

# CONSTRUCTION PLANS

FOR

## ROCHELLE MUNICIPAL AIRPORT MAJOR THOMAS F. KORITZ FIELD

ROCHELLE, OGLE COUNTY, ILLINOIS

### CONSTRUCT, LIGHT AND MARK PARTIAL PARALLEL TAXIWAY TO RUNWAY 7/25

SCOPE OF WORK:

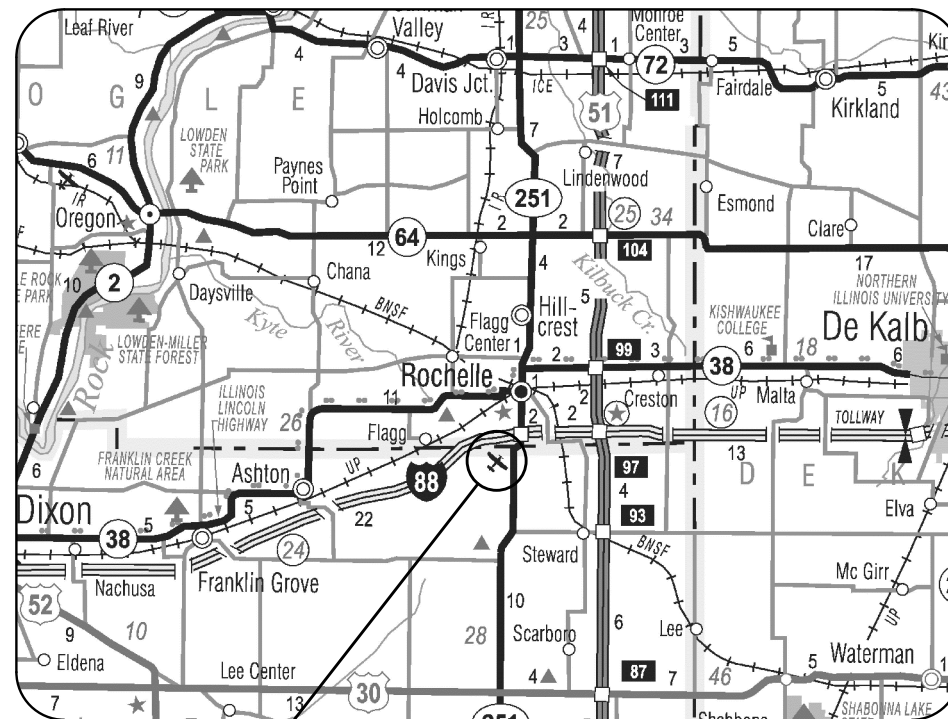
THE IMPROVEMENTS INCLUDE: THE CONSTRUCTION OF 1300' OF PARTIAL PARALLEL TAXIWAY TO RUNWAY 7-25. THIS PROJECT WILL INCLUDE UNCLASSIFIED EXCAVATION, GRADING, DRAINAGE, UNDERDRAIN, PAVING, PAVEMENT MARKING, EROSION PROTECTION, SEEDING, MULCHING, AND INSTALLATION OF MEDIUM INTENSITY TAXIWAY LIGHTING SYSTEM WITH ASSOCIATED CABLING, DUCT WORK, AND VAULT WORK.

ILL. PROJ.: RPJ-4279

LATITUDE: 41° 53' 35"  
LONGITUDE: 89° 04' 42"  
ELEVATION: 781.00' M.S.L.  
DATE: NOV. 15, 2013



LOCATION OF COUNTY



ROCHELLE MUNICIPAL AIRPORT LOCATION



PLANS PREPARED BY:

Hanson Professional Services Inc.  
**ELECTRICAL ENGINEER**

Submitted by: *Kevin Lightfoot* ENG'R  
Date Submitted: 11/18/2013  
Lic. Exp. Date: November 30, 2015

PLANS PREPARED BY:

Hanson Professional Services Inc.  
**CIVIL ENGINEER**

Submitted by: *Kyle B. Schweizer* ENG'R  
Date Submitted: 11/18/2013  
Lic. Exp. Date: November 30, 2015

ROCHELLE MUNICIPAL AIRPORT

Approved: *Mark Roth* AIRPORT MANAGER  
Date: 11-21-13

REVISION	DATE

ROCHELLE MUNICIPAL AIRPORT  
MAJOR THOMAS F. KORITZ FIELD  
ROCHELLE, OGLE COUNTY, ILLINOIS  
IL PROJ.: RPJ-4279

FILENAME	SCALE	DATE	LAYOUT	DRAWN	REVIEWED
C-001-CVR.dwg	NONE	11/15/2013	KBS	KBS	CAH

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1625 South Sixth Street  
Springfield, Illinois 62703-2886

CONSTRUCT PARTIAL PARALLEL TAXIWAY


COVER SHEET

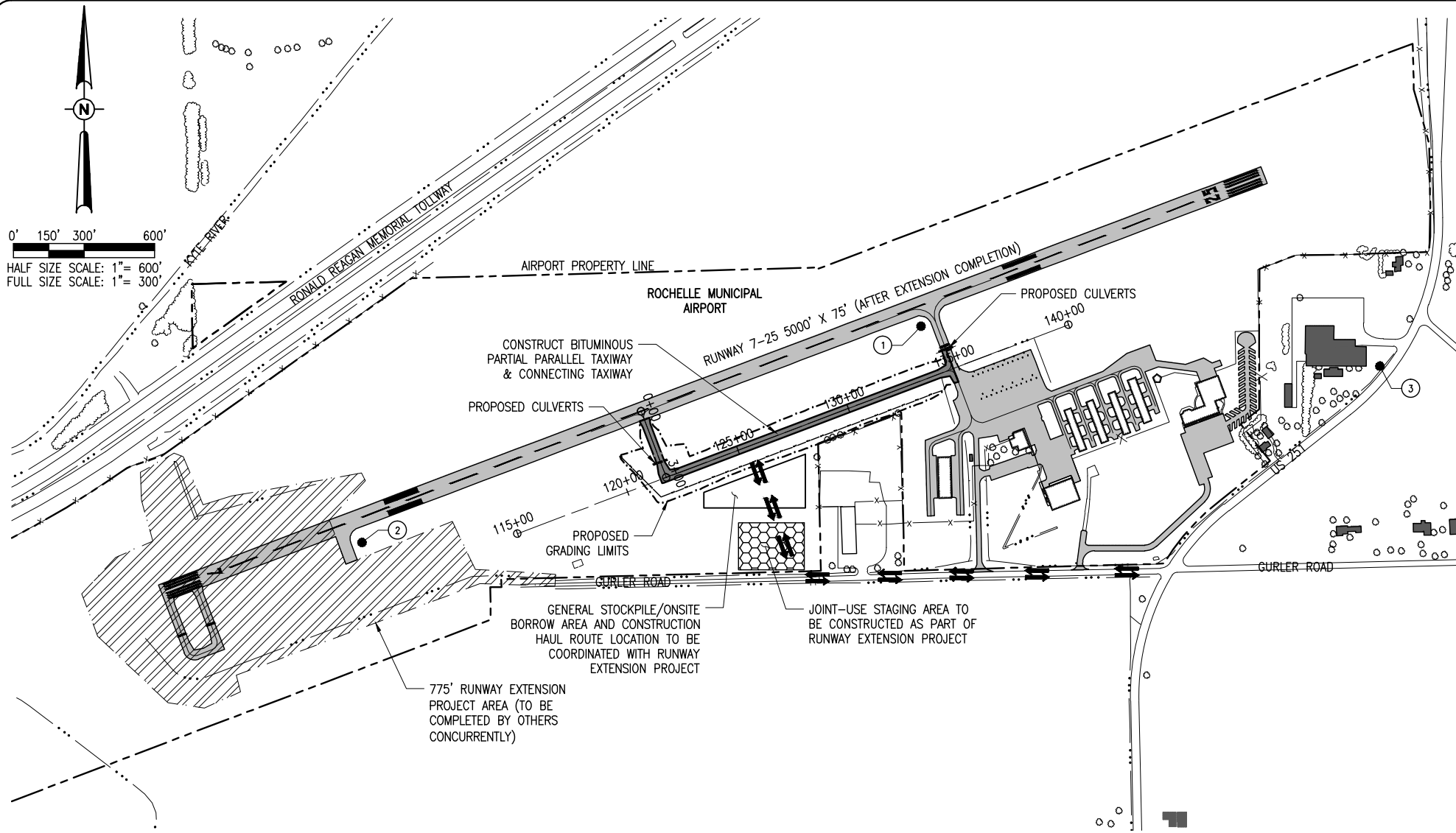
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SUMMARY OF QUANTITIES				
ITEM NO.	DESCRIPTION	UNIT	QUANTITY	AS-BUILT QUANTITY
AR108084	1/C #4 XLP-USE	LF	450	
AR108086	1/C #6 XLP-USE	LF	450	
AR108088	1/C #8 XLP-USE	LF	450	
AR108158	1/C #8 5 KV UG CABLE IN UD	LF	5670	
AR109200	INSTALL ELECTRICAL EQUIPMENT	LSUM	1	
AR110502	2-WAY CONCRETE ENCASED DUCT	LF	205	
AR110504	4-WAY CONCRETE ENCASED DUCT	LF	140	
AR110610	ELECTRICAL HANDHOLE	EACH	5	
AR125410	MITL - STAKE MOUNTED	EACH	32	
AR125415	MITL - BASE MOUNTED	EACH	6	
AR125444	TAXI GUIDANCE SIGN, 4 CHARACTER	EACH	1	
AR125901	REMOVE STAKE MOUNTED LIGHT	EACH	2	
AR125906	REMOVE SPLICE CAN	EACH	1	
AR150510	ENGINEER'S FIELD OFFICE	LSUM	1	
AR150520	MOBILIZATION	LSUM	1	
AR150540	HAUL ROUTE	LSUM	1	
AR152410	UNCLASSIFIED EXCAVATION	CY	3087	
AR152441	ON-SITE BORROW	CY	3905	
AR156510	SILT FENCE	LF	1000	
AR156511	DITCH CHECK	EACH	2	
AR156520	INLET PROTECTION	EACH	3	
AR156530	TEMPORARY SEEDING	ACRE	5	
AR209612	CRUSHED AGG. BASE COURSE - 12"	SY	6537	
AR401613	BIT. SURF. CSE.-METHOD I, SUPERPAVE	TON	580	
AR401655	BUTT JOINT CONSTRUCTION	SY	290	
AR401910	REMOVE & REPLACE BIT. PAVEMENT	SY	52	
AR403613	BIT. BASE CSE.-METHOD I, SUPERPAVE	TON	920	
AR602510	BITUMINOUS PRIME COAT	GAL	3094	
AR603510	BITUMINOUS TACK COAT	GAL	972	
AR620520	PAVEMENT MARKING - WATERBORNE	SF	2371	
AR620525	PAVEMENT MARKING - BLACK BORDER	SF	2439	
AR701710	RCEP SPAN 23 RISE 14	LF	176	
AR701713	RCEP SPAN 30 RISE 19	LF	176	
AR705506	6" PERFORATED UNDERDRAIN	LF	4678	
AR705546	6" NON PERFORATED UNDERDRAIN	LF	95	
AR705635	UNDERDRAIN COLLECTION STRUCTURE	EA	5	
AR705640	UNDERDRAIN CLEANOUT	EA	4	
AR752718	P R CONC. FES EQ. ROUND SIZE 18"	EA	4	
AR752724	P R CONC. FES EQ. ROUND SIZE 24"	EA	4	
AR801714	GROUT & ABANDON STORM SEWER PIPE	LSUM	1	
AR901510	SEEDING	ACRE	5	
AR908510	MULCHING	ACRE	5	

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REVISION	
DATE	
<b>ROCHELLE MUNICIPAL AIRPORT</b> <b>MAJOR THOMAS F. KORITZ FIELD</b> <b>ROCHELLE, OGLE COUNTY, ILLINOIS</b> IL PROJ.: RPJ-4279	
Hanson Proj. No. 12A0172 Filename C-002-QTY.dwg Scale NONE Date 11/15/2013	5/10/13 KFS 5/10/13 KFS 11/15/13 CAH
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CONSTRUCT PARTIAL PARALLEL TAXIWAY	SUMMARY OF QUANTITIES AND INDEX OF SHEETS
<div style="font-size: 2em; font-weight: bold;">2</div> 2 of 38 sheets	



**GENERAL NOTES**

1. THE SCOPE OF WORK SHEET IS INTENDED ONLY AS A GENERAL DESCRIPTION OF WORK ITEMS AND THEIR APPROXIMATE LOCATIONS AND LIMITS, FOR THE PURPOSE OF UNDERSTANDING THE SCOPE OF THE PROJECT. THIS SHEET SHALL NOT BE USED AS A CONSTRUCTION PLAN. REFER TO THE FOLLOWING PLAN SHEETS FOR DETAILED CONSTRUCTION REQUIREMENTS, LOCATIONS, AND ITEMS OF WORK.
2. WORK FOR THIS PROJECT SHALL CONSIST OF, BUT IS NOT LIMITED TO, UNCLASSIFIED AND ONSITE BORROW EXCAVATION, INSTALLATION OF DRAINAGE PIPE AND STRUCTURES, PLACEMENT OF CRUSHED AGGREGATE BASE COURSE, PLACEMENT OF BITUMINOUS PAVEMENT, PAVEMENT MARKING, INSTALLATION OF TAXIWAY LIGHTING, EROSION CONTROL, SEEDING, AND ALL OTHER ASSOCIATED ITEMS.
3. THE PROJECT PAY ITEMS ARE INTENDED TO BE INCLUSIVE OF ALL WORK TO BE PERFORMED AS SHOWN IN THESE PLANS. ALL INCIDENTAL WORK REQUIRED TO COMPLETE THE PROJECT TO THE SATISFACTION OF THE RESIDENT ENGINEER IS TO BE INCLUDED IN THE COSTS OF PERFORMING THESE ITEMS. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIAL, EQUIPMENT, AND TRANSPORTATION NECESSARY TO CONSTRUCT ALL ELEMENTS OF THE PROJECT AS DESCRIBED IN THE CONSTRUCTION PLANS AND SPECIFICATIONS.
4. THE RULES, REGULATIONS, AND SPECIFICATIONS ENUMERATED HEREIN SHALL BE CONSIDERED AS MINIMUM REQUIREMENTS. THEY SHALL NOT PROHIBIT THE CONTRACTOR FROM FURNISHING AND INSTALLING HIGHER GRADES OF MATERIAL THAN ARE SPECIFIED HEREIN, IF APPROVED BY THE ENGINEER.
5. ACCESS TO THE SITE SHALL BE RESTRICTED EXCLUSIVELY TO THE DESIGNATED CONSTRUCTION ENTRANCE, STAGING AREA, AND HAUL ROUTE. NO EQUIPMENT OR PERSONNEL SHALL BE PERMITTED OUTSIDE THE GENERAL PROJECT AREA.
6. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT AND KEEP CLEAN OF DEBRIS ALL EXISTING AIRFIELD AND ROADWAY PAVEMENTS AT ALL TIMES. ANY DAMAGE TO EXISTING ELECTRICAL, DRAINAGE, AND PAVEMENT STRUCTURES SHALL BE IMMEDIATELY REPAIRED AT NO ADDITIONAL COST TO THE CONTRACT.
7. CONTRACTOR IS REQUIRED TO PROVIDE THEIR OWN RESTROOM FACILITIES.
8. THE OWNER SHALL HAVE THE RIGHT OF FIRST REFUSAL FOR ALL SALVAGEABLE MATERIAL REMOVED ON THE PROJECT.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING PERMITS FOR HAULING ON PUBLIC ROADS, AS APPLICABLE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTING ANY DAMAGES TO ANY PAVEMENTS (PUBLIC OR PRIVATE) CAUSED BY HIS/HER CONSTRUCTION EQUIPMENT OR PERSONNEL.
10. THE CONTRACTOR SHALL PROVIDE ONE SET OF REDLINED RECORD DRAWINGS TO THE RESIDENT ENGINEER AT THE COMPLETION OF THE PROJECT.
11. CONTRACTOR SHALL NOTE THAT ALL AREAS WITHIN THE AIRPORT PROPERTY LINE AND OUTSIDE THE CONSTRUCTION LIMITS MAY BE USED FOR AGRICULTURAL PURPOSES. THE CONSTRUCTION LIMITS SHALL BE RESTRICTED TO AREAS THAT ARE ABSOLUTELY NECESSARY TO DISTURB TO COMPLETE THE REQUIRED WORK ITEMS. LIMITS SHALL BE COORDINATED WITH THE RESIDENT ENGINEER PRIOR TO BEGINNING ANY WORK. ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITY WHICH HAVE BEEN PREVIOUSLY FARMED OR ARE DESIGNATED TO BE FARMED AFTER THE PROJECT COMPLETION SHALL BE CHISEL PLOWED OR OTHERWISE SCARIFIED TO RETURN THE AREA TO A REASONABLE TILLABLE CONDITION (IF SO PERMITTED BY THE AIRPORT MANAGER) AT THE CONTRACTOR'S EXPENSE.
12. APPROXIMATE LOCATIONS OF UNDERGROUND UTILITIES ARE SHOWN THROUGHOUT THESE PLANS. THE CONTRACTOR SHALL DETERMINE EXACT LOCATIONS AND PROTECT THESE UTILITIES DURING CONSTRUCTION. ANY UTILITIES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. CONTRACTOR SHALL COORDINATE WITH THE PROPER AUTHORITIES FOR THE PURPOSE OF LOCATING AND PROTECTING EXISTING UNDERGROUND UTILITIES.
13. THE CONTRACTOR MUST AT ALL TIMES MAINTAIN PROPER DRAINAGE AND EROSION CONTROL FOR ALL AREAS AFFECTED BY HIS WORK.
14. THIS PROJECT WILL DISTURB MORE THAN 1 ACRE, THEREFORE A NPDES PERMIT IS REQUIRED. THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING AND MAINTAINING THE EROSION CONTROL MEASURES AS SHOWN IN THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) AND IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, ILLINOIS ENVIRONMENTAL PROTECTION AGENCY, CURRENT ISSUE.
15. **MATERIAL CERTIFICATIONS** - COMPLETED WORK ITEMS **CANNOT** BE PLACED ON A CONSTRUCTION REPORT FOR PAYMENT UNTIL **ALL** THE MATERIAL CERTIFICATIONS FOR THAT ITEM HAVE BEEN RECEIVED, REVIEWED AND ACCEPTED BY THE RESIDENT ENGINEER.
16. **CERTIFIED PAYROLLS** - THE RESIDENT ENGINEER **CANNOT** FORWARD A CONSTRUCTION REPORT FOR PAYMENT TO THE IDOT-DIVISION OF AERONAUTICS FOR PROCESSING UNTIL **ALL** CERTIFIED PAYROLLS FOR THAT PERIOD HAVE BEEN RECEIVED.
17. **COORDINATION BETWEEN PROJECTS** - A RUNWAY EXTENSION PROJECT IS EXPECTED TO BE CONSTRUCTED CONCURRENTLY WITH THE PROPOSED TAXIWAY PROJECT. SEVERAL ITEMS WILL REQUIRE COORDINATION BETWEEN CONTRACTORS. REFER TO THE SPECIAL PROVISIONS FOR ADDITIONAL DETAILS.

**EARTHWORK SUMMARY**

TOTAL AR152410 - UNCLASSIFIED EXCAVATION	<b>3,087 CY</b>
TOTAL EMBANKMENT	6,530 CY
UNCLASSIFIED EXCAVATION AVAILABLE FOR USE IN EMBANKMENT (ADJ. FOR 15% SHRINKAGE)	2,624 CY
<b>TOTAL AR152441 - ON-SITE BORROW EXCAVATION</b>	<b>3,905 CY</b>

**UTILITY NOTE**

THE LOCATION, SIZE, AND TYPE OF MATERIAL OF EXISTING UNDERGROUND AND/OR ABOVEGROUND UTILITIES INDICATED ON THE PLANS ARE NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. NEITHER THE OWNER NOR THE ENGINEER ASSUMES ANY RESPONSIBILITY WHATEVER IN RESPECT TO THE ACCURACY, COMPLETENESS, OR SUFFICIENCY OF THE INFORMATION. THERE IS NO GUARANTEE, EITHER EXPRESSED OR IMPLIED, THAT THE LOCATIONS, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ARE REPRESENTATIVE OF THOSE TO BE ENCOUNTERED IN THE CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES OF HIS OPERATIONAL PLANS AND SHALL OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES DETAILED INFORMATION AND ASSISTANCE RELATIVE TO THE LOCATION OF THEIR FACILITIES AND THE WORKING SCHEDULE OF THE COMPANIES FOR REMOVAL OR ADJUSTMENT WHERE REQUIRED. IN THE EVENT AN UNEXPECTED UTILITY INTERFERENCE IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY COMPANY OF JURISDICTION. THE OWNER'S REPRESENTATIVE AND/OR THE RESIDENT ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY DAMAGE TO SUCH MAINS AND SERVICES SHALL BE RESTORED TO SERVICE AT ONCE AND PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT. ALL UTILITY CABLES AND LINES SHALL BE LOCATED BY THE RESPECTIVE UTILITY. **CONTACT JULIE (JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS) FOR UTILITY INFORMATION, PHONE: 1-800-892-0123.** CONTACT THE FAA (FEDERAL AVIATION ADMINISTRATION) FOR ASSISTANCE IN LOCATING FAA CABLES AND UTILITIES. LOCATION OF FAA POWER, CONTROL, AND COMMUNICATION CABLES SHALL BE COORDINATED WITH AND/OR LOCATED BY THE FAA. ALSO CONTACT AIRPORT DIRECTOR/MANAGER AND AIRPORT PERSONNEL FOR ASSISTANCE IN LOCATING UNDERGROUND AIRPORT CABLES AND/OR UTILITIES. ALSO COORDINATE WORK WITH ALL ABOVEGROUND UTILITIES.

**J.U.L.I.E. INFORMATION**

COUNTY \_\_\_\_\_ OGLE/LEE  
 CITY \_\_\_\_\_ ROCHELLE  
 TOWNSHIP \_\_\_\_\_ FLAGG/REYNOLDS  
 SECTION NO. \_\_\_\_\_ 35/2  
 ADDRESS \_\_\_\_\_ MAJOR THOMAS F. KORITZ FIELD  
 ROCHELLE MUNICIPAL AIRPORT  
 ROUTE 251, SOUTH  
 ROCHELLE, ILLINOIS 61068

**LEGEND**

- EXISTING AIRPORT PAVEMENT
- EXISTING AIRPORT BUILDINGS
- PROPOSED PAVEMENT
- PROPOSED GRADING LIMITS
- CONSTRUCTION STAGING AREA
- AIRPORT PROPERTY LINE
- CONSTRUCTION HAUL ROUTE

**CONTROL POINT DATA**

NO.	DESCRIPTION	NORTHING	EASTING	ELEV.
1	NGS STAINLESS STEEL ROD IN SLEEVE-"ROCHPORT"	1,905,524.80	2,593,429.93	774.18
2	NGS STAINLESS STEEL ROD IN SLEEVE-"ROCHPORT AZ MK"	1,904,607.07	2,591,059.02	769.60
3	NGS V223-DISK IN CONCRETE ON WEST SIDE OF RT. 251	1,905,355	2,595,375	782.95

**SURVEY NOTES**

1. ALL COORDINATE VALUES SHOWN IN TABLE ARE BASED ON ILLINOIS STATE PLANE COORDINATE SYSTEM, WEST ZONE, NAD-83 (2007). ALL ELEVATIONS ARE REFERENCED TO NAVD 88.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION LAYOUT AND ANY EXTENSION OF THE CONTROL NETWORK NEEDED TO PROPERLY COMPLETE THE WORK.
3. THE CONTRACTOR SHALL VERIFY ELEVATION AND DIMENSIONS SHOWN IN THE CONTRACT DOCUMENTS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. WHERE NEW WORK IS TO BE FITTED TO EXISTING, THE CONTRACTOR SHALL VERIFY DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO THE START OF THE NEW WORK. ANY DISCREPANCIES FOUND SHALL BE REPORTED TO THE RESIDENT ENGINEER OR THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR THE NEW WORK.

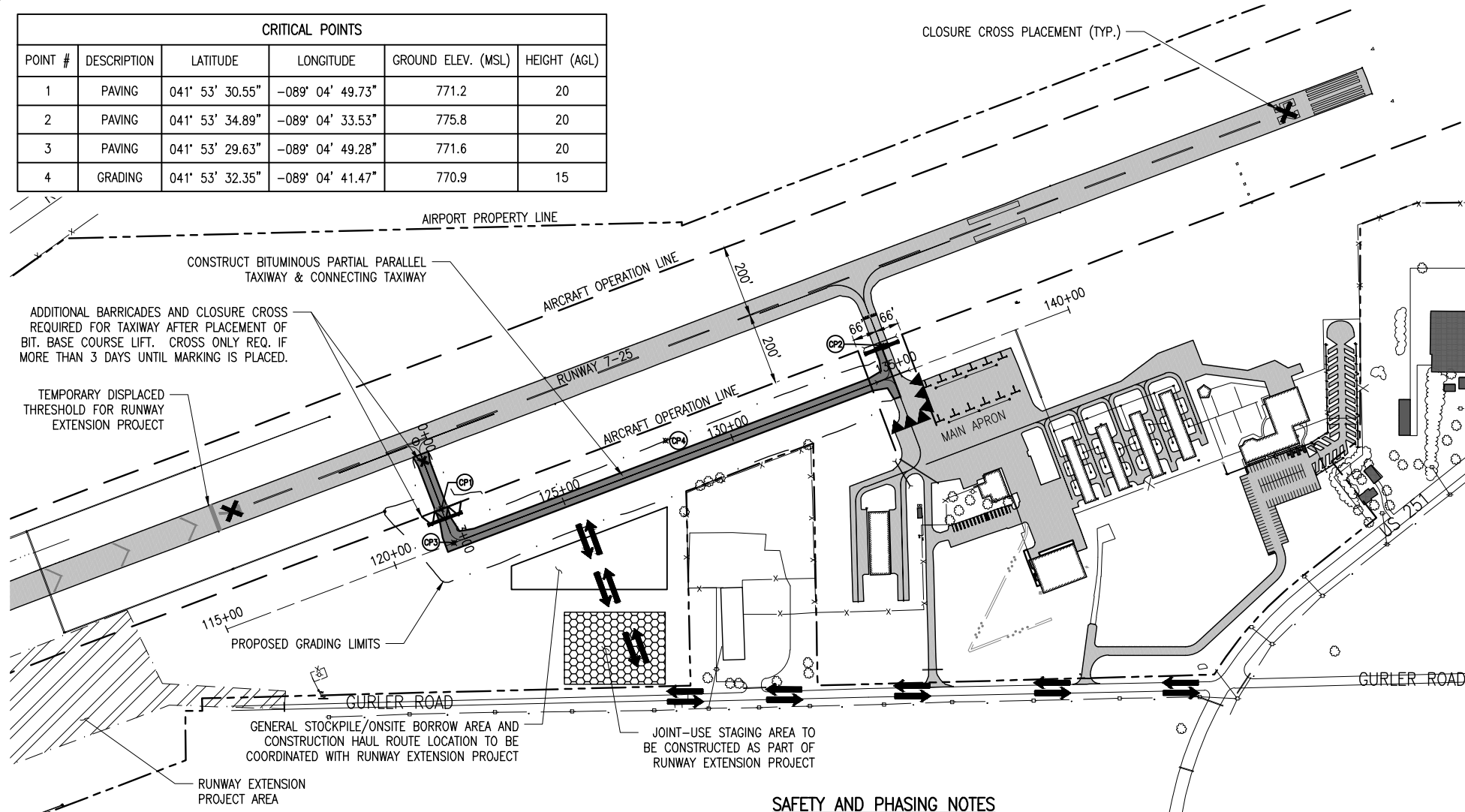
**ALIGNMENT DATA**

ALIGNMENT	LIMITS	NORTHING	EASTING
TAXIWAY "A"	BEGIN AT STA. 115+00	1,904,643.85	2,591,718.45
	END AT STA. 140+00	1,905,530.47	2,594,055.95
CONNECTOR	BEGIN AT STA. 0+00	1,905,163.74	2,592,243.19
	END AT STA. 3+00	1,904,883.24	2,592,349.58

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<p><b>ROCHELE MUNICIPAL AIRPORT</b>                  MAJOR THOMAS F. KORITZ FIELD                  ROCHELLE, OGLE COUNTY, ILLINOIS</p> <p>IL PROJ.: RPJ-4279</p>	<p><b>HANSON</b>                  Professional Services Inc. 2013                  1625 South Sixth Street                  Springfield, Illinois 62703-2886</p>
CONSTRUCT PARTIAL PARALLEL TAXIWAY	PROPOSED SCOPE OF WORK PLAN AND GENERAL NOTES
<p><b>3</b></p> <p>3 of 38 sheets</p>	

CRITICAL POINTS					
POINT #	DESCRIPTION	LATITUDE	LONGITUDE	GROUND ELEV. (MSL)	HEIGHT (AGL)
1	PAVING	041° 53' 30.55"	-089° 04' 49.73"	771.2	20
2	PAVING	041° 53' 34.89"	-089° 04' 33.53"	775.8	20
3	PAVING	041° 53' 29.63"	-089° 04' 49.28"	771.6	20
4	GRADING	041° 53' 32.35"	-089° 04' 41.47"	770.9	15



**LEGEND**

- EXISTING AIRPORT PAVEMENT
- EXISTING AIRPORT BUILDINGS
- PROPOSED PAVEMENT
- PROPOSED CONSTRUCTION STAGING AREA
- PROPOSED CONSTRUCTION HAUL ROUTE
- AIRCRAFT OPERATION LINE
- AIRPORT PROPERTY LINE
- TEMPORARY RUNWAY/TAXIWAY CLOSURE CROSS
- REQUIRED BARRICADES DURING RUNWAY/TAXIWAY CLOSURE
- REQUIRED ADDITIONAL BARRICADES FOR TAXIWAY CLOSURE

**RC006**

0' 100' 200' 400'

HALF SIZE SCALE: 1" = 400'  
FULL SIZE SCALE: 1" = 200'

**BARRICADE NOTES**

- ALL CONSTRUCTION SIGNS AND TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES INCLUDING THE ILLINOIS SUPPLEMENT (LATEST EDITION) AND THE FAA ADVISORY CIRCULARS (LATEST EDITION) UNLESS NOTED OTHERWISE. THE FAA OR MORE STRINGENT SPECIFICATIONS SHALL GOVERN.
- MODIFIED TYPE II BARRICADES SHALL BE SPACED END TO END THE WIDTH OF THE PAVEMENT IN 4' INCREMENTS AS DIRECTED BY THE ENGINEER. BARRICADES ARE TO BE SET BACK 66' FROM THE ACTIVE TAXIWAY CENTERLINE OR AS SHOWN ON THE PLANS.
- CONSTRUCTION RED WARNING LIGHT: THESE ARE PORTABLE, LENS DIRECTED, ENCLOSED LIGHTS. THE COLOR OF THE LIGHT EMITTED SHALL BE RED. THEY MAY BE USED IN EITHER A STEADY BURN (TYPE C) OR LOW INTENSITY FLASHING MODE (TYPE A) UNLESS NOTED OTHERWISE.
- THE LIGHTING SHALL BE MAINTAINED IN OPERATION DURING THE HOURS OF DARKNESS BETWEEN 1/2 HOUR AFTER SUNSET AND 1/2 HOUR BEFORE SUNRISE AND WHEN CONDITIONS EXIST WHICH TEND TO OBSCURE VISION.
- BARRICADES SHALL BE SECURED TO THE GROUND BY APPROVED METHODS TO PREVENT MOVEMENT BY PROP WASH, JET BLAST OR OTHER WIND CURRENTS.
- THE ONLY COLOR COMBINATION ON TYPE II BARRICADES IS ORANGE AND WHITE. THE ORANGE STRIPES SHALL BE ENCAPSULATED LENS REFLECTIVE SHEETING. THE WHITE STRIPES SHALL BE EITHER ENCAPSULATED OR ENCLOSED LENS REFLECTIVE SHEETING AND MUST BE IN ACCEPTABLE CONDITION.

4" WIDE x 8" TALL ALT. (ORANGE AND WHITE) STRIPES AT 45° ANGLE

**MODIFIED TYPE II BARRICADE**  
NOT TO SCALE

**SAFETY AND PHASING PLAN**

**GENERAL** - THE ROCHELLE MUNICIPAL AIRPORT IS COMPRISED OF A SINGLE PAVED RUNWAY AND CONNECTING TAXIWAY. THE PROPOSED CONSTRUCTION WILL NECESSITATE CLOSING BOTH THE RUNWAY AND TAXIWAY AT CERTAIN TIMES. THE CONTRACTOR SHALL COORDINATE ALL CLOSURES WITH THE AIRPORT MANAGER. TEMPORARY MARKINGS, BARRICADES AND CLOSURE CROSSES SHALL BE PLACED AND MAINTAINED AS DETAILED ON THIS SHEET AND AS DIRECTED BY THE ENGINEER. ALL CONSTRUCTION/OPERATIONS ARE TO BE PERFORMED IN ACCORDANCE WITH FAA ADVISORY CIRCULAR (AC) 150/5370-2F "OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION" AND AC 150/5300-13A "AIRPORT DESIGN". ALL COSTS ASSOCIATED WITH THE WORK AND MATERIALS INVOLVING CONSTRUCTION SAFETY AND PHASING AS SHOWN ON THIS SHEET, OR AS OTHERWISE DIRECTED BY THE RESIDENT ENGINEER OR AIRPORT MANAGER SHALL BE INCIDENTAL TO THE PROJECT.

**AIRCRAFT OPERATION LINE** - THE CONTRACTOR WILL LOCATE THIS LINE AT THE START OF CONSTRUCTION AND WILL PLACE AND MAINTAIN A FLAGGED LATHE EVERY 150' ALONG IT THROUGH THE PROJECT AREA. NO CONTRACTOR PERSONNEL OR EQUIPMENT MAY CROSS THIS LINE WITHOUT THE RUNWAY BEING CLOSED.

**RUNWAY CLOSURES** - RUNWAY 7-25 AND THE EXISTING TAXIWAY SHALL BE CLOSED ANY TIME THE CONTRACTOR INTENDS TO WORK WITHIN 200' OF THE RUNWAY CENTERLINE OR 66' OF THE EXISTING TAXIWAY CENTERLINE, AS DICTATED BY FAA CRITERIA AND DELINEATED ON THIS SHEET BY THE "AIRCRAFT OPERATION LINE". IN ORDER TO MINIMIZE IMPACTS TO AIRPORT BUSINESSES AND OPERATIONS, CLOSURES SHALL BE LIMITED TO MONDAY THROUGH THURSDAY UNTIL MAY 16TH, 2014, AT WHICH POINT CLOSURES WILL ONLY BE ALLOWED ON WEEKDAYS DURING THE HOURS OF 6 P.M. UNTIL 11 A.M. THE FOLLOWING MORNING. NO OTHER DAYTIME OR WEEKEND CLOSURES WILL BE PERMITTED FOR THIS PROJECT UNLESS AUTHORIZED BY THE AIRPORT MANAGER. THE AIRPORT MANAGER HAS COMPLETE AUTHORITY ON DETERMINING WHEN THE RUNWAY MAY BE CLOSED.

**RUNWAY/TAXIWAY CLOSURE PROCEDURES:**

- CONTACT THE AIRPORT MANAGEMENT OR ASSIGNED REPRESENTATIVE A MINIMUM OF 48 HOURS BEFORE THE DESIRED CLOSING TIME.
  - ISSUANCE OF NOTAM AND DEACTIVATION OF THE AIRFIELD LIGHTING AND NAVAIDS BY THE AIRPORT MANAGEMENT.
  - PLACEMENT OF CROSSES, THEN LIGHTED BARRICADES (SEE DETAIL ON THIS SHEET).
- ONLY AT THE TIME THAT ALL OF THE ABOVE ARE COMPLETED MAY ANY CONSTRUCTION OPERATIONS WITHIN 200 FT OF RUNWAY 7-25 OR WITHIN 66' OF THE EXISTING TAXIWAY CENTERLINE BEGIN.

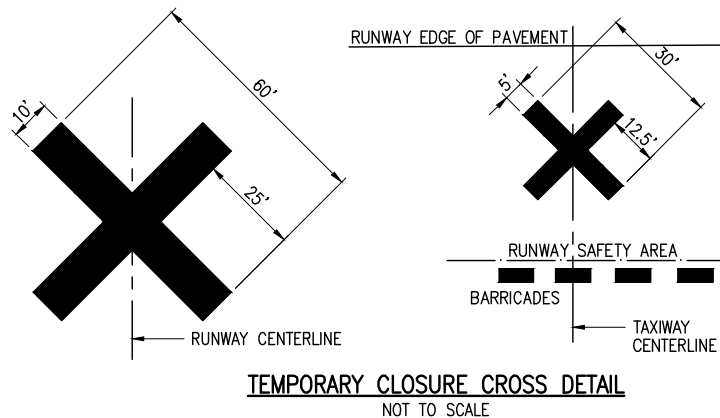
**RUNWAY/TAXIWAY RE-OPENING PROCEDURES:**

- REMOVE LIGHTED BARRICADES, THEN CROSSES.
  - NOTIFY THE AIRPORT MANAGEMENT OR REPRESENTATIVE TO CANCEL THE NOTAM.
  - ACTIVATION OF THE AIRFIELD LIGHTING AND NAVAIDS AND CANCELLATION OF THE NOTAM BY THE AIRPORT MANAGEMENT.
- A CLOSED RUNWAY/TAXIWAY WILL NOT BE RE-OPENED UNTIL ALL EQUIPMENT AND WORK ARE FURTHER THAN 200 FT. FROM THE RUNWAY CENTERLINE OR 66 FT. FROM THE CENTERLINE OF THE EXISTING TAXIWAY.

**RADIO CONTROL** - THE CONTRACTOR WILL BE REQUIRED TO BE IN CONSTANT TWO-WAY RADIO CONTACT WITH THE ROCHELLE MUNICIPAL AIRPORT UNICOM (122.975 MHz) WHILE HE HAS PERSONNEL OR EQUIPMENT ON THE AIRFIELD.

**SAFETY AND PHASING NOTES**

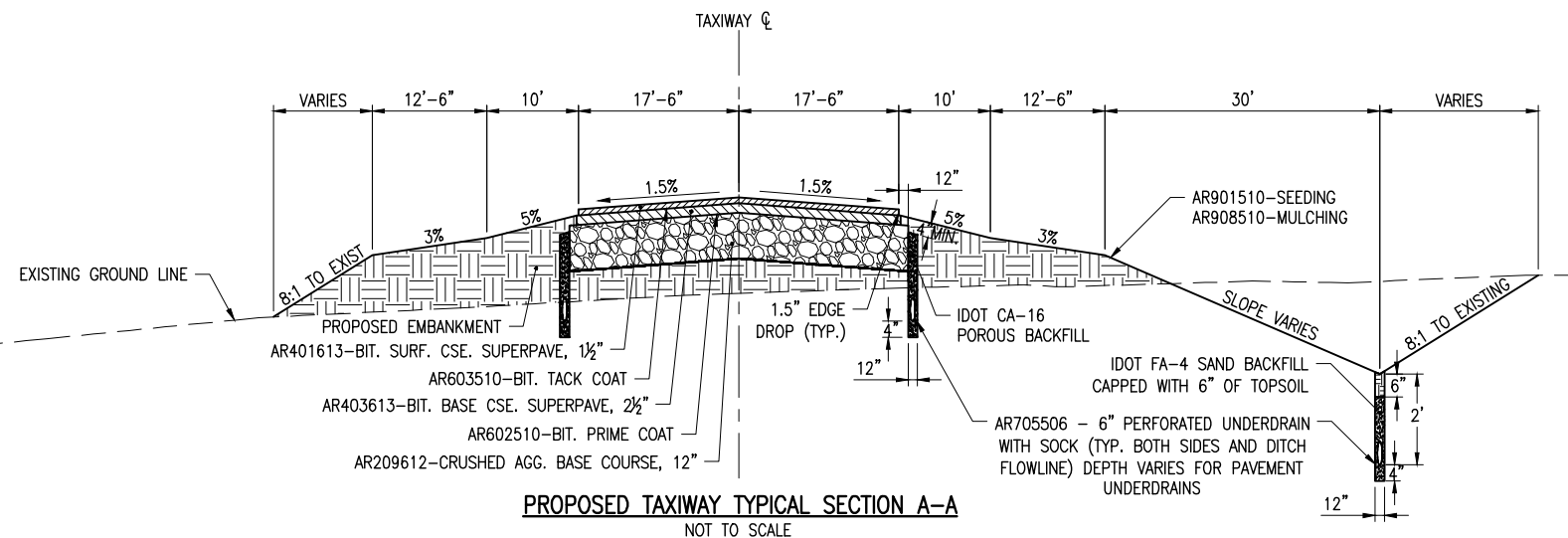
- ALL PROVISIONS OF THE LATEST EDITION OF FAA ADVISORY CIRCULAR AC 150/5370-2 (CURRENT EDITION), "OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION", APPLY TO THIS CONTRACT, EXCEPT AS MODIFIED BY THIS SAFETY PLAN, OR AS MODIFIED BY THE OWNER THROUGH THE RESIDENT ENGINEER AT THE PRECONSTRUCTION CONFERENCE, OR DURING THE COURSE OF THE CONTRACT.
- THE CONTRACTORS SHALL MINIMIZE DISRUPTION OF STANDARD OPERATING PROCEDURES FOR AERONAUTICAL ACTIVITY BY REMAINING WITHIN THE PRESCRIBED STAGING, CONSTRUCTION, AND PHASING AREAS PRESENTED ON THE PROJECT SAFETY AND PHASING PLANS. THE ENGINEER, ENGINEER'S REPRESENTATIVE AND/OR AIRPORT MANAGER RESERVE THE RIGHT TO SUSPEND OPERATIONS IN ORDER TO MAINTAIN SAFETY AT THE AIRPORT.
- ALL CONSTRUCTION EQUIPMENT OPERATING IN THE PRESCRIBED CONSTRUCTION AREA IS REQUIRED TO DISPLAY A CHECKERBOARD FLAG PROPERLY LOCATED OR A ROTATING BEACON (STROBE) AS SPECIFIED IN AC 150/5210-5, "PAINTING, MARKING, AND LIGHTING OF VEHICLES USED ON AN AIRPORT" LATEST EDITION.
- CLOSED AIRFIELD PHASING AREAS, OPEN TRENCHES, AND OTHER HAZARDOUS AREAS AT THE CONSTRUCTION SITE SHALL BE PROMINENTLY MARKED WITH LIGHTED BARRICADES WITH STEADY BURNING OR FLASHING RED LIGHTS AS SPECIFIED IN 150/5370-2, "OPERATIONAL SAFETY ON AIRPORT DURING CONSTRUCTION, LATEST EDITION. LIGHTED BARRICADES MUST BE NO TALLER THAN 18" (EXCLUSIVE OF SUPPLEMENTARY LIGHTS AND FLAGS) ON THE TAXIWAYS AND COMPLY WITH ADVISORY CIRCULAR 150/5370-2, LATEST EDITION. CONTRACTOR SHALL NIGHT CHECK BARRICADES DAILY FOR PROPER OPERATION.
- NO OPEN TRENCHES WITHIN 200' OF AN ACTIVE RUNWAY CENTERLINE OR WITHIN 50' OF ANY AIRPORT OPERATIONS AREA WILL BE PERMITTED UNLESS PROPERLY MARKED. OTHER TRENCHES SHALL BE MAINTAINED SAFE, I.E., BARRICADED OR COVERED WITH STEEL PLATES IN ALL OTHER AREAS. NO PAVEMENT EDGE DROP-OFFS GREATER THAN 3" ARE ALLOWED TO REMAIN ON ANY ACTIVE AIRFIELD PAVEMENT AREA. TEMPORARY EARTH OR SHOULDERS SHALL BE PLACED IF AN INCOMPLETE AREA IS TO BE REOPENED TO AIRCRAFT TRAFFIC.
- NO CONSTRUCTION EQUIPMENT GREATER THAN 23' TALL WILL BE PERMITTED ON THE AIRPORT WITHOUT THE APPROVAL OF THE AIRPORT MANAGER AND AIRSPACE APPROVAL BY THE FAA.
- SOIL, DEBRIS, AND LOOSE MATERIAL DROPPED OR TRUCKED ONTO AIRPORT ROADS, TAXIWAYS, AND SOD SURFACES, OR WHICH CAN BE BLOWN ONTO SUCH SURFACES, SHALL BE IMMEDIATELY SWEEPED, PICKED UP AND REMOVED, OR PLACED INTO CLOSED CONTAINERS. ANY DAMAGE TO AIRPORT PROPERTY SHALL BE REPAIRED IMMEDIATELY AT NO COST TO THE OWNER.
- EACH CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND MAINTAINING AIRPORT LIGHTING AND NAVIGATIONAL ELECTRICAL SYSTEMS DURING CONSTRUCTION. A CONTACT PERSON AND TELEPHONE NUMBER FOR 24 HOUR EMERGENCY IMMEDIATE REPAIR SHALL BE SUBMITTED TO THE AIRPORT MANAGER AND ENGINEER. HAUL ROUTES CROSSING PAVEMENT, DRAINAGE, MISCELLANEOUS. STRUCTURES AND/OR AIRFIELD CABLES SHALL BE PROTECTED FROM DAMAGE.
- ALL AIRCRAFT AND AIRPORT OPERATIONS HAVE THE RIGHT-OF-WAY. CONTRACTOR TO YIELD TO VEHICLES AND REMAIN CLEAR AT ALL TIMES.
- THE CONTRACTOR SHALL UTILIZE WATER AND/OR CHEMICALS APPROVED BY THE RESIDENT ENGINEER AS NECESSARY TO CONTROL DUST.



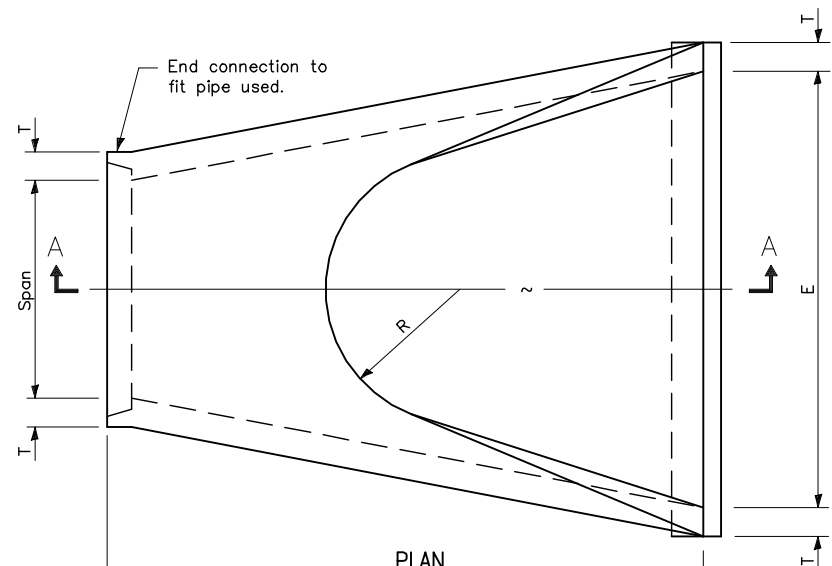
- TEMPORARY "CLOSED RUNWAY" AND "CLOSED TAXIWAY" MARKINGS SHALL BE "AVIATION YELLOW"
- TEMPORARY "CLOSED RUNWAY" MARKINGS SHALL BE CONSTRUCTED OF PLYWOOD, DOUBLE-LAYERED SNOW FENCE OR APPROVED FABRIC AND SHALL BE SECURED TO PAVEMENT BY SANDBAGS OR OTHER APPROVED METHOD.
- TEMPORARY "CLOSED RUNWAY" MARKINGS SHALL BE PLACED OVER THE RUNWAY DESIGNATION NUMBERS UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- TEMPORARY "CLOSED TAXIWAY" MARKINGS SHALL BE CONSTRUCTED USING TEMPORARY PAINT SUCH AS SEYMOUR TEMPORARY MARKER, PART NO. 20-636, OR AN EQUIVALENT PAINT EASILY REMOVED WITH WATER WITHOUT DEFAUCING THE PAVEMENT.
- TEMPORARY "CLOSED TAXIWAY" MARKINGS SHALL BE PLACED WHEN THE RUNWAY IS OPEN AND THE TAXIWAY IS CLOSED MORE THAN 72 HOURS. THE "CLOSED TAXIWAY" MARKINGS SHALL BE PLACED AS SHOWN ON THIS SHEET.
- THE PROPOSED CROSSES WILL BE PLACED EACH DAY THE RUNWAY OR TAXIWAY IS CLOSED AND REMOVED WHEN THE RUNWAY OR TAXIWAY IS RE-OPENED. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE PLACEMENT AND REMOVAL OF THE CROSSES. "CLOSED RUNWAY" AND "CLOSED TAXIWAY" MARKINGS SHALL NOT BE A PAY ITEM AND SHALL BE INCIDENTAL TO OTHER CONTRACT BID ITEMS.

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REVISION				
DATE				
<p><b>ROCHELLE MUNICIPAL AIRPORT</b> <b>MAJOR THOMAS F. KORITZ FIELD</b> <b>ROCHELLE, OGLE COUNTY, ILLINOIS</b></p> <p>IL PROJ.: RPJ-4279</p>				
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<p><b>CONSTRUCT PARTIAL PARALLEL TAXIWAY</b></p>		<p><b>CONSTRUCTION SAFETY AND PHASING PLAN</b></p>		
<p><b>4</b></p> <p>4 of 38 sheets</p>				

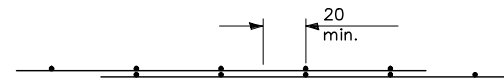


**PROPOSED TAXIWAY TYPICAL SECTION A-A**  
NOT TO SCALE

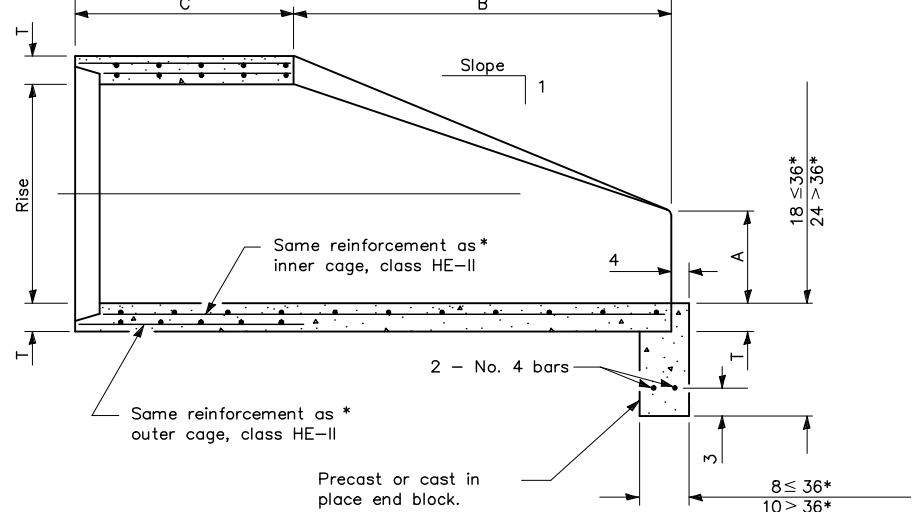


**PLAN**

SPAN	RISE	EQUIV. DIA.	WALL T	A	B	C	D	E	H	R	R 1	R 2	APPROX. SLOPE
23	14	18	2 3/4	8	27	3'-9"	6'-0"	36	5 3/8	6	6	20	1:3.1
30	19	24	3 1/4	8 1/2	39	33	6'-0"	4'-0"	6 7/8	7	8 1/4	26 1/4	1:2.8



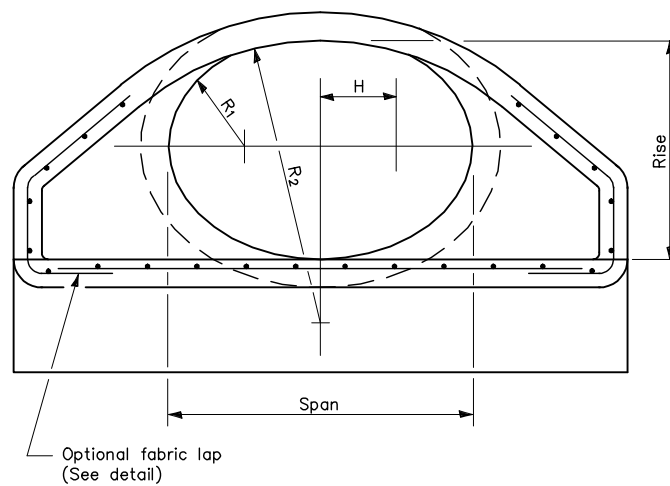
**OPTIONAL FABRIC LAP**



**SECTION A-A**

\*Refers to the equivalent pipe diameter.

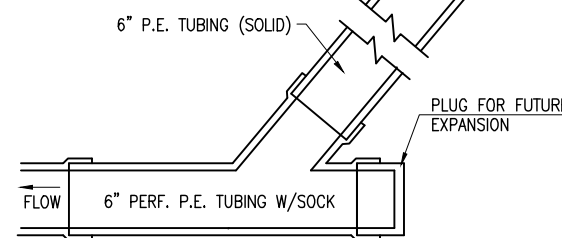
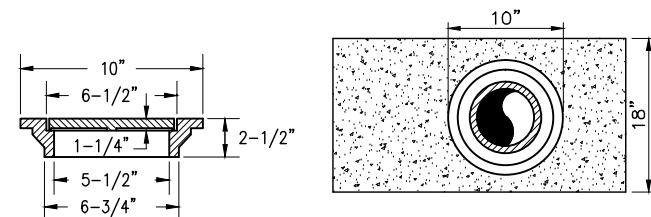
**PRECAST REINFORCED CONCRETE ELLIPTICAL FLARED END SECTION**  
IDOT STANDARD 542306-02  
NOT TO SCALE



**END VIEW**

**CAST IRON FRAME AND COVER**

NEENAH R-6013, DEETER 1810, EAST JORDAN 2790-6 OR APPROVED EQUAL

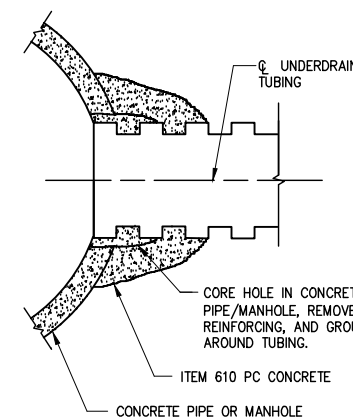


**UNDERDRAIN CLEANOUT TYPE B**

NOT TO SCALE

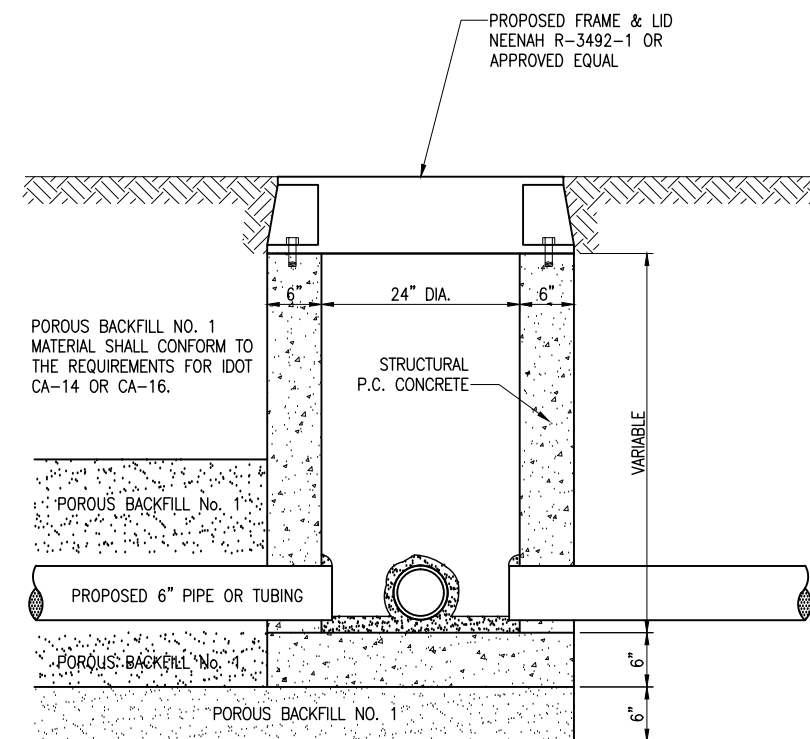
**CLEANOUT NOTES**

DIAMETER OF PIPE AS SPECIFIED.  
TOP OF CLEANOUTS SHALL BE 2" ABOVE FINISH GROUND LINE AT LOCATION SHOWN ON PLANS.  
1/2" CHAMFER TO BE USED ON ALL EXPOSED EDGES OF CLEANOUTS.  
THE CONCRETE SHALL BE STRUCTURAL PORTLAND CEMENT CONCRETE (NON- REINFORCED) IN ACCORDANCE WITH ITEM 610.



**STORM SEWER CONCRETE COLLAR AND GROUT CONNECTION**

NOT TO SCALE



**UNDERDRAIN COLLECTION STRUCTURE DETAIL**

NOT TO SCALE

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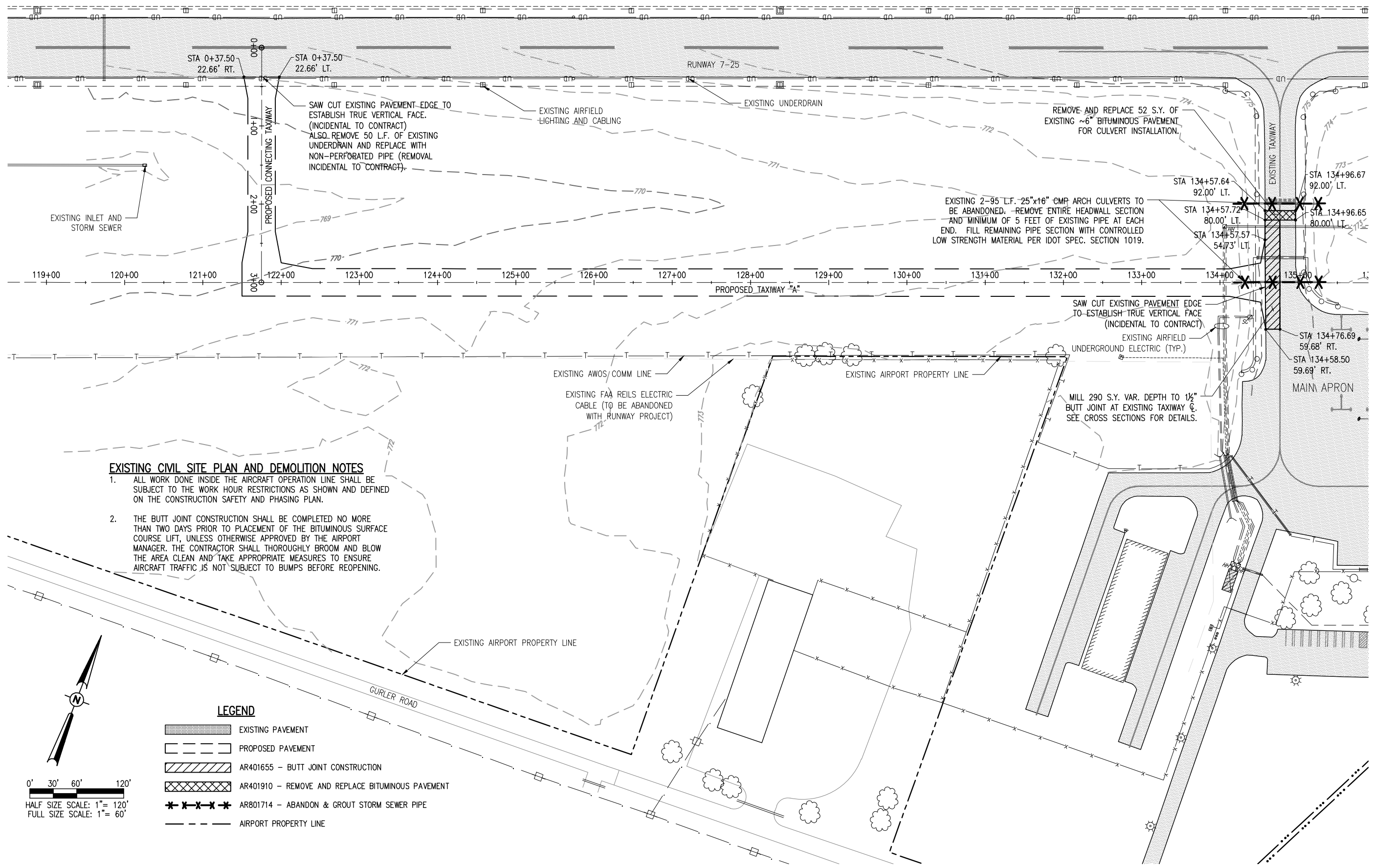
ROCHELLE MUNICIPAL AIRPORT  
MAJOR THOMAS F. KORITZ FIELD  
ROCHELLE, OGLE COUNTY, ILLINOIS

IL PROJ.: RPJ-4279

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REVIEWED	CAH	11/15/13	



CONSTRUCT PARTIAL PARALLEL TAXIWAY  
TYPICAL SECTION AND DRAINAGE DETAILS



REVISION	DATE

ROCHELLE MUNICIPAL AIRPORT  
 MAJOR THOMAS F. KORITZ FIELD  
 ROCHELLE, OGLE COUNTY, ILLINOIS

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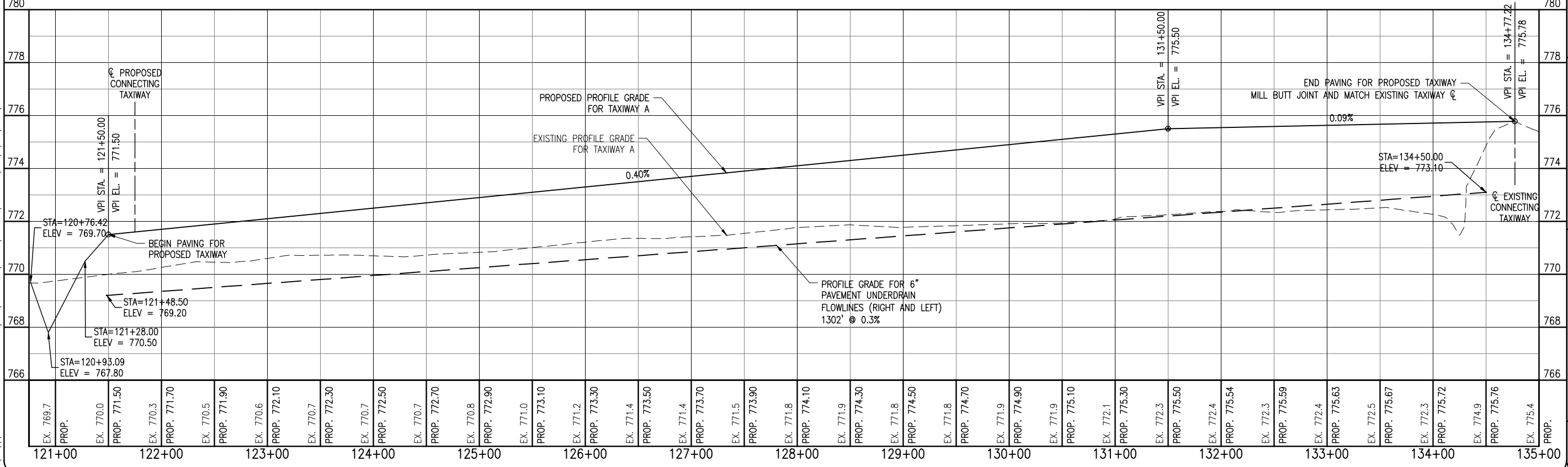
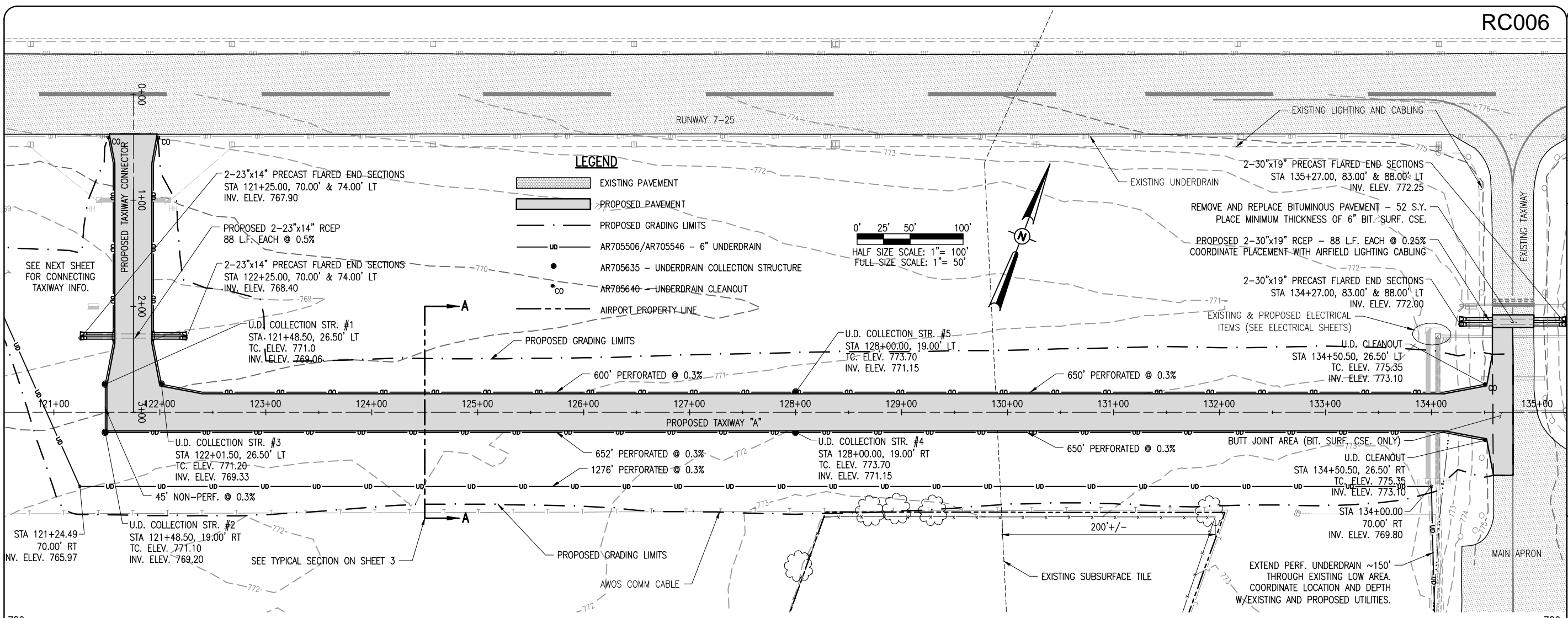
**HANSON**

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CONSTRUCT PARTIAL PARALLEL TAXIWAY

EXISTING CIVIL SITE DEMOLITION PLAN

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REVISION	DATE

**ROCHELLE MUNICIPAL AIRPORT**  
**MAJOR THOMAS F. KORITZ FIELD**  
**ROCHELLE, OGLE COUNTY, ILLINOIS**

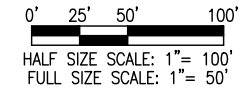
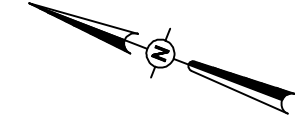
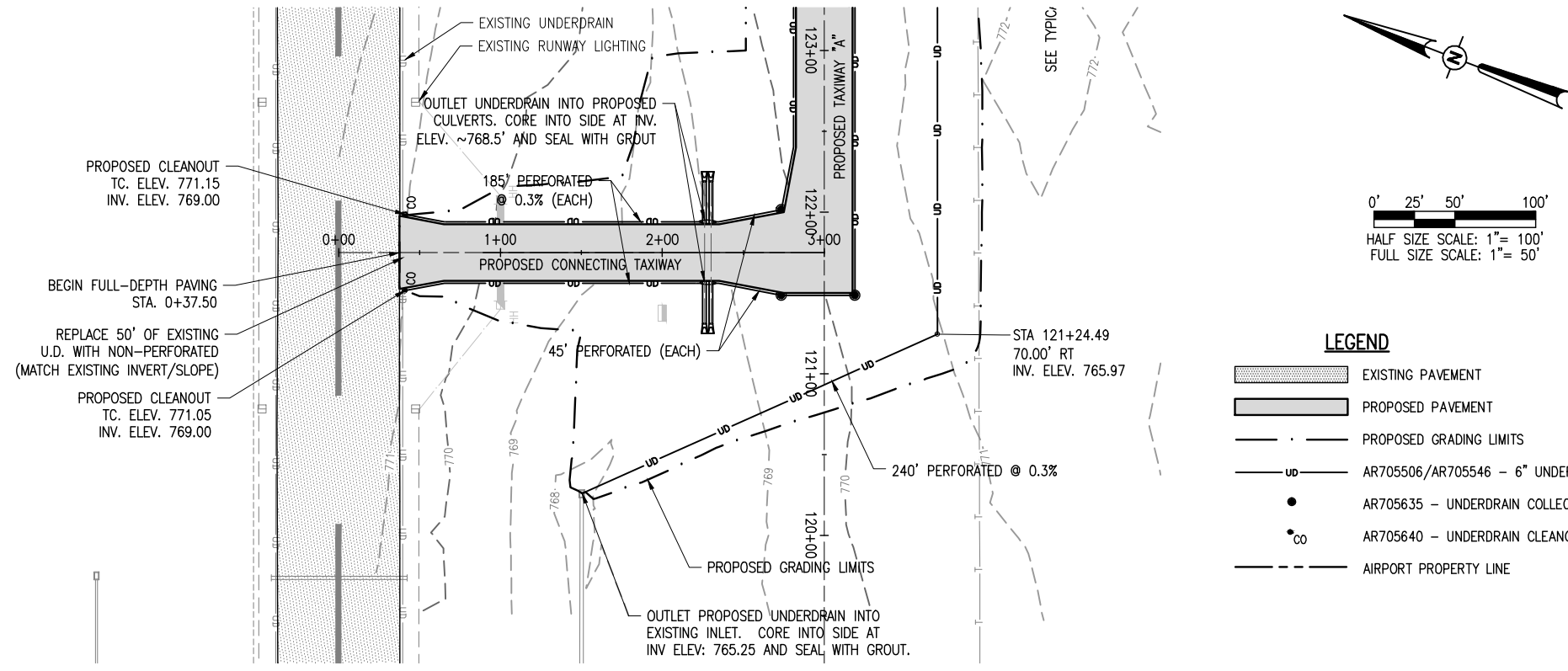
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REVIEWED	CAH	11/15/13	



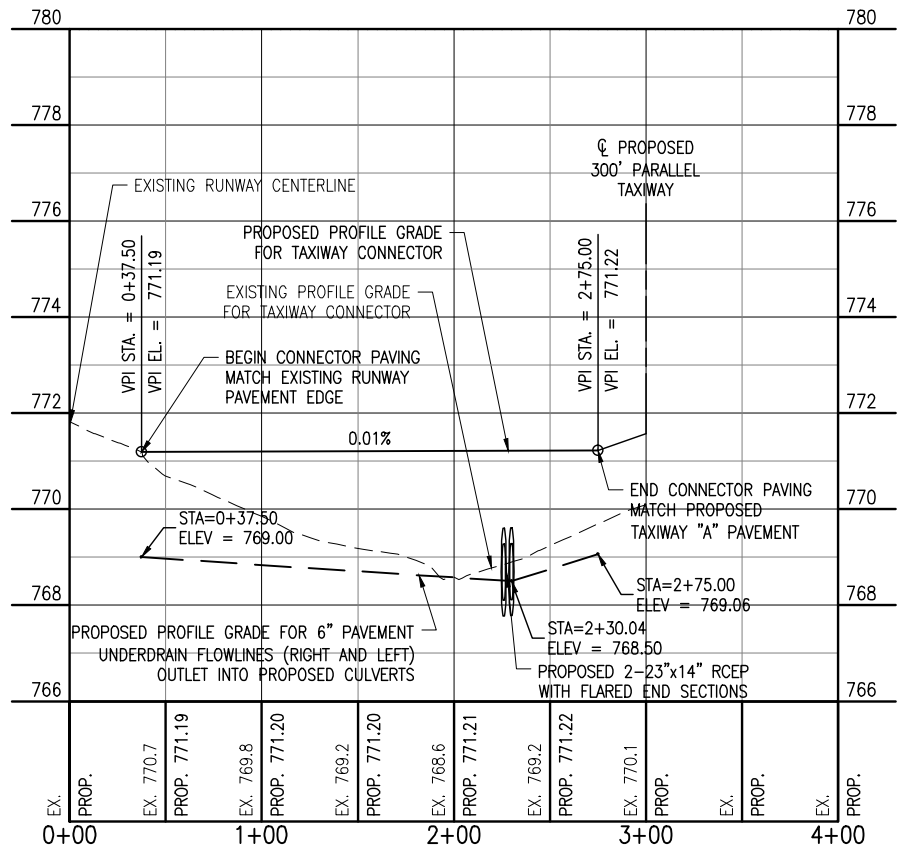
**CONSTRUCT PARTIAL PARALLEL TAXIWAY**

**TAXIWAY A PLAN AND PROFILE**



**LEGEND**

- EXISTING PAVEMENT
- PROPOSED PAVEMENT
- PROPOSED GRADING LIMITS
- AR705506/AR705546 - 6" UNDERDRAIN
- AR705635 - UNDERDRAIN COLLECTION STRUCTURE
- AR705640 - UNDERDRAIN CLEANOUT
- AIRPORT PROPERTY LINE



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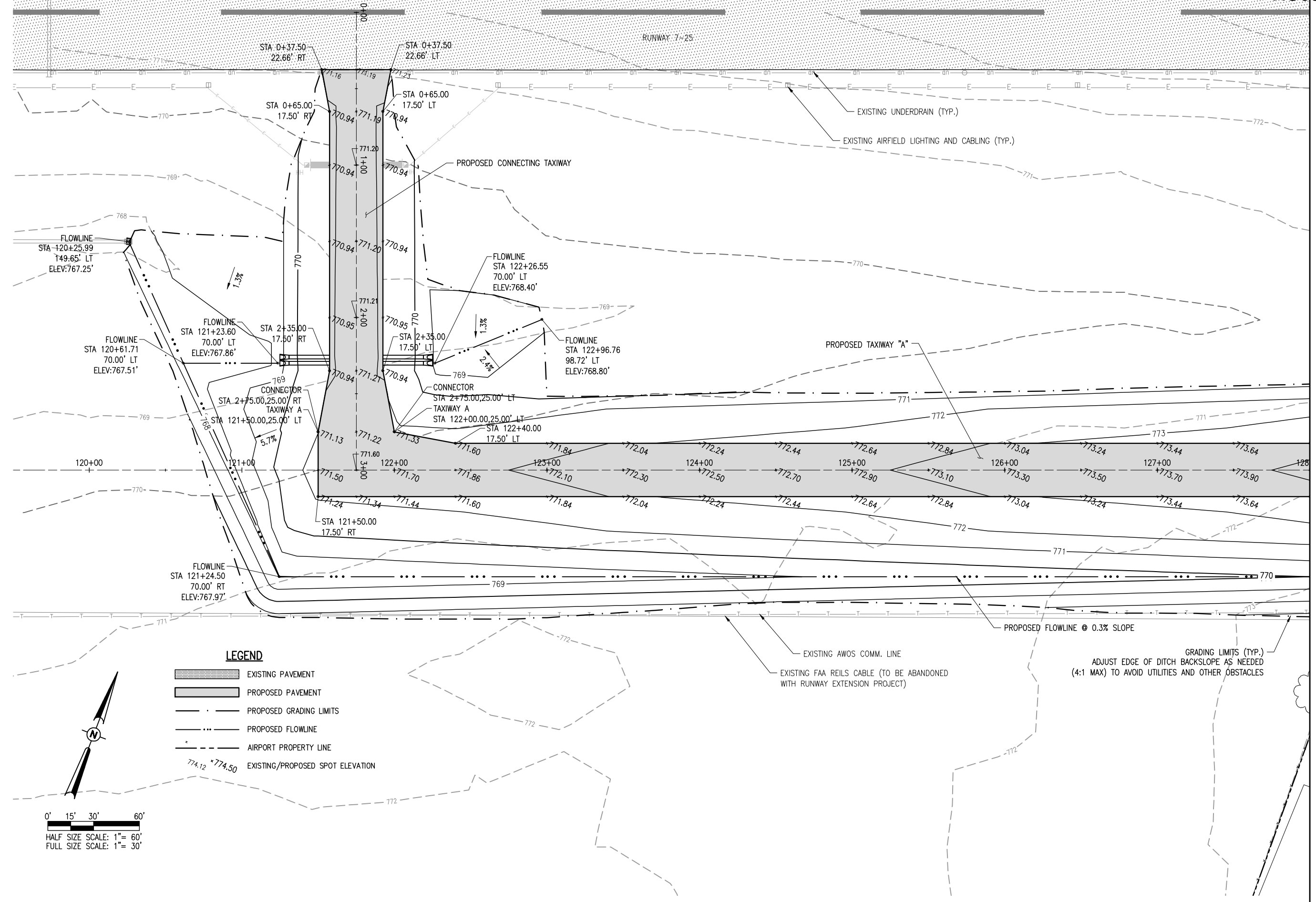
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CONSTRUCT PARTIAL PARALLEL TAXIWAY

TAXIWAY CONNECTOR PLAN AND PROFILE

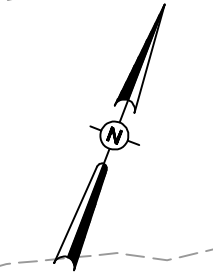




MATCHLINE - STA. 128+00

**LEGEND**

- EXISTING PAVEMENT
- PROPOSED PAVEMENT
- PROPOSED GRADING LIMITS
- PROPOSED FLOWLINE
- AIRPORT PROPERTY LINE
- EXISTING/PROPOSED SPOT ELEVATION



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

REVISION	DATE

ROCHELLE MUNICIPAL AIRPORT  
 MAJOR THOMAS F. KORITZ FIELD  
 ROCHELLE, OGLE COUNTY, ILLINOIS

IL PROJ.: RPJ-4279

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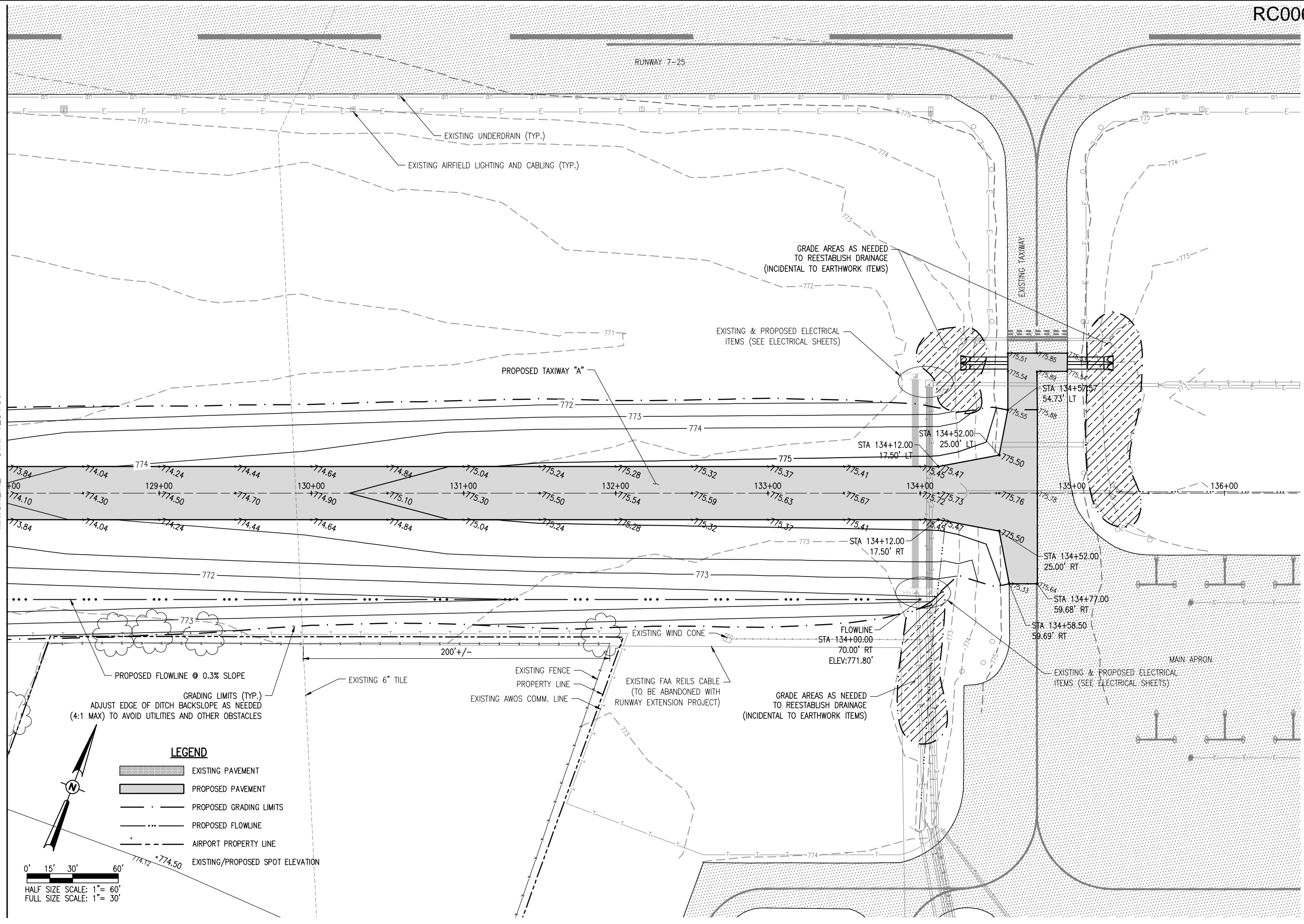


CONSTRUCT PARTIAL  
 PARALLEL TAXIWAY

GRADING PLAN SHEET 1

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MATCHLINE - STA. 128+00



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

**LEGEND**

- EXISTING PAVEMENT
- PROPOSED PAVEMENT
- PROPOSED GRADING LIMITS
- PROPOSED FLOWLINE
- AIRPORT PROPERTY LINE
- EXISTING/PROPOSED SPOT ELEVATION

GRADING LIMITS (TYP.)  
 ADJUST EDGE OF DITCH BACKSLOPE AS NEEDED  
 (4:1 MAX) TO AVOID UTILITIES AND OTHER OBSTACLES

PROPOSED FLOWLINE @ 0.3% SLOPE

EXISTING 6" TILE

EXISTING FENCE  
 PROPERTY LINE  
 EXISTING AWOS COMM. LINE

EXISTING WIND CONE  
 EXISTING FAA REELS CABLE  
 (TO BE ABANDONED WITH  
 RUNWAY EXTENSION PROJECT)

GRADE AREAS AS NEEDED  
 TO REESTABLISH DRAINAGE  
 (INCIDENTAL TO EARTHWORK ITEMS)

EXISTING & PROPOSED ELECTRICAL  
 ITEMS (SEE ELECTRICAL SHEETS)

GRADE AREAS AS NEEDED  
 TO REESTABLISH DRAINAGE  
 (INCIDENTAL TO EARTHWORK ITEMS)

EXISTING & PROPOSED ELECTRICAL  
 ITEMS (SEE ELECTRICAL SHEETS)

PROPOSED TAXIWAY "A"

EXISTING UNDERDRAIN (TYP.)  
 EXISTING AIRFIELD LIGHTING AND CABLING (TYP.)

RUNWAY 7-25

EXISTING TAXIWAY

MAIN APRON

FLOWLINE  
 STA 134+00.00  
 70.00' RT  
 ELEV: 771.80'

STA 134+12.00  
 17.50' LT

STA 134+52.00  
 25.00' LT

STA 134+57.57  
 54.73' LT

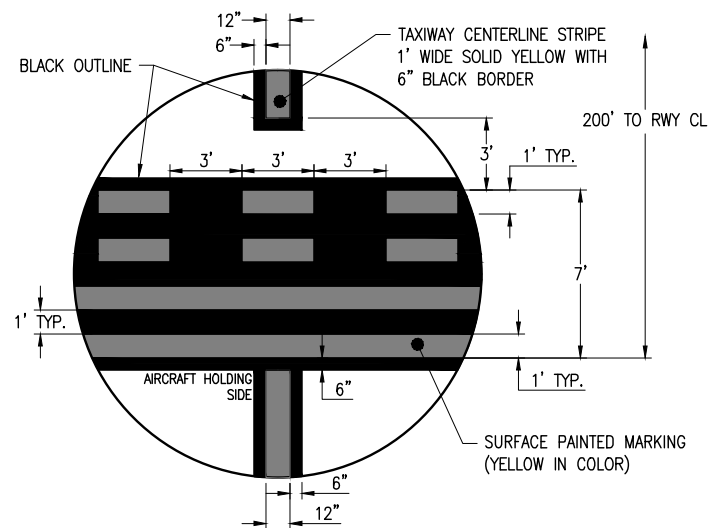
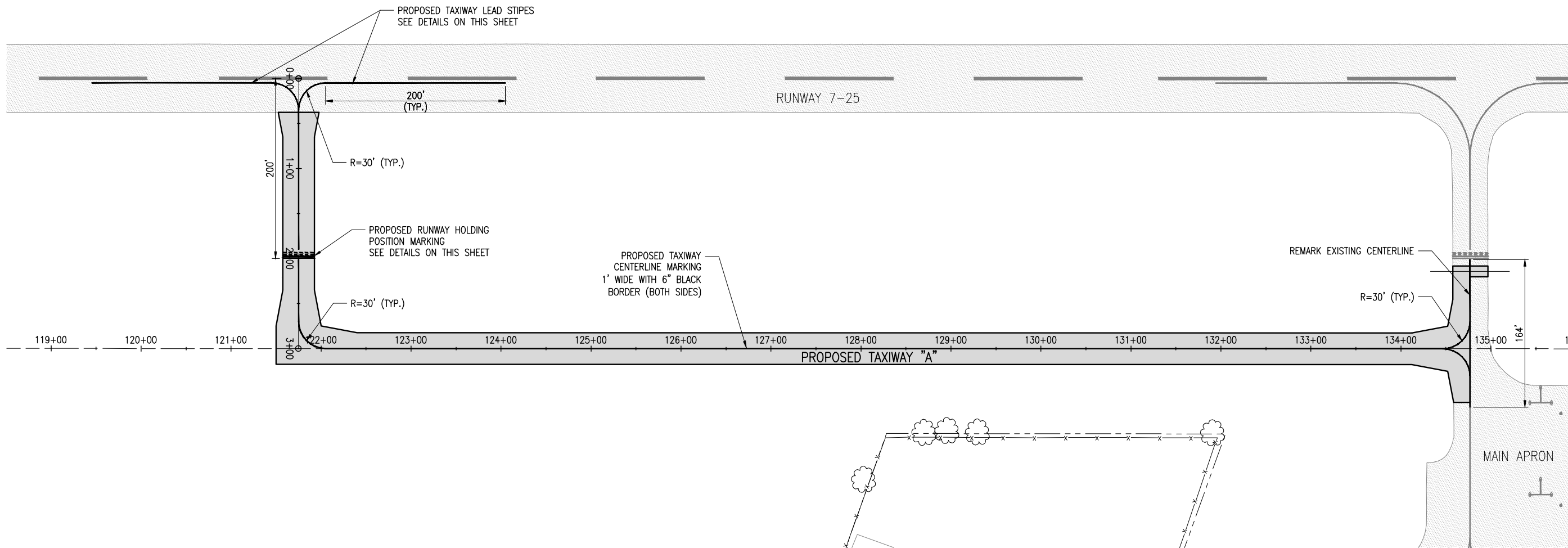
STA 134+52.00  
 25.00' RT

STA 134+77.00  
 59.68' RT

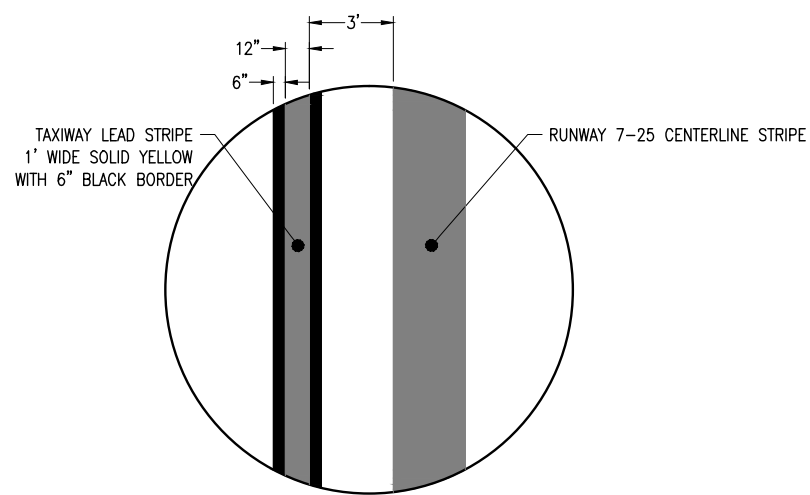
STA 134+58.50  
 59.69' RT

<p>ROCHELLE MUNICIPAL AIRPORT          MAJOR THOMAS F. KORITZ FIELD          ROCHELLE, OGLE COUNTY, ILLINOIS</p>	
<p>DATE</p>	<p>REVISION</p>
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<p>REVIEWED</p>	<p>CAH 11/15/13</p>
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<p>CONSTRUCT PARTIAL          PARALLEL TAXIWAY</p>	<p>GRADING PLAN SHEET 2</p>
<p>10</p>	

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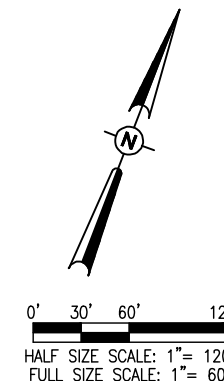
**RUNWAY HOLDING POSITION DETAIL**  
"NOT TO SCALE"



**TAXIWAY LEAD STRIPE DETAIL**  
NOT TO SCALE

**PAVEMENT MARKING NOTES**

1. TYPE B GLASS BEADS SHALL BE REQUIRED FOR ALL YELLOW PERMANENT PAINT MARKINGS. GLASS BEADS ARE NOT REQUIRED FOR TEMPORARY MARKINGS OR BLACK PAINT. REFER TO SPECIFICATION ITEM 620 FOR ADDITIONAL INFORMATION.
2. PAINT SHALL MEET REQUIREMENTS OF TECHNICAL SPECIFICATION ITEM 620, WATERBORNE PAINT.
3. IMMEDIATELY PRIOR TO THE APPLICATION OF PAINT, ALL SURFACES SHALL BE DRY AND FREE FROM DIRT, GREASE, OIL, LAITANCE, OR OTHER FOREIGN MATERIAL WHICH WOULD REDUCE THE BOND BETWEEN THE PAINT AND THE PAVEMENT. THIS SHALL INCLUDE PAINTED AREAS ON THE EXISTING PAVEMENTS. REFER TO SPECIFICATION ITEM 620-3.3 FOR ADDITIONAL INFORMATION.
4. EXISTING PAVEMENT MARKINGS OUTSIDE THE LIMITS OF THE MARKINGS SHOWN ON THESE PLANS WHICH ARE REMOVED OR WORN DUE TO CONSTRUCTION ACTIVITY SHALL BE REPAINTED. NO ADDITIONAL COMPENSATION SHALL BE MADE FOR THIS WORK.



REVISION	DATE

ROCHELLE MUNICIPAL AIRPORT  
MAJOR THOMAS F. KORITZ FIELD  
ROCHELLE, OGLE COUNTY, ILLINOIS

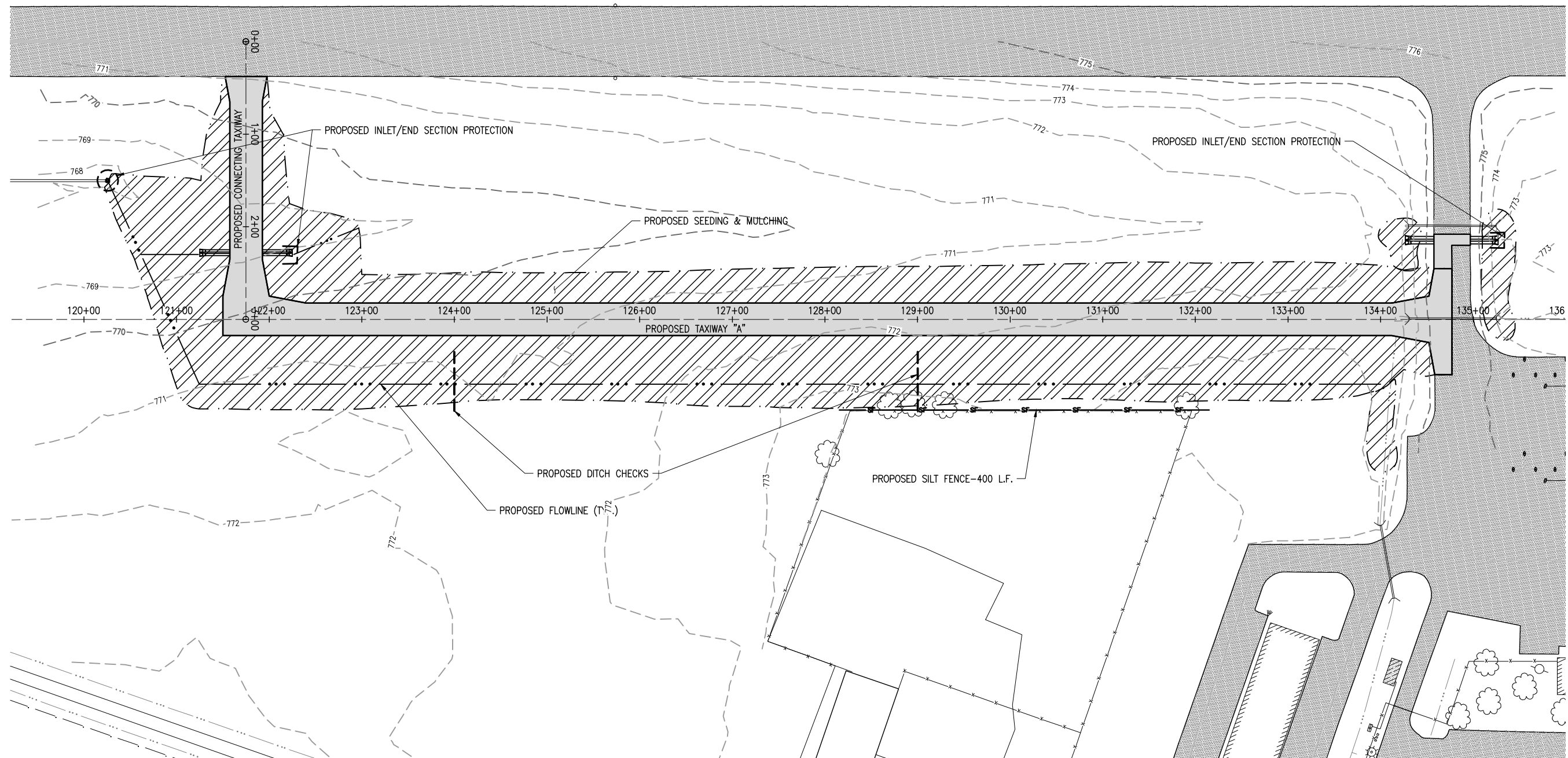
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CONSTRUCT PARTIAL  
PARALLEL TAXIWAY

MARKING PLAN

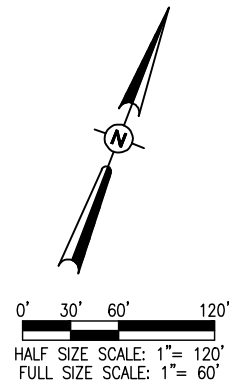


**STORM WATER POLLUTION PREVENTION NOTES**

1. THE CONTRACTOR SHALL IMPLEMENT ALL PROVISIONS OF THE CONTRACT DOCUMENTS TO ASSURE THAT STORM WATER POLLUTION PREVENTION ITEMS ARE CONSTRUCTED AND MAINTAINED IN A TIMELY MANNER. SEDIMENTATION MUST NOT BE TRANSPORTED OFF THE CONSTRUCTION SITE. PERMANENT DRAINAGE FEATURES AND VEGETATIVE MEASURES SHALL BE PROVIDED AS SOON AS POSSIBLE.
2. THE CONTRACTOR SHALL BE REQUIRED TO IMPLEMENT AND MAINTAIN STORM WATER POLLUTION PREVENTION PRACTICES AND MEASURES PRIOR TO THE STRIPPING OF EXISTING VEGETATION WHERE EVER POSSIBLE AND AS SOON AS CONSTRUCTION PERMITS IN OTHER AREAS. POLLUTION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, INCLUDING THESE CONSTRUCTION PLANS, AND WITH STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, ILLINOIS ENVIRONMENTAL PROTECTION AGENCY, CURRENT ISSUE. THE CONTRACTOR SHALL ADJUST HIS OPERATIONS AND IMPLEMENT POLLUTION CONTROL MEASURES SO THAT NO RUNOFF FROM STRIPPED AREAS WILL LEAVE THE CONSTRUCTION SITE OTHER THAN THROUGH SEDIMENT TRAPS OR OTHER SUITABLE CONTROL MEASURES.
3. THE CONTRACTOR IS TO MAINTAIN AND ADJUST, REPAIR OR REPLACE ALL STORMWATER POLLUTION PREVENTION MEASURES AS REQUIRED OR AS DIRECTED BY THE ENGINEER UNTIL PERMANENT VEGETATION HAS BEEN ESTABLISHED. MAINTENANCE OF POLLUTION CONTROL MEASURES IS TO BE PROVIDED AT NO ADDITIONAL COST TO THE CONTRACT.
4. AN ADDITIONAL 600 L.F. OF SILT FENCE HAS BEEN ALLOTTED TO BE PLACED AS DIRECTED BY THE RESIDENT ENGINEER AROUND STOCKPILES OR OTHER AREAS IN NEED OF EROSION CONTROL BASED ON ACTUAL SITE CONDITIONS.

**LEGEND**

- PROPOSED PAVEMENT
- GRADING LIMITS
- PROPOSED AR901510 SEEDING/AR908510 MULCHING
- PROPOSED AR156511 DITCH CHECK
- PROPOSED AR156510 SILT FENCE
- PROPOSED AR156520 INLET/END SECTION PROTECTION



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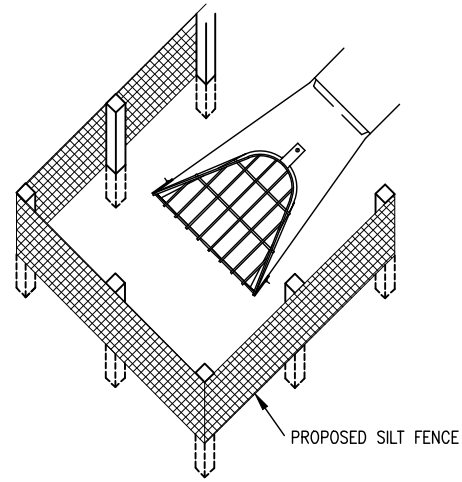
REVISION	DATE

ROCHELLE MUNICIPAL AIRPORT  
 MAJOR THOMAS F. KORITZ FIELD  
 ROCHELLE, OGLE COUNTY, ILLINOIS  
 IL PROJ.: RPJ-4279

Hanson Proj. No. 12A0172	Filename C-181-SWP.dwg	LAYOUT	KBS	5/10/13
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		REVIEWED	CAH	11/15/13

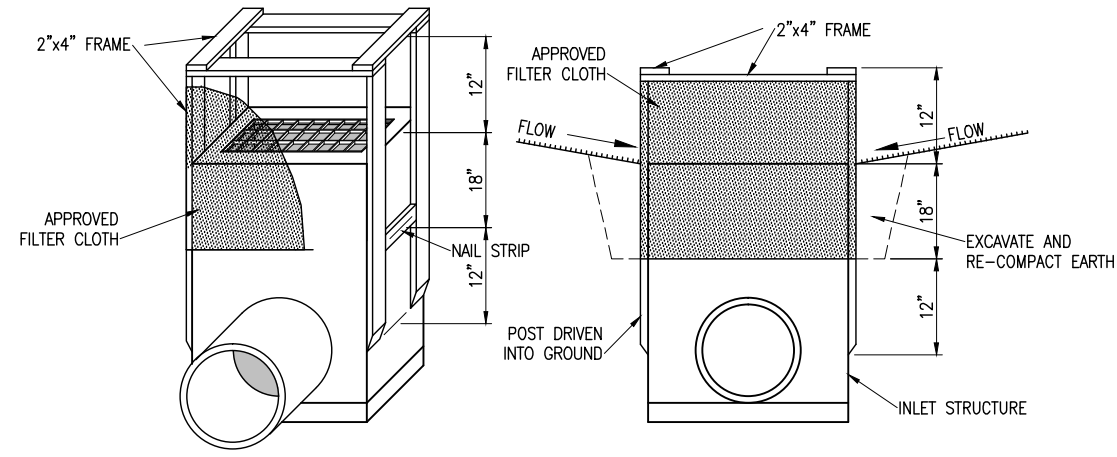
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 Springfield, Illinois 62703-2886

CONSTRUCT PARTIAL  
 PARALLEL TAXIWAY  
 STORMWATER POLLUTION  
 PREVENTION PLAN



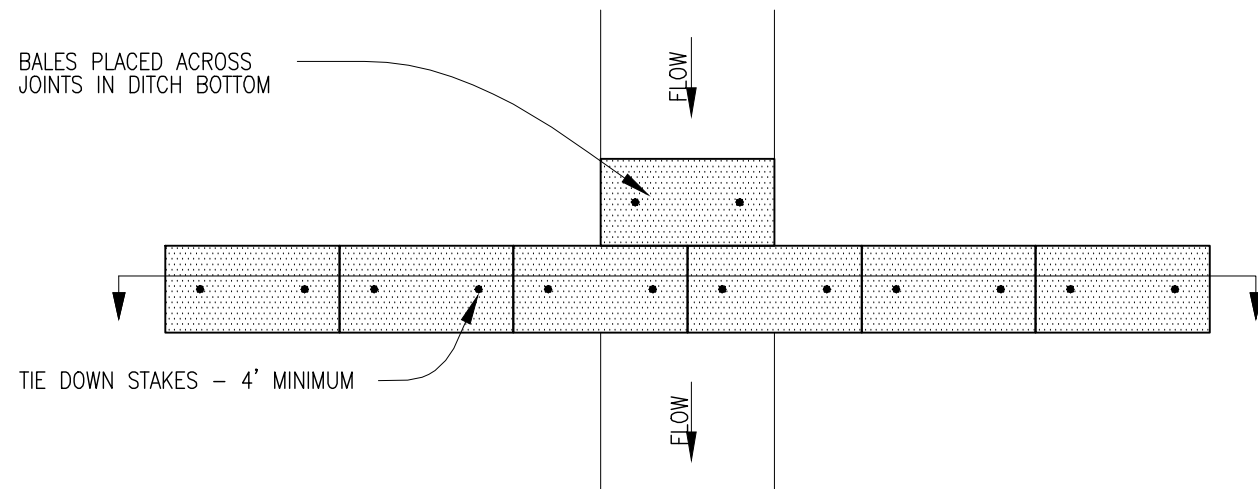
**INLET PROTECTION AT FLARED END SECTIONS (FES)**

NOT TO SCALE



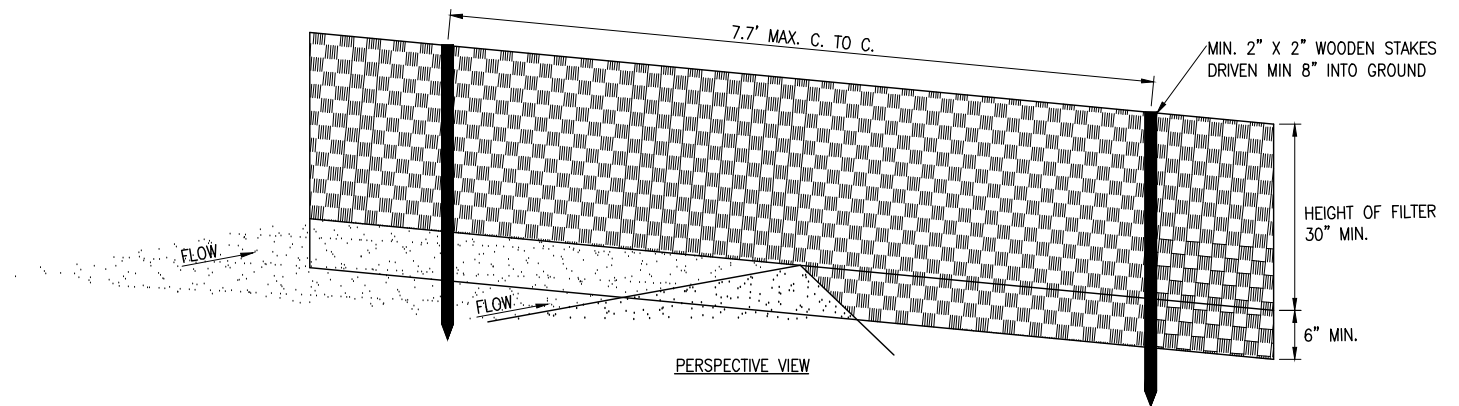
**INLET PROTECTION DETAIL**

NOT TO SCALE

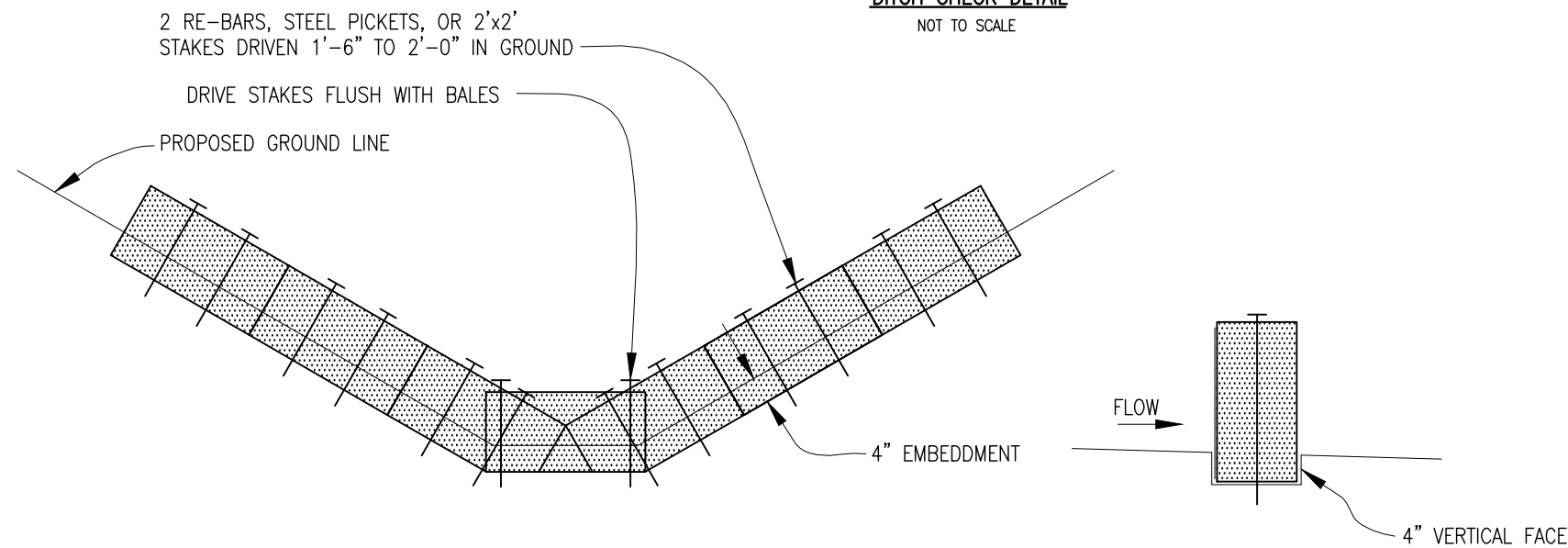


**DITCH CHECK DETAIL**

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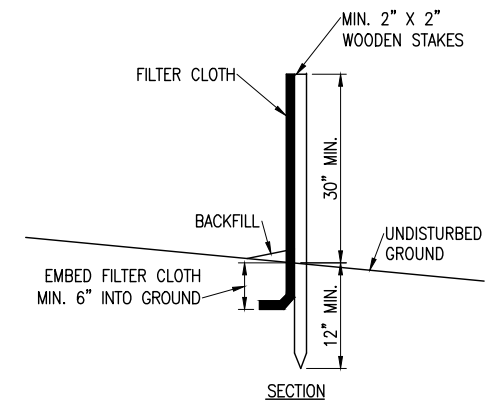


**PERSPECTIVE VIEW**



**SILT FENCE DETAIL**

NOT TO SCALE



**SECTION**

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REVISION	DATE

ROCHELLE MUNICIPAL AIRPORT  
 MAJOR THOMAS F. KORITZ FIELD  
 ROCHELLE, OGLE COUNTY, ILLINOIS

IL PROJ.: RPJ-4279

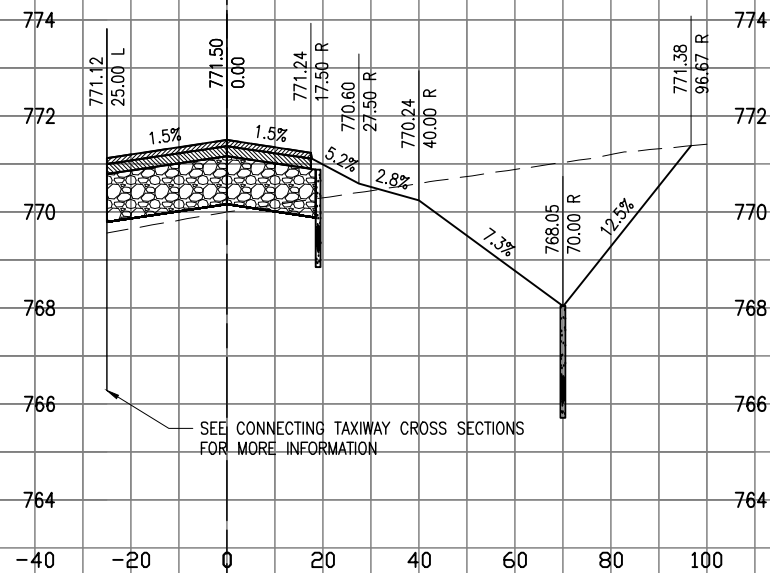
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REVIEWED	CAH	11/15/13	



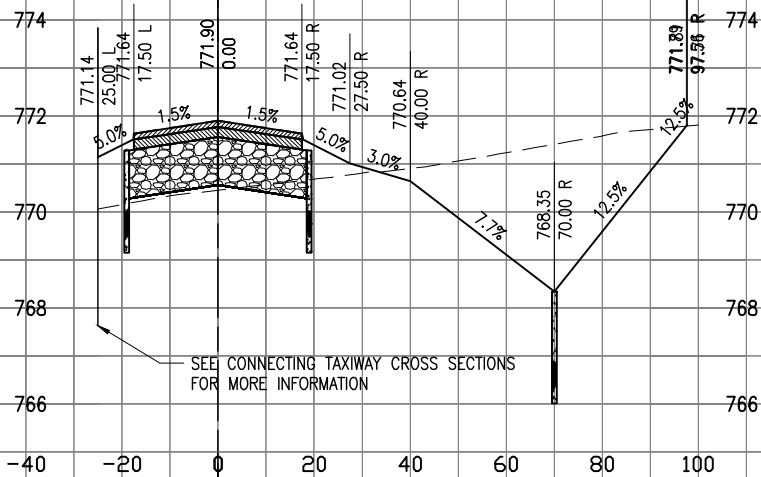
**CONSTRUCT PARTIAL PARALLEL TAXIWAY**

STORMWATER POLLUTION PREVENTION PLAN DETAILS

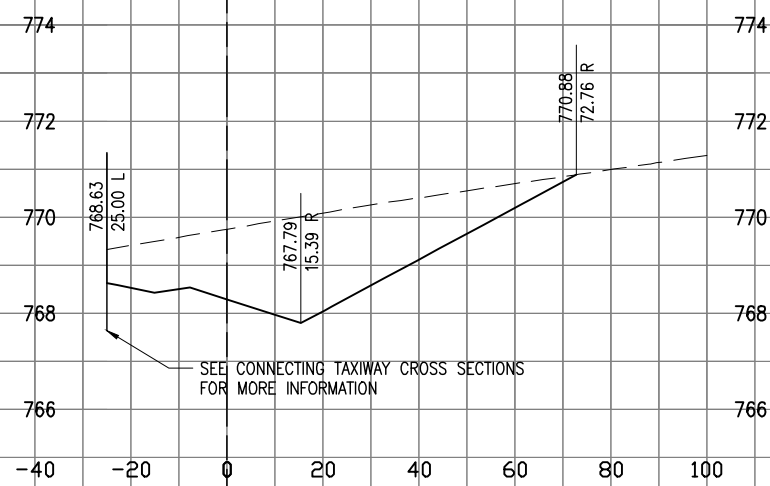
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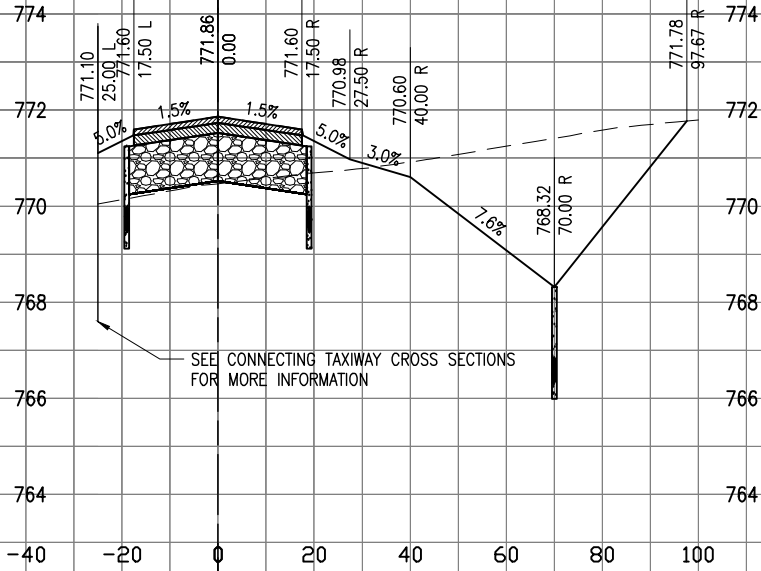
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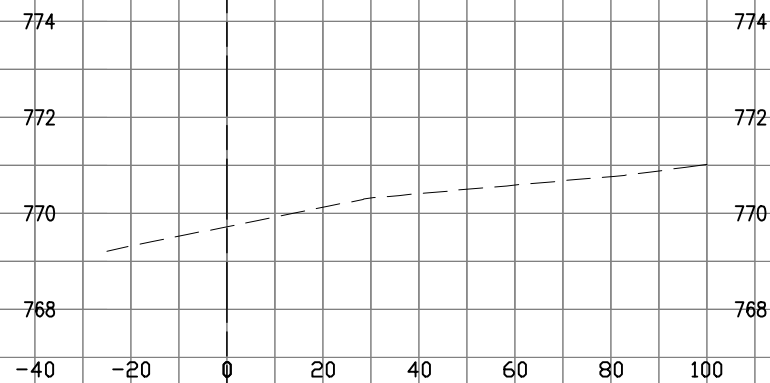
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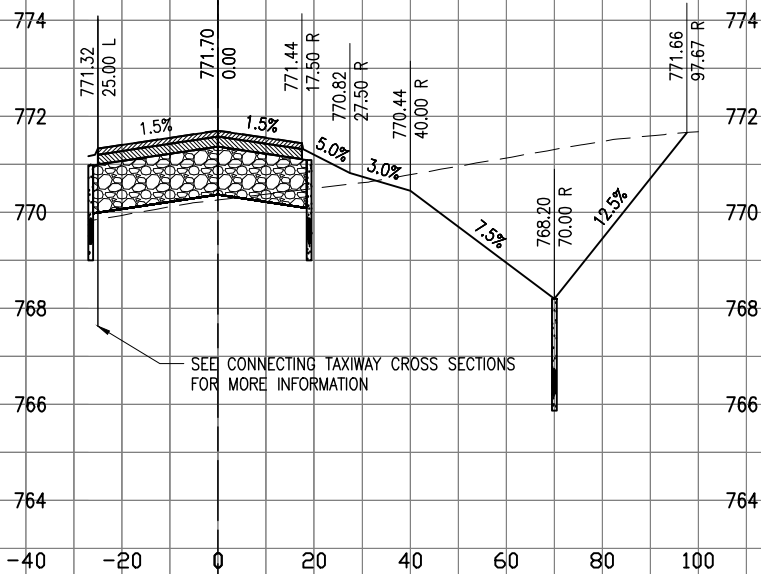
STA 121+00



STA 122+40



STA 120+50



STA 122+00

DATE	REVISION

ROCHELLE MUNICIPAL AIRPORT  
 MAJOR THOMAS F. KORITZ FIELD  
 ROCHELLE, OGLE COUNTY, ILLINOIS

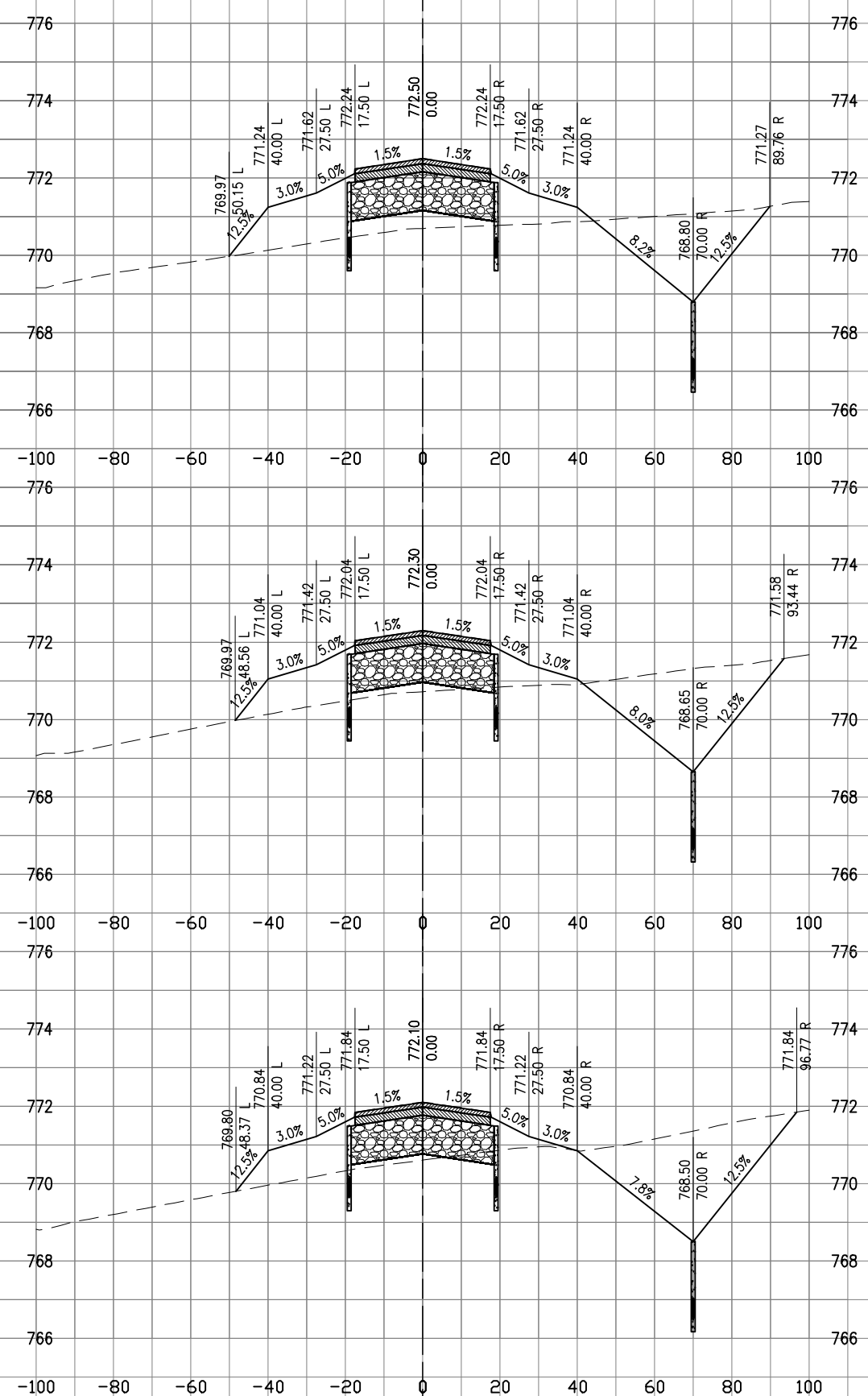
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Scale 1" = 20'H 1" = 2'V	Date 11/15/2013	DRAWN	KBS	10/4/13
		REVIEWED	CAH	11/15/13



CONSTRUCT PARTIAL  
 PARALLEL TAXIWAY  
 TAXIWAY A CROSS SECTIONS  
 STA. 121+00 TO STA. 122+50

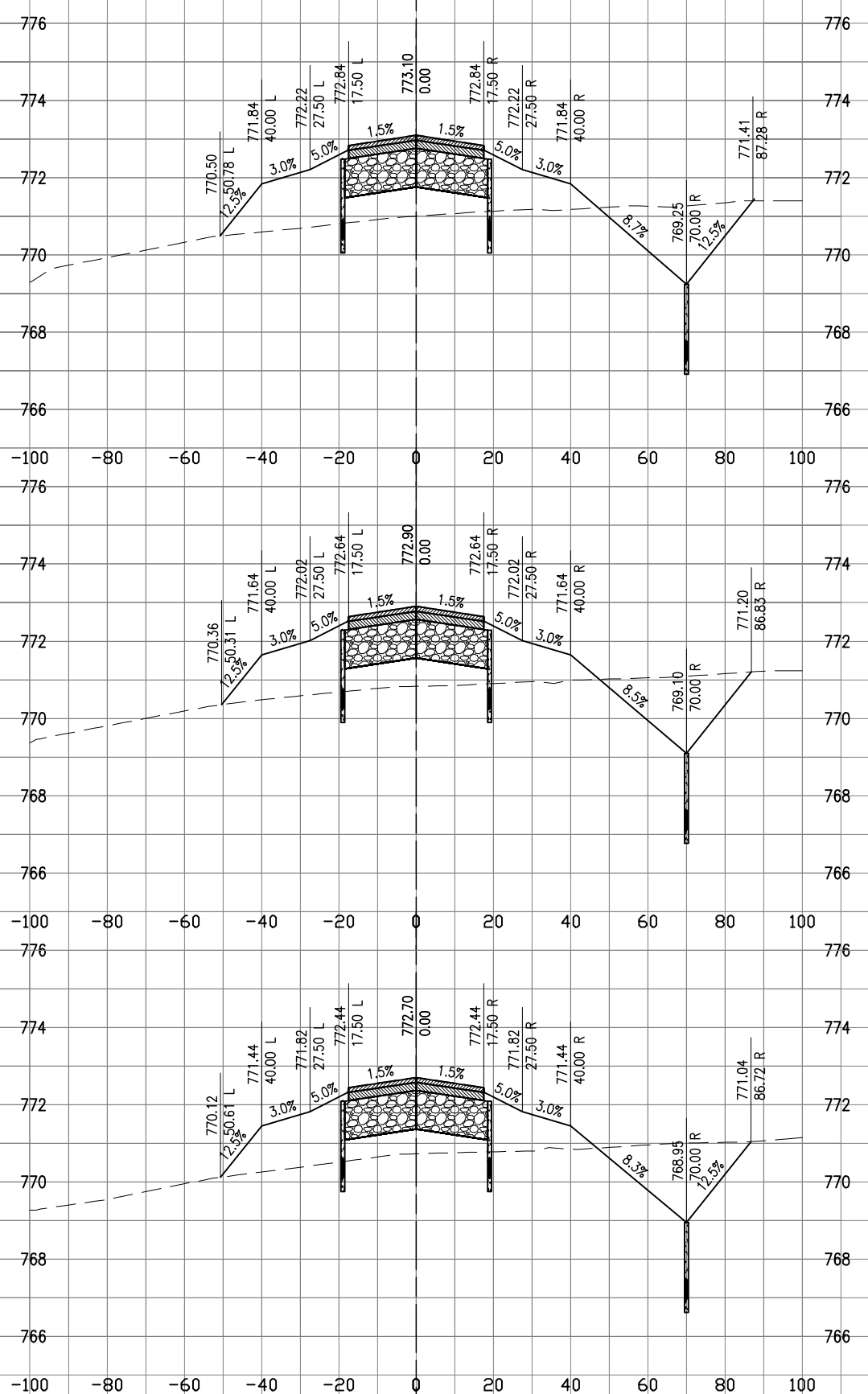
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STA 124+00

STA 123+00

STA 123+00



STA 125+00

STA 125+00

STA 124+50

DATE	REVISION

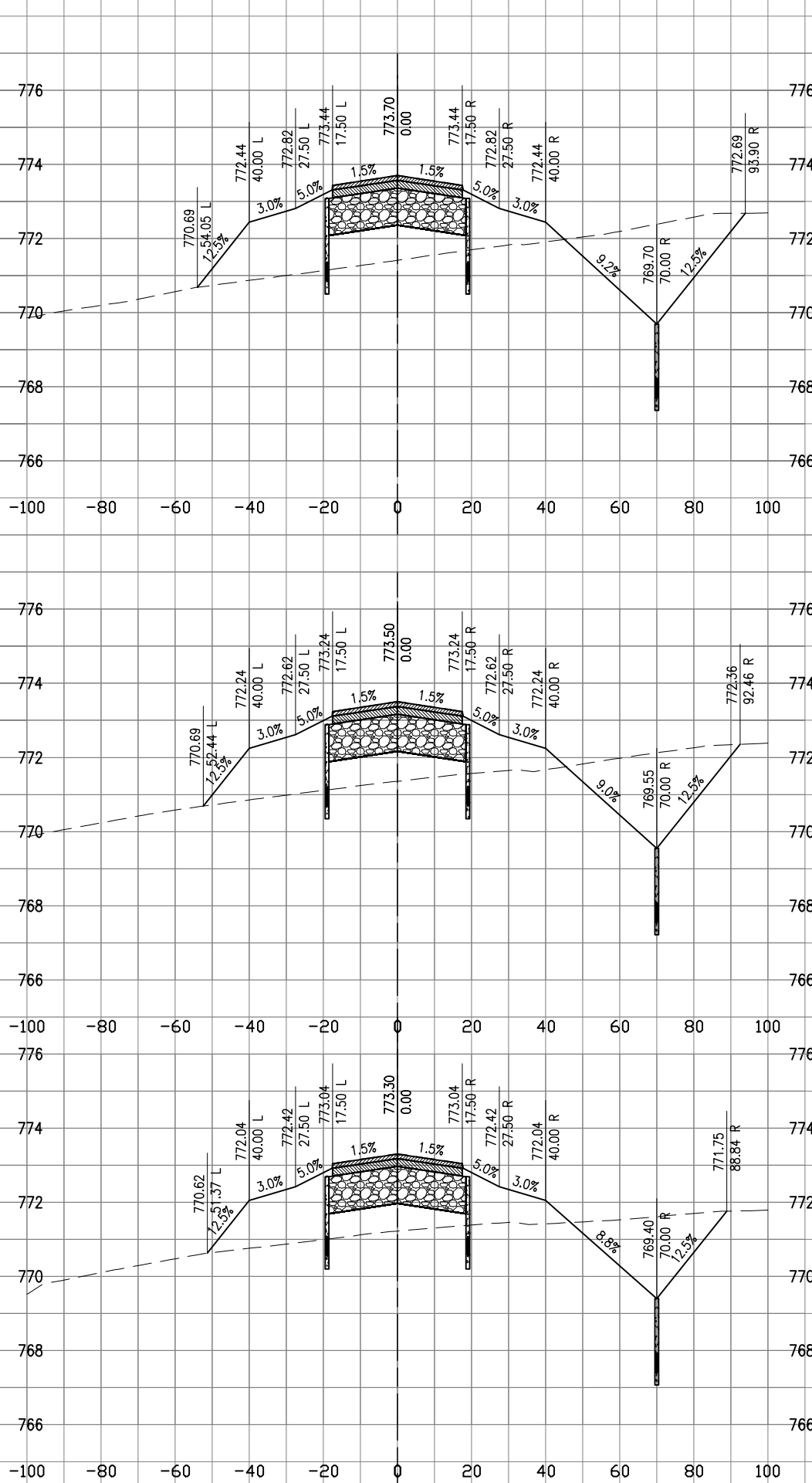
ROCHELLE MUNICIPAL AIRPORT  
 MAJOR THOMAS F. KORITZ FIELD  
 ROCHELLE, OGLE COUNTY, ILLINOIS

IL PROJ.: RPJ-4279

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LAYOUT	KBS	10/4/13	
DRAWN	KBS	10/4/13	
REVIEWED	CAH	11/15/13	

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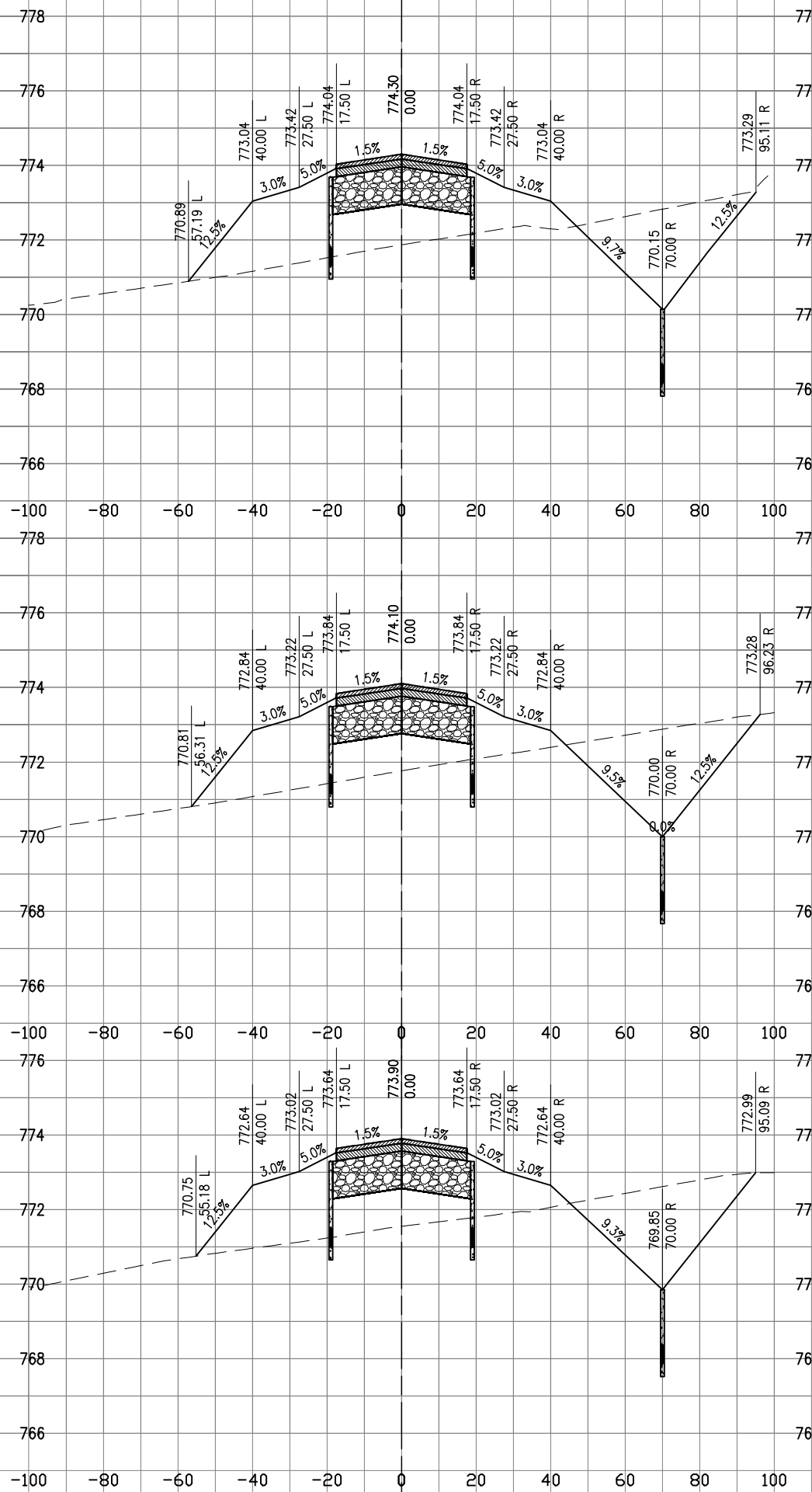
CONSTRUCT PARTIAL  
 PARALLEL TAXIWAY  
 TAXIWAY A CROSS SECTIONS  
 STA. 123+00 TO STA. 125+00



STA 127+00

STA 126+50

STA 126+00



STA 128+50

STA 128+00

STA 127+50

DATE	REVISION

ROCHELLE MUNICIPAL AIRPORT  
 MAJOR THOMAS F. KORITZ FIELD  
 ROCHELLE, OGLE COUNTY, ILLINOIS

IL PROJ.: RPJ-4279

Hanson Proj. No. 12A0172	Filename C-301-XS.dwg	Scale 1" = 20'H 1" = 2'V
Date 11/15/2013	LAYOUT KBS	10/4/13
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	REVIEWED CAH	11/15/13



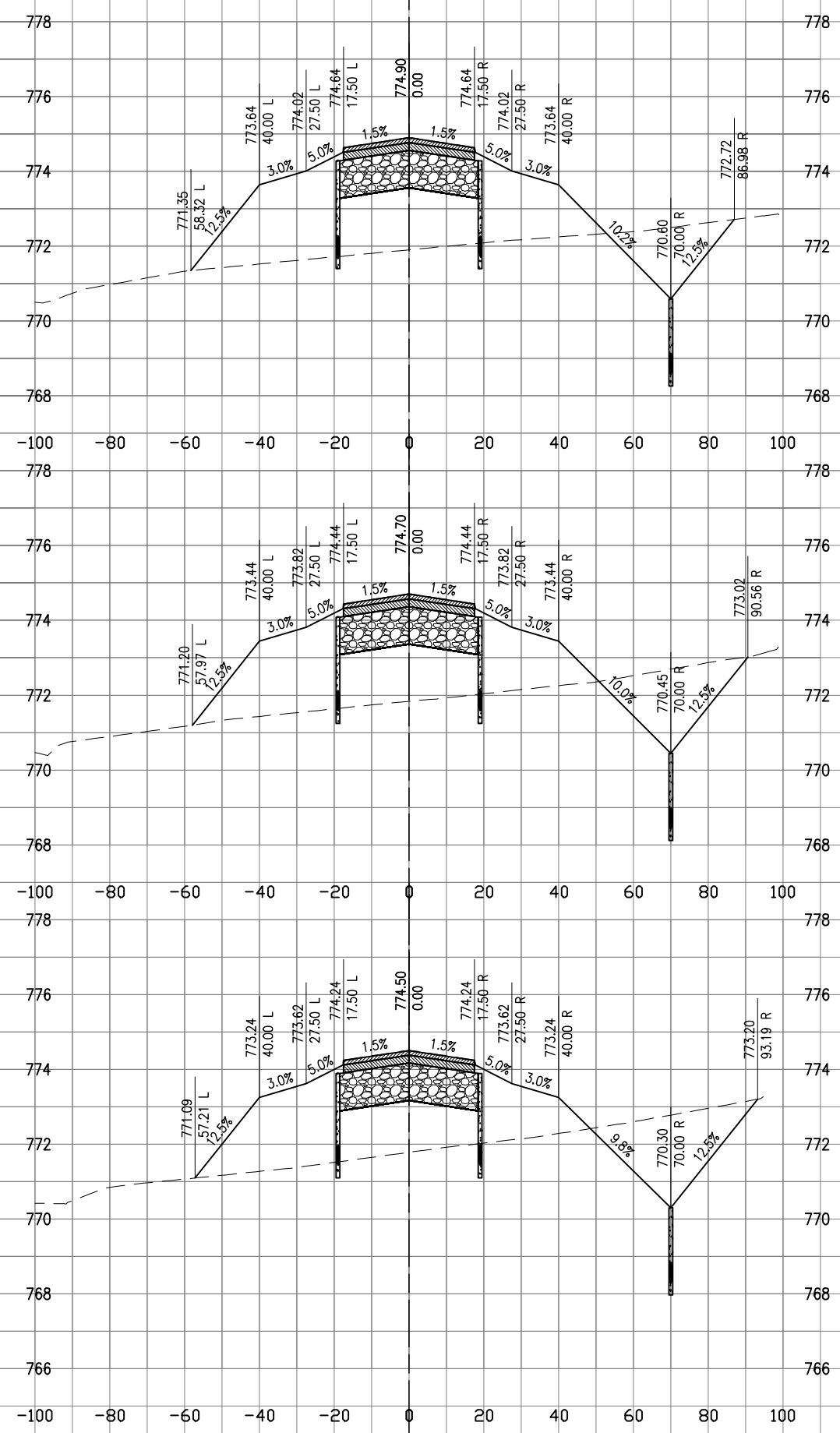
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CONSTRUCT PARTIAL  
 PARALLEL TAXIWAY

TAXIWAY A CROSS SECTIONS  
 STA. 126+00 TO STA. 128+50



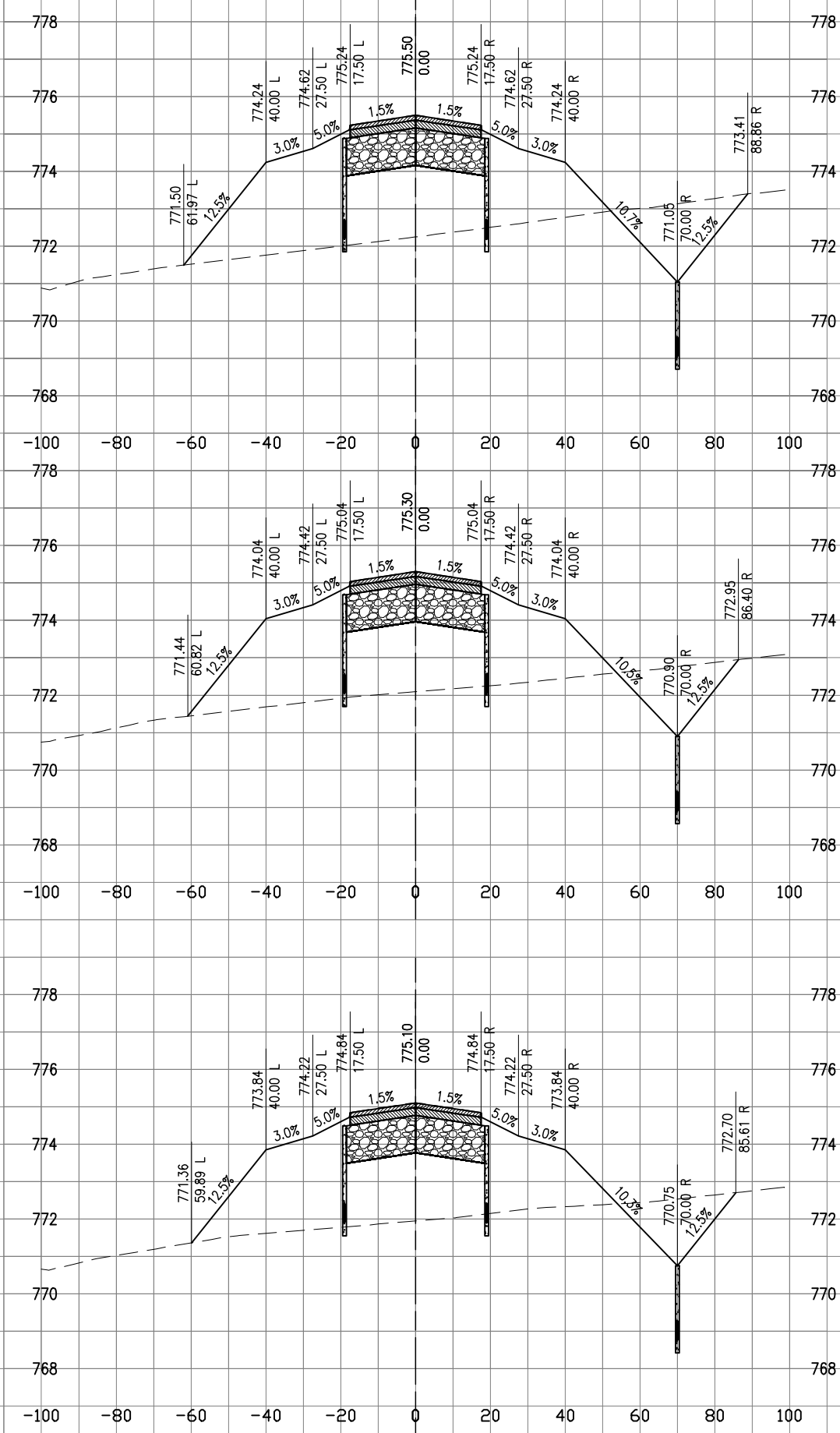
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STA 130+00

STA 129+50

STA 129+00



STA 131+50

STA 131+00

STA 130+50

REVISION	DATE

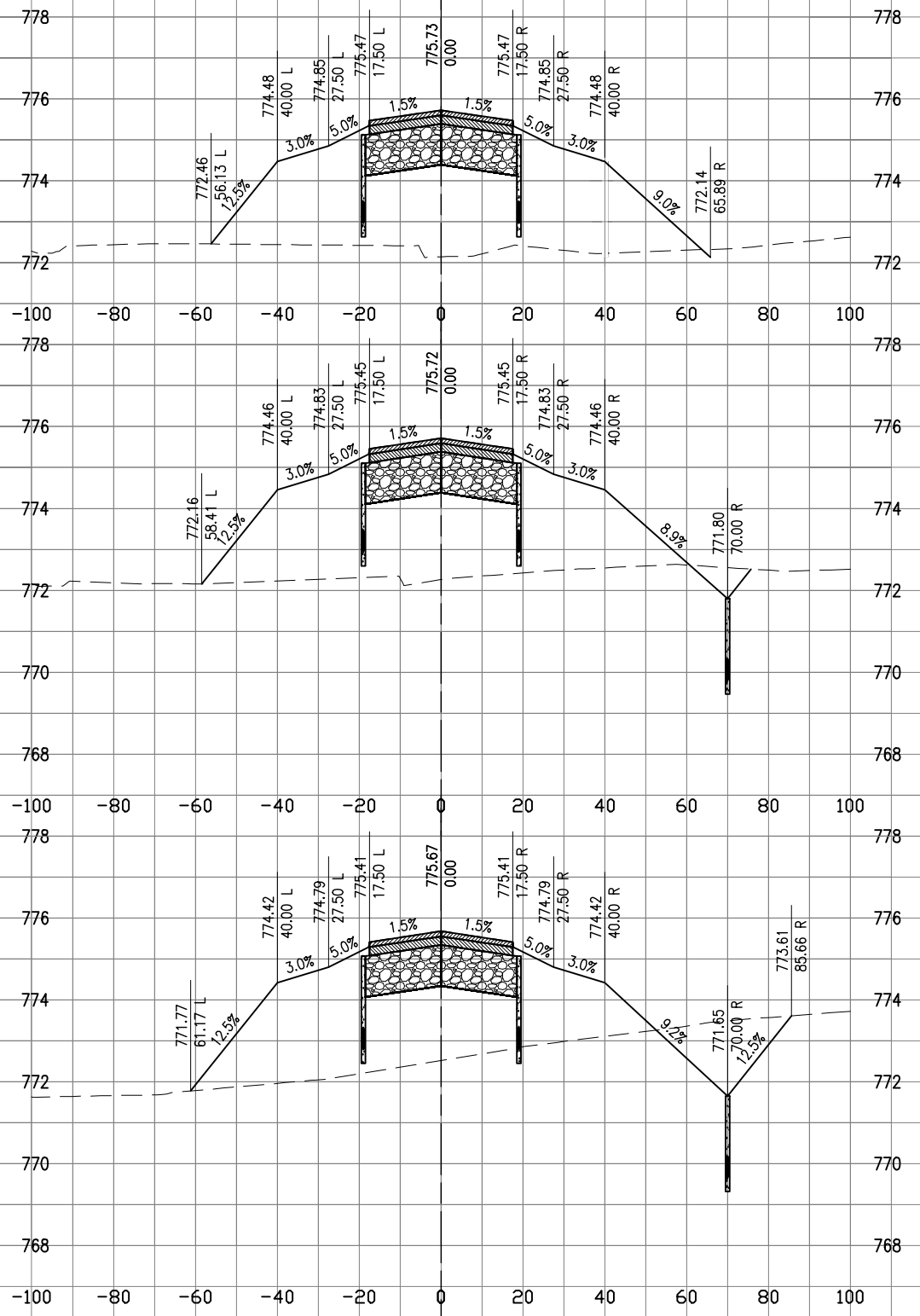
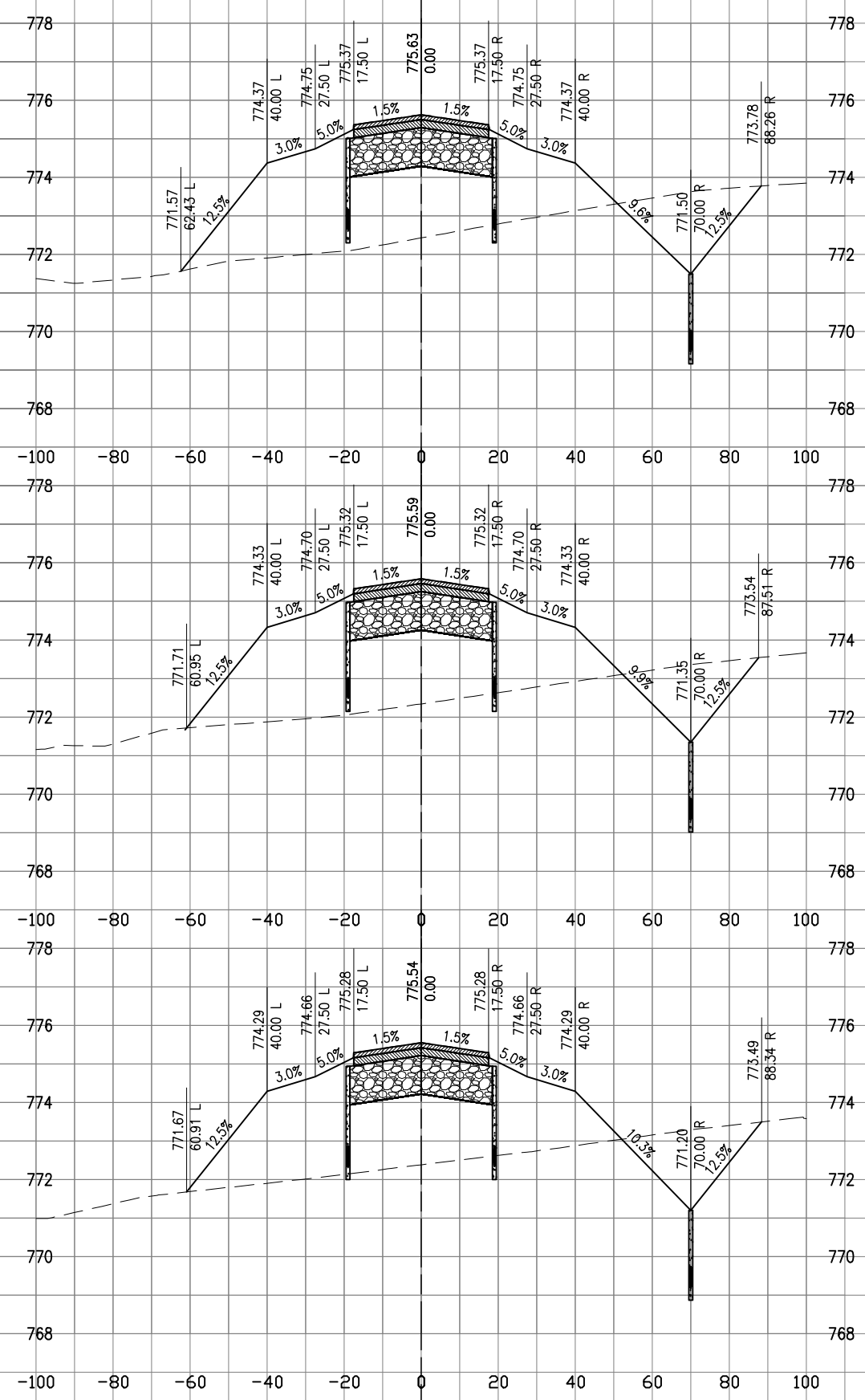
ROCHELLE MUNICIPAL AIRPORT  
 MAJOR THOMAS F. KORITZ FIELD  
 ROCHELLE, OGLE COUNTY, ILLINOIS  
 IL PROJ.: RPJ-4279

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Scale 1" = 20'H 1" = 2'V	Date 11/15/2013
LAYOUT	KBS 10/4/13
DRAWN	KBS 10/4/13
REVIEWED	CAH 11/15/13



CONSTRUCT PARTIAL  
 PARALLEL TAXIWAY  
 TAXIWAY A CROSS SECTIONS  
 STA. 129+00 TO STA. 131+50

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REVISION	DATE

ROCHELLE MUNICIPAL AIRPORT  
MAJOR THOMAS F. KORITZ FIELD  
ROCHELLE, OGLE COUNTY, ILLINOIS

IL PROJ.: RPJ-4279

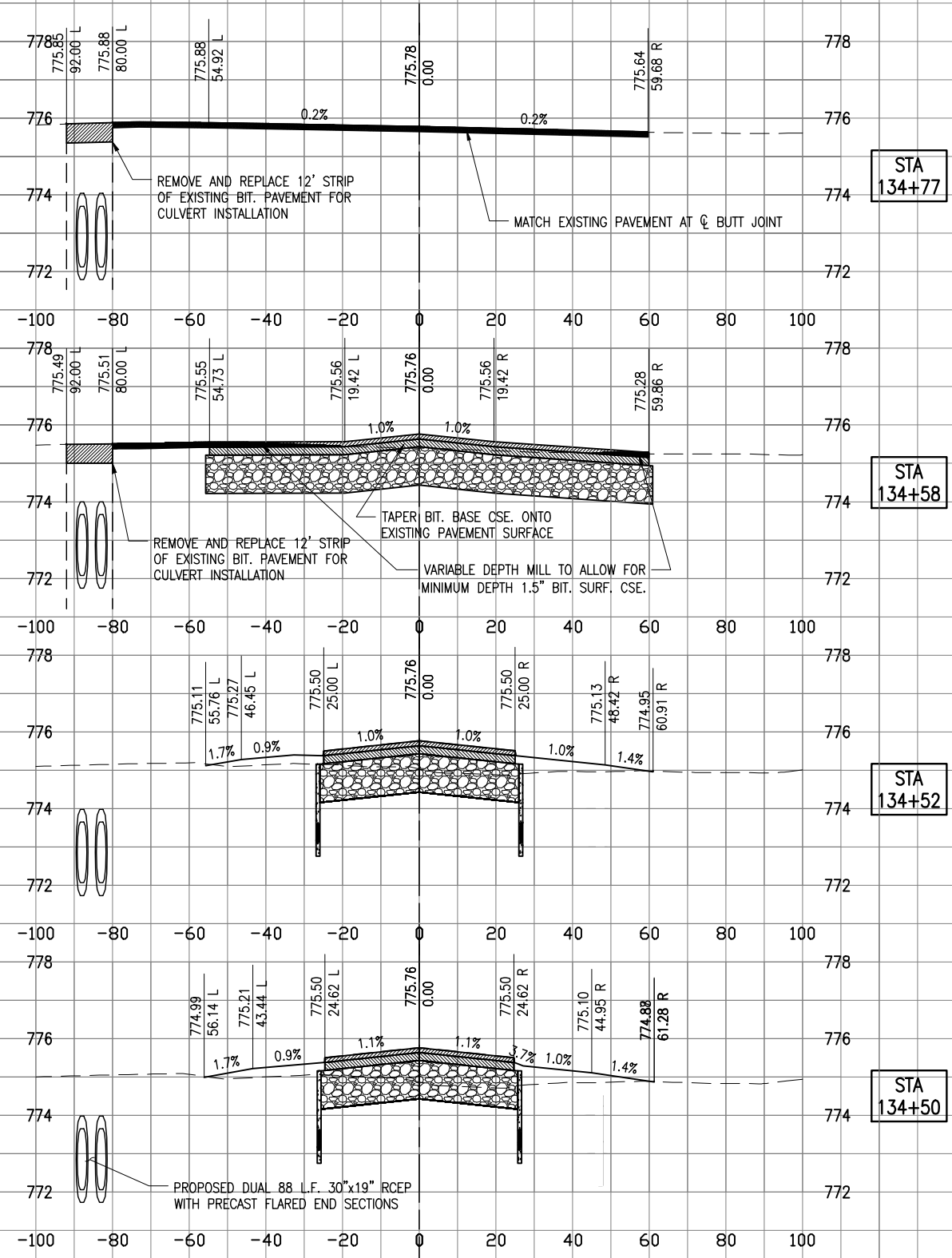
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Date 11/15/2013	LAYOUT KBS 10/4/13	DRAWN KBS 10/4/13
	REVIEWED CAH 11/15/13	



CONSTRUCT PARTIAL  
PARALLEL TAXIWAY

TAXIWAY A CROSS SECTIONS  
STA. 132+00 TO STA. 134+12

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TAXIWAY "A" EARTHWORK SUMMARY							
STATION	CUT AREA (SF)	FILL AREA (SF)	CUT VOL (CY)	FILL VOL (CY)	CUM CUT VOL (CY)	CUM REUSABLE VOL-15% S.F. (CY)	CUM FILL VOL (CY)
120+50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
121+00.00	119.14	0.00	110.32	0.00	110.32	93.77	0.00
121+50.00	91.96	63.89	195.45	59.15	305.76	259.90	59.15
121+75.00	94.30	9.92	87.41	9.20	393.19	334.21	68.36
122+00.00	99.36	8.63	89.65	8.59	482.84	410.42	76.95
122+40.00	99.21	13.60	147.09	16.47	629.93	535.44	93.42
122+50.00	96.27	14.87	36.20	5.27	666.13	566.21	98.69
123+00.00	82.89	35.76	165.89	46.88	832.02	707.21	145.57
123+50.00	69.33	43.41	140.95	73.31	972.97	827.02	218.88
124+00.00	51.59	64.22	111.97	99.66	1084.93	922.19	318.54
124+50.00	41.01	79.72	85.74	133.28	1170.68	995.07	451.81
125+00.00	39.15	84.27	74.22	151.85	1244.89	1058.16	603.66
125+50.00	40.85	86.77	74.07	158.37	1318.96	1121.12	762.03
126+00.00	46.41	86.34	80.80	160.29	1399.76	1189.80	922.31
126+50.00	61.23	90.89	99.67	164.10	1499.43	1274.52	1086.42
127+00.00	66.50	102.17	118.26	178.76	1617.69	1375.04	1265.17
127+50.00	69.56	111.99	125.98	198.30	1743.67	1482.12	1463.48
128+00.00	75.47	110.32	134.28	205.84	1877.95	1596.26	1669.32
128+50.00	65.38	122.18	130.41	215.28	2008.36	1707.11	1884.60
129+00.00	55.23	146.45	111.67	248.74	2120.04	1802.03	2133.33
129+50.00	44.92	160.14	92.74	283.88	2212.77	1880.86	2417.21
130+00.00	32.42	174.79	71.62	310.12	2284.39	1941.73	2727.34
130+50.00	27.98	190.66	55.93	338.38	2340.32	1989.27	3065.72
131+00.00	30.27	199.65	53.94	361.40	2394.26	2035.12	3427.12
131+50.00	38.05	202.36	63.26	372.23	2457.52	2088.89	3799.34
132+00.00	37.85	193.74	70.28	366.76	2527.80	2148.63	4166.10
132+50.00	35.46	199.78	67.88	364.37	2595.67	2206.32	4530.47
133+00.00	39.85	193.84	69.73	364.46	2665.41	2265.60	4894.93
133+50.00	30.48	193.70	65.13	358.83	2730.53	2320.95	5253.76
134+00.00	5.65	216.99	33.45	380.27	2763.99	2349.39	5634.03
134+12.00	0.20	221.34	1.30	97.41	2765.28	2350.49	5731.44
134+50.00	29.88	15.02	21.17	166.32	2786.45	2368.48	5897.76
134+52.00	44.26	9.41	2.75	0.90	2789.20	2370.82	5898.67
134+57.57	126.56	0.00	17.62	0.97	2806.82	2385.79	5899.64
134+77.00	0.00	0.00	0.78	0.00	2807.60	2386.46	5899.64

REVISION

DATE

ROCHELLE MUNICIPAL AIRPORT  
 MAJOR THOMAS F. KORITZ FIELD  
 ROCHELLE, OGLE COUNTY, ILLINOIS

IL PROJ.: RPJ-4279

Hanson Proj. No. 12A0172  
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 Date 11/15/2013

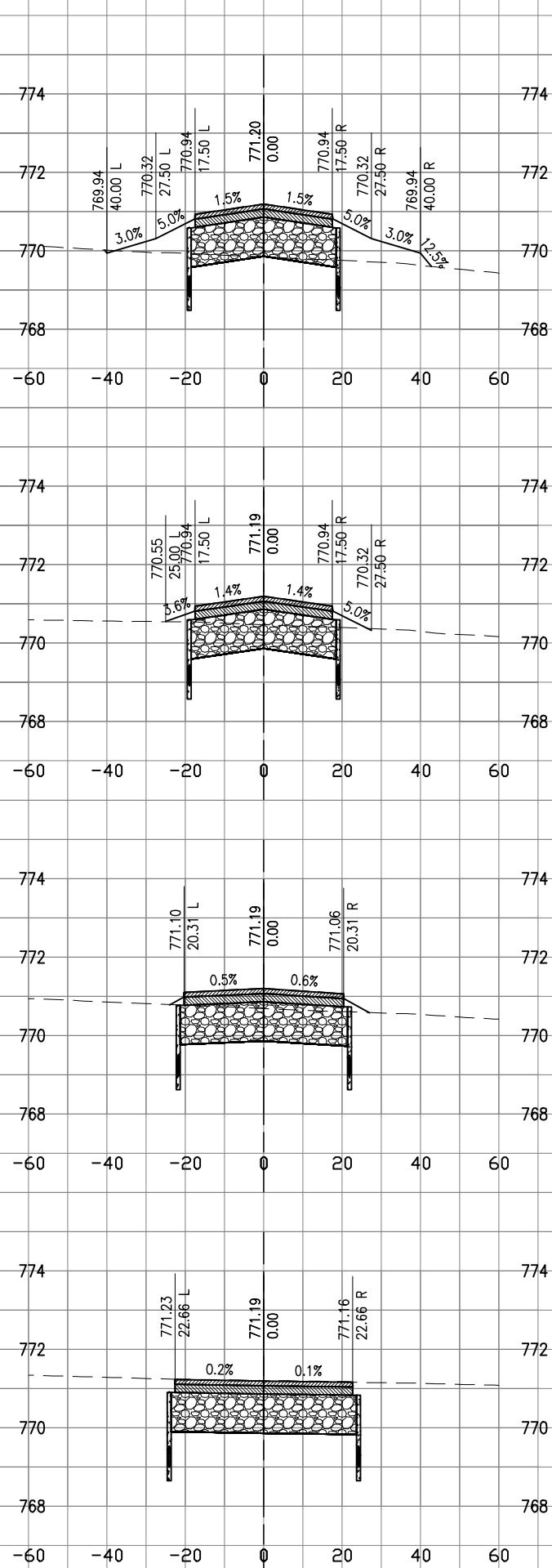
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 REVIEWED CAH 11/15/13

CONSTRUCT PARTIAL  
 PARALLEL TAXIWAY

TAXIWAY A CROSS SECTIONS  
 STA. 134+50 TO STA. 134+77

19

19 of 38 sheets

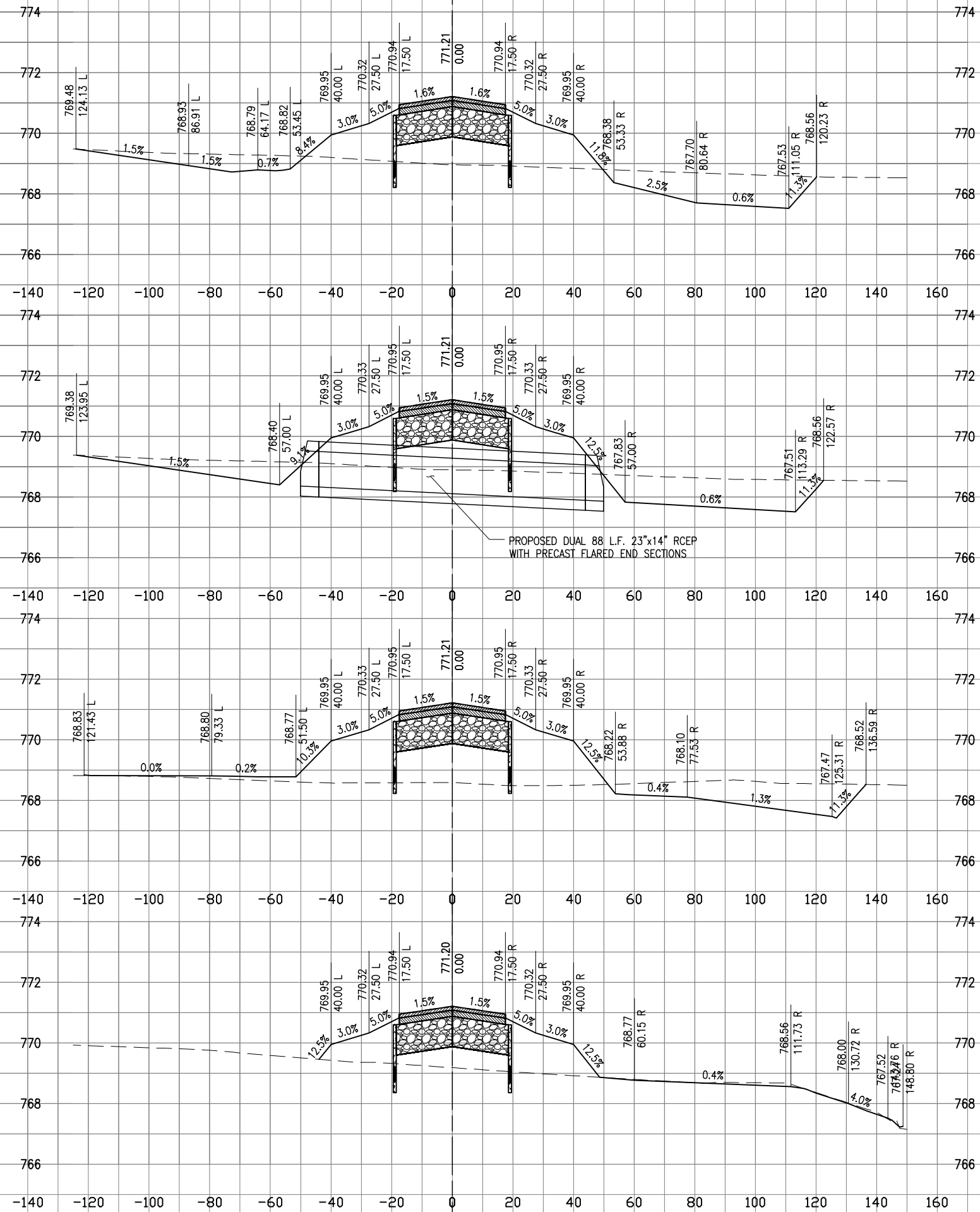


STA 1+00

STA 0+65

STA 0+50

STA 0+38



STA 2+35

STA 2+30

STA 2+00

STA 1+50

PROPOSED DUAL 88' L.F. 23"x14" RCEP WITH PRECAST FLARED END SECTIONS

DATE	REVISION

ROCHELLE MUNICIPAL AIRPORT  
 MAJOR THOMAS F. KORITZ FIELD  
 ROCHELLE, OGLE COUNTY, ILLINOIS

IL PROJ.: RPJ-4279

Hanson Proj. No. 12A0172	
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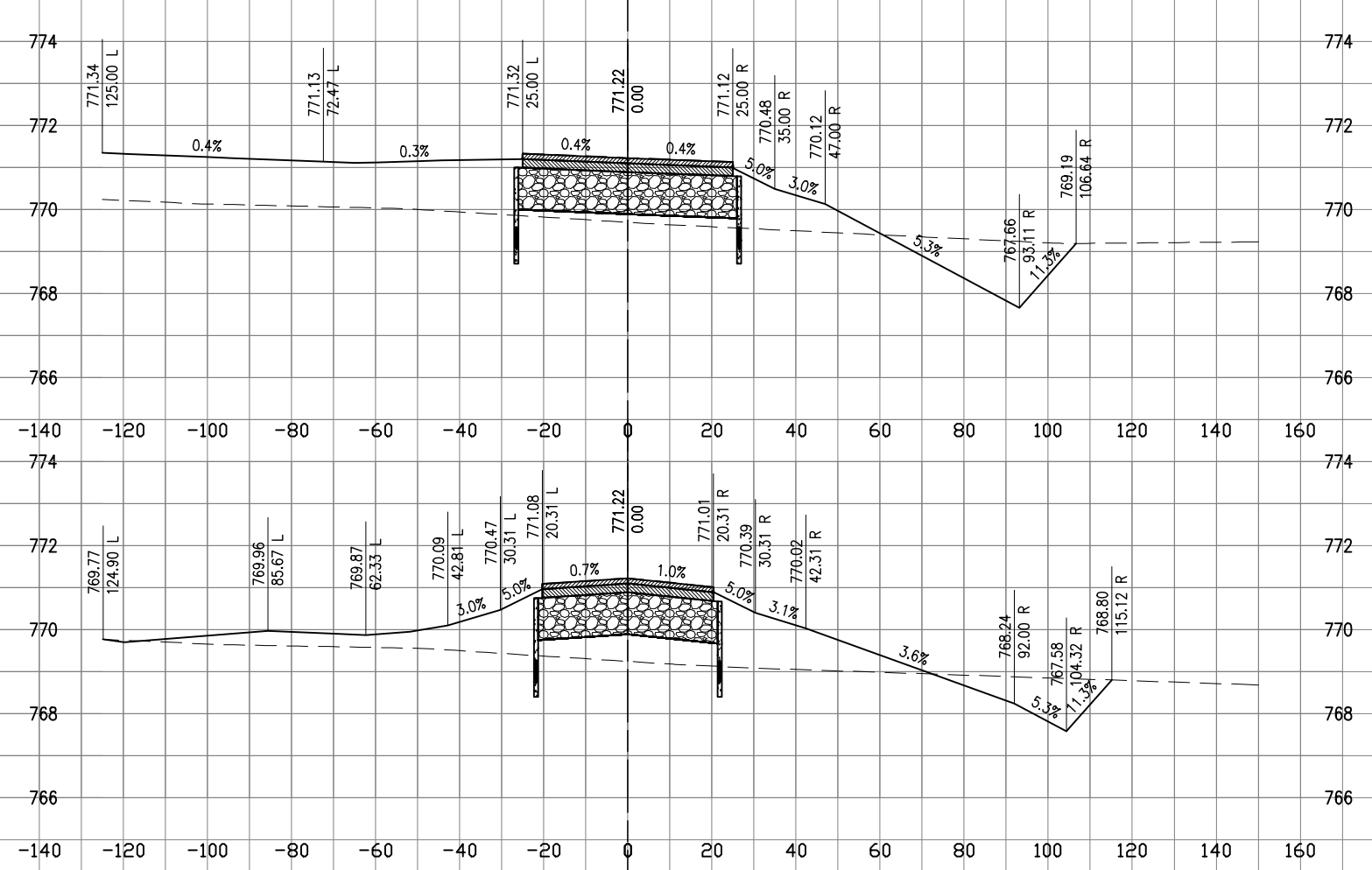


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CONSTRUCT PARTIAL  
 PARALLEL TAXIWAY

CONNECTOR CROSS SECTIONS  
 STA. 0+37.5 TO STA. 2+35

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CONNECTING TAXIWAY EARTHWORK SUMMARY							
STATION	CUT AREA (SF)	FILL AREA (SF)	CUT VOL (CY)	FILL VOL (CY)	CUM CUT VOL (CY)	CUM REUSABLE VOL-15% S.F. (CY)	CUM FILL VOL (CY)
0+37.50	62.98	0.00	0.00	0.00	0.00	0.00	0.00
0+50.00	37.87	0.99	23.34	0.23	23.34	19.84	0.23
0+65.00	27.70	2.22	18.21	0.89	41.56	35.32	1.12
1+00.00	4.69	20.26	21.00	14.57	62.55	53.17	15.69
1+50.00	3.24	74.96	7.34	88.17	69.90	59.41	103.86
2+00.00	56.41	142.00	55.23	200.89	125.13	106.36	304.75
2+30.00	89.52	99.32	81.07	134.07	206.20	175.27	438.82
2+35.00	81.24	91.95	15.81	17.71	222.01	188.71	456.53
2+50.00	24.89	108.23	29.48	55.61	251.49	213.77	512.14
2+75.00	36.11	146.45	28.24	117.91	279.73	237.77	630.04

REVISION	DATE

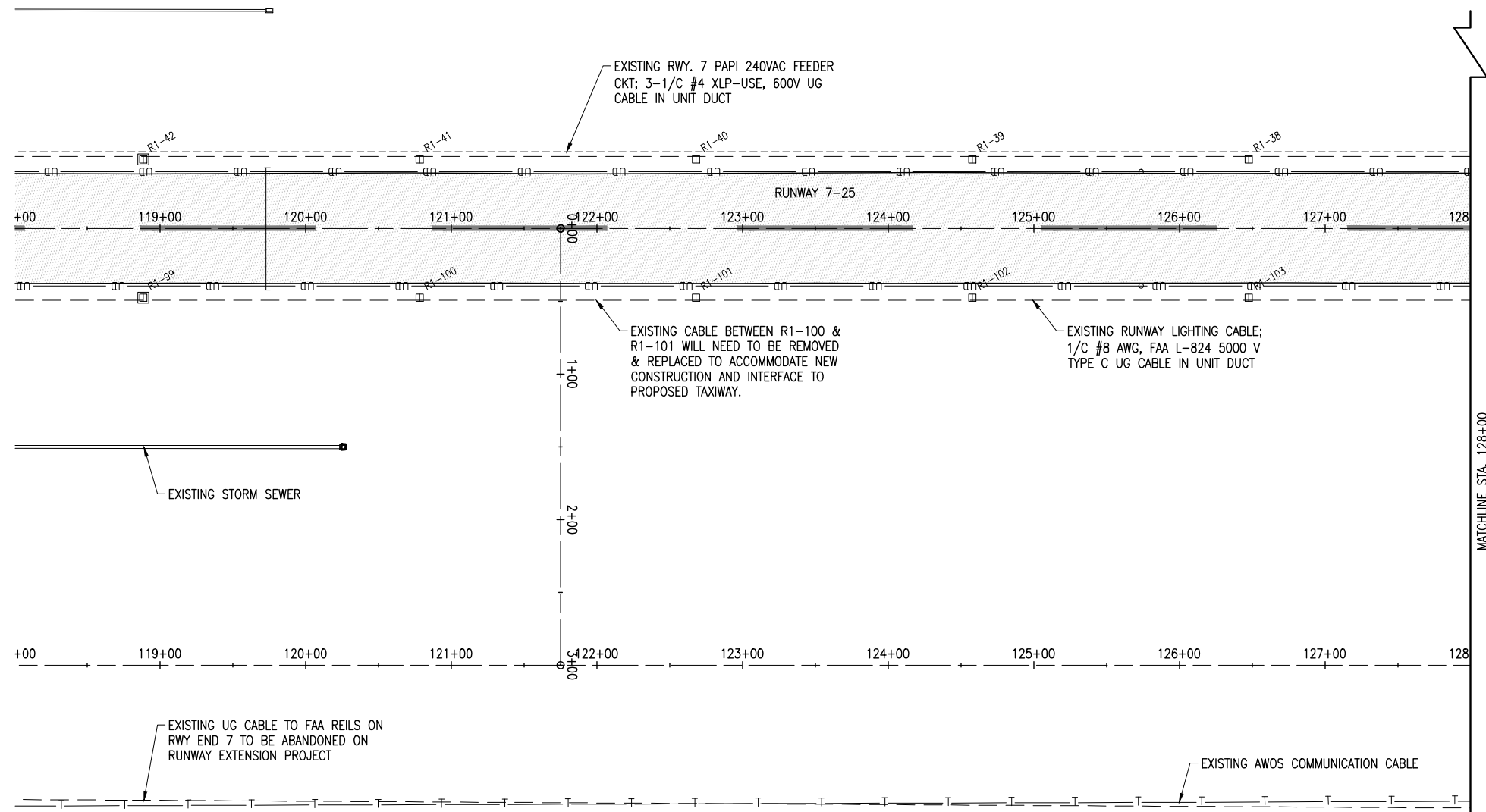
ROCHELLE MUNICIPAL AIRPORT  
 MAJOR THOMAS F. KORITZ FIELD  
 ROCHELLE, OGLE COUNTY, ILLINOIS  
 IL PROJ.: RPJ-4279

Hanson Proj. No. 12A0172	Filename C-301-XS.dwg	Scale 1" = 20'H 1" = 2'V	Date 11/15/2013
LAYOUT	KBS	10/4/13	
DRAWN	KBS	10/4/13	
REVIEWED	CAH	11/15/13	



CONSTRUCT PARTIAL  
 PARALLEL TAXIWAY  
 CONNECTOR CROSS SECTIONS  
 STA. 2+50 TO STA. 2+75

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THE LOCATION, SIZE, AND TYPE OF MATERIAL OF EXISTING UNDERGROUND AND/OR ABOVEGROUND UTILITIES INDICATED ON THE PLANS ARE NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. NEITHER THE OWNER NOR THE ENGINEER ASSUMES ANY RESPONSIBILITY WHATEVER IN RESPECT TO THE ACCURACY, COMPLETENESS, OR SUFFICIENCY OF THE INFORMATION. THERE IS NO GUARANTEE, EITHER EXPRESSED OR IMPLIED, THAT THE LOCATIONS, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ARE REPRESENTATIVE OF THOSE TO BE ENCOUNTERED IN THE CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES OF HIS OPERATIONAL PLANS AND SHALL OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES DETAILED INFORMATION AND ASSISTANCE RELATIVE TO THE LOCATION OF THEIR FACILITIES AND THE WORKING SCHEDULE OF THE COMPANIES FOR REMOVAL OR ADJUSTMENT WHERE REQUIRED. IN THE EVENT AN UNEXPECTED UTILITY INTERFERENCE IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY COMPANY OF JURISDICTION. THE OWNER'S REPRESENTATIVE AND/OR THE RESIDENT ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY DAMAGE TO SUCH MAINS AND SERVICES SHALL BE RESTORED TO SERVICE AT ONCE AND PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT.

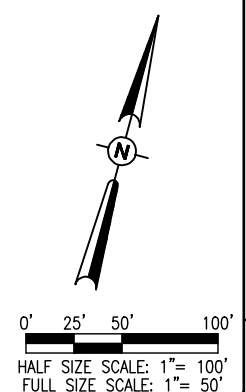
ALL UTILITY CABLES AND LINES SHALL BE LOCATED BY THE RESPECTIVE UTILITY. **CONTACT JULIE (JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS) FOR UTILITY INFORMATION, PHONE: 1-800-892-0123.** CONTACT THE FAA (FEDERAL AVIATION ADMINISTRATION) FOR ASSISTANCE IN LOCATING FAA CABLES AND UTILITIES. LOCATION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

**AIRFIELD LIGHTING REMOVAL AND TEMPORARY WORK NOTES C006**

- ALL WORK, POWER OUTAGES, AND/OR SHUT DOWN OF EXISTING SYSTEMS SHALL BE COORDINATED WITH THE AIRPORT DIRECTOR/MANAGER. ONCE SHUT DOWN, THE CIRCUITS SHALL BE LABELED AS SUCH TO PREVENT ACCIDENTAL ENERGIZING OF THE RESPECTIVE CIRCUITS. ALL PERSONNEL SHALL FOLLOW U.S. DEPARTMENT OF LABOR OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION (OSHA) 29 CFR PART 1910 OCCUPATIONAL SAFETY & HEALTH STANDARDS FOR ELECTRICAL SAFETY AND LOCKOUT/TAGOUT PROCEDURES INCLUDING, BUT NOT LIMITED TO, 29 CFR SECTION 1910.147 THE CONTROL OF HAZARDOUS ENERGY (LOCKOUT/TAGOUT).
- CONTRACTOR SHALL EXAMINE THE SITE TO DETERMINE THE EXTENT OF THE WORK. CONTRACTOR SHALL FIELD VERIFY EXISTING SITE CONDITIONS. CONTRACTOR SHALL FIELD VERIFY RESPECTIVE CIRCUITS AND POWER SOURCES PRIOR TO REMOVING OR DISCONNECTING THE RESPECTIVE AIRFIELD LIGHTING, NAVAIDS, OR OTHER DEVICE.
- COORDINATE REMOVAL OF TAXIWAY LIGHTS TO MINIMIZE DOWNTIME OF RUNWAY 7-25 LIGHTING SYSTEM. COORDINATE INSTALLATION OF NEW DUCTS, HANDHOLES, AND CABLING TO MINIMIZE DOWNTIME OF RUNWAY 7-25 LIGHTING SYSTEM. CONTRACTOR SHALL PROVIDE TEMPORARY DUCT & CABLING WHERE APPLICABLE TO MAINTAIN OPERATION OF RUNWAY 7-25 LIGHTING SYSTEM. TEMPORARY WORK TO MAINTAIN OPERATION OF THE RUNWAY 7-25 LIGHTING SYSTEM WILL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
- CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF FAA AC NO. 150/5370-2F (OR MOST CURRENT ISSUE) "OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION".
- CONTRACTOR SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS OF NFPA 70E - STANDARD FOR ELECTRICAL SAFETY IN THE WORKPLACE.
- THE EXISTING AIRFIELD (TAXIWAY) LIGHTS, AND THEIR ISOLATED TRANSFORMERS DESIGNATED FOR REMOVAL SHALL BE REMOVED AND TURNED OVER TO THE AIRPORT MANAGER. REMOVAL OF THE EXISTING AIRFIELD LIGHTS WILL BE PAID FOR UNDER ITEM AR125901 REMOVE STAKE MOUNTED LIGHT, PER EACH.
- THE EXISTING AIRFIELD LIGHTING CABLES WILL BE ABANDONED IN PLACE UNLESS IT CONFLICTS WITH THE INSTALLATION OF A PROPOSED LIGHT OR CABLE, PAVEMENT, OR OTHER WORK, THEN IT SHALL BE REMOVED AT NO ADDITIONAL COST TO THE CONTRACT.
- ALL ABOVEGROUND JUMPERS SHALL BE IN A DUCT WITH ALL CONNECTIONS SEALED. THE CONTRACTOR SHALL SECURE, IDENTIFY AND PLACE ALL TEMPORARY EXPOSED WIRING IN CONDUIT, DUCT, OR UNIT DUCT TO PREVENT ELECTROCUTION AND FIRE IGNITION SOURCES AS PER THE REQUIREMENTS OF FAA 150/5370-2F, OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION, SECTION 218 PARAGRAPH C.
- WHEN THE RUNWAY IS CLOSED THE NAVAIDS FOR IT SHALL BE SHUT OFF.
- NO CONNECTION TO AN ACTIVE LIGHTING CIRCUIT WILL BE BROKEN UNTIL THE CIRCUIT HAS BEEN TURNED OFF IN ACCORDANCE WITH NOTE 1.

**LEGEND**

- EXISTING PAVEMENT
- EXISTING ELECTRICAL DUCT
- EXISTING AIRFIELD LIGHTING ELECTRICAL CABLE
- EXISTING TELEPHONE/COMMUNICATION
- EXISTING UNDERDRAIN
- EXISTING STAKE MOUNTED RUNWAY LIGHT
- EXISTING BASE MOUNTED RUNWAY LIGHT



REVISION	DATE

ROCHELLE MUNICIPAL AIRPORT  
 MAJOR THOMAS F. KORITZ FIELD  
 ROCHELLE, OGLE COUNTY, ILLINOIS  
 IL PROJ.: RPJ-4279

Hanson Proj. No. 12A0172	Filename C-141-ELE.dwg	Scale 1"= 50'	Date 11/15/2013
LAYOUT	KBS/KNL	04/01/13	04/01/13
DRAWN	BAK	04/01/13	10/16/13
REVIEWED	KNL	10/16/13	

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CONSTRUCT PARTIAL  
 PARALLEL TAXIWAY

EXISTING ELECTRICAL PLAN  
 STA. 118+00 TO STA. 128+00

THE LOCATION, SIZE, AND TYPE OF MATERIAL OF EXISTING UNDERGROUND AND/OR ABOVEGROUND UTILITIES INDICATED ON THE PLANS ARE NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. NEITHER THE OWNER NOR THE ENGINEER ASSUMES ANY RESPONSIBILITY WHATEVER IN RESPECT TO THE ACCURACY, COMPLETENESS, OR SUFFICIENCY OF THE INFORMATION. THERE IS NO GUARANTEE, EITHER EXPRESSED OR IMPLIED, THAT THE LOCATIONS, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ARE REPRESENTATIVE OF THOSE TO BE ENCOUNTERED IN THE CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES OF HIS OPERATIONAL PLANS AND SHALL OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES DETAILED INFORMATION AND ASSISTANCE RELATIVE TO THE LOCATION OF THEIR FACILITIES AND THE WORKING SCHEDULE OF THE COMPANIES FOR REMOVAL OR ADJUSTMENT WHERE REQUIRED. IN THE EVENT AN UNEXPECTED UTILITY INTERFERENCE IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY COMPANY OF JURISDICTION. THE OWNER'S REPRESENTATIVE AND/OR THE RESIDENT ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY DAMAGE TO SUCH MAINS AND SERVICES SHALL BE RESTORED TO SERVICE AT ONCE AND PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT.

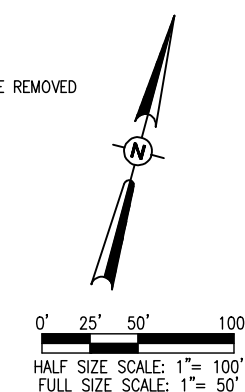
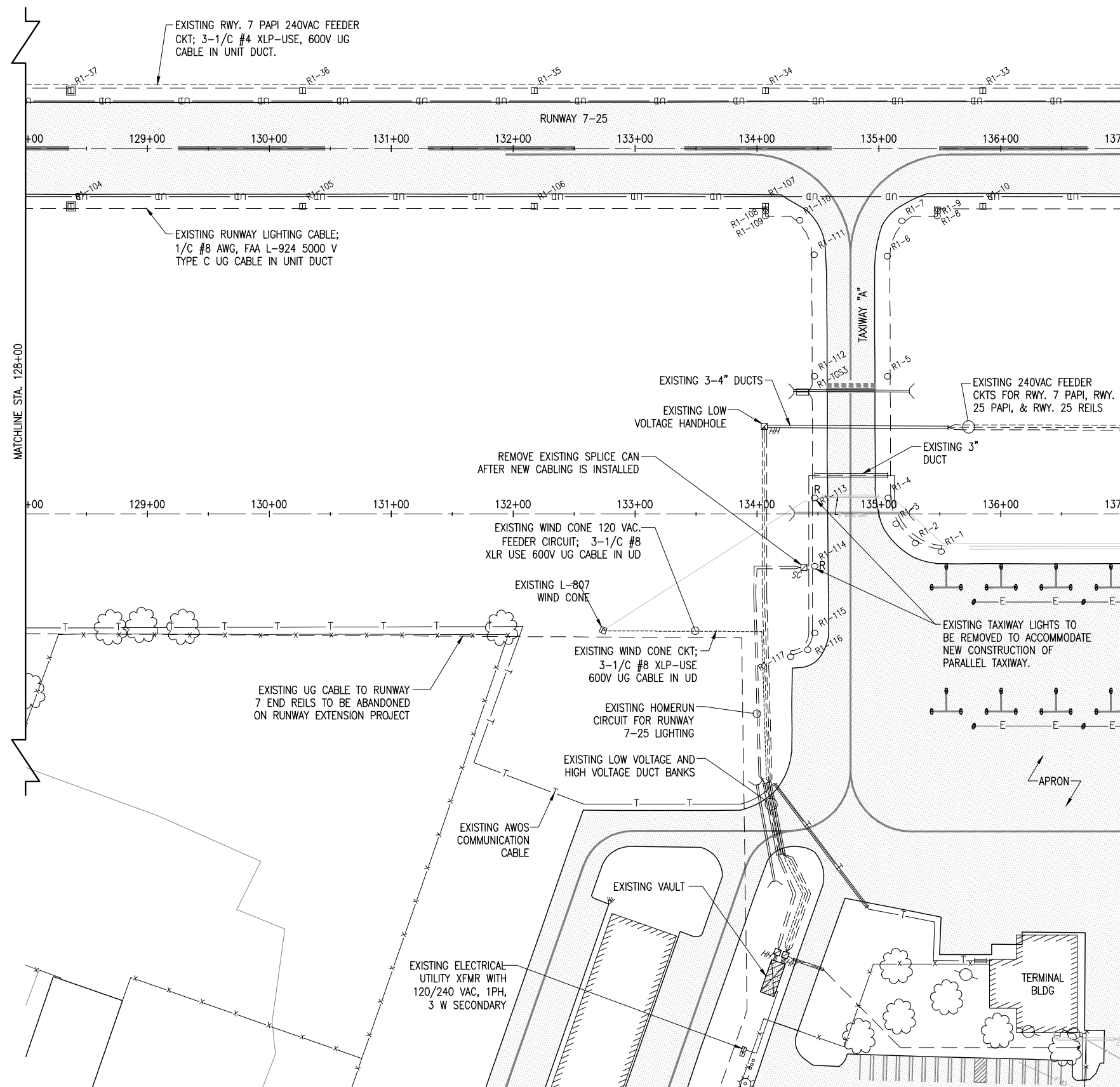
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**NOTES**

- EXISTING TAXIWAY LIGHTS R1-115, R1-116, & R1-117 SHALL BE RENUMBERED AND PUT ON THE TAXIWAY LIGHTING CIRCUIT TO ACCOMMODATE THE PROPOSED TAXIWAY INTERFACE & REMOVAL OF TAXIWAY LIGHTS R1-113 & R1-114.

**LEGEND**

- EXISTING PAVEMENT
- EXISTING ELECTRICAL DUCT
- EXISTING AIRFIELD LIGHTING ELECTRICAL CABLE
- EXISTING TELEPHONE/COMMUNICATION
- EXISTING UNDERDRAIN
- EXISTING FENCE
- EXISTING CULVERT
- EXISTING WIND CONE
- EXISTING STAKE MOUNTED TAXIWAY LIGHT
- EXISTING BASE MOUNTED TAXIWAY LIGHT
- EXISTING STAKE MOUNTED RUNWAY LIGHT
- EXISTING BASE MOUNTED RUNWAY LIGHT
- EXISTING TAXI GUIDANCE SIGN
- EXISTING STAKE MOUNTED TAXIWAY LIGHT TO BE REMOVED
- EXISTING ELECTRICAL HANDHOLE



REVISION	DATE

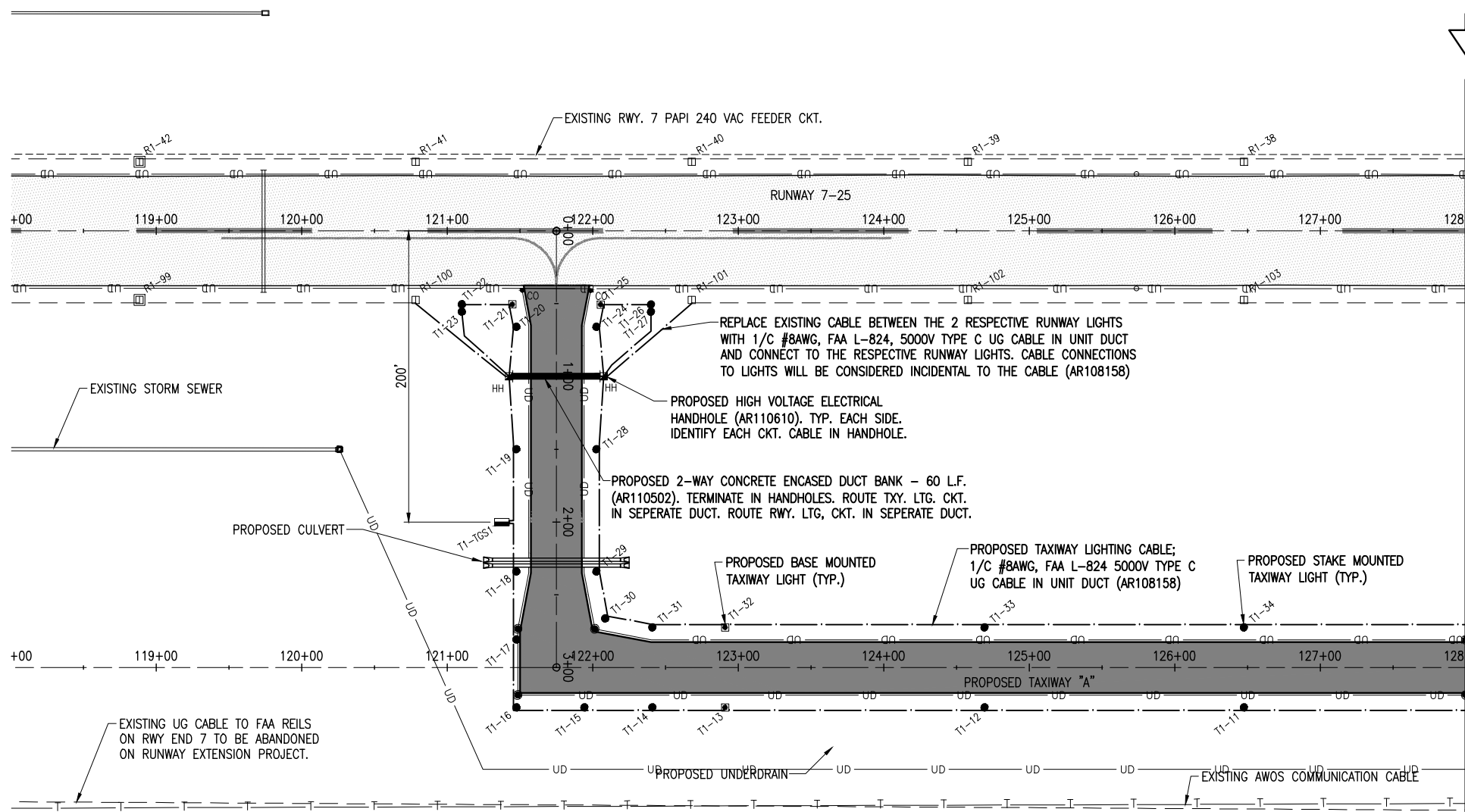
ROCHELLE MUNICIPAL AIRPORT  
 MAJOR THOMAS F. KORITZ FIELD  
 ROCHELLE, OGLE COUNTY, ILLINOIS  
 IL PROJ.: RPJ-4279

Hanson Proj. No. 12A0172	Filename C-141-ELE.dwg	Date 11/15/2013
Scale 1" = 50'	LAYOUT	04/01/13
	DRAWN	04/01/13
	REVIEWED	10/16/13

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CONSTRUCT PARTIAL  
 PARALLEL TAXIWAY  
 EXISTING ELECTRICAL PLAN  
 STA. 128+00 TO STA. 137+00

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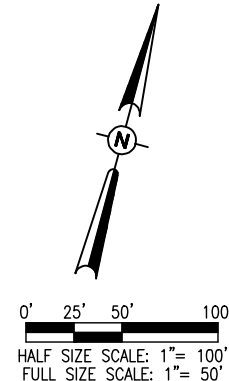
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- LEGEND**
- EXISTING PAVEMENT
  - PROPOSED PAVEMENT
  - EXISTING ELECTRICAL DUCT
  - PROPOSED ELECTRICAL DUCT
  - EXISTING AIRFIELD LIGHTING ELECTRICAL CABLE
  - EXISTING TELEPHONE/COMMUNICATION
  - EXISTING UNDERDRAIN
  - EXISTING STAKE MOUNTED RUNWAY LIGHT
  - EXISTING BASE MOUNTED RUNWAY LIGHT
  - PROPOSED STAKE MOUNTED TAXIWAY LIGHT
  - PROPOSED BASE MOUNTED TAXIWAY LIGHT
  - PROPOSED ELECTRICAL HANHOLE
  - PROPOSED 1/C #8AWG, FAA L-824, 5000VOLT TYPE C UG CABLE IN UD

**AIRFIELD LIGHTING NOTES**

1. ALL WORK, POWER OUTAGES, AND/OR SHUT DOWN OF EXISTING SYSTEMS SHALL BE COORDINATED WITH THE AIRPORT DIRECTOR/MANAGER. ONCE SHUT DOWN, THE CIRCUITS SHALL BE LABELED AS SUCH TO PREVENT ACCIDENTAL ENERGIZING OF THE RESPECTIVE CIRCUITS. ALL PERSONNEL SHALL FOLLOW U.S. DEPARTMENT OF LABOR OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION (OSHA) 29 CFR PART 1910 OCCUPATIONAL SAFETY & HEALTH STANDARDS FOR ELECTRICAL SAFETY AND LOCKOUT/TAGOUT PROCEDURES INCLUDING, BUT NOT LIMITED TO 29 CFR SECTION 1910.147 THE CONTROL OF HAZARDOUS ENERGY (LOCKOUT/TAGOUT).
2. CONTRACTOR SHALL FIELD VERIFY EXISTING SITE CONDITIONS. CONTRACTOR SHALL FIELD VERIFY RESPECTIVE CIRCUITS AND POWER SOURCES PRIOR TO REMOVING OR DISCONNECTING THE RESPECTIVE AIRFIELD LIGHTING, NAVAID, CABLE OR OTHER DEVICE.
3. PROPOSED TAXIWAY LIGHTS SHALL BE PLACED 10' (FT.) FROM THE PAVEMENT EDGE UNLESS SHOWN OTHERWISE ON THESE CONSTRUCTION DRAWINGS. PROPOSED TAXI GUIDANCE SIGNS SHALL BE LOCATED SUCH THAT THE CLOSEST SIDE OF THE SIGN IS 15' FROM THE PAVEMENT EDGE, UNLESS SHOWN OTHERWISE.
4. PROPOSED TAXIWAY LIGHTS, GUIDANCE SIGNS, OTHER AIRFIELD LIGHTING, SPLICE CANS, HANDHOLES, MANHOLES, ELECTRICAL DUCTS, AND CABLE SHALL BE INSTALLED AT THE LOCATIONS SHOWN AND IN COMPLIANCE WITH THE SPECIFICATIONS, SPECIAL PROVISIONS, RESPECTIVE DETAILS, AND MANUFACTURER'S RECOMMENDATIONS.
5. PROPOSED CABLE FOR RUNWAY AND TAXIWAY LIGHTING SHALL BE INSTALLED APPROXIMATELY 10' FROM THE PAVEMENT EDGE. CABLES SHALL BE PLACED A MINIMUM OF 18" BELOW FINISHED GRADE.
6. THE PROPOSED RUNWAY AND TAXIWAY LIGHTING CABLE SHALL BE 1/C, #8 AWG, FAA L-824, 5000 VOLT, TYPE C UNDERGROUND CABLE IN UNIT DUCT.
7. IN AREAS WHERE THERE IS A CONGESTION OF CABLES OR WHERE THE PROPOSED CABLE CROSSES AN EXISTING CABLE, THE CONTRACTOR IS REQUIRED TO HAND DIG THE TRENCH NECESSARY FOR THE PROPOSED CABLE. AT OTHER LOCATIONS, THE PROPOSED CABLE MAY BE TRENCHED OR PLOWED INTO PLACE. HAND DIGGING, TRENCHING AND/OR PLOWING WILL BE CONSIDERED INCIDENTAL TO THE PROPOSED CABLES AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
8. ALL PROPOSED TAXIWAY LIGHTS WILL BE FITTED WITH 360° BLUE LENSES.
9. ALL PROPOSED TAXIWAY LIGHTS SHALL BE TAGGED BY THE CONTRACTOR IN ACCORDANCE WITH THE LIGHT NUMBERS SHOWN ON THESE CONSTRUCTION DRAWINGS.
10. SEE "TAXI GUIDANCE SIGN SCHEDULE" AND/OR TAXI SIGN DETAILS FOR INFO ON SIGN LEGENDS.
11. THE CONTRACTOR SHALL SECURE, IDENTIFY AND PLACE ALL TEMPORARY EXPOSED WIRING IN CONDUIT, DUCT OR UNIT DUCT TO PREVENT ELECTROCUTION AND FIRE IGNITION SOURCES AS PER THE REQUIREMENTS OF FAA AC 150/5370-2F, PART 218, PARAGRAPH C. ALL LABOR, MATERIALS, AND TIME NECESSARY TO COMPLY WITH THIS REQUIREMENT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
12. HOMERUN CABLES FOR A RESPECTIVE CIRCUIT THAT ARE INSTALLED IN CONDUIT OR DUCT SHALL BE RUN TOGETHER IN THE SAME RACEWAY OR DUCT.
13. EXISTING AIRFIELD LIGHTING CABLES (SCHEDULED FOR REPLACEMENT) IN AREAS OF NEW WORK SHALL BE DISCONNECTED & REMOVED WHERE IN CONFLICT WITH NEW CONSTRUCTION. IN OTHER AREAS CABLES MAY BE ABANDONED IN PLACE.
14. THE CONTRACTOR IS REQUIRED TO FILL IN ALL HOLES AND DEPRESSIONS RESULTING FROM THE NEW WORK, WITH EARTH MATERIAL. THE AREAS SHALL BE COMPACTED TO PREVENT FUTURE SETTLEMENT AND FERTILIZED, SEEDED, AND MULCHED IN ACCORDANCE WITH ITEMS 901 AND 908 RESPECTIVELY.
15. IN THE EVENT THAT OTHER CONSTRUCTION PROJECTS ARE IN PROGRESS AT THE AIRPORT AT THE SAME TIME AS THIS PROJECT, THE CONTRACTOR WILL BE REQUIRED TO COOPERATE WITH ALL OTHER CONTRACTORS AND THE AIRPORT MANAGER IN THE COORDINATION OF THE WORK.
16. NO CONNECTION TO AN ACTIVE LIGHTING CIRCUIT WILL BE BROKEN UNTIL THE CIRCUIT HAS BEEN TURNED OFF IN ACCORDANCE WITH NOTE 1.



REVISION	DATE

ROCHELLE MUNICIPAL AIRPORT  
 MAJOR THOMAS F. KORITZ FIELD  
 ROCHELLE, OGLE COUNTY, ILLINOIS  
 IL PROJ.: RPJ-4279

Hanson Proj. No. 12A0172	04/01/13
Filename C-142-ELE.dwg	04/01/13
Scale 1" = 50'	BAK xxx
Date 11/15/2013	xx/xx/xx
LAYOUT	DRAWN
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CONSTRUCT PARTIAL  
 PARALLEL TAXIWAY  
 PROPOSED ELECTRICAL  
 PLAN STA. 118+00 TO STA.  
 128+00

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REVISION

ROCHELLE MUNICIPAL AIRPORT  
MAJOR THOMAS F. KORITZ FIELD  
ROCHELLE, OGLE COUNTY, ILLINOIS  
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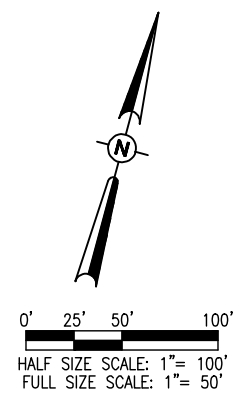
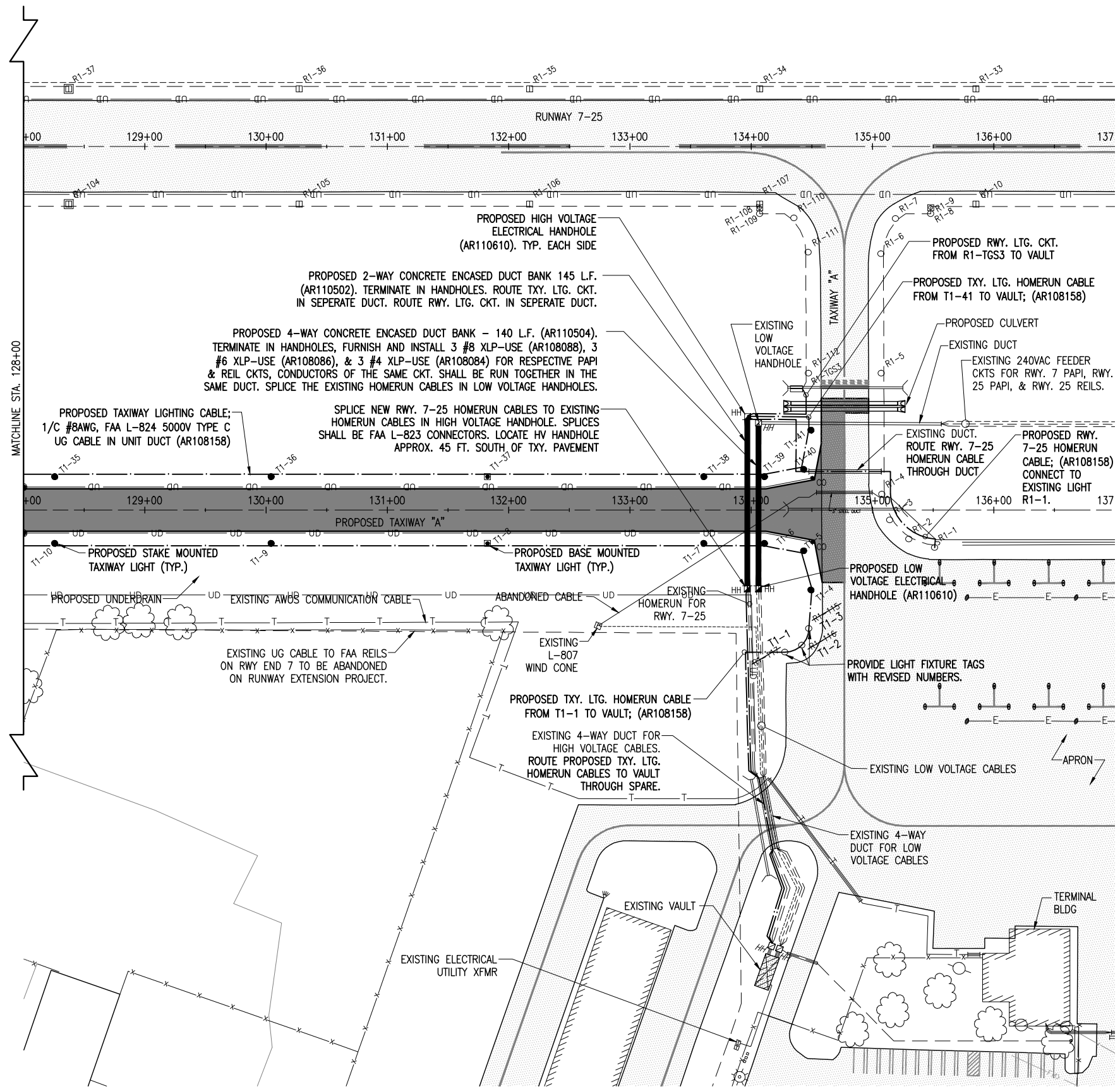
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PARALLEL TAXIWAY  
PROPOSED ELECTRICAL  
PLAN STA. 128+00 TO STA.  
137+00

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**LEGEND**

- [Symbol] EXISTING PAVEMENT
- [Symbol] PROPOSED PAVEMENT
- [Symbol] EXISTING ELECTRICAL DUCT
- [Symbol] PROPOSED ELECTRICAL DUCT
- - - EXISTING AIRFIELD LIGHTING ELECTRICAL CABLE
- T - - EXISTING TELEPHONE/COMMUNICATION
- UD - - EXISTING UNDERDRAIN
- X - - EXISTING FENCE
- [Symbol] EXISTING CULVERT
- [Symbol] EXISTING WIND CONE
- [Symbol] EXISTING STAKE MOUNTED TAXIWAY LIGHT
- [Symbol] EXISTING BASE MOUNTED TAXIWAY LIGHT
- [Symbol] EXISTING STAKE MOUNTED RUNWAY LIGHT
- [Symbol] EXISTING BASE MOUNTED RUNWAY LIGHT
- [Symbol] EXISTING TAXI GUIDANCE SIGN
- [Symbol] PROPOSED STAKE MOUNTED TAXIWAY LIGHT
- [Symbol] PROPOSED BASE MOUNTED TAXIWAY LIGHT
- [Symbol] PROPOSED ELECTRICAL HANDHOLE
- - - PROPOSED 1/C #8AWG FAA L-824, 5000 VOLT TYPE C UG CABLE IN UD



LIGHT LOCATION TABLE						
TAG NO.	NORTHING	EASTING	STATION	OFFSET	LT/RT	REFERENCE ALIGNMENT
T1-1	EXISTING LIGHT "R-117" TO BE RETAGGED					
T1-2	EXISTING LIGHT "R-116" TO BE RETAGGED					
T1-3	EXISTING LIGHT "R-115" TO BE RETAGGED					
T1-4	1905273.52	2593564.43	134+49.30	65.93	RT	TAXIWAY A
T1-5	1905301.63	2593547.28	134+43.23	33.57	RT	TAXIWAY A
T1-6	1905295.82	2593514.87	134+10.87	27.50	RT	TAXIWAY A
T1-7	1905278.09	2593468.12	133+60.87	27.50	RT	TAXIWAY A
T1-8	1905214.86	2593301.43	131+82.60	27.50	RT	TAXIWAY A
T1-9	1905151.62	2593134.69	130+04.26	27.50	RT	TAXIWAY A
T1-10	1905088.37	2592967.95	128+25.93	27.50	RT	TAXIWAY A
T1-11	1905025.13	2592801.21	126+47.60	27.50	RT	TAXIWAY A
T1-12	1904961.88	2592634.46	124+69.26	27.50	RT	TAXIWAY A
T1-13	1904898.64	2592467.72	122+90.93	27.50	RT	TAXIWAY A
T1-14	1904880.90	2592420.97	122+40.93	27.50	RT	TAXIWAY A
T1-15	1904864.34	2592377.29	121+94.21	27.50	RT	TAXIWAY A
T1-16	1904847.77	2592333.62	121+47.50	27.50	RT	TAXIWAY A
T1-31	1904932.33	2592401.47	122+40.93	27.50	LT	TAXIWAY A
T1-32	1904950.06	2592448.22	122+90.93	27.50	LT	TAXIWAY A
T1-33	1905013.31	2592614.96	124+69.26	27.50	LT	TAXIWAY A
T1-34	1905076.55	2592781.70	126+47.60	27.50	LT	TAXIWAY A
T1-35	1905139.80	2592948.44	128+25.93	27.50	LT	TAXIWAY A
T1-36	1905203.04	2593115.18	130+04.26	27.50	LT	TAXIWAY A
T1-37	1905266.29	2593281.92	131+82.60	27.50	LT	TAXIWAY A
T1-38	1905329.51	2593448.61	133+60.87	27.50	LT	TAXIWAY A
T1-39	1905347.25	2593495.36	134+10.87	27.50	LT	TAXIWAY A
T1-40	1905364.40	2593523.47	134+43.23	33.57	LT	TAXIWAY A
T1-41	1905396.81	2593517.66	134+49.30	65.93	LT	TAXIWAY A

LIGHT LOCATION TABLE						
TAG NO.	NORTHING	EASTING	STATION	OFFSET	LT/RT	REFERENCE ALIGNMENT
T1-17	1904891.45	2592317.05	2+80.79	27.50	RT	CONNECTOR
T1-18	1904935.13	2592300.48	2+34.07	27.50	RT	CONNECTOR
T1-19	1905013.73	2592270.66	1+50.00	27.50	RT	CONNECTOR
T1-20	1905092.34	2592240.85	0+65.93	27.50	RT	CONNECTOR
T1-21	1905105.72	2592232.68	0+50.52	30.39	RT	CONNECTOR
T1-22	1905093.45	2592200.32	0+50.51	65.00	RT	CONNECTOR
T1-23	1905088.78	2592202.09	0+55.51	65.00	RT	CONNECTOR
T1-24	1905111.84	2592292.27	0+65.93	27.50	LT	CONNECTOR
T1-25	1905127.25	2592289.52	0+50.54	30.39	LT	CONNECTOR
T1-26	1905139.52	2592321.88	0+50.56	65.00	LT	CONNECTOR
T1-27	1905134.84	2592323.66	0+55.56	65.00	LT	CONNECTOR
T1-28	1905033.24	2592322.09	1+50.00	27.50	LT	CONNECTOR
T1-29	1904954.63	2592351.91	2+34.07	27.50	LT	CONNECTOR
T1-30	1904926.53	2592369.06	2+66.43	33.57	LT	CONNECTOR

TAXI GUIDANCE SIGN SCHEDULE			
SIGN NUMBERS	LOCATION	SIDE A	SIDE B
T1-TGS1	INTERSECTION OF TAXIWAY AND RUNWAY 7-25 (AT HOLD LINE)	7-25	BLANK

**TAXI GUIDANCE SIGN SCHEDULE**

- A** TYPE L-858(L) LOCATION SIGN - YELLOW LEGEND AND BORDER ON A BLACK BACKGROUND
- 7-25** TYPE L-858R(L) MANDATORY INSTRUCTION SIGN - BLACK OUTLINE ON OUTSIDE EDGE OF WHITE LEGEND ON A RED BACKGROUND
- RAMP** ↑ TYPE L-858Y(L) DIRECTION, DESTINATION, AND BOUNDARY SIGN - BLACK LEGEND ON A YELLOW BACKGROUND
- BLANK** BLANK - BLACK BACKGROUND

**TAXI GUIDANCE SIGN NOTES**

- THE PROPOSED TAXI GUIDANCE SIGNS SHALL CONFORM TO ADVISORY CIRCULAR 150/5345 44J (OR LATEST ISSUE IN FORCE) AND BE FAA-APPROVED FOR TYPE L-858Y(L) DIRECTION, DESTINATION, AND BOUNDARY SIGNS (BLACK LEGEND ON YELLOW BACKGROUND); TYPE L-858R(L) MANDATORY INSTRUCTION SIGN (BLACK OUTLINE ON OUTSIDE EDGE OF WHITE LEGEND ON RED BACKGROUND); AND/OR TYPE L-858(L) LOCATION SIGN (YELLOW LEGEND AND BORDER ON BLACK BACKGROUND).
- THE SIGNS SHALL BE SIZE 1, 18-IN. SIGN FACE WITH A 12-IN. LEGEND; STYLE 2, POWERED FROM A 4.8 TO 6.6 AMP SERIES LIGHTING CIRCUIT; CLASS 2, FOR OPERATION FROM -40 DEGREES F TO 131 DEGREES F; MODE 2, TO WITHSTAND WIND LOADS OF 200 M.P.H., BASE-MOUNTED, DOUBLE-SIDED, AS SPECIFIED ON THE PLANS.
- WHERE TAXI GUIDANCE SIGNS HAVE LED (LIGHT EMITTING DIODE) TYPE ILLUMINATION THEY SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF FAA ENGINEERING BRIEF NO. 67D LIGHT SOURCES OTHER THAN INCANDESCENT AND XENON FOR AIRPORT AND OBSTRUCTION LIGHTING FIXTURES.
- THE PROPOSED TAXI GUIDANCE SIGNS SHALL BE LOCATED SUCH THAT THE CLOSEST SIDE OF THE SIGN IS 15' FROM THE PAVEMENT EDGE.
- THE PROPOSED TAXI GUIDANCE SIGNS WILL BE PAID FOR UNDER THE FOLLOWING ITEMS:  
AR125444 TAXI GUIDANCE SIGN, 4 CHARACTER \_\_\_\_\_ PER EACH.

LIGHT LENS SCHEDULE			
LIGHT NUMBERS	LENS	ORIENTATION	FIXTURE TYPE
T1-1 TO T1-41	BLUE	---	L-861T(L)

**TAXIWAY LIGHT FIXTURE NOTES**

- THE PROPOSED TAXIWAY EDGE LIGHTS SHALL BE TYPE L-861T(L) LED (LIGHT-EMITTING DIODE) FIXTURES MANUFACTURED IN ACCORDANCE TO FAA SPECIFICATION AC NO. 150/5345-46C, OR LATEST EDITION IN FORCE, AND SHALL BE FAA APPROVED AND IN COMPLIANCE WITH THE AIRPORT IMPROVEMENT PROGRAM BUY AMERICAN REQUIREMENTS. TYPE L-861T(L) TAXIWAY LIGHTS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF FAA ENGINEERING BRIEF NO. 67D LIGHT SOURCES OTHER THAN INCANDESCENT AND XENON FOR AIRPORT AND OBSTRUCTION LIGHTING FIXTURES. ALL LIGHTS SHALL HAVE AN OVERALL HEIGHT OF 30 IN.
- PRIOR TO INSTALLING THE PROPOSED AIRFIELD LIGHT FIXTURES, APPLY AN OXIDE-INHIBITING, ANTI-SEIZING COMPOUND TO ALL SCREWS, NUTS, BREAKABLE COUPLING, AND ALL PLACES WHERE METAL COMES INTO CONTACT WITH METAL.
- SERIES CIRCUIT ISOLATION TRANSFORMERS FOR THE AIRFIELD LIGHTING AND TAXI GUIDANCE SIGNS SHALL BE MANUFACTURED TO FAA SPECIFICATION AC 150/5345-47B, AC 150/5345-47C, OR LATEST EDITION IN FORCE, AND SHALL BE FAA-APPROVED (ETL-CERTIFIED). SERIES CIRCUIT TRANSFORMER SHALL BE PROPERLY SIZED FOR THE RESPECTIVE AIRFIELD LIGHTING DEVICE, AND SHALL BE AS RECOMMENDED BY THE RESPECTIVE EQUIPMENT MANUFACTURER. CONFIRM PROPER TRANSFORMER SELECTION AND SIZING WITH THE RESPECTIVE EQUIPMENT MANUFACTURER.
- IDENTIFICATION TAGS SHALL BE ATTACHED TO EACH AIRFIELD LIGHT FIXTURE.
- RUBBER AND PLASTIC ELECTRICAL TAPES SHALL BE SCOTCH ELECTRICAL TAPE NUMBERS 23 (2" WIDE) OR 130C (2" WIDE) AND 88 (1.5" WIDE) RESPECTIVELY, AS MANUFACTURED BY THE MINNESOTA MINING AND MANUFACTURING COMPANY, OR EQUIVALENT.

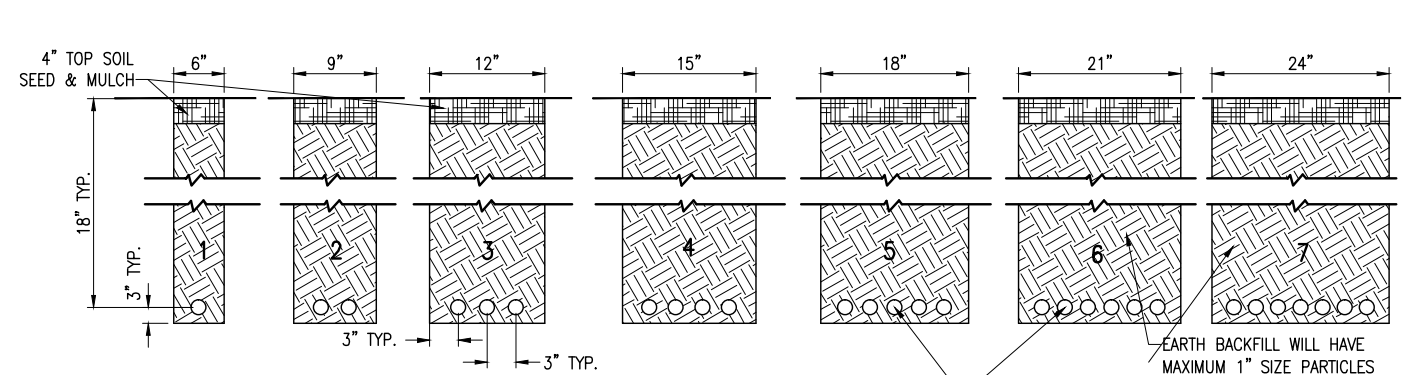
REVISION	DATE

ROCHELLE MUNICIPAL AIRPORT  
MAJOR THOMAS F. KORITZ FIELD  
ROCHELLE, OGLE COUNTY, ILLINOIS  
IL PROJ.: RPJ-4279

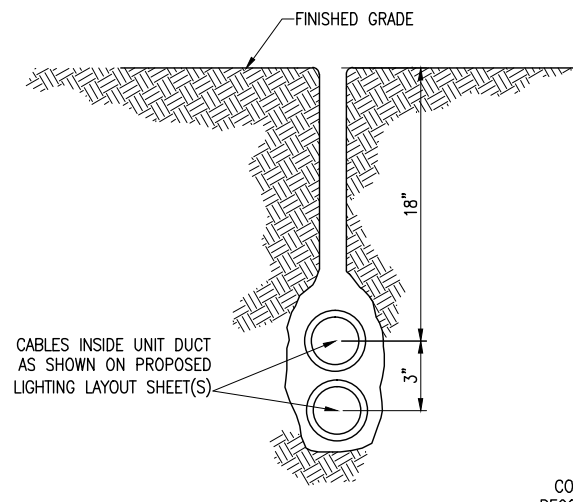
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REVIEWED	KNL	10/16/13	10/16/13



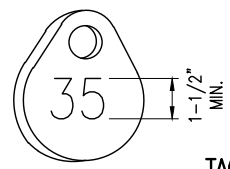
CONSTRUCT PARTIAL PARALLEL TAXIWAY  
AIRFIELD LIGHTING NOTES AND SCHEDULE



**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.

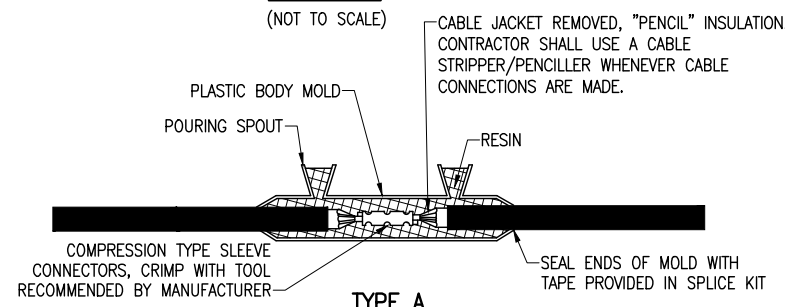


**PLOWED CABLE**  
(NOT TO SCALE)



**TAG DETAIL**  
(NOT TO SCALE)

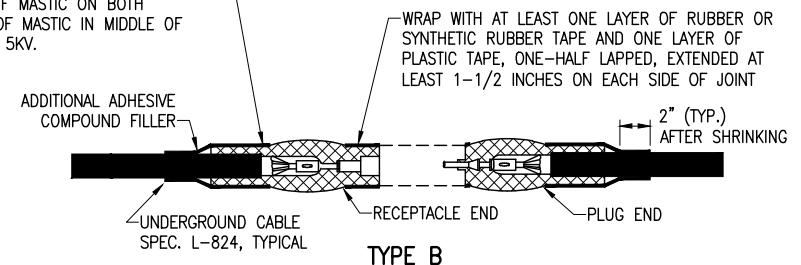
**NOTE:**  
 AFFIX NON-CORROSIVE TAG TO FIXTURE FACING RUNWAY WITH SET SCREW, WIRE TIE, OR METAL BAND. NUMERALS SHALL BE ENGRAVED FOR PERMANENT READABILITY.



**TYPE A**

CONTINUOUS HEAT SHRINK TUBING PLACED OVER THE ENTIRE L-823 CONNECTOR(S) BOTH MALE AND FEMALE AT ALL 5KV JUNCTIONS. THE HEAT SHRINK TUBING SHALL BE APPROXIMATELY 18" IN LENGTH WITH 6 INCHES OF MASTIC ON BOTH ENDS AND VOID OF MASTIC IN MIDDLE OF TUBE RATED FOR 5KV.

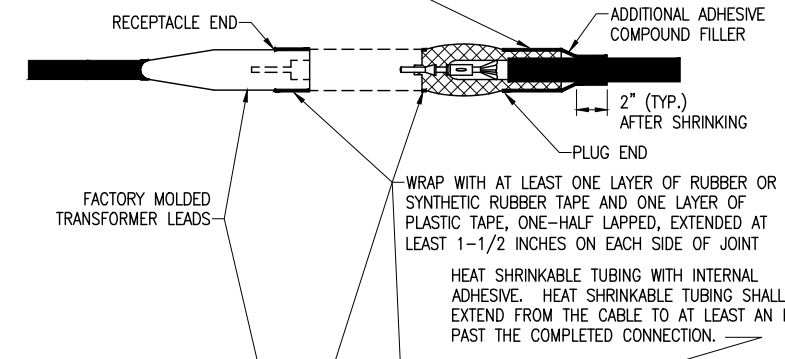
FOR SPLICES IN LOW VOLTAGE CABLE (600V) HOMERUNS FOR EXTENSIONS TO EXISTING LOW VOLTAGE CABLES ONLY. TYPE A SPLICES SHALL BE MADE IN SPLICE CANS, HANDHOLES, MANHOLES, OR JUNCTIONS BOXES



**TYPE B**

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

HEAT SHRINKABLE TUBING WITH INTERNAL ADHESIVE. HEAT SHRINKABLE TUBING SHALL EXTEND FROM THE CABLE TO AT LEAST AN INCH PAST THE COMPLETED CONNECTION.



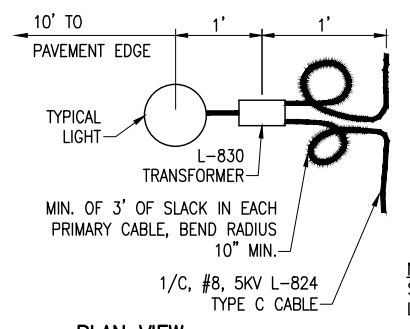
**TYPE C**

FOR SPLICES AT RUNWAY AND TAXIWAY LIGHTS

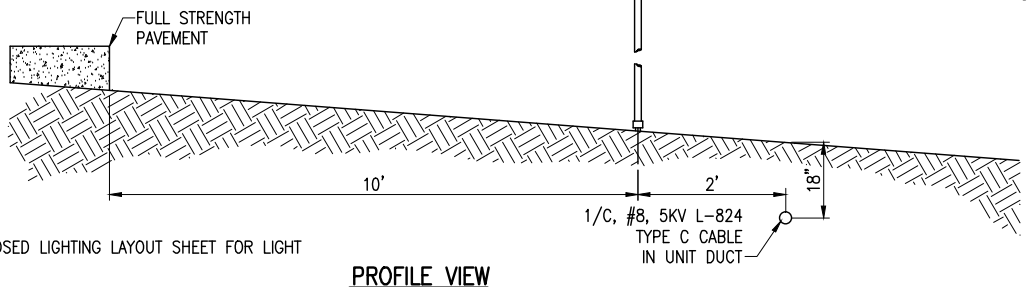
**NOTES:**  
 SEE PROPOSED LIGHTING LAYOUT SHEET(S) FOR SPLICE TYPE.  
 INSIDE DIAMETER OF CONNECTOR SHALL PROPERLY MATCH THE OUTSIDE DIAMETER OF CABLE.

**CABLE SPLICES**  
(NOT TO SCALE)

**CABLE TRENCHES**  
(NOT TO SCALE)



**PLAN VIEW**

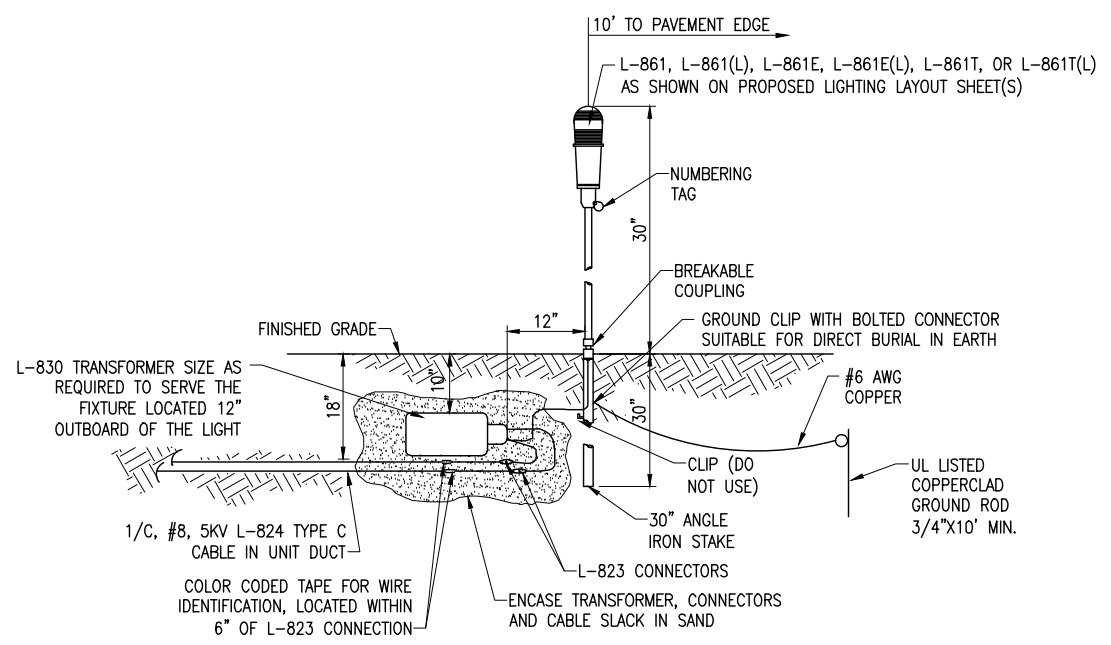


**PROFILE VIEW**

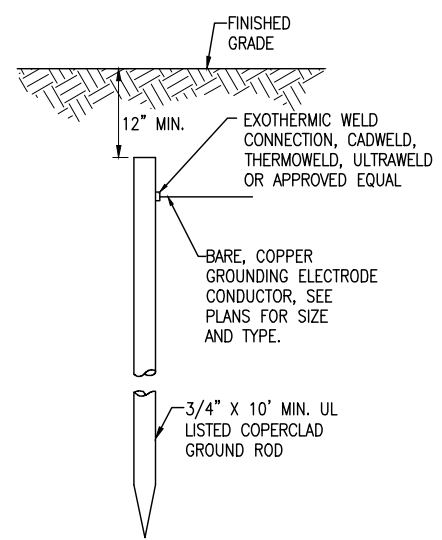
**LIGHT AND CABLE INSTALLATION DETAIL**  
(NOT TO SCALE)

PER FAA AC 150/5340-30G DESIGN AND INSTALLATION DETAILS FOR AIRPORT VISUAL AIDS, A LIGHT BASE GROUND MUST BE INSTALLED AT EACH LIGHT FIXTURE. A LIGHT BASE 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 LIGHT BASE GROUND SHALL BE A #6 AWG BARE COPPER CONDUCTOR BONDED TO THE GROUND LUG ON THE RESPECTIVE L-867 TRANSFORMER BASE/LIGHT CAN OR MOUNTING STAKE AND A 3/4-INCH DIAMETER BY 10-FOOT LONG (MINIMUM) UL LISTED COPPER CLAD GROUND ROD.

**NOTES:**  
 SEE PROPOSED LIGHTING LAYOUT SHEET FOR LIGHT LOCATIONS.



**MEDIUM INTENSITY LIGHT - STAKE MOUNTED**  
(NOT TO SCALE)



**GROUND ROD**  
(NOT TO SCALE)

**NOTES:**  
 TYPE AND MINIMUM NUMBER OF GROUND RODS SHALL BE AS SPECIFIED ON THE PLAN.  
 THE RESISTANCE TO GROUND OF THE GROUNDING SYSTEM SHALL NOT EXCEED 25 OHMS.  
COST OF GROUND RODS IS INCIDENTAL TO THE ASSOCIATED ITEMS REQUIRING GROUNDING UNLESS OTHERWISE SPECIFIED.

REVISION	
DATE	

ROCHELLE MUNICIPAL AIRPORT  
 MAJOR THOMAS F. KORITZ FIELD  
 ROCHELLE, OGLE COUNTY, ILLINOIS

IL PROJ.: RPJ-4279

Hanson Proj. No. 12A0172	Filename E-501-BEFL.dwg	Scale NOT TO SCALE	Date 11/15/2013
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REVIEWED	KNL	10/16/13	

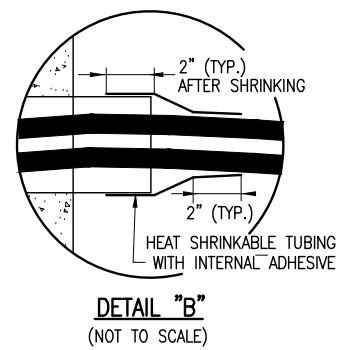
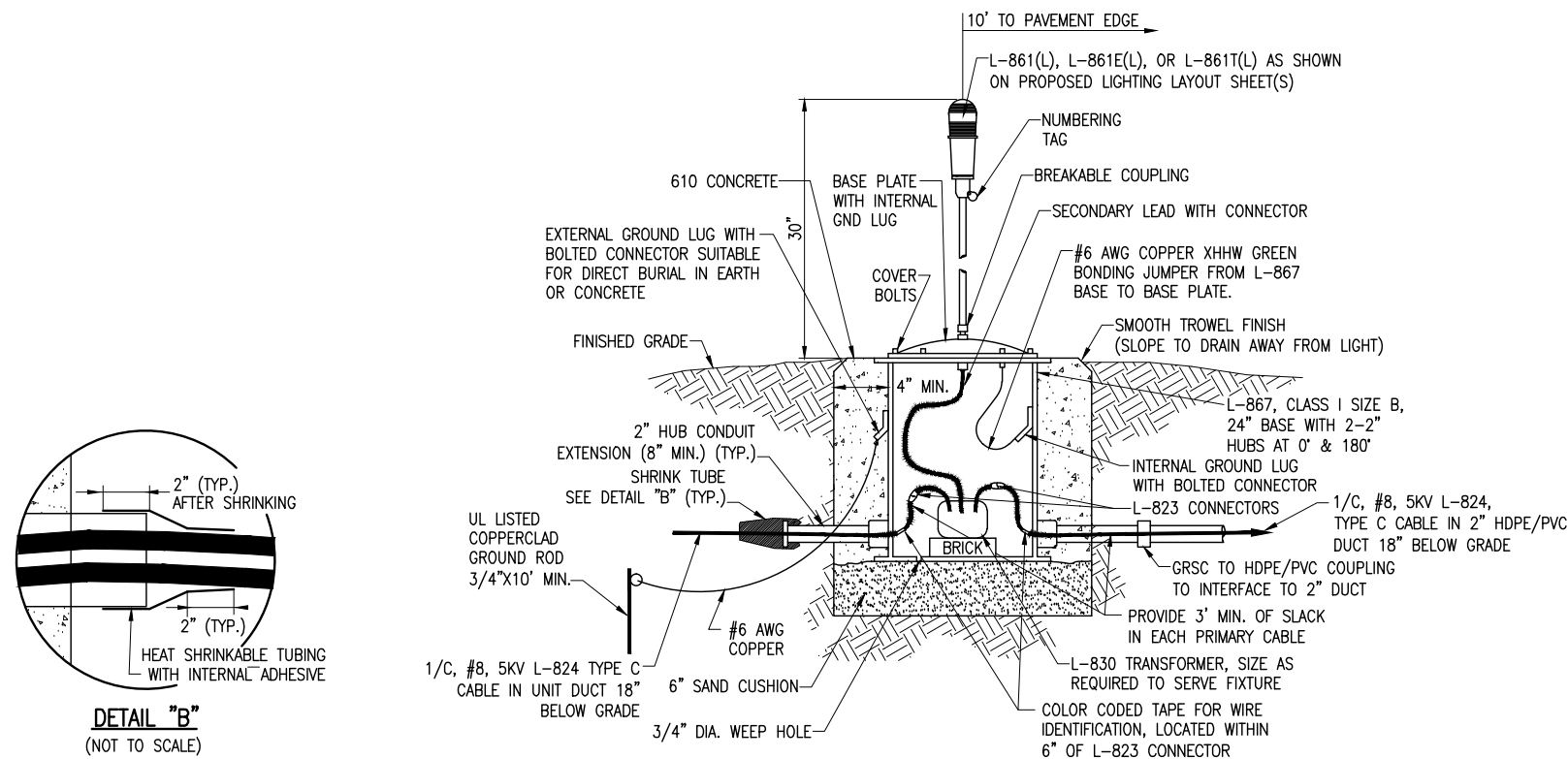
**HANSON**  
 Hanson Professional Services Inc. 2013  
 1625 South Sixth Street  
 Springfield, Illinois 62703-2886

CONSTRUCT PARTIAL  
 PARALLEL TAXIWAY  
 ELECTRICAL DETAILS  
 SHEET 1

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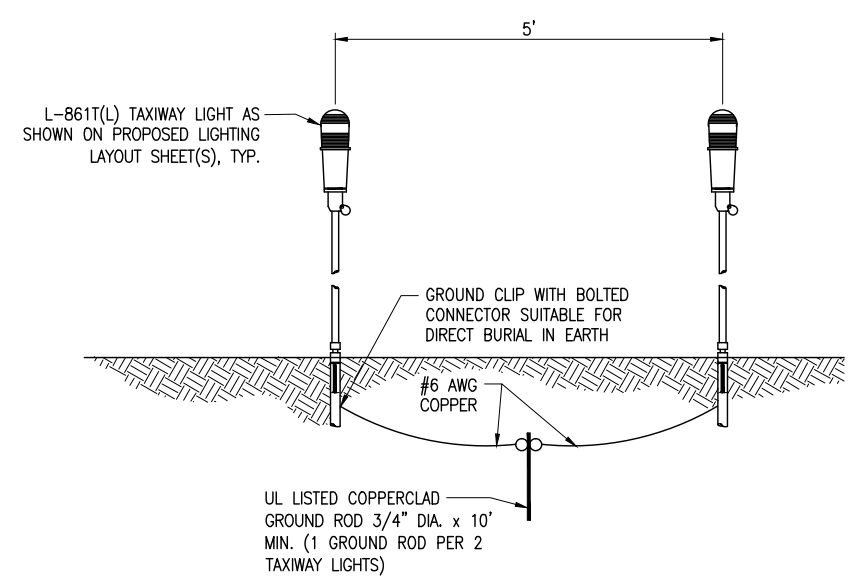
NOTES

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 150/5340-30G DESIGN AND INSTALLATION DETAILS FOR AIRPORT VISUAL AIDS, CHAPTER 12, PART 12.6; A GROUND MUST BE INSTALLED AT EACH LIGHT FIXTURE. THE PURPOSE OF THE LIGHT BASE GROUND IS TO PROVIDE A DEGREE OF PROTECTION FOR MAINTENANCE PERSONNEL FROM POSSIBLE CONTACT WITH AN ENERGIZED LIGHT BASE OR MOUNTING STAKE THAT MAY RESULT FROM A SHORTED POWER CABLE OR ISOLATION TRANSFORMER. A LIGHT BASE GROUND SHALL BE INSTALLED AT EACH TRANSFORMER BASE/LIGHT CAN ASSOCIATED WITH RUNWAY LIGHTS, TAXIWAY LIGHTS, AND LIGHTED TAXI GUIDANCE SIGNS. A LIGHT BASE GROUND SHALL ALSO BE INSTALLED AT EACH STAKE MOUNTED LIGHT FIXTURE. A LIGHT BASE GROUND SHALL BE INSTALLED AND CONNECTED TO THE METAL FRAME OF EACH TAXI GUIDANCE SIGN AS DETAILED ON THE PLANS AND IN ACCORDANCE WITH THE RESPECTIVE TAXI GUIDANCE SIGN MANUFACTURER RECOMMENDATIONS. THE LIGHT BASE GROUND SHALL BE A #6 AWG BARE COPPER CONDUCTOR BONDED TO THE GROUND LUG ON THE RESPECTIVE L-867 TRANSFORMER BASE/LIGHT CAN OR MOUNTING STAKE AND A 3/4-INCH DIAMETER BY 10-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, CADWELDED BY ERICO PRODUCTS, INC., SOLON, OHIO, (PHONE: 800-248-9353), THERMOWELDED BY CONTINENTAL INDUSTRIES, INC., TULSA, OKLAHOMA (PHONE: 918-663-1440), ULTRAWELDED BY HARGER, GRAYSLAKE, ILLINOIS (PHONE: 800-842-7437), OR APPROVED EQUAL. 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. FOR BASE MOUNTED LIGHT FIXTURES THE LIGHT FIXTURE MUST BE BONDED TO THE LIGHT BASE INTERNAL GROUND LUG VIA A #6 AWG STRANDED COPPER WIRE RATED FOR 600 VOLTS WITH GREEN XHHW OR USE INSULATION. THE GROUND WIRE LENGTH MUST BE SUFFICIENT TO ALLOW THE REMOVAL OF THE LIGHT FIXTURE FROM THE LIGHT BASE FOR ROUTINE MAINTENANCE. SEE THE LIGHT FIXTURE MANUFACTURER'S INSTRUCTIONS FOR PROPER METHODS OF ATTACHING A BONDING WIRE.
3. FOR TAXIWAY LIGHTS THAT ARE SPACED WITH LESS THAN 10 FEET OF SEPARATION BETWEEN THEM PROVIDE ONE 3/4-INCH DIAMETER BY 10-FOOT LONG GROUND ROD PER TWO ADJACENT TAXIWAY LIGHTS.
4. STEEL USED TO MANUFACTURE GROUND RODS SHALL BE 100% DOMESTIC STEEL.
5. 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 2011 NATIONAL ELECTRICAL CODE ARTICLE 250-12.
6. PER FAA 150/5430-30G THE RESISTANCE TO THE GROUND OF THE RESPECTIVE MOUNTING STAKE OR LIGHT BASE (WITH GROUND ROD CONNECTED) MUST BE 25 OHMS OR LESS.
7. FOR EACH GROUNDING ELECTRODE SYSTEM THE CONTRACTOR SHALL TEST THE MADE ELECTRODE GROUND SYSTEM WITH AN INSTRUMENT SPECIFICALLY DESIGNED FOR TESTING GROUNDING SYSTEMS. TEST RESULTS SHALL BE RECORDED FOR EACH GROUNDING ELECTRODE SYSTEM. IF GROUND RESISTANCE EXCEEDS 25 OHMS, CONTACT THE PROJECT ENGINEER FOR FURTHER DIRECTION. COPIES OF THE GROUND SYSTEM TEST RESULTS SHALL BE FURNISHED TO THE RESIDENT PROJECT REPRESENTATIVE/RESIDENT ENGINEER.

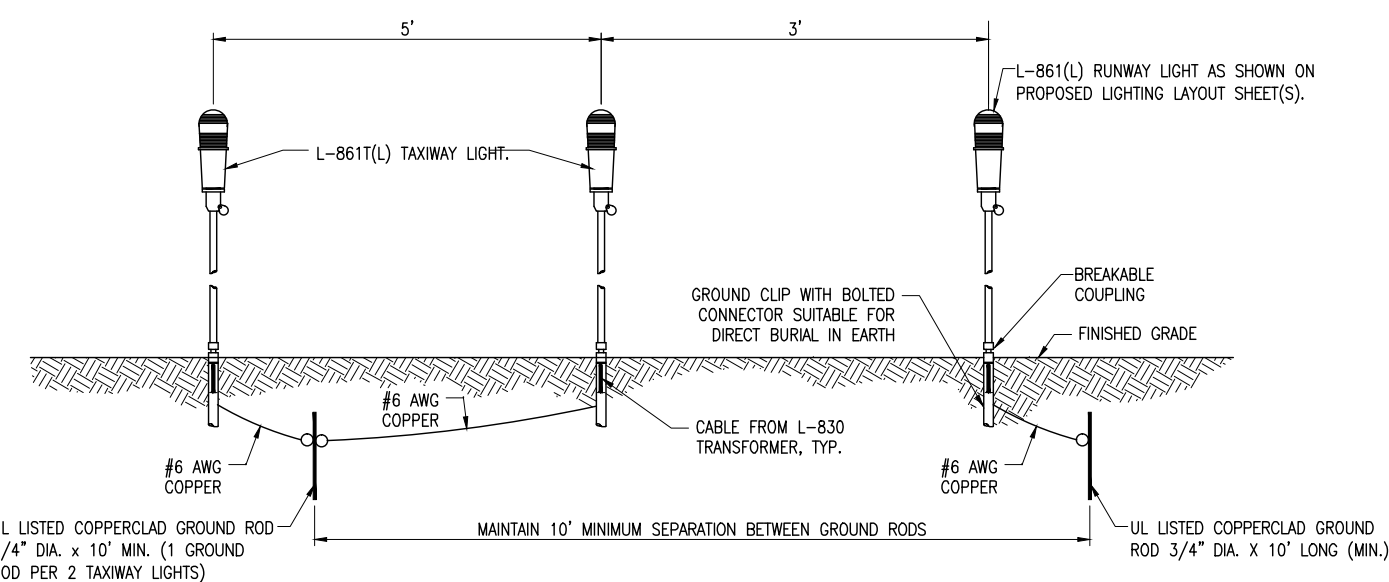


**MEDIUM INTENSITY LIGHT – BASE MOUNTED**  
(NOT TO SCALE)

NOTE: SEE PROPOSED ELECTRICAL PLANS FOR LOCATIONS OF BASE MOUNTED LIGHTS WITH 2" DUCT INTERFACE AND LOCATIONS WITH CABLE IN UNIT DUCT INTERFACE.



**GROUNDING DETAIL FOR ADJACENT TAXIWAY LIGHTS**  
(NOT TO SCALE)



**GROUNDING DETAIL FOR ADJACENT RUNWAY AND TAXIWAY LIGHTS**  
(NOT TO SCALE)

REVISION	DATE

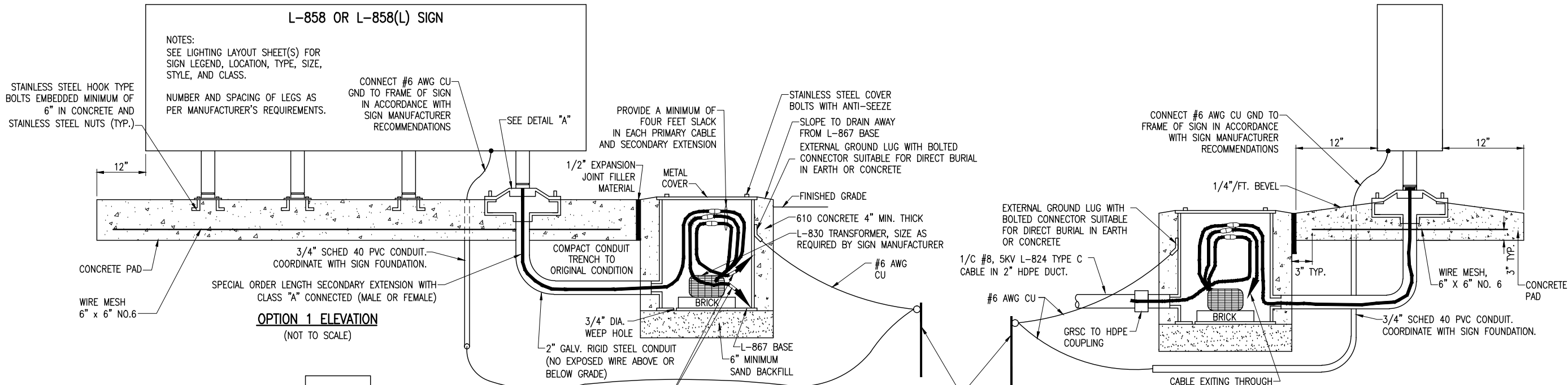
ROCHELLE MUNICIPAL AIRPORT  
MAJOR THOMAS F. KORITZ FIELD  
ROCHELLE, OGLE COUNTY, ILLINOIS  
IL PROJ.: RPJ-4279

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LAYOUT	KNL	04/01/13	
DRAWN	BAK	04/01/13	
REVIEWED	KNL	10/16/13	



CONSTRUCT PARTIAL PARALLEL TAXIWAY  
ELECTRICAL DETAILS SHEET 2

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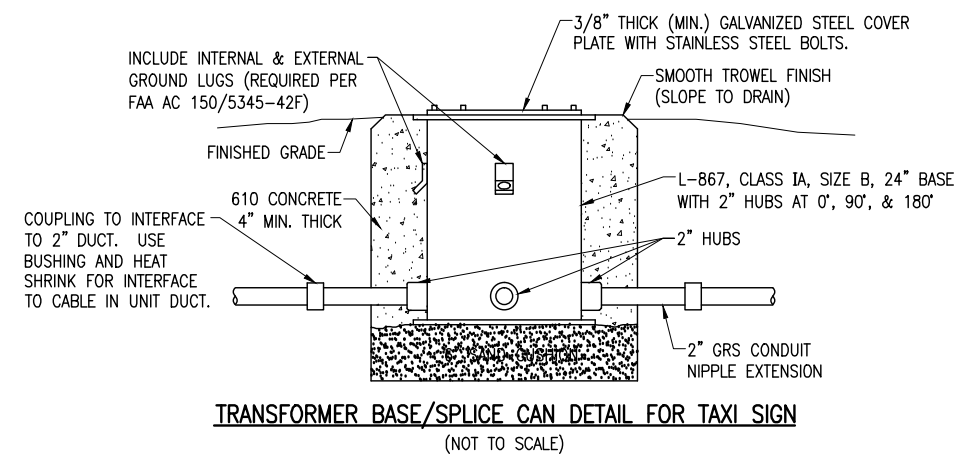
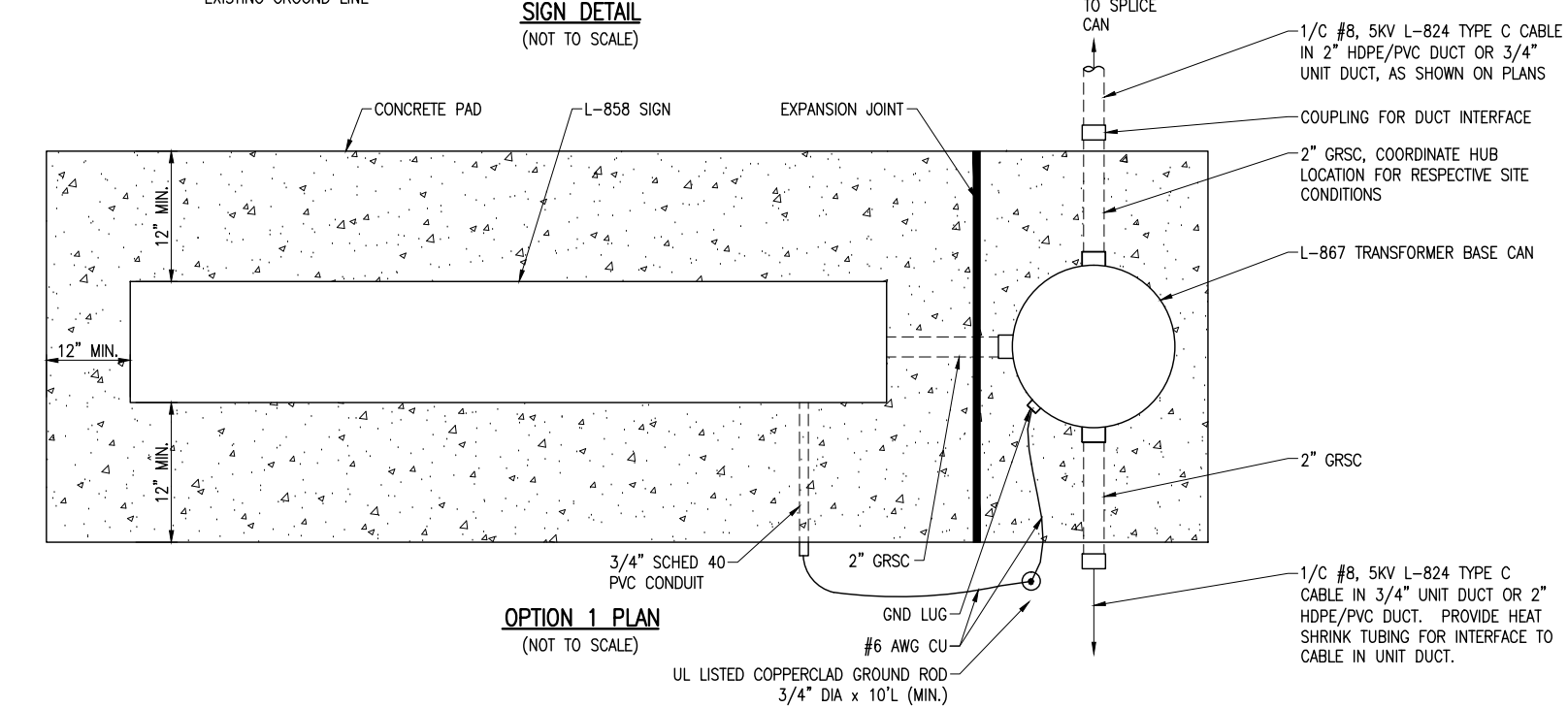
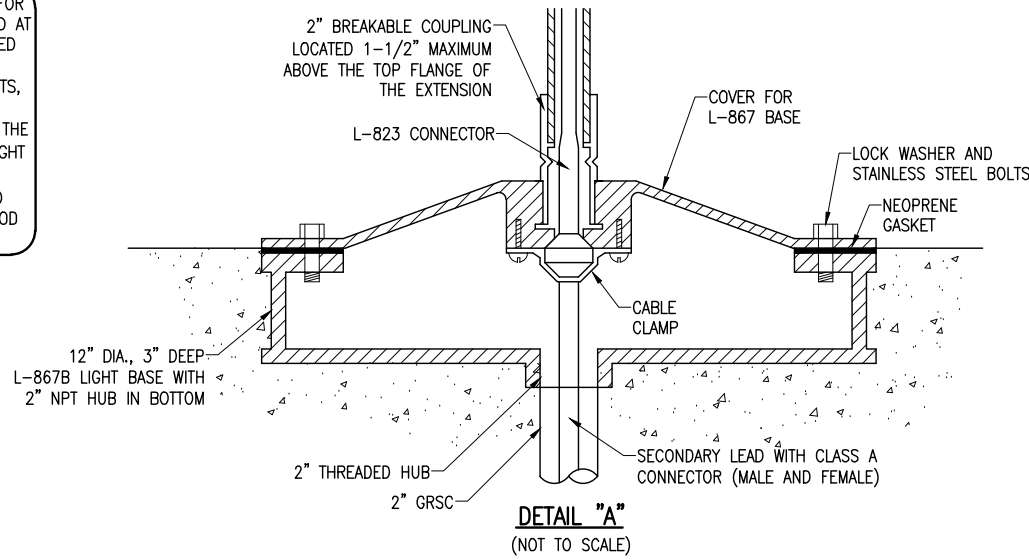
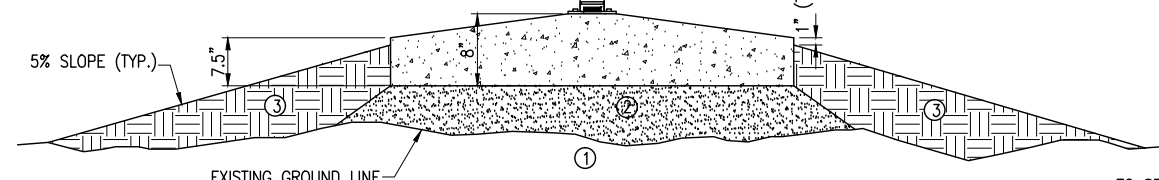
1/C #8, 5 KV, L-824 TYPE C CABLE. COLOR CODED TAPE FOR WIRE IDENTIFICATION LOCATED WITHIN 6" OF L-823 CONNECTOR. SEE PLAN VIEW FOR CABLE ENTRANCE & EXIT.

PER FAA AC 150/5340-30G DESIGN AND INSTALLATION DETAILS FOR AIRPORT VISUAL AIDS, A LIGHT BASE GROUND MUST 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 LIGHT BASE GROUND SHALL BE A #6 AWG BARE COPPER CONDUCTOR CONNECTED TO THE GROUND LUG ON THE RESPECTIVE L-867 TRANSFORMER BASE/LIGHT CAN, TAXI SIGN FRAME, OR MOUNTING STAKE AND A 3/4-INCH DIAMETER BY 10-FOOT LONG (MINIMUM) UL LISTED COPPER CLAD GROUND ROD. ALSO BOND THE SIGN FRAME TO THE GROUND ROD WITH A #6 AWG BARE COPPER CONDUCTOR.

**GENERAL NOTES**

- SEE LIGHTING LAYOUT SHEET FOR SIGN LEGEND, LOCATION, TYPE, SIZE, STYLE, AND CLASS.
- SEE ELECTRICAL NOTES SHEETS.

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



**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.

REVISION	DATE

ROCHELLE MUNICIPAL AIRPORT  
MAJOR THOMAS F. KORITZ FIELD  
ROCHELLE, OGLE COUNTY, ILLINOIS  
IL PROJ.: RPJ-4279

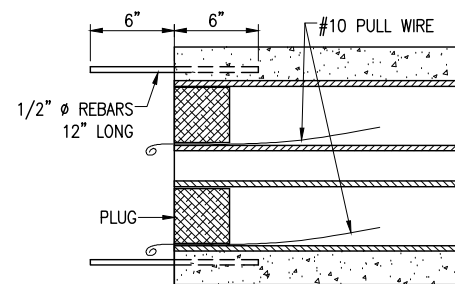
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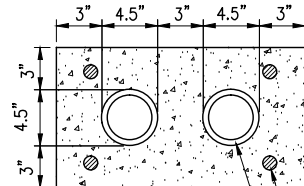
CONSTRUCT PARTIAL  
PARALLEL TAXIWAY

ELECTRICAL DETAILS  
SHEET 3

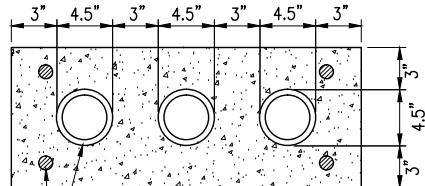
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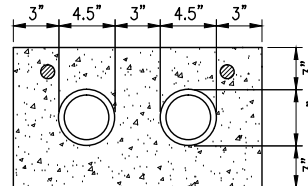
**DUCT BANK TYPICAL SECTION**  
"NOT TO SCALE"



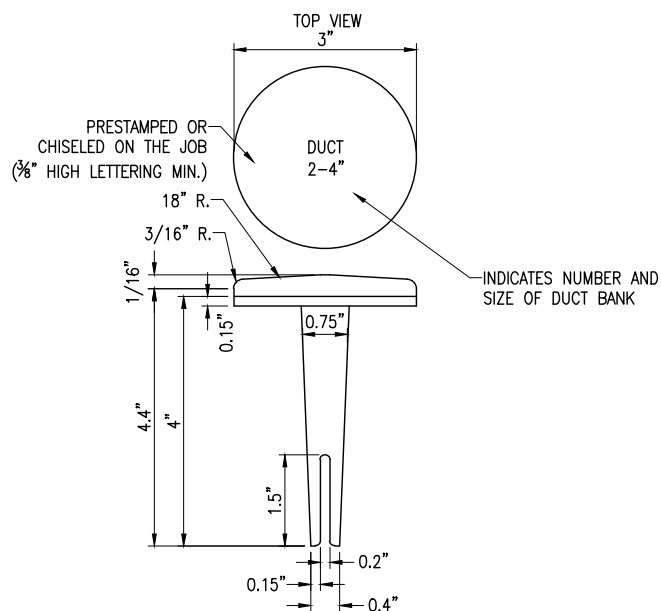
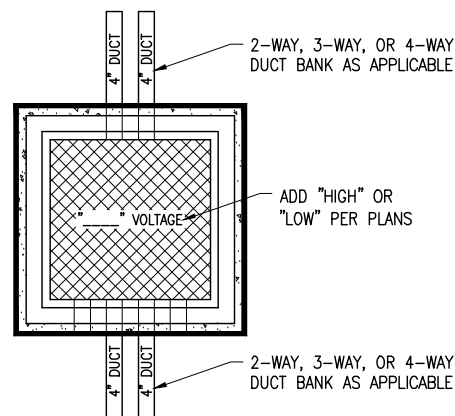
**2-DUCT BANK**  
"NOT TO SCALE"



**3-DUCT BANK**  
"NOT TO SCALE"



**4-DUCT BANK**  
"NOT TO SCALE"



**BITUMINOUS PAVEMENT DUCT MARKERS**  
"NOT TO SCALE"

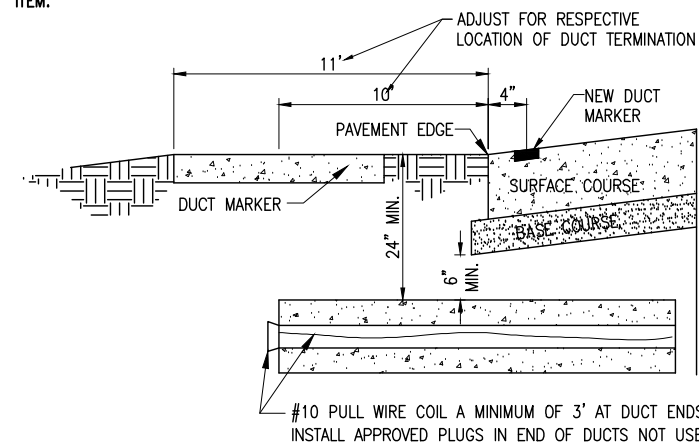
- NOTES:**
- TOP OF MARKER SHALL BE FLUSH WITH FINISHED PAVEMENT SURFACE. MARKER MAY BE INSTALLED IN A DRILLED HOLE AND SECURED WITH EPOXY GLUE.

**DUCT BANK NOTES:**

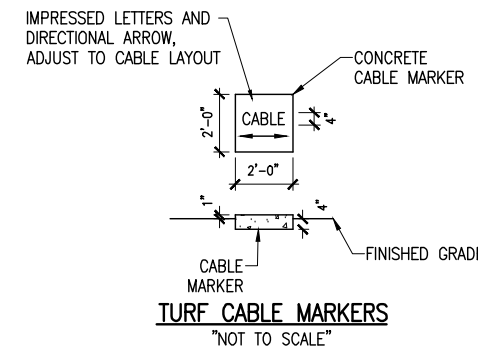
- DIMENSIONS FOR CONCRETE COVERAGE AND SEPARATION BETWEEN DUCTS ARE MINIMUM.
- INCLUDE DUCT SPACERS AS MANUFACTURED BY UNDERGROUND DEVICES INC., OR APPROVED EQUAL TO MAINTAIN PROPER SEPARATION OF CONDUITS.
- REBAR IS REQUIRED TO ACCOMMODATE FUTURE DUCT EXTENSIONS & INTERFACE AT DUCT BANK TERMINATIONS. CONCRETE ENCASED DUCT BANKS TERMINATING IN HANDHOLES REQUIRE REBAR AT TERMINATIONS.
- CONDUITS FOR CONCRETE ENCASED DUCT SHALL BE SCHEDULE 40 PVC CONFORMING TO ITEM 110.
- MINIMUM DEPTH OF TOP OF DUCT ENCASEMENT SHALL BE 18" BELOW FINISHED GRADE.
- HIGH VOLTAGE AND LOW VOLTAGE CIRCUITS SHALL NOT BE INSTALLED IN THE SAME RACEWAY, CONDUIT, DUCT, HANDHOLE, OR MANHOLE.
- HOMERUN CABLES FOR A RESPECTIVE CIRCUIT SHALL BE INSTALLED IN THE SAME RACEWAY OR DUCT.
- DUCT INTERFACE TO HANDHOLES OR MANHOLES WILL BE CONSIDERED INCIDENTAL TO THE RESPECTIVE DUCT PAY ITEM.

**CABLE & DUCT MARKER NOTES:**

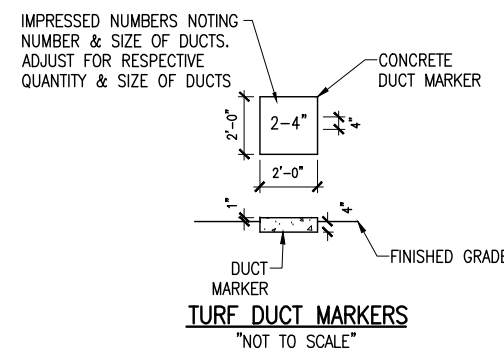
- THE COST OF ALL TURF AND PAVEMENT DUCT MARKERS SHALL BE INCIDENTAL TO THE DUCT. THE COST OF ALL CABLE MARKERS SHALL BE INCIDENTAL TO THE CABLE.
- BITUMINOUS PAVEMENT DUCT MARKER AND CONCRETE DUCT MARKER TO BE PROVIDED AT EACH END OF EACH DUCT AS SHOWN ON THE LOCATION PLAN. FOR CONCRETE PAVEMENT, THE LETTER "D" SHALL BE IMPRESSED IN THE PAVEMENT INSTEAD OF THE MARKER. THE LETTER SHALL BE FORMED AS DESCRIBED IN NOTE 4.
- CABLE MARKERS SHALL BE PLACED AT CHANGES OF DIRECTION AND APPROXIMATELY EVERY 200' ALONG CABLE RUNS.
- CONCRETE CABLE MARKERS AND DUCT MARKERS SHALL HAVE LETTERS 4" HIGH, 3" WIDE WITH WIDTH OF STROKE 1/2" AND 1/4" DEEP. ALL LETTERS, NUMBERS AND ARROWS TO BE IMPRESSED.
- EMPLOY THE FOLLOWING METHODS WHERE ADDITIONAL SPACE TO FIT THE LEGEND IS REQUIRED:
  - REDUCE LETTER SIZE TO 3" HIGH, 2" WIDE.
  - INCREASE THE MARKER SIZE TO 30" X 30".
  - PROVIDE ADDITIONAL MARKERS PLACED SIDE BY SIDE.



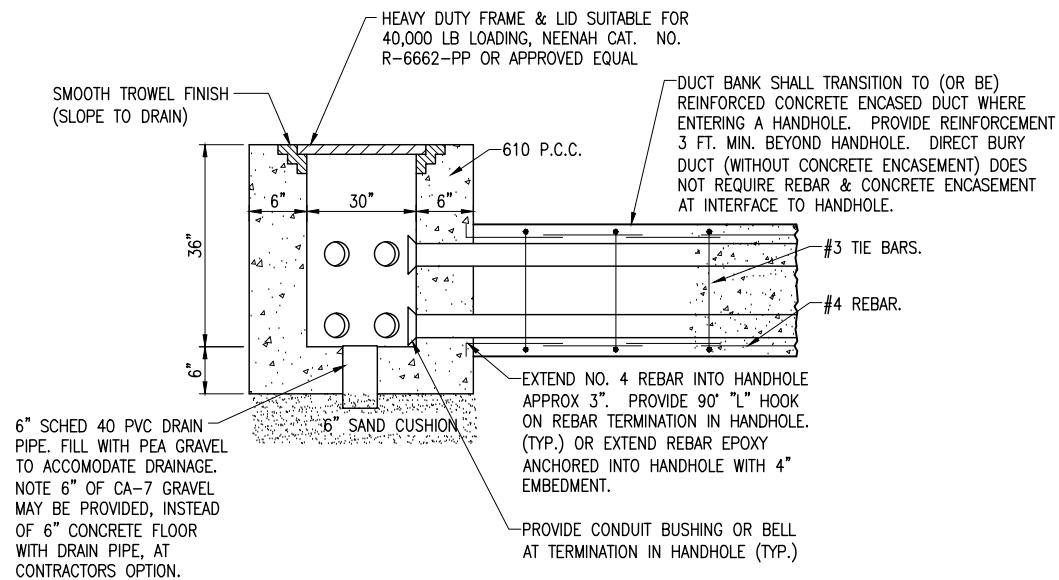
**UNDERGROUND ELECTRICAL DUCT**  
"NOT TO SCALE"



**TURF CABLE MARKERS**  
"NOT TO SCALE"



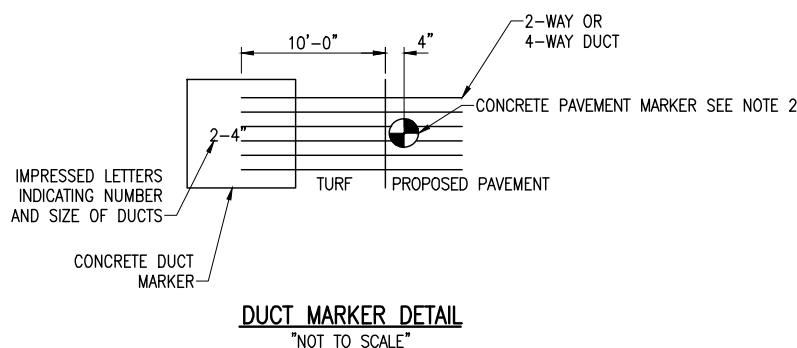
**TURF DUCT MARKERS**  
"NOT TO SCALE"



**ELECTRICAL HANDHOLE**  
"NOT TO SCALE"

**NOTES:**

- LIDS FOR LOW VOLTAGE HANDHOLES SHALL BE LABELED "LOW VOLTAGE". LIDS FOR HIGH VOLTAGE HANDHOLES SHALL BE LABELED "HIGH VOLTAGE". COORDINATE LETTERING WITH MFR.
- HANDHOLES MAY BE CAST IN PLACE OR PRECAST. PRECAST MANUFACTURERS MUST BE ON THE IDOT (ILLINOIS DEPT. OF TRANSPORTATION) APPROVED LIST OF CERTIFIED PRECAST CONCRETE PRODUCERS.
- ALL CORING, INTERFACE, AND LABOR ASSOCIATED WITH CONDUIT, DUCT, CABLE IN UNIT DUCT, AND / OR CABLE ENTRIES WILL BE CONSIDERED INCIDENTAL TO THE INSTALLATION OF THE HANDHOLE AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- ELECTRICAL HANDHOLES WILL BE PAID FOR UNDER ITEM AR110610 ELECTRICAL HANDHOLE PER EACH.



**DUCT MARKER DETAIL**  
"NOT TO SCALE"

REVISION	DATE

ROCHELLE MUNICIPAL AIRPORT  
MAJOR THOMAS F. KORITZ FIELD  
ROCHELLE, OGLE COUNTY, ILLINOIS  
IL PROJ.: RPJ-4279

Hanson Proj. No. 12A0172	FILENAME E-504-DETL.dwg	LAYOUT	KNL	04/01/13
Scale NOT TO SCALE	Date 11/15/2013	DRAWN	BAK	04/01/13
		REVIEWED	KNL	10/16/13

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CONSTRUCT PARTIAL  
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ELECTRICAL DETAILS  
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GENERAL NOTES

- 1. ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN CONFORMANCE WITH NFPA 70 - NATIONAL ELECTRICAL CODE (NEC) MOST CURRENT ISSUE IN FORCE, THE RESPECTIVE EQUIPMENT MANUFACTURER'S DIRECTIONS AND ALL OTHER APPLICABLE LOCAL CODES, LAWS, ORDINANCES, AND REQUIREMENTS IN FORCE. ANY INSTALLATIONS WHICH VOID THE U.L. LISTING, ETL LISTING (OR OTHER THIRD PARTY LISTING) AND/OR THE MANUFACTURER'S WARRANTY OF A DEVICE WILL NOT BE PERMITTED.
2. CONTRACTOR SHALL KEEP A COPY OF THE LATEST NEC IN FORCE ON SITE AT ALL TIMES DURING CONSTRUCTION FOR USE AS A REFERENCE.
3. CONTRACTOR SHALL COORDINATE WORK AND ANY POWER OUTAGES AND/OR SHUT DOWN OF SYSTEMS WITH THE RESPECTIVE FACILITY OWNER PERSONNEL AND THE AIRPORT MANAGER/DIRECTOR. ONCE SHUT DOWN, THE CIRCUITS SHALL BE LABELED AS SUCH TO PREVENT ACCIDENTAL ENERGIZING OF THE RESPECTIVE CIRCUITS. ALL PERSONNEL SHALL FOLLOW U.S. DEPARTMENT OF LABOR OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION (OSHA) 29 CFR PART 1910 OCCUPATIONAL SAFETY & HEALTH STANDARDS FOR ELECTRICAL SAFETY AND LOCKOUT/TAGOUT PROCEDURES INCLUDING, BUT NOT LIMITED TO, 29 CFR SECTION 1910.147 THE CONTROL OF HAZARDOUS ENERGY (LOCKOUT/TAGOUT).
4. THE CONTRACTOR SHALL ASCERTAIN THAT ALL LIGHTING SYSTEM COMPONENTS FURNISHED BY HIM, INCLUDING FAA APPROVED EQUIPMENT, ARE COMPATIBLE IN ALL RESPECTS WITH EACH OTHER AND THE REMAINDER OF THE NEW/EXISTING SYSTEM. ANY NONCOMPATIBLE COMPONENTS FURNISHED BY THIS CONTRACTOR SHALL BE REPLACED BY HIM AT NO ADDITIONAL COST TO THE AIRPORT SPONSOR WITH A SIMILAR UNIT, APPROVED BY THE ENGINEER (DIFFERENT MODEL OR DIFFERENT MANUFACTURER) THAT IS COMPATIBLE WITH THE REMAINDER OF THE AIRPORT LIGHTING SYSTEM.
5. IN CASE THE CONTRACTOR ELECTS TO FURNISH AND INSTALL AIRPORT LIGHTING EQUIPMENT REQUIRING ADDITIONAL WIRING, TRANSFORMERS, ADAPTORS, MOUNTINGS, ETC., TO THOSE SHOWN ON THE DRAWINGS AND/OR LISTED IN THE SPECIFICATION, ANY COST FOR THESE ITEMS SHALL BE INCIDENTAL TO THE EQUIPMENT COST.
6. THE CONTRACTOR INSTALLED EQUIPMENT (INCLUDING FAA APPROVED) SHALL NOT GENERATE ANY ELECTROMAGNETIC INTERFERENCE IN THE EXISTING AND/OR NEW COMMUNICATIONS, WEATHER, AIR NAVIGATION, AND AIR TRAFFIC CONTROL EQUIPMENT. ANY EQUIPMENT GENERATING SUCH INTERFERENCE SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST WITH THE EQUIPMENT MEETING THE APPLICABLE SPECIFICATIONS AND NOT GENERATING ANY INTERFERENCE.
7. WHEN A SPECIFIC TYPE, STYLE, CLASS, ETC. OF FAA APPROVED EQUIPMENT IS SPECIFIED ONLY THAT TYPE, STYLE, CLASS, WILL BE ACCEPTABLE, EVEN THOUGH EQUIPMENT OF OTHER TYPES STYLES, CLASSES, ETC. MAY BE APPROVED.
8. ANY AND ALL INSTRUCTIONS FROM THE RESIDENT 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 ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF AERONAUTICS). THE CONTRACTOR SHALL NOT ACCEPT ANY VERBAL INSTRUCTIONS FROM THE RESIDENT ENGINEER REGARDING ANY CHANGES FROM THE PLANS AND SPECIFICATIONS.
9. A MINIMUM OF THREE COPIES OF THE INSTRUCTION BOOK SHALL BE SUPPLIED WITH EACH DIFFERENT TYPE OF EQUIPMENT. THE BOOKS DESCRIBING A MORE SOPHISTICATED TYPE OF EQUIPMENT, SUCH AS REGULATORS, PAPI, REIL, ETC. AS A MINIMUM SHALL CONTAIN THE FOLLOWING:
A. A DETAILED DESCRIPTION OF THE OVERALL EQUIPMENT AND ITS INDIVIDUAL COMPONENTS.
B. THEORY OF OPERATION INCLUDING THE FUNCTION OF EACH COMPONENT.
C. INSTALLATION INSTRUCTION.
D. START-UP INSTRUCTIONS.
E. PREVENTATIVE MAINTENANCE REQUIREMENTS.
F. CHART FOR TROUBLE-SHOOTING.
G. COMPLETE POWER AND CONTROL DETAILED WIRING DIAGRAM(S), SHOWING EACH CONDUCTOR/CONNECTION/COMPONENT - "BLACK" BOXES ARE NOT ACCEPTABLE. THE DIAGRAM OF THE NARRATIVE SHALL SHOW VOLTAGE/CURRENTS/WAVE SHAPES AT STRATEGIC LOCATIONS TO BE USED WHEN CHECKING AND/OR TROUBLE-SHOOTING THE EQUIPMENT. WHEN THE EQUIPMENT HAS SEVERAL MODES OF OPERATION, SUCH AS SEVERAL BRIGHTNESS STEPS, THESE PARAMETERS SHALL BE INDICATED FOR ALL DIFFERENT MODES.
H. PARTS LIST WHICH WILL INCLUDE ALL MAJOR AND MINOR COMPONENTS SUCH AS RESISTORS, DIODES, ETC. IT SHALL INCLUDE A COMPLETE NOMENCLATURE OF EACH COMPONENT AND, IF APPLICABLE, THE NAME OF ITS MANUFACTURER AND THE CATALOG NUMBER.
I. SAFETY INSTRUCTIONS.

POWER AND CONTROL NOTES

- 1. PROVIDE LEGEND PLATES FOR ALL ELECTRICAL EQUIPMENT TO IDENTIFY FUNCTION, CIRCUIT VOLTAGE AND PHASE. WHERE THE EQUIPMENT CONTAINS FUSES, ALSO IDENTIFY THE FUSE OR FUSE LINK AMPERE RATING. WHERE THE EQUIPMENT DOES NOT HAVE SUFFICIENT AREA TO INSTALL LEGEND PLATES, THE LEGEND PLATES SHALL BE INSTALLED ON THE WALL NEXT TO THE UNIT. LEGEND PLATES SHALL BE WEATHERPROOF ENGRAVED PLASTIC OR PHENOLIC MATERIAL, 1/4" HIGH BLACK LETTERS ON A WHITE BACKGROUND UNLESS NOTED OTHERWISE. SECURE WITH WEATHERPROOF ADHESIVE AND MACHINE SCREWS. FURNISH ADDITIONAL LEGEND PLATES WHERE REQUIRED BY CODE, FOR ADDITIONAL EQUIPMENT, AS DETAILED HEREIN ON THE PLANS, AND AS NOTED IN THE SPECIAL PROVISION SPECIFICATIONS.
2. COLOR CODE ALL PHASE WIRING BY THE USE OF COLORED WIRE INSULATION AND/OR COLORED TAPE. WHERE TAPE IS USED, THE WIRE INSULATION SHALL BE BLACK. BLACK AND RED SHALL BE USED FOR PHASE CONDUCTORS ON 120/240VAC SINGLE-PHASE, THREE WIRE SYSTEMS AND BLACK, ORANGE (FOR HIGH LEG) AND BLUE SHALL BE USED FOR PHASE CONDUCTORS ON 240/120VAC THREE-PHASE, FOUR WIRE SYSTEMS. NEUTRAL CONDUCTORS, SIZE NO. 6 AWG OR SMALLER, SHALL BE IDENTIFIED BY A CONTINUOUS WHITE OR NATURAL GRAY OUTER FINISH ALONG ITS ENTIRE LENGTH. NEUTRAL CONDUCTORS LARGER THAN NO. 6 AWG SHALL BE IDENTIFIED EITHER BY A CONTINUOUS WHITE OR NATURAL GRAY OUTER FINISH ALONG ITS ENTIRE LENGTH OR BY THE USE OF WHITE TAPE AT ITS TERMINATIONS AND INSIDE ACCESSIBLE WIREWAYS. INSULATED GROUND CONDUCTORS SHALL HAVE GREEN COLORED INSULATION FOR ALL CONDUCTOR SIZES (AWG OR KCMIL).
3. ALL BRANCH CIRCUIT CONDUCTORS CONNECTED TO A PARTICULAR PHASE SHALL BE IDENTIFIED WITH THE SAME COLOR. THE COLOR CODING SHALL BE EXTENDED TO THE POINT OF UTILIZATION.
4. IN CONTROL WIRING THE SAME COLOR SHALL BE USED THROUGHOUT THE SYSTEM FOR THE SAME FUNCTION, SUCH AS 10%, 30%, 100% BRIGHTNESS CONTROL, ETC.
5. LOW VOLTAGE (600 V.) AND HIGH VOLTAGE (5000 V.) CONDUCTORS SHALL BE INSTALLED IN SEPARATE WIREWAYS.
6. NEATLY LACE WIRING IN DISTRIBUTION PANELS, WIREWAYS, SWITCHES AND JUNCTION/PULL BOXES.
7. THE MINIMUM SIZE OF PULL/JUNCTION BOXES, REGARDLESS OF THE QUANTITY AND SIZE OF THE CONDUCTORS SHOWN, SHALL BE AS FOLLOWS:
A. IN STRAIGHT PULLS THE LENGTH OF THE BOX SHALL NOT BE LESS THAN EIGHT TIMES THE TRADE DIAMETER OF THE LARGER CONDUIT. THE TOTAL AREA (INCLUDING THE CONDUIT CROSS-SECTIONAL AREA) OF A BOX END SHALL BE AT LEAST 3 TIMES GREATER THAN THE TOTAL TRADE CROSS-SECTIONAL AREA OF THE CONDUITS TERMINATING AT THE END.
B. IN ANGLE PULLS OR 'U' PULLS THE DISTANCE BETWEEN EACH CONDUIT ENTRY INSIDE THE BOX AND THE OPPOSITE WALL OF THE BOX SHALL NOT BE LESS THAN SIX (6) TIMES THE TRADE DIAMETER OF THE LARGEST CONDUIT. THIS DISTANCE SHALL BE INCREASED FOR ADDITIONAL ENTRIES BY THE AMOUNT OF THE SUM OF THE DIAMETERS OF ALL OTHER CONDUIT ENTRIES ON THE SAME WALL AS THE BOX. THE DISTANCE BETWEEN CONDUIT ENTRIES ENCLOSING THE SAME CONDUCTOR SHALL NOT BE LESS THAN SIX TIMES THE TRADE DIAMETER OF THE LARGEST CONDUIT.
8. A RUN OF CONDUIT BETWEEN TERMINATIONS AT EQUIPMENT ENCLOSURES, SQUARE DUCTS AND PULL/JUNCTION BOXES, SHALL NOT CONTAIN MORE THAN THE EQUIVALENT OF FOUR QUARTER BENDS (360 DEGREES TOTAL), INCLUDING THOSE BENDS LOCATED IMMEDIATELY AT THE TERMINATIONS, CAST, CONDUIT TYPE OUTLETS SHALL NOT BE TREATED AS PULL/JUNCTION BOXES.
9. EQUIPMENT CABINETS SHALL NOT BE USED AS PULL/JUNCTION BOXES. ONLY WIRING TERMINATING AT THE EQUIPMENT SHALL BE BROUGHT INTO THESE ENCLOSURES.
10. SPLICES AND JUNCTION POINTS SHALL BE PERMITTED ONLY IN JUNCTION BOXES, DUCTS EQUIPPED WITH REMOVABLE COVERS, AND AT EASILY ACCESSIBLE LOCATIONS.
11. CIRCUIT BREAKERS IN POWER DISTRIBUTION PANEL(S) SHALL BE THERMAL-MAGNETIC MOLDED CASE, PERMANENT TRIP WITH 100 AMPERE, MINIMUM FRAME.
12. DUAL LUGS SHALL BE USED WHERE TWO (2) WIRES, SIZE NO. 6 OR LARGER, ARE TO BE CONNECTED TO THE SAME TERMINAL.
13. ALL INTERIOR WALL MOUNTED EQUIPMENT ENCLOSURES SHALL BE MOUNTED ON HOT DIPPED GALVANIZED STEEL STRUT SUPPORT, OR STAINLESS STEEL STRUT SUPPORT, WITH CORROSION RESISTANT HARDWARE.
14. SUPPORT FOR EXTERIOR MOUNTED EQUIPMENT SHALL USE HOT DIPPED GALVANIZED STEEL STRUT SUPPORT OR STAINLESS STEEL STRUT SUPPORT WITH STAINLESS STEEL HARDWARE. PROVIDE ZINC RICH PAINT APPLIED TO FIELD CUTS OF GALVANIZED STEEL SUPPORT TO MINIMIZE THE POTENTIAL FOR CORROSION PER THE RESPECTIVE STRUT SUPPORT MANUFACTURER'S RECOMMENDATIONS.

- 15. CONDUITS FOR ELECTRIC SERVICE ENTRANCE AND FEEDERS SHALL BE AS DETAILED HEREIN ON THE PLANS. WHERE GALVANIZED RIGID STEEL CONDUIT IS SPECIFIED IT SHALL HAVE THREADED FITTINGS. SET SCREW TYPE FITTINGS WILL NOT BE ACCEPTABLE. CONDUITS FOR UNDERGROUND APPLICATIONS SHALL BE AS DETAILED HEREIN. CONDUITS FOR GROUNDING ELECTRODE CONDUCTORS OR INDIVIDUAL GROUNDING CONDUCTORS SHALL BE SCHEDULE 40 OR SCHEDULE 80 PVC.
16. PROVIDE LIQUID TIGHT FLEXIBLE METAL CONDUIT AT CONNECTIONS TO EQUIPMENT SUBJECT TO VIBRATION OR WHERE FLEXIBILITY IS REQUIRED. LIQUID TIGHT FLEXIBLE METAL CONDUIT AND ASSOCIATED FITTINGS SHALL BE U.L. LISTED TO MEET THE REQUIREMENTS OF NEC 350.6, SUITABLE FOR GROUNDING, SUNLIGHT RESISTANT, AND RESISTANT TO OIL, GASOLINE, AND GREASE. LIQUID TIGHT FLEXIBLE METAL CONDUIT THAT IS USED FOR FLEXIBILITY (INCLUDING CONNECTIONS TO MOTORS, TRANSFORMERS, & CONSTANT CURRENT REGULATORS) SHALL REQUIRE AN EXTERNAL BONDING JUMPER OR INTERNAL EQUIPMENT GROUNDING CONDUCTOR PER NEC 350.60. DO NOT INSTALL LIQUID TIGHT FLEXIBLE METAL CONDUIT THAT IS NOT U.L. LISTED. CONFIRM LIQUID-TIGHT FLEXIBLE METAL CONDUIT BEARS THE UL LABEL PRIOR TO INSTALLING IT.
17. UNLESS OTHERWISE SHOWN, ALL EXPOSED CONDUITS SHALL BE RUN PARALLEL TO OR AT RIGHT ANGLES WITH THE LINES OF THE STRUCTURE.
18. ALL STEEL CONDUITS, FITTINGS, NUTS, BOLTS, ETC. SHALL BE GALVANIZED.
19. USE CONDUIT BUSHINGS AT EACH CONDUIT TERMINATION. WHERE NO. 4 AWG OR LARGER UNDERGROUND WIRE IS INSTALLED, USE INSULATED BUSHINGS.
20. USE DOUBLE LOCK NUTS AT EACH CONDUIT TERMINATION.
21. WRAP ALL PRIMARY AND SECONDARY POWER TRANSFORMER CONNECTIONS WITH SUFFICIENT LAYERS OF INSULATING TAPE (3M SCOTCH 23 ALL-VOLTAGE SPLICING TAPE, 3M SCOTCH 130C LINERLESS RUBBER SPLICING TAPE, OR APPROVED EQUAL) AND COVER WITH VINYL ELECTRICAL TAPE (3M SCOTCH 88 VINYL ELECTRICAL TAPE OR APPROVED EQUAL) FOR FULL VALUE OF CABLE INSULATION VOLTAGE.
22. UNLESS OTHERWISE NOTED, ALL SINGLE CONDUCTOR CONTROL WIRING SHALL BE NO. 12 AWG. COPPER 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, CUTOUT, PANELBOARD, & CONTROL PANEL TO WARN PERSONS OF POTENTIAL ELECTRIC ARC FLASH HAZARDS, PER THE REQUIREMENTS OF NEC 110.16 "FLASH PROTECTION".

REVISION DATE
ROCHELLE MUNICIPAL AIRPORT
MAJOR THOMAS F. KORITZ FIELD
ROCHELLE, OGLE COUNTY, ILLINOIS
IL PROJ.: RPJ-4279
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Filename E-001-NOTE.dwg
Scale NOT TO SCALE
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**AIRFIELD LIGHTING NOTES**

- 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.
- NO COMPONENTS OF PRIMARY CIRCUIT SUCH AS CABLE, CONNECTORS AND TRANSFORMERS SHALL BE BROUGHT ABOVE GROUND AT EDGE LIGHTS, SIGNS, REIL, PAPI, ETC.
- THERE SHALL BE NO EXPOSED POWER/CONTROL CABLES BETWEEN THE POINT WHERE THEY LEAVE THE UNDERGROUND (DEB OR L-867 BASES) AND WHERE THEY ENTER THE EQUIPMENT (SUCH AS TAXIWAY SIGNS, PAPI, REIL, ETC.) ENCLOSURES. THESE CABLES SHALL BE ENCLOSED IN RIGID CONDUIT OR IN FLEXIBLE, WATERTIGHT CONDUIT WITH BREAKABLE COUPLING(S) AT THE GRADE OR THE HOUSING COVER, AS SHOWN IN APPLICABLE DETAILS.
- 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 ELECTRICAL DETAILS SHEET 1.
- 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 ELECTRICAL DETAILS SHEET 1.
- L-823 TYPE II, TWO-CONDUCTOR SECONDARY CONNECTORS SHALL BE CLASS 'A' (FACTORY MOLDED).
- THERE SHALL BE NO SPLICES IN THE SECONDARY CABLE(S) WITHIN THE STEMS OF A RUNWAY/TAXIWAY EDGE/THRESHOLD LIGHTING FIXTURE AND THE WIREWAYS LEADING TO TAXIWAY SIGNS AND PAPI/REIL EQUIPMENT.
- ELECTRICAL INSULATING GREASE SHALL BE APPLIED WITHIN THE L-823, SECONDARY, TWO CONDUCTOR CONNECTORS TO PREVENT WATER ENTRANCE. THESE CONNECTORS SHALL NOT BE TAPED.
- 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.
- A SLACK OF THREE (3') FEET, MINIMUM, PLUS DEPTH OF BASE CAN (IF APPLICABLE), 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. THERE SHALL BE NO ADDITIONAL PAYMENT FOR CABLE SLACK AND THEREFORE THE QUANTITY OF PROPOSED CABLE SLACK HAS NOT BEEN INCLUDED IN THE RESPECTIVE CABLE PAY ITEMS.
- 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.
- L-867 BASES SHALL BE SIZE B, 24" DEEP, CLASS I, UNLESS OTHERWISE NOTED.
- 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.
- 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.
- 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.
- TOPS OF THE STAKES SUPPORTING LIGHT FIXTURES SHALL BE FLUSH WITH THE SURROUNDING GRADE.
- PLASTIC LIGHTING FIXTURE COMPONENTS, SUCH AS LAMP HEADS, STEMS, BREAKABLE COUPLINGS, BASE COVERS, BRACKETS, STAKES, SHALL NOT BE ACCEPTABLE.
- 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.
- 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.

- 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 ELECTRICAL DETAILS SHEET 1.
- GALVANIZED/PAINTED EQUIPMENT/COMPONENT SURFACES SHALL NOT BE DAMAGED BY DRILLING, FILING, ETC. DRAIN HOLES IN METAL TRANSFORMER HOUSINGS SHALL BE MADE BEFORE GALVANIZING.
- EDGE LIGHT NUMBERING TAGS SHALL BE FACING THE PAVEMENT.
- 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.
- ALL UNDERGROUND CABLE RUNS SHALL BE IDENTIFIED BY CABLE MARKERS AT 200 FEET MAXIMUM SPACING, WITH AN ADDITIONAL MARKER AT EACH CHANGE OF DIRECTION OF THE CABLE RUN. CABLE MARKERS SHALL BE INSTALLED IMMEDIATELY ABOVE THE CABLES.
- THERE SHALL BE NO SPLICES BETWEEN THE ISOLATION TRANSFORMERS. L-823 CONNECTORS ARE ALLOWED AT TRANSFORMER CONNECTIONS ONLY, UNLESS OTHERWISE SHOWN.
- APPLY AN OXIDE INHIBITING, ANTI-SEIZING COMPOUND TO ALL SCREWS, NUTS AND BREAKAGE COUPLING THREADS.
- LOCATIONS OF ENDS OF ALL UNDERGROUND DUCTS SHALL BE IDENTIFIED BY DUCT MARKERS.
- WHERE A PARALLEL, CONSTANT VOLTAGE PAPI SYSTEM IS PROVIDED, THE "T" SPLICES SHALL BE OF THE CAST TYPE.
- CONCRETE USED FOR SLABS, FOOTINGS, BACKFILL AROUND TRANSFORMER HOUSINGS, MARKINGS, ETC. SHALL BE 3500 PSI, AIR-ENTRAINED.
- 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.
- THE LOCATION, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND AND/OR ABOVEGROUND UTILITIES INDICATED ON THE PLANS IS NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. NEITHER THE OWNER NOR THE ENGINEER ASSUMES ANY RESPONSIBILITY WHATEVER IN RESPECT TO ACCURACY, COMPLETENESS, OR SUFFICIENCY OF THE INFORMATION. THERE IS NO GUARANTEE EITHER EXPRESSED OR IMPLIED, THAT THE LOCATIONS, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ARE REPRESENTATIVE OF THOSE TO BE ENCOUNTERED IN THE CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES OF HIS OPERATIONAL PLANS AND SHALL OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES DETAILED INFORMATION AND ASSISTANCE RELATIVE TO THE LOCATION OF THEIR FACILITIES AND THE WORKING SCHEDULE OF THE COMPANIES FOR REMOVAL OR ADJUSTMENT WHERE REQUIRED. IN THE EVENT AN UNEXPECTED UTILITY INTERFERENCE IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY COMPANY OF JURISDICTION. THE OWNER'S REPRESENTATIVE AND/OR THE RESIDENT ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY DAMAGE TO SUCH MAINS AND SERVICES SHALL BE RESTORED TO SERVICE AT ONCE AND PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT. ALL UTILITY CABLES AND LINES SHALL BE LOCATED BY THE RESPECTIVE UTILITY. **CONTACT J.U.L.I.E. FOR UTILITY INFORMATION AT 1-800-892-0123.** ALSO CONTACT AIRPORT DIRECTOR/MANAGER AND AIRPORT PERSONNEL FOR ASSISTANCE IN LOCATING UNDERGROUND AIRPORT CABLES AND/OR UTILITIES. ALSO COORDINATE WORK WITH ALL ABOVEGROUND UTILITIES.
- WHEN PREPARING CABLE FOR SPLICES, THE CONTRACTOR SHALL USE A CABLE STRIPPER/PENCILLER WHENEVER CABLE CONNECTIONS ARE MADE.

**GROUNDING NOTES FOR AIRFIELD LIGHTING**

- 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 150/5340-30G DESIGN AND INSTALLATION DETAILS FOR AIRPORT VISUAL AIDS, CHAPTER 12, PART 12.6; A GROUND MUST BE INSTALLED AT EACH LIGHT FIXTURE. THE PURPOSE OF THE LIGHT BASE GROUND IS TO PROVIDE A DEGREE OF PROTECTION FOR MAINTENANCE PERSONNEL FROM POSSIBLE CONTACT WITH AN ENERGIZED LIGHT BASE OR MOUNTING STAKE THAT MAY RESULT FROM A SHORTED POWER CABLE OR ISOLATION TRANSFORMER. A LIGHT BASE GROUND SHALL BE INSTALLED AT EACH TRANSFORMER BASE/LIGHT CAN ASSOCIATED WITH RUNWAY LIGHTS, TAXIWAY LIGHTS, AND LIGHTED TAXI GUIDANCE SIGNS. A LIGHT BASE GROUND SHALL ALSO BE INSTALLED AT EACH STAKE MOUNTED LIGHT FIXTURE. A LIGHT BASE GROUND SHALL BE INSTALLED AND CONNECTED TO THE METAL FRAME OF EACH TAXI GUIDANCE SIGN AS DETAILED ON THE PLANS AND IN ACCORDANCE WITH THE RESPECTIVE TAXI GUIDANCE SIGN MANUFACTURER RECOMMENDATIONS. THE LIGHT BASE GROUND SHALL BE A #6 AWG BARE COPPER CONDUCTOR BONDED TO THE GROUND LUG ON THE RESPECTIVE L-867 TRANSFORMER BASE/LIGHT CAN OR MOUNTING STAKE AND A 3/4-INCH DIAMETER BY 10-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), ULTRAWELD BY HARGER, GRAYSLAKE, ILLINOIS (PHONE: 800-842-7437), OR APPROVED EQUAL. 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.
- FOR BASE MOUNTED LIGHT FIXTURES THE LIGHT FIXTURE MUST BE BONDED TO THE LIGHT BASE INTERNAL GROUND LUG VIA A #6 AWG STRANDED COPPER WIRE RATED FOR 600 VOLTS WITH GREEN XHHW INSULATION OR A BRAIDED GROUNDING STRAP OF EQUIVALENT CURRENT RATING. THE GROUND WIRE LENGTH MUST BE SUFFICIENT TO ALLOW THE REMOVAL OF THE LIGHT FIXTURE FROM THE LIGHT BASE FOR ROUTINE MAINTENANCE. SEE THE LIGHT FIXTURE MANUFACTURER'S INSTRUCTIONS FOR PROPER METHODS OF ATTACHING A BONDING WIRE.
- 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 2011 NATIONAL ELECTRICAL CODE ARTICLE 250-12.
- PER FAA 150/5340-30G THE RESISTANCE TO GROUND OF THE RESPECTIVE MOUNTING STAKE OR LIGHT BASE (WITH GROUND ROD CONNECTED) MUST BE 25 OHMS OR LESS.
- FOR EACH GROUNDING ELECTRODE SYSTEM THE CONTRACTOR SHALL TEST THE MADE ELECTRODE GROUND SYSTEM WITH AN INSTRUMENT SPECIFICALLY DESIGNED FOR TESTING GROUNDING SYSTEMS. TEST RESULTS SHALL BE RECORDED FOR EACH GROUNDING ELECTRODE SYSTEM. IF GROUND RESISTANCE EXCEEDS 25 OHMS CONTACT THE PROJECT ENGINEER FOR FURTHER DIRECTION. COPIES OF THE GROUND SYSTEM TEST RESULTS SHALL BE FURNISHED TO THE RESIDENT PROJECT REPRESENTATIVE/RESIDENT ENGINEER.

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ROCHELLE MUNICIPAL AIRPORT  
 MAJOR THOMAS F. KORITZ FIELD  
 ROCHELLE, OGLE COUNTY, ILLINOIS  
 IL PROJ.: RPJ-4279

Hanson Proj. No. 12A0172	Filename E-002-NOTE.dwg	Scale NOT TO SCALE	Date 11/15/2013
LAYOUT	KNL	04/01/13	
DRAWN	BAK	04/01/13	
REVIEWED	KNL	10/16/13	



CONSTRUCT PARTIAL  
 PARALLEL TAXIWAY

ELECTRICAL NOTES  
 SHEET 2

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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 CIRCUAR MIL
MDP	MAIN DISTRIBUTION PANEL
MFR	MANUFACTURER
MH	METAL HALIDE
MIN	MINIMUM
MLO	MAIN LUGS ONLY
NEC	NATIONAL ELECTRICAL CODE (NFPA 70)
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OHE	OVERHEAD ELECTRIC
OL	OVERLOAD

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

AIRPORT EQUIPMENT/FACILITY ABBREVIATIONS	
ASOS	AUTOMATED SURFACE OBSERVING SYSTEM
ATCT	AIR TRAFFIC CONTROL TOWER
AWOS	AUTOMATED WEATHER OBSERVING SYSTEM
CCR	CONSTANT CURRENT REGULATOR
DME	DISTANCE MEASURING EQUIPMENT
FAR	FEDERAL AVIATION REGULATION
GS	GLIDE SLOPE FACILITY
HIRL	HIGH INTENSITY RUNWAY LIGHT
ILS	INSTRUMENT LANDING SYSTEM
IM	INNER MARKER
LIR	LOW IMPACT-RESISTANT
LOC	LOCALIZER FACILITY
MALS	MEDIUM INTENSITY APPROACH LIGHTING SYSTEM
MALSR	MEDIUM INTENSITY APPROACH LIGHTING SYSTEM WITH RUNWAY ALIGNMENT INDICATING LIGHTS
MIRL	MEDIUM INTENSITY RUNWAY LIGHT
MITL	MEDIUM INTENSITY TAXIWAY LIGHT
NDB	NON-DIRECTIONAL BEACON
PAPI	PRECISION APPROACH PATH INDICATOR
PLASI	PULSE LIGHT APPROACH SLOPE INDICATOR
RAIL	RUNWAY ALIGNMENT INDICATING LIGHTS
REIL	RUNWAY END IDENTIFIER LIGHT
RVR	RUNWAY VISUAL RANGE
VADI	VISUAL APPROACH DESCENT INDICATOR
VASI	VISUAL APPROACH SLOPE INDICATOR
VOR	VERY HIGH FREQUENCY OMNIDIRECTIONAL RANGE FACILITY
WC	WIND CONE

**NOTES:**

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

<b>120/240 VAC, 1 PHASE, 3 WIRE</b>	
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. CONFIRM LTFMC BEARS THE UL LABEL PRIOR TO INSTALLATION.
- ALL ENCLOSURES RATED NEMA 4, 4X SHALL HAVE WATERTIGHT HUBS AT CONDUIT ENTRANCES U.L. LISTED NEMA 4, 4X FOR THE RESPECTIVE ENCLOSURE, TO MAINTAIN THE NEMA 4, 4X RATING.
- HIGH VOLTAGE & LOW VOLTAGE CIRCUITS SHALL NOT BE INSTALLED IN THE SAME WIREWAY, CONDUIT, DUCT, OR HANDHOLE.

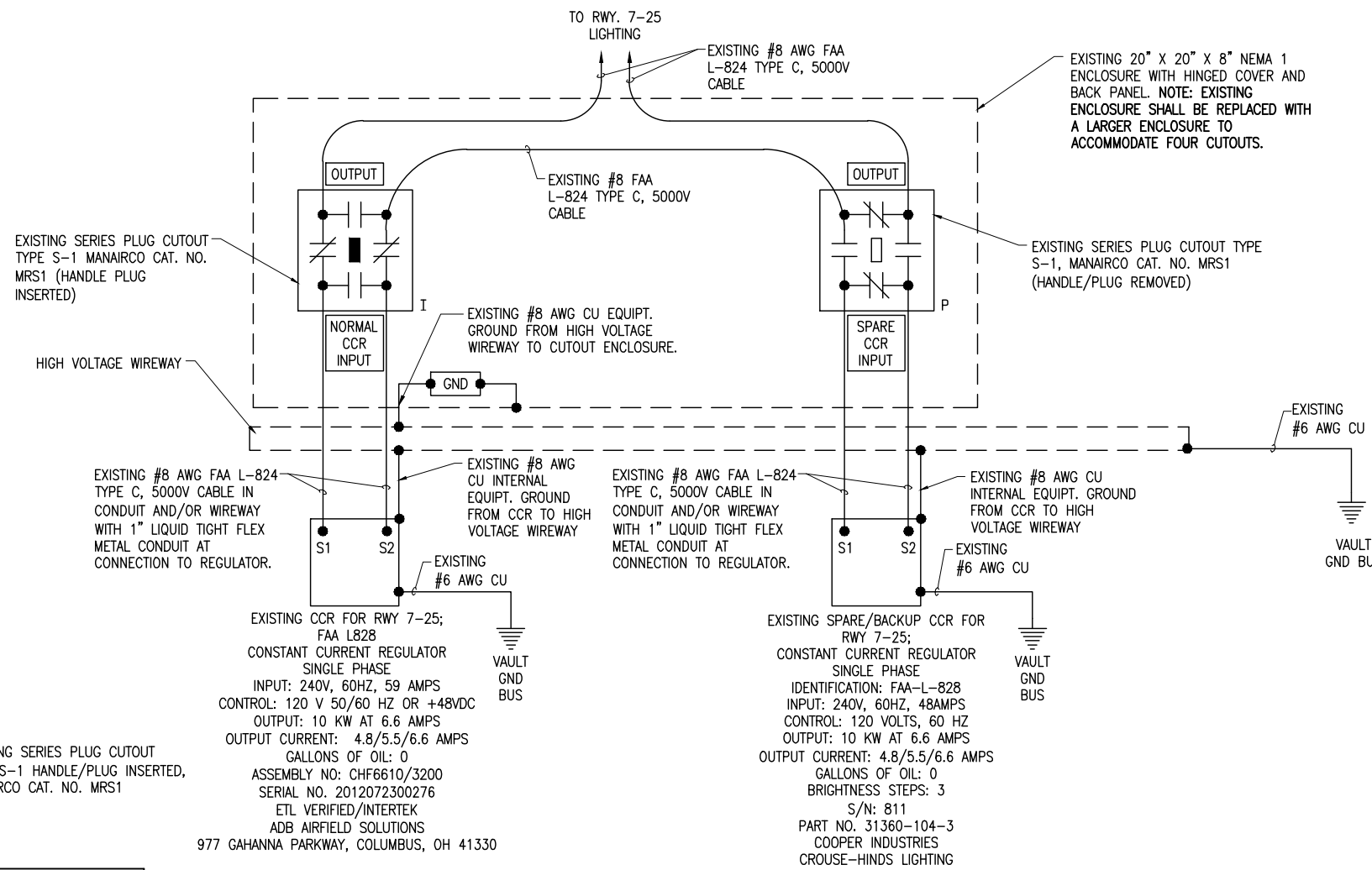
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ROCHELLE MUNICIPAL AIRPORT  
 MAJOR THOMAS F. KORITZ FIELD  
 ROCHELLE, OGLE COUNTY, ILLINOIS  
 IL PROJ.: RPJ-4279

Hanson Proj. No. 12A0172	Filename E-003-ELEC.dwg	Scale NOT TO SCALE	Date 11/15/2013
LAYOUT	KNL	04/01/13	
DRAWN	BAK	04/01/13	
REVIEWED	KNL	10/16/13	

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CONSTRUCT PARTIAL  
 PARALLEL TAXIWAY  
 ELECTRICAL LEGEND,  
 ABBREVIATIONS & NOTES



**EXISTING HIGH VOLTAGE WIRING SCHEMATIC FOR RUNWAY 7-25**

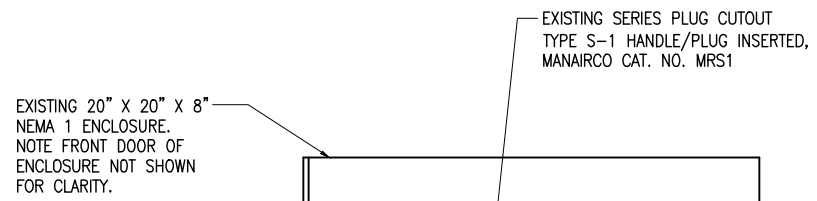
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**NOTES:**

1. ALL WORK, POWER OUTAGES, AND/OR SHUT DOWN OF EXISTING SYSTEMS SHALL BE COORDINATED WITH THE AIRPORT DIRECTOR AND THE RESPECTIVE FAA ATCT PERSONNEL. ONCE SHUT DOWN, THE CIRCUITS SHALL BE LABELED AS SUCH TO PREVENT ACCIDENTAL ENERGIZING OF THE RESPECTIVE CIRCUITS. ALL PERSONNEL SHALL FOLLOW U.S. DEPARTMENT OF LABOR OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION (OSHA) 29 CFR PART 1910 OCCUPATIONAL SAFETY & HEALTH STANDARDS FOR ELECTRICAL SAFETY AND LOCKOUT/TAGOUT PROCEDURES INCLUDING, BUT NOT LIMITED TO, 29 CFR SECTION 1910.147 THE CONTROL OF HAZARDOUS ENERGY (LOCKOUT/TAGOUT).
2. CONTRACTOR SHALL EXAMINE THE SITE TO CONFIRM AND FIELD VERIFY EXISTING SITE CONDITIONS.
3. MEGGER TEST AND RECORD EXISTING SERIES CIRCUITS PRIOR TO CABLE WORK. ALSO TEST AND RECORD SERIES CIRCUIT LOOP RESISTANCE.
4. RUNWAY 7-25 CCR, AND BACKUP CCR FOR RUNWAY 7-25, AND THE ASSOCIATED CUTOUTS ARE EXISTING.
5. ALL CCR'S SHALL BE TESTED FOR PROPER OPERATION BEFORE REMOVAL WORK AND AFTER THE NEW CABLES AND LIGHTING SYSTEM MODIFICATIONS & ADDITIONS HAVE BEEN COMPLETED.
6. HIGH VOLTAGE & LOW VOLTAGE CIRCUITS SHALL NOT BE INSTALLED IN THE SAME WIREWAY, CONDUIT, DUCT, RACEWAY, JUNCTION BOX, HANDHOLE, OR MANHOLE.
7. SPLICES FOR RUNWAY AND TAXIWAY SERIES CIRCUITS SHALL BE FAA APPROVED TYPE L-823 CONNECTORS AND SHALL BE INSTALLED IN HIGH VOLTAGE HANDHOLES, HIGH VOLTAGE MANHOLES, SPLICE CANS OR HIGH VOLTAGE ENCLOSURES.

**LEGEND**

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



**EXISTING SERIES PLUG CUTOUT MOUNTING DETAIL FOR RUNWAY CIRCUIT**

NOT TO SCALE

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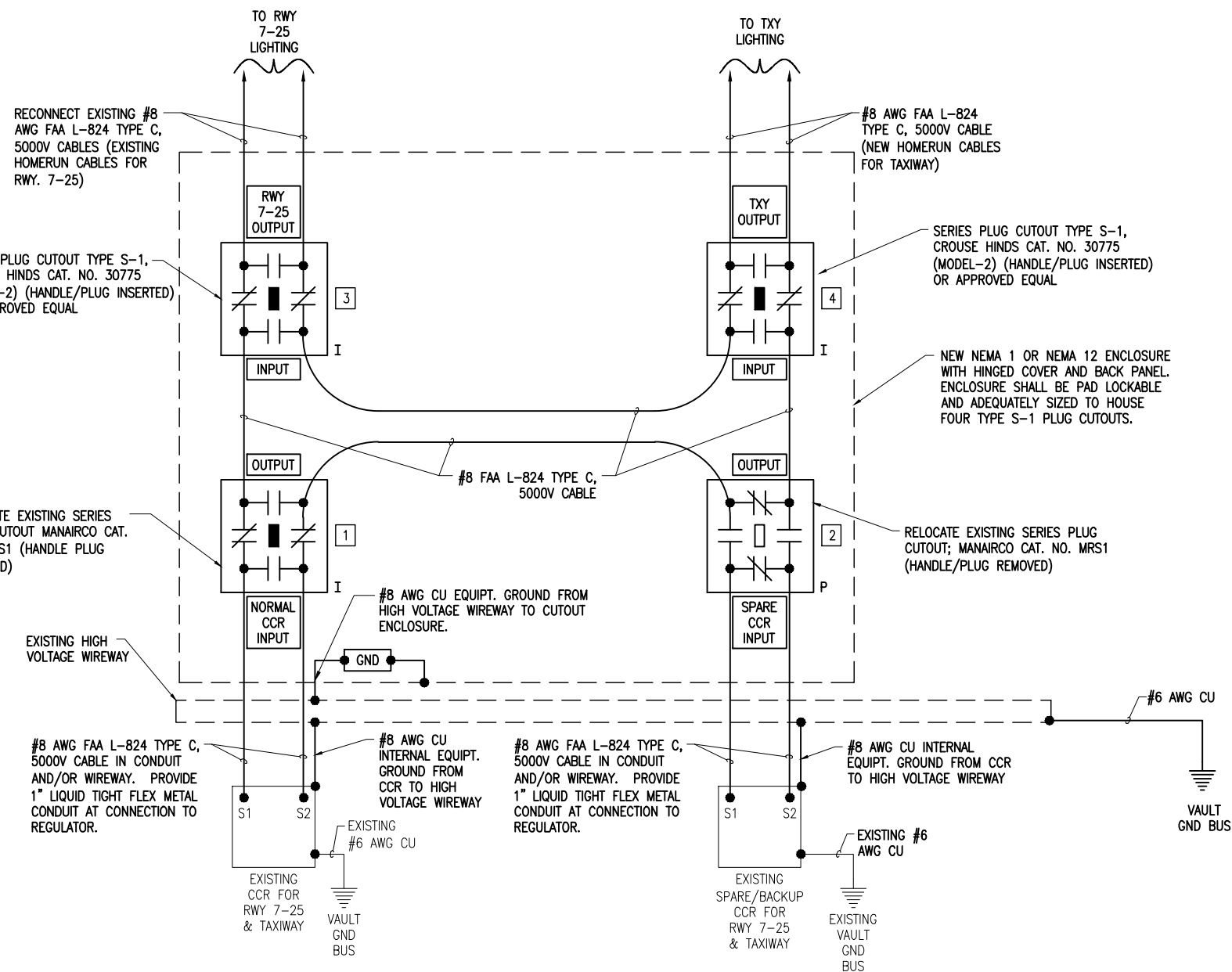
ROCHELLE MUNICIPAL AIRPORT  
 MAJOR THOMAS F. KORITZ FIELD  
 ROCHELLE, OGLE COUNTY, ILLINOIS  
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Hanson Proj. No. 12A0172	Filename E-601-WRG.dwg	Scale NOT TO SCALE	Date 11/15/2013
LAYOUT	KNL	04/01/13	
DRAWN	BAK	04/01/13	
REVIEWED	KNL	10/16/13	



CONSTRUCT PARTIAL PARALLEL TAXIWAY  
 EXISTING HIGH VOLTAGE WIRING SCHEMATIC FOR RWY. 7-25

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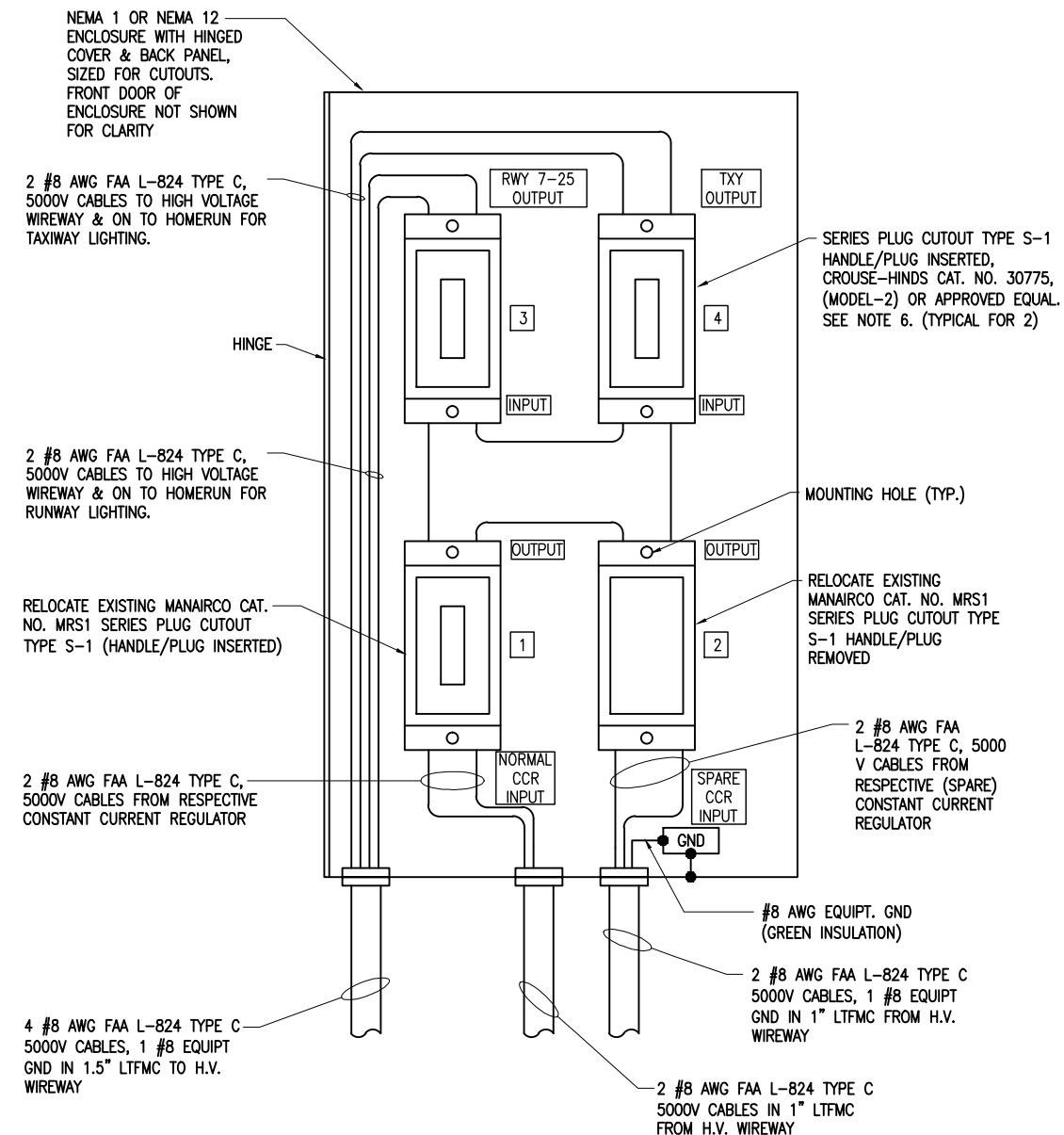


PROPOSED HIGH VOLTAGE WIRING SCHEMATIC FOR RUNWAY 7-25 & TAXIWAY

NOT TO SCALE

NOTES

1. PROVIDE PHENOLIC ENGRAVED LEGEND PLATES FOR EACH CONSTANT CURRENT REGULATOR (EXISTING & NEW) NOTING THE RUNWAY AND/OR TAXIWAY SERVED.
2. EACH PLUG CUTOUT CABINET SHALL BE FURNISHED WITH A PHENOLIC ENGRAVED LEGEND PLATE THAT IDENTIFIES THE RESPECTIVE RUNWAY OR TAXIWAY CIRCUIT OR REGULATOR. INCLUDE AN ADDITIONAL LEGEND PLATE LABELED "CAUTION OPERATE CUTOUTS WITH CCR SHUT OFF".
3. PROVIDE PHENOLIC ENGRAVED LEGEND PLATES FOR THE CUTOUTS TO IDENTIFY THE RESPECTIVE REGULATOR OUTPUT CONNECTION AND THE RESPECTIVE CIRCUIT LOAD CONNECTION.
4. PROVIDE ADEQUATE WORKING SPACE IN FRONT OF EACH CUTOUT ENCLOSURE TO MEET NEC CLEARANCE REQUIREMENTS.
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). DO NOT INSTALL LIQUID TIGHT FLEXIBLE METAL CONDUIT THAT IS NOT UL LISTED. CONFIRM LIQUID TIGHT FLEXIBLE METAL CONDUIT BEARS THE UL LABEL PRIOR TO INSTALLING IT.
6. SERIES PLUG CUTOUTS SHALL BE TYPE S-1, RATED 5000 VOLTS, 20-AMP, AND SHALL COMPLY WITH FAA AC 150/5340-1C, SERIES PLUG CUTOUTS SHALL BE RATED SUITABLE FOR NORMAL OPERATION WITH HANDLE REMOVED OR HANDLE INSERTED. CUTOUTS SHALL DISCONNECT THE INPUT FROM THE OUTPUT, SHORT THE INPUT TERMINALS, AND SHORT THE OUTPUT TERMINALS WHEN THE HANDLE/PLUG IS REMOVED. CUTOUTS SHALL BE SUITABLE FOR OPERATION WITH THE HANDLE REMOVED TO ALLOW EITHER CIRCUIT TO OPERATE. SERIES PLUG CUTOUTS SHALL BE CROUSE-HINDS CAT. NO. 30775, OR APPROVED EQUAL. THE RESPECTIVE MANUFACTURER SHALL CERTIFY IN WRITING THAT THEIR CUTOUT IS SUITABLE AND RATED FOR THE RESPECTIVE APPLICATION.
7. HIGH VOLTAGE & LOW VOLTAGE CIRCUITS SHALL NOT BE INSTALLED IN THE SAME WIREWAY, CONDUIT, HANDHOLE, JUNCTION BOX, OR RACEWAY.
8. EXISTING CABLES & CONDUITS FROM THE CCR'S TO THE CUTOUTS MAY BE REUSED WHERE ADEQUATE LENGTHS ARE AVAILABLE.



SERIES PLUG CUTOUT MOUNTING DETAIL

NOT TO SCALE

LEGEND

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

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ROCHELLE MUNICIPAL AIRPORT  
MAJOR THOMAS F. KORITZ FIELD  
ROCHELLE, OGLE COUNTY, ILLINOIS

IL PROJ.: RPJ-4279

Hanson Proj. No. 12A0172	Filename E-602-WRG.dwg	Scale NOT TO SCALE	Date 11/15/2013
LAYOUT	KNL	04/01/13	
DRAWN	BAK	04/01/13	
REVIEWED	KNL	10/16/13	



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CONSTRUCT PARTIAL  
PARALLEL TAXIWAY

PROPOSED HIGH VOLTAGE  
WIRING SCHEMATIC FOR  
RWY. 7-25 & TAXIWAY

LEGEND PLATE SCHEDULE	
DEVICE	LABEL
RUNWAY 7-25 CCR	RUNWAY 7-25 & TAXIWAY
BACKUP/SPARE CCR FOR RUNWAY 7-25	SPARE FOR RUNWAY 7-25 & TAXIWAY
CUTOUT ENCLOSURE FOR RUNWAY 7-25	RUNWAY 7-25 & TAXIWAY CUTOUTS
RUNWAY 7-25 CUTOUT #1 (NORMAL CCR INPUT)	#1
RUNWAY 7-25 CUTOUT #2 (SPARE CCR INPUT)	#2
RUNWAY 7-25 CUTOUT #3	#3
TAXIWAY CUTOUT #4	#4
RUNWAY 7-25 CUTOUT #1 INPUT SIDE CONNECTION	NORMAL CCR INPUT
RUNWAY 7-25 CUTOUT #2 INPUT SIDE CONNECTION	SPARE CCR INPUT
RUNWAY 7-25 CUTOUT #3 INPUT SIDE CONNECTION	INPUT
TAXIWAY CUTOUT #4 INPUT SIDE CONNECTION	INPUT
RUNWAY 7-25 CUTOUT #1 OUTPUT SIDE CONNECTION	OUTPUT
RUNWAY 7-25 CUTOUT #2 OUTPUT SIDE CONNECTION	OUTPUT
RUNWAY 7-25 CUTOUT #3 OUTPUT SIDE CONNECTION	RWY 7-25 OUTPUT
TAXIWAY CUTOUT #4 OUTPUT SIDE CONNECTION	TAXIWAY OUTPUT
CUTOUT ENCLOSURE FOR RUNWAY 7-25	CAUTION OPERATE CUTOUTS WITH CCR'S SHUT OFF

DIRECTIONS TO TRANSFER RUNWAY 7-25 LIGHTING FROM NORMAL CCR TO SPARE/BACKUP CCR.

1. SHUT OFF RUNWAY 7 REILS (WHERE POWERED BY RUNWAY 7-25 SERIES CIRCUIT) WHEN OPERATING ON SPARE/BACKUP CCR FOR RUNWAY 7-25.
2. SHUT OFF INPUT POWER (CIRCUIT BREAKER) TO BOTH RWY 7-25 CCR'S & TURN CCR SELECTOR SWITCHES TO OFF.
3. OPERATE MANUAL TRANSFER SWITCH FOR RWY 7-25 AND MOVE HANDLE FROM "NORMAL" POSITION TO "SPARE/BACKUP" POSITION.
4. PULL CUTOUT HANDLE FROM NORMAL CCR UNIT (CUTOUT #1) & INSERT INTO SPARE CCR CUTOUT (CUTOUT #2).
5. GO TO RADIO RELAY INTERFACE PANEL & TURN "RWY 7-25 CCR TRANSFER" SELECTOR SWITCH FROM "NORMAL" TO "SPARE" POSITION.
6. TURN ON INPUT POWER (CIRCUIT BREAKER) FOR SPARE RWY 7-25 CCR.
7. TURN SELECTOR SWITCH ON SPARE CCR TO "REMOTE" POSITION.

PROVIDE PLACARD OR LEGEND PLATE FOR RUNWAY CONSTANT CURRENT REGULATOR PAIR AS NOTED ABOVE: LETTERING TO BE MIN. 1/4" HIGH, BLACK ON WHITE BACKGROUND. LOCATE PLACARD ABOVE OR ADJACENT TO RESPECTIVE CUTOUT ENCLOSURE FOR RUNWAY. NEW PLACARD SHALL REPLACE THE EXISTING PLACARD IN THE VAULT, AND WILL BE CONSIDERED INCIDENTAL TO ITEM AR125610 REILS.

**RUNWAY 7-25 & TAXIWAY CCR TRANSFER PROCEDURE PLACARD DETAIL**

NOT TO SCALE

NOTE: 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.

FURNISH & INSTALL A WEATHERPROOF WARNING LABEL FOR EACH SAFETY SWITCH, PANELBOARD, LOAD CENTER, CUTOUT, & CONTROL PANEL TO WARN PERSONS OF POTENTIAL ELECTRIC ARC FLASH HAZARDS, PER THE REQUIREMENTS OF NEC 110.16 "FLASH PROTECTION". LABELS SHALL BE HAZARD COMMUNICATION SYSTEMS, LLC (190 OLD MILFORD RD., BOX 1174, MILFORD, PA 18337, PHONE: 1-877-748-0244) PART NO. H6010-9VWHBJ OR APPROVED EQUAL.



"DANGER - HIGH VOLTAGE" SIGN

FURNISH AND INSTALL "DANGER - HIGH VOLTAGE" LABELS/SIGNS FOR EACH CUTOUT ENCLOSURE, EACH CONSTANT CURRENT REGULATOR, AND THE HIGH VOLTAGE WIREWAY, TO COMPLY WITH FAA AC 150/5340-26B "MAINTENANCE OF AIRPORT VISUAL AID FACILITIES". LABELS SHALL BE APPROXIMATELY 4" X 6" OR 5" X 7".

REVISION	
DATE	

ROCHELLE MUNICIPAL AIRPORT  
MAJOR THOMAS F. KORITZ FIELD  
ROCHELLE, OGLE COUNTY, ILLINOIS

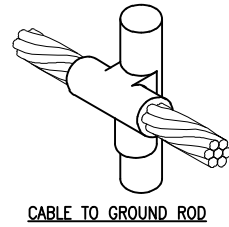
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Hanson Proj. No. 12A0172	Filename E-603-SCH.dwg	Scale NOT TO SCALE	Date 11/15/2013
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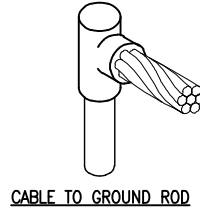


CONSTRUCT PARTIAL PARALLEL TAXIWAY

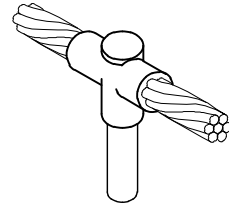
LEGEND PLATE SCHEDULES



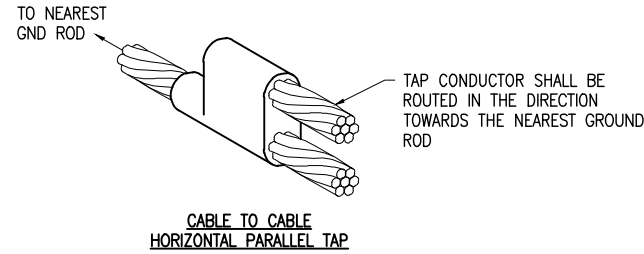
CABLE TO GROUND ROD



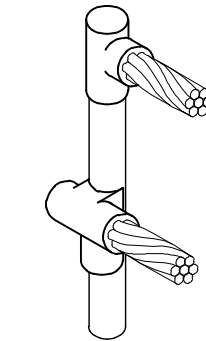
CABLE TO GROUND ROD



CABLE TO GROUND ROD



CABLE TO CABLE HORIZONTAL PARALLEL TAP

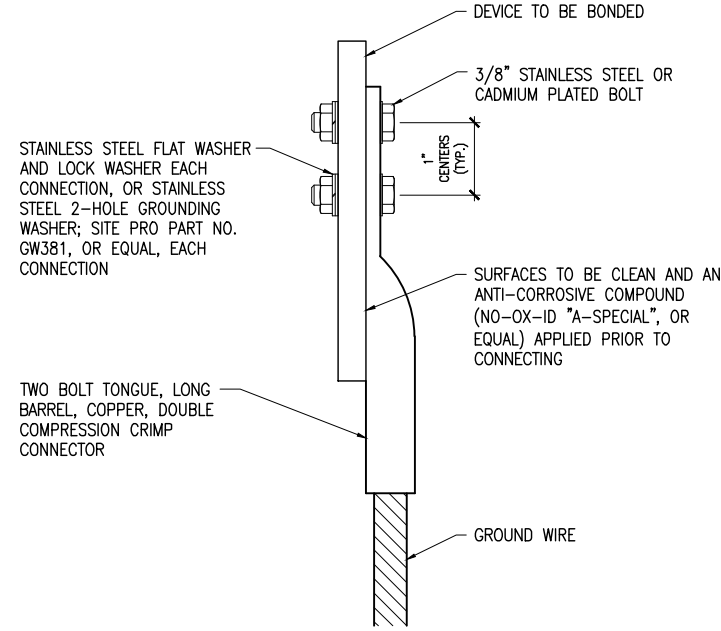


CABLES TO GROUND ROD

**DETAIL NOTES**

- ALL BELOW GRADE CONNECTIONS TO GROUND RODS & GROUND RING CONDUCTORS SHALL BE EXOTHERMIC WELD TYPE CONNECTIONS. EXOTHERMIC WELDS SHALL BE CADWELD AS MANUFACTURED BY ERICO PRODUCTS, SOLON, OHIO, ULTRAWELD AS MANUFACTURED BY HARGER LIGHTNING PROTECTION & GROUNDING EQUIPMENT, GRAYSLAKE, IL, THERMOWELD AS MANUFACTURED BY CONTINENTAL INDUSTRIES, TULSA, OKLAHOMA, OR APPROVED EQUAL. VERIFY PROPER SIZES, MOLDS, TYPES, AND REQUIREMENTS FOR THE RESPECTIVE APPLICATION WITH THE MANUFACTURER, AND INSTALL PER THEIR DIRECTIONS.
- FOR APPLICATIONS TO GALVANIZED STEEL OR PAINTED STEEL, REMOVE GALVANIZING AND/OR PAINT & CLEAN THE SURFACE TO EXPOSE BARE STEEL BEFORE MAKING EXOTHERMIC WELD CONNECTION.
- INDIVIDUAL GROUNDING ELECTRODE CONDUCTORS SHALL NOT BE INSTALLED IN METAL CONDUIT. INSTALL GROUNDING ELECTRODE CONDUCTORS IN SCHED 40 PVC CONDUIT AS REQUIRED IN FOUNDATIONS, FOR PROTECTION, WHERE ENTERING ENCLOSURES, ETC. WHERE PLASTIC CONDUIT IS USED FOR INDIVIDUAL GROUND WIRES, DO NOT COMPLETELY ENCIRCLE THE CONDUIT WITH FERROUS AND/OR MAGNETIC MATERIALS. WHERE METAL CLAMPS ARE INSTALLED USE NYLON BOLTS, NUTS, WASHERS, & SPACERS TO INTERRUPT A COMPLETE METALLIC PATH FROM ENCIRCLING THE CONDUIT.

**EXOTHERMIC WELD DETAILS**

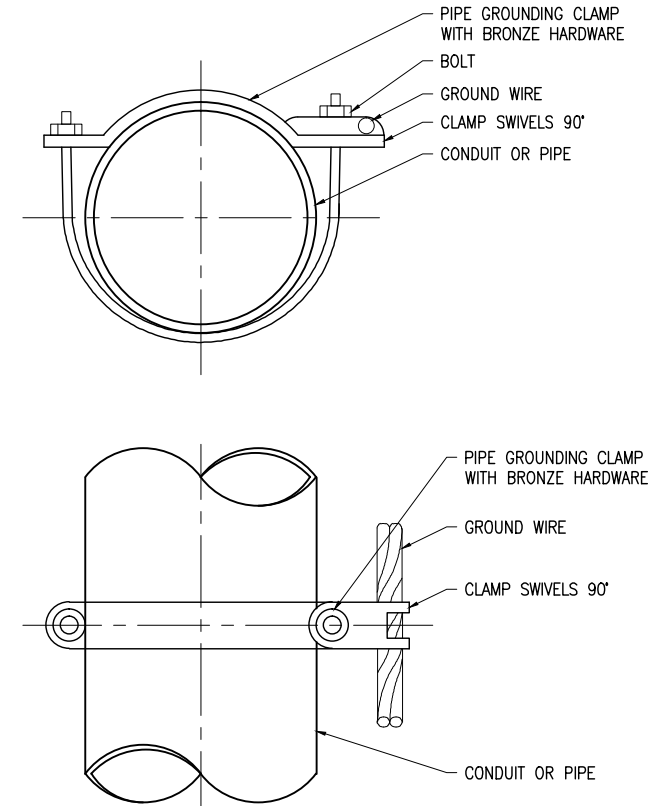


2 HOLE LONG BARREL COMPRESSION LUG TABLE			
WIRE SIZE	BURNDY CAT. NO.	THOMAS & BETTS CAT. NO.	PENN-UNION CAT. NO.
#8 AWG STRANDED	YA8C-2TC38	256-30695-1157	BBLU-8D-2TC38
#6 AWG SOLID	YA8C-2TC38 OR YGA6C-2TC38E2G1		
#6 AWG STRANDED	YA6C-2TC38	256-30695-1158	BBLU-6D-2TC38
#4 AWG STRANDED	YA4C-2TC38	256-30695-1159	BBLU-4D-2TC38
#2 AWG STRANDED	YA2C-2TC38	256-30695-1160	BBLU-2D-2TC38
#2 AWG SOLID	YA3C-2TC38	256-30695-1160	BBLU-3D-2TC38
#1/0 AWG STRANDED	YA25-2TC38	256-30695-1162	BBLU-1/0D-2TC38
#2/0 AWG STRANDED	YA26-2TC38	256-30695-1116	BBLU-2/0D-2TC38
#3/0 AWG STRANDED	YA27-2TC38	54816BE	BBLU-3/0D-2TC38
#4/0 AWG STRANDED	YA28-2TC38	256-30695-1117	BBLU-4/0D-2TC38

**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 ENCIRCLE THE CONDUIT WITH FERROUS AND/OR MAGNETIC MATERIALS. WHERE METAL CLAMPS ARE INSTALLED USE NYLON BOLTS, NUTS, WASHERS, & SPACERS TO INTERRUPT A COMPLETE METALLIC APTH FROM ENCIRCLING THE CONDUIT.
- ALL CONNECTIONS SHALL BE COATED WITH A CORROSION PREVENTATIVE COMPOUND (SANCHEM INC. NO-OX-ID "A-SPECIAL", BURNDY PENETROX E, OR EQUAL) BEFORE JOINING. ALL COPPER BUS BARS SHALL BE CLEANED PRIOR TO MAKING CONNECTIONS TO REMOVE SURFACE OXIDATION. CLEAN SURFACES, OF RESPECTIVE DEVICES TO BE BONDED, TO BARE METAL, PER NEC 250-12.

**GROUNDING LUG CONNECTION DETAIL**



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

**NOTES**

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

**PIPE/CONDUIT GROUNDING CLAMP DETAIL**

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ROCHELLE MUNICIPAL AIRPORT  
MAJOR THOMAS F. KORITZ FIELD  
ROCHELLE, OGLE COUNTY, ILLINOIS

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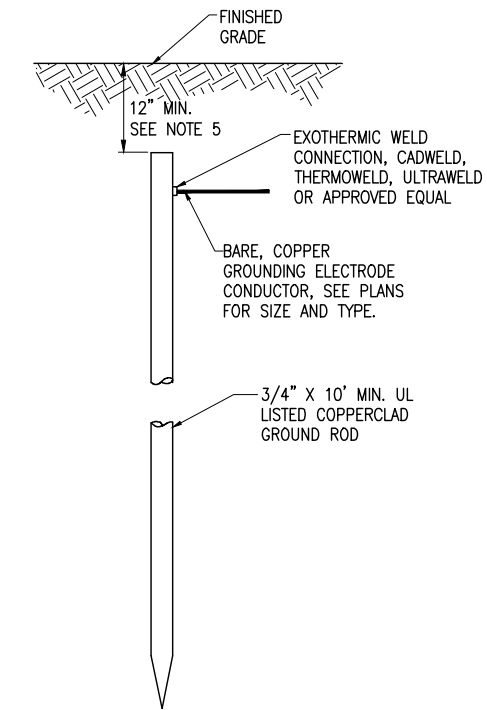
CONSTRUCT PARTIAL PARALLEL TAXIWAY

GROUNDING DETAILS

**GROUNDING NOTES**

- THE CONTRACTOR SHALL FURNISH AND INSTALL ALL GROUNDING AS MAY BE NECESSARY OR REQUIRED TO MAKE A COMPLETE GROUNDING SYSTEM AS REQUIRED BY THE LATEST NATIONAL ELECTRICAL CODE (NFPA 70) IN FORCE AND FAA-STD-019e (LIGHTNING AND SURGE PROTECTION, GROUNDING, BONDING, AND SHIELDING REQUIREMENTS FOR FACILITIES AND ELECTRONIC EQUIPMENT). THE RELIABILITY OF THE GROUNDING SYSTEM IS DEPENDENT ON CAREFUL, PROPER INSTALLATION AND CHOICE OF MATERIALS. IMPROPER PREPARATION OF SURFACES TO BE JOINED TO MAKE AN ELECTRICAL PATH, LOOSE JOINTS OR CORROSION CAN INTRODUCE IMPEDANCE THAT WILL SERIOUSLY IMPAIR THE ABILITY OF THE GROUND PATH TO PROTECT PERSONNEL AND EQUIPMENT AND TO ABSORB TRANSIENTS THAT CAN CAUSE NOISE IN COMMUNICATIONS CIRCUITS. THE FOLLOWING FUNCTIONS ARE PARTICULARLY IMPORTANT TO ENSURE A RELIABLE GROUND SYSTEM:
- FURNISH AND INSTALL GROUND RODS AS DETAILED HEREIN. GROUND RODS FOR AIRFIELD LIGHTING (RUNWAY LIGHTING, TAXIWAY LIGHTING, TAXI GUIDANCE SIGNS, & DISTANCE REMAINING SIGNS) SHALL BE MINIMUM 3/4-IN. DIAMETER BY 10-FT LONG, UL-LISTED COPPER CLAD WITH 10-MIL MINIMUM COPPER COATING. GROUND RODS FOR OTHER APPLICATIONS SHALL BE MINIMUM 3/4-IN. DIAMETER BY 10-FT LONG, UL-LISTED, COPPER CLAD WITH 10-MIL MINIMUM COPPER COATING. GROUND RODS SHALL BE SPACED OR AS DETAILED ON THE RESPECTIVE PLANS, AND IN NO CASE SPACED LESS THAN ONE ROD LENGTH APART. ALL CONNECTIONS TO GROUND RODS AND THE GROUND RING SHALL BE MADE WITH EXOTHERMIC WELD TYPE CONNECTORS, CADWELD BY ERICO PRODUCTS, INC., SOLON, OHIO, (PHONE 1-800-248-9353), THERMOWELD BY CONTINENTAL INDUSTRIES, INC., TULSA, OKLAHOMA (PHONE 918-663-1440) OR ULTRAWELD BY HARGER, GRAYSLAKE, ILLINOIS (PHONE 1-800-842-7437) OR APPROVED EQUAL. EXOTHERMIC WELD CONNECTIONS SHALL BE INSTALLED IN CONFORMANCE WITH THE RESPECTIVE MANUFACTURER'S DIRECTIONS USING MOLDS AS REQUIRED FOR EACH RESPECTIVE APPLICATION. BOLTED CONNECTIONS WILL NOT BE PERMITTED AT GROUND RODS OR AT BURIED GROUNDING ELECTRODE CONDUCTORS.
- CONTRACTOR SHALL TEST EACH MADE ELECTRODE GROUND ROD/GROUND FIELD/GROUND RING WITH AN INSTRUMENT SPECIFICALLY DESIGNED FOR TESTING GROUND FIELD SYSTEMS. IF GROUND RESISTANCE EXCEEDS 25 OHMS, CONTACT THE PROJECT ENGINEER FOR FURTHER DIRECTION. COPIES OF GROUND ROD TEST RESULTS SHALL BE FURNISHED TO THE RESIDENT ENGINEER/RESIDENT PROJECT REPRESENTATIVE.
- ALL PRODUCTS ASSOCIATED WITH THE GROUNDING SYSTEM SHALL BE UL-LISTED AND LABELED.
- ALL BOLTED OR MECHANICAL CONNECTIONS SHALL BE COATED WITH A CORROSION PREVENTATIVE COMPOUND BEFORE JOINING, SANCHEM INC. "NO-OX-ID 'A-SPECIAL' COMPOUND, BURNDY PENETROX E, OR EQUAL.
- METALLIC SURFACES TO BE JOINED SHALL BE PREPARED BY THE REMOVAL OF ALL NON-CONDUCTIVE MATERIAL, PER 2011 NATIONAL ELECTRICAL CODE ARTICLE 250-12. ALL COPPER BUS BARS MUST BE CLEANED PRIOR TO MAKING CONNECTIONS TO REMOVE SURFACE OXIDATION.
- METALLIC RACEWAY FITTINGS SHALL BE MADE UP TIGHT TO PROVIDE A PERMANENT LOW IMPEDANCE PATH FOR ALL CIRCUITS. METAL CONDUIT TERMINATIONS IN ENCLOSURES SHALL BE BONDED TO THE ENCLOSURE WITH UL-LISTED FITTINGS SUITABLE FOR GROUNDING. PROVIDE GROUNDING BUSHINGS WITH BONDING JUMPERS FOR ALL METAL CONDUITS ENTERING SERVICE EQUIPMENT (METER BASE, CT CABINET, MAIN SERVICE BREAKER ENCLOSURE, ETC.). PROVIDE GROUNDING BUSHINGS WITH BONDING JUMPERS FOR ALL METAL CONDUITS ENTERING AN ENCLOSURE THROUGH CONCENTRIC OR ECCENTRIC KNOCKOUTS THAT ARE PUNCHED OR OTHERWISE FORMED SO AS TO IMPAIR THE ELECTRICAL CONNECTION TO GROUND. STANDARD LOCKNUTS OR BUSHINGS SHALL NOT BE THE SOLE MEANS FOR BONDING WHERE A CONDUIT ENTERS AN ENCLOSURE THROUGH A CONCENTRIC OR ECCENTRIC KNOCKOUT
- ALL CONNECTIONS, LOCATED ABOVE GRADE, BETWEEN THE DIFFERENT TYPES OF GROUNDING CONDUCTORS SHALL BE MADE USING UL-LISTED DOUBLE COMPRESSION CRIMP TYPE CONNECTORS OR UL-LISTED BOLTED GROUND CONNECTORS. FOR GROUND CONNECTIONS TO ENCLOSURES, CASES AND FRAMES OF ELECTRICAL EQUIPMENT NOT SUPPLIED WITH GROUND LUGS THE CONTRACTOR SHALL DRILL REQUIRED HOLES FOR MOUNTING A BOLTED GROUND CONNECTOR. ALL BOLTED GROUND CONNECTORS SHALL BE BURNDY, THOMAS AND BETTS, OR EQUAL. TIGHTEN CONNECTIONS TO COMPLY WITH TIGHTENING TORQUES IN UL STANDARD 486A TO ASSURE PERMANENT AND EFFECTIVE GROUNDING.
- ALL METAL EQUIPMENT ENCLOSURES, CONDUITS, CABINETS, BOXES, RECEPTACLES, MOTORS, ETC. SHALL BE BONDED TO THE RESPECTIVE GROUNDING SYSTEM.
- PROVIDE ALL BOXES FOR PROPOSED OUTLETS, SWITCHES, CIRCUIT BREAKERS, ETC. WITH GROUNDING SCREWS. PROVIDE ALL PANELBOARD, SWITCHGEAR, ETC., ENCLOSURES WITH GROUNDING BARS WITH INDIVIDUAL SCREWS, LUGS, CLAMPS, ETC., FOR EACH OF THE GROUNDING CONDUCTORS THAT ENTER THEIR RESPECTIVE ENCLOSURES.
- EACH NEW FEEDER CIRCUIT AND/OR BRANCH CIRCUIT SHALL INCLUDE AN EQUIPMENT GROUND WIRE. METAL RACEWAY OR CONDUIT SHALL NOT MEET THIS REQUIREMENT. THE EQUIPMENT GROUND WIRE FROM EQUIPMENT SHALL NOT BE SMALLER THAN ALLOWED BY 2011 NEC TABLE 250-122 "MINIMUM SIZE CONDUCTORS OR GROUNDING RACEWAY AND EQUIPMENT." WHEN CONDUCTORS ARE ADJUSTED IN SIZE TO COMPENSATE FOR VOLTAGE DROP, EQUIPMENT-GROUNDING CONDUCTORS SHALL BE ADJUSTED PROPORTIONATELY ACCORDING TO CIRCULAR MIL AREA. ALL EQUIPMENT GROUND WIRES SHALL BE COPPER, EITHER BARE OR INSULATED GREEN IN COLOR. WHERE THE EQUIPMENT GROUNDING CONDUCTORS ARE INSULATED, THEY SHALL BE IDENTIFIED BY THE COLOR GREEN, AND SHALL BE THE SAME INSULATION TYPE AS THE PHASE CONDUCTORS.

- ALL EXTERIOR METAL CONDUIT, WHERE NOT ELECTRICALLY CONTINUOUS BECAUSE OF MANHOLES, HANDHOLES, NON-METALLIC JUNCTION BOXES, ETC., SHALL BE BONDED TO ALL OTHER METAL CONDUIT IN THE RESPECTIVE DUCT RUN, AND AT EACH END, WITH A COPPER-BONDING JUMPER SIZED IN CONFORMANCE WITH 2011 NEC 250-102. WHERE METAL CONDUITS TERMINATE IN AN ENCLOSURE (SUCH AS A MOTOR CONTROL CENTER, SWITCHBOARD, ETC) WHERE THERE IS NOT ELECTRICAL CONTINUITY WITH THE CONDUIT AND THE RESPECTIVE ENCLOSURE, PROVIDE A BONDING JUMPER FROM THE RESPECTIVE ENCLOSURE GROUND BUS TO THE CONDUIT SIZED PER 2011 NEC 250-102.
- IT IS THE INTENT OF THIS SPECIFICATION THAT ALL MOTOR FRAMES, PUMP BASES ELECTRICAL EQUIPMENT ENCLOSURES, PANEL HOUSINGS, CONDUITS, BOXES, ETC. HAVE A CONTINUOUS COPPER WIRE GROUND CONNECTION AND SHALL BE POSITIVELY BONDED TO THE RESPECTIVE GROUNDING SYSTEM. CONDUIT CONNECTORS WILL NOT BE CONSIDERED AS ADEQUATE GROUNDING.
- PROVIDE A POSITIVE GROUND BOND FOR ALL OUTLET BOXES, ELECTRICAL EQUIPMENT ENCLOSURES, GROUNDING RECEPTACLES, TOGGLE SWITCHES, ETC. INSTALL A GROUNDING CONDUCTOR IN ALL WIRE AND CABLE RACEWAYS. GROUND CONDUCTOR TO HAVE 600-VOLT INSULATION AND BE IDENTIFIED BY A CONTINUOUS GREEN COLOR COATING. THEY SHALL BE USED SOLELY FOR GROUNDING PURPOSES AND BE ENTIRELY SEPARATE FROM WHITE GROUND NEUTRAL CONDUCTOR, EXCEPT AT SUPPLY SIDE OF SERVICE DISCONNECTING MEANS, WHERE GROUNDING AND NEUTRAL SYSTEMS ARE TO BE CONNECTED TO SERVICE GROUND.
- EACH AND ALL GROUNDING CASED AND METAL PARTS ASSOCIATED WITH ELECTRICAL EQUIPMENT SHALL BE TESTED FOR CONTINUITY OF CONNECTION WITH GROUND BUS SYSTEM BY CONTRACTOR IN PRESENCE OF OWNER'S REPRESENTATIVE.
- ALL CONNECTIONS BETWEEN THE DIFFERENT TYPES OF GROUNDING CONDUCTORS ABOVE GRADE SHALL BE MADE USING BOLTED GROUND CONNECTORS. GROUND LUGS SHALL BE PROVIDED IN ALL ENCLOSURES AND WIRING TERMINATION JUNCTION BOXES. EQUIPMENT GROUNDS AND GROUNDING CONDUCTOR SHALL BE CONNECTED TO THESE GROUND LUGS. FOR GROUND CONNECTIONS TO ENCLOSURES, CASES AND FRAMES OF ELECTRICAL EQUIPMENT NOT SUPPLIED WITH GROUND LUGS THE CONTRACTOR SHALL DRILL REQUIRED HOLES FOR MOUNTING A BOLTED GROUND CONNECTOR. ALL BOLTED GROUND CONNECTORS SHALL BE BURNDY, OR APPROVED EQUAL.
- BOND ALL NONCURRENT-CARRYING PARTS OF METAL EQUIPMENT TO GROUND SYSTEM.
- BUILDING STRUCTURAL STEEL SYSTEM SHALL BE BONDED TO ELECTRICAL GROUND SYSTEM.
- INSTALL GROUNDING ELECTRODE CONDUCTORS, LIGHTNING PROTECTION DOWN CONDUCTORS AND SEPARATE GROUND CONDUCTORS IN SCHEDULE 40 OR SCHEDULE 80 PVC CONDUIT OR EXPOSED WHERE ACCEPTABLE TO LOCAL CODES. WHERE GROUNDING ELECTRODE CONDUCTORS, LIGHTNING PROTECTION DOWN CONDUCTORS OR INDIVIDUAL GROUND CONDUCTORS ARE RUN IN PVC CONDUIT, DO NOT COMPLETELY ENCIRCLE CONDUIT WITH FERROUS AND/OR MAGNETIC MATERIALS. USE NON-METALLIC REINFORCED FIBERGLASS STRUT SUPPORT. WHERE METAL CONDUIT CLAMPS ARE INSTALLED, USE NYLON BOLTS, NUTS, WASHERS AND SPACERS TO INTERRUPT A COMPLETE METALLIC PATH FROM ENCIRCLING THE CONDUIT. THIS IS REQUIRED TO AVOID GIRDLING OF GROUND CONDUCTORS. GIRDLING OF A GROUND CONDUCTOR IS THE RESULT OF PLACING THE CONDUCTOR IN A RING OF MAGNETIC MATERIAL. THIS RING COULD BE A METALLIC CONDUIT, U-BOLT OR STRUT SUPPORT PIPE CLAMP, OR OTHER SUPPORT HARDWARE. THE RESULT OF GIRDLING GROUND CONDUCTORS SIGNIFICANTLY INCREASES THE INDUCTIVE IMPEDANCE OF THE GROUND CONDUCTOR. INDUCTIVE AND CAPACITIVE IMPEDANCE IS A TYPE OF RESISTANCE THAT OPPOSES THE FLOW OF ALTERNATING CURRENT. ANY INCREASE IN THE IMPEDANCE OF A GROUND CONDUCTOR REDUCES ITS ABILITY TO EFFECTIVELY MITIGATE RADIO FREQUENCY NOISE IN THE GROUND SYSTEM. THE CONDITION WHERE A GROUND CONDUCTOR IS GIRDLED DURING A LIGHTNING STRIKE RESULTS IN PHENOMENA KNOWN AS SURGE IMPEDANCE LOADING. SURGE IMPEDANCE LOADING IS A RESULT OF VOLTAGE AND CURRENT REACHING 500,000 VOLTS AND 10,000 AMPS FOR A SHORT DURATION. GIRDLING FURTHER INCREASES THE IMPEDANCE AT LIGHTNING FREQUENCIES OF 100 KILOHERTZ TO 100 MEGAHERTZ. AT THESE POWER AND FREQUENCY LEVELS ANY INCREASE IN THE IMPEDANCE OF THE GROUND CONDUCTOR MUST BE CONTROLLED. DURING LIGHTNING DISCHARGE CONDITIONS A LOW INDUCTIVE IMPEDANCE PATH IS MORE IMPORTANT THAN A LOW DC RESISTANCE PATH.
- IF LOCAL CODES DICTATE THAT INDIVIDUAL GROUNDING CONDUCTORS MUST BE RUN IN METAL CONDUIT OR RACEWAY, THEN THE CONDUIT OR RACEWAY MUST BE BONDED AT EACH END OF THE RUN WITH A BONDING JUMPER SIZED EQUAL TO THE INDIVIDUAL GROUNDING CONDUCTOR OR AS REQUIRED BY 2011 NEC 250-102. NOTE THIS DOES NOT APPLY TO AC EQUIPMENT GROUNDING CONDUCTORS RUN WITH AC CIRCUITS.
- WHERE A CONFLICT IS DETERMINED WITH RESPECT TO GROUNDING REQUIREMENTS PER MANUFACTURER INSTALLATION INSTRUCTIONS, NEC, AND/OR THE CONTRACT DOCUMENTS, CONTACT THE RESIDENT ENGINEER OR PROJECT ENGINEER FOR FURTHER DIRECTIONS.
- GROUND RODS SHALL BE MANUFACTURED IN THE UNITED STATES OF AMERICA TO COMPLY WITH THE AIRPORT IMPROVEMENT PROGRAM BUY AMERICAN REQUIREMENTS. STEEL USED TO MANUFACTURE GROUND RODS SHALL BE 100 PERCENT DOMESTIC STEEL.



**10 FT. GROUND ROD**

**NOTES**

- TYPE AND MINIMUM NUMBER OF GROUND RODS SHALL BE AS SPECIFIED ON THE PLAN.
- THE RESISTANCE TO GROUND OF THE GROUNDING SYSTEM SHALL NOT EXCEED 25 OHMS.
- COST OF GROUND RODS IS INCIDENTAL TO THE ASSOCIATED ITEMS REQUIRING GROUNDING UNLESS OTHERWISE SPECIFIED.
- GROUND RODS SHALL BE SPACED AS DETAILED ON THE PLANS AND SHALL NOT BE SPACED LESS THAN ONE ROD LENGTH APART.
- TOP OF GROUND RODS SHALL BE 12" MINIMUM BELOW GRADE UNLESS DETAILED OTHERWISE HEREIN.
- GROUND RODS FOR RUNWAY LIGHTING, TAXIWAY LIGHTING, AND TAXI GUIDANCE SIGNS SHALL BE A MINIMUM 3/4-INCH DIAMETER BY 10-FT LONG UL LISTED COPPER CLAD.

**GROUND RODS**  
(NOT TO SCALE)

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DATE					
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<p><b>CONSTRUCT PARTIAL</b>  <b>PARALLEL TAXIWAY</b></p>			<p><b>GROUNDING NOTES</b></p>		
<p style="font-size: 2em; font-weight: bold;">38</p> <p style="font-size: x-small;">38 of 38 sheets</p>					