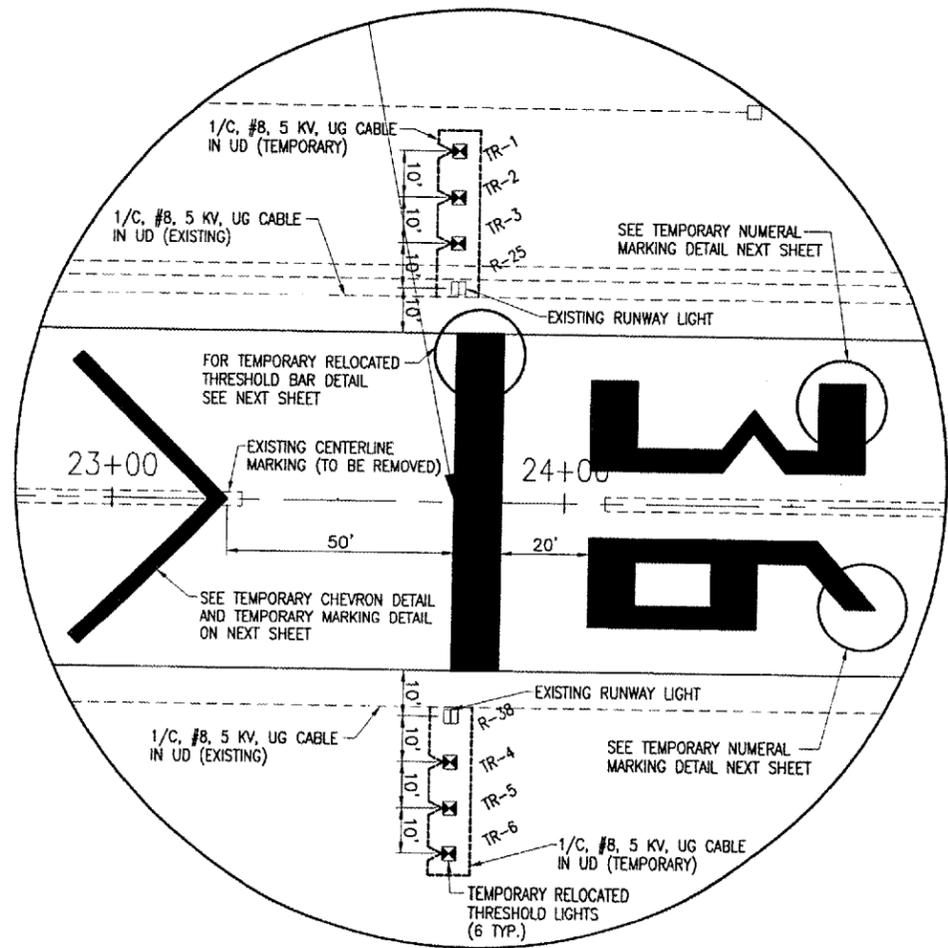
MARKING REMOVAL NOTES

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

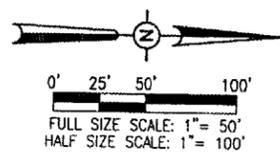
ALL AREAS TO BE REMOVED ARE CALCULATED AREAS. ANY ADDITIONAL AREAS, DUE TO OVER SPRAY, SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

THE TWO HOLDLINES ON TAXIWAYS "A1" AND "A2" WILL NOT BE REMOVED UNTIL THE PROPOSED HOLDLINES AT THEIR PROPOSED LOCATIONS ARE INSTALLED. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR THE SECOND MOBILIZATION TO REMOVE THE HOLDLINE MARKING.

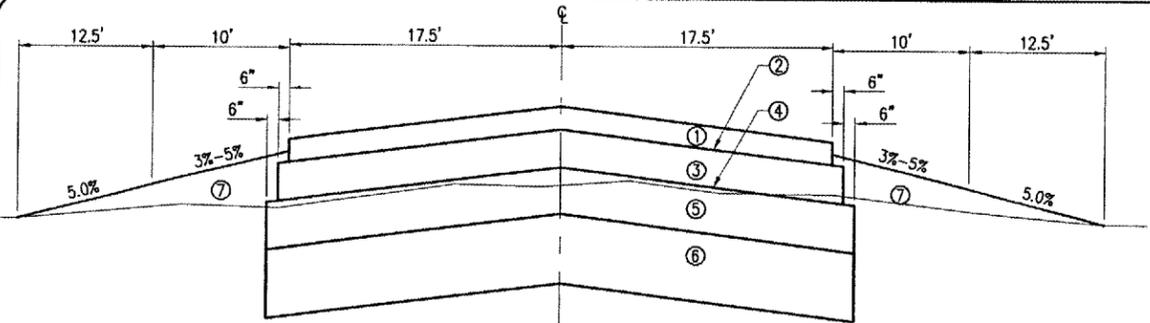
THE PROPOSED MARKING REMOVAL SHALL BE PAID FOR UNDER ITEM: AR620900 "PAVEMENT MARKING REMOVAL" - PER S.F.



DETAIL "A"
 FULL SCALE: 1" = 20'
 HALF SCALE: 1" = 40'



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- LEGEND**
- ① PROPOSED AR401: 2" BITUMINOUS SURFACE COURSE
 - ② PROPOSED AR603: BITUMINOUS TACK COAT BETWEEN BITUMINOUS LIFTS (2 LIFTS=1 SURFACE/1 BASE)
 - ③ PROPOSED AR201: 3" BITUMINOUS BASE COURSE
 - ④ PROPOSED AR602: BITUMINOUS PRIME COAT
 - ⑤ PROPOSED AR209: CRUSHED AGGREGATE BASE - 6"
 - ⑥ PROPOSED AR208: OVERSIZED AGGREGATE BASE - 8"
 - ⑦ EXISTING GROUND

COORDINATE DATA - TAXIWAY "A" & "A3" BASELINES

POINT ID.	BASELINE	STATION	OFFSET	EASTING (X)	NORTHING (Y)
A	RWY 18-36	17+17.50	0	1044764.8863	516149.9396
B	TXY "A3"	0+37.50	0	1044802.5056	516149.8574
C	TXY "A"	17+00.00	0	1045004.8474	516131.9151
D	TXY "A"	17+17.50	0	1045004.8857	516149.4150

COORDINATE DATA - TAXIWAY "A" & "A3"

POINT No.	BASELINE	STATION	OFFSET	EASTING (X)	NORTHING (Y)
1	TXY "A3"	0+37.50	17.50' RT.	1044802.3479	516132.3577
2	TXY "A3"	0+38.00	67.50' LT.	1044803.1140	516217.3562
3	TXY "A3"	0+88.00	17.50' LT.	1044853.0046	516167.2470
4	TXY "A3"	0+88.00	67.50' LT.	1044853.1139	516217.2469
5	TXY "A3"	1+72.50	17.50' LT.	1044937.4242	516167.0625
6	TXY "A3"	1+72.50	67.50' LT.	1044937.5335	516217.0624
7	TXY "A"	17+00.00	17.50' RT.	1045022.3474	516131.8768
8	TXY "A"	17+85.00	17.50' LT.	1044987.5334	516216.9535

REMOVE BITUMINOUS PAVEMENT
 THE AREA(S) DESIGNATED AS [Hatched Pattern] ON THIS SHEET WILL HAVE THE EXISTING PAVEMENT REMOVED (FULL DEPTH) TO A SUITABLE SUBGRADE. ALL REMOVED MATERIAL WILL BE DISPOSED OF OFF THE AIRPORT SITE.

WHERE THE PROPOSED REMOVAL AREA ABUTTS THE EXISTING PAVEMENT, THE PAVEMENT WILL BE SAWS AS SHOWN ON THIS SHEET. THE SAWING WILL BE CONSIDERED AS AN INCIDENTAL ITEM TO THE PROPOSED PAVEMENT REMOVAL AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

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

THIS ITEM OF WORK SHALL BE PAID FOR UNDER ITEM:
 AR401900 "REMOVE BITUMINOUS PAVEMENT" - PER S.Y.

AR201003 BITUMINOUS BASE COURSE - METHOD 1, SUPERPAVE
 THE BITUMINOUS BASE COURSE (201) SHALL BE PLACED IN ACCORDANCE WITH ITEM AR201003 "BITUMINOUS BASE COURSE-METHOD 1, SUPERPAVE" AS STATED ON PAGE 209 OF THE SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS, ADOPTED JULY 1, 2004.

THIS ITEM OF WORK SHALL CONSIST OF CONSTRUCTING ONE LIFT OF BITUMINOUS BASE COURSE (3 INCH DEPTH) ON THE PROPOSED CRUSHED AGGREGATE BASE COURSE FOR THE PROPOSED TAXIWAY EXTENSION.

ALL BITUMINOUS PAVEMENT WILL BE PAVED IN ACCORDANCE WITH PAGE 209 OF THE RECURRING SPECIAL PROVISIONS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE QUALITY CONTROL IN THE PRODUCTION AND CONSTRUCTION OF THE BITUMINOUS BASE COURSE.

THE PROPOSED BITUMINOUS BASE COURSE WILL BE DESIGNED TO A SUPERPAVE DESIGN OF (LESS) THAN 60,000 POUNDS FOR RUNWAY/TAXIWAY PAVEMENTS.

201-4.9 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.

201-4.11 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.

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 269 OF THE SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS, ADOPTED JULY 1, 2004.

THIS ITEM OF WORK SHALL CONSIST OF CONSTRUCTING THE FIRST LIFT OF BITUMINOUS LEVELING COURSE (2 INCH DEPTH) ON A BITUMINOUS BASE COURSE.

ALL BITUMINOUS PAVEMENT WILL BE PAVED IN ACCORDANCE WITH PAGE 269 OF THE RECURRING SPECIAL PROVISIONS.

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

THE PROPOSED BITUMINOUS SURFACE COURSE WILL BE DESIGNED TO A SUPERPAVE DESIGN OF (LESS) THAN 60,000 POUNDS FOR RUNWAY/TAXIWAY PAVEMENTS.

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.

AR152410-UNCLASSIFIED EXCAVATION NOTES:

THE PROPOSED UNCLASSIFIED EXCAVATION SHALL BE PLACED IN ACCORDANCE WITH ITEM 152 "EXCAVATION AND EMBANKMENT" AS STATED ON PAGE 25 OF THE SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS, ADOPTED JULY 1, 2004.

THE EARTH SUBGRADE WILL BE FIRST ROUGH CUT TO THE SPECIFIED ELEVATIONS, THE ELEVATIONS SHOWN ON THE STAKING PLAN ARE FOR FINISHED PAVEMENT. SUBGRADE ELEVATIONS WILL BE THE GRADE SHOWN MINUS THE PAVEMENT THICKNESS (INCLUDING BASE).

MATERIAL TO BE USED FOR SHOULDERING WILL BE STORED OUTSIDE OF THE PROPOSED PAVEMENT AREA AND WITHIN THE GRADING LIMITS.

THE MATERIAL TO BE USED FOR THE SHOULDERING WILL BE TOPSOIL OBTAINED FROM THE ON SITE UNCLASSIFIED EXCAVATION.

THE EXCAVATED AREAS WILL BE COMPACTED IN ACCORDANCE WITH PROCEDURES FOR AIRCRAFT WEIGHING (MORE)(LESS) THAN 60,000 POUNDS.

THE PROPOSED SHOULDER MATERIAL WILL ONLY REQUIRE "LIGHT COMPACTION" TO THE SATISFACTION OF THE RESIDENT ENGINEER.

ALL EARTHWORK WILL BE CLASSIFIED AS "UNCLASSIFIED EXCAVATION".

THE PROPOSED UNCLASSIFIED EXCAVATION WILL BE PAID FOR UNDER ITEM:
 AR152410 UNCLASSIFIED EXCAVATION - PER C.Y.

156-SEPARATION FABRIC NOTES:

THE SEPARATION FABRIC (156) SHALL BE PLACED IN ACCORDANCE WITH ITEM AR156 "SEPARATION FABRIC" AS STATED ON PAGE 180 OF THE SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS, ADOPTED JULY 1, 2004.

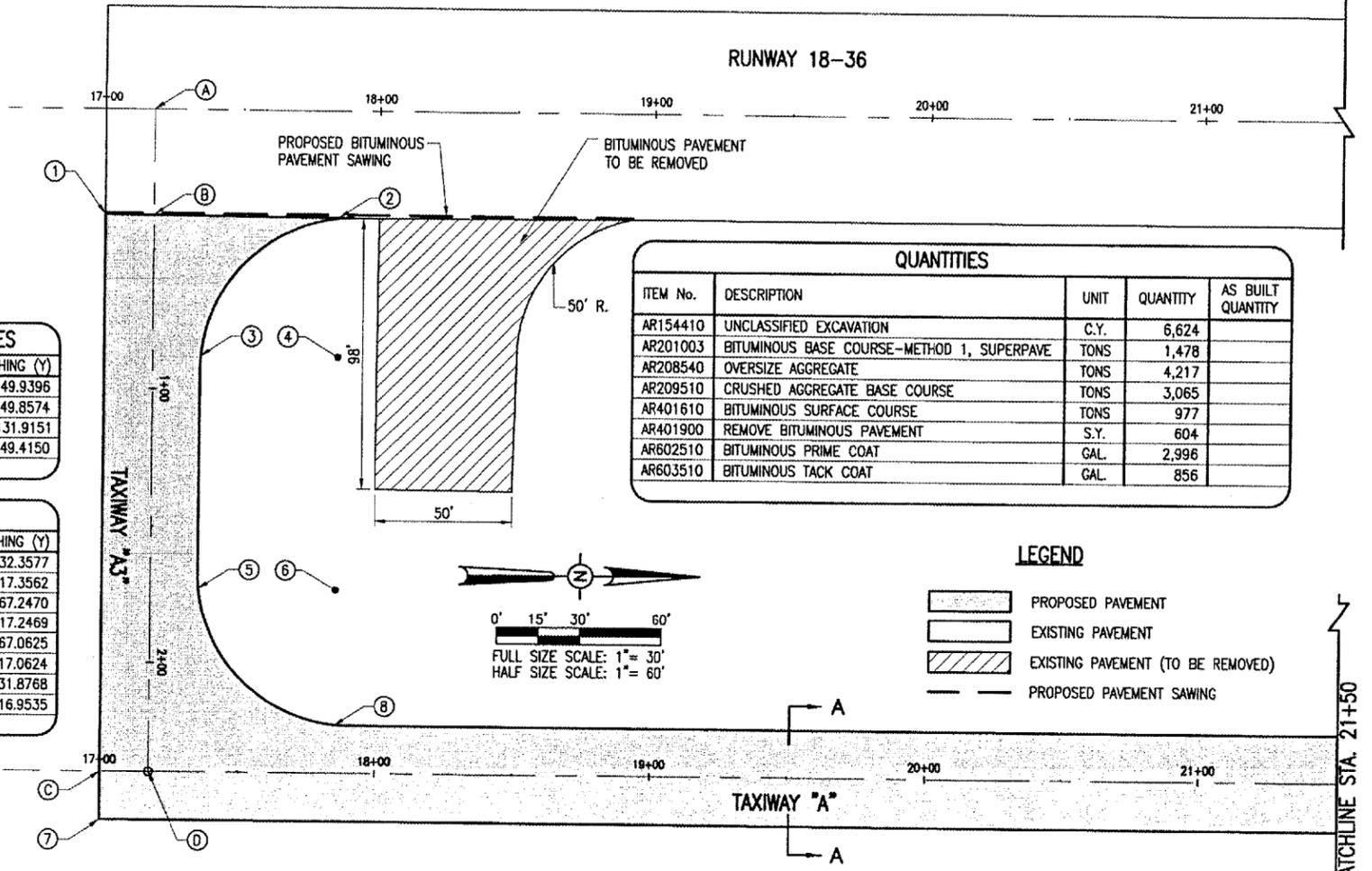
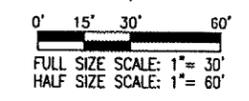
THE PROPOSED SEPARATION FABRIC SHALL BE PLACED ON THE SUBGRADE PRIOR TO THE PLACEMENT OF THE PROPOSED OVERSIZE AGGREGATE. THE SEPARATION FABRIC SHALL BE PLACED TO THE WIDTHS SHOWN ON THE PROPOSED PAVEMENT TYPICAL SECTION.

THE PROPOSED SEPARATION FABRIC WILL BE PAID FOR UNDER ITEM:
 AR156513 SEPARATION FABRIC _____ PER SQ. YDS.

QUANTITIES

ITEM No.	DESCRIPTION	UNIT	QUANTITY	AS BUILT QUANTITY
AR154410	UNCLASSIFIED EXCAVATION	C.Y.	6,624	
AR201003	BITUMINOUS BASE COURSE-METHOD 1, SUPERPAVE	TONS	1,478	
AR208540	OVERSIZE AGGREGATE	TONS	4,217	
AR209510	CRUSHED AGGREGATE BASE COURSE	TONS	3,065	
AR401610	BITUMINOUS SURFACE COURSE	TONS	977	
AR401900	REMOVE BITUMINOUS PAVEMENT	S.Y.	604	
AR602510	BITUMINOUS PRIME COAT	GAL.	2,996	
AR603510	BITUMINOUS TACK COAT	GAL.	856	

- LEGEND**
- [Dotted Pattern] PROPOSED PAVEMENT
 - [Solid Grey] EXISTING PAVEMENT
 - [Hatched Pattern] EXISTING PAVEMENT (TO BE REMOVED)
 - [Dashed Line] PROPOSED PAVEMENT SAWING



DATE	REVISION	BY							
CARMI MUNICIPAL AIRPORT CARMI, ILLINOIS									
A.I.P. PROJ.: 3-17-0109-87									
IL PROJ.: CUL-3683									
LAYOUT	SEP	11/15/06							
DRAWN	CCC	11/15/06							
REVIEWED	CAH	03/27/07							
HANSON Hanson Professional Services Inc. 1525 South Sixth Street Springfield, Illinois 62703-2886 Office: Nationwide									
EXTEND PARTIAL PARALLEL TAXIWAY	PROPOSED CONSTRUCTION PLAN STA. 17+00 TO STA. 21+50								
7									

11/27/07 7:35 AM BAK
 C:\AIRPORTS\CARMI\801-071\TAXI\AIRPORT_SHEETS\R-121CON.DWG - STA. 18+50 TO STA. 21+50

CR003

MATCHLINE STA. 21+50

MATCHLINE STA. 30+00



TAXIWAY "A"

AR401655 BUTT JOINT CONSTRUCTION NOTES

THE PROPOSED BUTT JOINTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ITEM AR401655 "BUTT JOINT CONSTRUCTION" AS STATED ON PAGE 295 OF THE SUPPLEMENTAL SPECIFICATION AND RECURRING SPECIAL PROVISIONS, ADOPTED JULY 1, 2004.

THIS ITEM SHALL CONSIST 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.

THE PAVEMENT SURFACE WILL THEN BE MILLED TO A DEPTH OF 0.17 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 PAVEMENT MILLING WILL BE PAID FOR UNDER ITEM: AR401655 "BUTT JOINT CONSTRUCTION" 175 S.Y.

AR603-BITUMINOUS TACK COAT NOTES:

THE BITUMINOUS TACK COAT (603) SHALL BE PLACED IN ACCORDANCE WITH ITEM AR603 "BITUMINOUS TACK COAT" AS STATED ON PAGE 62 OF THE SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS, ADOPTED JULY 1, 2004.

THE PROPOSED BITUMINOUS TACK COAT SHALL BE PLACED ON THE PROPOSED BITUMINOUS PAVEMENT PRIOR TO THE PLACEMENT OF THE NEXT LIFT OF PROPOSED BITUMINOUS SURFACE COURSE. THE PROPOSED BITUMINOUS PAVEMENT SHALL HAVE A TACK COAT OF BITUMINOUS MATERIAL APPLIED IN ACCORDANCE WITH THE REQUIREMENTS OF THE SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS.

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

COORDINATE DATA - TAXIWAY "A" & "A3" BASELINES

POINT ID.	BASELINE	STATION	OFFSET	EASTING (X)	NORTHING (Y)
E	TXY "A"	36+01.22	0	1045009.0053	518033.0746
F	TXY "A"	36+19.32	0	1045009.0436	518050.5805

COORDINATE DATA - TAXIWAY "A" & "A3"

POINT No.	BASELINE	STATION	OFFSET	EASTING (X)	NORTHING (Y)
9	TXY "A"	35+51.10	67.50' LT.	1044941.3787	517983.1550
10	TXY "A"	35+51.10	17.50' LT.	1044991.3786	517983.0457
11	TXY "A"	36+01.10	67.50' LT.	1044941.5054	518033.1549
12	TXY "A"	36+01.08	17.50' RT.	1045026.5053	518033.0538

AR602-BITUMINOUS PRIME COAT NOTES:

THE BITUMINOUS PRIME COAT (602) SHALL BE PLACED IN ACCORDANCE WITH ITEM AR602 "BITUMINOUS PRIME COAT" AS STATED ON PAGE 58 OF THE SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS, ADOPTED JULY 1, 2004.

THE PROPOSED BITUMINOUS PRIME COAT SHALL BE PLACED ON THE PROPOSED AGGREGATE BASE COURSE PRIOR TO THE PLACEMENT OF THE FIRST LIFT OF PROPOSED BITUMINOUS BASE COURSE. THE PROPOSED AGGREGATE BASE COURSE SHALL HAVE A PRIME COAT OF BITUMINOUS MATERIAL APPLIED IN ACCORDANCE WITH THE REQUIREMENTS OF THE SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS.

THE PROPOSED BITUMINOUS PRIME COAT WILL BE PAID FOR UNDER ITEM: AR602510 BITUMINOUS PRIME COAT - PER GAL.

PAVEMENT SAWING NOTES

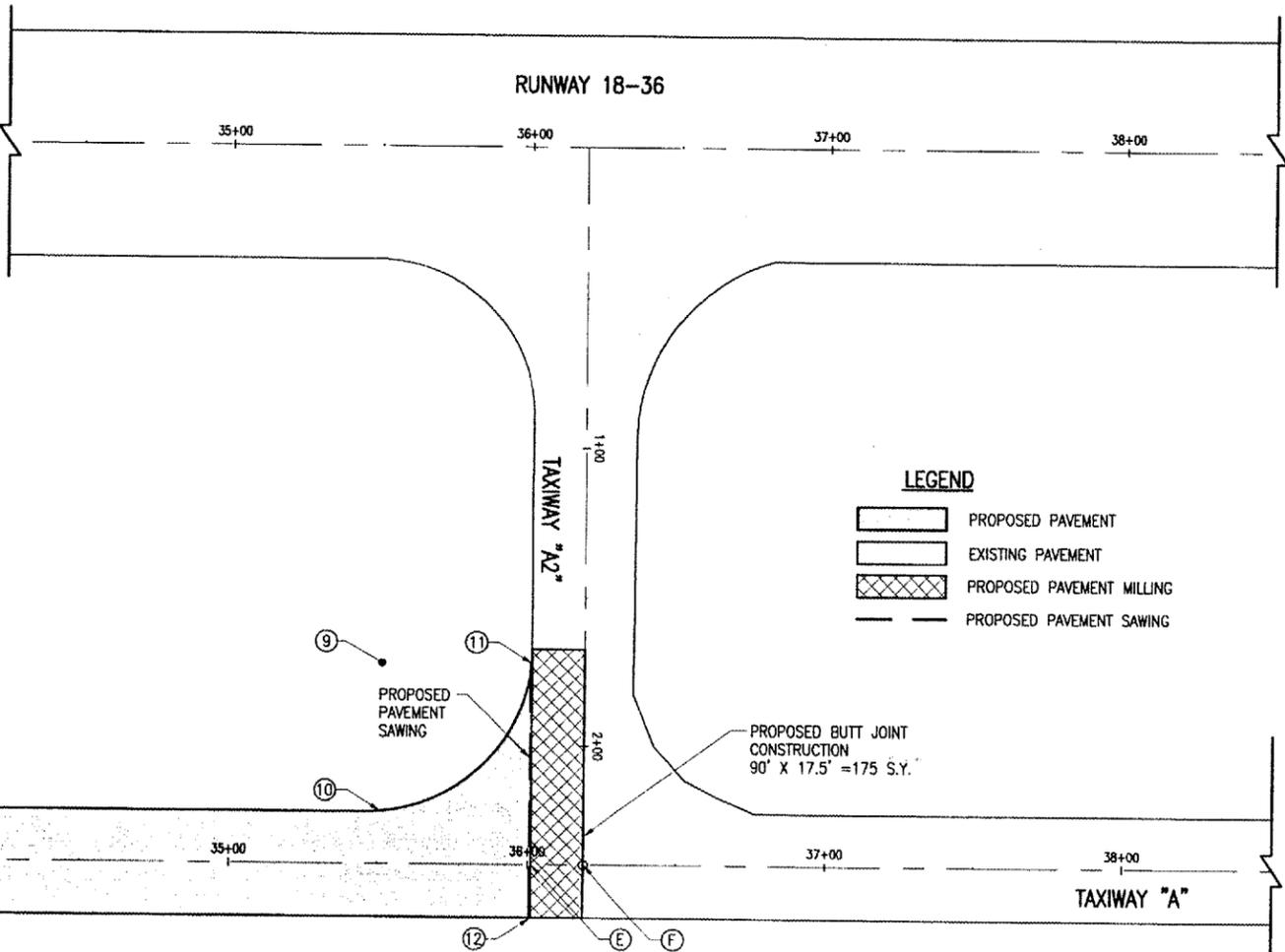
THE EDGE OF THE EXISTING PAVEMENT WILL BE SAWED FULL DEPTH.

THE PROPOSED SAWING WILL REMOVE THE ROLLED DOWN EDGE AND PROVIDE A STRAIGHT PAVEMENT EDGE TO BUTT AGAINST.

THE RESIDENT ENGINEER WILL MARK THE PROPOSED SAW LINE IN THE FIELD.

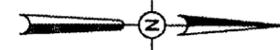
ANY BITUMINOUS PAVEMENT CUT FROM THE SAWING OPERATIONS WILL BE COLLECTED AND DISPOSED OF OFF THE AIRPORT SITE.

THE SAWING AND DISPOSAL OF ANY WASTE MATERIAL WILL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

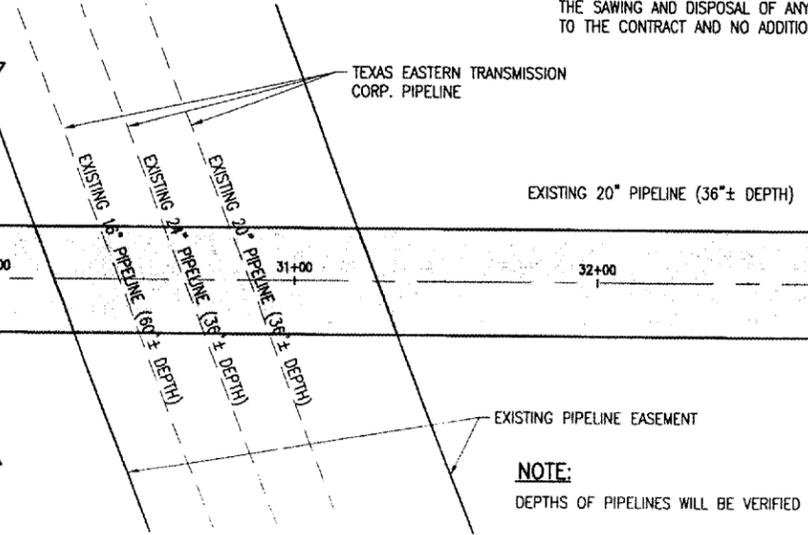


LEGEND

- PROPOSED PAVEMENT
- EXISTING PAVEMENT
- PROPOSED PAVEMENT MILLING
- PROPOSED PAVEMENT SAWING



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



NOTE:
DEPTHS OF PIPELINES WILL BE VERIFIED PRIOR TO ANY EXCAVATION.

DATE	REVISION	BY

CARMIC MUNICIPAL AIRPORT
CARMIC, ILLINOIS

A.I.P. PROJ.: 3-17-0109-B7

IL PROJ.: CUL-3683

HEL PROJECT NO. 801-07TXD.0800	DATE 11/15/06
DESIGNER R-121CON.DWG	SCALE
DATE 11/15/06	SEP 11/15/06
	CCC 11/15/06
	CAH 03/27/07
LAYOUT	SEP 11/15/06
DRAWN	CCC 11/15/06
REVIEWED	CAH 03/27/07

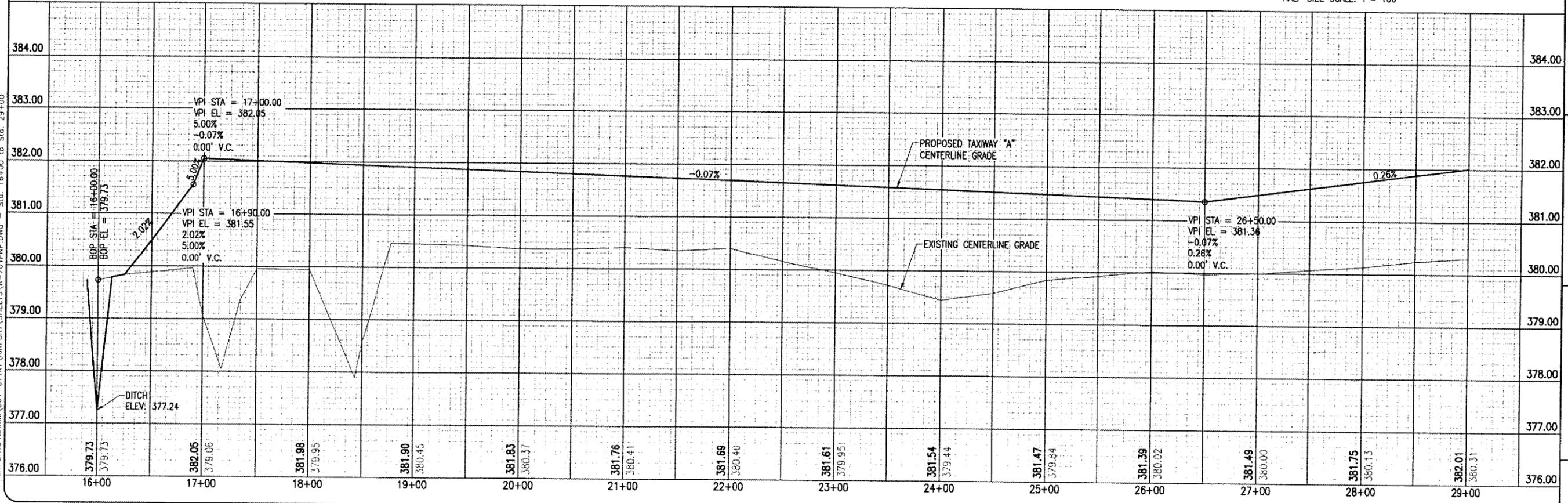
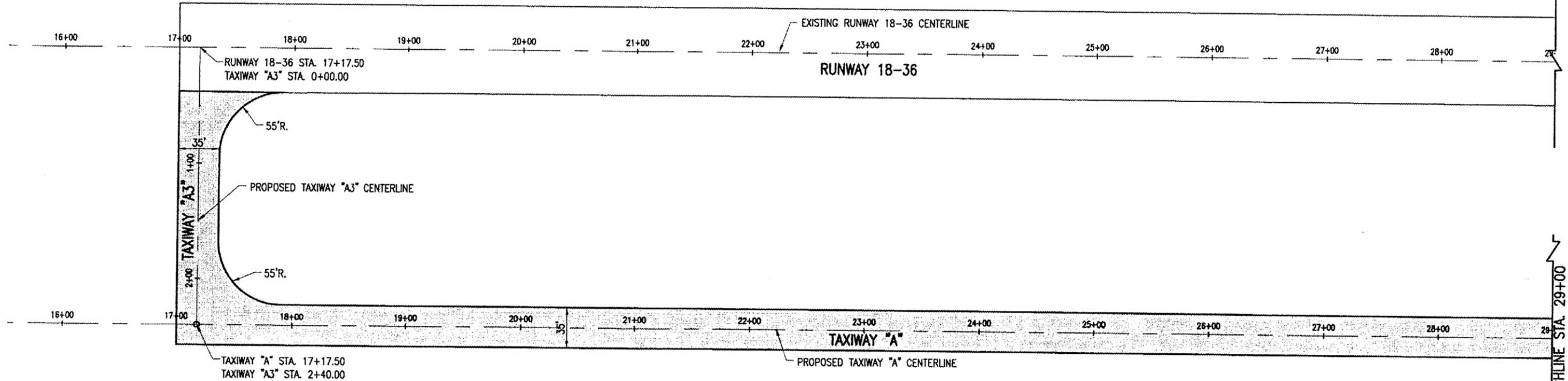


Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62703-2886
Offices Nationwide

EXTEND PARTIAL
PARALLEL TAXIWAY

PROPOSED
CONSTRUCTION PLAN
STA. 21+50 TO STA. 38+50

APR 30, 2007 1:57 PM CCC
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DATE	REVISION	BY

**CARMi MUNICIPAL AIRPORT
CARMi, ILLINOIS**

IL PROJ.: CUL-3683 A.I.P. PROJ.: 3-17-0109-B7

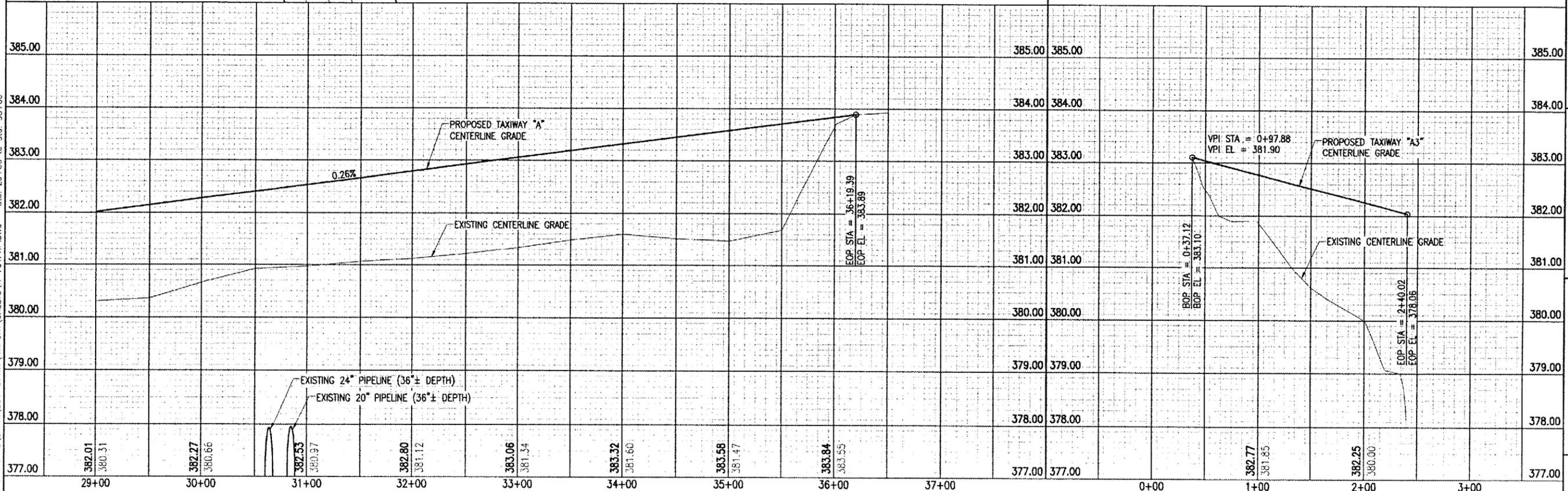
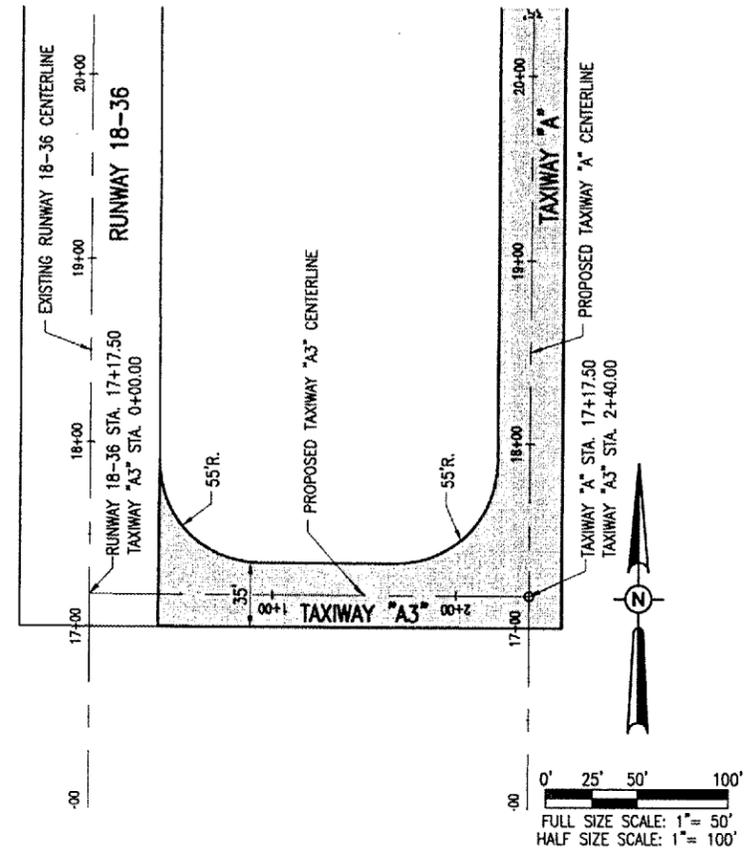
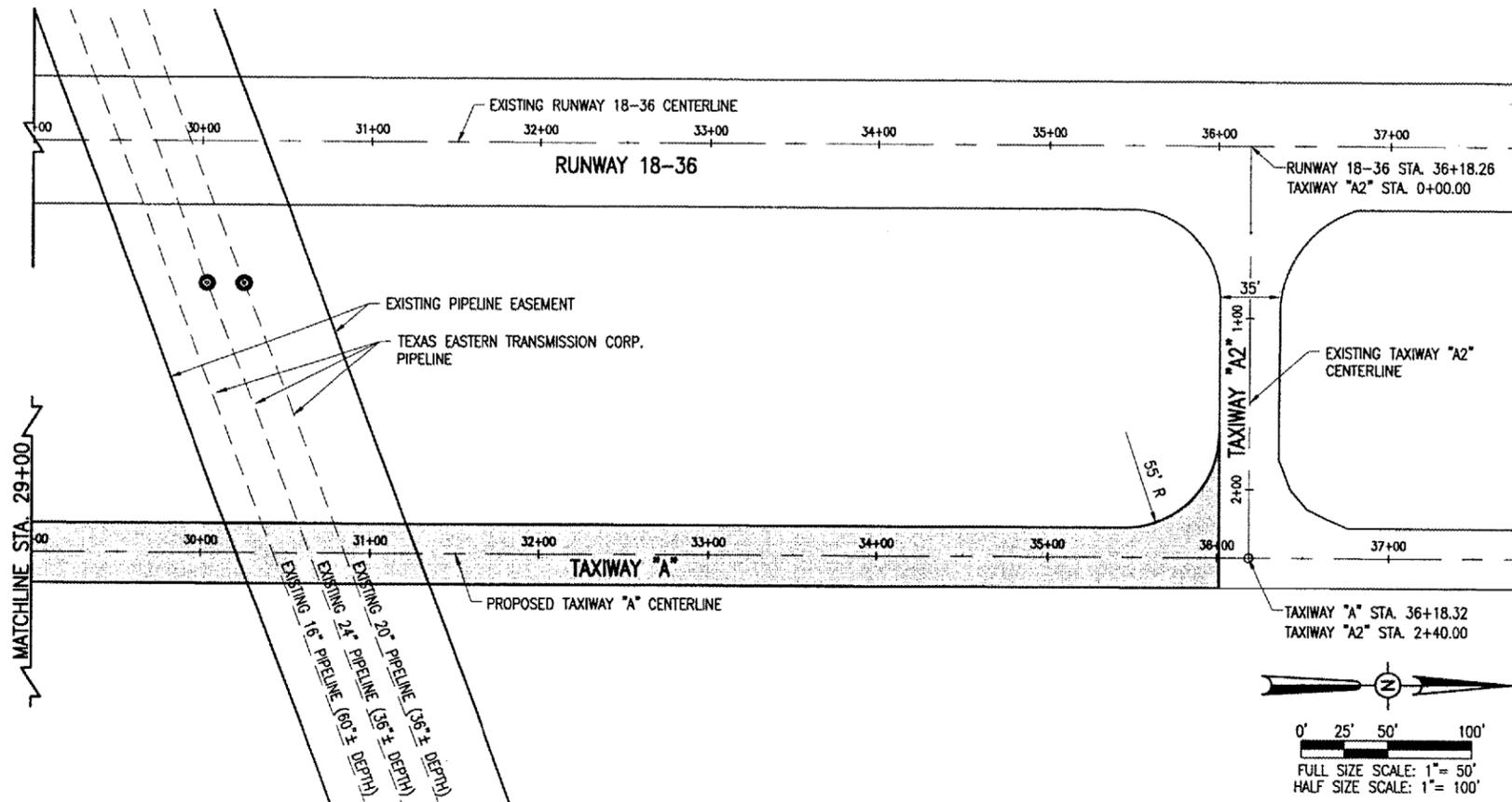
FILE: Project No. 801-071XP0_0800
 Filename: R-701PNP.DWG
 Scale: 1" = 50'
 Date: 11/15/06

LAYOUT	SEP	11/15/06
DRAWN	CCC	11/15/06
REVIEWED	CAH	03/27/07

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 1400 S. State Street
 Springfield, Illinois 62703-2886
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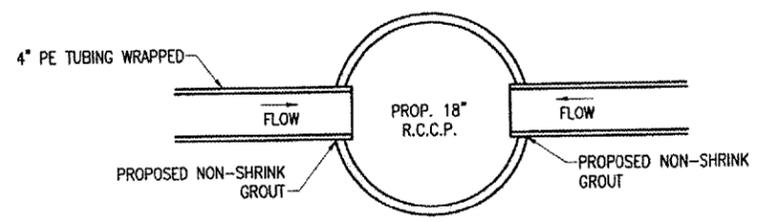
**EXTEND PARTIAL
PARALLEL TAXIWAY
PROPOSED PAVEMENT
PLAN & PROFILE
STA. 16+00 TO STA. 29+00**

9
9 of 55 sheets

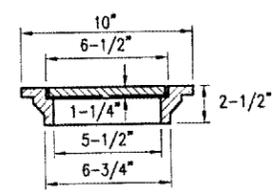


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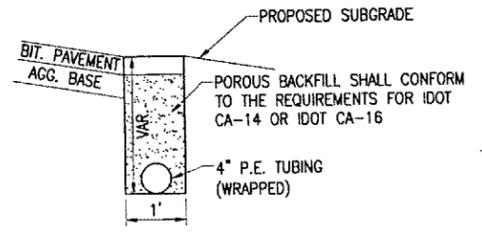
BY	
REVISION	
DATE	
CARMI MUNICIPAL AIRPORT CARMI, ILLINOIS	
A.I.P. PROJ.: 3-17-0109-B7	
ILL. PROJ.: CUL-3683	
LEI Project No.	801-07TXD 0800
Revision	R-701PAP.DWG
Scale	1" = 50'
Date	11/15/06
LAYOUT	SEP 11/15/06
DRAWN	CCC 11/15/06
REVIEWED	CAH 03/27/07
HANSON Hanson Professional Services Inc. 1400 Shawnee Blvd. Springfield, Illinois 62705-2886 Offices Nationwide	
EXTEND PARTIAL PARALLEL TAXIWAY PROPOSED PAVEMENT PLAN & PROFILE STA. 29+00 TO STA. 36+19.39	
10	
10 of 55 sheets	



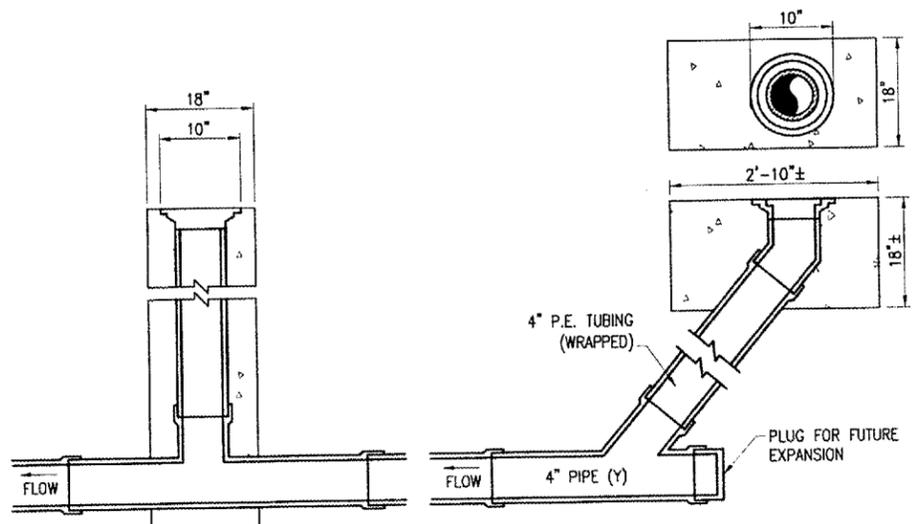
PIPE UNDERDRAIN CONNECTION
"NOT TO SCALE"



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

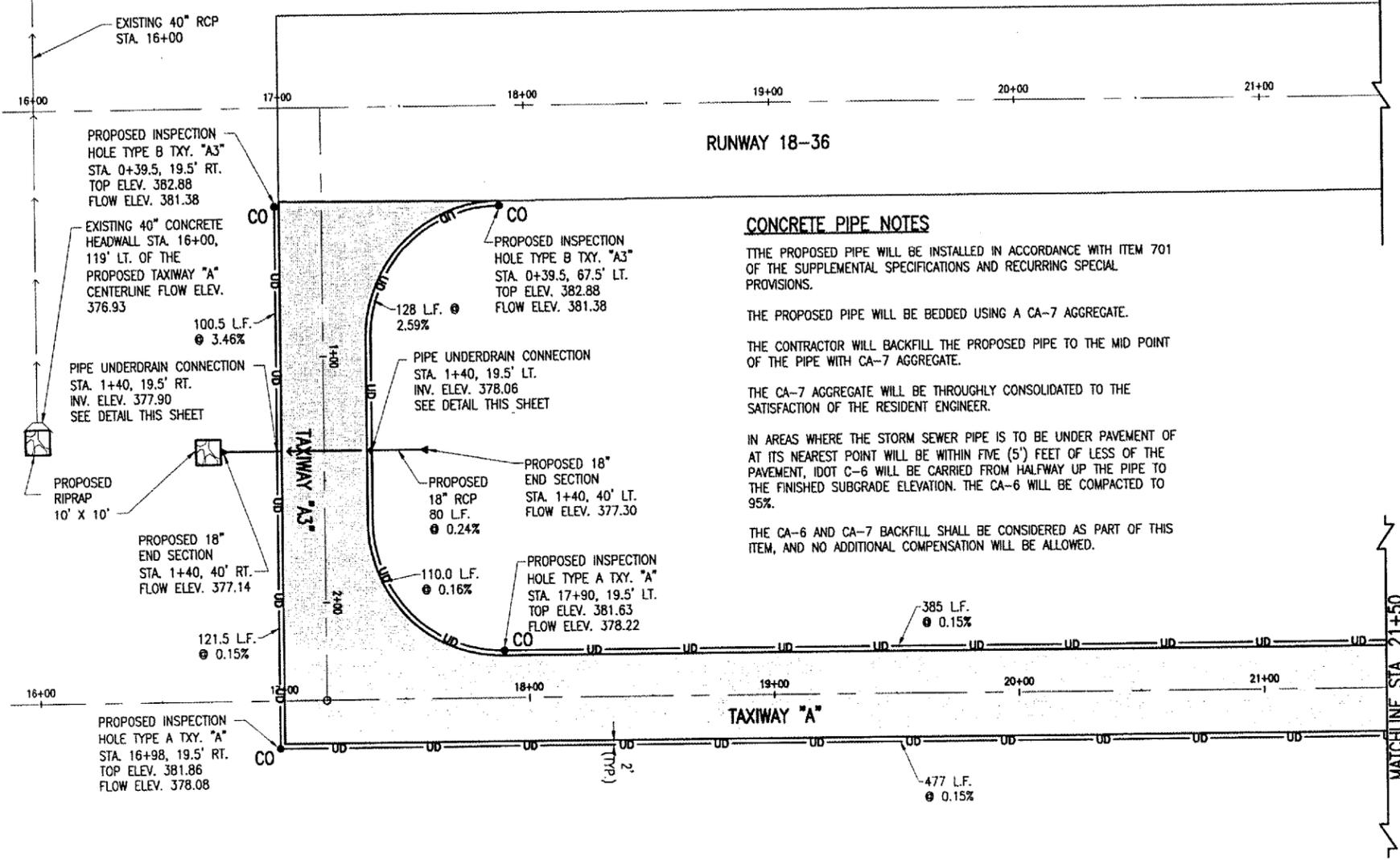


UNDERDRAIN DETAIL
"NOT TO SCALE"



INSPECTION HOLE-TYPE A

INSPECTION HOLE-TYPE B



CONCRETE PIPE NOTES

THE PROPOSED PIPE WILL BE INSTALLED IN ACCORDANCE WITH ITEM 701 OF THE SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS.

THE PROPOSED PIPE WILL BE BEDDED USING A CA-7 AGGREGATE.

THE CONTRACTOR WILL BACKFILL THE PROPOSED PIPE TO THE MID POINT OF THE PIPE WITH CA-7 AGGREGATE.

THE CA-7 AGGREGATE WILL BE THOROUGHLY CONSOLIDATED TO THE SATISFACTION OF THE RESIDENT ENGINEER.

IN AREAS WHERE THE STORM SEWER PIPE IS TO BE UNDER PAVEMENT OF AT ITS NEAREST POINT WILL BE WITHIN FIVE (5') FEET OF LESS OF THE PAVEMENT, IDOT C-6 WILL BE CARRIED FROM HALFWAY UP THE PIPE TO THE FINISHED SUBGRADE ELEVATION. THE CA-6 WILL BE COMPACTED TO 95%.

THE CA-6 AND CA-7 BACKFILL SHALL BE CONSIDERED AS PART OF THIS ITEM, AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

UNDERDRAIN NOTES

THE CONTRACTOR SHALL INSTALL THE PROPOSED 4" P.E. TUBING UNDERDRAINS TO THE DEPTH AND GRADES SHOWN ON THIS SHEET. THE UNDERDRAINS SHALL BE INSTALLED AFTER THE AGGREGATE HAS BEEN COMPLETED.

THE 4" P.E. TUBING SHALL BE CAPPED AT THE ENDS WHICH DO NOT CONNECT INTO STRUCTURES.

THE TRENCH SHALL BE BACKFILLED AND COMPACTED WITH POROUS BACKFILL CA-14 OR CA-16 MATERIAL. THE TRENCH LOCATED IN THE PROPOSED PAVEMENT AREAS WILL BE BACKFILLED AS SHOWN IN THE DETAIL ON THIS SHEET. THE TRENCH LOCATED IN TURF AREAS SHALL BE BACKFILLED UP TO WITHIN 1 FT. OF THE EXISTING GROUND ELEVATION. THE REMAINING 1 FT. OF TRENCH WILL BE BACKFILLED AND COMPACTED WITH EARTH MATERIAL.

THE POROUS BACKFILL SHALL CONFORM TO THE REQUIREMENTS FOR IDOT CA-14 OF IDOT CA-16.

THE CONNECTION TO THE PROPOSED 18" RCP WILL BE CONSIDERED INCIDENTAL TO THE "4" PERFORATED UNDERDRAIN W/SOCK" ITEM AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

THE PROPOSED UNDERDRAINS AND BACKFILLED MATERIAL WILL BE PAID FOR UNDER THE FOLLOWING ITEMS:
AR705410 "POROUS BACKFILL" - PER C.Y.
AR705524 "4" PERFORATED UNDERDRAIN W/SOCK" -PER L.F.

INSPECTION HOLE NOTES

DIAMETER OF PIPE AS SPECIFIED.

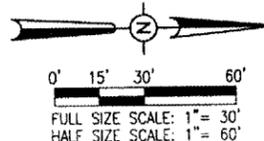
TOP OF INSPECTION HOLES SHALL BE 2" ABOVE FINISH GROUND LINE AT LOCATION SHOWN ON PLANS.

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

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

LEGEND

- EXISTING PAVEMENT
- EXISTING RCP
- EXISTING HEADWALL
- PROPOSED PAVEMENT
- PROPOSED 4" PERFORATED UNDERDRAIN W/SOCK
- PROPOSED RCP
- PROPOSED UNDERDRAIN INSPECTION HOLE
- PROPOSED FLARED END SECTION



DATE	REVISION	BY
04/01/08	REVISED PIPE NOTES	CAH

CARMI MUNICIPAL AIRPORT
CARMI, ILLINOIS

ILL. PROJ.: CUL-3683 A.I.P. PROJ.: J-17-0109-B7

HEI Project No. 801-07TYD.0800	DATE: 11/15/06
Drawn: R-13DRN.DWG	SCALE: 1" = 30'
DATE: 11/15/06	LAYOUT: SEP 11/15/06
	DRAWN: CCC 11/15/06
	REVIEWED: CAH 03/27/07



EXTEND PARTIAL PARALLEL TAXIWAY DRAINAGE PLAN

PROPOSED
STA. 16+00 TO STA. 21+50

2008 09:18 AM H:\CADD\003683\131DRN.DWG - Layout1

DATE	REVISION	BY

CARMI MUNICIPAL AIRPORT
CARMI, ILLINOIS

IL PROJ.: CUL-3683 A.I.P. PROJ.: 3-17-0109-B7

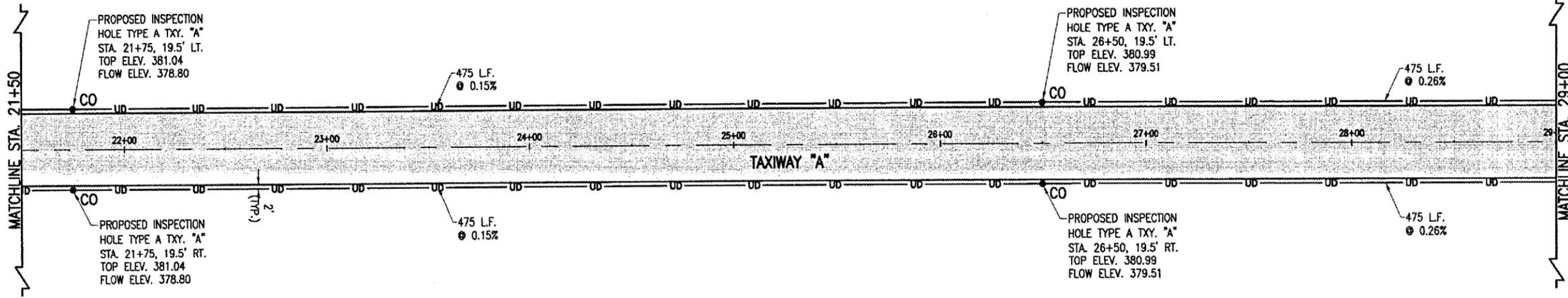
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File Name	R-131DRN.DWG
Scale	1" = 30'
Date	11/15/06
LAYOUT	SEP 11/15/06
DRAWN	CCC 11/15/06
REVIEWED	CAH 03/27/07

HANSON

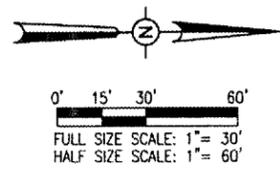
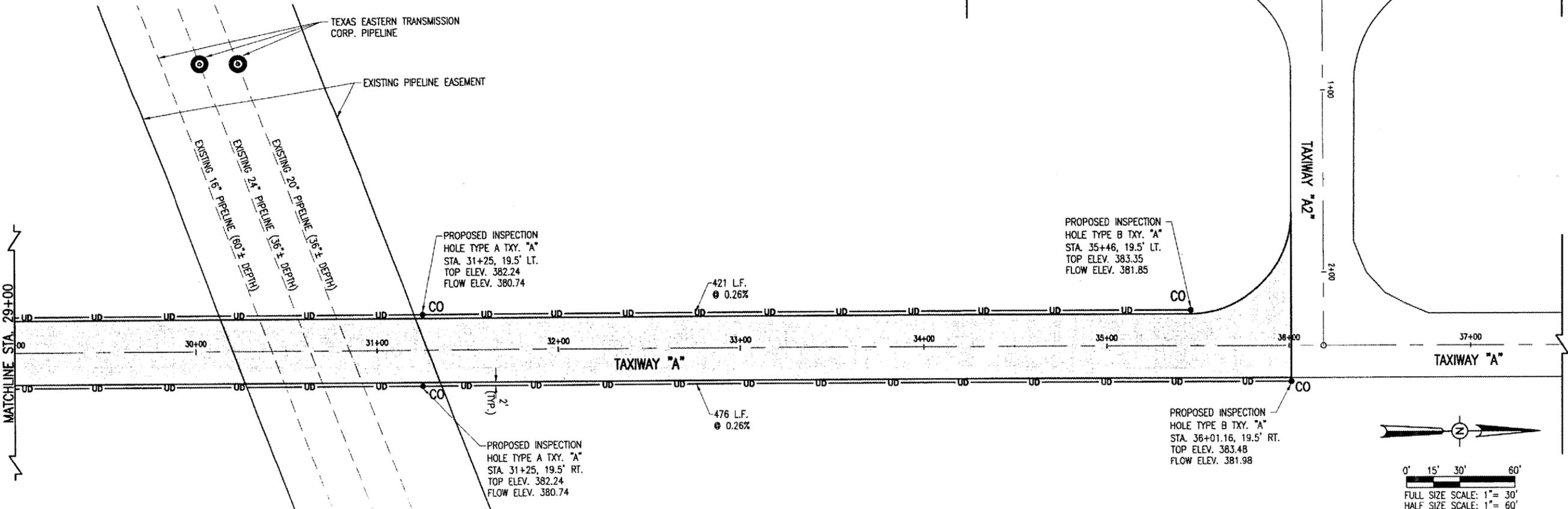
Hanson Professional Services Inc.
15215 South Sixth Street
Springfield, Illinois 62703-2886
Offices Nationwide

EXTEND PARTIAL PARALLEL TAXIWAY

PROPOSED DRAINAGE PLAN
STA. 21+50 TO STA. 37+50



- LEGEND**
- EXISTING PAVEMENT
 - PROPOSED PAVEMENT
 - PROPOSED 4" PERFORATED UNDERDRAIN W/SOCK
 - PROPOSED UNDERDRAIN INSPECTION HOLE



APR 30, 2007 3:01 PM CCC
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901 SEEDING NOTES

THE PROPOSED SEEDING SHALL BE ACCOMPLISHED IN ACCORDANCE WITH ITEM 901 "SEEDING" AS STATED ON PAGE 120 OF THE SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS, ADOPTED JULY 1, 2004.

ALL DISTURBED AREAS LOCATED WITHIN THE PROPOSED GRADING AND SEEDING LIMITS WILL BE SEEDDED IN ACCORDANCE WITH THE ABOVE NOTED SPECIFICATION. ALL AREAS OUTSIDE THE DESIGNATED GRADING AND SEEDING LIMITS WILL ALSO BE SEEDDED 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 AND TAXIWAY.

901-3.4 MAINTENANCE OF SEEDDED 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 RESIDENT 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 _____ 11 ACRES

908 MULCHING NOTES

THE PROPOSED MULCHING SHALL BE ACCOMPLISHED IN ACCORDANCE WITH ITEM 908 "MULCHING" AS STATED ON PAGE 127 OF THE SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS, ADOPTED JULY 1, 2004.

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

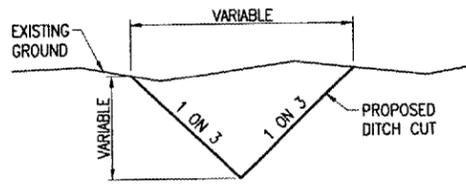
908-2.1 MULCH MATERIAL: THE CONTRACTOR MAY EITHER FURNISH STRAW OR HYDROMULCH AS THE TYPE OF MULCH MATERIAL TO BE USED ON THIS PROJECT.

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.

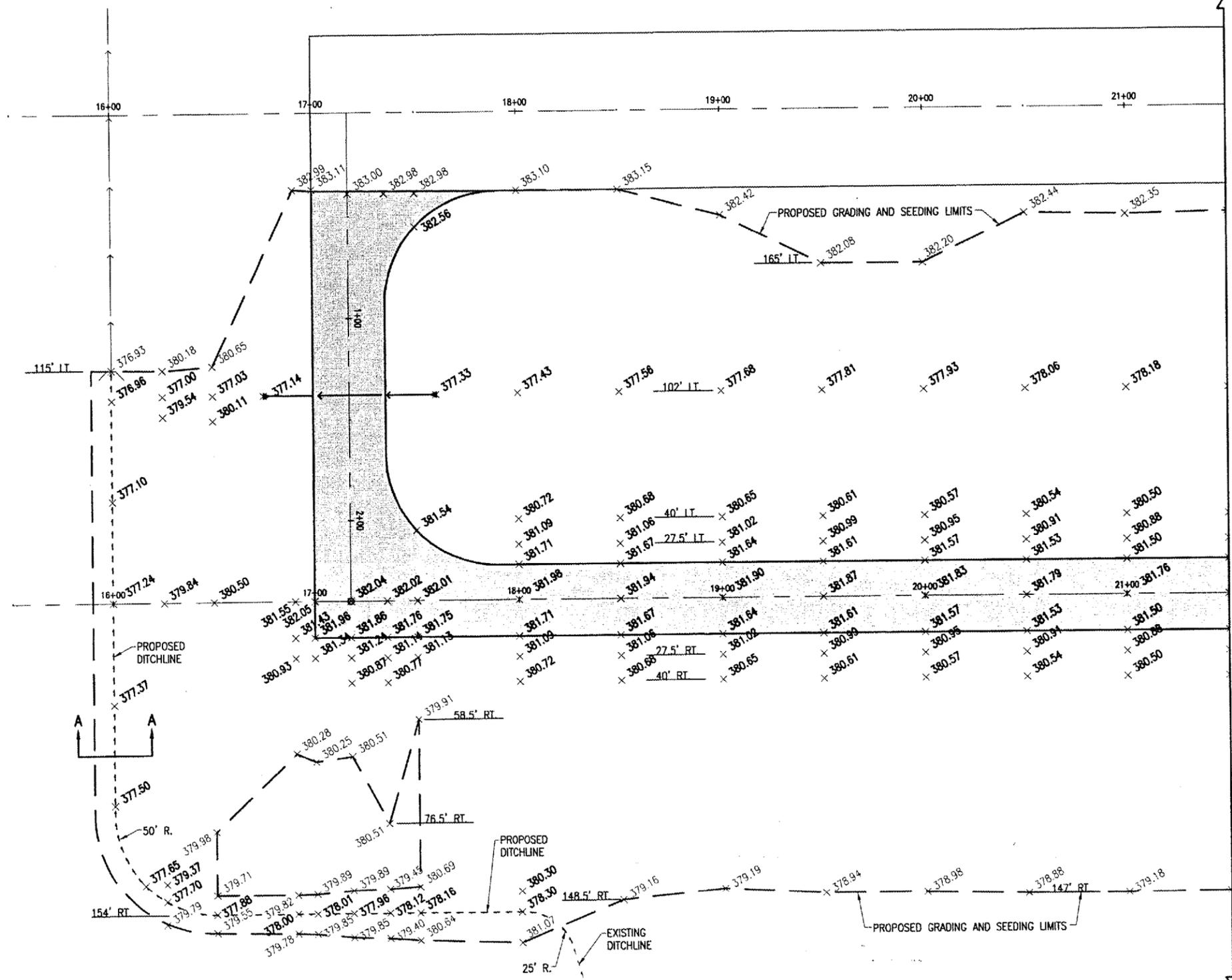
908-3.4 STRUCTURE CLEANING: AFTER THE PROPOSED MULCH HAS BEEN APPLIED, THE CONTRACTOR WILL CLEAN THE MULCH OFF ALL STRUCTURES (DRAINAGE, ELECTRICAL, LIGHTS, ETC.).

DATE MULCHING COMPLETED _____

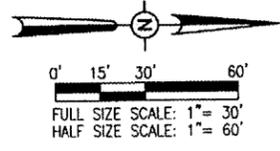
THE PROPOSED MULCHING WILL BE PAID FOR UNDER ITEMS: AR908510 MULCHING _____ 11 ACRES



TYPICAL SECTION "A-A"
"NOT TO SCALE"



- LEGEND**
- EXISTING PAVEMENT
 - PROPOSED PAVEMENT
 - PROPOSED GRADING AND SEEDING LIMITS
 - ← PROPOSED 18" RCP
 - +382.67 EXISTING GRADE
 - +382.93 PROPOSED GRADE
 - ▲ PROPOSED FLARED END SECTION



DATE	REVISION	BY

MATCHLINE STA. 21+50

**CARMI MUNICIPAL AIRPORT
CARMI, ILLINOIS**

A.I.P. PROJ.: 3-17-0109-87
ILL. PROJ.: CUL-3683

ILL. Project No. 801-07TXD-0800	SEP 11/15/06
Revision R-191STK.DWG	BAK 11/15/06
Scale 1"=30'	CAH 03/27/07
Date 11/15/06	

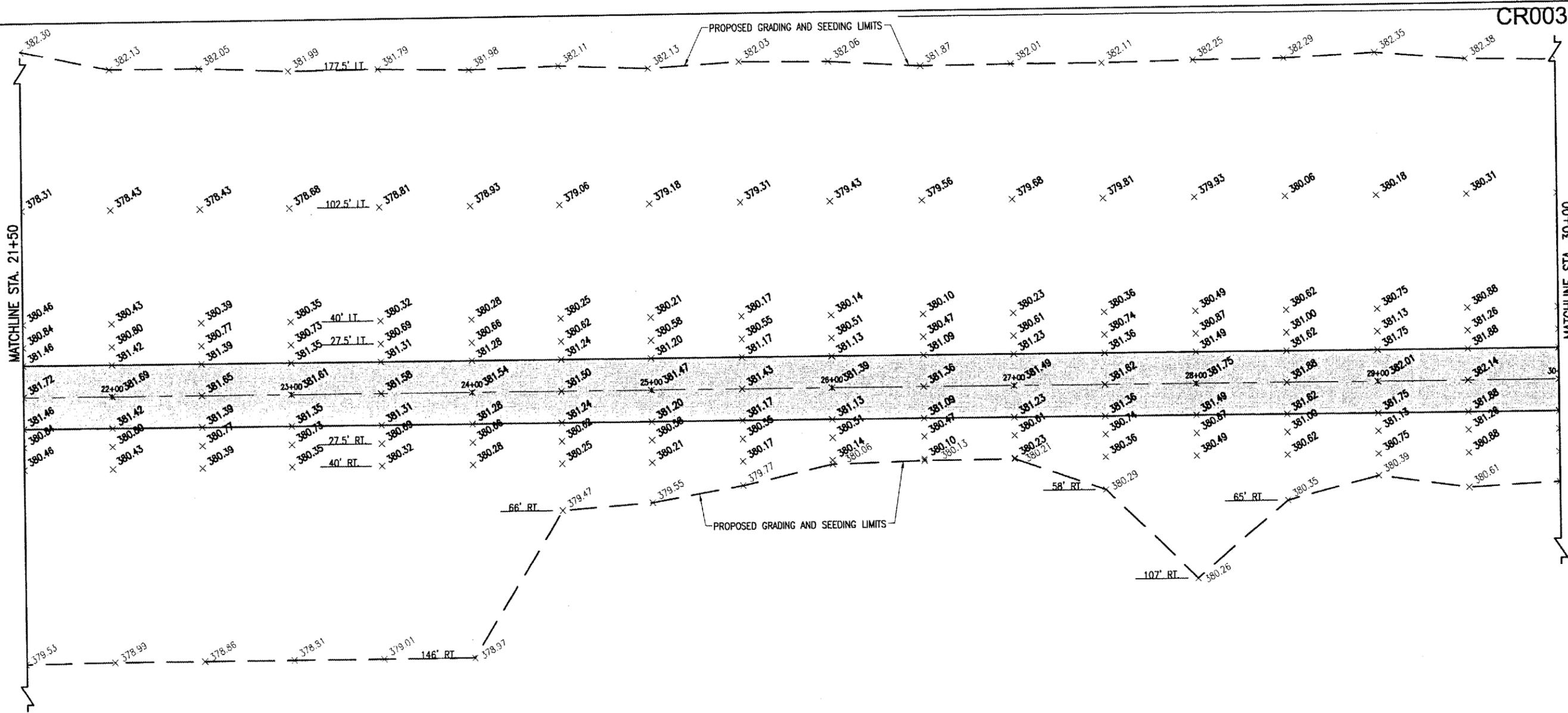
HANSON
Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62703-2886
Offices Nationwide

EXTEND PARTIAL
PARALLEL TAXIWAY

PROPOSED
STAKING PLAN
STA. 15+90 TO STA. 21+50

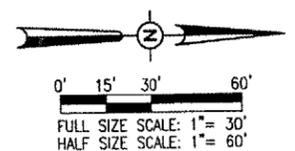
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APR 27 2007 7:40 AM BAK
 I:\AIRPORTS\CARMA\801-07TKX\AIRPORT\SHEETS\R-1915TK.DWG - STA. 21+50 TO STA. 30+00



LEGEND

- EXISTING PAVEMENT
- PROPOSED PAVEMENT
- PROPOSED GRADING AND SEEDING LIMITS
- EXISTING GRADE
- PROPOSED GRADE



DATE	REVISION	BY

**CARMİ MUNICIPAL AIRPORT
 CARMİ, ILLINOIS**

IL PROJ.: CUL-3683 A.I.P. PROJ.: 3-17-0109-87

REL. Project No. 801-07TKXD.0800	DATE: 11/15/06
Revision: R-1915TK.DWG	LAYOUT: SEP 11/15/06
Scale: 1" = 30'	DRAWN: BAK 11/15/06
	REVIEWED: CAH 03/27/07

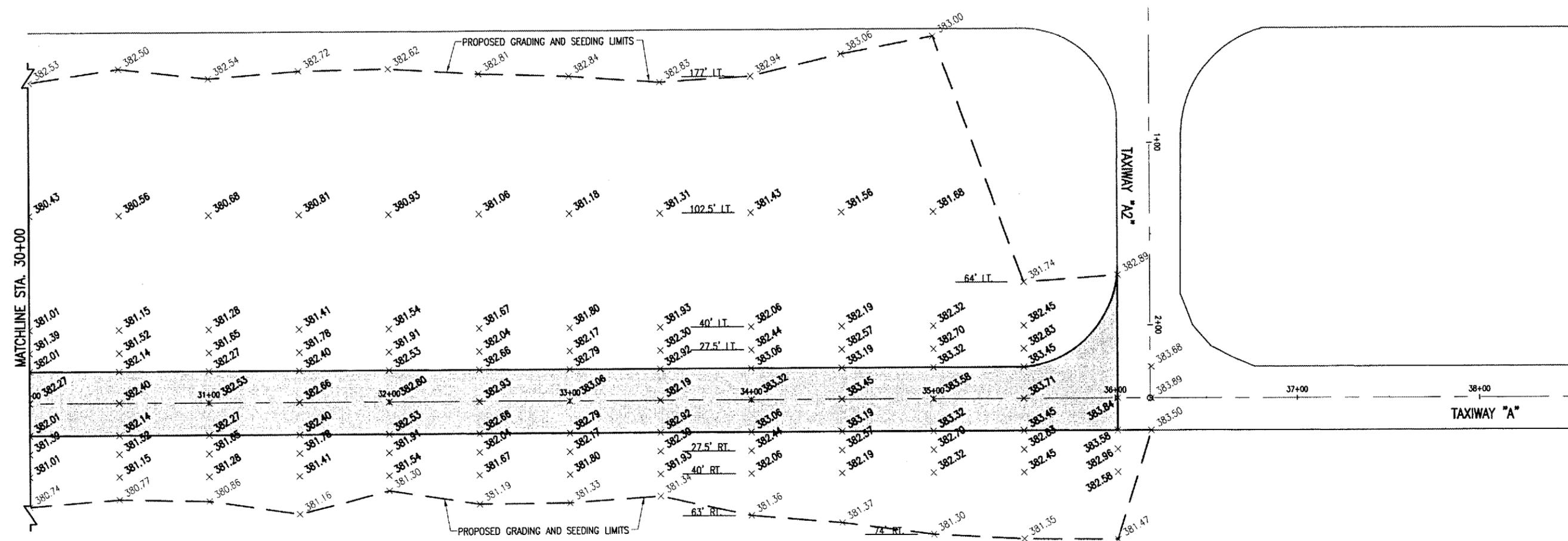
HANSON

Hanson Professional Services Inc.
 1626 South Sixth Street
 Springfield, Illinois 62702-2886
 Offices Nationwide

**EXTEND PARTIAL
 PARALLEL TAXIWAY**

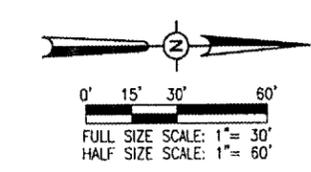
PROPOSED
 STAKING PLAN

STA. 21+50 TO STA. 30+00



APR 27, 2007 7:40 AM BAK
 I:\A\PORTS\CARMI\801-07TX\AIRPORT\SHEETS\R-1911STK.DWG - STA. 30+00 TO STA. 38+50

- LEGEND**
- EXISTING PAVEMENT
 - PROPOSED PAVEMENT
 - PROPOSED GRADING AND SEEDING LIMITS
 - +382.67 EXISTING GRADE
 - +382.93 PROPOSED GRADE



DATE	REVISION	BY

CARMI MUNICIPAL AIRPORT
CARMI, ILLINOIS

ILL. PROJ.: CUL-3683
 A.I.P. PROJ.: 3-17-0109-B7

Proj. No. 801-07TXD 0800	11/15/06
File No. R-1911STK.DWG	SEP
Scale 1" = 30'	BAK
Date 11/15/06	CAH
LAYOUT	11/15/06
DRAWN	11/15/06
REVIEWED	03/27/07

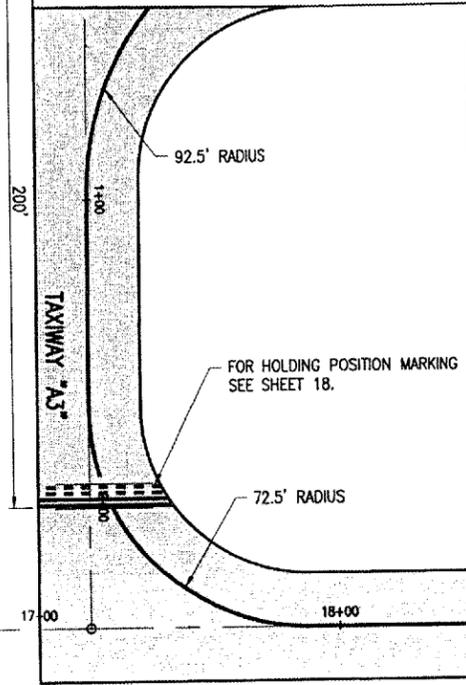
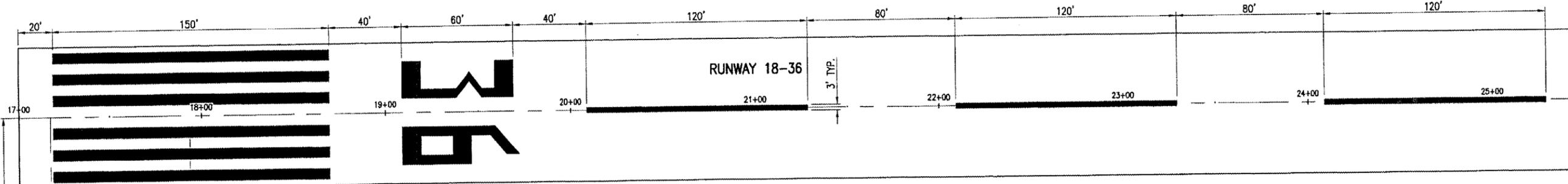
HANSON

Hanson Professional Services Inc.
 1625 South State Street
 Springfield, IL 62703-2886
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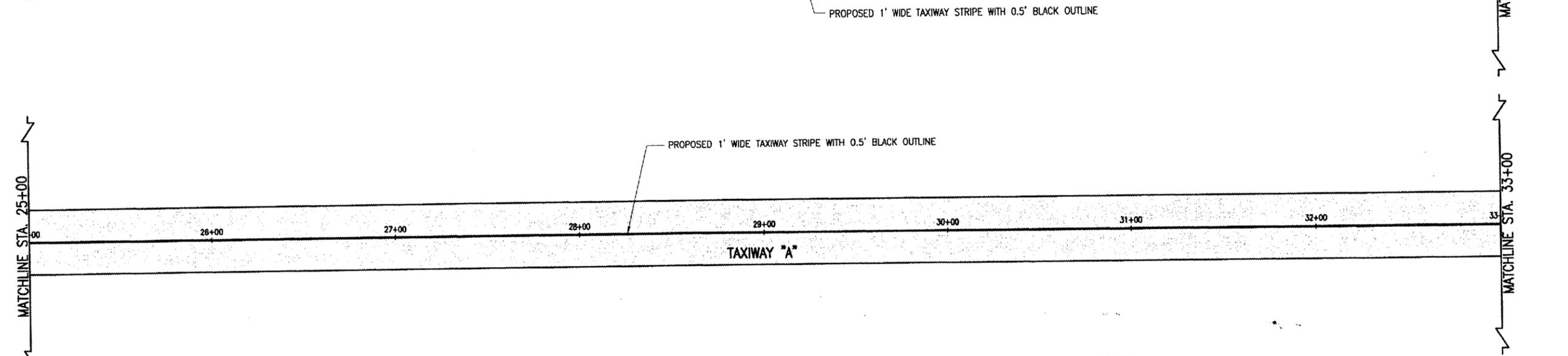
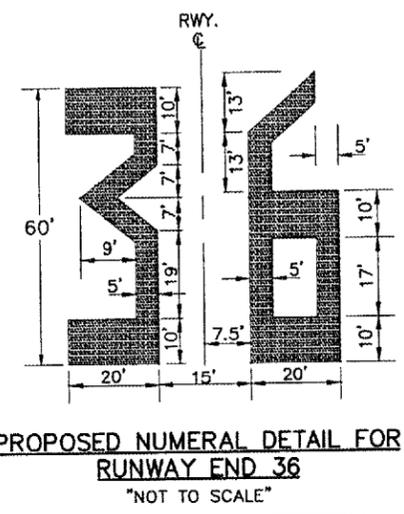
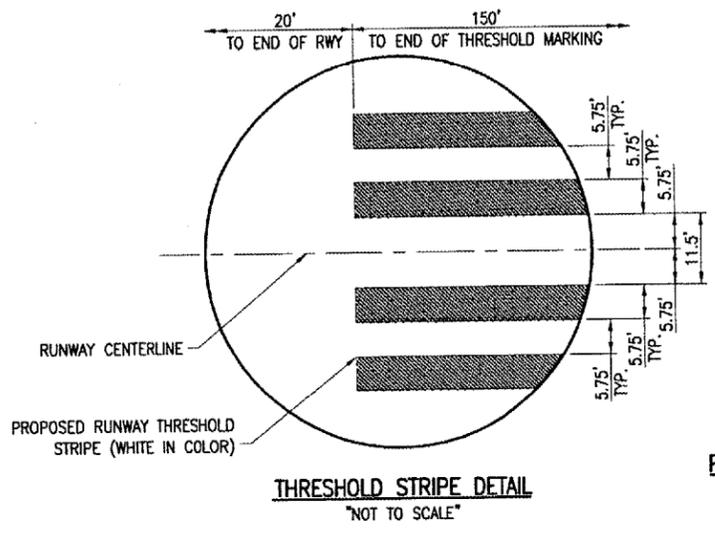
**EXTEND PARTIAL
 PARALLEL TAXIWAY**

**PROPOSED
 STAKING PLAN**

STA. 30+00 TO STA. 38+50

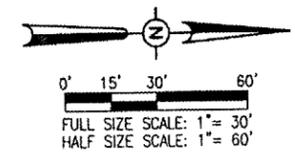


MARKING QUANTITIES			
DESCRIPTION	UNIT AREA	NO. REQUIRED	TOTAL AREA
RUNWAY THRESHOLD STRIPES	862.5	6	5,175
RUNWAY CENTERLINE STRIPES	360	3	1,080
RUNWAY NUMERAL 3	634	1	634
RUNWAY NUMERAL 6	712	1	712
TOTAL WHITE			7,501
DESCRIPTION	UNIT AREA	NO. REQUIRED	TOTAL AREA
TAXIWAY CENTERLINE	5,618	1	5,618
HOLDING LINE: TXY "A3"	132	1	132
HOLDING LINE: TXY "A2"	147	1	147
HOLDING LINE: TXY "A1"	142	1	142
TOTAL YELLOW			6,019
TAXIWAY CENTERLINE BLACK OUTLINE	5,618	1	5,618
HOLDING LINE BLACK OUTLINE: TXY "A3"	215	1	215
HOLDING LINE BLACK OUTLINE: TXY "A2"	239	1	239
HOLDING LINE BLACK OUTLINE: TXY "A1"	228	1	228
TOTAL BLACK			6,300
TOTAL MARKING			19,920



LEGEND

- EXISTING PAVEMENT
- PROPOSED PAVEMENT
- EXISTING MARKING
- PROPOSED MARKING



DATE	REVISION	BY

CARMi MUNICIPAL AIRPORT
CARMi, ILLINOIS

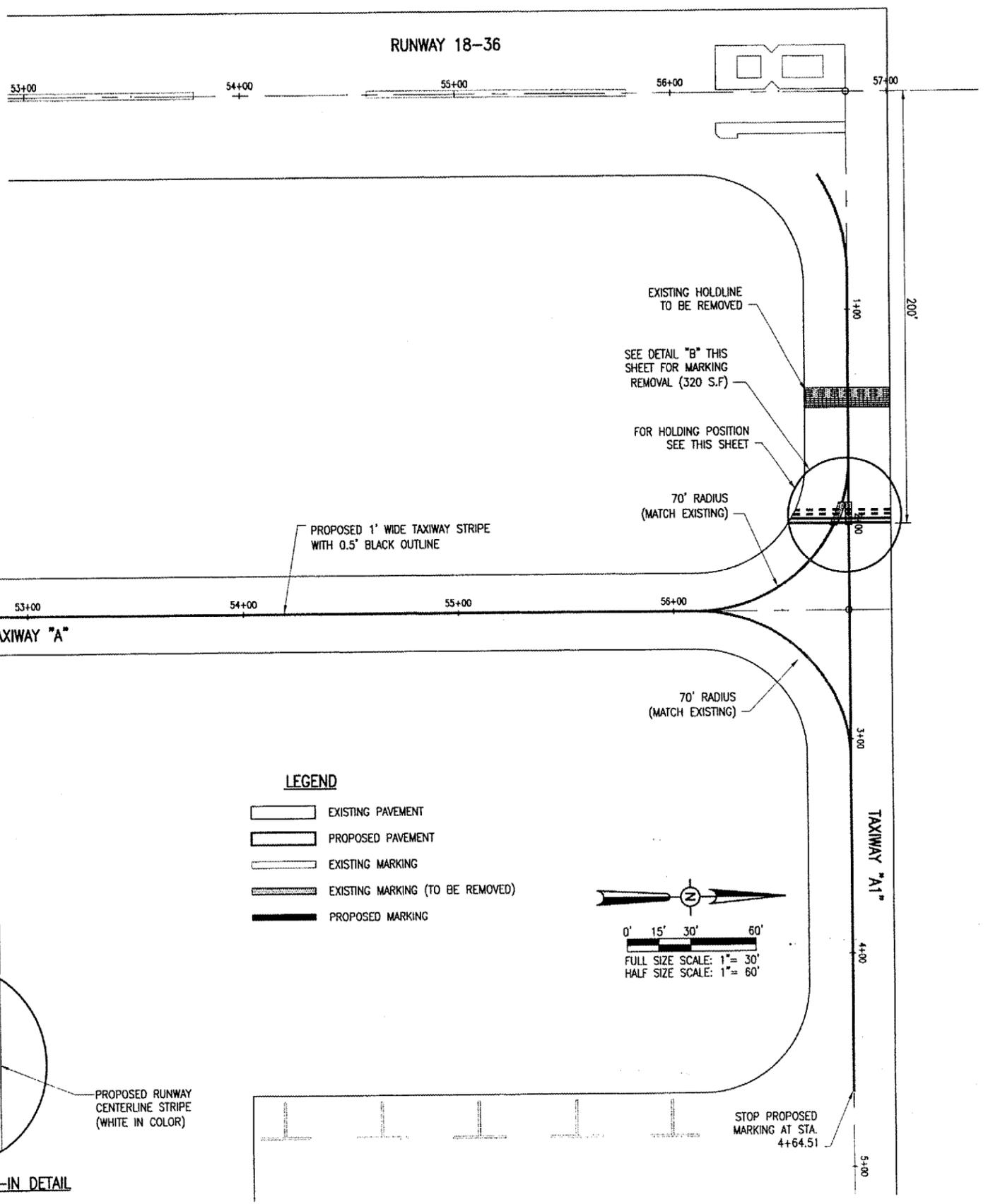
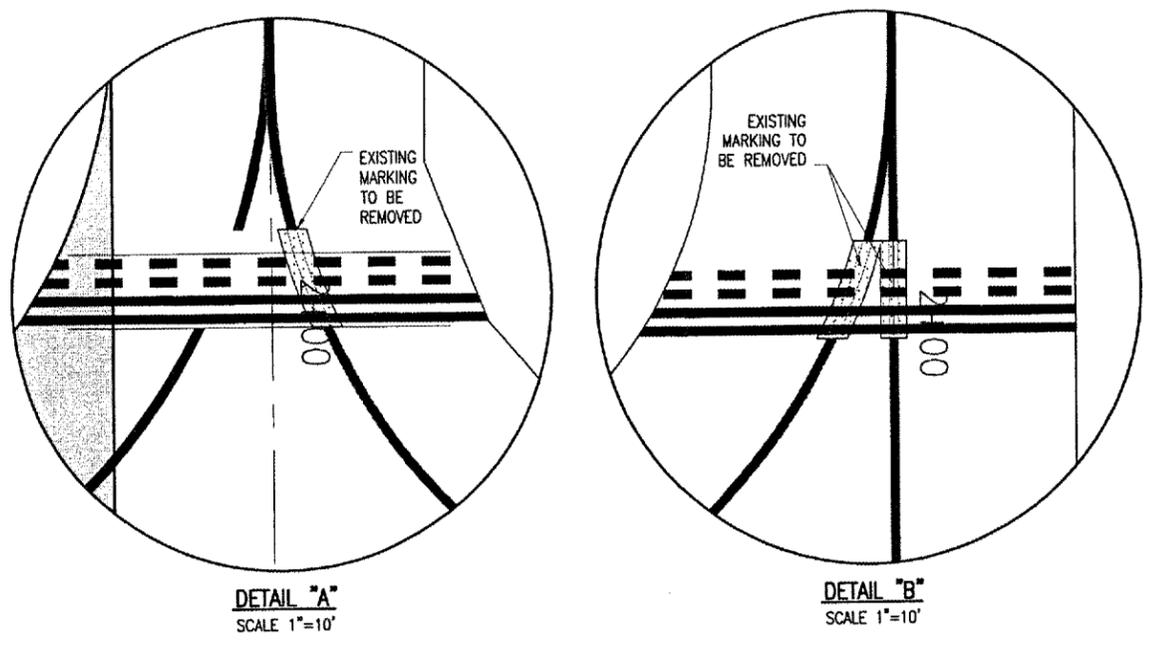
IL PROJ.: CUL-3683 A.I.P. PROJ.: J-17-0109-B7

HEL Project No. 601-07TXD 0800	02/16/07
File Name: R-151MRK.DWG	MDR 02/16/07
Scale: 1" = 30'	DRAWN 02/16/07
Date: 02/16/07	REVIEWED CAH 03/27/07



EXTEND PARTIAL
PARALLEL TAXIWAY

PROPOSED
MARKING PLAN
STA. 17+00 TO STA. 33+00



MATCHLINE STA. 49+00

MARKING REMOVAL NOTES

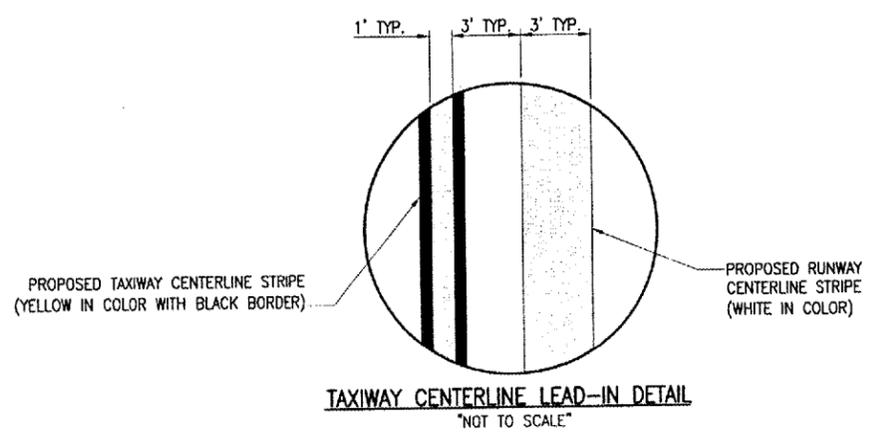
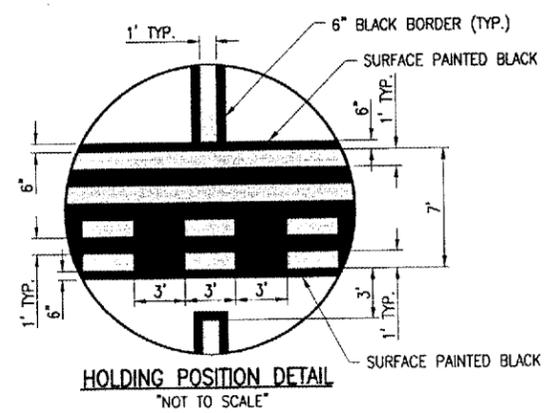
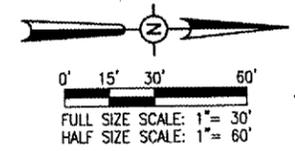
THE AREAS THAT ARE DESIGNATED EXISTING MARKING (TO BE REMOVED) WILL BE REMOVED BY SANDBLASTING OR SHOT BLASTING.

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

THE PROPOSED MARKING REMOVAL SHALL BE PAID FOR UNDER ITEM:
AR620900 "PAVEMENT MARKING REMOVAL" - PER S.F.

LEGEND

- EXISTING PAVEMENT
- PROPOSED PAVEMENT
- EXISTING MARKING
- EXISTING MARKING (TO BE REMOVED)
- PROPOSED MARKING



REVISION	DATE	BY

CARMI MUNICIPAL AIRPORT
CARMI, ILLINOIS

IL PROJ.: CUL-3683 A.I.P. PROJ.: 3-17-0109-B7

HEL Project No. 801-07TXD 0800	LAYOUT	MDR	02/16/07
File Name R-151MRK.DWG	DRAWN	MDR	02/16/07
Scale 1"=30'	REVIEWED	CAH	03/27/07
Date 02/16/07			

HANSON

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

EXTEND PARTIAL PARALLEL TAXIWAY

PROPOSED MARKING PLAN

STA. 49+00 TO STA. 57+00

APR 27, 2007 7:42 AM BAK \\LAIR\FORIS\CARMI\801-07TXD\AIRPORT\SHETS\R-151MRK.DWG - STA. 49+00 TO STA. 57+00

PER FAA AC 150/5340-30B 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 3/8-INCH DIAMETER BY 8-FOOT LONG (MINIMUM) UL LISTED COPPER CLAD GROUND ROD. SEE ELECTRICAL DETAIL SHEETS FOR ADDITIONAL INFORMATION ON THIS REQUIREMENT.

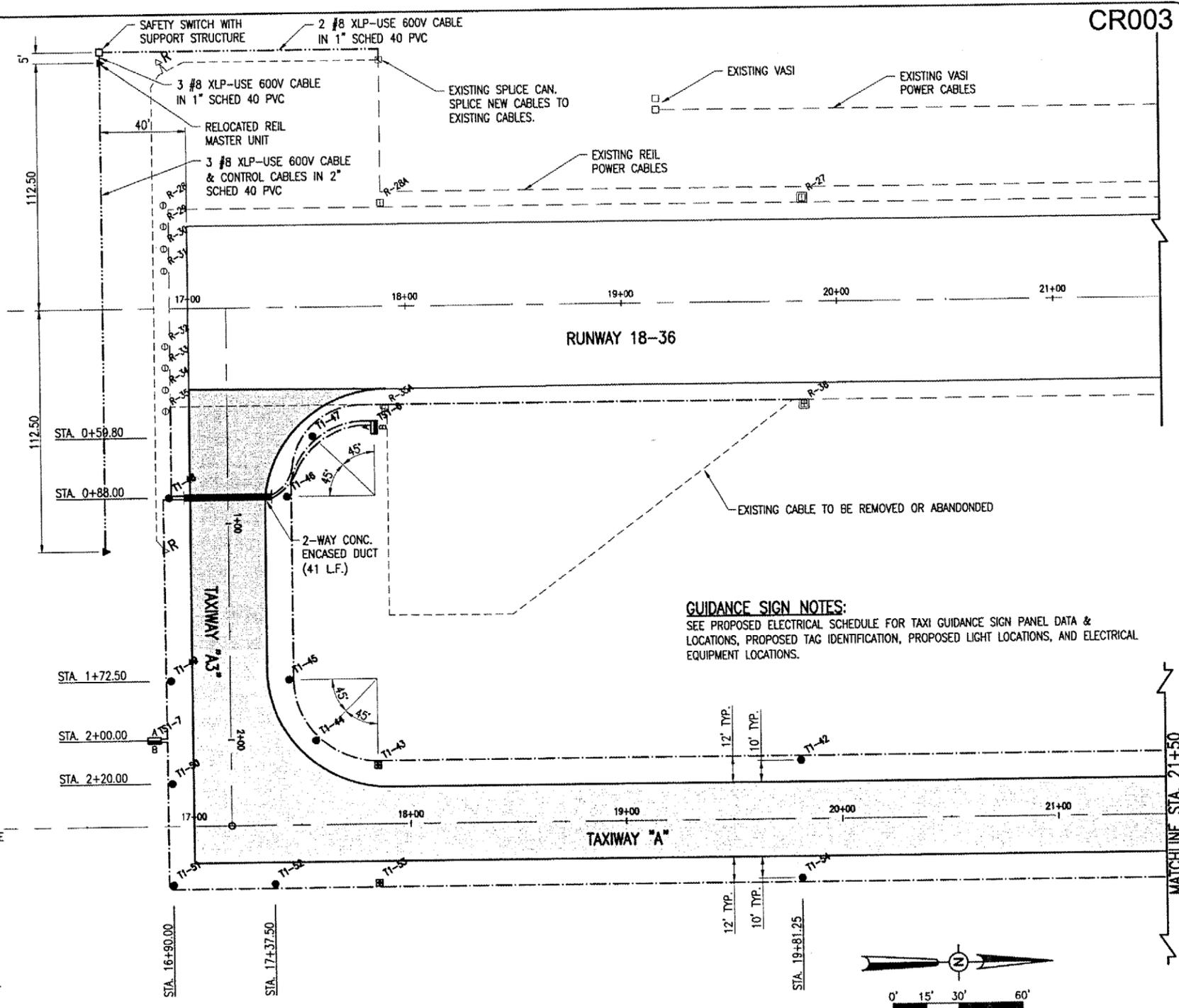
THE LOCATION, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ON THE PLANS IS NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES OF HIS OPERATIONAL PLANS AND SHALL OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES DETAILED INFORMATION AND ASSISTANCE RELATIVE TO THE LOCATION OF THEIR FACILITIES AND THE WORKING SCHEDULE OF THE COMPANIES FOR REMOVAL OR ADJUSTMENT WHERE REQUIRED. IN THE EVENT AN UNEXPECTED UTILITY INTERFERENCE IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY COMPANY OF JURISDICTION. THE ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY SUCH MAINS AND SERVICES SHALL BE RESTORED TO SERVICE AT ONCE AND PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT.

CALL J.U.L.I.E. FOR UTILITY INFORMATION AT 1-800-892-0123. CONTACT AIRPORT PERSONNEL FOR ASSISTANCE IN LOCATING AIRPORT CABLES.

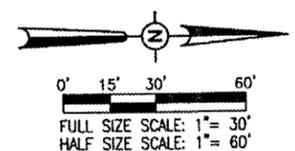
NOTES:

- ALL TAXIWAY LIGHTS ARE TO BE LOCATED 10' FROM THE PAVEMENT EDGE, AND THE NEAR EDGE OF THE TAXIWAY SIGNS WILL BE LOCATED 15' FROM THE EDGE OF PAVEMENT.
- REFER TO THE LIGHTING STANDARD SHEET AND SPECIFICATION FOR DETAILS FOR THE STAKE AND BASE LIGHTS AND TAXIWAY SIGNS.
- LIGHTING CABLE WILL BE 1/C No. 8, 5 KV. TYPE C UNDERGROUND CABLE IN UNIT DUCT. CABLE BENDS WILL BE 3'-0" OR GREATER.
- LIGHTING CABLE SHALL BE BURIED AT A MINIMUM DEPTH OF 18 INCHES AND 12 FEET FROM THE PAVEMENT EDGE. THE SPACING OF MULTI CABLES IN THE SAME TRENCH SHALL BE SEPARATED BY 3 INCHES, CABLE TO CABLE. FOR ELECTRICAL TRENCH DETAILS REFER TO THE ELECTRICAL DETAIL SHEET.
- ALL PROPOSED LIGHTS AND SIGNS WILL BE TAGGED IN ACCORDANCE WITH LIGHT NUMBER SHOWN ON THE PLANS.
- IN AREAS WHERE THERE IS A CONGESTION OF EXISTING CABLES, THE PROPOSED CABLES WILL BE HAND-DUG IN PLACE. AT ALL OTHER LOCATIONS, THE CABLE MAY BE TRENCHED OR PLOWED INTO PLACE.
- THE REMOVED LIGHT FIXTURES AND ISOLATION TRANSFORMERS WILL BE TURNED OVER TO THE AIRPORT MANAGER. IF THE MANAGER DOES NOT WANT THE SALVAGED MATERIAL, THEN THE CONTRACTOR WILL DISPOSE OF THE MATERIALS. THE CONCRETE BASES AND METAL STAKES WILL BE DISPOSED OF OFF THE AIRPORT SITE BY THE CONTRACTOR.
- ALL PROPOSED TAXIWAY LIGHTS WILL BE TYPE L-861-T, WITH 30 WATT INCANDESCENT LAMP.
- ALL OF THE ABOVE LIGHTS WILL BE MANUFACTURED IN ACCORDANCE TO FAA SPECIFICATION AC NO. 150/5345-46B, LATEST EDITION.
- THE CONCRETE USED IN THE CONSTRUCTION OF THESE ITEMS SHALL BE IN ACCORDANCE WITH ITEM 610.
- PRIOR TO INSTALLING THE PROPOSED TAXIWAY LIGHTS, THE CONTRACTOR WILL APPLY AN OXIDE-INHIBITING, ANTI-SEIZING COMPOUND TO ALL SCREWS, NUTS, BREAKABLE COUPLING, AND ALL PLACES WHERE METAL COMES INTO CONTACT WITH METAL. THE ANTI-SEIZE COMPOUND WILL BE AS MANUFACTURED BY I.T.I. BRAND NAME "CONTAX" OR APPROVED EQUAL.
- ALL BASE PLATE MOUNTING BOLTS AND STAKE MOUNTING BOLTS SHALL BE STAINLESS STEEL.
- THE CONTRACTOR WILL LOCATE ALL BURIED CABLES PRIOR TO THE PLACEMENT OF NEW CABLES. IN AREAS OF MULTIPLE CABLES, THE PROPOSED CABLES SHALL BE PLACED BY HAND DIGGING.
- THE EXISTING TAXI GUIDANCE SIGNS (TO BE RELOCATED) WILL BE REMOVED, STORED, AND PREPARED FOR RELOCATION BY ADDING ANOTHER SIGN MODULE TO THE EXISTING SIGN AND CHANGING THE SIGN LEGENDS TO READ AS SHOWN ON SHEET 22. THE EXISTING SIGN BASES WILL BE REMOVED AND DISPOSED OF OFF THE AIRPORT SITE. NEW SIGN BASES WILL BE CONSTRUCTED IN ACCORDANCE WITH THE DETAILS SHOWN ON THE ELECTRICAL STANDARD SHEET. THE STORED SIGNS WILL BE INSTALLED ON THE NEW BASES. ANY DAMAGE TO THE SIGNS WILL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S OWN EXPENSE. PAYMENT WILL BE MADE UNDER ITEM AR125964, RELOCATE TAXI GUIDANCE SIGN.
- THE TWO EXISTING ONE MODULE TAXI GUIDANCE SIGNS LOCATED ON TAXIWAY "A1" WILL BE REMOVED AND TURNED OVER TO THE AIRPORT MANAGER. IF THE AIRPORT MANAGER DOESN'T WANT THEM, THEN THE CONTRACTOR WILL DISPOSE OF THEM OFF THE AIRPORT SITE. THE EXISTING CONCRETE BASES WILL BE REMOVED AND DISPOSED OF OFF THE AIRPORT SITE. IF THE EXISTING SIGN LOCATION WILL NOT BE USED BY A PROPOSED TAXI GUIDANCE SIGN, THEN THE CONTRACTOR WILL CONNECT THE EXISTING CABLES BACK TOGETHER, BURY THEM, PLACE DIRT IN THE HOLE LEFT FROM THE REMOVAL OF THE SIGN BASE, SEED AND MULCH THE DISTURBED AREA. ALL THIS WORK WILL BE CONSIDERED AS AN INCIDENTAL ITEM TO THE REMOVAL TO THE TAXI GUIDANCE SIGN AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED. PAYMENT WILL BE MADE UNDER ITEM AR125904, REMOVE TAXI GUIDANCE SIGN.

THE LOCATION OF UNDERGROUND UTILITIES AS INDICATED ON THE PLANS HAS BEEN OBTAINED FROM EXISTING RECORDS. NEITHER THE OWNER OR THE ENGINEER ASSUMES ANY RESPONSIBILITY WHATSOEVER IN RESPECT TO THE ACCURACY OR SUFFICIENCY OF THE INFORMATION AND THERE IS NO GUARANTEE, EITHER EXPRESSED OR IMPLIED, THAT THE CONDITIONS INDICATED ARE REPRESENTATIVES OF THOSE TO BE ENCOUNTERED IN THE CONSTRUCTION.



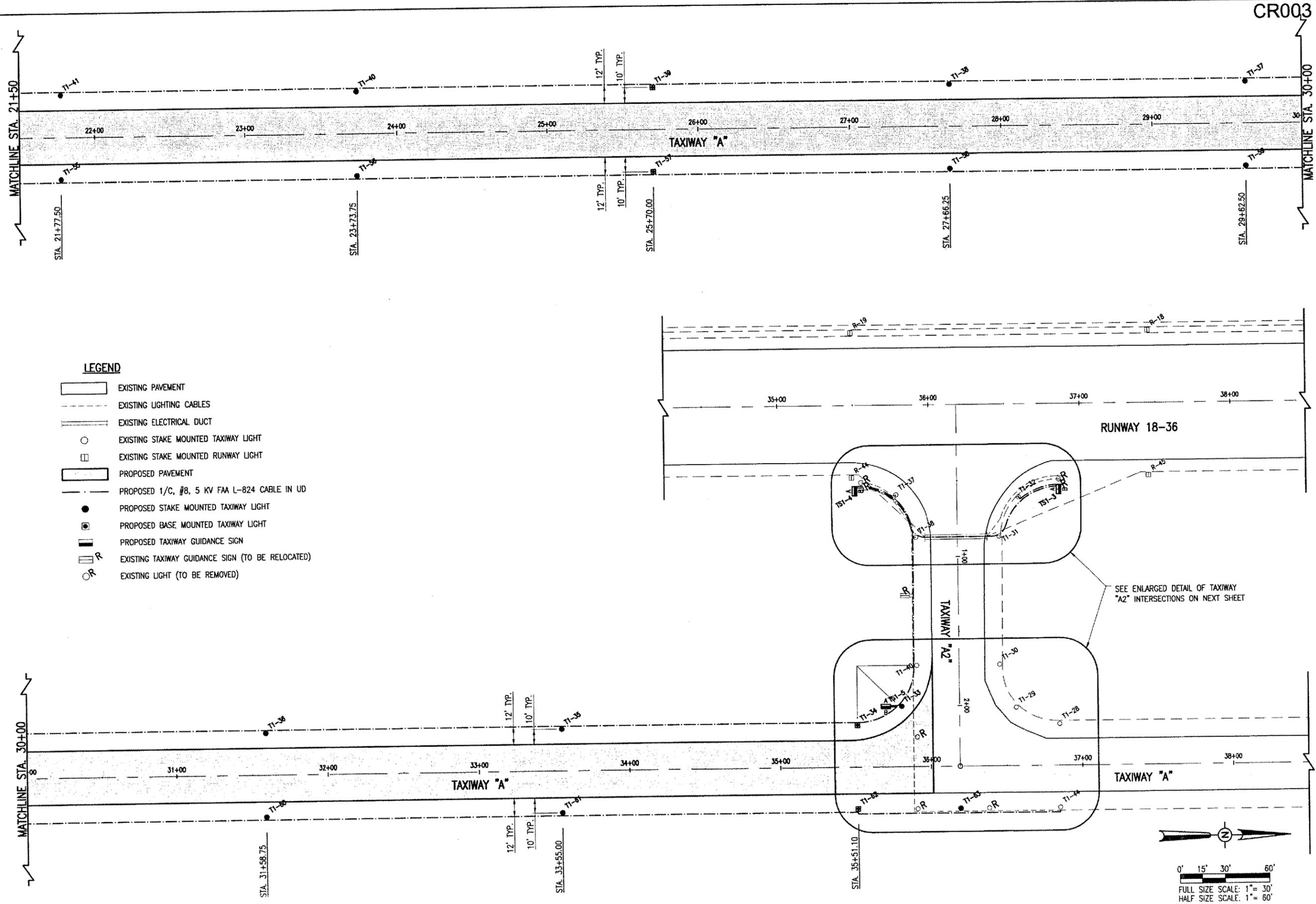
GUIDANCE SIGN NOTES:
SEE PROPOSED ELECTRICAL SCHEDULE FOR TAXI GUIDANCE SIGN PANEL DATA & LOCATIONS, PROPOSED TAG IDENTIFICATION, PROPOSED LIGHT LOCATIONS, AND ELECTRICAL EQUIPMENT LOCATIONS.



QUANTITIES				
ITEM No.	DESCRIPTION	UNIT	QUANTITY	AS BUILT QUANTITY
AR108158	1/C #8 5 KV UG CABLE IN UD	L.F.	5,226	
AR110502	2-WAY CONCRETE ENCASED DUCT	L.F.	41	
AR125410	MIL-STAKE MOUNTED	EACH	25	
AR125415	MIL-BASE MOUNTED	EACH	6	
AR125443	TAXI GUIDANCE SIGN, 3 CHARACTER	EACH	4	
AR125444	TAXI GUIDANCE SIGN, 4 CHARACTER	EACH	1	
AR125901	REMOVE STAKE MOUNTED LIGHT	EACH	7	
AR125904	REMOVE TAXI GUIDANCE SIGN	EACH	2	
AR125964	RELOCATE TAXI GUIDANCE SIGN	EACH	2	
AR125967	RELOCATE REILS	PAIR	1	

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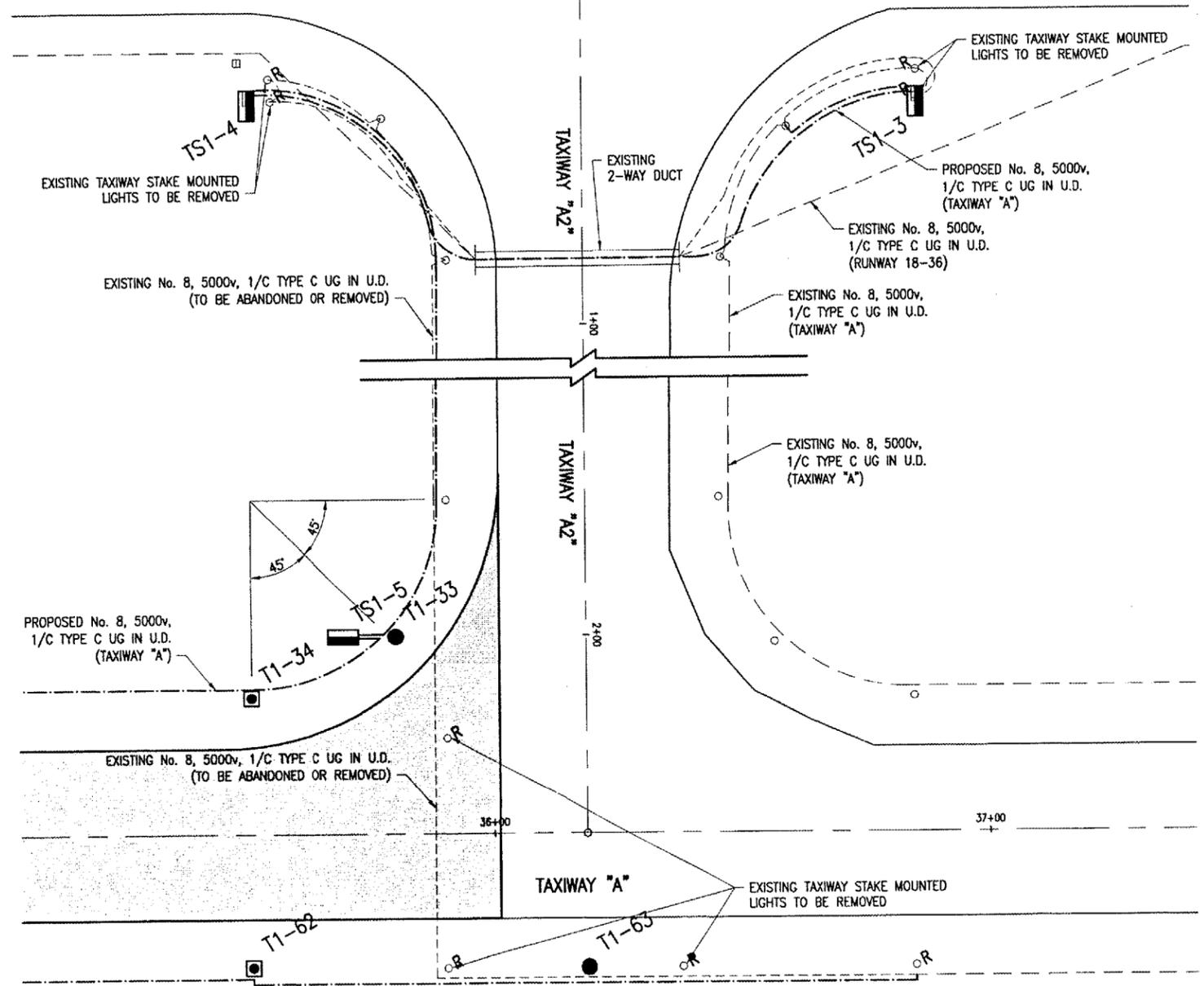
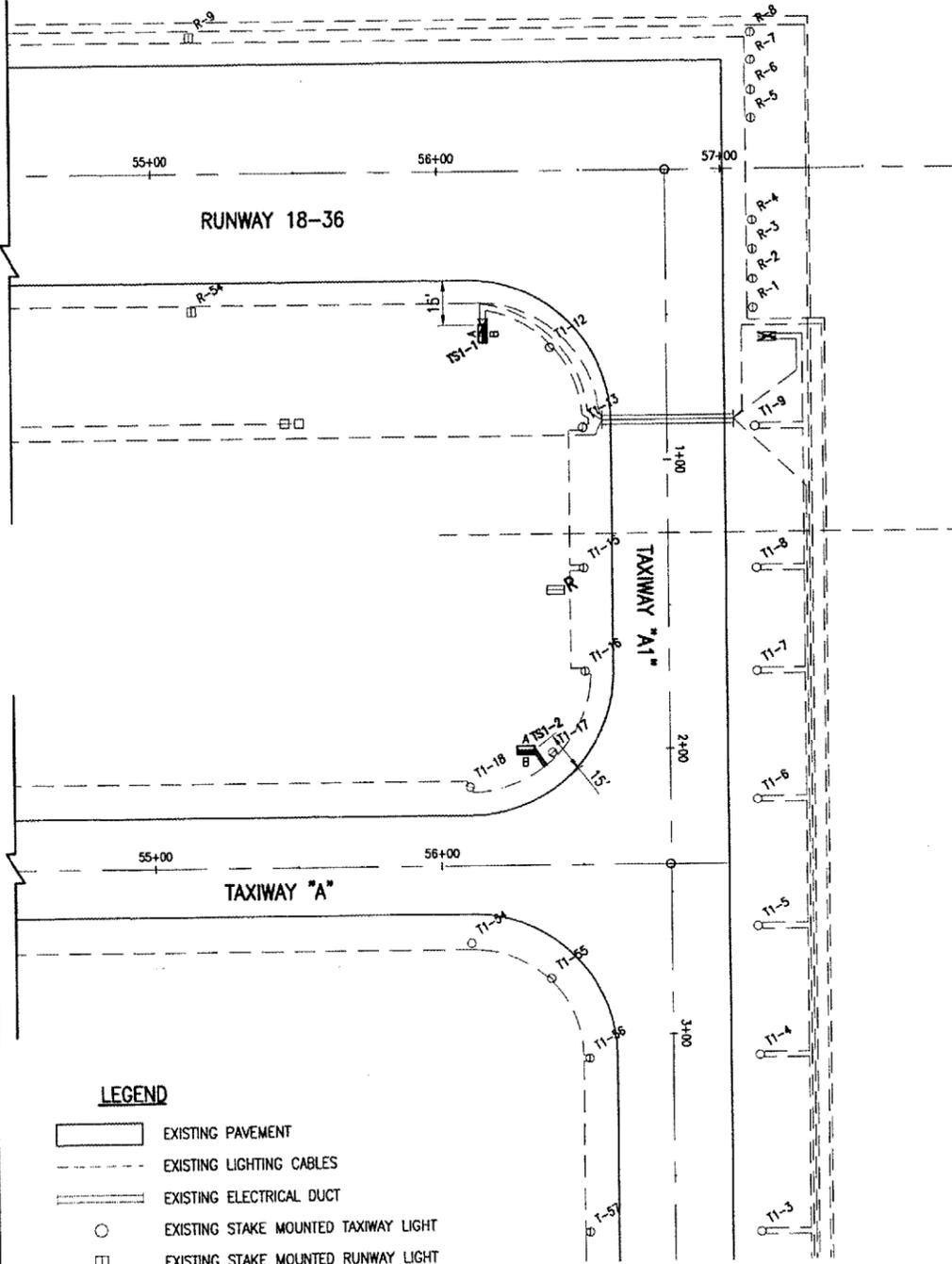
DATE	REVISION								
CARMI MUNICIPAL AIRPORT CARMI, ILLINOIS									
A.I.P. PROJ.: 3-17-0109-B7 IL PROJ.: CUL-3683									
HCL Project No. 801-071XXD_0800		Revision: R-141ELE.DWG		Scale: 1" = 30'		Date: 11/15/06		LAYOUT SEP 11/15/06	
DRAWN CCC		CHECKED CCC		DATE 11/15/06		REVIEWED CAH		DATE 03/27/07	
HANSON Hanson Professional Services Inc. 1525 South Sixth Street Springfield, Illinois 62703-2886 Offices Nationwide									
EXTEND PARTIAL PARALLEL TAXIWAY					PROPOSED ELECTRICAL PLAN STA. 16+50 TO STA. 21+50				
19									
19 of 55 sheets									



- LEGEND**
- EXISTING PAVEMENT
 - EXISTING LIGHTING CABLES
 - EXISTING ELECTRICAL DUCT
 - EXISTING STAKE MOUNTED TAXIWAY LIGHT
 - EXISTING STAKE MOUNTED RUNWAY LIGHT
 - PROPOSED PAVEMENT
 - PROPOSED 1/C, #8, 5 KV FAA L-824 CABLE IN UD
 - PROPOSED STAKE MOUNTED TAXIWAY LIGHT
 - PROPOSED BASE MOUNTED TAXIWAY LIGHT
 - PROPOSED TAXIWAY GUIDANCE SIGN
 - EXISTING TAXIWAY GUIDANCE SIGN (TO BE RELOCATED)
 - EXISTING LIGHT (TO BE REMOVED)

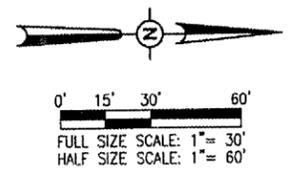
<p>CR003</p> <p>MATCHLINE STA. 21+50</p> <p>MATCHLINE STA. 30+00</p> <p>STA. 21+77.50</p> <p>STA. 23+73.75</p> <p>STA. 25+70.00</p> <p>STA. 27+66.25</p> <p>STA. 29+62.50</p>	<p>DATE</p> <p>REVISION</p> <p>BY</p>									
<p>TAXIWAY "A"</p>										
<p>STA. 31+58.75</p> <p>STA. 33+55.00</p> <p>STA. 35+51.10</p>										
<p>MATCHLINE STA. 30+00</p> <p>MATCHLINE STA. 38+50</p>										
<p>TAXIWAY "A"</p>										
<p>STA. 31+00</p> <p>STA. 32+00</p> <p>STA. 33+00</p> <p>STA. 34+00</p> <p>STA. 35+00</p> <p>STA. 36+00</p> <p>STA. 37+00</p> <p>STA. 38+00</p>										
<p>RUNWAY 18-36</p>										
<p>TAXIWAY "A2"</p>										
<p>SEE ENLARGED DETAIL OF TAXIWAY "A2" INTERSECTIONS ON NEXT SHEET</p>										
<p>0' 15' 30' 60'</p> <p>FULL SIZE SCALE: 1" = 30'</p> <p>HALF SIZE SCALE: 1" = 60'</p>										
<p>HANSON</p> <p>Hanson Professional Services Inc. 1525 South Sixth Street Springfield, Illinois 62703-2886 Offices Nationwide</p>										
<p>EXTEND PARTIAL PARALLEL TAXIWAY</p> <p>PROPOSED ELECTRICAL PLAN</p> <p>STA. 21+50 TO STA. 38+50</p>										
<p>20</p> <p>20 of 55 sheets</p>										
<p>ILL. Project No. 801-07TXY01 08000 File Name: R-14\ELE.DWG Scale: 1" = 30' Date: 11/15/06</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>LAYOUT</td> <td>SEP</td> <td>11/15/06</td> </tr> <tr> <td>DRAWN</td> <td>CCC</td> <td>11/15/06</td> </tr> <tr> <td>REVIEWED</td> <td>CAH</td> <td>03/27/07</td> </tr> </table> <p>ILL. PROJ.: CUL-3683 A.I.P. PROJ.: 3-17-0109-B7</p>		LAYOUT	SEP	11/15/06	DRAWN	CCC	11/15/06	REVIEWED	CAH	03/27/07
LAYOUT	SEP	11/15/06								
DRAWN	CCC	11/15/06								
REVIEWED	CAH	03/27/07								

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ENLARGED DETAIL OF TAXIWAY "A2" INTERSECTIONS
 NOT TO SCALE

- LEGEND**
- EXISTING PAVEMENT
 - EXISTING LIGHTING CABLES
 - EXISTING ELECTRICAL DUCT
 - EXISTING STAKE MOUNTED TAXIWAY LIGHT
 - EXISTING STAKE MOUNTED RUNWAY LIGHT
 - EXISTING VASI
 - EXISTING THRESHOLD LIGHTS
 - PROPOSED PAVEMENT
 - PROPOSED 1/C #8 5KV FAA L-824 CABLE IN UD
 - PROPOSED STAKE MOUNTED TAXIWAY LIGHT
 - PROPOSED TAXIWAY GUIDANCE SIGN
 - EXISTING LIGHTING CABLES (TO BE ABANDONED OR REMOVED)
 - EXISTING TAXIWAY GUIDANCE SIGN (TO BE RELOCATED)
 - EXISTING TAXIWAY GUIDANCE SIGN (TO BE REMOVED)
 - EXISTING LIGHT (TO BE REMOVED)



DATE	REVISION	BY

**CARM MUNICIPAL AIRPORT
 CARM, ILLINOIS**

IL PROJ.: CUL-3663 A.I.P. PROJ.: 3-17-0109-87

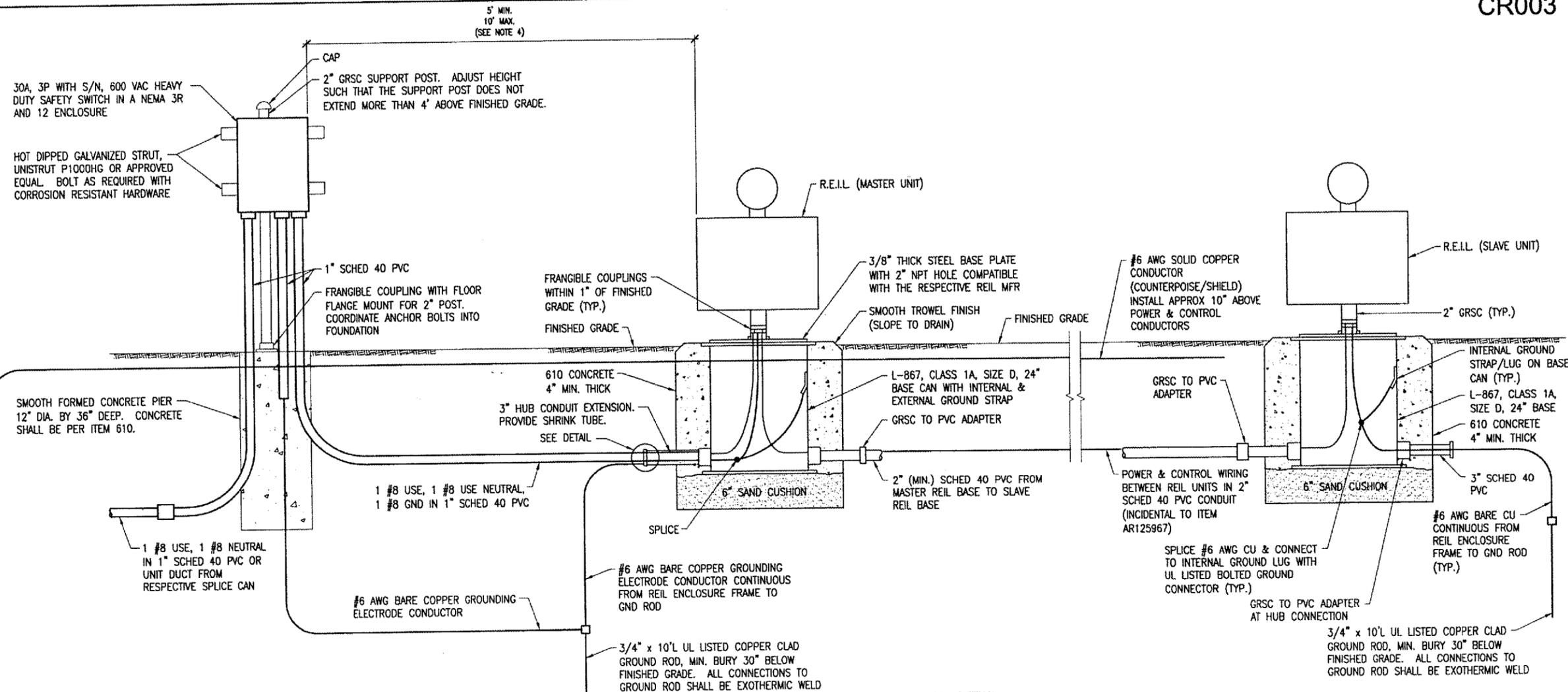
HEL Project No. 801-07TXD 0800
 Filename: R-141ELE.DWG
 Scale: 1" = 30'
 Date: 11/15/06

LAYOUT	SEP 11/15/06
DRAWN	CCC
REVIEWED	CAH

HANSON
 Hanson Professional Services Inc.
 1528 South Sixth Street
 Springfield, Illinois 62703-2886
 Offices Nationwide

EXTEND PARTIAL
 PARALLEL TAXIWAY

PROPOSED
 ELECTRICAL PLAN
 STA. 54+50 TO STA. 57+50



LOCATE GND ROD NOT LESS THAN 10 FEET APART FROM OTHER GND RODS

3/4" x 10' UL LISTED COPPER CLAD GROUND ROD, MIN. BURY 30" BELOW FINISHED GRADE. ALL CONNECTIONS TO GROUND ROD SHALL BE EXOTHERMIC WELD

SMOOTH FORMED CONCRETE PIER 12" DIA. BY 36" DEEP. CONCRETE SHALL BE PER ITEM 610.

30A, 3P WITH S/N, 600 VAC HEAVY DUTY SAFETY SWITCH IN A NEMA 3R AND 12 ENCLOSURE

HOT DIPPED GALVANIZED STRUT, UNISTRUT P1000HG OR APPROVED EQUAL BOLT AS REQUIRED WITH CORROSION RESISTANT HARDWARE

2" GRSC SUPPORT POST. ADJUST HEIGHT SUCH THAT THE SUPPORT POST DOES NOT EXTEND MORE THAN 4' ABOVE FINISHED GRADE.

1" SCHED 40 PVC
FRANGIBLE COUPLING WITH FLOOR FLANGE MOUNT FOR 2" POST. COORDINATE ANCHOR BOLTS INTO FOUNDATION

FRANGIBLE COUPLINGS WITHIN 1" OF FINISHED GRADE (TYP.)

R.E.I.L. (MASTER UNIT)

3/8" THICK STEEL BASE PLATE WITH 2" NPT HOLE COMPATIBLE WITH THE RESPECTIVE REIL MFR

SMOOTH TROWEL FINISH (SLOPE TO DRAIN)

#6 AWG SOLID COPPER CONDUCTOR (COUNTERPOISE/SHIELD) INSTALL APPROX 10" ABOVE POWER & CONTROL CONDUCTORS

R.E.I.L. (SLAVE UNIT)

2" GRSC (TYP.)

INTERNAL GROUND STRAP/LUG ON BASE CAN (TYP.)

L-867, CLASS 1A, SIZE D, 24" BASE

610 CONCRETE 4" MIN. THICK

3" SCHED 40 PVC

1 #8 USE, 1 #8 NEUTRAL IN 1" SCHED 40 PVC OR UNIT DUCT FROM RESPECTIVE SPLICE CAN

1 #8 USE, 1 #8 NEUTRAL, 1 #8 GND IN 1" SCHED 40 PVC

#6 AWG BARE COPPER GROUNDING ELECTRODE CONDUCTOR FROM REIL ENCLOSURE FRAME TO GND ROD

3/4" x 10' UL LISTED COPPER CLAD GROUND ROD, MIN. BURY 30" BELOW FINISHED GRADE. ALL CONNECTIONS TO GROUND ROD SHALL BE EXOTHERMIC WELD

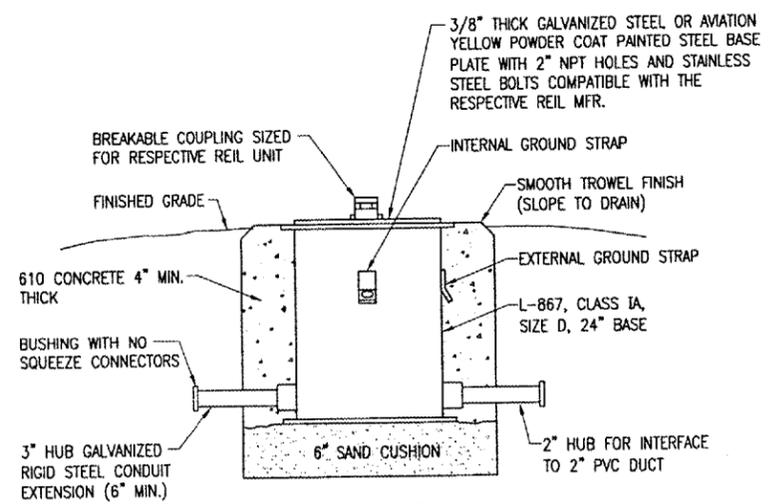
POWER & CONTROL WIRING BETWEEN REIL UNITS IN 2" SCHED 40 PVC CONDUIT (INCIDENTAL TO ITEM AR125967)

SPLICE #6 AWG CU & CONNECT TO INTERNAL GROUND LUG WITH UL LISTED BOLTED GROUND CONNECTOR (TYP.)

GRSC TO PVC ADAPTER AT HUB CONNECTION

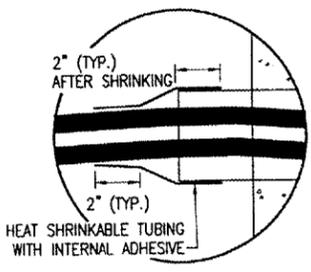
3/4" x 10' UL LISTED COPPER CLAD GROUND ROD, MIN. BURY 30" BELOW FINISHED GRADE. ALL CONNECTIONS TO GROUND ROD SHALL BE EXOTHERMIC WELD

REIL INSTALLATION DETAIL
NOT TO SCALE



REIL BASE DETAIL
(NOT TO SCALE)

NOTE:
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.



SHRINK TUBE DETAIL
(NOT TO SCALE)

REIL RELOCATION NOTES

1. THE EXISTING REILS ARE GODFREY ENGINEERING PART NO. GE420-100F. THE MANUFACTURER IS NO LONGER IN BUSINESS. CONTRACTOR SHALL CONFIRM & RECORD EXISTING WIRING & CONNECTIONS PRIOR TO RELOCATING REIL UNITS. VERIFY INSTALLATION & WIRING REQUIREMENTS WITH THE RESPECTIVE REIL MANUFACTURER'S INSTRUCTIONS.
2. THE PROPOSED 120 VAC POWER CABLES FROM THE EXISTING SPLICE CAN TO THE SAFETY SWITCH AT THE MASTER REIL UNIT SHALL BE 2-1/C #8 XLP-USE 600V UG CABLE (HOT & NEUTRAL) IN 1" UNIT DUCT OR SCHED 40 PVC CONDUIT. THE PROPOSED 120 VAC POWER CABLES FROM THE SAFETY SWITCH TO THE REIL MASTER UNIT SHALL BE 3-1/C #8 XLP-USE 600V UG CABLE (HOT, NEUTRAL, & GND) IN 1" SCHED 40 PVC CONDUIT. THE CONTRACTOR SHALL ALSO FURNISH AND INSTALL THE POWER AND CONTROL CABLES BETWEEN THE MASTER AND SLAVE REIL UNITS. THE SIZE, TYPE AND NUMBER OF CABLES TO BE INSTALLED BETWEEN THE REIL UNITS SHALL BE AS DETAILED HEREIN AND PER THE MANUFACTURER'S RECOMMENDATIONS. THE CABLE WILL BE TRENCHED AT A MINIMUM DEPTH OF 18". ALL POWER, CONTROL, & GROUNDING CONDUCTORS WILL BE INCIDENTAL TO ITEM AR125967 RELOCATE REILS.
3. ANY AND ALL TRENCHES AND DISTURBED AREAS WILL BE BACKFILLED AND RESTORED TO A SMOOTH GRADE AND SEEDED TO THE SATISFACTION OF THE ENGINEER. ALL TRENCH SETTLEMENT SHALL BE CORRECTED FOR A PERIOD OF ONE YEAR. RESTORATION, GRADING, AND SEEDING OF AREAS DISTURBED DURING THE REIL RELOCATION AND INSTALLATION OF THE PROPOSED CABLE WILL BE INCIDENTAL TO ITEM AR125967 RELOCATE REILS.
4. SAFETY SWITCH FOR REILS SHALL BE LOCATED OUTSIDE OF THE RUNWAY SAFETY AREA (80' MIN. PERPENDICULAR FROM RUNWAY PAVEMENT EDGE).
5. REILS SHALL BE AIMED AT ANGLE 10 DEGREES VERTICALLY AND TOED OUT 15 DEGREES FROM THE LINE PARALLEL TO THE RUNWAY CENTERLINE.
6. RELOCATION OF REILS SHALL BE PAID FOR UNDER ITEM AR125967 RELOCATE REILS - PER PAIR.

REVISION	DATE

CARMi MUNICIPAL AIRPORT
CARMi, ILLINOIS

IL PROJ.: CUL-3683 A.I.P. PROJ.: 3-17-0109-B7

REV. Product No.	801-07TXD-0800
File Name	E-502.DWG
Scale	NONE
Date	02/16/07
LAYOUT	KNL 02/16/07
DRAWN	MV 02/19/07
REVIEWED	CAH 03/27/07

HANSON

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

EXTEND PARTIAL
PARALLEL TAXIWAY

REIL
INSTALLATION
DETAILS

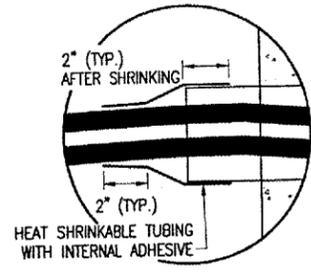
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F:\AIRPORTS\CARMi\801-07TXD\AIRPORT SHEETS\E-502.DWG - Work

THE LOCATION OF UNDERGROUND UTILITIES AS INDICATED ON THE PLANS HAS BEEN OBTAINED FROM EXISTING RECORDS. NEITHER THE OWNER NOR THE ENGINEER ASSUMES ANY RESPONSIBILITY WHATSOEVER, IN RESPECT TO THE ACCURACY OR SUFFICIENCY OF THE INFORMATION AND THERE IS NO GUARANTEE, EITHER EXPRESSED OR IMPLIED, THAT THE CONDITIONS ARE REPRESENTATIVE OF THOSE TO BE ENCOUNTERED IN THE CONSTRUCTION.

L-858 SIGN

NOTES:
SEE LIGHTING LAYOUT SHEET(S) FOR SIGN LEGEND, LOCATION, TYPE, SIZE, STYLE, AND CLASS.

NUMBER AND SPACING OF LEGS AS PER MANUFACTURER'S REQUIREMENTS.



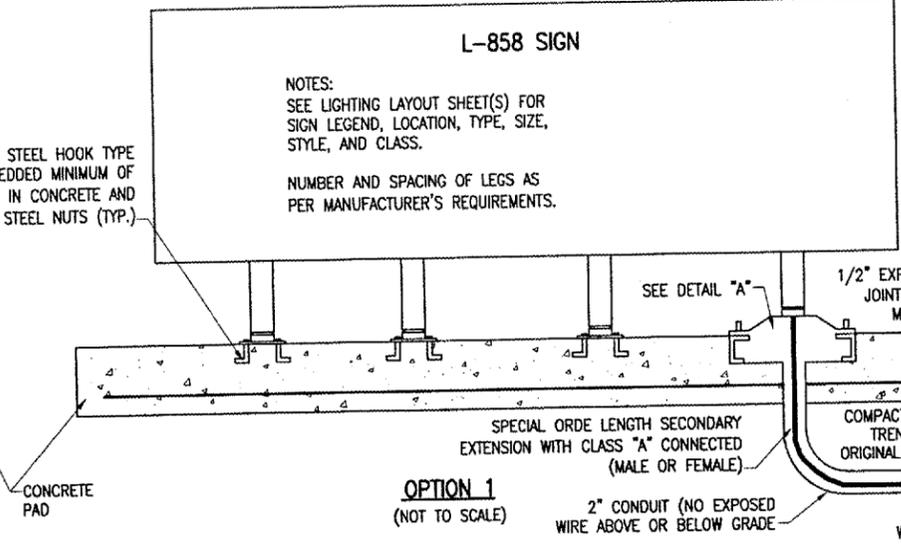
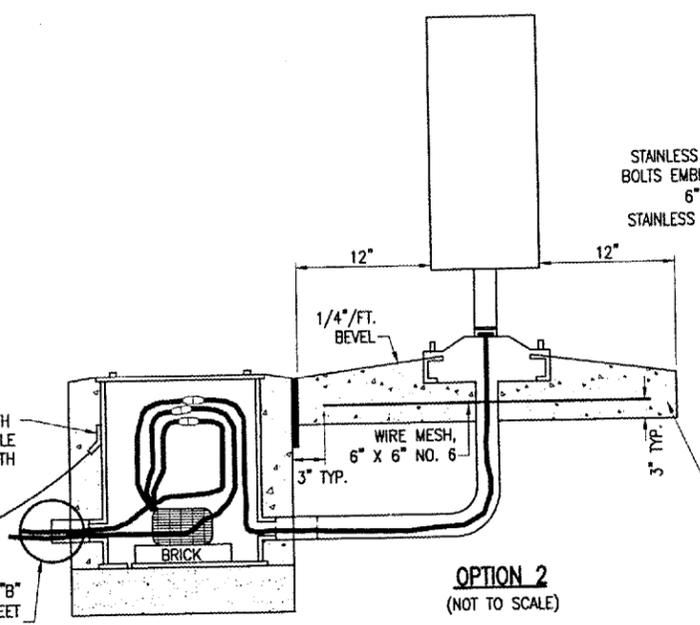
DETAIL "B"
(NOT TO SCALE)

EXTERNAL GROUND LUG WITH BOLTED CONNECTOR SUITABLE FOR DIRECT BURIAL IN EARTH OR CONCRETE

#6 AWG CU

UL LISTED COPPERCLAD GROUND ROD 5/8" DIA. x 8'L (MIN.)

SEE DETAIL "B" ON THIS SHEET



PROVIDE A MINIMUM OF THREE FEET SLACK IN EACH PRIMARY CABLE AND SECONDARY EXTENSION

COVER BOLTS

SLOPE TO DRAIN AWAY FROM L-867 BASE

EXTERNAL GROUND LUG WITH BOLTED CONNECTOR SUITABLE FOR DIRECT BURIAL IN EARTH OR CONCRETE

FINISHED GRADE

610 CONCRETE 4" MIN. THICK

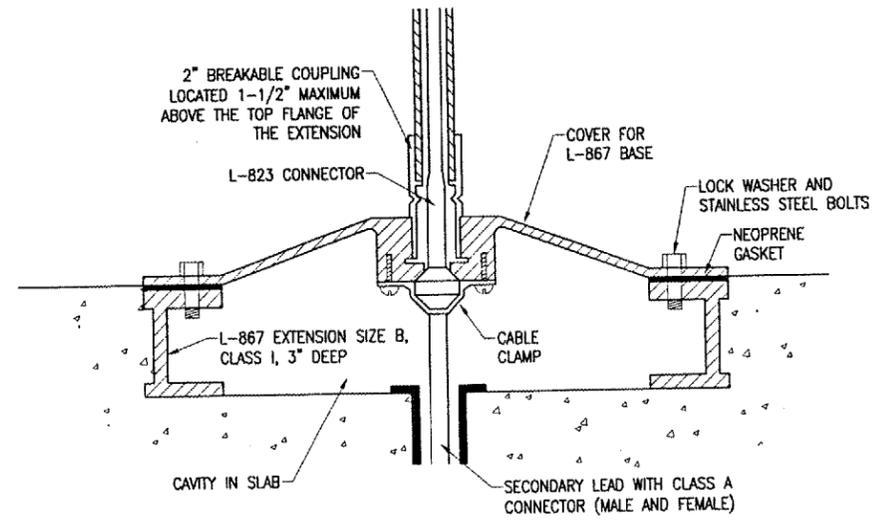
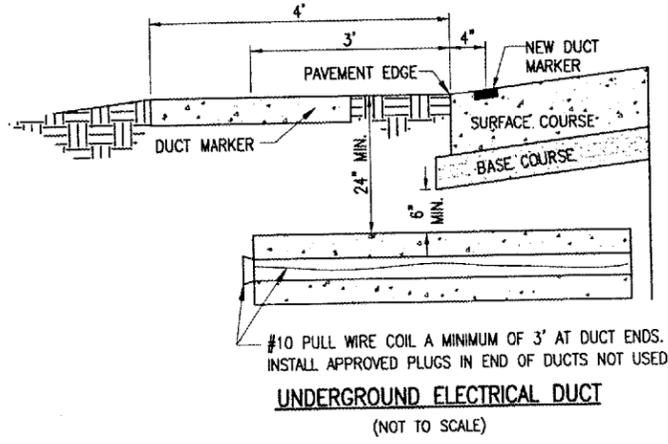
L-830 TRANSFORMER, SIZE AS REQUIRED BY SIGN MANUFACTURER

SHRINK TUBE

1/C, #8, 5 KV, L-824 TYPE 'C' CABLE

#6 AWG CU

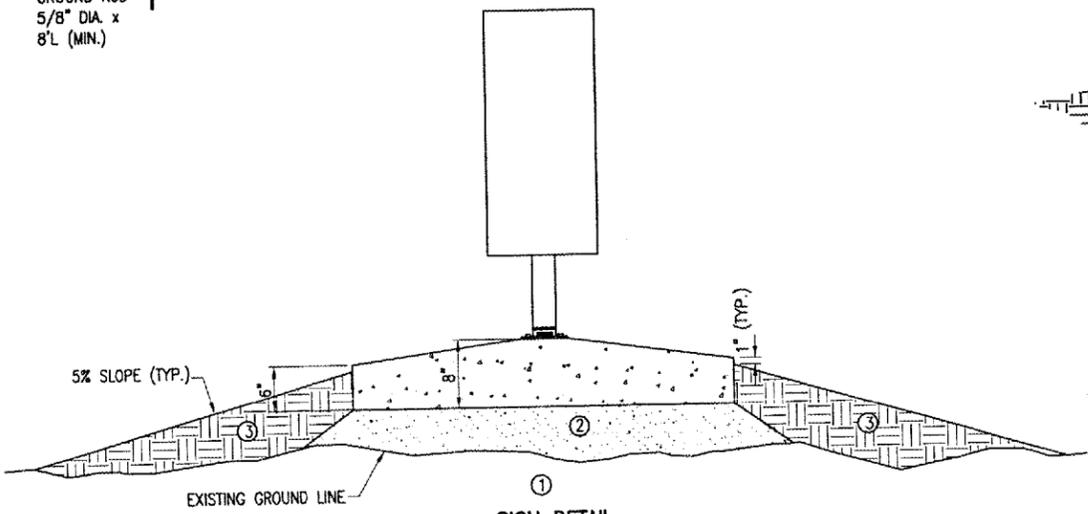
UL LISTED COPPERCLAD GROUND ROD 5/8" DIA x 8'L (MIN.)



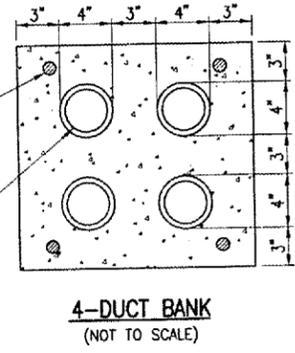
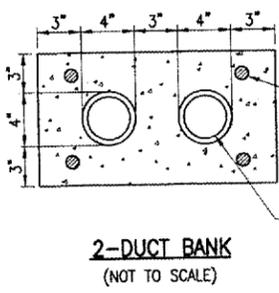
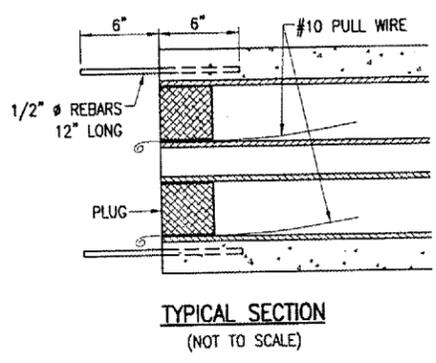
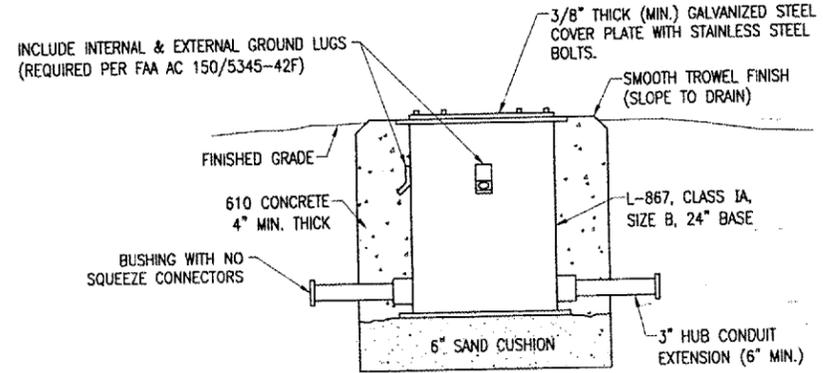
GENERAL NOTES

SEE LIGHTING LAYOUT SHEET FOR SIGN LEGEND, LOCATION, TYPE, SIZE, STYLE, AND CLASS.

SEE SHEETS 26 THROUGH 27 FOR ELECTRICAL NOTES.



- ① EXISTING SOD TO BE STRIPPED AND REMOVED
- ② SAND BACKFILL, VARIABLE DEPTH
- ③ PROPOSED TOPSOIL BACKFILL MATERIAL



REVISION	DATE

CARMi MUNICIPAL AIRPORT
CARMi, ILLINOIS

IL PROJ.: CUL-3683

A.I.P. PROJ.: 3-17-0109-B7

LAYOUT	SEP	11/16/06
DRAWN	CCC	11/16/06
REVIEWED	CAH	03/27/07

HANSON

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

EXTEND PARTIAL
PARALLEL TAXIWAY

ELECTRICAL DETAILS

BY	
REVISION	
DATE	

CARMI MUNICIPAL AIRPORT
CARMI, ILLINOIS

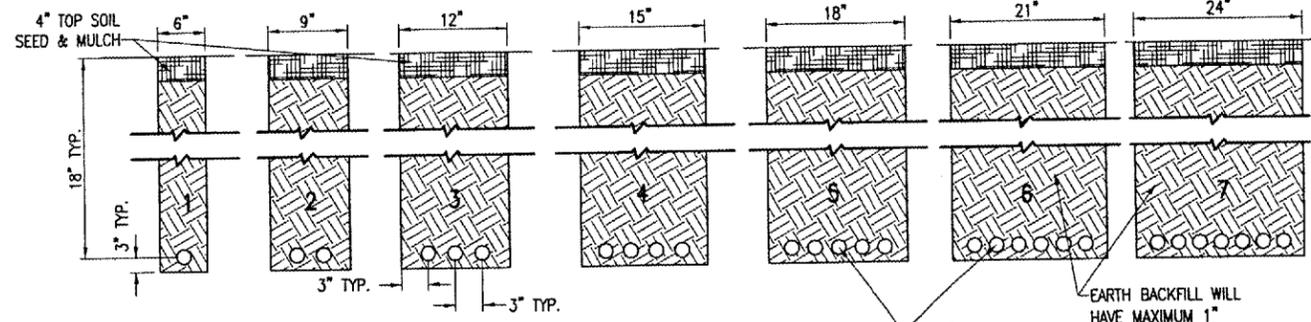
IL PROJ.: CU-3683 A.I.P. PROJ.: 3-17-0109-87

REL. Project No.	801-071X10-0800
Revision	R-542ELE.DWG
Scale	NOT TO SCALE
Date	11/16/06
LAYOUT	SEP 11/16/06
DRAWN	CCC 11/16/06
REVIEWED	CAH 03/27/07



EXTEND PARTIAL
PARALLEL TAXIWAY

ELECTRICAL DETAILS

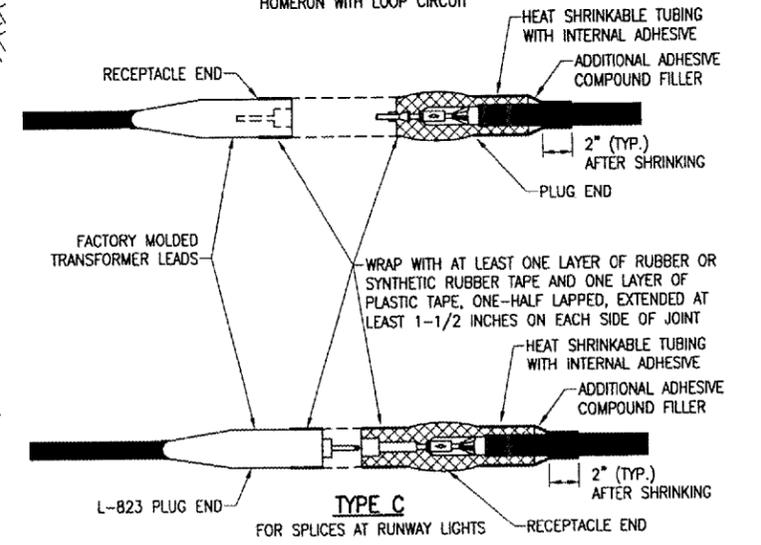
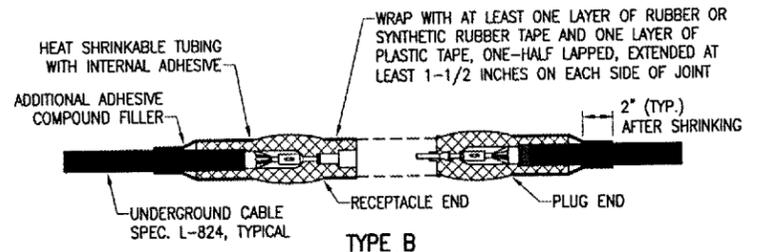
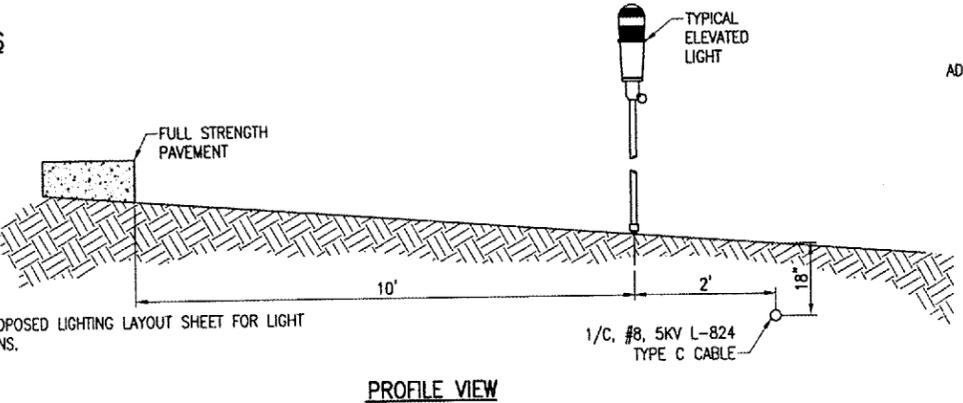
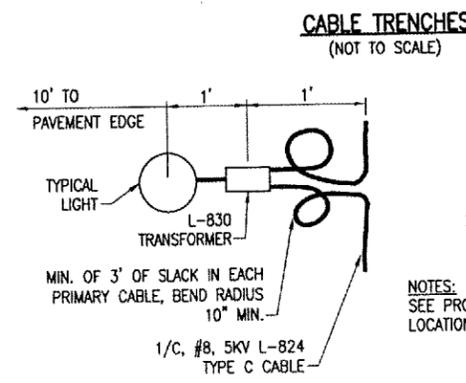
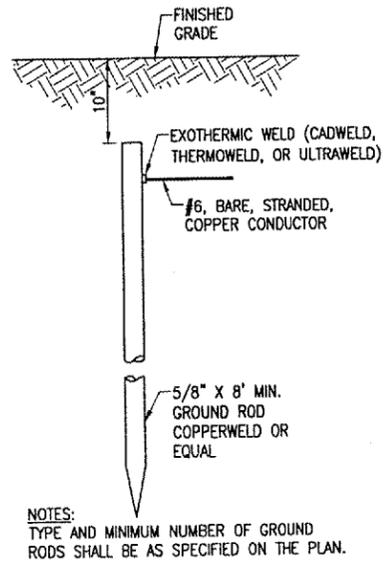
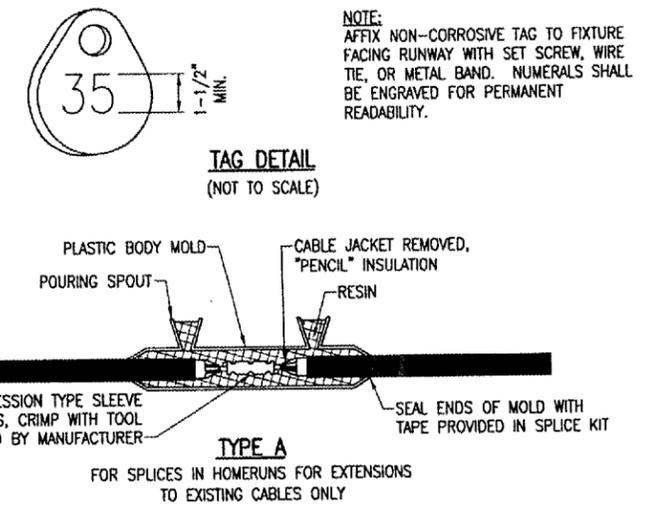
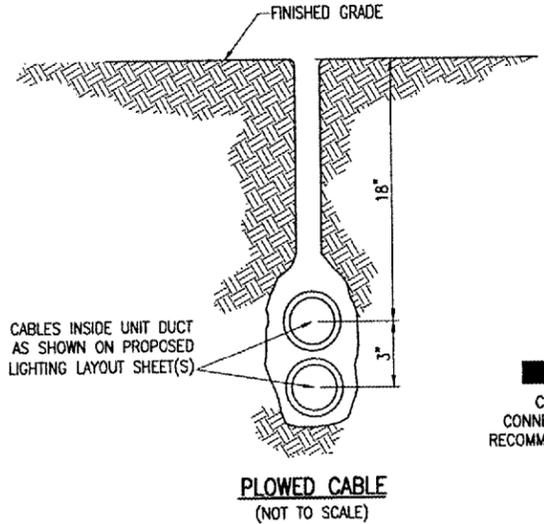


NOTES:
DETAIL NUMBERS INDICATE NO. OF CABLES.

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.



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

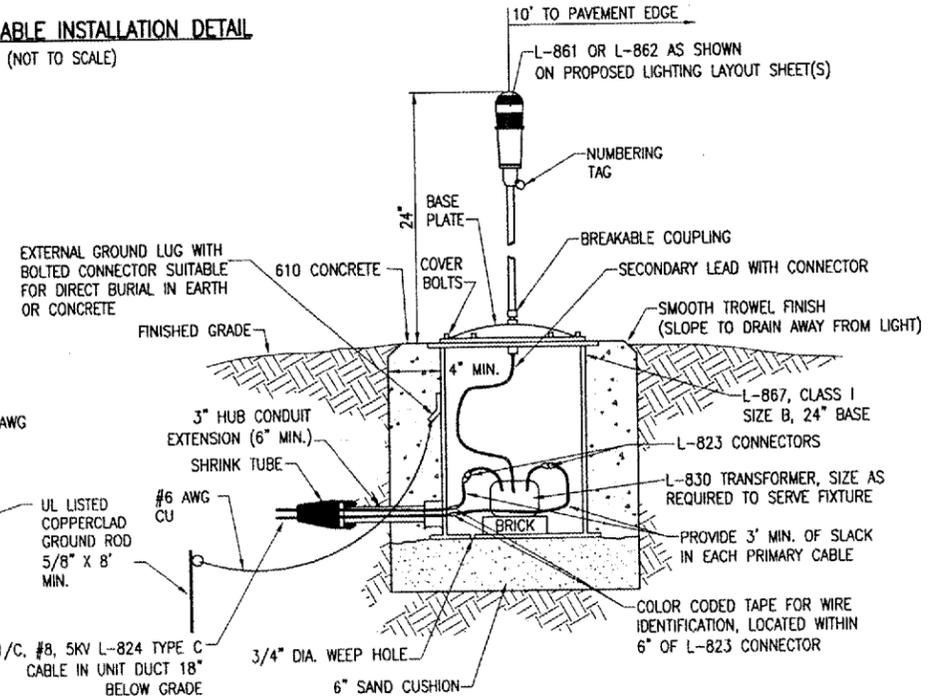
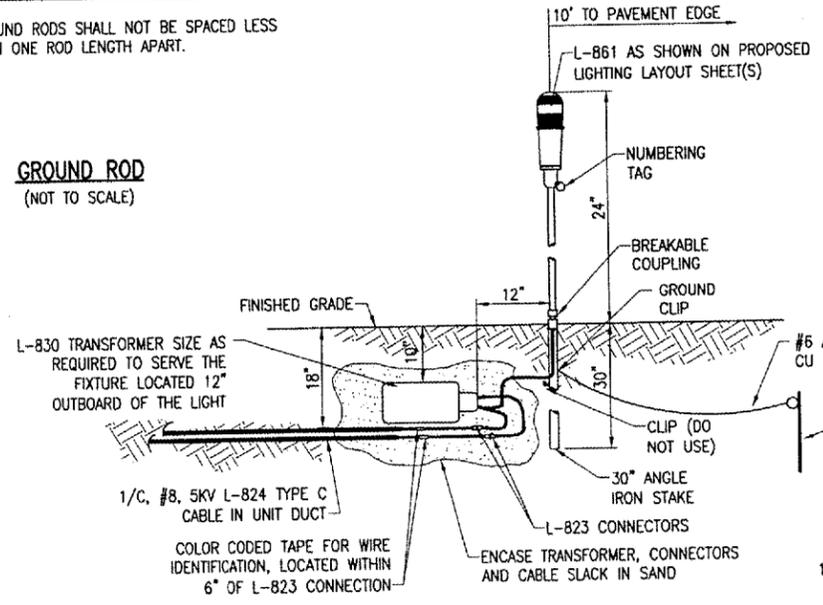
INSIDE DIAMETER OF CONNECTOR SHALL PROPERLY MATCH THE OUTSIDE DIAMETER OF CABLE.

CABLE SPLICES
(NOT TO SCALE)

PLAN VIEW

LIGHT AND CABLE INSTALLATION DETAIL
(NOT TO SCALE)

GROUND ROD
(NOT TO SCALE)



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I:\AIRPORTS\CARMI\B01-071XY\AIRPORT SHEETS\R-542ELE.DWG - ELEC DETAILS

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 WITH THE RESPECTIVE FACILITY OWNER PERSONNEL AND THE AIRPORT MANAGER.
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 SINGLE-PHASE, THREE WIRE SYSTEMS AND BLACK, RED AND BLUE SHALL BE USED FOR THREE-PHASE SYSTEMS. NEUTRAL CONDUCTORS, SIZE NO. 6 AWG OR SMALLER, SHALL BE IDENTIFIED BY A CONTINUOUS WHITE OR NATURAL GRAY OUTER FINISH ALONG ITS ENTIRE LENGTH. NEUTRAL CONDUCTORS LARGER THAN NO. 6 AWG SHALL BE IDENTIFIED EITHER BY A CONTINUOUS WHITE OR NATURAL GRAY OUTER FINISH ALONG ITS ENTIRE LENGTH OR BY THE USE OF WHITE TAPE AT ITS TERMINATIONS AND INSIDE ACCESSIBLE WIREWAYS. 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 U.L. LISTED.
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 MINIMUM.
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, CUTOFF, PANELBOARD, & CONTROL PANEL TO WARN PERSONS OF POTENTIAL ELECTRIC ARC FLASH HAZARDS, PER THE REQUIREMENTS OF NEC 110.16 "FLASH PROTECTION".

APR 01, 2008 8:48 AM HACLO00382 I:\AIRPORTS\CARMIL\801-071XX\AIRPORT\ SHEETS\R-543ELE.DWG - ELEC. NOTES

DATE	REVISION	BY

**CARMI MUNICIPAL AIRPORT
CARMI, ILLINOIS**

A.I.P. PROJ.: 3-17-0109-87
I.L. PROJ.: CUL-3683

REV. PROJECT No. 801-071XX.0800	DATE 11/16/06
FIGURE R-543ELE.DWG	SCALE 11/16/06
NOT TO SCALE	DATE 11/16/06
LAYOUT	SFP 11/16/06
DRAWN	CCC 11/16/06
REVIEWED	CAH 03/27/07



**EXTEND PARTIAL
PARALLEL TAXIWAY**

ELECTRICAL NOTES

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. 37.
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. 37.
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. 36.
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 400 FEET MAXIMUM SPACING, WITH AN ADDITIONAL MARKER AT EACH CHANGE OF DIRECTION OF THE CABLE RUN. CABLE MARKERS SHALL BE INSTALLED IMMEDIATELY ABOVE THE CABLES.
25. THERE SHALL BE NO SPLICES BETWEEN THE ISOLATION TRANSFORMERS. L-823 CONNECTORS ARE ALLOWED AT TRANSFORMER CONNECTIONS ONLY, UNLESS OTHERWISE SHOWN.
26. APPLY AN OXIDE INHIBITING, ANTI-SEIZING COMPOUND TO ALL SCREWS, NUTS AND BREAKAGE COUPLING THREADS.
27. LOCATIONS OF ENDS OF ALL UNDERGROUND DUCTS SHALL BE IDENTIFIED BY DUCT MARKERS.
28. WHERE A PARALLEL, CONSTANT VOLTAGE PAPI SYSTEM IS PROVIDED, THE "T" SPLICES SHALL BE OF THE CAST TYPE.
29. CONCRETE USED FOR SLABS, FOOTINGS, BACKFILL AROUND TRANSFORMER HOUSINGS, MARKINGS, ETC. SHALL BE 3000 PSI, AIR-ENTRAINED.
30. ALL POWER AND CONTROL CABLES IN MAN/HAND HOLES SHALL BE TAGGED. USE EMBOSSED COPPER STRIPS TO BE ATTACHED AT BOTH ENDS TO THE CABLE BY THE USE OF PLASTIC STRAPS. MINIMUM OF TWO TAGS SHALL BE PROVIDED ON EACH CABLE IN A MAN/HAND HOLE-ONE AT THE CABLE ENTRANCE AND ONE AT THE CABLE EXIT.
31. THE LOCATION, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ON THE PLANS IS NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES OF HIS OPERATIONAL PLANS AND SHALL OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES DETAILED INFORMATION AND ASSISTANCE RELATIVE TO THE LOCATION OF THEIR FACILITIES AND THE WORKING SCHEDULE OF THE COMPANIES FOR REMOVAL OR ADJUSTMENT WHERE REQUIRED. IN THE EVENT AN UNEXPECTED UTILITY INTERFERENCE IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY COMPANY OF JURISDICTION. THE ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY SUCH MAINS AND SERVICES SHALL BE RESTORED TO SERVICE AT ONCE AND PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT. CALL J.U.L.I.E. FOR UTILITY INFORMATION AT 1-800-892-0123. ALSO CONTACT AIRPORT MANAGER AND/OR RESPECTIVE AIRPORT PERSONNEL FOR ASSISTANCE IN LOCATING UNDERGROUND AIRPORT CABLES AND/OR UTILITIES. CONTACT FAA FOR ASSISTANCE IN LOCATING THEIR CABLES.

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 150/5340-30C 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 150/5340-30C THE RESISTANCE TO GROUND OF THE RESPECTIVE MOUNTING STAKE OR LIGHT BASE (WITH GROUND ROD CONNECTED) MUST BE 25 OHMS OR LESS.
4. **GROUNDING FOR REILS.** GROUNDING FOR REILS SHALL CONFORM TO THE RESPECTIVE REIL MANUFACTURER'S INSTALLATION INSTRUCTIONS, AS DETAILED ON THE PLANS, AND AS SPECIFIED HEREIN. FURNISH AND INSTALL A 3/4-INCH DIAMETER BY 10-FOOT LONG COPPER CLAD GROUND ROD AT EACH REIL UNIT. BOND EACH REIL UNIT HOUSING AND THE REIL BASE CAN TO THE RESPECTIVE GROUND ROD IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS WITH A #6 AWG BARE SOLID OR STRANDED (PER REIL MANUFACTURER REQUIREMENTS) COPPER GROUNDING ELECTRODE CONDUCTOR. TOP OF GROUND RODS SHALL BE BURIED 30 INCHES BELOW GRADE. ALL CONNECTIONS TO GROUND RODS SHALL BE EXOTHERMIC WELD AS MANUFACTURED BY CADWELD, THERMOWELD, OR ULTRAWELD. CONNECTIONS TO REIL UNIT FRAMES SHALL BE AS RECOMMENDED BY THE MANUFACTURER OR WITH UL LISTED GROUNDING CONNECTORS. CONTRACTOR SHALL CONFIRM COUNTERPOISE REQUIREMENTS AND/OR ADDITIONAL GROUNDING REQUIREMENTS WITH THE RESPECTIVE REIL MANUFACTURER'S INSTALLATION INSTRUCTIONS AND/OR RECOMMENDATIONS.

APR 01, 2008 10:04 AM HAGL000382
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DATE	REVISION	CARM MUNICIPAL AIRPORT CARM, ILLINOIS		I.L. PROJ.: CUL-3683 A.I.P. PROJ.: 3-17-0109-B7
I.L. Project No. B01-07TXXD.0800 Filename: R-544ELE.DWG Scale: NOT TO SCALE Date: 11/16/06		LAYOUT SEP 11/16/06 DRAWN CCC 11/16/06 REVIEWED CAH 03/27/07	 Hanson Professional Services Inc. 1525 South Sixth Street Springfield, Illinois 62703-2886 Offices Nationwide	
EXTEND PARTIAL PARALLEL TAXIWAY		ELECTRICAL NOTES		
27		27 of 55 sheets		

ELECTRICAL LEGEND -- ONE-LINE DIAGRAM

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

ELECTRICAL LEGEND -- SCHEMATIC

	NORMALLY OPEN (N.O.) CONTACT
	NORMALLY CLOSED (N.C.) CONTACT
	STARTER COIL, * = STARTER NUMBER
	OVERLOAD RELAY CONTACT
	CONTROL RELAY, * = CONTROL RELAY NUMBER
	RELAY, * = RELAY NUMBER
	TOGGLE SWITCH / 2 POSITION SWITCH
	2-POSITION SELECTOR SWITCH
	3-POSITION SELECTOR SWITCH (H-O-A SHOWN)
	2 POLE DISCONNECT SWITCH
	3 POLE DISCONNECT SWITCH
	PHOTOCELL
	TERMINAL BLOCK, * = TERMINAL NUMBER
	DEVICE TERMINAL, * = DEVICE TERMINAL NUMBER
	INTERNAL PANEL WIRING
	FIELD WIRING
	FUSE
	GROUND BUS OR TERMINAL
	NEUTRAL BUS
	GROUND, GROUND ROD, GROUND BUS
	INDUSTRIAL CONTROL RELAY OR LIGHTING CONTACTOR
	S1 CUTOUT HANDLE REMOVED
	S1 CUTOUT HANDLE INSERTED
	N.O. THERMAL SWITCH
	N.C. THERMAL SWITCH
	L-830 SERIES ISOLATION TRANSFORMER

ELECTRICAL ABBREVIATIONS

A.F.F.	ABOVE FINISHED FLOOR
A, AMP	AMPERES
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
BKR	BREAKER
C	CONDUIT
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CR	CONTROL RELAY
CU	COPPER
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 CIRCULAR 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
MTL	MEDIUM INTENSITY TAXIWAY LIGHT
NDB	NON-DIRECTIONAL BEACON
PAP	PRECISION APPROACH PATH INDICATOR
PLASI	PULSE LIGHT APPROACH SLOPE INDICATOR
RAIL	RUNWAY ALIGNMENT INDICATING LIGHTS
REL	RUNWAY END IDENTIFIER LIGHT
RVR	RUNWAY VISUAL RANGE
VAD	VISUAL APPROACH DESCENT INDICATOR
VASI	VISUAL APPROACH SLOPE INDICATOR
VDR	VERY HIGH FREQUENCY OMNIDIRECTIONAL RANGE FACILITY
WC	WIND CONE

- NOTES:**
- 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.
 - CONTRACTOR SHALL COORDINATE WORK AND ANY POWER OUTAGES WITH THE RESPECTIVE FACILITY OWNER PERSONNEL AND THE AIRPORT MANAGER.
 - 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
 - SEE RESPECTIVE SITE PLANS FOR SITE LEGEND INFORMATION.
 - LTFMC DENOTES LIQUID TIGHT FLEXIBLE METAL CONDUIT UL LISTED, SUNLIGHT RESISTANT, & SUITABLE FOR GROUNDING. LIQUID TIGHT FLEXIBLE METAL CONDUIT AND ASSOCIATED FITTINGS SHALL BE U.L. LISTED TO MEET THE REQUIREMENTS OF NEC 350.6. LIQUID TIGHT FLEXIBLE METAL CONDUIT THAT IS USED FOR FLEXIBILITY (INCLUDING CONNECTIONS TO CCR'S & TRANSFORMERS) SHALL REQUIRE AN EXTERNAL BONDING JUMPER OR INTERNAL EQUIPMENT GROUNDING CONDUCTOR PER NEC 350.60. EXTERNAL BONDING JUMPERS USED WITH CCR INSTALLATIONS SHALL BE #6 AWG COPPER (MINIMUM). DO NOT INSTALL LTFMC THAT IS NOT UL LISTED.

BY	
REVISION	
DATE	

CARM MUNICIPAL AIRPORT
CARM, ILLINOIS

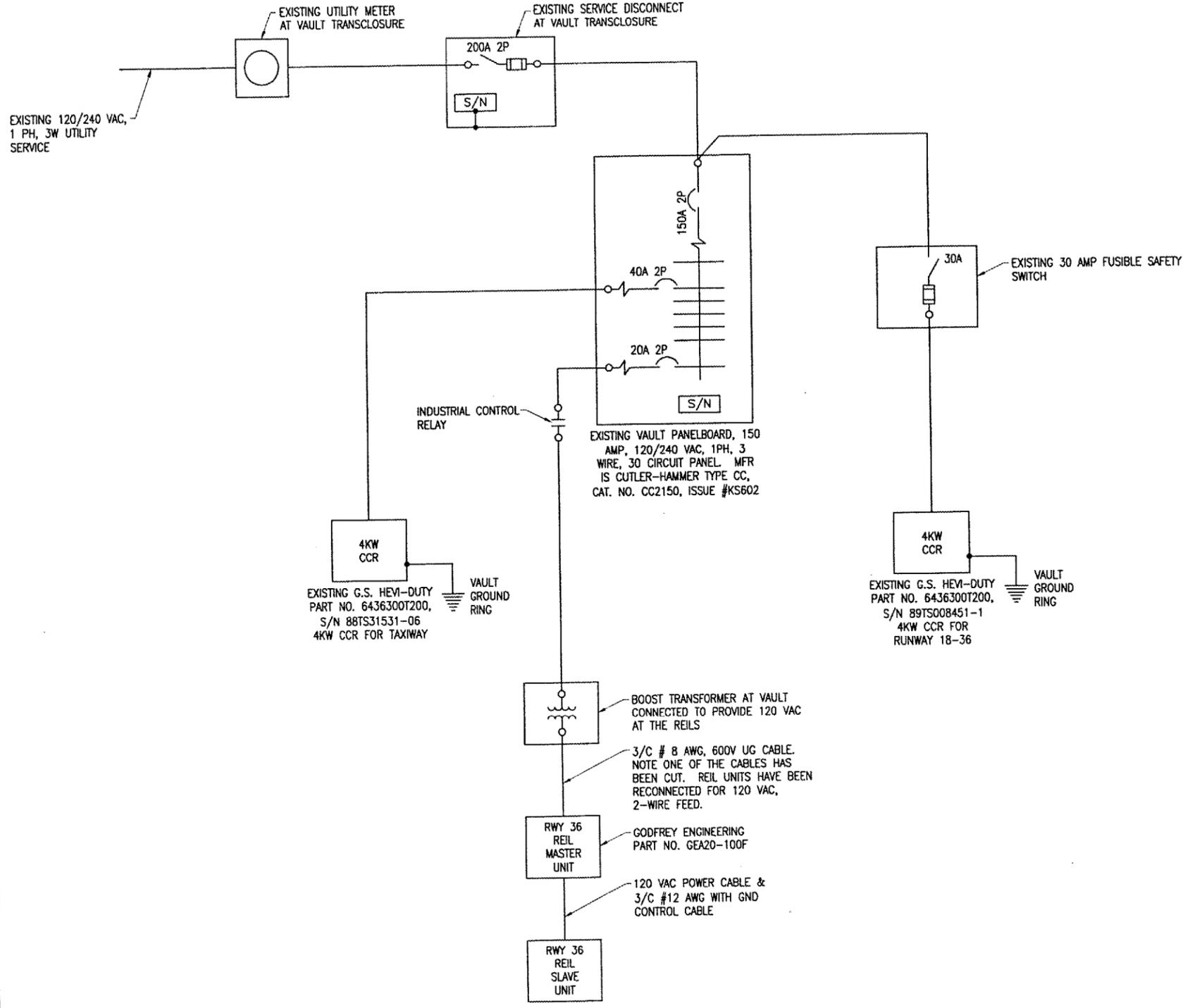
ILL. PROJ.: 3-17-0109-B7
ILL. PROJ.: CUL-3683

FILE Project No.	801-071XVD_0800
Filename	E-001.DWG
Scale	NONE
Date	02/05/07
LAYOUT	KNL 02/05/07
DRAWN	MV 02/05/07
REVIEWED	CAH 03/27/07



EXTEND PARTIAL
PARALLEL TAXIWAY

ELECTRICAL LEGEND
AND ABBREVIATIONS

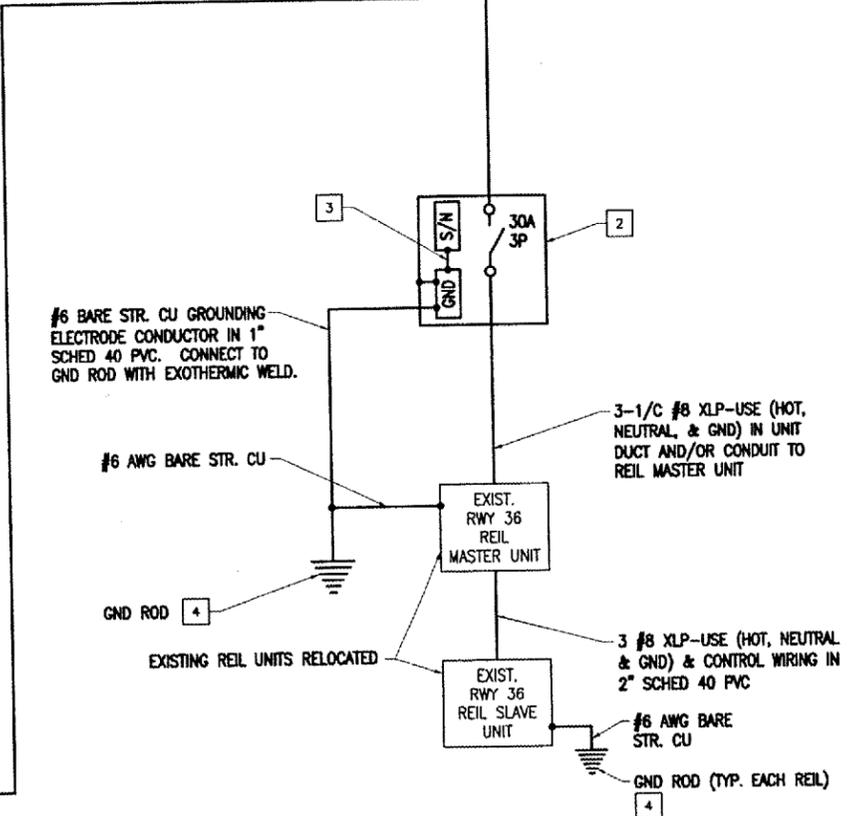
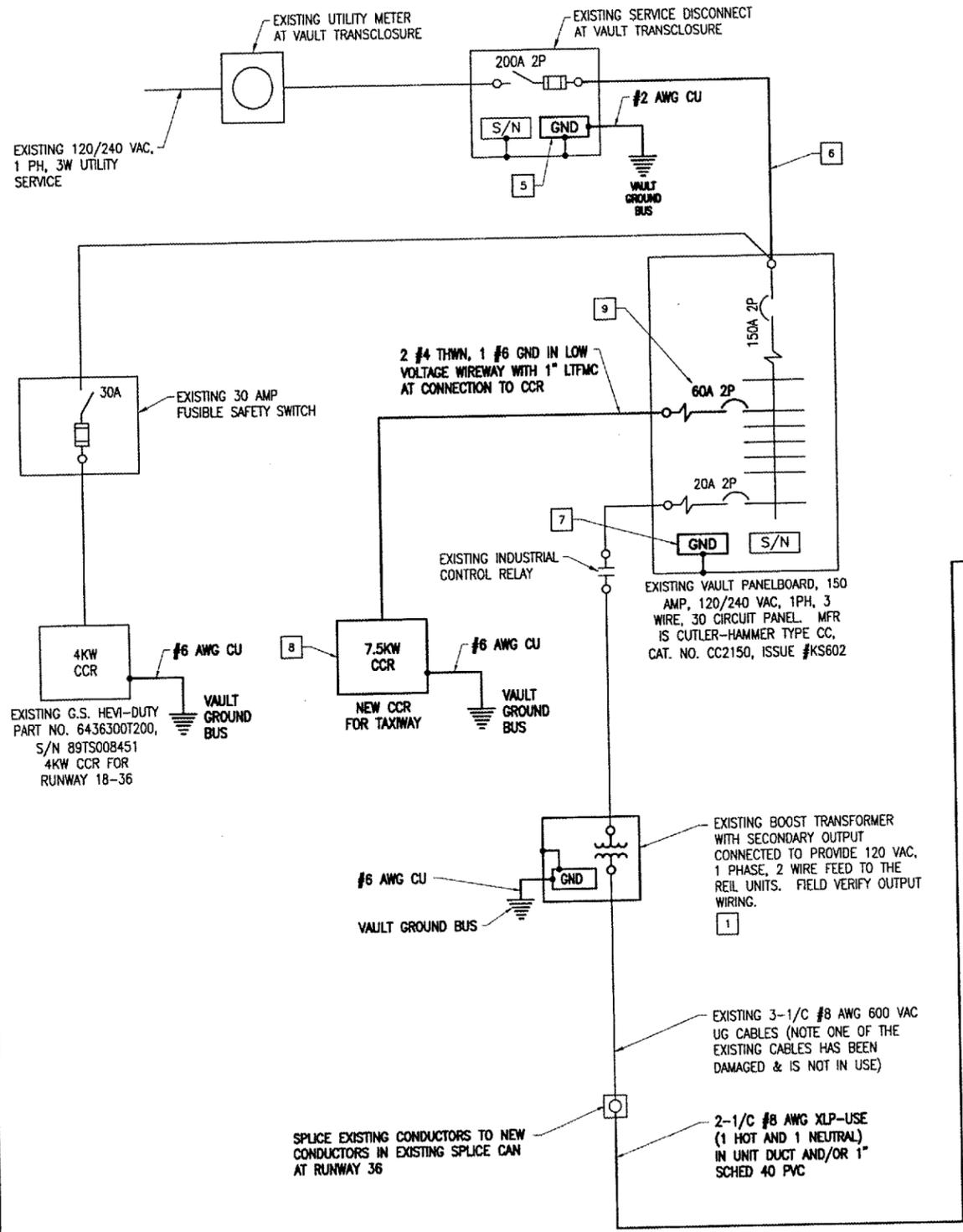


EXISTING VAULT ELECTRICAL ONE LINE DIAGRAM

- NOTES**
1. ALL VAULT WORK AND/OR POWER OUTAGES SHALL BE COORDINATED WITH THE AIRPORT MANAGER AND THE RESIDENT ENGINEER.
 2. BASED ON INFORMATION FROM RECORD DRAWINGS THE EXISTING VAULT WAS INSTALLED IN 1975. BASED ON INFORMATION FROM THE AIRPORT, MODIFICATIONS AND ADDITIONS HAVE TAKEN PLACE SINCE THE ORIGINAL INSTALLATION. EXISTING INFORMATION NOTED ON THE PLANS IS BASED ON RECORD DRAWINGS AND INFORMATION IN PART, PROVIDED BY OTHERS. THE ACTUAL CONDITIONS MIGHT VARY FROM THOSE INDICATED ON THE PLANS. CONTRACTOR SHALL FIELD VERIFY & CONFIRM EXISTING CONDITIONS.
 3. THE EXISTING CONSTANT CURRENT REGULATOR FOR THE TAXIWAY SHALL BE REPLACED WITH A 7.5 KW UNIT TO ACCOMMODATE THE ADDITIONAL TAXIWAY LIGHTING LOADS ASSOCIATED WITH THE TAXIWAY EXTENSION. THE EXISTING CONSTANT CURRENT REGULATOR SHALL BE TURNED OVER TO THE AIRPORT AND RELOCATED TO STORAGE AS DIRECTED BY THE AIRPORT MANAGER.

APR 27 2007 7:50 AM BAK \\AIPORTS\CARMI\801-07TX\AIRPORT\SHEETS\E-601.DWG - Work

DATE	REVISION						
<p>CARMI MUNICIPAL AIRPORT CARMI, ILLINOIS</p>							
<p>IL PROJ.: CUI-3683 A.I.P. PROJ.: 3-17-0109-B7</p>							
<p>REL Project No. 801-07TXD 0800 Ename E-601.DWG Scale NONE Date 02/05/07</p>		<p>LAYOUT KNL 02/05/07 DRAWN MW 02/05/07 REVIEWED CAH 03/27/07</p>		<p>HANSON Hanson Professional Services Inc. 1525 South Sixth Street Springfield, Illinois 62703-2886 Offices Nationwide</p>			
<p>EXTEND PARTIAL PARALLEL TAXIWAY</p>				<p>EXISTING VAULT ELECTRICAL ONE LINE DIAGRAM</p>			
<p>29</p>							



NEW ELECTRICAL ONE LINE DIAGRAM FOR VAULT

NOTES

1. ALL VAULT WORK AND/OR POWER OUTAGES SHALL BE COORDINATED WITH THE AIRPORT MANAGER.
2. ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN CONFORMANCE WITH NFPA 70 (NEC MOST CURRENT ISSUE IN FORCE), THE RESPECTIVE EQUIPMENT MANUFACTURER'S DIRECTIONS AND ALL OTHER APPLICABLE LOCAL CODES, LAWS, ORDINANCES AND REQUIREMENTS IN FORCE. ANY INSTALLATIONS WHICH VOID THE U.L LISTING, ETL LISTING, (OR OTHER THIRD PARTY LISTING) AND/OR THE MANUFACTURER'S WARRANTY OF A DEVICE WILL NOT BE PERMITTED.
3. ALL EQUIPMENT NOT LABELED AS "EXISTING" IS NEW.
4. ADDITIONAL EXISTING CIRCUITS NOT SHOWN FOR CLARITY.
5. HIGH VOLTAGE & LOW VOLTAGE CIRCUITS SHALL NOT BE INSTALLED IN THE SAME RACEWAY.
6. LTFMC DENOTES LIQUID TIGHT FLEXIBLE METAL CONDUIT UL LISTED TO MEET NEC 350.6.
7. VAULT WORK SHALL BE PAID FOR UNDER ITEM AR109200.
8. STEP DOWN TRANSFORMER FOR REILS SHALL BE LOCATED AS SHOWN ON THE PROPOSED ELECTRICAL PLAN SHEETS. FIELD VERIFY LOCATION OF STEP DOWN TRANSFORMER AND ASSOCIATED SAFETY SWITCHES WITH RESIDENT ENGINEER.
9. RELOCATION OF REILS SHALL BE PAID FOR UNDER ITEM AR125967 RELOCATE REILS - PER PAIR.
10. PROVIDE HOT DIPPED GALVANIZED STEEL STRUT SUPPORT, UNISTRUT P1000HG, OR APPROVED EQUAL, TO MOUNT EQUIPMENT.

KEYED NOTES

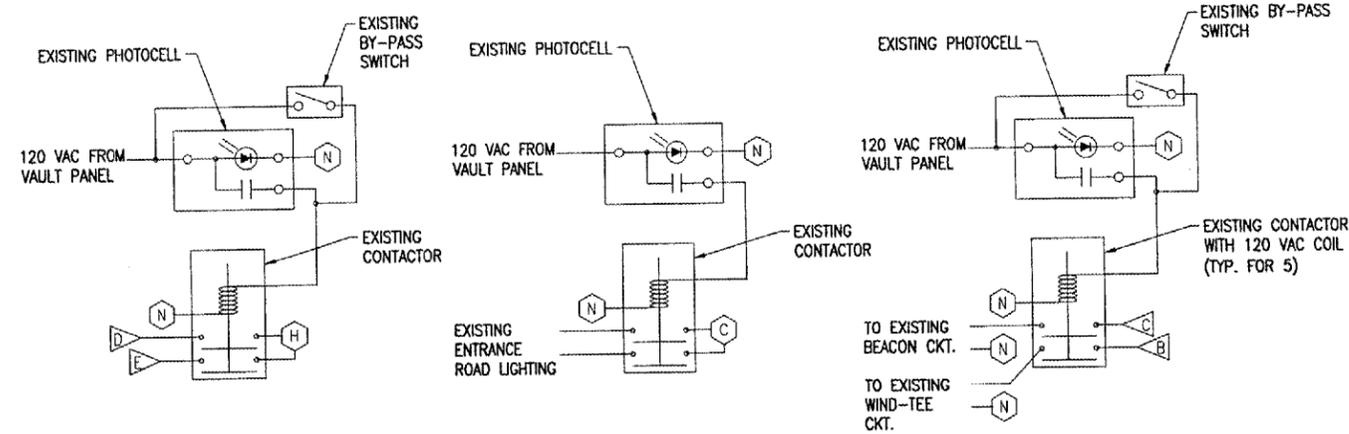
- 1 TRANSFORMER SECONDARY NEUTRAL SHALL BE BONDED TO GROUND.
- 2 30 AMP, 3 POLE, 600 VAC, UL LISTED HEAVY DUTY NOT FUSIBLE SAFETY SWITCH IN A NEMA 3R & 12 ENCLOSURE WITHOUT KNOCKOUTS, SQUARE D CLASS 3110, CAT. NO. HU361AWK WITH NEUTRAL ASSEMBLY, OR APPROVED EQUAL. INCLUDE EQUIPMENT GROUND KIT. USE CENTER POLE FOR SINGLE PHASE APPLICATION WITH ONLY ONE HOT CONDUCTOR. LOCATE NEAR MASTER REIL UNIT OUTSIDE RUNWAY SAFETY AREA.
- 3 BOND NEUTRAL TO GROUND WITH #8 AWG CU BONDING JUMPER OR BONDING SCREW IN CONFORMANCE WITH 2005 NEC 250.32
- 4 10'L x 3/4" DIA UL LISTED COPPERCLAD GND ROD. MIN. BURY 30" BELOW GRADE. ALL CONNECTIONS TO GND RODS SHALL BE EXOTHERMIC WELD.
- 5 FURNISH & INSTALL GROUND LUGS/BAR IN SERVICE DISCONNECT TO ACCOMMODATE GROUND WIRES. NEUTRAL SHALL BE BONDED TO GROUND. BOND SERVICE DISCONNECT ENCLOSURE TO VAULT GROUND BUS WITH #2 AWG COPPER GROUNDING ELECTRODE CONDUCTOR.
- 6 FURNISH & INSTALL #6 AWG COPPER EQUIPMENT GROUND WIRE FROM SERVICE DISCONNECT TO VAULT PANELBOARD. ROUTE WITH EXISTING FEEDER CONDUCTORS.
- 7 FURNISH & INSTALL COPPER EQUIPT. GROUND BAR WITH 12 TERMINALS/TAPS SUITABLE FOR #14 AWG TO #4 AWG CONDUCTORS, ILSCO CAT. NO. D167-12 OR EQUAL.
- 8 SEE SPECIAL PROVISION SPECS ITEM 109 FOR NEW CONSTANT CURRENT REGULATOR REQUIREMENTS.
- 9 FURNISH & INSTALL A NEW CIRCUIT BREAKER FOR THE CONSTANT CURRENT REGULATOR SIZED PER THE RESPECTIVE CCR MANUFACTURER'S RECOMMENDATION AND NEC.

APR 27, 2007 7:51 AM BAK E:\AIRPORTS\CARMI\601-DTXX\AIRPORT\SHEET\5\E-602.DWG - Work

BY		REVISION		DATE					
CARMI MUNICIPAL AIRPORT CARMI, ILLINOIS									
A.I.P. PROJ.: 3-17-0109-87 IL PROJ.: CUL-3683									
THE Project No. 801-07TXD_0800		E-602.DWG		DATE 02/16/07		KIL		02/19/07	
Scale NONE		NONE		DATE 02/16/07		LAYOUT		03/27/07	
						DRAWN		CAH	
						REVIEWED		CAH	
HANSON									
Hanson Professional Services Inc. 1525 South Sixth Street Springfield, Illinois 62703-2886 Chicago Nationwide									
EXTEND PARTIAL PARALLEL TAXIWAY					NEW ELECTRICAL ONE LINE DIAGRAM FOR VAULT				
30									
30 of 55 sheets									

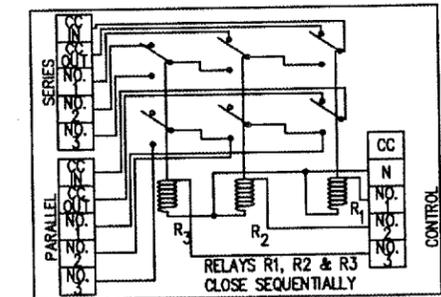
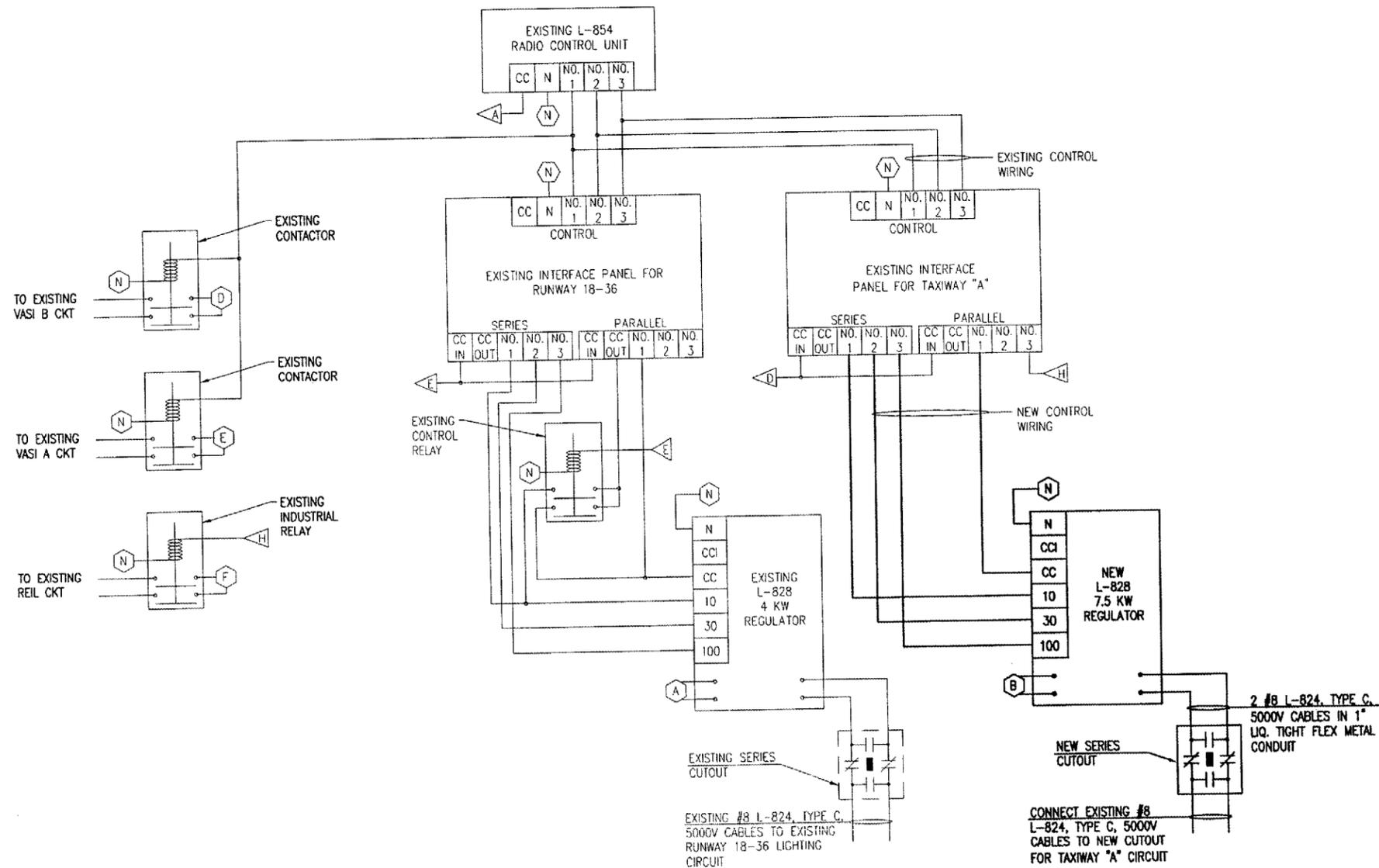
NOTES

1. ALL ELECTRICAL EQUIPMENT WILL BE WIRED IN ACCORDANCE WITH THE SCHEMATIC WIRING DIAGRAM AND ALL APPLICABLE CODES.
2. ALL CONTROL CABLE WILL BE NO. 12 AWG COPPER, 600 VOLT CABLE.
3. ALL ELECTRICAL EQUIPMENT WILL BE PROPERLY LABELED AND ALL ELECTRICAL CABLES WILL BE TAGGED.
4. ALL ELECTRICAL CABLES INSIDE THE VAULT WILL BE IN CONDUIT OR DUCT.
5. THE RUNWAY/TAXIWAY CIRCUITS WILL BE CONTROLLED BY THE L-854 RADIO CONTROL UNIT IN THE FOLLOWING MANNER:
 3 CLICKS - 10% BRIGHTNESS
 5 CLICKS - 30% BRIGHTNESS
 7 CLICKS - 100% BRIGHTNESS
6. RADIO CONTROL UNIT, PHOTOCELL, CONTROL RELAYS, CONTACTORS, CCR FOR RWY 18-36 AND THE RESPECTIVE INTERFACE PANEL, & CUTOUT ARE EXISTING. INTERFACE PANEL FOR TAXIWAY CCR IS EXISTING.
7. 7.5 KW CONSTANT CURRENT REGULATOR FOR TAXIWAY AND ASSOCIATED CUTOUT, 240 VAC POWER WIRING, CONTROL WIRING, & 5000V L-824 CABLES ARE NEW AND SHALL BE FURNISHED & INSTALLED UNDER ITEM AR109200.
8. EQUIPMENT GROUND WIRES SHALL BE INCLUDED WITH EACH NEW BRANCH/FEEDER CIRCUIT & THE NEW CONTROL CIRCUIT, TO THE CONSTANT CURRENT REGULATOR.



SHEET LEGEND

- (A) FEED FROM 30A, 2P FUSIBLE SAFETY SWITCH (RWY 18-36 CCR)
- (B) VAULT PANEL 240 VAC CKT (TAXIWAY "A" CCR)
- (C) VAULT PANEL 240 VAC CKT (ENTRANCE ROAD LIGHTS)
- (D) VAULT PANEL 240 VAC CKT (VASI B)
- (E) VAULT PANEL 240 VAC CKT (VASI A)
- (F) VAULT PANEL 240 VAC CKT (REILS)
- (G) RESERVED
- (H) VAULT PANEL 120/240 VAC CKT (CONTROL FOR CCR'S)
- (N) N DESIGNATES NEUTRAL FROM THE RESPECTIVE PANEL THAT POWERS THE DEVICE. FOR CONTROL CIRCUIT INPUTS TO CCR'S N SHALL BE FROM THE RESPECTIVE INTERFACE PANEL CIRCUIT NEUTRAL CONNECTION.
- (A) VAULT PANEL 120 VAC CKT (L-854 RADIO)
- (B) VAULT PANEL 120 VAC CKT (WIND-TEE)
- (C) VAULT PANEL 120 VAC CKT (BEACON)
- (D) 120 VAC POWER FOR TAXIWAY INTERFACE PANEL
- (E) 120 VAC POWER FOR RUNWAY INTERFACE PANEL
- (H) PARALLEL NO. 3 OUTPUT FROM INTERFACE PANEL FOR TAXIWAY CCR



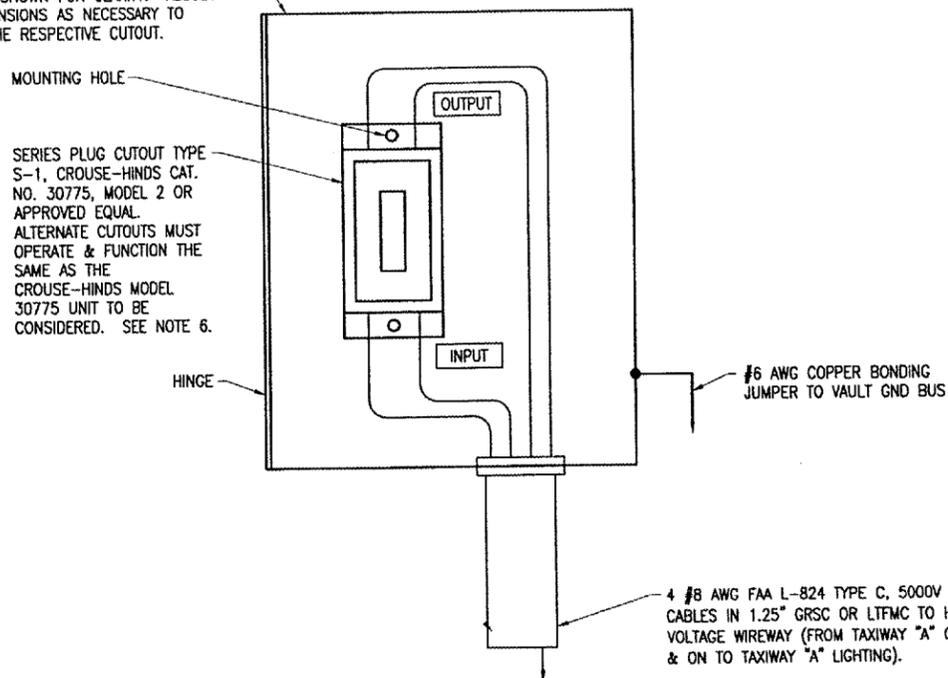
TYP. INTERFACE PANEL DETAIL

AIRFIELD LIGHTING SCHEMATIC WIRING DIAGRAM

APR 27, 2007 7:52 AM BAK C:\AIRPORTS\CARMIL\801-07TAXI\AIRPORT\SHEETS\E-603.DWG - Work

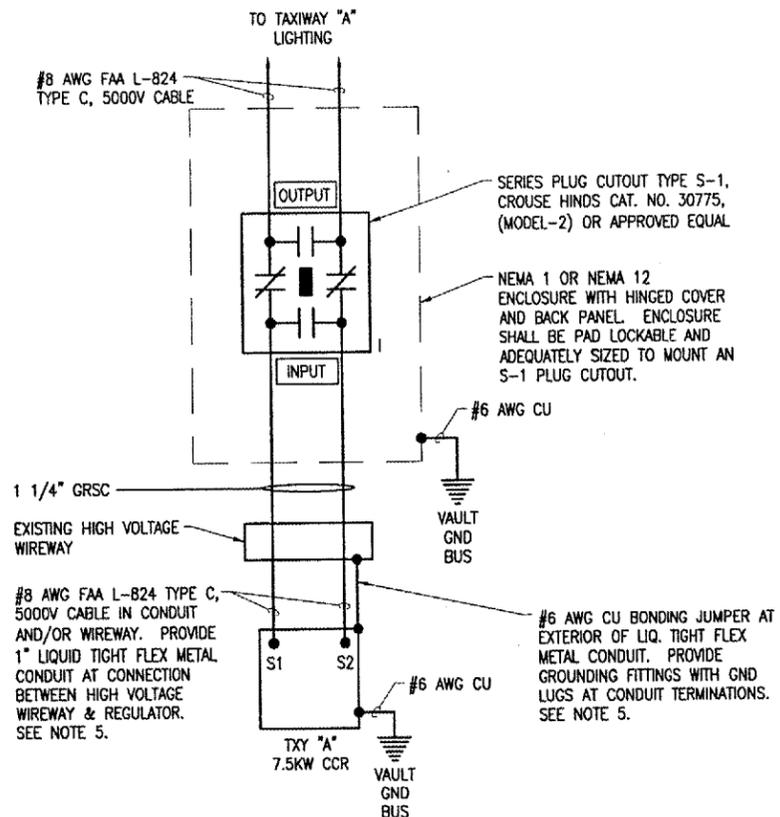
BY	
REVISION	
DATE	
CARMIL MUNICIPAL AIRPORT CARMIL, ILLINOIS	
A.I.P. PROJ.: 3-17-0109-B7	
ILL. PROJ.: CUL-3683	
Project No.	801-07TAXI 0800
Filename	E-603.DWG
Scale	NONE
Date	02/05/07
LAYOUT	KNL 02/05/07
DRAWN	MY 02/05/07
REVIEWED	CAH 03/27/07
HANSON	
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EXTEND PARTIAL PARALLEL TAXIWAY AIRFIELD LIGHTING WIRING SCHEMATIC	
31	
31 of 55 sheets	

14"H x 12"W x 8"D (APPROXIMATE DIMENSIONS)
NEMA 1 OR NEMA 12 ENCLOSURE WITH HINGED
COVER & BACK PANEL. NOTE FRONT DOOR OF
ENCLOSURE NOT SHOWN FOR CLARITY. ADJUST
ENCLOSURE DIMENSIONS AS NECESSARY TO
ACCOMMODATE THE RESPECTIVE CUTOUT.



SERIES PLUG CUTOUT MOUNTING DETAIL

NOT TO SCALE



HIGH VOLTAGE WIRING SCHEMATIC

NOTES

1. PROVIDE PHENOLIC ENGRAVED LEGEND PLATES FOR EACH CONSTANT CURRENT REGULATOR (EXISTING & NEW) NOTING THE RUNWAY AND/OR TAXIWAY SERVED.
2. PLUG CUTOUT CABINET SHALL BE FURNISHED WITH A PHENOLIC ENGRAVED LEGEND PLATE THAT IDENTIFIES THE RESPECTIVE RUNWAY/TAXIWAY CIRCUIT OR REGULATOR.
3. PROVIDE PHENOLIC ENGRAVED LEGEND PLATES FOR CUTOUT TO IDENTIFY THE RESPECTIVE REGULATOR OUTPUT CONNECTION AND THE RESPECTIVE CIRCUIT LOAD CONNECTION.
4. BOND PLUG CUTOUT CABINET TO THE VAULT GROUND BUS WITH A #6 AWG COPPER BONDING JUMPER.
5. LIQUID TIGHT FLEXIBLE METAL CONDUIT AND ASSOCIATED FITTINGS SHALL BE U.L. LISTED TO MEET THE REQUIREMENTS OF NEC 350.6, SUITABLE FOR GROUNDING AND SUNLIGHT RESISTANT. LIQUID TIGHT FLEXIBLE METAL CONDUIT THAT IS USED FOR FLEXIBILITY (INCLUDING CONNECTIONS TO CCR'S & TRANSFORMERS) SHALL REQUIRE AN EXTERNAL BONDING JUMPER OR INTERNAL EQUIPMENT GROUNDING CONDUCTOR PER NEC 350.60. EXTERNAL BONDING JUMPERS USED WITH CCR INSTALLATIONS SHALL BE #6 AWG COPPER (MINIMUM). INTERNAL EQUIPMENT GROUNDING CONDUCTORS USED WITH CCR OUTPUT SERIES CIRCUIT WIRING SHALL BE #8 AWG COPPER (MINIMUM). DO NOT INSTALL LIQUID TIGHT FLEXIBLE METAL CONDUIT THAT IS NOT U.L. LISTED.
6. CROUSE-HINDS CAT. NO. 30771, (MODEL-3) SERIES PLUG CUTOUTS ARE NOT ACCEPTABLE, BECAUSE THE HANDLE IS NOT REMOVABLE. OTHER CUTOUTS THAT DO NOT FUNCTION THE SAME AS THE CROUSE-HINDS CAT. NO. 30775 (MODEL-2) ARE NOT ACCEPTABLE.
7. MAINTAIN SEPARATION OF HIGH VOLTAGE AND LOW VOLTAGE CIRCUITS. HIGH VOLTAGE AND LOW VOLTAGE CIRCUITS SHALL NOT BE INSTALLED IN THE SAME WIREWAY, CONDUIT, OR RACEWAY. COORDINATE HIGH VOLTAGE WIRING ENTRIES INTO THE CCR HIGH VOLTAGE SECTION. COORDINATE LOW VOLTAGE WIRING ENTRIES INTO THE LOW VOLTAGE SECTION.

LEGEND

- * DENOTES PLUG CUTOUT WITH PLUG INSERTED
- *P* DENOTES PLUG CUTOUT WITH PLUG PULLED
- *CCR* DENOTES CONSTANT CURRENT REGULATOR

LEGEND PLATE SCHEDULE	
DEVICE	LEGEND PLATE LABEL
RUNWAY 18/36 CCR	RUNWAY 18/36
TAXIWAY A CCR	TAXIWAY A
CUTOUT ENCLOSURE FOR TAXIWAY A CCR	TAXIWAY A
CUTOUT LINE SIDE CONNECTION	INPUT
CUTOUT LOAD SIDE CONNECTION	OUTPUT
HIGH VOLTAGE WIREWAY	HIGH VOLTAGE
LOW VOLTAGE WIREWAY	LOW VOLTAGE
SAFETY SWITCH FOR RWY 36 REILS	REIL DISCONNECT FED FROM VAULT

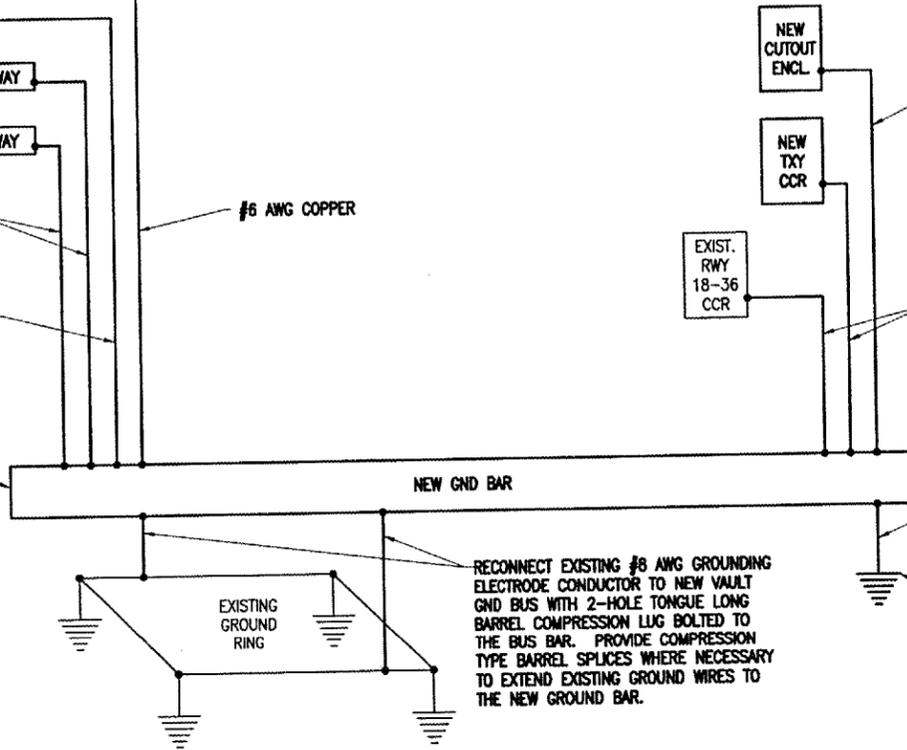
NOTES
ALL LEGEND PLATES SHALL BE ENGRAVED PHENOLIC OR PLASTIC MATERIAL, BLACK LETTERS ON A WHITE BACKGROUND.

BY	
REVISION	
DATE	
CARM MUNICIPAL AIRPORT CARM, ILLINOIS	
A.I.P. PROJ.: 3-17-0109-B7 IL PROJ.: CUL-3683	
H.E. Project No. 801-07TXD 0800 E-604.DWG Scale NONE Date 02/05/07	LAYOUT KNL 02/05/07 DRAWN MW 02/05/07 REVIEWED CAH 03/27/07
<p>Hanson Professional Services Inc. 1525 South Sixth Street Springfield, Illinois 62703-2886 Offices Nationwide</p>	
EXTEND PARTIAL PARALLEL TAXIWAY	HIGH VOLTAGE WIRING SCHEMATIC
32	
32 of 55 sheets	

TO SECONDARY OF BOOST/STEP-UP TRANSFORMER FOR RWY 36 REILS
TO SERVICE DISCONNECT ENCLOSURE GROUND BUS/LUG

HIGH VOLTAGE WIREWAY
LOW VOLTAGE WIREWAY
BOND HIGH VOLTAGE & LOW VOLTAGE WIREWAYS TO NEW GROUND BUS WITH A #6 AWG (MIN.) COPPER BONDING JUMPER. SEE NOTE 1.
#2 AWG COPPER IN 3/4" SCHEDULE 40 PVC

1/4" THICK x 2" HIGH x 20" LONG COPPER GROUND BUS WITH STANDOFF INSULATORS. GROUND BUS SHALL BE AS MANUFACTURED BY HARGER CAT. NO. GBI 14220M OR APPROVED EQUAL. FIELD VERIFY & COORDINATE LOCATION INSIDE EXISTING VAULT TRANSCLOSURE.



CONNECT EACH CUTOUT ENCLOSURE (NEW & EXISTING) TO NEW GROUND BUS WITH A #6 AWG (MIN.) COPPER GND CONDUCTOR. SEE NOTE 1. (TYP. EACH CUTOUT ENCLOSURE)

CONNECT EACH CCR FRAME (NEW & EXISTING) TO THE NEW GROUND BUS WITH A #6 AWG (MINIMUM) COPPER GND CONDUCTOR. SEE NOTE 1. (TYP. FOR EACH CCR)

RECONNECT EXISTING #8 AWG GROUNDING ELECTRODE CONDUCTOR TO NEW VAULT GND BUS WITH 2-HOLE TONGUE LONG BARREL COMPRESSION LUG BOLTED TO THE BUS BAR. PROVIDE COMPRESSION TYPE BARREL SPLICES WHERE NECESSARY TO EXTEND EXISTING GROUND WIRES TO THE NEW GROUND BAR.

#2 AWG BARE COPPER. CORE DRILL THROUGH CONCRETE SLAB & INSTALL 3/4" SCHED 40 PVC SLEEVE FOR GROUNDING ELECTRODE CONDUCTOR. DO NOT INSTALL GROUNDING ELECTRODE CONDUCTOR IN METAL RACEWAY OR METAL CONDUIT.

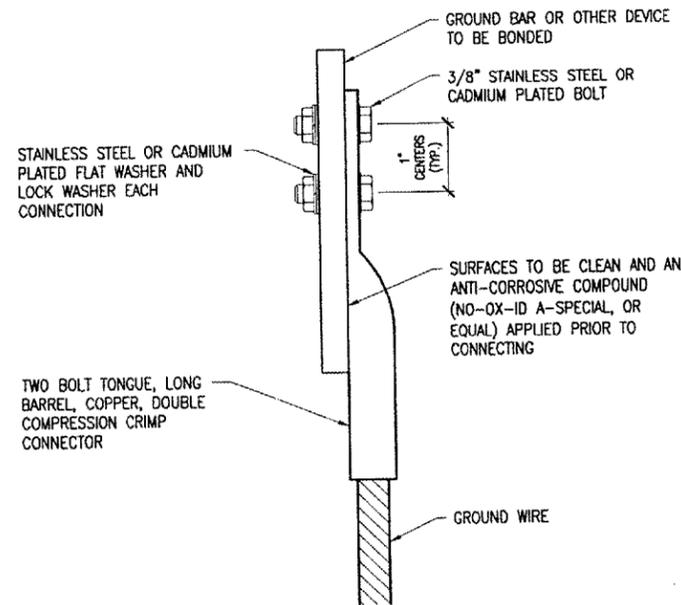
NEW 3/4" DIA x 10' L UL LISTED COPPERCLAD GROUND ROD. LOCATE 10' MINIMUM FROM VAULT TRANSCLOSURE & 10' MINIMUM FROM EXISTING GROUND RING. CONNECTION TO GROUND ROD SHALL BE EXOTHERMIC WELD. TOP OF GROUND ROD SHALL BE BURIED 30" MIN. BELOW GRADE.

CCR GROUND BUS RISER

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

NOTES

- ALL CONNECTIONS TO GROUND BUS BAR SHALL BE WITH 2 HOLE TONGUE LONG BARREL COMPRESSION LUGS BOLTED TO THE BUS BAR.
- GROUND WIRE CONNECTIONS TO EQUIPMENT SHALL BE WITH 2 HOLE TONGUE LONG BARREL COMPRESSION LUGS BOLTED TO THE DEVICE OR WITH THE RESPECTIVE EQUIP MANUFACTURER'S LUG OR TERMINAL WHERE APPLICABLE.
- GROUNDING ELECTRODE CONDUCTORS, BONDING JUMPERS, & INDIVIDUAL GROUND WIRES SHALL NOT BE INSTALLED IN METAL CONDUIT. WHERE PLASTIC CONDUIT IS USED FOR INDIVIDUAL GROUND WIRES, DO NOT COMPLETELY RENCIRCLE THE CONDUIT WITH FERROUS AND/OR MAGNETIC MATERIALS. WHERE METAL CLAMPS ARE INSTALLED USE NYLON BOLTS, NUTS, WASHERS, & SPACERS TO INTERRUPT A COMPLETE METALLIC PATH FROM ENCIrcLING THE CONDUIT.
- ALL CONNECTIONS SHALL BE COATED WITH A CORROSION PREVENTATIVE COMPOUND (SANCHEM INC. NO-OX-ID A-SPECIAL, OR BURNDY PENETROX E, OR APPROVED EQUAL) BEFORE JOINING. ALL COPPER BUS BARS SHALL BE CLEANED PRIOR TO MAKING CONNECTIONS TO REMOVE SURFACE OXIDATION. CLEAN SURFACES OF RESPECTIVE DEVICES TO BE BONDED, TO BARE METAL, PER NEC 250-12.



GROUNDING LUG CONNECTION DETAIL

NOTES

- CONNECTIONS TO GROUND BUS BAR SHALL BE WITH 2-HOLE TONGUE LONG BARREL COMPRESSION LUGS BOLTED TO THE BUS BAR.
- ALL INSULATED GROUND WIRES SHALL HAVE GREEN COLORED INSULATION FOR ALL CONDUCTOR AWG AND KCMIL.
- CONSTANT CURRENT REGULATORS SHALL BE SHUT OFF PRIOR TO DISCONNECTING EXISTING FRAME GROUNDS AND SHALL REMAIN OFF UNTIL GROUNDING UPGRADES AND NEW GROUND CONNECTIONS ARE COMPLETED.
- ALL WORK SHOWN ON THIS SHEET SHALL BE PAID FOR UNDER ITEM AR109200 "INSTALL ELECTRICAL EQUIPMENT" PER LUMP SUM.
- CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS. REPORT ANY VARIATIONS TO THE RESIDENT ENGINEER. EXISTING EQUIPMENT CONNECTED TO THE EXISTING GROUND SYSTEM SHALL BE RECONNECTED TO THE NEW GROUND BAR.

DATE	REVISION	BY

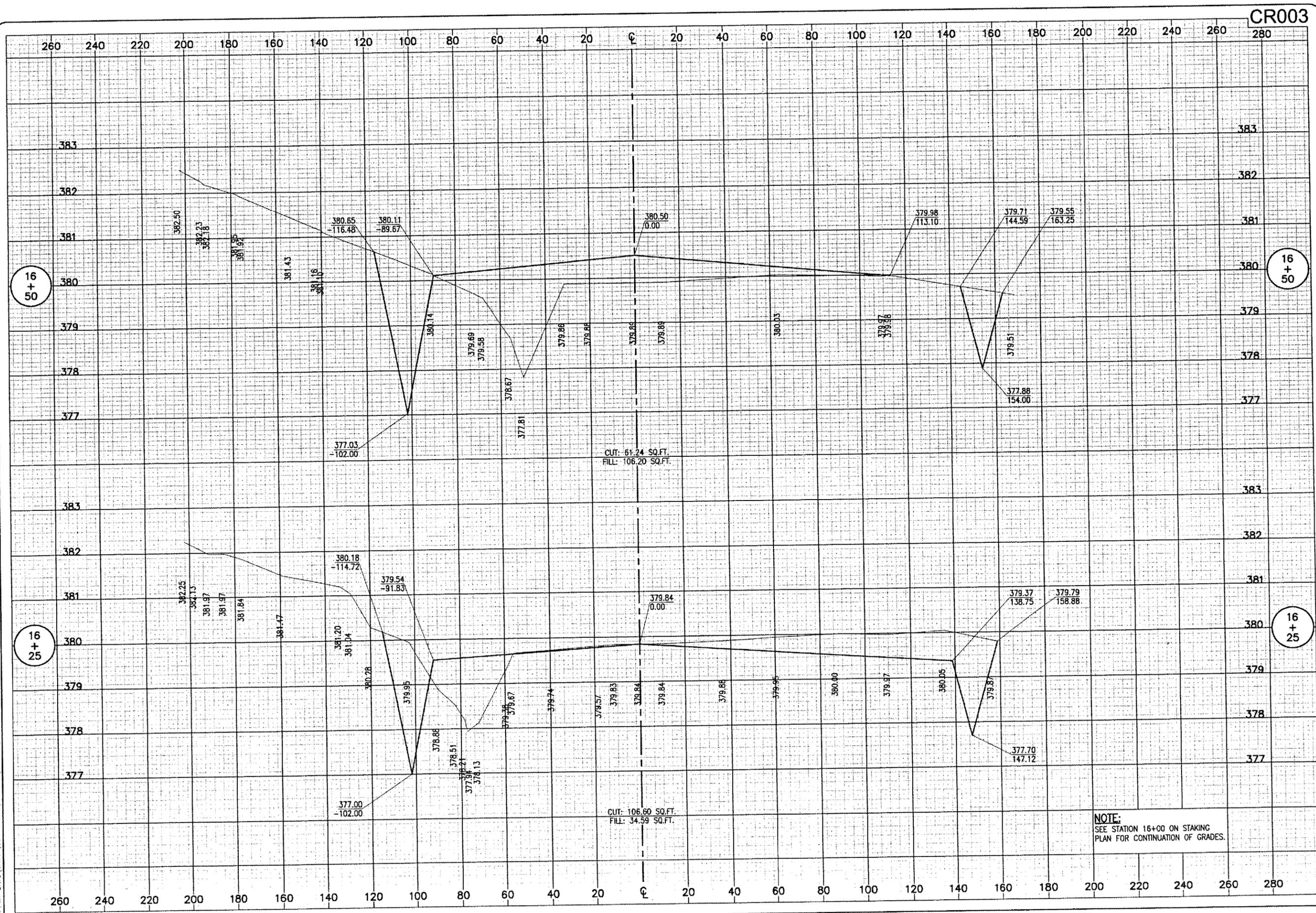
CARMi MUNICIPAL AIRPORT
CARMi, ILLINOIS
A.I.P. PROJ.: 3-17-0109-B7
I.L. PROJ.: CUL-3683

FILE PROJECT NO. 801-071X10-0800	DATE 02/13/07
FILE NO. E-605.DWG	DATE 02/13/07
SCALE NONE	DATE 03/27/07
DATE 02/13/07	
LAYOUT KNL	
DRAWN MW	
REVIEWED CAH	

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EXTEND PARTIAL PARALLEL TAXIWAY
CCR GROUND BUS RISER AND GROUNDING DETAILS

APR 27, 2007 7:55 AM BAK
 I:\AIRPORTS\CARMA\B01-07TXY\AIRPORT_SHEETS\R-301XS.DWG - STA. 16+25 TO STA. 16+50



NOTE:
 SEE STATION 16+00 ON STAKING
 PLAN FOR CONTINUATION OF GRADES.

CR003

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DATE	REVISION	BY

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A.I.P. PROJ.: 3-17-0109-B7
 I.L. PROJ.: CUL-3683

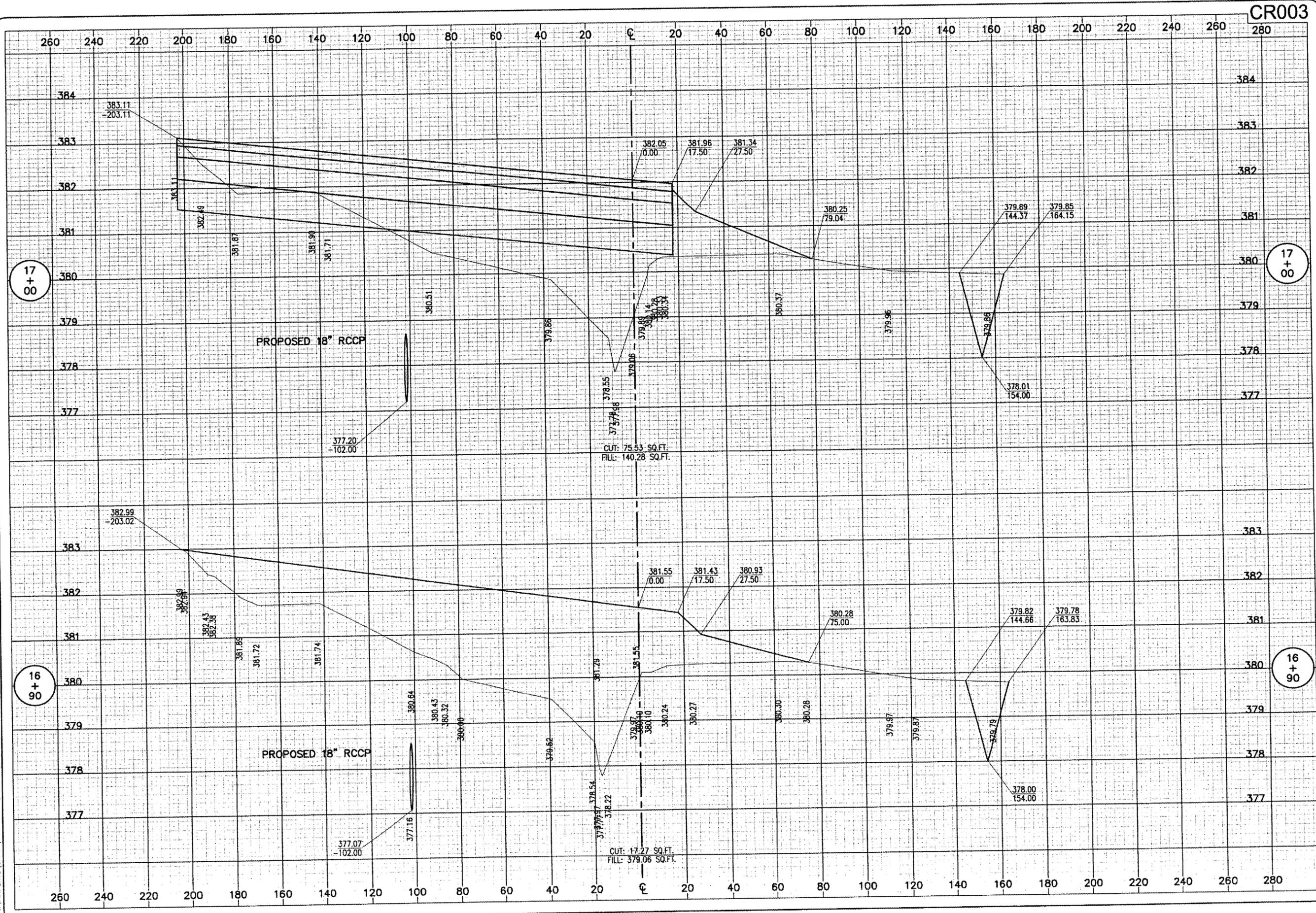
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Element: R-301XS.DWG	DRAWN CCC/ZSH 03/09/07
Scale: 1"=20' Horiz., 1"=1' Vert.	REVIEWED CAH 03/27/07
Date: 03/09/07	



**EXTEND PARTIAL
 PARALLEL TAXIWAY**

**PROPOSED TAXIWAY "A"
 CROSS-SECTIONS
 STA. 16+25 TO STA. 16+50**

APR 27, 2007 7:55 AM Bak
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 CARMi, ILLINOIS**

IL PROJ.: CUL-3683 A.I.P. PROJ.: 3-17-0109-B7

HEI Project No. 801-071XYD_0600	SEP 03/09/07
Filename R-302XS.DWG	CCC/ZSH 03/09/07
Scale 1"=20' Horiz., 1"=1' Vert.	CAH 03/27/07
Date 03/09/07	



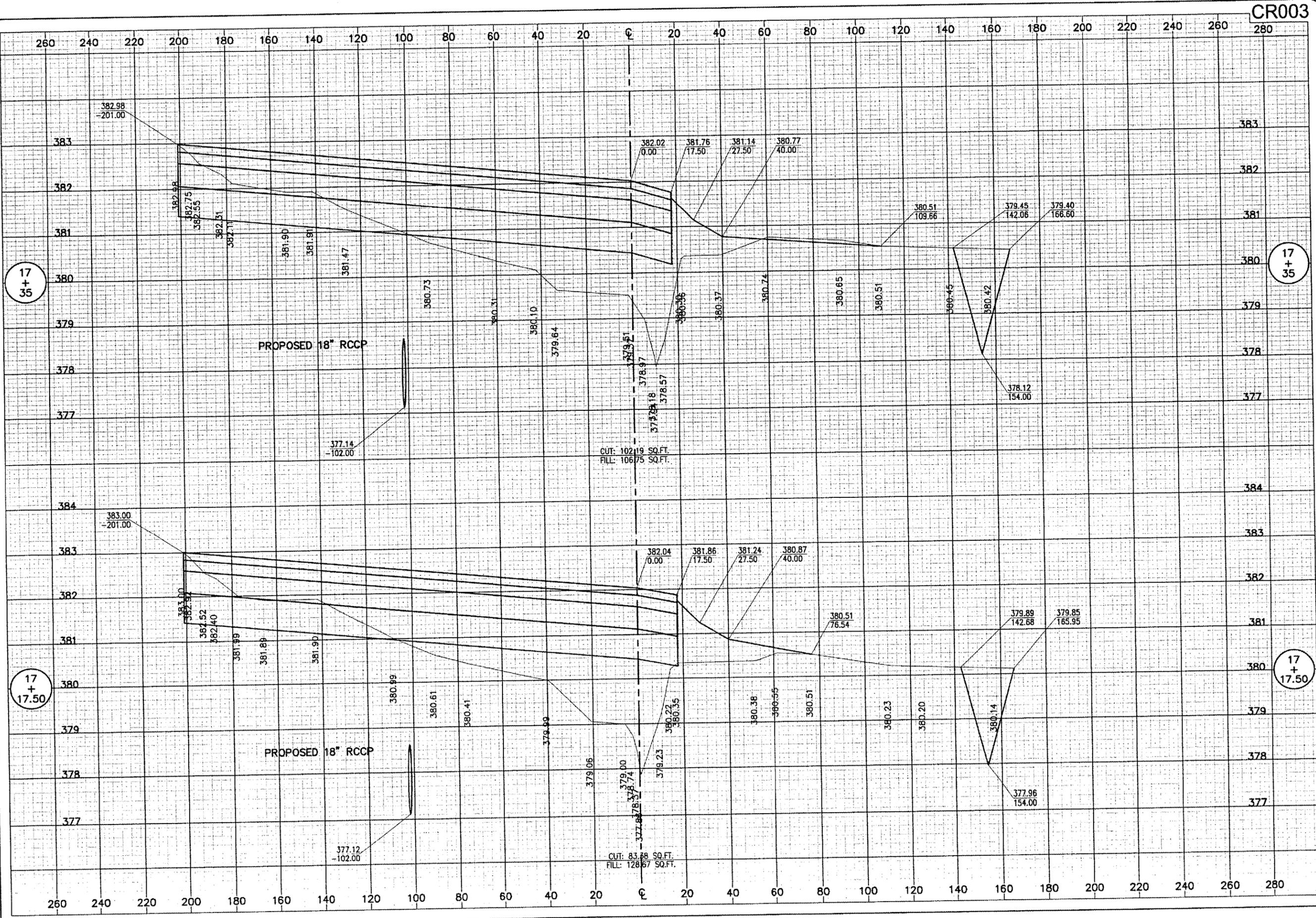
Hanson Professional Services Inc.
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 Springfield, Illinois 62703-2886
 Offices Nationwide

**EXTEND PARTIAL
 PARALLEL TAXIWAY**
**PROPOSED TAXIWAY "A"
 CROSS-SECTIONS**
 STA. 16+90 TO STA. 17+00

35

35 of 55 sheets

APR 27, 2007 7:56 AM BAK
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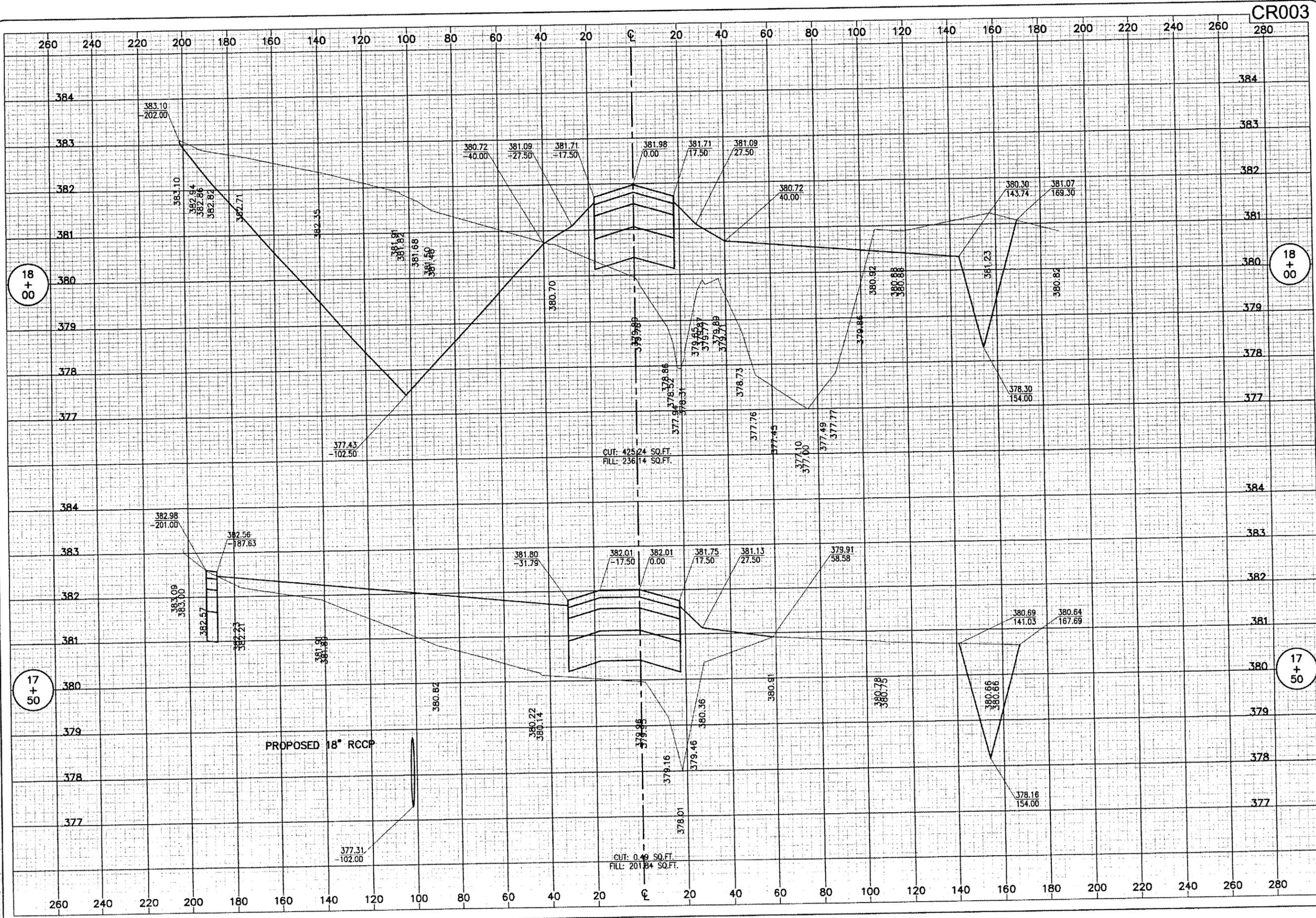
ILL. PROJ.: CUI-3683
 A.I.P. PROJ.: 3-17-0109-B7
CARM MUNICIPAL AIRPORT
CARM, ILLINOIS

REVIEWED	DATE	BY

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EXTEND PARTIAL
PARALLEL TAXIWAY
PROPOSED TAXIWAY 'A'
CROSS-SECTIONS
 STA. 17+17.50 TO STA. 17+35

APR 27, 2007 7:56 AM BAK
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DATE	REVISION	BY

**CARMI MUNICIPAL AIRPORT
 CARMI, ILLINOIS**

IL PROJ.: CUL-3683 A.I.P. PROJ.: 3-17-0109-87

IRI Project No. 801-07TAXI 0800 Filename: R-304XS.DWG Scale: 1"=20' Horiz., 1"=1' Vert. Date: 03/09/07	LAYOUT SEP 03/09/07 DRAWN CCC/JSH 03/09/07 REVIEWED CAH 03/27/07
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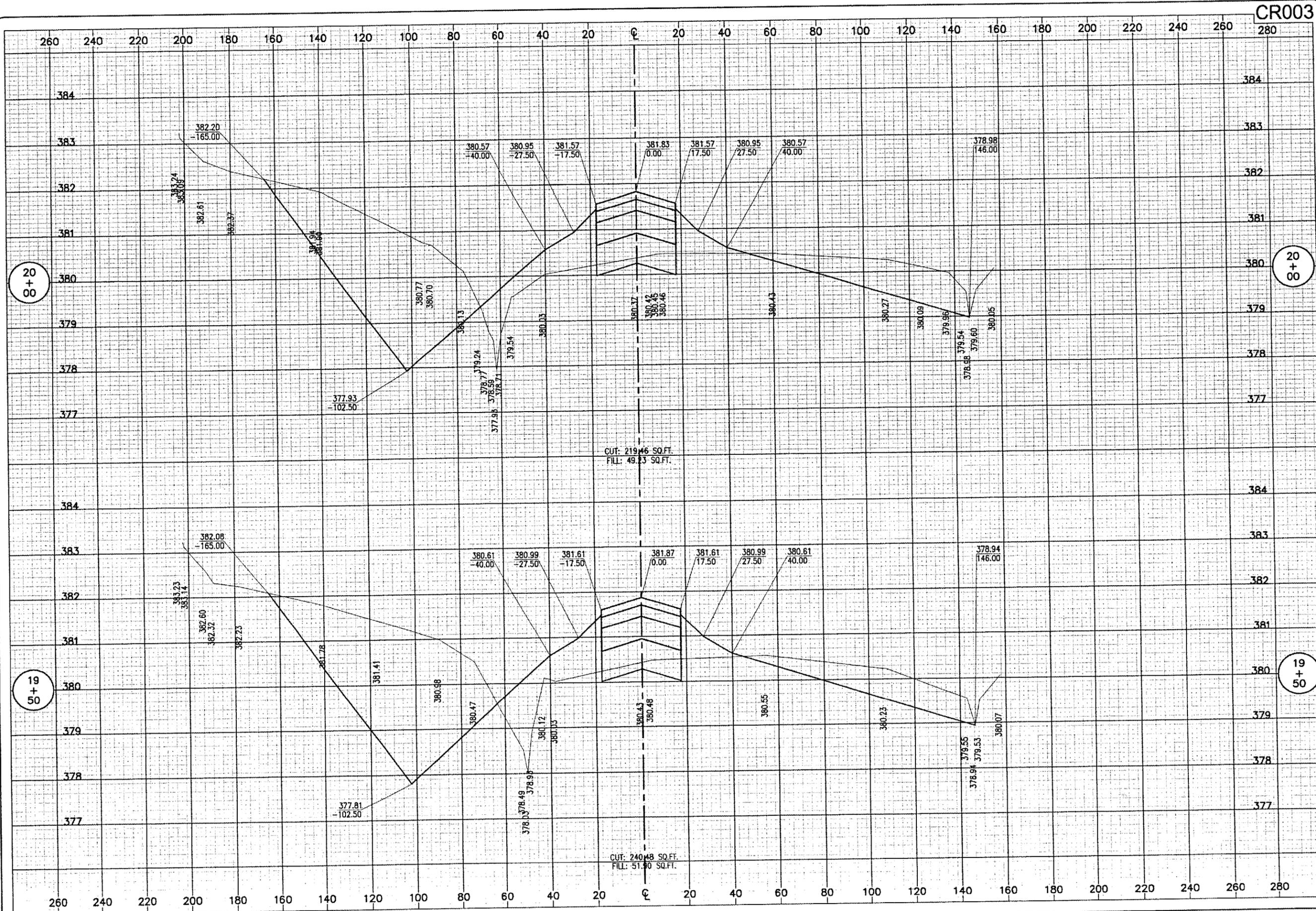


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**EXTEND PARTIAL
 PARALLEL TAXIWAY**
 PROPOSED TAXIWAY "A"
 CROSS-SECTIONS
 STA. 17+50 TO STA. 18+00

37

APR 27, 2007 7:58 AM BAK
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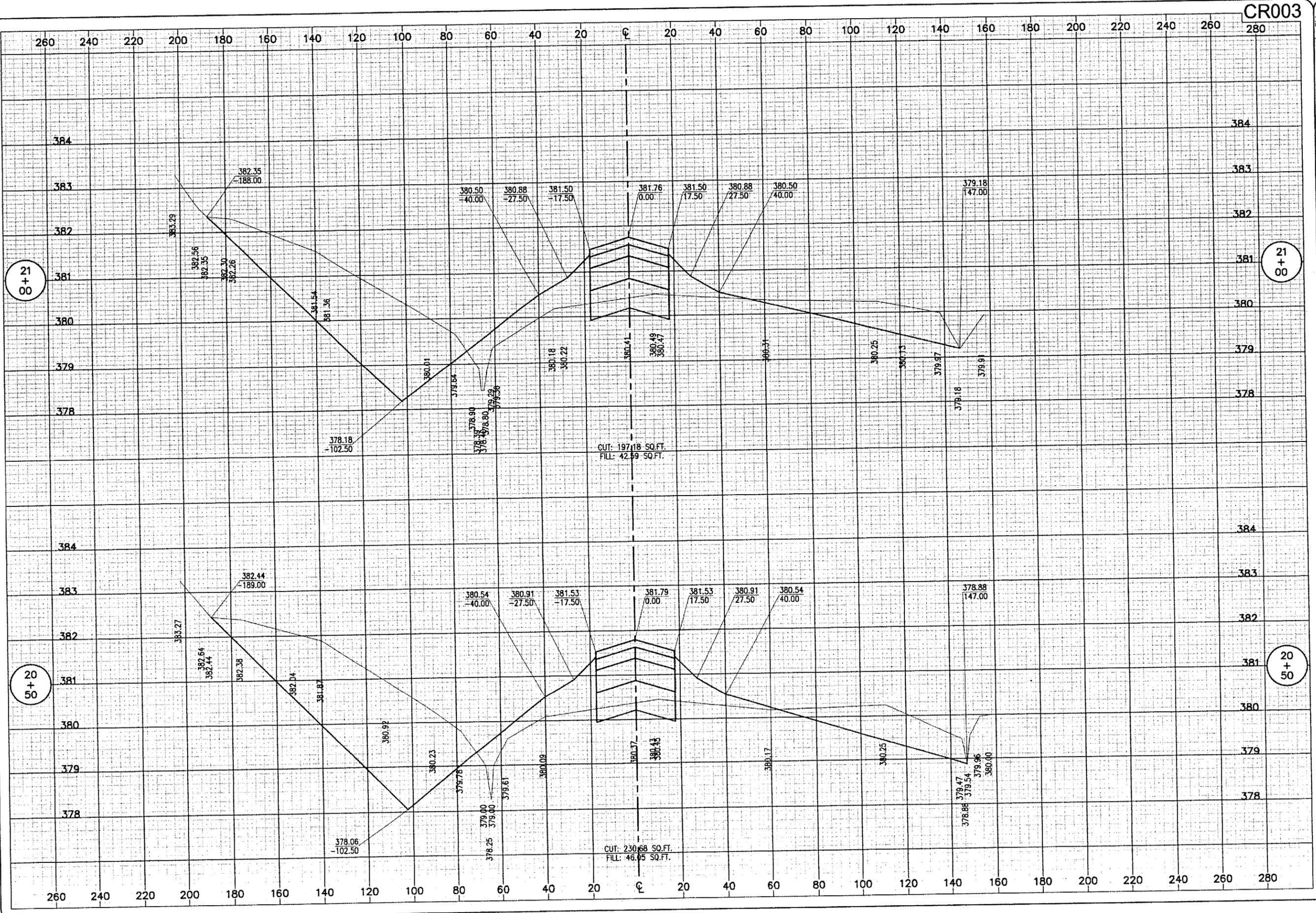
CARM MUNICIPAL AIRPORT
 CARM, ILLINOIS
 I.L. PROJ.: CUL-3863
 A.I.P. PROJ.: 3-17-0109-B7

I.L. Project No. 801-0710YD 0800 Executive R-306XS.DWG Scale 1"=20' Horiz., 1"=1' Vert. Date 03/09/07	LAYOUT SEP 03/09/07 DRAWN CCC/TSH 03/09/07 REVIEWED CAH 03/27/07
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EXTEND PARTIAL
 PARALLEL TAXIWAY
 PROPOSED TAXIWAY "A"
 CROSS-SECTIONS
 STA. 19+50 TO STA. 20+00

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**CARMI MUNICIPAL AIRPORT
 CARMI, ILLINOIS**

ILL. PROJ.: CUL-3683 A.I.P. PROJ.: 3-17-0109-B7

DATE	REVISION	BY
03/09/07	SEP	CCC/ZSH
03/09/07	DRAWN	CCC/ZSH
03/27/07	REVIEWED	CAH

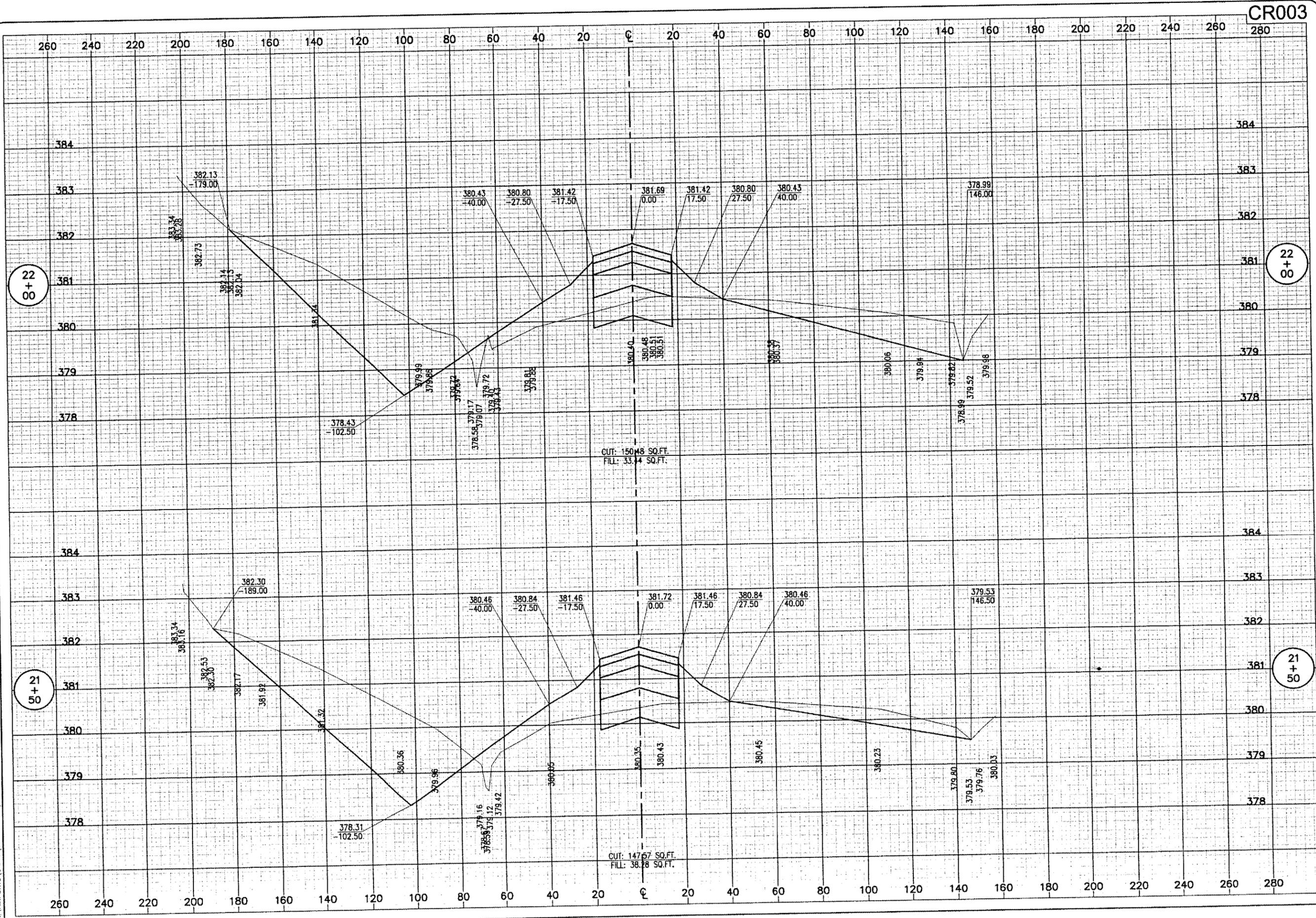


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**EXTEND PARTIAL
 PARALLEL TAXIWAY**
 PROPOSED TAXIWAY "A"
 CROSS-SECTIONS
 STA. 20+50 TO STA. 21+00

40

APR 27, 2007 7:59 AM BAK
 I:\AIRPORTS\CARMIL\801-07TXX\AIRPORT\SHEETS\R-308XS.DWG - STA. 21+50 TO STA. 22+00



CR003

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CUT: 150.88 SQ.FT.
 FILL: 33.14 SQ.FT.

CUT: 147.67 SQ.FT.
 FILL: 38.88 SQ.FT.

DATE	REVISION

**CARMI MUNICIPAL AIRPORT
 CARMI, ILLINOIS**

A.I.P. PROJ.: 3-17-0109-87
 I.L. PROJ.: CUL-3683

File: Project: 801-07TXXD_0800
 Filename: R-308XS.DWG
 Scale: 1"=20' Horiz., 1"=1' Vert.
 Date: 03/09/07

LAYOUT	SEP	03/09/07
DRAWN	CCC/ZSH	03/09/07
REVIEWED	CAH	03/27/07

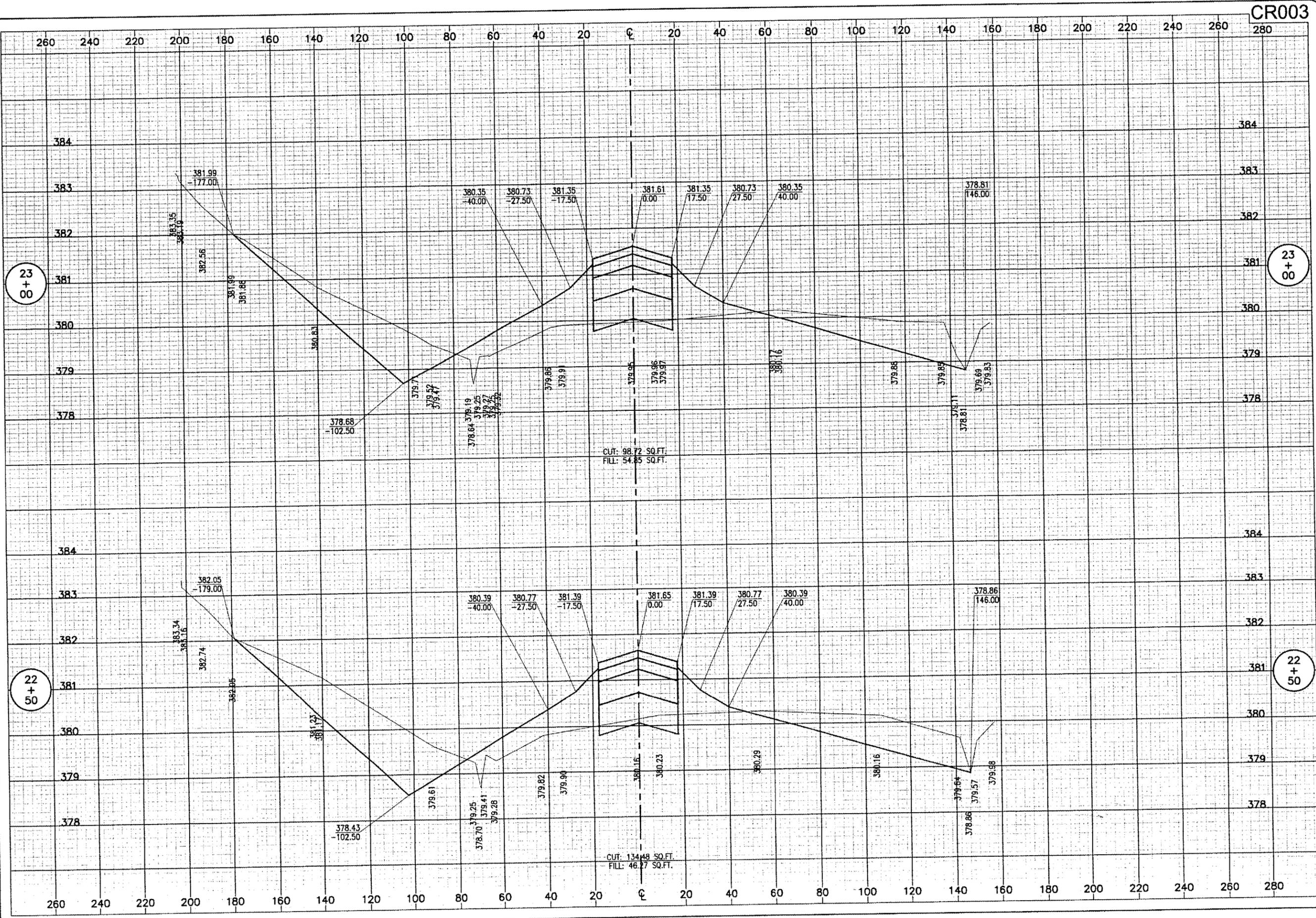


Hanson Professional Services Inc.
 1525 South Sixth Street
 Springfield, Illinois 62703-2886
 Offices Nationwide

**EXTEND PARTIAL
 PARALLEL TAXIWAY**
 PROPOSED TAXIWAY "A"
 CROSS-SECTIONS
 STA. 21+50 TO STA. 22+00

41

APR 27, 2007 8:00 AM BAK
 I:\AIRPORTS\CARMIL\01-07\TYX\AIRPORT\SHEETS\R-309XS.DWG - STA. 22+50 TO STA. 23+00



CR003

23
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23
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22
+
50

22
+
50

DATE	REVISION	BY

CARMIL MUNICIPAL AIRPORT
CARMIL, ILLINOIS

IL PROJ.: CUL-3683 A.I.P. PROJ.: 3-17-0109-B7

HEL Project No. 801-07XTD 0800
 Filename R-309XS.DWG
 Scale 1"=20' Horiz., 1"=1' Vert.
 Date 03/09/07

LAYOUT	SEP 03/09/07
DRAWN	CCC/ZSH 03/09/07
REVIEWED	CAH 03/27/07



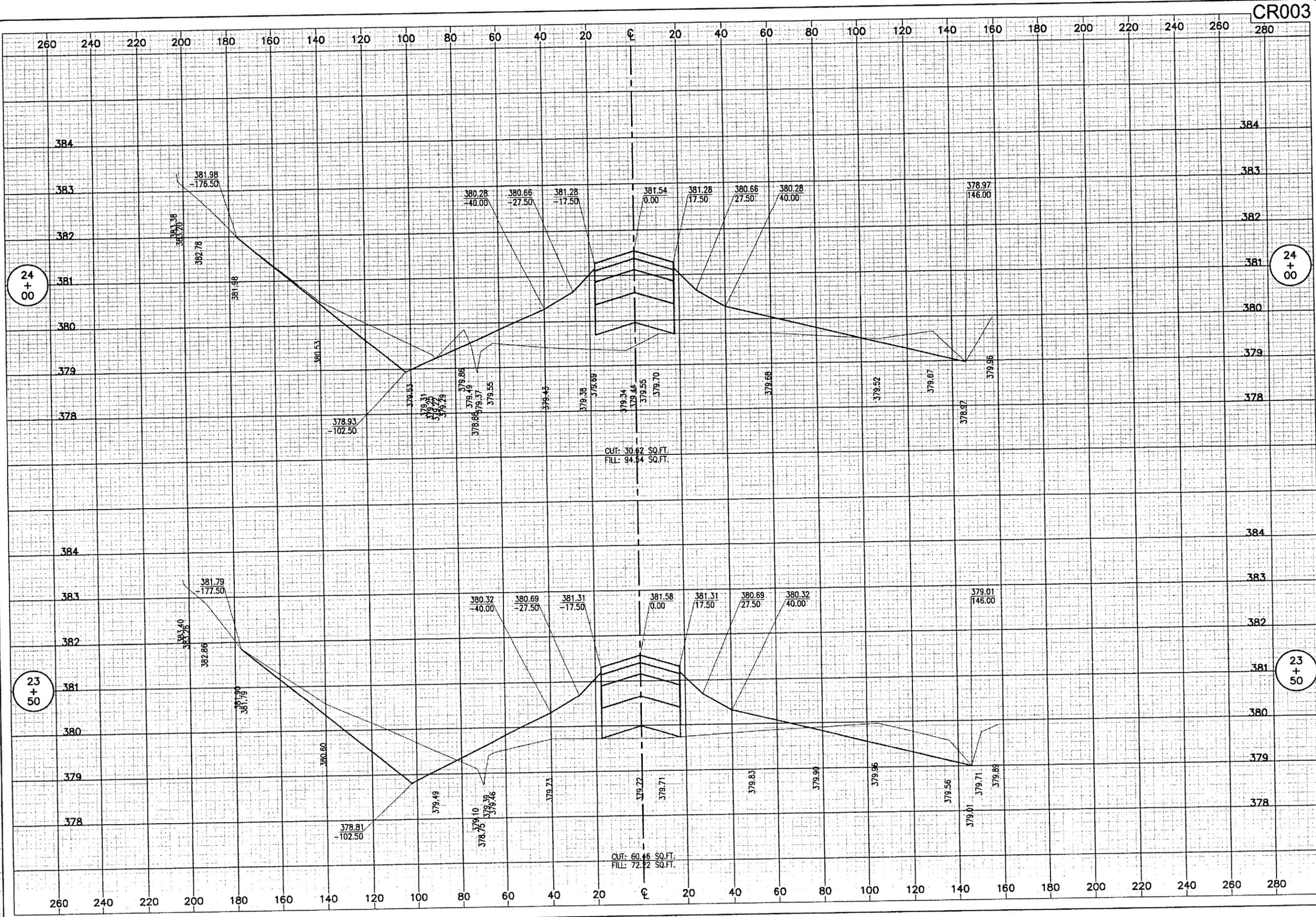
**EXTEND PARTIAL
 PARALLEL TAXIWAY**

**PROPOSED TAXIWAY "A"
 CROSS-SECTIONS**

STA. 22+50 TO STA. 23+00

42

APR 27, 2007 8:00 AM BAK
 I:\AIRPORTS\CARMIL\801-07TAXI\AIRPORT\SHEETS\R-310XS.DWG - STA. 23+50 TO STA. 24+00



CR003

24
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23
+
50

23
+
50

CUT: 30.62 SQ.FT.
 FILL: 94.54 SQ.FT.

CUT: 60.46 SQ.FT.
 FILL: 72.82 SQ.FT.

DATE	REVISION	BY

CARMI MUNICIPAL AIRPORT
CARMIL, ILLINOIS

IL PROJ.: CUL-3683 A.I.P. PROJ.: J-17-0109-B7

HEI Project No. 801-07TAXI.DWG
 Filenames: R-310XS.DWG
 Scale: 1"=20' Horiz., 1"=1' Vert.
 Date: 03/09/07

LAYOUT	SEP	03/09/07
DRAWN	CCC/JSH	03/09/07
REVIEWED	CAH	03/27/07

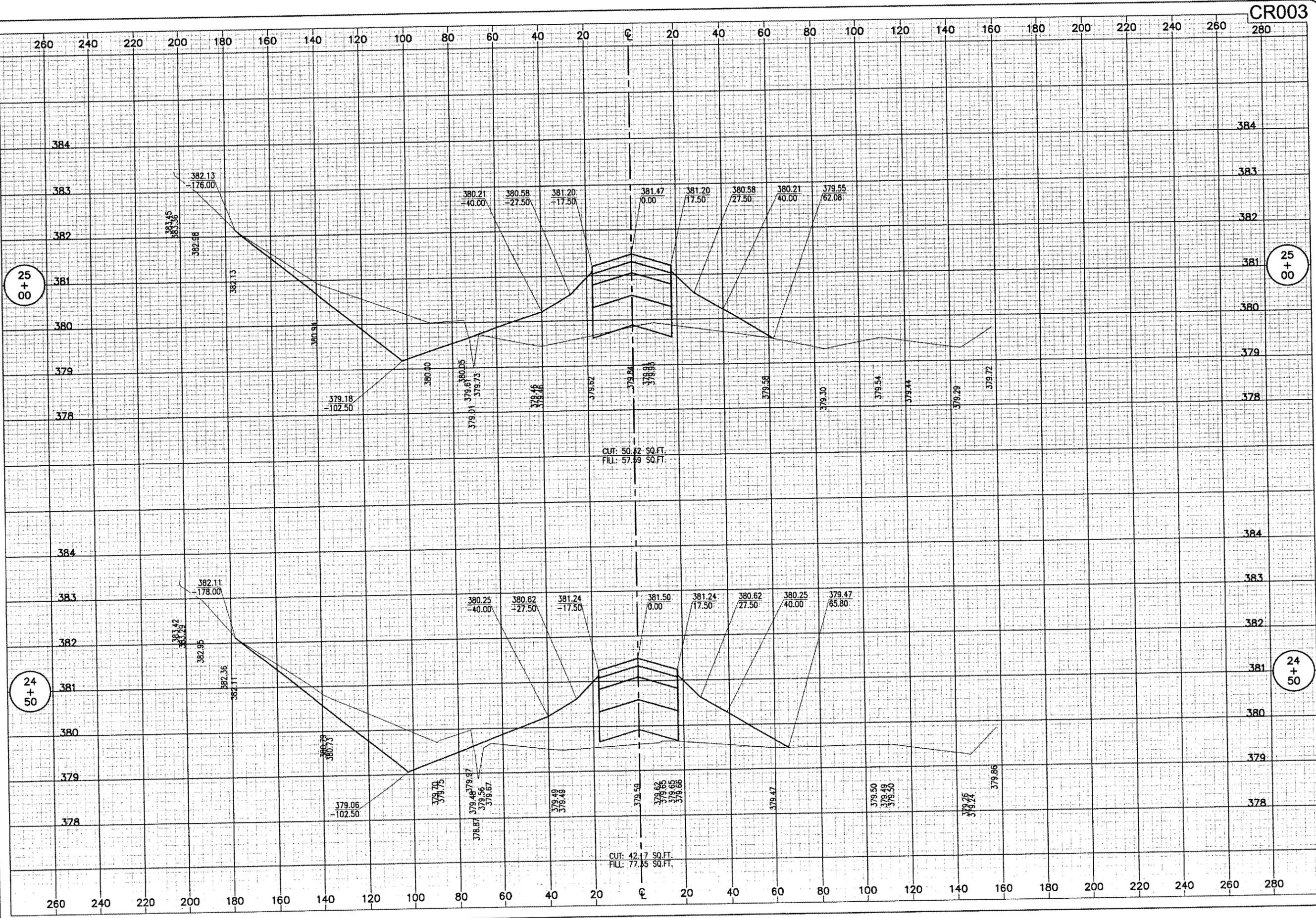


Hanson Professional Services Inc.
 1525 South Sixth Street
 Springfield, Illinois 62703-2886
 Offices Nationwide

**EXTEND PARTIAL
 PARALLEL TAXIWAY**

PROPOSED TAXIWAY "A"
CROSS-SECTIONS
 STA. 23+50 TO STA. 24+00

APR 27, 2007 8:01 AM BAK
 C:\AIRCRAFTS\CARMIL\801-07TAXY\AIRPORT\SHEETS\R-311XS.DWG - STA. 24+50 TO STA. 25+00



24 + 50

24 + 50

25 + 00

25 + 00

DATE	REVISION	BY

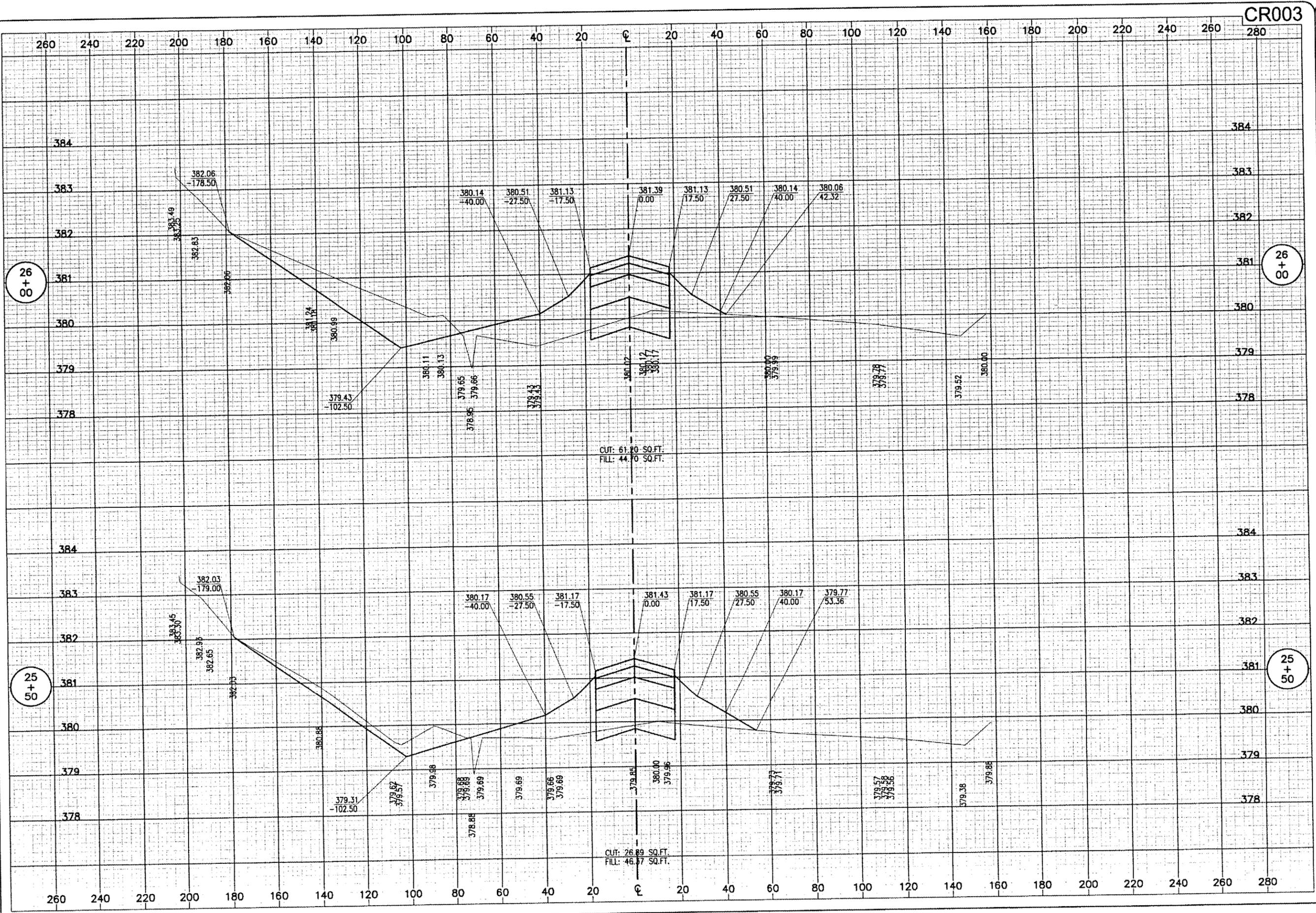
CR003
 CARMi MUNICIPAL AIRPORT
 CARMi, ILLINOIS
 I.L. PROJ.: CUL-3683 A.I.P. PROJ.: 3-17-0109-B7

I.E.F. Project No. 801-07TAXY-0800 Client: R-311XS.DWG Scale: 1"=20' Horiz., 1"=1' Vert. Date: 03/09/07	LAYOUT: SEP 03/09/07 DRAWN: CCC/ZSH 03/09/07 REVIEWED: CAH 03/27/07
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EXTEND PARTIAL
 PARALLEL TAXIWAY
 PROPOSED TAXIWAY "A"
 CROSS-SECTIONS
 STA. 24+50 TO STA. 25+00

APR 17, 2007 8:01 AM BAK
 L:\AIRPORTS\CARMI\801-071X\AIRPORT\SHEETS\R-312XS.DWG - STA. 25+50 TO STA. 26+00



CR003

DATE	REVISION	BY

CARMI MUNICIPAL AIRPORT
CARMI, ILLINOIS

IL PROJ.: CUL-3683 A.I.P. PROJ.: 3-17-0109-87

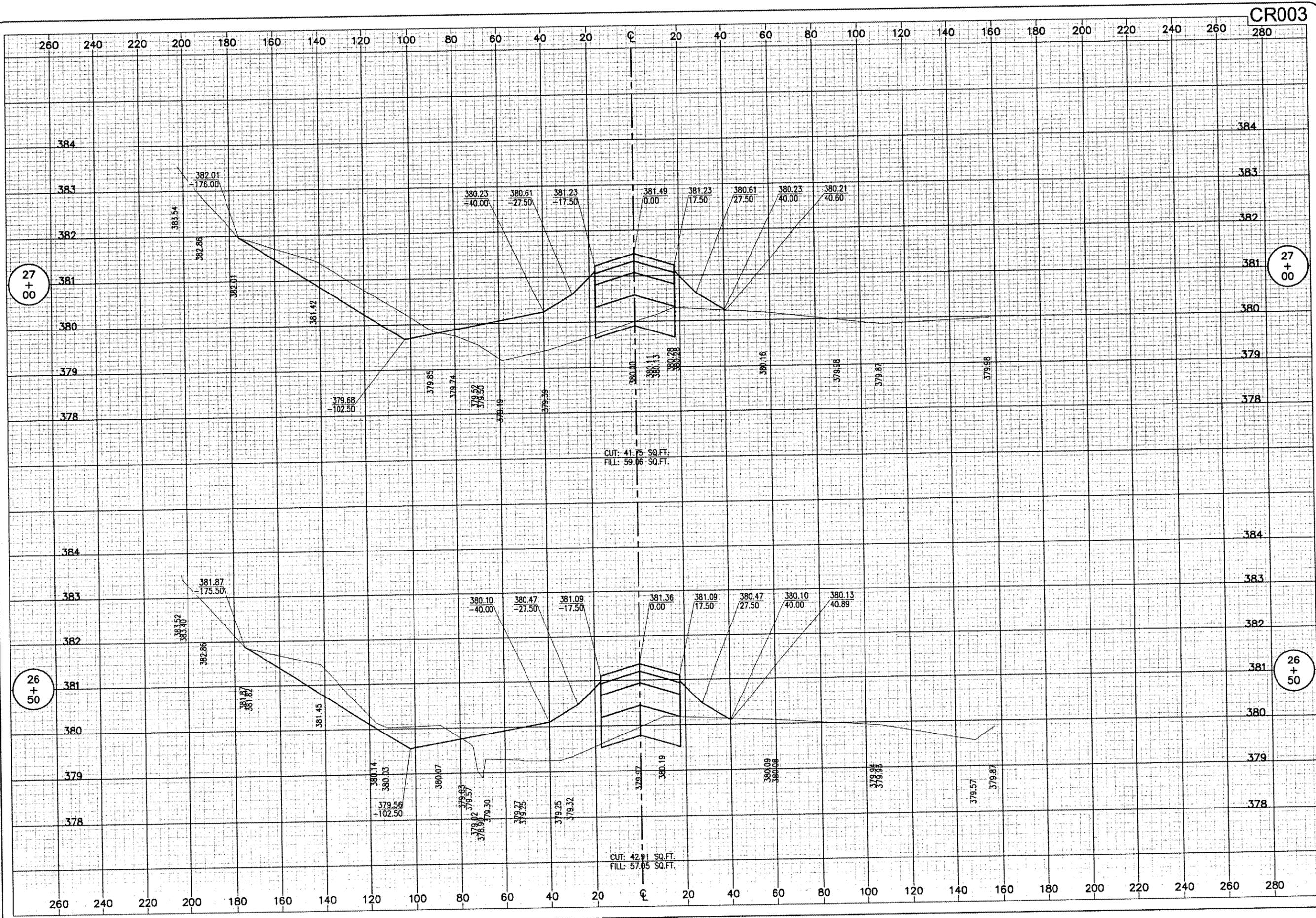
REVIEWED	CAD	03/27/07

H.E. Project No. 801-071XID 0800
 Drawings R-312XS.DWG
 Scale 1"=20' Horiz., 1"=1' Vert.
 Date 03/09/07



EXTEND PARTIAL PARALLEL TAXIWAY
PROPOSED TAXIWAY "A"
CROSS-SECTIONS
STA. 25+50 TO STA. 26+00

APR 27, 2007 8:02 AM BAK
 I:\AIRPORTS\CARM\801-07TAXI\AIRPORT_SHEETS\R-313XS.DWG - Layout1



CR003

27
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27
+
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26
+
50

26
+
50

DATE	REVISION	BY

CARM MUNICIPAL AIRPORT
 CARM, ILLINOIS

IL PROJ.: CUL-3683
 A.I.P. PROJ.: 3-17-0109-B7

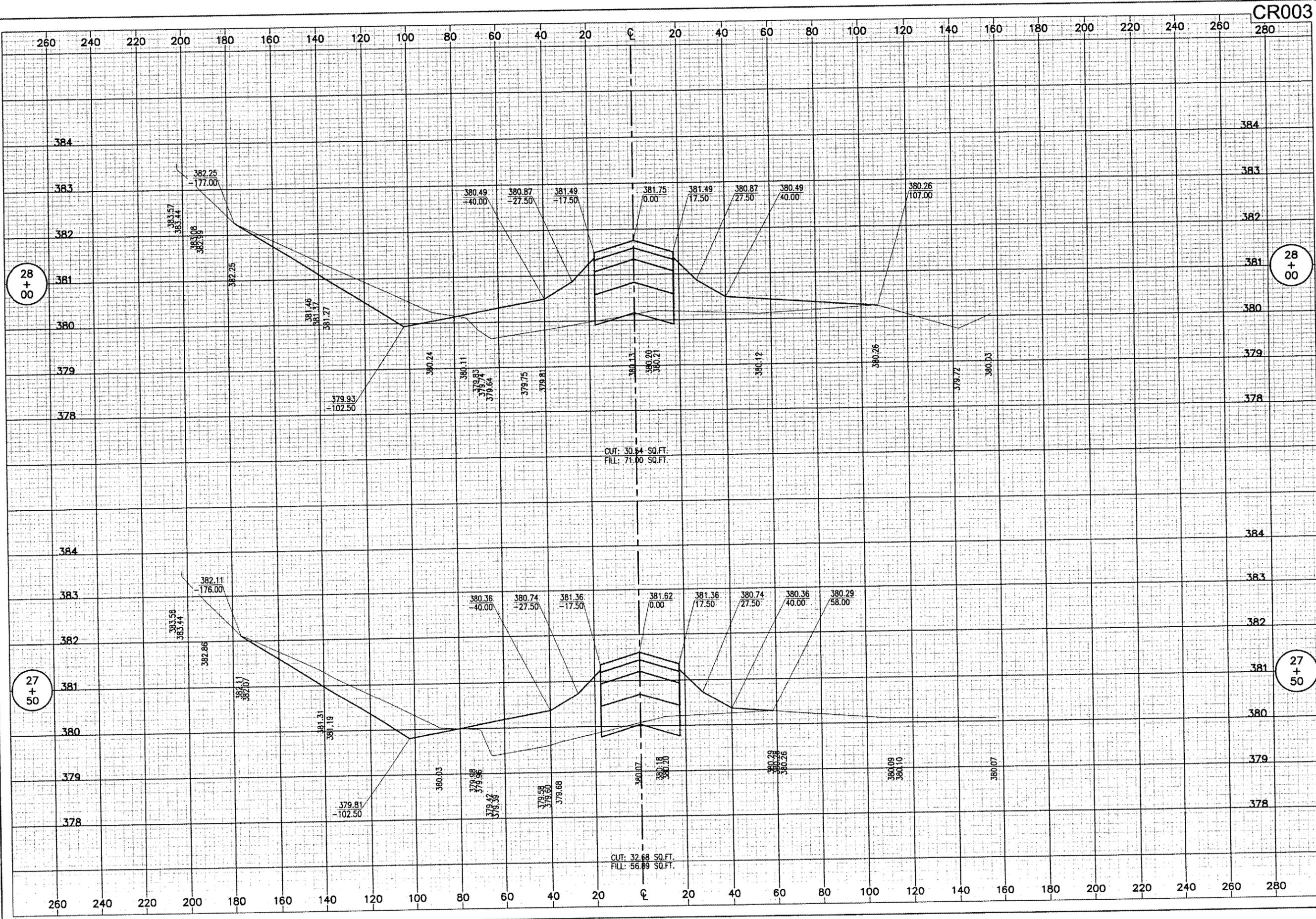
Project No.	801-07TAXI 0800
Filename	R-313XS.DWG
Scale	1"=20' Horiz. 1"=1' Vert.
Date	03/09/07
LAYOUT	SEP 03/09/07
DRAWN	CCC/ZSH 03/09/07
REVIEWED	CAH 03/27/07



EXTEND PARTIAL
 PARALLEL TAXIWAY

PROPOSED TAXIWAY "A"
 CROSS-SECTIONS
 STA. 26+50 TO STA. 27+00

APR 27 2007 8:03 AM BAK
 I:\AIRPORT\CAMM\801-07TX\AIRPORT SHEETS\R-31\XSDWG - STA. 27+50 TO STA. 28+00



CR003

DATE	REVISION	BY

CARMi MUNICIPAL AIRPORT
CARMi, ILLINOIS

IL PROJ.: CUL-3683 A.I.P. PROJ.: 3-17-0109-B7

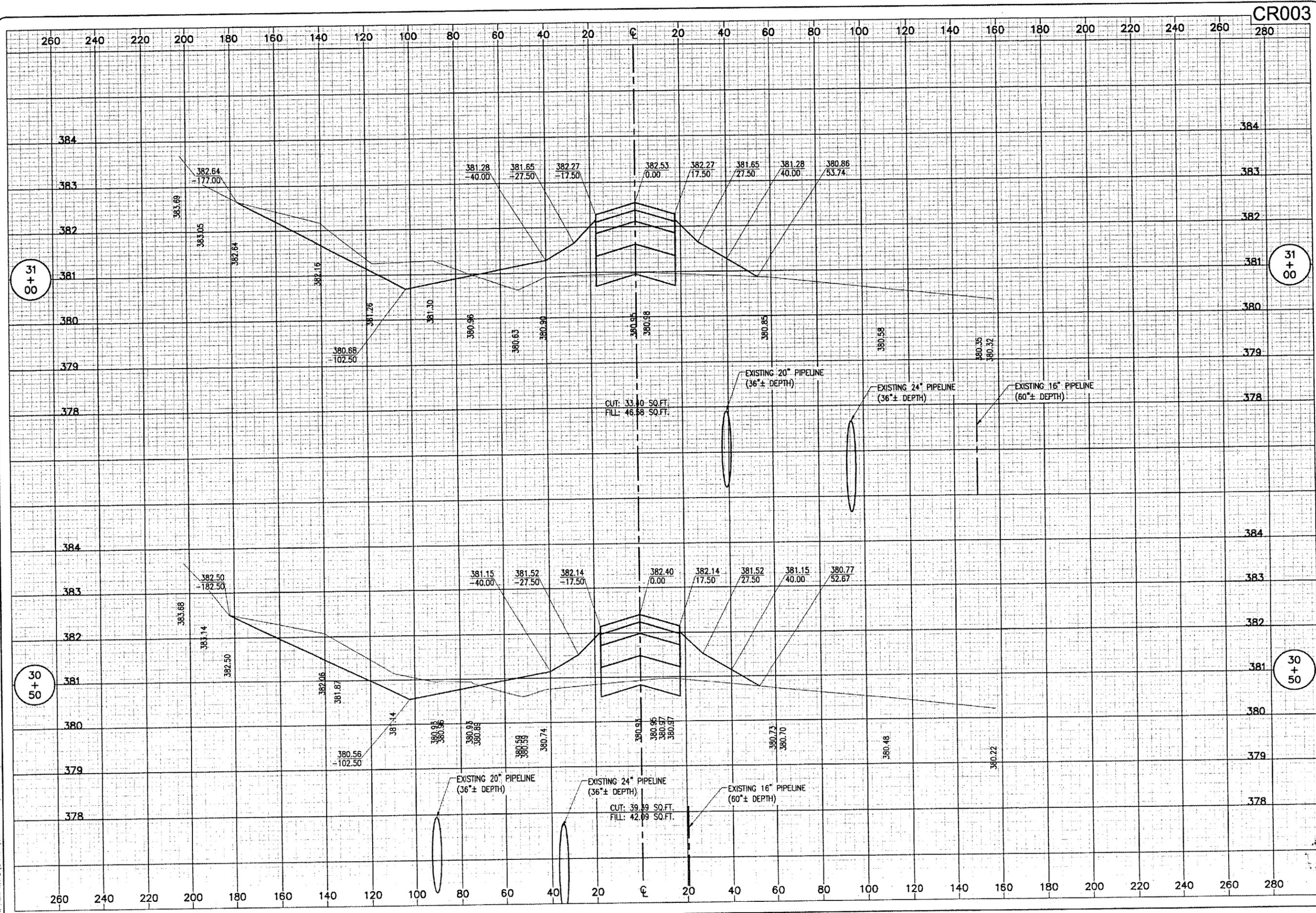
HEL PROJECT No. 801-07TXD 0800	REVISED	03/09/07
Drawings R-31XSDWG	DRAWN	CCC/ZSH
Scale 1"=20' Horiz. 1"=1' Vert.	REVIEWED	CAH
Date 03/09/07	LAYOUT	SEP



EXTEND PARTIAL
PARALLEL TAXIWAY

PROPOSED TAXIWAY "A"
CROSS-SECTIONS
STA. 27+50 TO STA. 28+00

APR 30, 2007 3:35 PM CCC
 C:\AIRPORTS\CARMI\901-071XY\AIRPORT\SHETS\R-317XS.DWG - STA 30+50 TO STA. 31+00



CR003

DATE	REVISION	BY

CARMI MUNICIPAL AIRPORT
CARMI, ILLINOIS

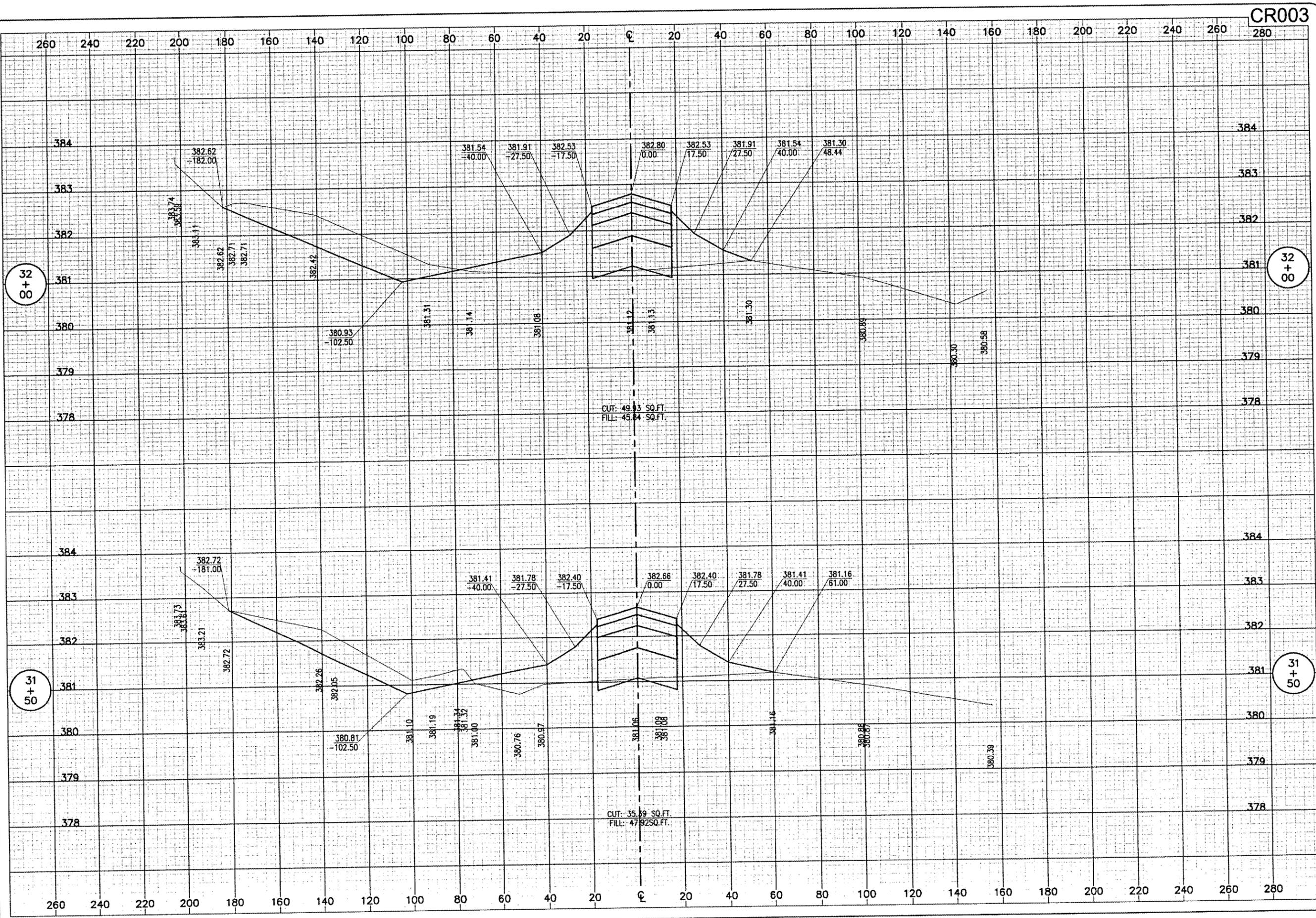
ILL. PROJ.: CUL-3683 A.I.P. PROJ.: 3-17-0109-B7

REL. FIGURE	NO.	DATE
801-071XYD	0600	03/09/07
R-317XS	DWG	03/09/07
SCALE	1" = 20' Horiz., 1" = 1' Vert.	03/09/07
DATE	03/09/07	03/27/07

HANSON
 Hanson Professional Services Inc.
 1925 South Sixth Street
 Springfield, Illinois 62703-2886
 Offices Nationwide

EXTEND PARTIAL PARALLEL TAXIWAY
PROPOSED TAXIWAY 'A'
CROSS-SECTIONS
 STA. 30+50 TO STA. 31+00

APR 27, 2007 8:05 AM BAK
 I:\AIRPORTS\CARM\801-07TAX\AIRPORT\SHEETS\R-318XS.DWG - STA. 31+50 TO STA. 32+00



32
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32
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31
+
50

31
+
50

CUT: 49.93 SQ.FT.
 FILL: 45.84 SQ.FT.

CUT: 35.89 SQ.FT.
 FILL: 47.92 SQ.FT.

CR003

DATE	REVISION	BY

CARM MUNICIPAL AIRPORT
CARM, ILLINOIS

IL PROJ.: CUL-3663 A.I.P. PROJ.: 3-17-0109-87

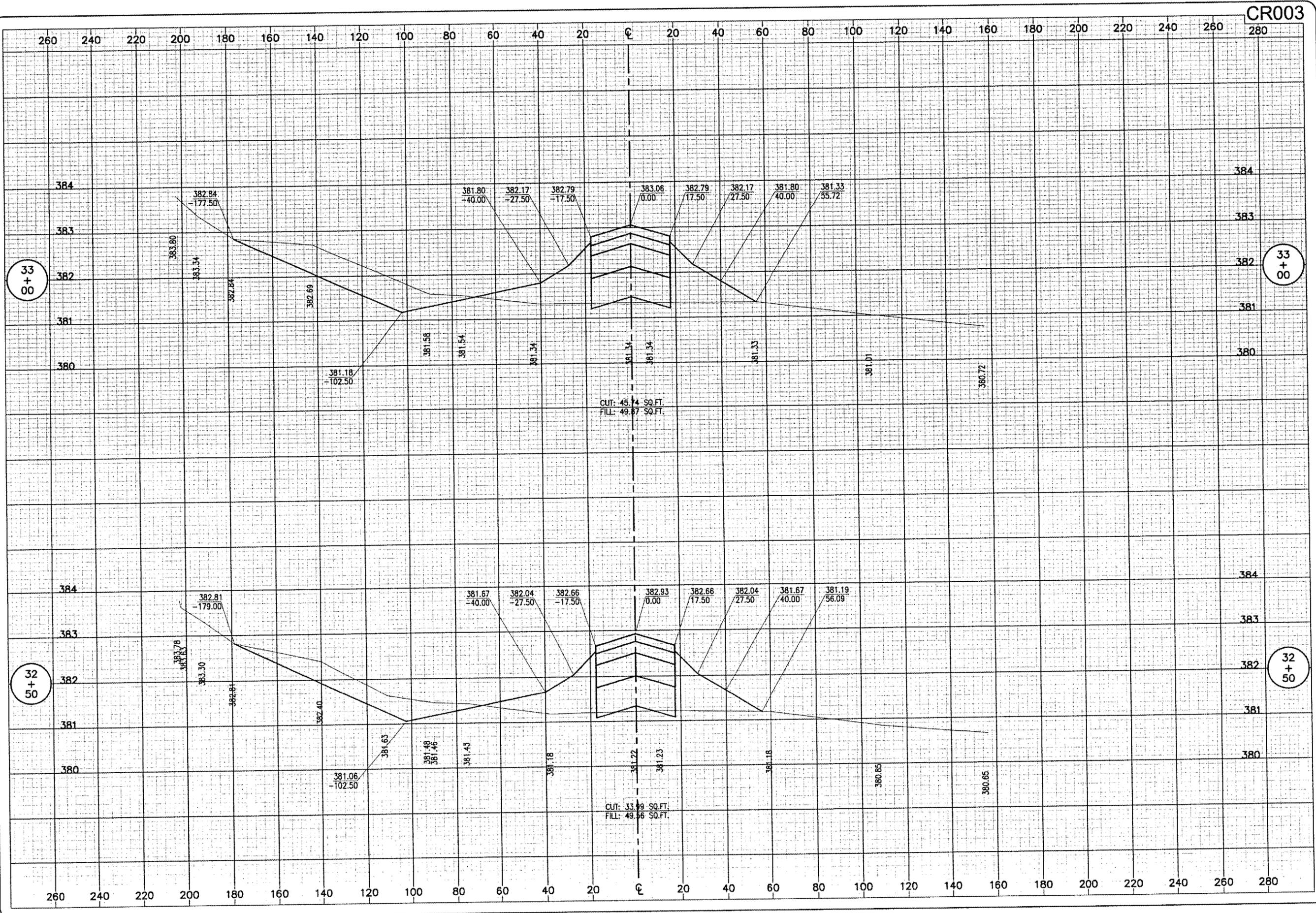
REL. Project No. 801-07TAXD.0800	DATE	03/09/07
Filename: R-318XS.DWG	LAYOUT	SEP 03/09/07
Scale: 1"=20' Horiz., 1"=1' Vert.	DRAWN	CCC/ZSH 03/09/07
Date: 03/09/07	REVIEWED	CAH 03/27/07



**EXTEND PARTIAL
 PARALLEL TAXIWAY**

PROPOSED TAXIWAY "A"
 CROSS-SECTIONS
 STA. 31+50 TO STA. 32+00

APR 27, 2007 8:06 AM BAK
I:\REPORTS\CARMA\B01-07TX\AIRPORT\SHEETS\R-319XS.DWG - STA. 32+50 TO STA. 33+00



DATE	REVISION	BY

CARMi MUNICIPAL AIRPORT
CARMi, ILLINOIS

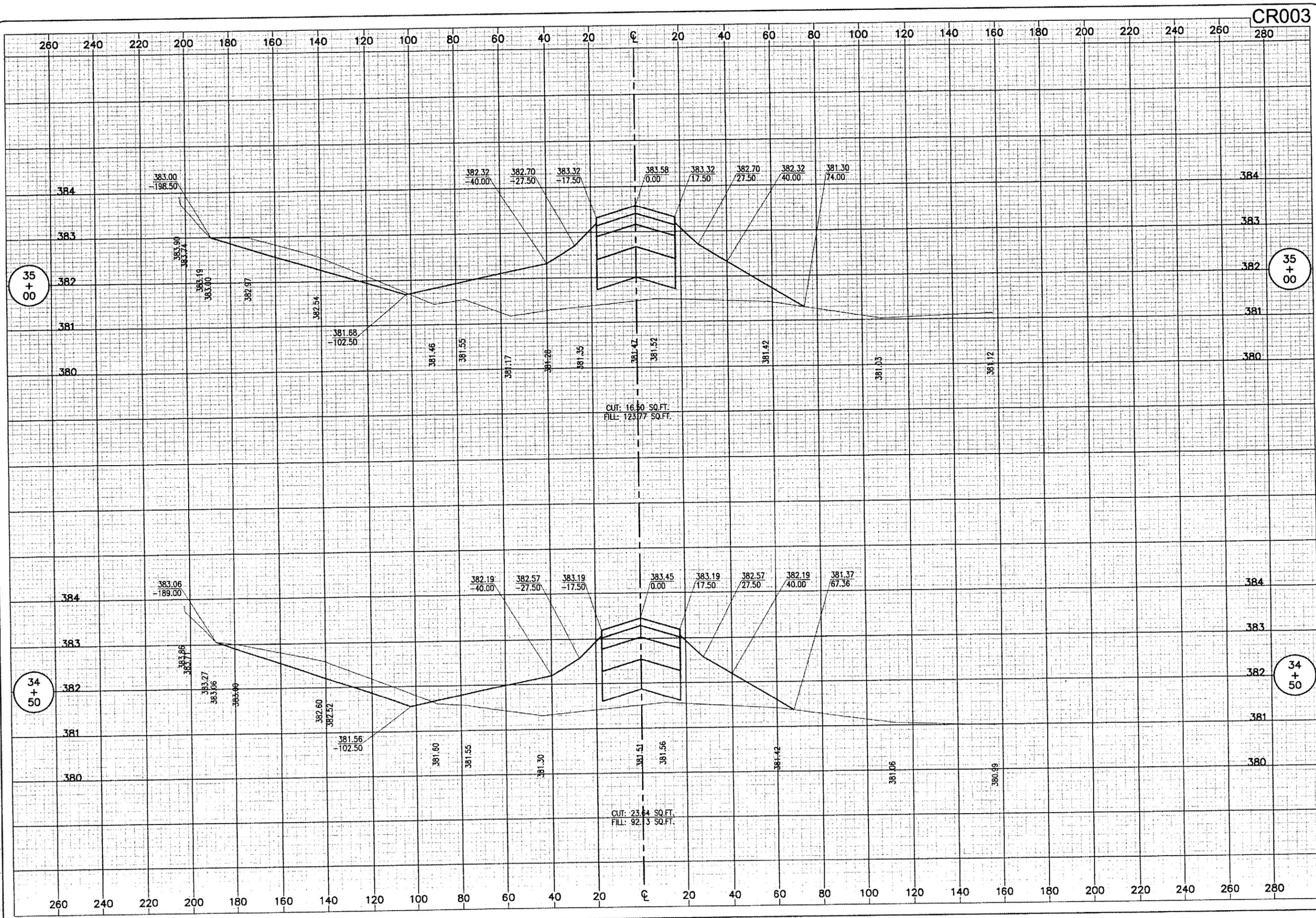
IL PROJ.: CUL-3683 A.I.P. PROJ.: J-17-0109-87

FILE PROJECT NO.	DATE	REVIEWED	CAH
801-07TX10 0800	03/09/07		
R-319XS.DWG	03/09/07		
Scale: 1"=20' Horiz. 1"=1' Vert.			
Date: 03/09/07			



EXTEND PARTIAL PARALLEL TAXIWAY
PROPOSED TAXIWAY "A" CROSS-SECTIONS
 STA. 32+50 TO STA. 33+00

APR 27, 2007 8:07 AM BAK
 P:\AIRPORTS\CARM\1801-07\TX\AIRPORT\SHEETS\R-321XS.DWG - STA. 34+50 TO STA. 35+00



CR003

DATE	REVISION	BY

**CARM MUNICIPAL AIRPORT
 CARM, ILLINOIS**

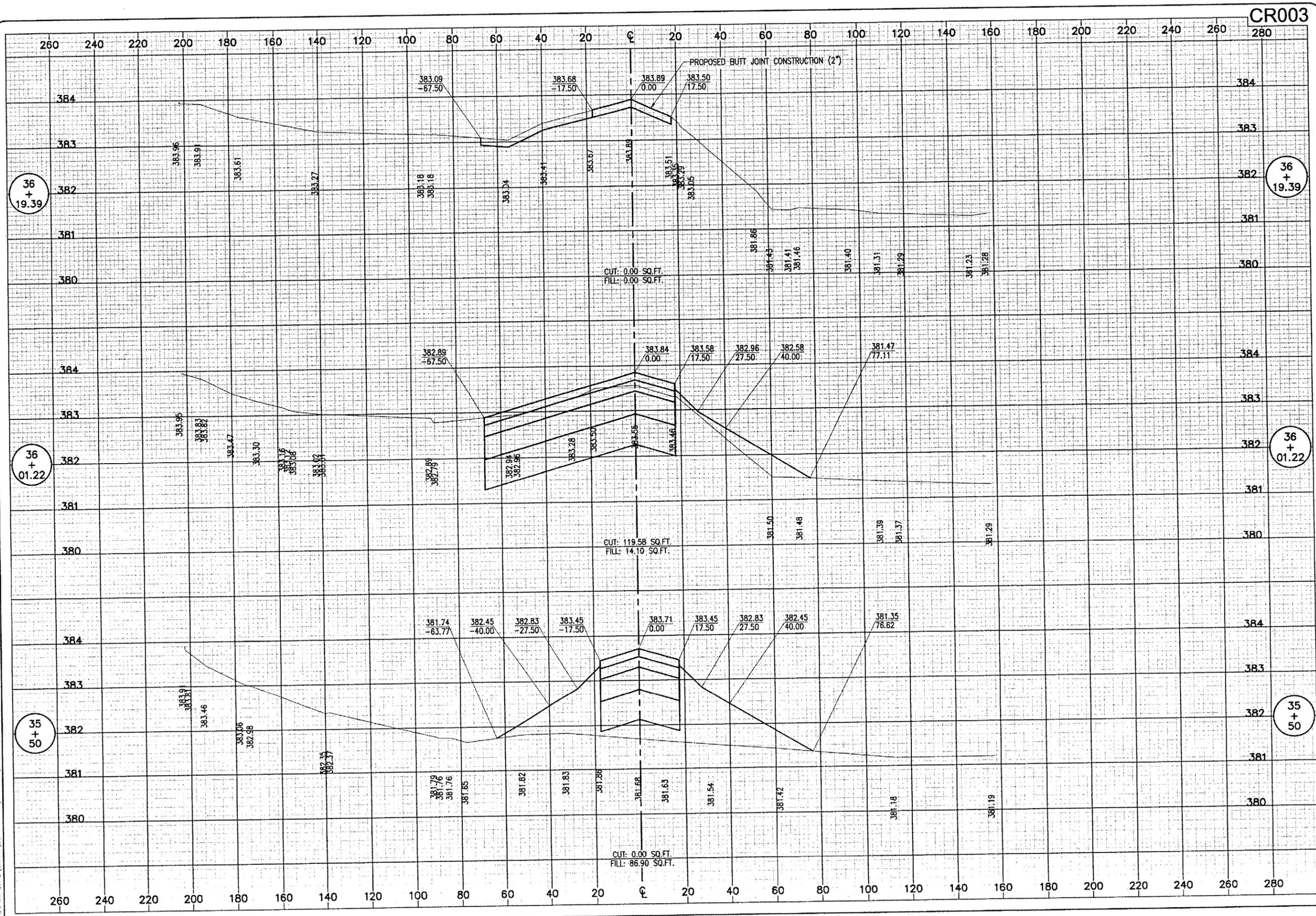
IL PROJ: CUL-3683 A.I.P. PROJ: 3-17-0109-87

1861 Project No. 801-07\TX\0 0800	SEP 03/09/07
Filename: R-321XS.DWG	CCC/ZSH 03/09/07
Scale: 1" = 20' Horiz, 1" = 1' Vert.	CAH 03/27/07
Date: 03/09/07	
LAYOUT	
DRAWN	
REVIEWED	



**EXTEND PARTIAL
 PARALLEL TAXIWAY**
 PROPOSED TAXIWAY "A"
 CROSS-SECTIONS
 STA. 34+50 TO STA. 35+00

APR 27, 2007 8:08 AM BAK
 H:\AIRPORTS\CARMI\801-07TXX\AIRPORT\SHEETS\R-322XS.DWG - STA 35+50 TO STA. 36+19.39



CR003

36 + 19.39

36 + 01.22

35 + 50

36 + 19.39

36 + 01.22

35 + 50

DATE	REVISION	BY

CARMi MUNICIPAL AIRPORT
 CARMi, ILLINOIS

IL PROJ.: CUL-3683 A.I.P. PROJ.: 3-17-0109-87

Project No. 801-07TXXD.0800	SEP 03/09/07
Drawings R-322XS.DWG	CCC/ZSH 03/09/07
Scale 1" = 20' Horiz, 1" = 1' Vert.	CAH 03/27/07
Date 03/09/07	
LAYOUT	
DRAWN	
REVIEWED	



EXTEND PARTIAL
 PARALLEL TAXIWAY

PROPOSED TAXIWAY "A"
 CROSS-SECTIONS
 STA. 35+50 TO STA. 36+19.39