ROANOKE-BLACKSBURG REGIONAL AIRPORT

ROANOKE, VIRGINIA

REHABILITATE RUNWAY 6-24

AIP PROJECT NO. 3-51-0045-074-2025 (DESIGN)

AIP PROJECT NO. PENDING (CONSTRUCTION)

RRAC BID NO.

DELTA PROJECT NO. 24072

FOR THE

ROANOKE REGIONAL AIRPORT COMMISSION

MAY 2026

BIDDING NOTES:

1. ALTERNATE 1 SCOPE INCLUDES ALL WORK SHOWN IN THE PLANS.
2. ALTERNATE 2 SCOPE INCLUDES ALL WORK SHOWN IN THE PLANS FROM BASELINE "RW 6-24" STA 9+00.00 TO STA 33+18.00 UNLESS OTHERWISE NOTED.
3. ALTERNATE 3 SCOPE INCLUDES ALL WORK SHOWN IN THE PLANS FROM BASELINE "RW 6-24" STA 9+00.00 TO STA 27+25.00 UNLESS OTHERWISE NOTED.
4. THE CONTRACTOR IS REQUIRED TO BID ALTERNATE 1, ALTERNATE 2 AND ALTERNATE 3.
5. THE QUANTITIES SHOWN FOR EACH ALTERNATE ARE INDEPENDENT; I.E. EACH ALTERNATE SHALL STAND ALONE AS AN INDIVIDUAL PROJECT. ONLY ONE (1) ALTERNATE WILL BE AWARDED.
6. THE OWNER RESERVES THE RIGHT TO AWARD ALTERNATE 1, ALTERNATE 2, ALTERNATE 3, OR TO REJECT ALL BIDS AND READVERTISE.
7. THE LOW BIDDER FOR EACH ALTERNATE SHALL BE CONSIDERED THE LOWEST RESPONSIVE AND RESPONSIBLE BIDDER ON EACH ALTERNATE.
8. THE OWNER RESERVES THE RIGHT TO AWARD THE PROJECT WHICH IS IN THE BEST INTEREST OF THE OWNER.
9. IF ALTERNATE 1 IS AWARDED, IT WILL BE COMPLETED OVER TWO YEARS. THE SPLIT BETWEEN THE YEARS WILL BE BASED ON THE FUNDING AVAILABLE AND SEPARATE NOTICE TO PROCEEDS WILL BE ISSUED EACH YEAR. NO WORK WILL BE PERMITTED TO BEGIN ON ANY YEAR 2 WORK UNTIL FUNDING HAS BEEN SECURED. WORK WILL BE ROUGHLY SPLIT EVENLY BETWEEN THE TWO YEARS. FAA ANTICIPATES PROVIDE ABOUT 55% OF PROJECT FUNDING IN FY 2026 AND THE REMAINING 45% IN FY 2027.

ALTERNATE 1 - FUNDING AVAILABILITY

BY SUBMITTING A BID, BIDDER ACKNOWLEDGES AND AGREES THAT:

1. THE CONTRACT FOR ALTERNATE 1 IS SUBJECT TO AND CONDITIONED UPON AWARD OF MULTIPLE GRANTS TO THE OWNER BY THE FEDERAL AVIATION ADMINISTRATION (FAA) TO BE AWARDED ON SEPARATE TIMELINES AND FISCAL YEARS.
2. THE OWNER SPECIFICALLY RETAINS THE RIGHT TO CANCEL AND TERMINATE WITHOUT PREJUDICE THE YEAR 2 PORTION OF THE ALTERNATE 1 CONTRACT IN THE EVENT THE OWNER IS NOT AWARDED FY 2027 GRANT FUNDS SUFFICIENT TO FUND YEAR 2 COSTS, AS DETERMINED IN THE SOLE AND EXCLUSIVE DISCRETION OF THE OWNER. THE OWNER SHALL NOTIFY THE CONTRACTOR OF SUCH CANCELLATION BY SEPTEMBER 30, 2027.
3. IF YEAR 2 OF THE ALTERNATE 1 CONTRACT IS CANCELLED, THE CONTRACTOR SHALL BE DUE NO FURTHER PAYMENT, AND THE OWNER SHALL NOT BE LIABLE TO CONTRACTOR FOR ANY PAYMENT, DAMAGES, LOST PROFITS, CLAIMS, OR COSTS OF ANY KIND BASED ON SUCH CANCELLATION OR STOP WORK ORDER.

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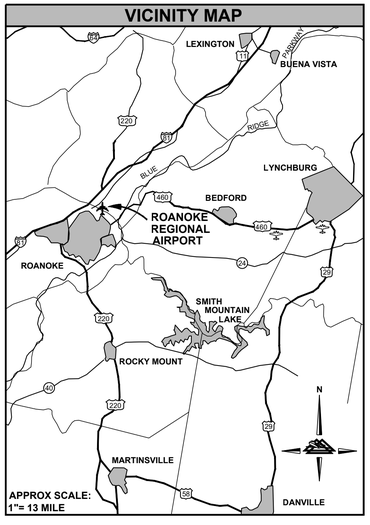
VICINITY MAP



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AS-BID

FOR BIDDING PURPOSES
DO NOT USE FOR CONSTRUCTION
CONFORMED DOCUMENTS WILL BE ISSUED SEPARATELY FOR CONSTRUCTION

MAY 2026

NO.	REVISIONS	BY	APP.	DATE

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phone: (804) 275-8301
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DELTA AIRPORT CONSULTANTS, INC.

DOUGLAS E. SANDER
Lic. No. 034088
Digitally signed by Douglas E Sander
Date: 2026.05.20 13:43:56 -04'00'

WILLIAM M. ESCHENFELDER
Lic. No. 045144
Digitally signed by William M. Eschenfelder
Date: 2026.05.19 08:36:10-04'00'

REHABILITATE RUNWAY 6-24	AIP NO. 3-51-0045-074-2025		JOB NO. 24072
COVER SHEET	DRAWN BY: RAS		SHEET 1
	DESIGNED BY: WME/SRS		OF 58
ROANOKE-BLACKSBURG REGIONAL AIRPORT	SCALE: NONE	DATE: MAY 2026	

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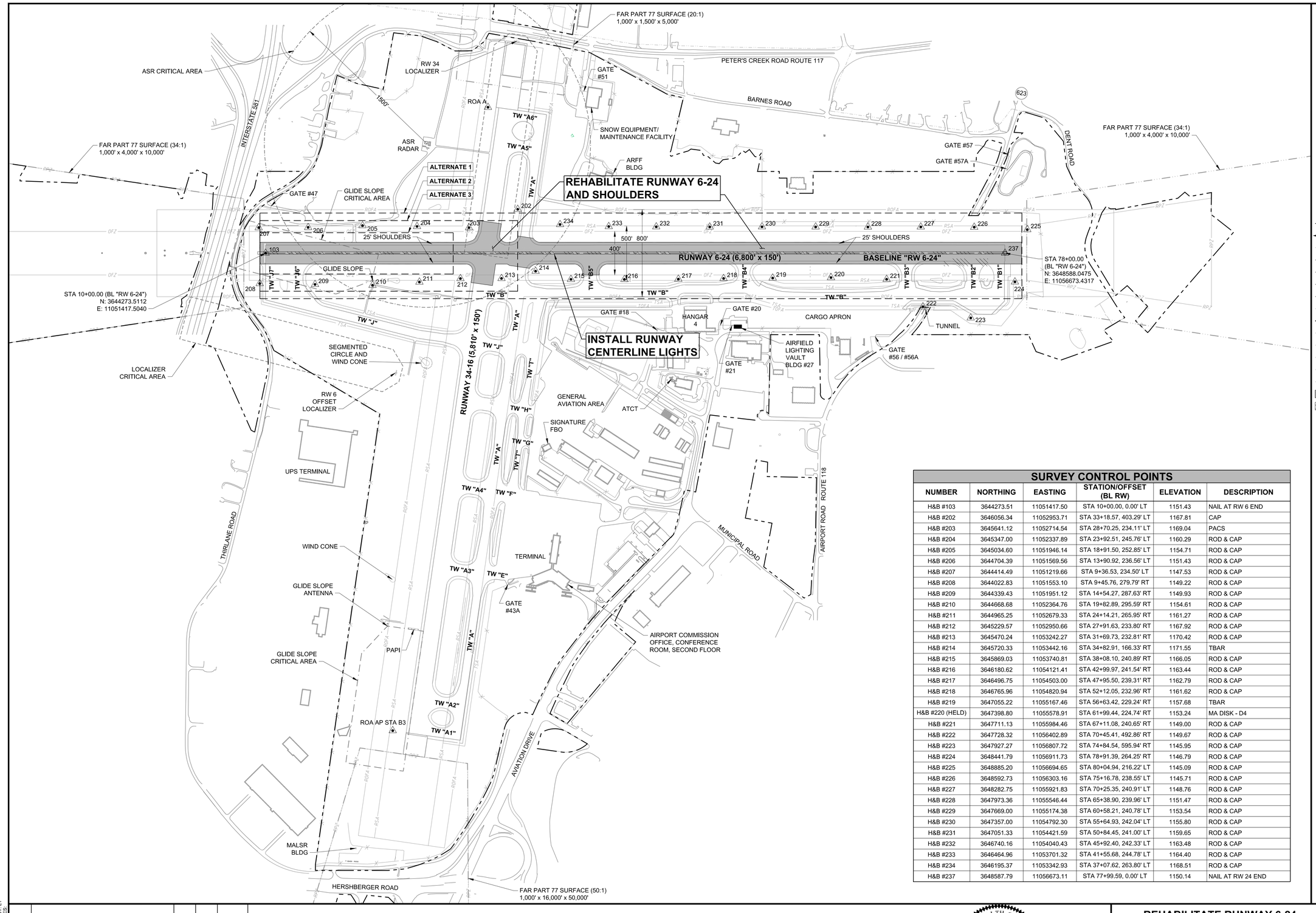

LEGEND

- 2XX — SURVEY CONTROL POINT LOCATION
- CEP — CONTRACTOR EMPLOYEE PARKING
- CSA — CONTRACTOR STAGING AREA
- EFO — ENGINEER'S FIELD OFFICE
- WORK AREA LIMITS
- HAUL ROUTE (TWO-WAY TRAFFIC)
- EXISTING FENCE
- EXISTING GLIDE SLOPE CRITICAL AREA
- EXISTING LOCALIZER CRITICAL AREA
- EXISTING ASR RADAR CRITICAL AREA
- EXISTING PART 77 APPROACH SURFACE
- EXISTING OBSTACLE FREE ZONE
- EXISTING AIRPORT PROPERTY LINE
- EXISTING RUNWAY OBJECT FREE AREA
- EXISTING RUNWAY PROTECTION ZONE
- EXISTING RUNWAY SAFETY AREA
- EXISTING TAXIWAY OBJECT FREE AREA
- EXISTING TAXIWAY SAFETY AREA
- PROPOSED CONSTRUCTION
- RUNWAY CENTERLINE LIGHT INSTALLATION

SURVEY CONTROL POINTS

NUMBER	NORTHING	EASTING	STATION/OFFSET (BL RW)	ELEVATION	DESCRIPTION
H&B #103	3644273.51	11051417.50	STA 10+00.00, 0.00' LT	1151.43	NAIL AT RW 6 END
H&B #202	3646056.34	11052953.71	STA 33+18.57, 403.29' LT	1167.81	CAP
H&B #203	3645641.12	11052714.54	STA 28+70.25, 234.11' LT	1169.04	PACS
H&B #204	3645347.00	11052337.89	STA 23+92.51, 245.76' LT	1160.29	ROD & CAP
H&B #205	3645034.60	11051946.14	STA 18+91.50, 252.85' LT	1154.71	ROD & CAP
H&B #206	3644704.39	11051569.56	STA 13+90.92, 236.56' LT	1151.43	ROD & CAP
H&B #207	3644414.49	11051219.66	STA 9+36.53, 234.50' LT	1147.53	ROD & CAP
H&B #208	3644022.83	11051553.10	STA 9+45.76, 279.79' RT	1149.22	ROD & CAP
H&B #209	3644339.43	11051951.12	STA 14+54.27, 287.63' RT	1149.93	ROD & CAP
H&B #210	3644668.68	11052364.76	STA 19+82.89, 295.59' RT	1154.61	ROD & CAP
H&B #211	3644965.25	11052679.33	STA 24+14.21, 265.95' RT	1161.27	ROD & CAP
H&B #212	3645229.57	11052950.66	STA 27+91.63, 233.80' RT	1167.92	ROD & CAP
H&B #213	3645470.24	11053242.27	STA 31+69.73, 232.81' RT	1170.42	ROD & CAP
H&B #214	3645720.33	11053442.16	STA 34+82.91, 166.33' RT	1171.55	TBAR
H&B #215	3645869.03	11053740.81	STA 38+08.10, 240.89' RT	1166.05	ROD & CAP
H&B #216	3646180.62	11054121.41	STA 42+99.97, 241.54' RT	1163.44	ROD & CAP
H&B #217	3646496.75	11054503.00	STA 47+95.50, 239.31' RT	1162.79	ROD & CAP
H&B #218	3646765.96	11054820.94	STA 52+12.05, 232.96' RT	1161.62	ROD & CAP
H&B #219	3647055.22	11055167.46	STA 56+63.42, 229.24' RT	1157.68	TBAR
H&B #220 (HELD)	3647398.80	11055578.91	STA 61+99.44, 224.74' RT	1153.24	MA DISK - D4
H&B #221	3647711.13	11055984.46	STA 67+11.08, 240.65' RT	1149.00	ROD & CAP
H&B #222	3647728.32	11056402.89	STA 70+45.41, 492.86' RT	1149.67	ROD & CAP
H&B #223	3647927.27	11056807.72	STA 74+84.54, 595.94' RT	1145.95	ROD & CAP
H&B #224	3648441.79	11056911.73	STA 78+91.39, 264.25' RT	1146.79	ROD & CAP
H&B #225	3648885.20	11056694.65	STA 80+04.94, 216.22' LT	1145.09	ROD & CAP
H&B #226	3648592.73	11056303.16	STA 75+16.78, 238.55' LT	1145.71	ROD & CAP
H&B #227	3648282.75	11055921.83	STA 70+25.35, 240.91' LT	1148.76	ROD & CAP
H&B #228	3647973.36	11055546.44	STA 65+38.90, 239.96' LT	1151.47	ROD & CAP
H&B #229	3647669.00	11055174.38	STA 60+58.21, 240.78' LT	1153.54	ROD & CAP
H&B #230	3647357.00	11054792.30	STA 55+64.93, 242.04' LT	1155.80	ROD & CAP
H&B #231	3647051.33	11054421.59	STA 50+84.45, 241.00' LT	1159.65	ROD & CAP
H&B #232	3646740.16	11054040.43	STA 45+92.40, 242.33' LT	1163.48	ROD & CAP
H&B #233	3646464.96	11053701.32	STA 41+55.68, 244.78' LT	1164.40	ROD & CAP
H&B #234	3646195.37	11053342.93	STA 37+07.62, 263.80' LT	1168.51	ROD & CAP
H&B #237	3648587.79	11056673.11	STA 77+99.59, 0.00' LT	1150.14	NAIL AT RW 24 END

NOTE

1. SEE "PHASING LAYOUT" FOR LOCATION OF CONTRACTOR STAGING AREA AND ENGINEER'S FIELD OFFICE.

400 0 400 800
SCALE: 1"=400' FEET

NO.	REVISIONS	BY	APP.	DATE

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DELTA AIRPORT CONSULTANTS, INC.

COMMONWEALTH OF VIRGINIA
WILLIAM M. ESCHENFELDER
Lic. No. 045144
PROFESSIONAL ENGINEER
Digitally signed by William M. Eschenfelder
DN: cn=2026.05.19 08:46-04'00'

REHABILITATE RUNWAY 6-24	AIP NO. 3-51-0045-074-2025		JOB NO. 24072
GENERAL LAYOUT	DRAWN BY: RAS		SHEET 2 OF 58
	DESIGNED BY: WME/SRS		
ROANOKE-BLACKSBURG REGIONAL AIRPORT	SCALE: 1" = 400'	DATE: MAY 2026	

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PROJECT NOTES:

GENERAL:

1. THE PROJECT NOTICE-TO-PROCEED WILL NOT BE ISSUED UNTIL ALL PROJECT FUNDING IS IN-PLACE AND THE CONSTRUCTION CONTRACT HAS BEEN APPROVED AND FULLY EXECUTED BY ALL PARTIES. THE NOTICE-TO-PROCEED IS ANTICIPATED TO BE ISSUED SPRING 2027.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING (INCLUDING PAYMENT OF FEES) ALL BONDS, PERMITS, LICENSES, ETC. REQUIRED BY LOCAL, STATE, AND FEDERAL AGENCIES. THE PERMITS REQUIRED SHALL BE IDENTIFIED AND PROCURED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL COORDINATE WHICH PERMITS ARE REQUIRED WITH THE CITY PUBLIC WORKS DIVISION, STATE SOIL CONSERVATION SERVICE, STATE HIGHWAY ADMINISTRATION, CITY PURCHASING OFFICE, EROSION CONTROL OFFICER, ETC. (NO SEPARATE PAY ITEM).

3. ANY LISTED MANUFACTURER'S EQUIPMENT WILL MEAN THAT LISTED ITEM OR AN APPROVED EQUIVALENT.

4. BORING LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE. BORING INFORMATION WAS PROVIDED BY:

   SCHNABEL ENGINEERING
   1901 SOUTH MAIN STREET, SUITE 11
   BLACKSBURG, VA 24060
   540 953-1239

5. PAVEMENT ASSESSMENT WAS PROVIDED BY:

   APPLIED TECHNOLOGY, INC.
   115 WEST MAIN STREET, SUITE 400
   URBANA, IL 61801
   (217) 398-3977

6. FIELD SURVEY INFORMATION WAS PROVIDED BY:

   H&B SURVEYING AND MAPPING
   614 MOOREFIELD PARK DRIVE
   RICHMOND, VA 23236
   804 330-3781

7. THE OWNER RESERVES THE RIGHT TO CONTRACT AND PERFORM OTHER OR ADDITIONAL WORK ADJACENT TO AND WITHIN THE WORK AREA COVERED BY THIS CONTRACT. WHEN SEPARATE CONTRACTS ARE LET WITHIN THE LIMITS OF ANY ONE PROJECT, EACH CONTRACTOR SHALL CONDUCT THEIR WORK SO AS NOT TO INTERFERE WITH OR HINDER THE PROGRESS OR THE COMPLETION OF THE WORK BEING COMPLETED BY OTHER CONTRACTORS. THE CONTRACTORS WORKING ON THE SAME PROJECT SHALL COOPERATE WITH EACH OTHER AS ORDERED BY THE ENGINEER. ANY ADDITIONAL EFFORT OR WORK REQUIRED FOR SUCH COORDINATION WITH OTHER CONTRACTORS SHALL BE INCIDENTAL TO THE PROJECT AND NO SEPARATE MEASUREMENT OR PAYMENT WILL BE MADE. REFERENCE IS DIRECTED TO SECTION 50-06 OF THE SPECIFICATIONS. IT IS ANTICIPATED THAT OTHER WORK MAY BE COMPLETED BY AN INDEPENDENT CONTRACTOR(S) DURING THE COURSE OF THIS PROJECT.

8. THE APPROXIMATE LOCATION OF THE CONTRACTOR'S STAGING AREA(S) HAVE BEEN SHOWN ON THE PLANS.

9. CONTRACTOR EMPLOYEE(S) ARE PROHIBITED FROM RESIDING AT THE PROJECT SITE, ON AIRPORT PROPERTY, IN THE STAGING AREA, OR ANY OTHER TEMPORARY FACILITY.

10. THIS PROJECT HAS BEEN ENVIRONMENTALLY APPROVED BY THE (FAA, DOAV, ETC) UNDER A CAT EX DATED APRIL 02, 2024.

11. IN ACCORDANCE WITH SECTION 60-05, A RESIDENT PROJECT REPRESENTATIVE'S FIELD OFFICE AND ASSOCIATED EQUIPMENT SHALL BE INSTALLED AT A LOCATION INDICATED ON THE PLANS AND IS INCIDENTAL TO THE COST OF THE PROJECT. THERE WILL BE NO SEPARATE MEASUREMENT OR PAYMENT. THE OWNER WILL PROVIDE ALL RESIDENT PROJECT REPRESENTATIVE SERVICES.

12. THERE ARE PROVISIONS IN THE CONTRACT DOCUMENTS FOR ADJUSTMENT IN CONTRACT TIME DUE TO UNUSUALLY ADVERSE WEATHER CONDITIONS. HOWEVER, THE CONTRACT TIME HAS BEEN ESTABLISHED BASED UPON THE RECEIPT OF NORMAL PRECIPITATION FOR THE PROJECT AREA. REFER TO "CONTRACT TIME EXTENSIONS" OF THE SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION.

13. IN ACCORDANCE WITH SECTION 50-07, THE CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION LAYOUT AND STAKING AND MUST FURNISH STAKES FOR THE LAYOUT AND CONSTRUCTION OF THE WORK AND PRESERVING ALL STAKES AND BENCHMARKS THROUGH THE DURATION OF THE PROJECT.

SECURITY:

14. ALL PERSONNEL WORKING INSIDE THE SECURITY FENCE SHALL HAVE A VALID SECURITY BADGE OR BE UNDER THE DIRECT SUPERVISION (WITHIN APPROXIMATELY 100 FEET) OF A PERSON WITH A BADGE. BACKGROUND EMPLOYMENT HISTORY INFORMATION IS REQUIRED FOR ALL WORKERS WITHIN THE SECURITY FENCE. REFERENCE IS DIRECTED TO THE SPECIAL PROVISIONS OF THE SPECIFICATIONS.

15. THE CONTRACTOR SHALL SUBMIT A SAFETY PLAN COMPLIANCE DOCUMENT (SPCD) IN ACCORDANCE WITH SECTION 80-04.1 "OPERATIONAL SAFETY ON AIRPORT DURING CONSTRUCTION" AND THE SPECIAL PROVISIONS OF THE SPECIFICATIONS.

16. ALL UNBADGED DRIVERS SHALL BE ESCORTED AT ALL TIMES WHEN ON THE AOA SIDE OF THE SECURITY GATE. ALL UNBADGED EMPLOYEES SHALL BE UNDER THE DIRECT SUPERVISION AND WITHIN SIGHT OF A BADGED EMPLOYEE.

17. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL OF ITS EMPLOYEES AND SUBCONTRACTOR EMPLOYEES USE ONLY THE AUTHORIZED ACCESS POINT TO THE PROJECT AND VERIFYING THAT THE ACCESS POINT IS SECURE IMMEADIATELY AFTER USE. GATES THAT FAIL TO SECURE MUST BE IMMEDIATELY REPORTED TO THE ENGINEER OR OWNER.

18. THE AIRPORT IS SUBJECT TO FAA TSA SECURITY REQUIREMENTS AND RIGID ADHERENCE IS MANDATORY.

19. ANY FINES FOR UNAUTHORIZED PERSONNEL ENTERING THROUGH THE CONTRACTOR'S ACCESS POINT WILL BE DEDUCTED FROM MONIES DUE THE CONTRACTOR, UNLESS OTHERWISE NOTED.

20. THE CONTRACTOR SHALL ONLY USE THE HAUL ROUTE(S) INDICATED ON THE PLANS UNLESS OTHERWISE APPROVED BY THE ENGINEER AND OWNER. THE OWNER WILL PROVIDE ACCESS TO THE CONTRACTOR ONLY AFTER THE CONTRACTOR HAS RECEIVED SECURITY TRAINING AND SECURITY CLEARANCE FROM THE OWNER. ALL CONTRACTOR PERSONNEL THAT WILL RECEIVE BADGES SHALL COMPLETE SAFETY AND SECURITY TRAINING AND DRIVER TRAINING PRIOR TO ISSUANCE OF BADGES. TRAINING SESSIONS ARE APPROXIMATELY THREE (3) HOURS IN DURATION AND REQUIRE TWO SEPARATE VISITS.

21. THE CONTRACTOR SHALL MAINTAIN SEPARATION BETWEEN THE AIRSIDE AND NON-SECURE SIDE OF THE AIRPORT AT ALL TIMES. THE PERIMETER FENCE SHALL BE MAINTAINED ON A CONTINUOUS BASIS WITH ANY TEMPORARY OPENING BEING CONTINUOUSLY OBSERVED BY THE CONTRACTOR'S DESIGNATED EMPLOYEE. IF ORDERED BY THE ENGINEER OR OWNER, THE CONTRACTOR MAY BE REQUIRED TO PROVIDE GATE GUARDS. GATE GUARDS ARE INCIDENTAL TO THE COST OF THE PROJECT. ALL TEMPORARY OPENINGS AND CONSTRUCTION GATES SHALL BE SECURED AND LOCKED AT THE COMPLETION OF WORK EACH DAY.

22. ALL CONTRACTOR VEHICLES OPERATING INSIDE THE SECURITY FENCE SHALL BE CLEARLY LABELED WITH THE CONTRACTOR'S COMPANY NAME VISIBLE FROM 200 FEET. COMPANY VEHICLES SHALL BE NUMBERED FOR EASE OF IDENTIFICATION.

OPERATIONS AND PHASING:

23. A 25-FOOT MAXIMUM EQUIPMENT HEIGHT HAS BEEN COORDINATED WITH THE FAA FOR AIRSPACE CLEARANCE. THE CONTRACTOR SHALL SUBMIT AN UPDATED FAA FORM 7460 "NOTICE OF PROPOSED CONSTRUCTION" IF THE CONTRACTOR INTENDS TO USE ANY EQUIPMENT WITH A HEIGHT OVER 25 FEET.

24. THE CONTRACTOR SHALL MARK AND LIGHT AREAS UNDER CONSTRUCTION IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. AIRCRAFT AND PUBLIC SAFETY SHALL NOT BE COMPROMISED, AND PROPER SEPARATION SHALL BE MAINTAINED AT ALL TIMES. REFERENCE IS DIRECTED TO SECTION 80-04.1 "OPERATIONAL SAFETY ON AIRPORT DURING CONSTRUCTION" AND THE SPECIAL PROVISIONS OF THE SPECIFICATIONS. EQUIPMENT AND VEHICLES SHALL BE MARKED WITH YELLOW FLASHING DOME TYPE LIGHTS OR 3' x 3' ORANGE AND WHITE CHECKER FLAGS. YELLOW FLASHING DOME TYPE LIGHTS ARE REQUIRED FOR NIGHTTIME OPERATIONS.

25. ALL CONTRACTOR PERSONNEL SHALL ARRIVE AT THE PROJECT IN COMPANY VEHICLES. ONLY AUTHORIZED VEHICLES WILL BE ALLOWED INSIDE THE SECURITY FENCE. AT THE END OF EACH WORK DAY, THE CONTRACTOR SHALL POSITION ALL EQUIPMENT, TOOLS, MATERIAL, ETC. IN THE APPROVED CONTRACTOR'S STAGING AREA UNLESS OTHERWISE REQUESTED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.

26. THE CONTRACTOR SHALL RELOCATE THE CLOSED MARKERS AND AVIATION BARRICADES DURING THE PROJECT. MULTIPLE RELOCATION OF THE CLOSED MARKERS WILL BE CONSIDERED INCIDENTAL TO THE PROJECT. THE LOCATION OF THE CLOSED MARKERS AND BARRICADES, AS SHOWN ON THE PLANS, REPRESENTS THE MOST TYPICAL LOCATION.

27. THE CONTRACTOR SHALL HAVE AN ADEQUATE NUMBER OF TWO-WAY AVIATION BAND RADIOS ON-SITE AT ALL TIMES AND SHALL BE RESPONSIBLE FOR PROVIDING THE RADIOS. REFERENCE IS DIRECTED TO THE SPECIAL PROVISIONS OF THE SPECIFICATIONS.

    PRIOR TO ENTERING ANY AIR OPERATIONS AREA (AOA) OR SAFETY AREA (AS SHOWN ON PLANS AND IDENTIFIED IN THE SPECIFICATIONS), THE CONTRACTOR SHALL OBTAIN CLEARANCE FROM THE AIR TRAFFIC CONTROL GROUND FREQUENCY (121.9 MHZ). TWO-WAY RADIO COMMUNICATIONS WITH AVIATION BAND RADIOS SHALL BE REQUIRED AT ALL TIMES. NO EQUIPMENT OR PERSONNEL SHALL ENTER AN OPEN RUNWAY OR TAXIWAY SAFETY AREA UNLESS PROPERLY COORDINATED WITH THE CONTROL TOWER. THE USE OF TRAINED FLAGMEN AND TWO-WAY AVIATION BAND RADIOS SHALL BE REQUIRED IN THESE AREAS.

28. RUNWAY AND/OR TAXIWAY LIGHTS SHALL BE DE-ENERGIZED OR PROPERLY COVERED ON CLOSED RUNWAY(S) AND ALL CLOSED SECTIONS OF TAXIWAYS IN A MANNER APPROVED BY THE ENGINEER (NO SEPARATE PAY ITEM). REMOVING THE LAMP FROM ITS FIXTURE IS NOT ALLOWED.

29. UPON NOTIFICATION FROM THE CONTROL TOWER, THE CONTRACTOR SHALL IMMEDIATELY CLEAR THE RUNWAY AND/OR TAXIWAY SAFETY AREAS OF EQUIPMENT AND PERSONNEL IN THE EVENT OF A DECLARED AIRCRAFT EMERGENCY.

HAUL ROUTE:

30. THE CONTRACTOR SHALL INSTALL TEMPORARY CONSTRUCTION ENTRANCES AT ALL LOCATIONS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. SEE THE EROSION AND SEDIMENT CONTROL SHEET FOR DETAILS AND GENERAL PROJECT LAYOUT SHEET. THE CONTRACTOR SHALL MAINTAIN THESE TEMPORARY CONSTRUCTION ENTRANCES SUCH THAT MUD AND DEBRIS ARE NOT TRACKED ONTO OPEN AREAS OF THE AIRCRAFT APRON OR VEHICLE ROADWAYS.

31. ALL CONTRACTOR AND SUBCONTRACTOR PERSONNEL AND EQUIPMENT SHALL USE ONLY THE DESIGNATED HAUL ROUTES FOR INGRESS AND EGRESS TO THE CONSTRUCTION AREA.

32. NO CONTRACTOR TRAFFIC SHALL USE ANY PORTION OF RUNWAY(S), TAXIWAY(S) OR APRON(S) THAT ARE NOT ON THE HAUL ROUTE OR WITHIN THE ACTIVE PROJECT AREA.

33. ANY CONSTRUCTION OR MAINTENANCE NECESSARY, INCLUDING ASSOCIATED LABOR AND MATERIALS, TO PRESERVE THE HAUL ROUTE FOR THE CONTRACTOR'S USE WILL BE CONSIDERED INCIDENTAL PROJECT COSTS AND WILL NOT BE A SEPARATE PAY ITEM.

34. UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL REPAIR ANY PAVEMENTS DAMAGED BY THE CONTRACTOR'S OPERATIONS. NO SEPARATE PAYMENT WILL BE MADE FOR PAVEMENT REPAIR NECESSARY DUE TO CONTRACTOR'S HAULING OPERATIONS.

35. THE CONTRACTOR'S ATTENTION IS ALSO DIRECTED TO THE GENERAL LAYOUT AND PHASING LAYOUT FOR ADDITIONAL INFORMATION.

36. THE CONTRACTOR SHALL BE RESPONSIBLE TO KEEP SIDEWALKS, ROADS, AND OTHER PAVEMENTS CLEAN OF DEBRIS, MUD, AND DUST AT ALL TIMES.

37. 37. ANY PLAN FOR THE MAINTENANCE OF TRAFFIC MUST BE PERMITTED VIA THE CITY'S ROW USE PERMIT PROCESS.

NO.	REVISIONS	BY	APP.	DATE

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DELTA AIRPORT CONSULTANTS, INC.

COMMONWEALTH OF VIRGINIA
WILLIAM M. ESCHENFELDER
Lic. No. 045144
PROFESSIONAL ENGINEER
Digitally signed by William M. Eschenfelder
Date: 2026.05.19 08:46:04-04'00'

REHABILITATE RUNWAY 6-24	AIP NO. 3-51-0045-074-2025		JOB NO. 24072
PROJECT NOTES	DRAWN BY: RAS		SHEET 3 OF 58
	DESIGNED BY: WME/SRS		
ROANOKE-BLACKSBURG REGIONAL AIRPORT	SCALE: NONE	DATE: MAY 2026	

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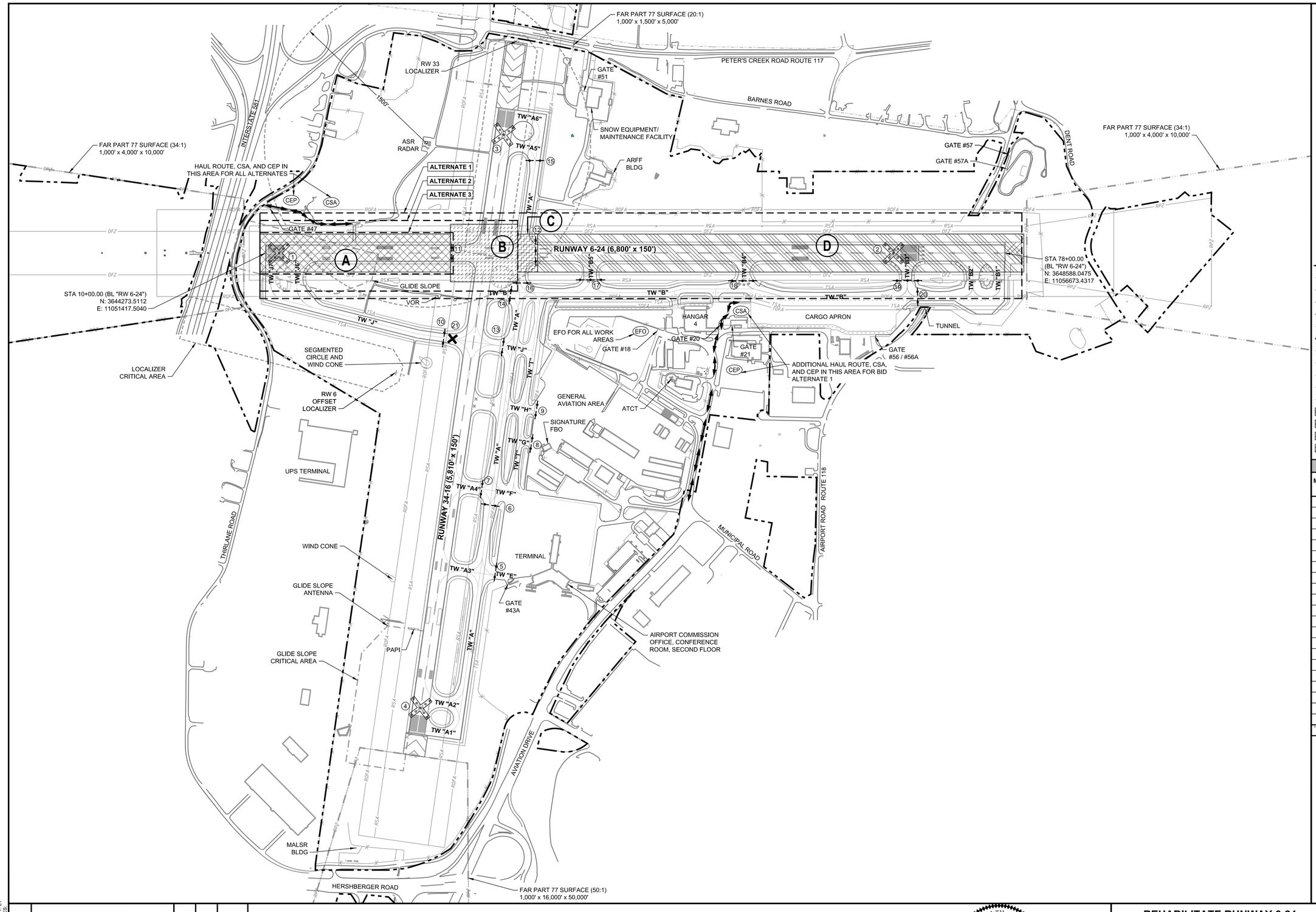

LEGEND

- CLOSED RUNWAY MARKER - MOBILE LIGHTED
- CLOSED TAXIWAY MARKER - LIGHTED
- (X) WORK AREA/PHASE LABEL
- (X) CLOSED RUNWAY/TAXIWAY MARKER LABEL
- (CEP) CONTRACTOR EMPLOYEE PARKING
- (CSA) CONTRACTOR STAGING AREA
- (EFO) ENGINEER'S FIELD OFFICE
- HAUL ROUTE (TWO-WAY TRAFFIC)
- EXISTING FENCE
- EXISTING GLIDE SLOPE CRITICAL AREA
- EXISTING LOCALIZER CRITICAL AREA
- EXISTING PART 77 APPROACH SURFACE
- OFZ — EXISTING OBSTACLE FREE ZONE
- EXISTING AIRPORT PROPERTY LINE
- ROFA — EXISTING RUNWAY OBJECT FREE AREA
- RPZ — EXISTING RUNWAY PROTECTION ZONE
- RSA — EXISTING RUNWAY SAFETY AREA
- TOFA — EXISTING TAXIWAY OBJECT FREE AREA
- TSA — EXISTING TAXIWAY SAFETY AREA
- WORK AREA A
- WORK AREA B
- WORK AREA C
- WORK AREA D

CLOSED MARKER SCHEDULE

MARKER #	TYPE	IN PLACE DURING WORK IN PHASE/AREA: A	B	C	D
1	CLOSED RUNWAY	X	X	X	X
2	CLOSED RUNWAY	X	X	X	X
3	CLOSED RUNWAY		X		
4	CLOSED RUNWAY		X		
5	AVIATION BARRICADES		X		
6	AVIATION BARRICADES		X		
7	AVIATION BARRICADES		X		
8	AVIATION BARRICADES		X		
9	AVIATION BARRICADES		X		
10	AVIATION BARRICADES	X	X	X	X
11	AVIATION BARRICADES	X		X	X
12	AVIATION BARRICADES	X		X	X
13	AVIATION BARRICADES		X		
14	AVIATION BARRICADES		X		
15	AVIATION BARRICADES			X	
16	AVIATION BARRICADES		X	X	
17	AVIATION BARRICADES	X	X	X	X
18	AVIATION BARRICADES	X	X	X	X
19	AVIATION BARRICADES	X	X	X	X
20	AVIATION BARRICADES	X	X	X	X
21	CLOSED TAXIWAY	X	X	X	X

* - CLOSED RUNWAY MARKERS TO BE INSTALLED BY OWNER.

NOTES

1. REFER TO "GENERAL LAYOUT" FOR BENCHMARK SCHEDULE.
2. ALL MARKERS AND BARRICADES SHALL BE IN-PLACE DURING THE PROJECT UNLESS OTHERWISE NOTED.

400 0 400 800
SCALE: 1"=400' FEET

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WILLIAM M. ESCHENFELDER
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PROFESSIONAL ENGINEER
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DN: cn=2026.05.19 08:50-04'00'

REHABILITATE RUNWAY 6-24	AIP NO. 3-51-0045-074-2025		JOB NO. 24072
PHASING LAYOUT	DRAWN BY: RAS		SHEET 4 OF 58
	DESIGNED BY: WME/SRS		
ROANOKE-BLACKSBURG REGIONAL AIRPORT	SCALE: 1" = 400'	DATE: MAY 2026	

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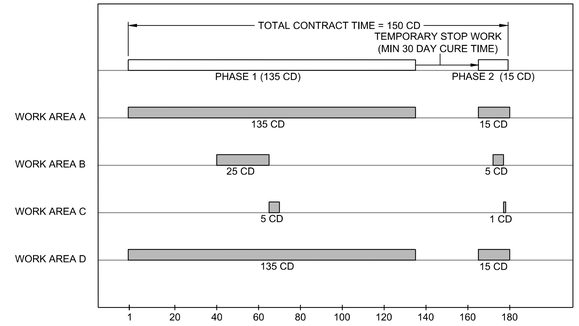
REHABILITATE RUNWAY 6-24

WORK AREAS	AOA CLOSURES	CLOSURE PERIOD	MILESTONE TIME (NIGHTS)			LIQUIDATED DAMAGES
			ALT 1 - YEAR 1	ALT 1 - YEAR 2	ALT 2 AND ALT 3	
PHASE 1: RUNWAY REHABILITATION, CENTERLINE LIGHTS, AND INITIAL MARKING 135 CD						
WORK AREA A	RUNWAY 6-24 TAXIWAY J TAXIWAY J7 TAXIWAY J6 TAXIWAY B5 TAXIWAY B4 TAXIWAY B3 TAXIWAY B2 TAXIWAY B1 PARTIAL CLOSURE OF TAXIWAY B	10:00 PM TO 6:00 AM DAILY	NONE	NONE	NONE	**EXCEED MILESTONE TIME OR PHASE DURATION:** $3,000 /CD **LATE OPENING (EXCEED CLOSURE PERIOD):** $2,000 FIRST 15 MINUTES; $3,000 SECOND 15 MINUTES; $5,000 EACH SUCCESSIVE 15 MINUTES; NO CAP
WORK AREA B	RUNWAYS 6-24 AND 16-34 CLOSED AIRCRAFT OPERATIONS LIMITED TO APRONS AND GROUND REPOSITION MOVEMENTS	1:00 AM TO 5:00 AM DAILY	25 NIGHTS	25 NIGHTS	25 NIGHTS	
WORK AREA C	RUNWAY 6-24 TAXIWAY J TAXIWAY J7 TAXIWAY J6 TAXIWAY B5 TAXIWAY B4 TAXIWAY B3 TAXIWAY B2 TAXIWAY B1 PARTIAL CLOSURE OF TAXIWAY B	10:00 PM TO 6:00 AM DAILY	5 NIGHTS	5 NIGHTS	5 NIGHTS	
WORK AREA D	RUNWAY 6-24 TAXIWAY J TAXIWAY J7 TAXIWAY J6 TAXIWAY B5 TAXIWAY B4 TAXIWAY B3 TAXIWAY B2 TAXIWAY B1 PARTIAL CLOSURE OF TAXIWAY B	10:00 PM TO 6:00 AM DAILY	NONE	NONE	NONE	
PHASE 2: FINAL MARKINGS AND GROOVING 15 CD						
WORK AREA A	PHASE 2 AOA CLOSURE SHALL BE COORDINATED WITH THE OWNER	10:00 PM TO 6:00 AM DAILY	NONE	NONE	NONE	**EXCEED MILESTONE TIME OR PHASE DURATION:** $3,000 /CD **LATE OPENING (EXCEED CLOSURE PERIOD):** $2,000 FIRST 15 MINUTES; $3,000 SECOND 15 MINUTES; $5,000 EACH SUCCESSIVE 15 MINUTES; NO CAP
WORK AREA B		1:00 AM TO 5:00 AM DAILY	5 NIGHTS	5 NIGHTS	5 NIGHTS	
WORK AREA C		10:00 PM TO 6:00 AM DAILY	1 NIGHT	1 NIGHT	1 NIGHT	
WORK AREA D		10:00 PM TO 6:00 AM DAILY	NONE	NONE	NONE	

NOTES:

1. DE-ENERGIZE LIGHTS ON AFFECTED RUNWAY AND TAXIWAY SEGMENTS, COORDINATE WITH OWNER AND ENGINEER.
2. THE TOTAL CONTRACT TIME FOR ALTERNATE 1 IS 300 CALENDAR DAYS. THE TOTAL CONTRACT TIME FOR ALTERNATES 2 AND 3 IS 150 CALENDAR DAYS.
3. AIRLINE FLIGHT SCHEDULES ARE BEING TEMPORARILY REVISED FOR THIS PROJECT. IF CONTRACT TIME IS EXTENDED, ALL WORK MUST BE COMPLETE BETWEEN 1:00 AM AND 5:00 AM OUTSIDE OF SCHEDULED SERVICE.
4. LIQUIDATED DAMAGES WILL BE ASSESSED ON A CALENDAR DAY BASIS FOR EXCEEDING THE ALLOWABLE TIME FOR A PHASE OR MILESTONE AND ON A PER MINUTE BASIS FOR KEEPING THE RUNWAY CLOSED FOR BEYOND THE ALLOTTED CLOSURE PERIOD.



SCHEMATIC PHASING SCHEDULE
ALT 1 (YEAR 1 OR 2), ALT 2 & ALT 3

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SCHEMATIC PHASING SCHEDULES	DRAWN BY: RAS		SHEET 5 OF 58
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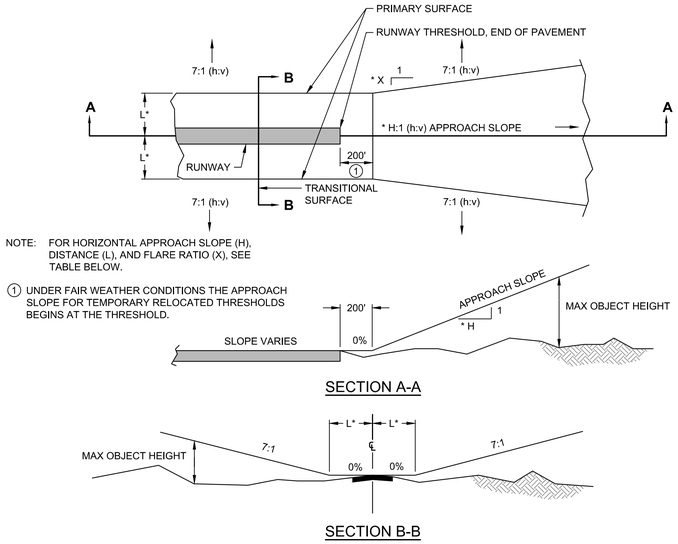


NOTE: FOR HORIZONTAL APPROACH SLOPE (H), DISTANCE (L), AND FLARE RATIO (X), SEE TABLE BELOW.

(1) UNDER FAIR WEATHER CONDITIONS THE APPROACH SLOPE FOR TEMPORARY RELOCATED THRESHOLDS BEGINS AT THE THRESHOLD.

SECTION A-A

SECTION B-B

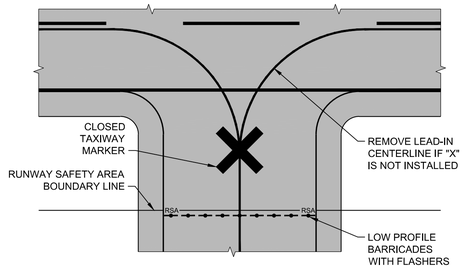
FAR PART 77 IMAGINARY SURFACES

NTS

NOTE:

1. ANY EQUIPMENT OR OBJECTS PENETRATING THE PART 77 IMAGINARY SURFACES SHALL BE COORDINATED, IN ADVANCE, WITH THE ENGINEER. OBSTRUCTIONS PENETRATING THE PART 77 SURFACES SHALL BE MARKED AND/OR LIGHTED IN ACCORDANCE WITH FAA GUIDELINES.

RUNWAY	APPROACH SLOPE (H)	L	X
6	34	500	0.15
16	20	500	0.10
24	34	500	0.15
34	50	500	0.15

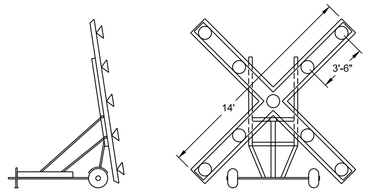


CLOSED TAXIWAY AT RUNWAY DETAIL

NTS

NOTES:

1. LOW PROFILE BARRICADES SHALL BE COMMERCIALLY MANUFACTURED FOR SPECIFIC USE ON AIRPORTS.
2. BARRICADES SHALL BE LOCATED OUTSIDE OF ALL SAFETY AREAS.
3. BARRICADES TO BE USED IN CONJUNCTION WITH COVERING, REMOVAL OF LIGHTS, SIGN PANELS AND OTHER AIRFIELD FEATURES RELATED TO THE TEMPORARY CLOSURE OF TAXIWAYS.
4. FOR EXTENDED CLOSURE PERIODS, PAINT OVER TAXIWAY CENTERLINES TO CLOSED TAXIWAY WITH FLAT BLACK PAINT. REMOVE BLACK PAINT AND REMARK IN ACCORDANCE WITH FAA SPECIFICATION P-620.
5. CLOSED "X" SHALL BE LOCATED MIDWAY BETWEEN RSA AND RUNWAY EDGE.
6. CLOSED "X" SHALL BE SECURED WITH SAND FILLED SOCKS, SAND BAGS, OR OTHER APPROVED MATERIALS. SECURING MATERIALS SHALL NOT EXCEED 3" IN HEIGHT (ABOVE THE GROUND) IN ACCORDANCE WITH RUNWAY SAFETY AREA (RSA) STANDARDS. SECURING MATERIALS SHALL BE THE SAME COLOR AS THE MARKER (CLOSED "X").
7. CONTRACTOR SHALL MAKE FREQUENT INSPECTION OF BARRICADES AND "X's". AT A MINIMUM, INSPECTIONS SHALL OCCUR AT THE BEGINNING AND END OF EACH WORK PERIOD. CONTRACTOR SHALL IMMEDIATELY REPAIR/REPLACE "X", BARRICADES AND/OR ANY ANCHOR DEVICES THAT HAVE BEEN MOVED OR DAMAGED.

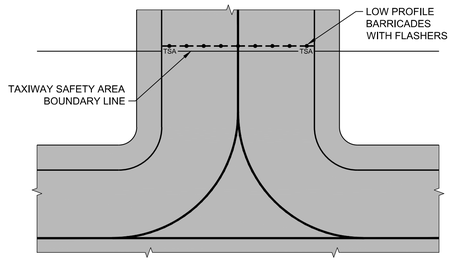


PORTABLE LIGHTED CLOSED RUNWAY MARKER DETAIL (CONTRACTOR FURNISHED)

NTS

NOTES:

1. CLOSED MARKERS SHALL BE INSTALLED AS THE FIRST ITEM OF WORK. APPROVAL FROM THE OWNER AND CLEARANCE FROM THE ATCT IS REQUIRED TO ENTER THE RSA. THE OWNER WILL ISSUE A NOTAM FOR THE CLOSURE AND PROVIDE NOTICE WHEN THE MARKER CAN BE INSTALLED.
2. THE CONTRACTOR SHALL PROVIDE LIGHTED CLOSED MARKERS MEETING THE REQUIREMENTS OF ITEM M-103, FAA AC 150/5345-55 (LATEST EDITION), AND IN GENERAL CONFORMANCE WITH THIS DETAIL.
3. THE MARKERS SHALL BE A PORTABLE UNIT THAT CAN BE QUICKLY TOWED TO AND FROM THE RUNWAY BY A STANDARD MEDIUM DUTY PICKUP TRUCK.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RELOCATING THE MARKERS AS DICTATED BY PROJECT PHASING. THE CONTRACTOR SHALL MAKE FREQUENT INSPECTION OF THE MARKERS AND MAKE PROMPT REPAIRS AS NECESSARY.
5. THE LIGHTED CLOSED MARKER SHALL BE ILLUMINATED AT ALL TIMES THAT IT IS PLACED IN POSITION ON THE RUNWAY.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE AND USAGE COSTS (FUEL, BULBS, ETC.) FOR THE PROJECT DURATION.

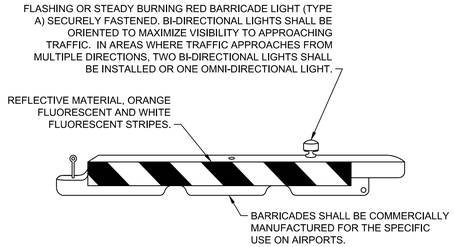


CLOSED TAXIWAY AT TAXIWAY DETAIL

NTS

NOTES:

1. LOW PROFILE BARRICADES SHALL BE COMMERCIALLY MANUFACTURED FOR SPECIFIC USE ON AIRPORTS.
2. BARRICADES SHALL BE LOCATED OUTSIDE OF ALL SAFETY AREAS.
3. BARRICADES TO BE USED IN CONJUNCTION WITH COVERING, REMOVAL OF LIGHTS, SIGN PANELS AND OTHER AIRFIELD FEATURES RELATED TO THE TEMPORARY CLOSURE OF TAXIWAYS.
4. FOR EXTENDED CLOSURE PERIODS, PAINT OVER TAXIWAY CENTERLINES TO CLOSED TAXIWAY WITH FLAT BLACK PAINT. REMOVE BLACK PAINT AND REMARK IN ACCORDANCE WITH FAA SPECIFICATION P-620.
5. CONTRACTOR SHALL MAKE FREQUENT INSPECTIONS OF BARRICADES. AT A MINIMUM, THE CONTRACTOR SHALL INSPECT AT THE BEGINNING AND ENDING OF EACH WORK SHIFT. CONTRACTOR SHALL IMMEDIATELY REPAIR/REPLACE BARRICADES THAT HAVE BEEN MOVED OR DAMAGED.



WATER FILLED AVIATION BARRICADE DETAIL

NTS

(LOW PROFILE)

NOTES:

1. BARRICADES SHALL BE SPACED A MAXIMUM OF 4' APART, EXCEPT AT VEHICLE ACCESS/ARFF ACCESS POINTS WHERE A 15' GAP IS ALLOWED.
2. BARRICADES SHALL BE COMMERCIALLY MADE IN LENGTHS OF 6' OR 8'.
3. BARRICADES SHALL BE FILLED WITH WATER TO ADEQUATELY WITHSTAND HIGH WINDS AND/OR JET BLAST.
4. THE CONTRACTOR SHALL MAKE FREQUENT INSPECTION OF THE BARRICADES AND MAKE PROMPT REPAIRS AS NECESSARY.
5. RELOCATIONS AND MULTIPLE SETUPS AND REMOVALS OF THE AVIATION BARRICADES SHALL BE INCIDENTAL TO THE UNIT COST WHEREIN NO SEPARATE PAYMENT WILL BE MADE.

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CONSTRUCTION NOTES:

GENERAL:

1. THE CONTRACTOR SHALL LOCATE AND PROTECT EXISTING UTILITIES AND FACILITIES (I.E., AIRPORT LIGHTING, NAVAIDS, ETC.) FROM DAMAGE BY EQUIPMENT OR PERSONNEL. THE CONTRACTOR SHALL CONTACT ALL UTILITY AND FACILITY AGENCIES FOR FIELD MARKING PRIOR TO BEGINNING CONSTRUCTION. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. ALL UTILITIES AND FACILITIES ARE NOT NECESSARILY SHOWN. THE CONTRACTOR SHALL ADVISE THE ENGINEER, IN WRITING, OF ANY EXISTING DAMAGED UTILITIES PRIOR TO BEGINNING CONSTRUCTION.

   ANY UTILITIES OR FACILITIES DAMAGED DURING THE PROJECT BY THE CONTRACTOR'S MEN OR EQUIPMENT SHALL BE PROMPTLY REPAIRED AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL HAND DIG WHEN WITHIN FIVE (5) FEET OF ANY KNOWN OR SUSPECTED UNDERGROUND UTILITY.

2. ALL STATIONS AND OFFSETS ARE APPROXIMATE AND SHALL BE CONFIRMED IN THE FIELD BY THE CONTRACTOR.

3. THE CONTRACTOR SHALL FIELD STAKE ALL FIXTURES OR PERMANENT ITEMS FOR ACCEPTANCE BY THE ENGINEER PRIOR TO INSTALLATION. ANY DISCREPANCIES IN THE ALIGNMENT LOCATION SHALL BE RESOLVED WITH THE ENGINEER PRIOR TO INSTALLATION.

4. THE CONTRACTOR SHALL PROTECT EXISTING AIRFIELD LIGHTING FIXTURES TO REMAIN FROM DAMAGE DURING CONSTRUCTION. AN INVENTORY OF EXISTING FIXTURES SHALL BE COMPLETED PRIOR TO THE START OF WORK WITH THE ENGINEER AND/OR OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF REPLACEMENT OF ANY FIXTURES DAMAGED BY THEIR OPERATIONS. SEE SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION.

5. ALL DISTURBED AREAS, INCLUDING THE CONTRACTORS STAGING AREA, HAUL ROUTES, ETC. SHALL BE RESTORED TO A SMOOTH LINE AND GRADE WITH POSITIVE DRAINAGE. THE CONTRACTOR SHALL SEED AND MULCH ALL DISTURBED AREAS. THERE WILL BE NO MEASUREMENT FOR PAYMENT OF SEEDING AND MULCHING REQUIRED OUTSIDE THE GRADING LIMITS, APPROVED STOCKPILE LIMITS, OR APPROVED HAUL LIMITS.

6. ALL BROKEN CONCRETE, ASPHALT, ETC. SHALL BE DISPOSED OF OFFSITE BY THE CONTRACTOR IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL GUIDELINES.

7. THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE FOR THE COMPLETE DURATION OF THE PROJECT. THE DRAINAGE CONVEYANCES, INCLUDING TEMPORARY, SHALL BE OF EQUAL OR GREATER CAPACITY OF THE EXISTING DRAINAGE CONVEYANCES. THIS MAY REQUIRE TEMPORARY DITCHES, STRUCTURES OR PIPES, WHICH WILL BE INCIDENTAL TO THE PROJECT.

8. THE CONTRACTOR IS ADVISED THAT AIRCRAFT OPERATIONS ARE CONDUCTED ADJACENT TO THE PROJECT. SPECIAL ATTENTION TO DUST CONTROL WILL BE REQUIRED DURING THE DURATION OF THE PROJECT. THE USE OF WATER SHALL BE ANTICIPATED. THE ENGINEER RESERVES THE RIGHT TO HALT WORK OR HAULING IN NON-CONFORMING AREAS, IF DUST CONTROL ACTIONS ARE NOT PROMPTLY TAKEN BY THE CONTRACTOR.

9. NO DEBRIS OF ANY NATURE IS ALLOWED IN ACTIVE AIRCRAFT OPERATIONS AREAS. ALL LOOSE MATERIALS (DIRT, STONE, PAVEMENT, FORMING, ETC.) MUST BE KEPT WITHIN THE LIMITS OF CONSTRUCTION. WHEN THE CONSTRUCTION BARRIERS ARE MOVED DURING CONSTRUCTION, THE CLEANUP OF THE AREAS OUTSIDE THE BARRIERS SHALL OCCUR IMMEDIATELY. IN ADDITION, NO LOOSE MATERIALS THAT COULD BLOW INTO AIRCRAFT OPERATIONS AREAS ARE ALLOWED IN THE CONSTRUCTION AREA.

10. CONTRACTORS ARE ENCOURAGED TO EXAMINE THE SITE TO VERIFY FIELD CONDITIONS BEFORE SUBMITTING BIDS. NO ADDITIONAL COMPENSATION WILL BE MADE FOR ADVERSE FIELD CONDITIONS.

11. THE CONTRACTOR SHALL FURNISH APPROPRIATE ARTIFICIAL LIGHTING NECESSARY FOR NIGHTTIME OPERATIONS. THE LIGHTING SHALL BE ADEQUATE TO SAFELY COMPLETE THE WORK BEING PERFORMED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. IN ADDITION TO EQUIPMENT MOUNTED LIGHTS, THE LIGHTING SHALL BE IN THE FORM OF PORTABLE FLOODLIGHT UNITS, EACH WITH A MINIMUM CAPACITY OF 3,000-WATT ELECTRICAL BEAMS. LIGHTING SHALL BE DIRECTED OR SHADED TO PREVENT INTERFERENCE WITH AIRCRAFT, THE AIR TRAFFIC CONTROL TOWER, AND OTHER AIRPORT OPERATIONS. THE CONTRACTOR SHALL REORIENT LIGHTS AS ORDERED BY THE AIR TRAFFIC CONTROL TOWER, ENGINEER, AND/OR OWNER.

12. THE CONTRACTOR SHALL HAVE A FULLY OPERATIONAL VACUUM TRUCK AVAILABLE FOR CLEANING AREAS OF POTENTIAL FOD/DEBRIS. VACUUM TRUCKS SHALL BE IN GOOD WORKING ORDER AND ANY SWEEPING ELEMENTS SHALL BE MADE OF NON-WIRE BRISTLES (WIRED BRISTLES TEND TO BREAK AND BECOME FOD). SWEEPER VEHICLES SHALL BE AT ANY ACTIVE RUNWAY OR TAXIWAY CROSSING DURING WORK HOURS (NO SEPARATE PAY ITEM). A SPARE VACUUM TRUCK SHALL BE ON SITE OR AVALIABLE WITHIN THE HOUR.

13. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING A “GOOD STAND OF GRASS WITH REGARD TO COLOR AND DENSITY”. NO ADDITIONAL COMPENSATION WILL BE MADE FOR OVERSEEDING AREAS THAT YIELD A SPARSE COVER FROM THE INITIAL SEEDING.

14. THE CONTRACTOR IS RESPONSIBLE FOR MOWING OF GRASS WITHIN THE PROJECT AREAS UNTIL SUBSTANTIAL COMPLETION AND ALL OBSTACLES TO MOWING ARE REMOVED. GRASS MUST BE MAINTAINED BETWEEN 7 TO 14 INCHES IN HEIGHT (NO SEPARATE PAY ITEM).

15. THE OWNER WILL PROVIDE THE PERSONNEL TO COMPLETE THE REQUIRED ACCEPTANCE TESTING. HOWEVER, THE CONTRACTOR WILL BE RESPONSIBLE FOR THEIR OWN QUALITY CONTROL TESTING. ACCEPTANCE TESTING WILL NOT BE PERFORMED AS A QUALITY CHECK FOR THE CONTRACTOR. ANY FAILED ACCEPTANCE TEST SHALL BE BILLED TO THE CONTRACTOR. REFERENCE IS DIRECTED TO ITEM C-100 “CONTRACTOR QUALITY CONTROL REQUIREMENTS” AND SPECIAL PROVISION “TESTING GENERAL” OF THE SPECIFICATIONS.

DEMOLITION:

16. ALL ITEMS SHOWN AND LABELED TO BE REMOVED ON THIS PLAN SHALL BE REMOVED UNDER ITEM P-101 “PREPARATION/REMOVAL OF EXISTING PAVEMENTS” OR M-150 “MICELLANEOUS DEMOLITION”.

17. OTHER MINOR ITEMS (I.E. STRUCTURES, CONCRETE PADS, ETC.) THAT MAY BE ENCOUNTERED SHALL BE REMOVED AND CONSIDERED INCIDENTAL TO THE PROJECT.

18. ANY INTERRUPTION TO SERVICE TO ACTIVE LIGHTING CIRCUITS SHALL BE IMMEDIATELY REPAIRED BY THE CONTRACTOR. ANY DAMAGE TO EXISTING AIRPORT CIRCUITS CAUSED BY THE CONTRACTOR'S EQUIPMENT OR PERSONNEL SHALL BE PROMPTLY REPAIRED AT THE CONTRACTOR'S EXPENSE. ALL ACTIVE LIGHTING SYSTEMS FOR OPEN AIRCRAFT OPERATIONAL AREAS SHALL BE OPERABLE FROM DUSK TO DAWN. THE USE OF TEMPORARY CABLES SHALL BE ANTICIPATED IN ORDER TO ACCOMMODATE CONSTRUCTION PHASING (NO SEPARATE PAY ITEM).

19. RESIDUAL MATERIALS FROM THE DEMOLITION WILL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM AIRPORT PROPERTY UNLESS OTHERWISE NOTED. ALL DISPOSALS SHALL BE COMPLETED BY THE CONTRACTOR IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS.

20. ALL EXISTING ELECTRICAL EQUIPMENT REMOVED SHALL BECOME PROPERTY OF THE CONTRACTOR AND REMOVED OFF-SITE.

21. THE LOCATION OF EXISTING DUCTS SHOWN ON PLANS IS APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR.

22. THE CONTRACTOR SHALL MAINTAIN THE EXISTING AIRFIELD LIGHTING SYSTEMS/CIRCUITS FOR OPEN SEGMENTS AT ALL TIMES. THE USE OF TEMPORARY CABLE SHALL BE ANTICIPATED. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN TEMPORARY CABLES AS REQUIRED. ALL COSTS TO PROVIDE AND MAINTAIN THE TEMPORARY CABLES WILL BE CONSIDERED INCIDENTAL TO THE PROJECT (NO SEPARATE PAY ITEM).

23. CLEARING AND GRUBBING OF MISCELLANEOUS VEGETATION ASSOCIATED WITH GRADING, EXCAVATION, AND STOCKPILES WILL BE CONSIDERED INCIDENTAL TO THE PROJECT (NO SEPARATE PAY ITEM).

GENERAL PAVING:

24. IN ACCORDANCE WITH ITEM P-401/P-403, THE CONTRACTOR SHALL PROVIDE APPROPRIATE ARTIFICIAL LIGHTING DURING ANY NIGHTTIME PAVING. A LIGHTING PLAN SHALL BE PREPARED BY THE CONTRACTOR AND SUBMITTED FOR ACCEPTANCE BY THE ENGINEER PRIOR TO THE START OF ANY NIGHTTIME PAVING. THE LIGHTING SHALL BE ADEQUATE TO SAFELY COMPLETE THE WORK BEING PERFORMED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. IN ADDITION TO EQUIPMENT MOUNTED LIGHTS, THE LIGHTING SHALL BE IN THE FORM OF PORTABLE FLOODLIGHT UNITS, EACH WITH A MINIMUM CAPACITY OF 3,000-WATT ELECTRICAL BEAMS. ALL WORK SHALL BE IN ACCORDANCE WITH THE APPROVED CSPP AND LIGHTING PLAN. LIGHTING SHALL BE DIRECTED OR SHADED TO PREVENT INTERFERENCE WITH AIRCRAFT, THE AIR TRAFFIC CONTROL TOWER, AND OTHER AIRPORT OPERATIONS. THE CONTRACTOR SHALL REORIENT LIGHTS AS ORDERED BY THE AIR TRAFFIC CONTROL TOWER, ENGINEER, AND/OR OWNER

25. THE CONTRACTOR SHALL ATTEND A PRE-PAVING CONFERENCE CONDUCTED BY THE ENGINEER PRIOR TO START OF PAVING OPERATIONS. THE PAVING FOREMAN SHALL BE PRESENT AT THE CONFERENCE. THE CONTRACTOR SHALL BE PREPARED TO DISCUSS THE PROPOSED LAYDOWN/PAVING PLAN.

26. THE CONTRACTOR SHALL PROVIDE A LIGHT WEIGHT STRAIGHT EDGE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS. THE STRAIGHT EDGE SHALL HAVE A HANDLE WITH A TWO (2) FOOT HEIGHT. THE CONTRACTOR SHALL PROVIDE AN EMPLOYEE TO ASSIST THE RESIDENT PROJECT REPRESENTATIVE IN CONDUCTING THE STRAIGHT EDGE TEST REQUIRED BY THE TECHNICAL SPECIFICATIONS (NO SEPARATE PAY ITEM).

27. THE CONTRACTOR SHALL PROVIDE A FINISHED PAVEMENT SURFACE FREE OF PONDING WATER. ALL AREAS OF PONDING WATER SHALL BE REPAIRED AS ORDERED BY THE ENGINEER AT NO ADDITIONAL COST TO THE OWNER.

28. FINAL PAVEMENT EDGES SHALL BE STRAIGHT AND NEAT. THIS MAY REQUIRE SAW CUTTING OF FINAL EDGES, PARTICULARLY IN FILLET AREAS. NO ADDITIONAL PAYMENT WILL BE MADE FOR ANY REQUIRED SAW CUTTING.

ASPHALT PAVING:

29. RUNWAY 6-24 SHALL BE PAVED WITH A MAXIMUM OF FIVE (5) COLD JOINTS (SIX (6) LANES). ADDITIONAL COLD JOINTS MAY BE USED ON THE RUNWAY SHOULDER, STUB TAXIWAYS, FILLET WIDENING AND TRANSITION SECTION. A 25-FOOT PAVER OR SMALLER PAVERS PULLED IN TANDEM WITH A HOT JOINT WILL BE REQUIRED. NO MORE THAN THIRTY (30) MINUTES SHALL ELAPSE BETWEEN 2 PAVERS PULLED IN TANDEM FOR A JOINT TO BE CONSIDERED HOT.

30. LONGITUDINAL JOINTS WHICH ARE IRREGULAR, DAMAGED, UNCOMPACTED, OR OTHERWISE DEFECTIVE, OR WHICH HAVE BEEN LEFT EXPOSED FOR MORE THAN 4 HOURS, OR WHOSE SURFACE TEMPERATURE HAS COOLED TO LESS THAN 175 DEGREES SHALL BE CUT BACK BY SAWING OR MILLING A MAXIMUM OF 3 INCHES TO EXPOSE A CLEAN, SOUND VERTICAL SURFACE FOR THE FULL DEPTH OF THE COURSE. REFERENCE IS DIRECTED TO ITEM P-401 OF THE SPECIFICATIONS.

31. THE CONTRACTOR SHALL CONTINUALLY MONITOR THE JOINT BETWEEN PAVING LANES TO ENSURE A GOOD JOINT WITH REGARD TO GRADE, SMOOTHNESS, APPEARANCE, AND DENSITY.

32. THE PAVING SHALL BE ACCOMPLISHED BY USE OF A PAVER WITH AUTOMATIC GRADE CONTROLS, UNLESS OTHERWISE APPROVED BY THE ENGINEER. REFERENCE IS DIRECTED TO ITEM P-401 OF THE SPECIFICATIONS.

33. IN ORDER TO REMOVE ANY SMALL IRREGULARITIES, THE CONTRACTOR WILL BE REQUIRED TO PROVIDE AND USE A 30-FOOT SKI. A SHORT SHOE MAY ONLY BE USED WHEN MATCHING THE EDGE OF AN ADJACENT LIFT.

34. THE CONTRACTOR SHALL HAVE A MILLING MACHINE ON SITE TO ACCOMPLISH THE DAILY TRANSITIONS AND TIE-INS (NO SEPARATE PAY ITEM).

35. THE CONTRACTOR SHALL HAVE A PAINT MACHINE ON SITE FOR DAILY MARKING OF ALL AREAS TO BE RE-OPENED TO AIRCRAFT.

36. THE CONTRACTOR SHALL HAVE AT LEAST ONE (1) SPARE PAVER AND ONE (1) SPARE ROLLER ONSITE AND IN GOOD OPERATING CONDITION DURING WORK WITHIN ALL AREAS THAT MUST REOPEN ON A DAILY BASIS (NO SEPARATE PAY ITEM).

SITE CLEANUP

37. ALL GRADED AREAS SHALL BE ADDRESSED WITH A MECHNICAL ROCKHOUND AFTER THE PLACEMENT OF TOPSOIL AND PRIOR TO THE APPLICATION OF SEED AND MULCH. AN ENGINEER/OWNER WALKOVER OF ALL AREAS WILL BE CONDUCTED AND ANY REQUIRED CORRECTIONS TO GRADE OR SMOOTHNESS, AND REMOVAL OF ROCKS AND/OR FOREIGN DEBRIS SHALL BE COMPLETED BEFORE SEED AND MULCH ARE APPLIED.

38. THE ENGINEER AND/OR OWNER SHALL INSPECT ALL AREAS AFTER SEEDING ANY DEFICIENT AREAS SHALL BE ADDRESSED BY HAND REMOVAL OF OBJECTIONABLE MATERIAL. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO ITEM T-901/8 OF THE SPECIFICATIONS.

39. STAGING AREAS SHALL BE RESTORED TO THEIR PRE-CONSTRUCTION CONDITION WITH A SMOOTH, MOWABLE GRADE WITH POSITIVE DRAINAGE AND A GOOD STAND OF GRASS.

40. AFTER WORK IS COMPLETED, THE CONTRACTOR SHALL REMOVE ALL TOOLS AND OTHER EQUIPMENT, LEAVING THE ENTIRE SITE FREE, CLEAR, AND IN GOOD CONDITION (NO SEPARATE PAY ITEM).

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COMMONWEALTH OF VIRGINIA
WILLIAM M. ESCHENFELDER
Lic. No. 045144
PROFESSIONAL ENGINEER
Digitally signed by William M. Eschenfelder
Date: 2026.05.19 16:36:54-04'00'

MATCHLINE SHEET 9

PROTECT EXISTING HOUSEKEEPING PAD AND REPLACE JOINT SEALANT (NO PAY ITEM)

PROTECT EXISTING RUNWAY EDGE LIGHT (TYP)

NOTE 2

PROTECT EXISTING MANHOLE

BASELINE "RW 6-24"

RUNWAY 6-24 (6,800' x 150')

PROTECT EXISTING IN-PAVEMENT RUNWAY EDGE LIGHT (TYP)

100' (TYP)

NOTE 5

PROTECT EXISTING PULLCAN (TYP)

NOTE 2

PROTECT EXISTING LIGHTS (TYP)

NOTE 2

PROTECT EXISTING MARKING TO REMAIN (TYP)

PROTECT EXISTING RUNWAY EDGE LIGHT (TYP)

PROTECT EXISTING HANDHOLE

PROTECT EXISTING MANHOLE

PROTECT EXISTING REIL

TW "J7"

TW "J6"

SIGN 131

SIGN 115

SIGN 112

SIGN 24-6 STOP SIGN

APPROXIMATE LOCATION OF 15" RCP

15" RCP

INV=1149.68'

INV=1149.86'

24" RCP TO #24MH6

6-24

6-24

200' LT

200' RT

400' RT

RSA

OFZ

ROFA

TSA

FAA

10+00

11+00

12+00

13+00

14+00

15+00

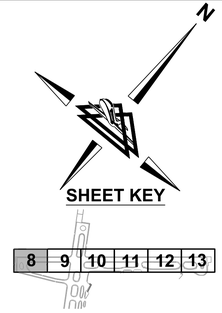
16+00

18+00

19+00

20+00

SHEET KEY



LEGEND

SYMBOL	DESCRIPTION
X	EXISTING ITEM TO BE REMOVED
B-X	BORING LOCATION (APPROX)
	EXISTING DROP INLET
	EXISTING FLARED END SECTION
	EXISTING STORM MANHOLE
	EXISTING AIRFIELD GUIDANCE SIGN
	EXISTING RUNWAY LIGHT
R G	EXISTING RUNWAY THRESHOLD LIGHT
	EXISTING TAXIWAY LIGHT
W Y	EXISTING L-850C IN-PAVEMENT HIRL
E	EXISTING ELECTRICAL HANDHOLE
P	EXISTING L-867 ELECTRICAL PULLCAN
B	L-867 LIGHT BASE ONLY
S	PAVEMENT SENSOR
	WORK AREA LIMITS
	EXISTING STORM DRAIN
X	EXISTING FENCE
OFZ	EXISTING OBSTACLE FREE ZONE
	EXISTING AIRPORT PROPERTY LINE
ROFA	EXISTING RUNWAY OBJECT FREE AREA
RSA	EXISTING RUNWAY SAFETY AREA
TOFA	EXISTING TAXIWAY OBJECT FREE AREA
TSA	EXISTING TAXIWAY SAFETY AREA
	EXISTING PAVEMENT TO BE MILLED (3" DEPTH)
	EXISTING PAVEMENT TO BE MILLED (VARIABLE DEPTH)
	FULL DEPTH PAVEMENT REMOVAL
	EXISTING MARKING REMOVAL

NOTES

1. ALL STATIONS AND OFFSETS ARE GIVEN WITH RESPECT TO BASELINE "RW 6-24" UNLESS OTHERWISE SPECIFIED.
2. SAWCUT NEAT VERTICAL FACE.
3. MILLING LIMITS SHOWN INDICATE THE MAXIMUM PAY LIMITS. SHOULD THE CONTRACTOR ELECT TO INCREASE MILLING LIMIT, COST OF ADDITIONAL MILLING AND PAVING SHALL BE AT THEIR OWN EXPENSE.
4. FULL DEPTH INDICATES ASPHALT AS WELL AS BASE COURSE.
5. EXISTING PAVEMENT SENSOR AND CABLES TO BE REMOVED AND PROVIDED TO OWNER. THE CABLE SHALL BE REMOVED FROM THE SENSOR TO THE RPU.
6. ALL EXISTING ELECTRICAL EQUIPMENT IS TO BE PROTECTED. REFER TO THE ELECTRICAL LAYOUT FOR ELECTRICAL WORK.

40 0 40 80
SCALE: 1"=40' FEET

NO.	REVISIONS	BY	APP.	DATE

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PROFESSIONAL ENGINEER
Digitally signed by William M. Eschenfelder
Date: 2026.05.19 08:55:04'00'

REHABILITATE RUNWAY 6-24	AIP NO. 3-51-0045-074-2025	JOB NO. 24072	
DEMOLITION LAYOUT	DRAWN BY: RAS	SHEET 8 OF 58	
	DESIGNED BY: WME/SRS		
ROANOKE-BLACKSBURG REGIONAL AIRPORT	SCALE: 1" = 40'	DATE: MAY 2026	

DRAWING: 24072DEM.dwg, LAYOUT: L1
XREFS: 24072-plan-set.dwg; 24072-sheet key.dwg; IMAGES:

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MATCHLINE SHEET 8

MATCHLINE SHEET 10

22+00 24+00 26+00 28+00 30+00 32+00

200' LT

200' RT

400' RT

ALTERNATES 1, 2, & 3

ALTERNATES 1 & 2

ALTERNATE 1 & 2

PROTECT EXISTING FAA CABLES

PROTECT EXISTING RUNWAY EDGE LIGHT (TYP)

STA 27+25, 100'± LT

STA 27+25, 100'± RT

SIGN 116

SIGN 44

NOTE 2 (ALTERNATE 3 ONLY)

NOTE 5

PROTECT EXISTING MARKING TO REMAIN (TYP)

NOTE 2

STA 29+70±, 298'± LT

STA 31+68±, 270'± LT

STA 29+63±, 246'± LT

STA 31+61±, 218'± LT

SIGN 41

PROTECT EXISTING IN-PAVEMENT RUNWAY EDGE LIGHT (TYP)

PROTECT EXISTING PULLCAN (TYP)

STA 29+03±, 173'± RT

STA 31+00, 202'± RT

STA 28+89±, 270'± RT

STA 30+86±, 298'± RT

PROTECT EXISTING CONCRETE AND REPLACE JOINT SEALANT (SEE DETAIL)

SIGN 45

SIGN 49

SIGN 50

SIGN 48

SIGN 47

SIGN 46

EXISTING SENSOR RPU - 1

BASELINE "RW"

RUNWAY 6-24 (6,800' x 150')

RUNWAY 34-16 (5,810' x 150')

TW "B"

SHEET KEY

8	9	10	11	12	13

LEGEND

SYMBOL	DESCRIPTION
X	EXISTING ITEM TO BE REMOVED
B-X	BORING LOCATION (APPROX)
	EXISTING DROP INLET
	EXISTING FLARED END SECTION
	EXISTING STORM MANHOLE
	EXISTING AIRFIELD GUIDANCE SIGN
	EXISTING RUNWAY LIGHT
R G	EXISTING RUNWAY THRESHOLD LIGHT
	EXISTING TAXIWAY LIGHT
W Y	EXISTING L-850C IN-PAVEMENT HIRL
E	EXISTING ELECTRICAL HANDHOLE
P	EXISTING L-867 ELECTRICAL PULLCAN
B	L-867 LIGHT BASE ONLY
S	PAVEMENT SENSOR
	WORK AREA LIMITS
	EXISTING STORM DRAIN
X	EXISTING FENCE
OFZ	EXISTING OBSTACLE FREE ZONE
	EXISTING AIRPORT PROPERTY LINE
ROFA	EXISTING RUNWAY OBJECT FREE AREA
RSA	EXISTING RUNWAY SAFETY AREA
TOFA	EXISTING TAXIWAY OBJECT FREE AREA
TSA	EXISTING TAXIWAY SAFETY AREA
	EXISTING PAVEMENT TO BE MILLED (3" DEPTH)
	EXISTING PAVEMENT TO BE MILLED (VARIABLE DEPTH)
	FULL DEPTH PAVEMENT REMOVAL
	EXISTING MARKING REMOVAL

NOTES

1. ALL STATIONS AND OFFSETS ARE GIVEN WITH RESPECT TO BASELINE "RW 6-24" UNLESS OTHERWISE SPECIFIED.
2. SAWCUT NEAT VERTICAL FACE.
3. MILLING LIMITS SHOWN INDICATE THE MAXIMUM PAY LIMITS. SHOULD THE CONTRACTOR ELECT TO INCREASE MILLING LIMIT, COST OF ADDITIONAL MILLING AND PAVING SHALL BE AT THEIR OWN EXPENSE.
4. FULL DEPTH INDICATES ASPHALT AS WELL AS BASE COURSE.
5. EXISTING PAVEMENT SENSOR AND CABLES TO BE REMOVED AND PROVIDED TO OWNER. THE CABLE SHALL BE REMOVED FROM THE SENSOR TO THE RPU.
6. ALL EXISTING ELECTRICAL EQUIPMENT IS TO BE PROTECTED. REFER TO THE ELECTRICAL LAYOUT FOR ELECTRICAL WORK.

40 0 40 80

SCALE: 1"=40' FEET

NO.	REVISIONS	BY	APP.	DATE

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DN: cn=William M. Eschenfelder
Date: 2026.05.19 08:55:04'00'

REHABILITATE RUNWAY 6-24	AIP NO. 3-51-0045-074-2025	JOB NO. 24072	
DEMOLITION LAYOUT	DRAWN BY: RAS	SHEET 9	
	DESIGNED BY: WME/SRS	OF 58	
ROANOKE-BLACKSBURG REGIONAL AIRPORT	SCALE: 1" = 40'	DATE: MAY 2026	

MATCHLINE SHEET 9

MATCHLINE SHEET 11

34+00 36+00 38+00 40+00 42+00 44+00

24-6

SIGN 39

18" RCP

200' LT

200' RT

ALTERNATE 1 ONLY

ALTERNATE 1 & 2

STA 33+21.3±, 137.5'± LT

STA 33+18±, 147'± LT

NOTE 2

STA 34+60.7±, 137.2'± LT

SIGN 117

SIGN 38

SIGN 118

PROTECT EXISTING MARKING TO REMAIN (TYP)

PROTECT EXISTING RUNWAY EDGE LIGHT (TYP)

ABANDONED IN PLACE

COMM

FO

NOTE 2 (ALTERNATE 2 ONLY)

50'

34+00 35+00 36+00 37+00 38+00 39+00 40+00 41+00 42+00 43+00 44+00

BASELINE "RW 6-24"

RUNWAY 6-24 (6,800' x 150')

PROTECT EXISTING MARKING TO REMAIN (TYP)

PROTECT EXISTING IN-PAVEMENT RUNWAY EDGE LIGHT (TYP)

PROTECT EXISTING IN-PAVEMENT RUNWAY EDGE LIGHT (TYP)

TW "A"

TW "B&B"

PROTECT EXISTING PULLCAN (TYP)

PROTECT EXISTING RUNWAY EDGE LIGHT (TYP)

SIGN 34

SIGN 35

SIGN 29

SIGN 24

STA 33+18±, 124'± RT

STA 34+17.4±, 156.7'± RT

PROTECT EXISTING CONCRETE AND REPLACE JOINT SEALANT (SEE DETAIL)

ALTERNATE 1 & 2

ALTERNATE 1 ONLY

STA 39+11.5±, 200.0'± RT

NOTE 2

STA 40+68.5±, 199.0'± RT

STA 40+64.7±, 200.0'± RT

SIGN 31

SIGN 25

SIGN 26

18" RCP

24" RCP

30" RCP

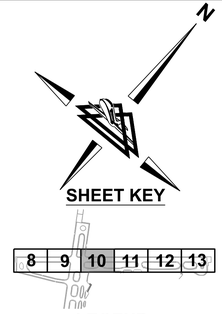
ABANDONED IN PLACE

200' RT

400' RT

34+00 36+00 38+00 40+00 42+00 44+00

SHEET KEY



LEGEND

SYMBOL	DESCRIPTION
X	EXISTING ITEM TO BE REMOVED
B-X	BORING LOCATION (APPROX)
	EXISTING DROP INLET
	EXISTING FLARED END SECTION
	EXISTING STORM MANHOLE
	EXISTING AIRFIELD GUIDANCE SIGN
	EXISTING RUNWAY LIGHT
R G	EXISTING RUNWAY THRESHOLD LIGHT
	EXISTING TAXIWAY LIGHT
W Y	EXISTING L-850C IN-PAVEMENT HIRL
E	EXISTING ELECTRICAL HANDHOLE
P	EXISTING L-867 ELECTRICAL PULLCAN
B	L-867 LIGHT BASE ONLY
S	PAVEMENT SENSOR
	WORK AREA LIMITS
	EXISTING STORM DRAIN
X	EXISTING FENCE
OFZ	EXISTING OBSTACLE FREE ZONE
	EXISTING AIRPORT PROPERTY LINE
ROFA	EXISTING RUNWAY OBJECT FREE AREA
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TSA	EXISTING TAXIWAY SAFETY AREA
	EXISTING PAVEMENT TO BE MILLED (3" DEPTH)
	EXISTING PAVEMENT TO BE MILLED (VARIABLE DEPTH)
	FULL DEPTH PAVEMENT REMOVAL
	EXISTING MARKING REMOVAL

NOTES

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40 0 40 80

SCALE: 1"=40' FEET

NO.	REVISIONS	BY	APP.	DATE

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PROFESSIONAL ENGINEER
Digitally signed by William M. Eschenfelder
Date: 2026.05.19 08:56:04'00'

REHABILITATE RUNWAY 6-24

DEMOLITION LAYOUT

ROANOKE-BLACKSBURG REGIONAL AIRPORT

AIP NO. 3-51-0045-074-2025

JOB NO. 24072

DRAWN BY: RAS

DESIGNED BY: WME/SRS

SCALE: 1" = 40'

DATE: MAY 2026

SHEET 10 OF 58

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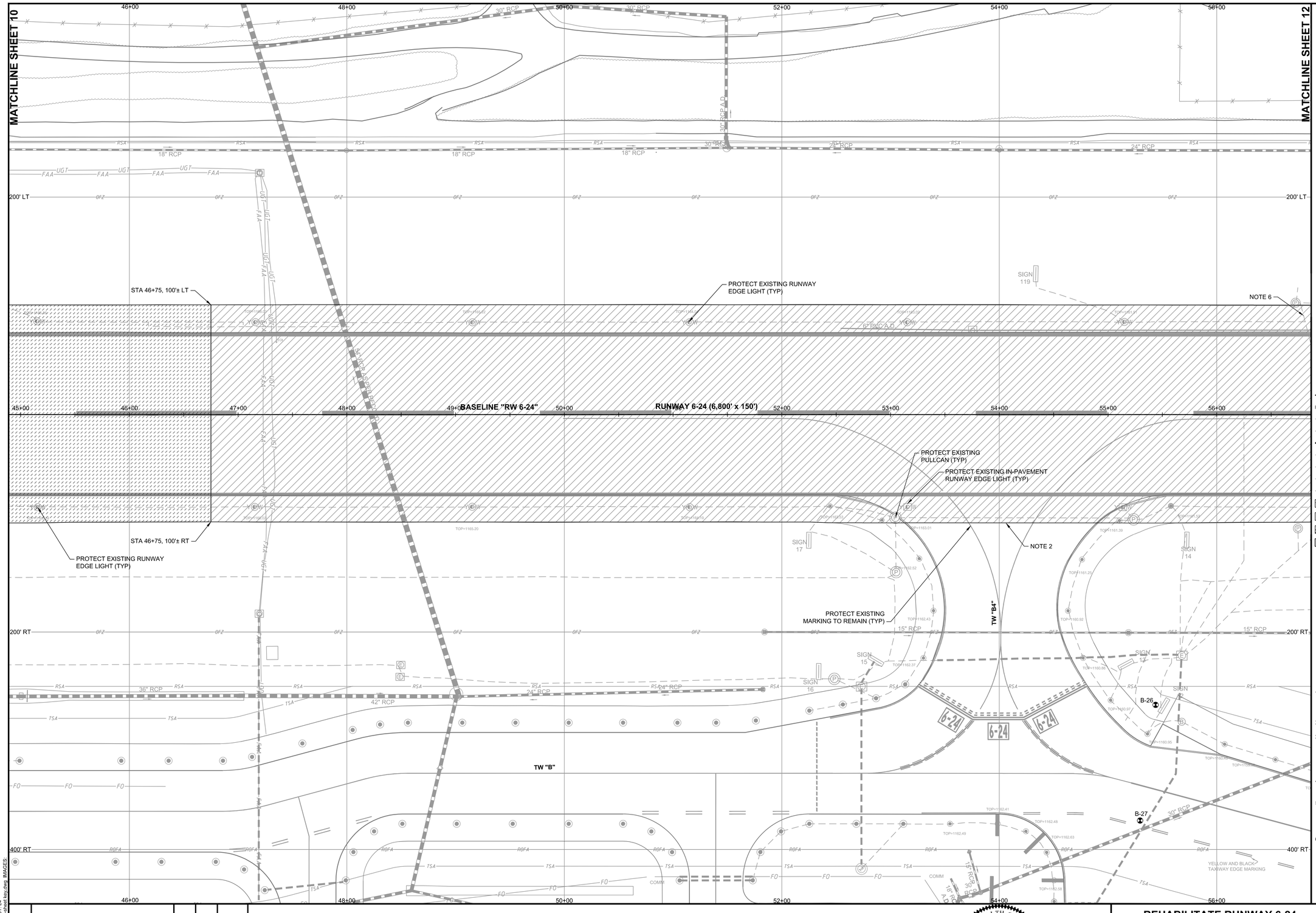

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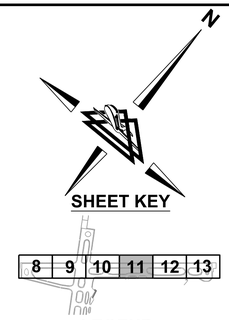

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40 0 40 80
SCALE: 1"=40' FEET

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REHABILITATE RUNWAY 6-24	AIP NO. 3-51-0045-074-2025		JOB NO. 24072
DEMOLITION LAYOUT	DRAWN BY: RAS		SHEET 11 OF 58
	DESIGNED BY: WME/SRS		
ROANOKE-BLACKSBURG REGIONAL AIRPORT	SCALE: 1" = 40'	DATE: MAY 2026	

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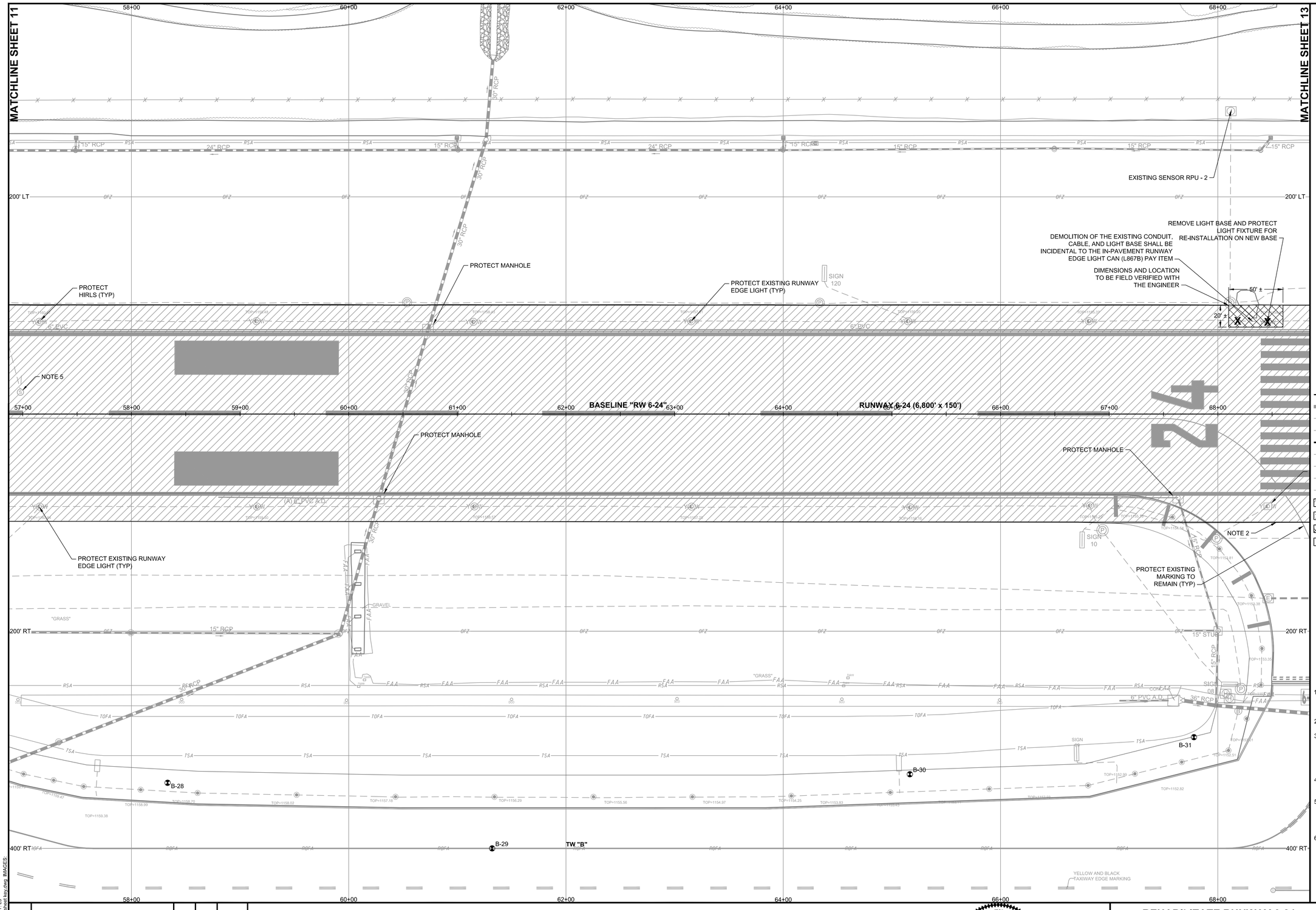

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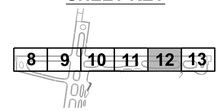

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W Y	EXISTING L-850C IN-PAVEMENT HIRL
E	EXISTING ELECTRICAL HANDHOLE
P	EXISTING L-867 ELECTRICAL PULLCAN
B	L-867 LIGHT BASE ONLY
S	PAVEMENT SENSOR
	WORK AREA LIMITS
	EXISTING STORM DRAIN
X	EXISTING FENCE
OFZ	EXISTING OBSTACLE FREE ZONE
	EXISTING AIRPORT PROPERTY LINE
ROFA	EXISTING RUNWAY OBJECT FREE AREA
RSA	EXISTING RUNWAY SAFETY AREA
TOFA	EXISTING TAXIWAY OBJECT FREE AREA
TSA	EXISTING TAXIWAY SAFETY AREA
	EXISTING PAVEMENT TO BE MILLED (3" DEPTH)
	EXISTING PAVEMENT TO BE MILLED (VARIABLE DEPTH)
	FULL DEPTH PAVEMENT REMOVAL
	EXISTING MARKING REMOVAL

NOTES

1. ALL STATIONS AND OFFSETS ARE GIVEN WITH RESPECT TO BASELINE "RW 6-24" UNLESS OTHERWISE SPECIFIED.
2. SAWCUT NEAT VERTICAL FACE.
3. MILLING LIMITS SHOWN INDICATE THE MAXIMUM PAY LIMITS. SHOULD THE CONTRACTOR ELECT TO INCREASE MILLING LIMIT, COST OF ADDITIONAL MILLING AND PAVING SHALL BE AT THEIR OWN EXPENSE.
4. FULL DEPTH INDICATES ASPHALT AS WELL AS BASE COURSE.
5. EXISTING PAVEMENT SENSOR AND CABLES TO BE REMOVED AND PROVIDED TO OWNER. THE CABLE SHALL BE REMOVED FROM THE SENSOR TO THE RPU.
6. ALL EXISTING ELECTRICAL EQUIPMENT IS TO BE PROTECTED. REFER TO THE ELECTRICAL LAYOUT FOR ELECTRICAL WORK.

40 0 40 80
SCALE: 1"=40' FEET

NO.	REVISIONS	BY	APP.	DATE

2700 Polo Parkway
Midlothian, Virginia 23113
phone: (804) 275-8301
www.deltaairport.com

DELTA AIRPORT CONSULTANTS, INC.

COMMONWEALTH OF VIRGINIA
WILLIAM M. ESCHENFELDER
Lic. No. 045144
PROFESSIONAL
Digitally signed by William M. Eschenfelder
Date: 2026.05.19 15:57-04'00'

REHABILITATE RUNWAY 6-24	AIP NO. 3-51-0045-074-2025		JOB NO. 24072
DEMOLITION LAYOUT	DRAWN BY: RAS	DESIGNED BY: WME/SRS	SHEET 12 OF 58
ROANOKE-BLACKSBURG REGIONAL AIRPORT	SCALE: 1" = 40'	DATE: MAY 2026	

DRAWING: 24072DEM.dwg, LAYOUT: L5
XREFS: 24072-plan-ex.dwg, 24072-sheet key.dwg IMAGES:
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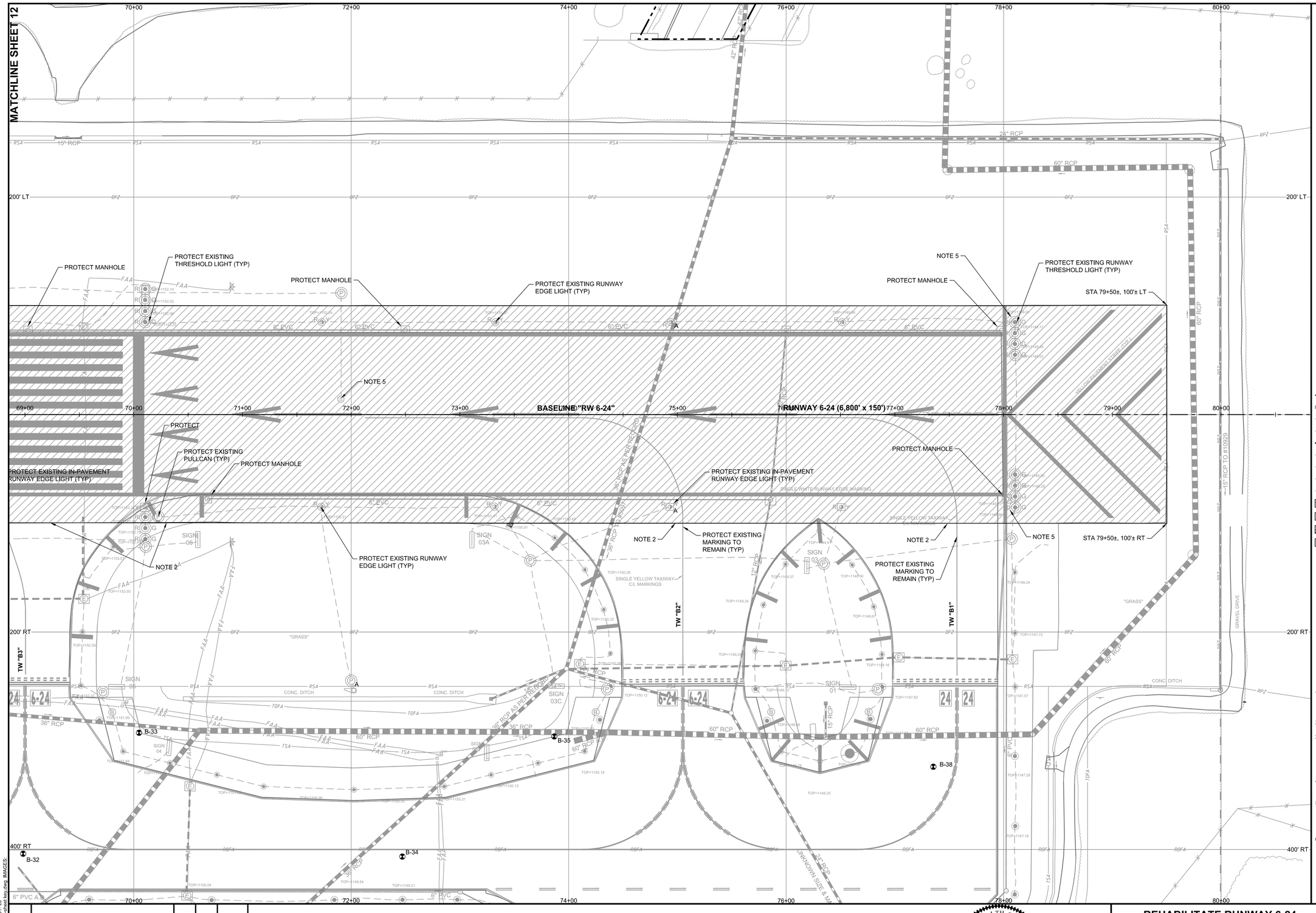

SHEET KEY

8	9	10	11	12	13

LEGEND

SYMBOL	DESCRIPTION
X	EXISTING ITEM TO BE REMOVED
B-X	BORING LOCATION (APPROX)
	EXISTING DROP INLET
	EXISTING FLARED END SECTION
	EXISTING STORM MANHOLE
	EXISTING AIRFIELD GUIDANCE SIGN
	EXISTING RUNWAY LIGHT
R G	EXISTING RUNWAY THRESHOLD LIGHT
	EXISTING TAXIWAY LIGHT
W Y	EXISTING L-850C IN-PAVEMENT HIRL
E	EXISTING ELECTRICAL HANDHOLE
P	EXISTING L-867 ELECTRICAL PULLCAN
B	L-867 LIGHT BASE ONLY
S	PAVEMENT SENSOR
	WORK AREA LIMITS
	EXISTING STORM DRAIN
X	EXISTING FENCE
OFZ	EXISTING OBSTACLE FREE ZONE
	EXISTING AIRPORT PROPERTY LINE
ROFA	EXISTING RUNWAY OBJECT FREE AREA
RSA	EXISTING RUNWAY SAFETY AREA
TOFA	EXISTING TAXIWAY OBJECT FREE AREA
TSA	EXISTING TAXIWAY SAFETY AREA
	EXISTING PAVEMENT TO BE MILLED (3" DEPTH)
	EXISTING PAVEMENT TO BE MILLED (VARIABLE DEPTH)
	FULL DEPTH PAVEMENT REMOVAL
	EXISTING MARKING REMOVAL

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Date: 2026.05.19 16:58:04'00'

REHABILITATE RUNWAY 6-24	AIP NO. 3-51-0045-074-2025		JOB NO. 24072
DEMOLITION LAYOUT	DRAWN BY: RAS	DESIGNED BY: WME/SRS	SHEET 13 OF 58
ROANOKE-BLACKSBURG REGIONAL AIRPORT	SCALE: 1" = 40'	DATE: MAY 2026	

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MATCHLINE SHEET 15

10+00 12+00 14+00 16+00 18+00 20+00

200' LT 200' LT

PROTECT EXISTING HOUSEKEEPING PAD AND REPLACE JOINT SEALANT (NO PAY ITEM)

ADJUST MANHOLE TO GRADE. SEE "ADJUST MANHOLE TO GRADE DETAIL".

NOTE 2

BASELINE "RW 6-24"

RUNWAY 6-24 (6,800' x 150')

10+00 11+00 12+00 13+00 200' ± 14+00 15+00 16+00 17+00 18+00 19+00 20+00

100' (TYP)

NOTE 2

NOTE 2

ADJUST MANHOLE TO GRADE. SEE "ADJUST MANHOLE TO GRADE DETAIL".

TW "J7"

TW "J6"

6 6

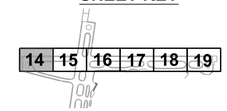
6-24 6-24

200' RT 200' RT

400' RT 400' RT

10+00 12+00 14+00 18+00 20+00

SHEET KEY



LEGEND

- EXISTING WIND CONE
- B-X — BORING LOCATION (APPROX)
- WORK AREA LIMITS
- OFZ — EXISTING OBSTACLE FREE ZONE
- EXISTING AIRPORT PROPERTY LINE
- ROFA — EXISTING RUNWAY OBJECT FREE AREA
- RSA — EXISTING RUNWAY SAFETY AREA
- TOFA — EXISTING TAXIWAY OBJECT FREE AREA
- TOFA — PROPOSED TAXIWAY OBJECT FREE AREA
- TSA — EXISTING TAXIWAY SAFETY AREA
- TSA — PROPOSED TAXIWAY SAFETY AREA
- PROPOSED VARIABLE DEPTH OVERLAY (MINIMUM 3" DEPTH)
- PROPOSED 3" OVERLAY
- PROPOSED FULL DEPTH SHOULDER PAVEMENT

NOTES

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3. REFER TO SHEET "PAVEMENT TIE-IN & TRANSITION DETAILS" FOR DETAIL OF SECTION VIEW.
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REHABILITATE RUNWAY 6-24	AIP NO. 3-51-0045-074-2025		JOB NO. 24072
PAVING LAYOUT	DRAWN BY: RAS		SHEET 14 OF 58
	DESIGNED BY: WME/SRS		
ROANOKE-BLACKSBURG REGIONAL AIRPORT	SCALE: 1" = 40'	DATE: MAY 2026	

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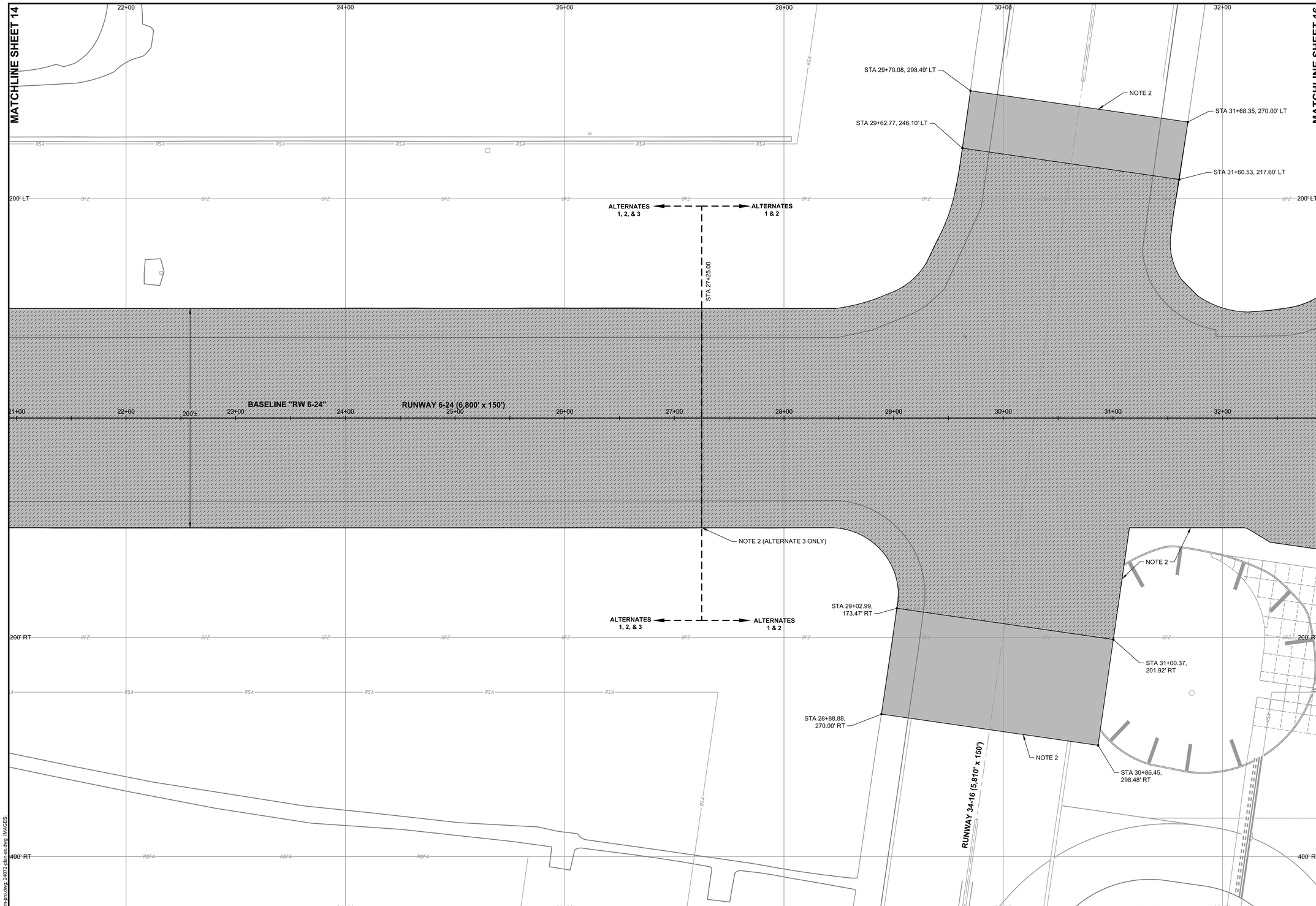

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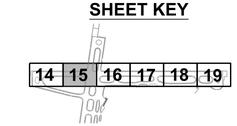

LEGEND

- EXISTING WIND CONE
- B-X BORING LOCATION (APPROX)
- WORK AREA LIMITS
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NOTES

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40 0 40 80
SCALE: 1"=40' FEET

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Digitally signed by William M. Eschenfelder
Date: 2026.05.19 14:56:59-04'00'

REHABILITATE RUNWAY 6-24	AIP NO. 3-51-0045-074-2025	JOB NO. 24072
PAVING LAYOUT	DRAWN BY: RAS	SHEET 15 OF 58
	DESIGNED BY: WME/SRS	
ROANOKE-BLACKSBURG REGIONAL AIRPORT	SCALE: 1" = 40'	DATE: MAY 2026

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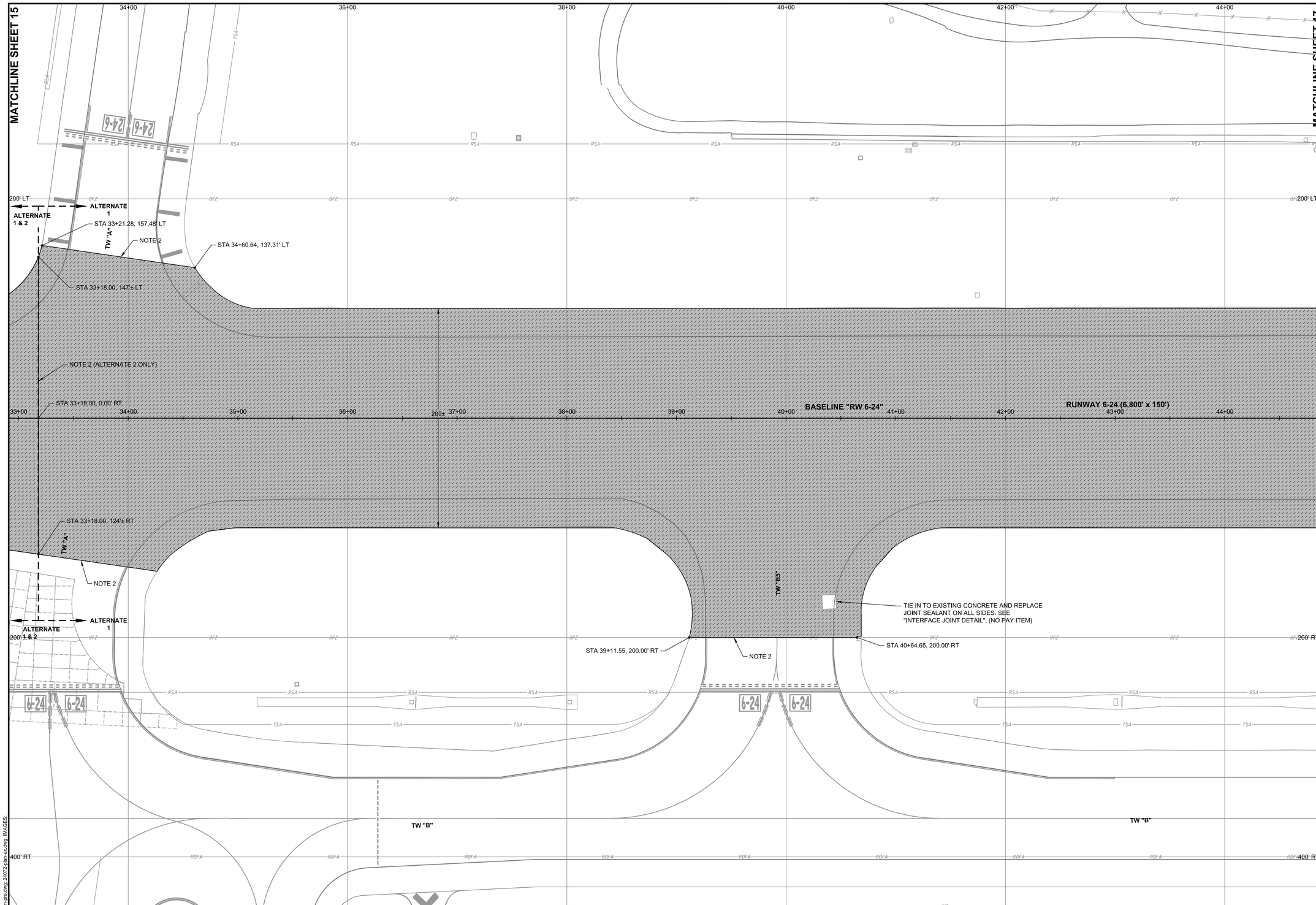

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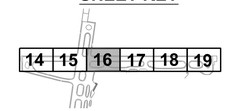

LEGEND

- EXISTING WIND CONE
- B-X BORING LOCATION (APPROX)
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NOTES

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40 0 40 80
SCALE: 1"=40' FEET

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Digitally signed by William M. Eschenfelder
Date: 2026.05.19 11:57:00-04'00'

REHABILITATE RUNWAY 6-24

PAVING LAYOUT

ROANOKE-BLACKSBURG REGIONAL AIRPORT

AIP NO.	3-51-0045-074-2025
JOB NO.	24072
DRAWN BY:	RAS
DESIGNED BY:	WME/SRS
SCALE:	1" = 40'
DATE:	MAY 2026
SHEET	16 OF 58

DRAWING: 24072GEO.dwg LAYOUT: L3
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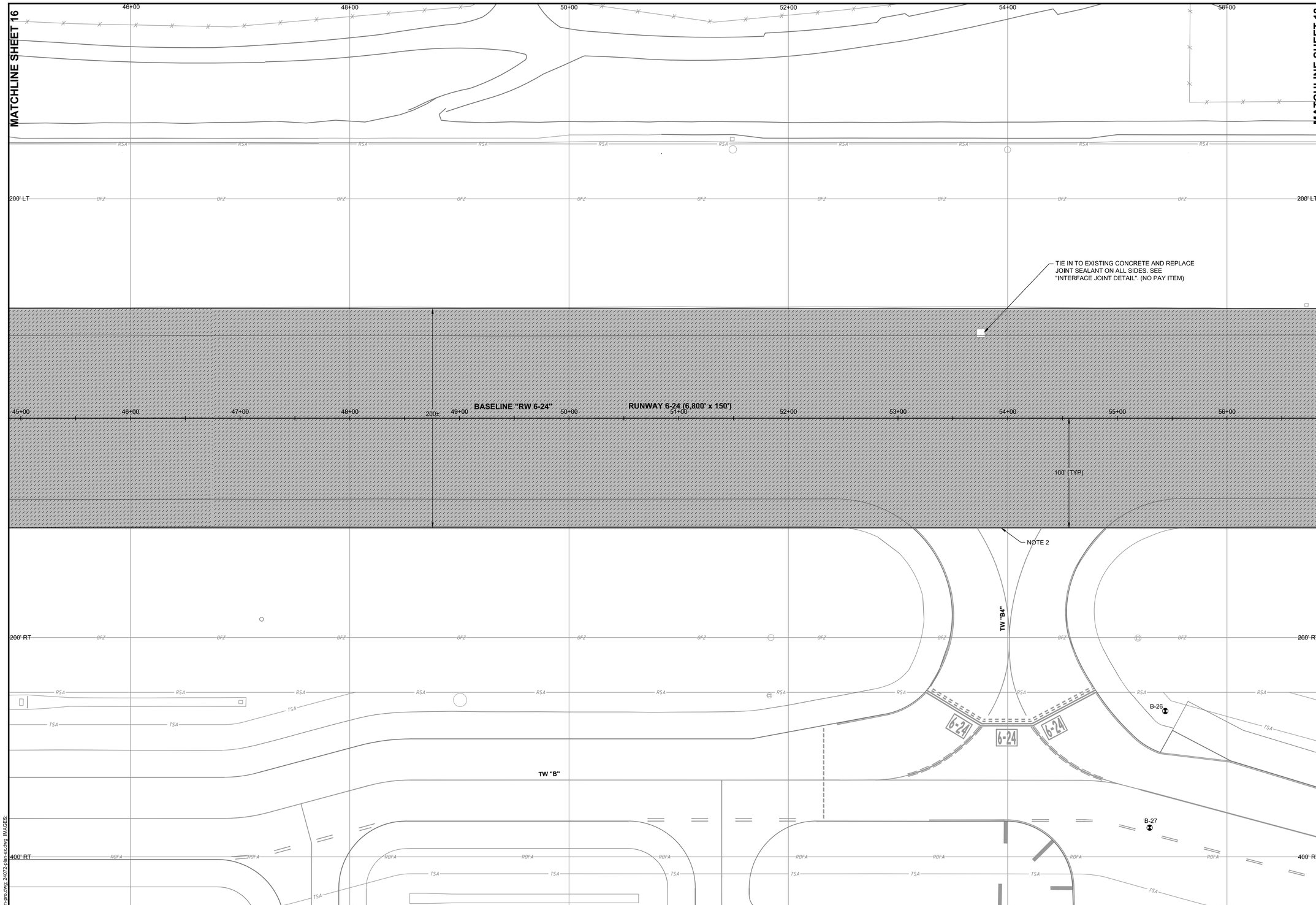

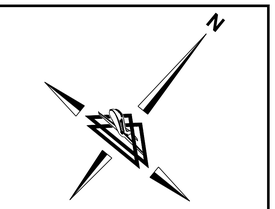

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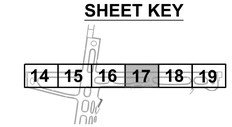

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40 0 40 80
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Date: 2026.05.19 11:37:00-04'00'

REHABILITATE RUNWAY 6-24

PAVING LAYOUT

ROANOKE-BLACKSBURG REGIONAL AIRPORT

AIP NO. 3-51-0045-074-2025
JOB NO. 24072
DRAWN BY: RAS
DESIGNED BY: WME/SRS
SCALE: 1" = 40'
DATE: MAY 2026
SHEET 17 OF 58

DRAWING: 24072GEO.dwg LAYOUT: L4
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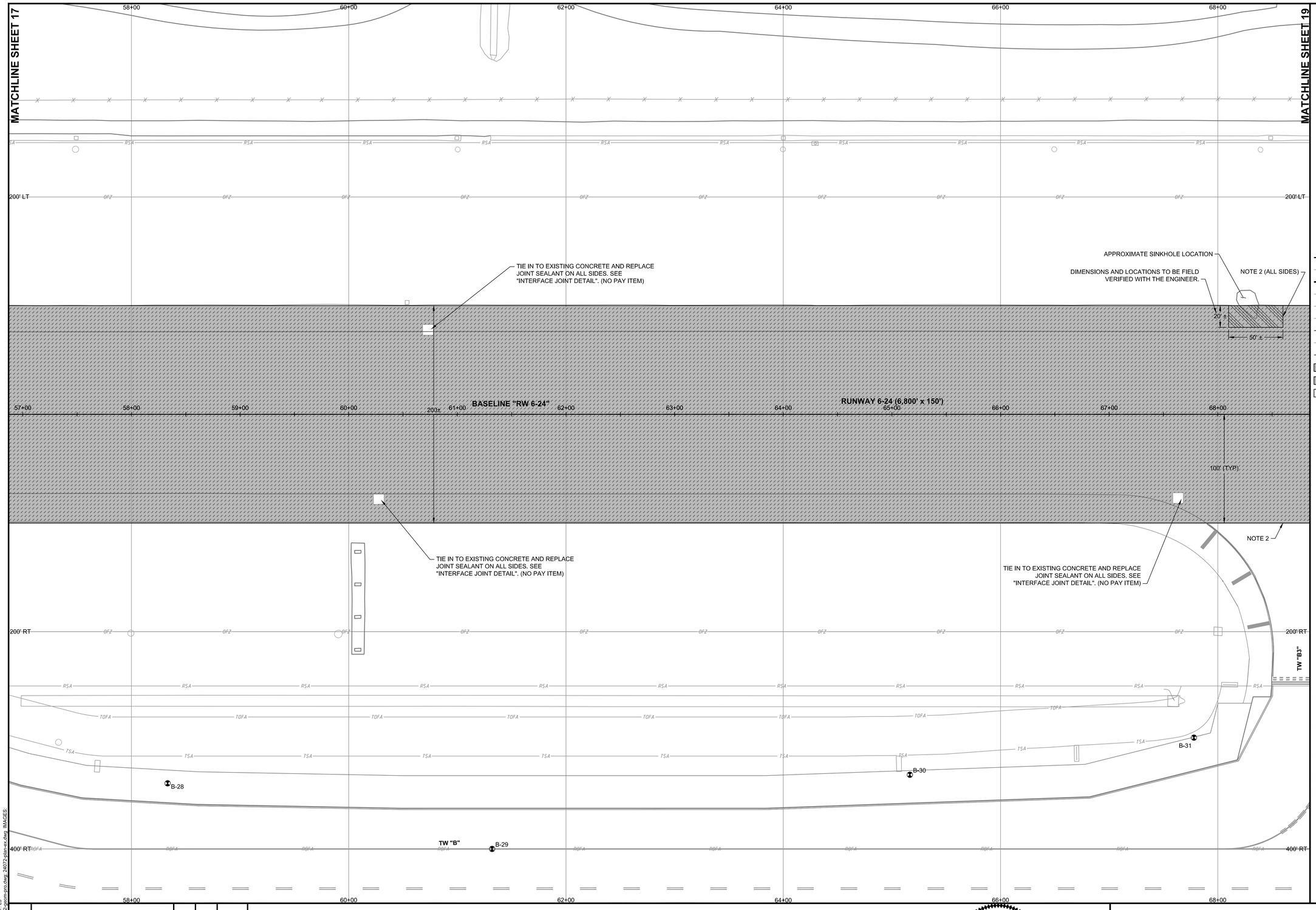

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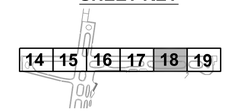

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Date: 2026.05.19 15:07:01-04'00'

REHABILITATE RUNWAY 6-24	AIP NO. 3-51-0045-074-2025
PAVING LAYOUT	DRAWN BY: RAS
	DESIGNED BY: WME/SRS
ROANOKE-BLACKSBURG REGIONAL AIRPORT	SCALE: 1" = 40'
	DATE: MAY 2026
	JOB NO. 24072
	SHEET 18 OF 58

DRAWING: 24072GEO.dwg LAYOUT: L5
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MATCHLINE SHEET 18

70+00 72+00 74+00 76+00 78+00 80+00

200' LT 200' LT

TIE IN TO EXISTING CONCRETE AND REPLACE JOINT SEALANT ON ALL SIDES. SEE "INTERFACE JOINT DETAIL". (NO PAY ITEM)

TIE IN TO EXISTING CONCRETE AND REPLACE JOINT SEALANT ON ALL SIDES. SEE "INTERFACE JOINT DETAIL". (NO PAY ITEM)

TIE IN TO EXISTING CONCRETE AND REPLACE JOINT SEALANT ON ALL SIDES. SEE "INTERFACE JOINT DETAIL." (NO PAY ITEM)

TIE IN TO EXISTING CONCRETE AND REPLACE JOINT SEALANT ON ALL SIDES. SEE "INTERFACE JOINT DETAIL." (NO PAY ITEM)

100' (TYP)

RUNWAY 6-24 (6,800' x 150')

BASELINE "RW 6-24"

69+00 70+00 71+00 72+00 200± 73+00 74+00 75+00 76+00 77+00 78+00 79+00 80+00

100' (TYP) 100' (TYP)

NOTE 2 NOTE 2 NOTE 2

TIE IN TO EXISTING CONCRETE AND REPLACE JOINT SEALANT ON ALL SIDES. SEE "INTERFACE JOINT DETAIL". (NO PAY ITEM)

TIE IN TO EXISTING CONCRETE AND REPLACE JOINT SEALANT ON ALL SIDES. SEE "INTERFACE JOINT DETAIL". (NO PAY ITEM)

TIE IN TO EXISTING CONCRETE AND REPLACE JOINT SEALANT ON ALL SIDES. SEE "INTERFACE JOINT DETAIL". (NO PAY ITEM)

200' RT 200' RT

TW "B3" TW "B2" TW "B1"

6-24 6-24 24 24

B-33 B-35 B-38

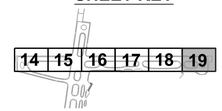
400' RT 400' RT

B-32 B-34

TW "B"

70+00 72+00 74+00 76+00 78+00 80+00

SHEET KEY



LEGEND

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- B-X — BORING LOCATION (APPROX)
- WORK AREA LIMITS
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- TSA — EXISTING TAXIWAY SAFETY AREA
- TSA — PROPOSED TAXIWAY SAFETY AREA
- PROPOSED VARIABLE DEPTH OVERLAY (MINIMUM 3" DEPTH)
- PROPOSED 3" OVERLAY
- PROPOSED FULL DEPTH SHOULDER PAVEMENT

NOTES

1. ALL STATIONS AND OFFSETS ARE GIVEN WITH RESPECT TO BASELINE "RW 6-24" UNLESS OTHERWISE SPECIFIED.
2. SAWCUT NEAT VERTICAL FACE. MATCH EXISTING PAVEMENT ELEVATION. SEE "PAVEMENT TIE-IN DETAIL".
3. REFER TO SHEET "PAVEMENT TIE-IN & TRANSITION DETAILS" FOR DETAIL OF SECTION VIEW.
4. SEE "OVERLAY TRANSITION DETAIL".
5. ALL EXISTING ELECTRICAL EQUIPMENT IS TO BE PROTECTED. REFER TO THE ELECTRICAL LAYOUT FOR ELECTRICAL WORK.

40 0 40 80
SCALE: 1"=40' FEET

NO.	REVISIONS	BY	APP.	DATE

2700 Polo Parkway
Midlothian, Virginia 23113
phone: (804) 275-8301
www.deltaairport.com

DELTA AIRPORT CONSULTANTS, INC.

COMMONWEALTH OF VIRGINIA
WILLIAM M. ESCHENFELDER
Lic. No. 045144
PROFESSIONAL ENGINEER
Digitally signed by William M. Eschenfelder
Date: 2026.05.19 07:01-04'00'

REHABILITATE RUNWAY 6-24	AIP NO. 3-51-0045-074-2025		JOB NO. 24072
PAVING LAYOUT	DRAWN BY: RAS		SHEET 19 OF 58
	DESIGNED BY: WME/SRS		
ROANOKE-BLACKSBURG REGIONAL AIRPORT	SCALE: 1" = 40'	DATE: MAY 2026	

DRAWING: 24072GEO.dwg LAYOUT: L6
XREFS: 24072-sheet key.dwg; 24072-geom-pmn.dwg; 24072-plan+ex.dwg; IMAGES

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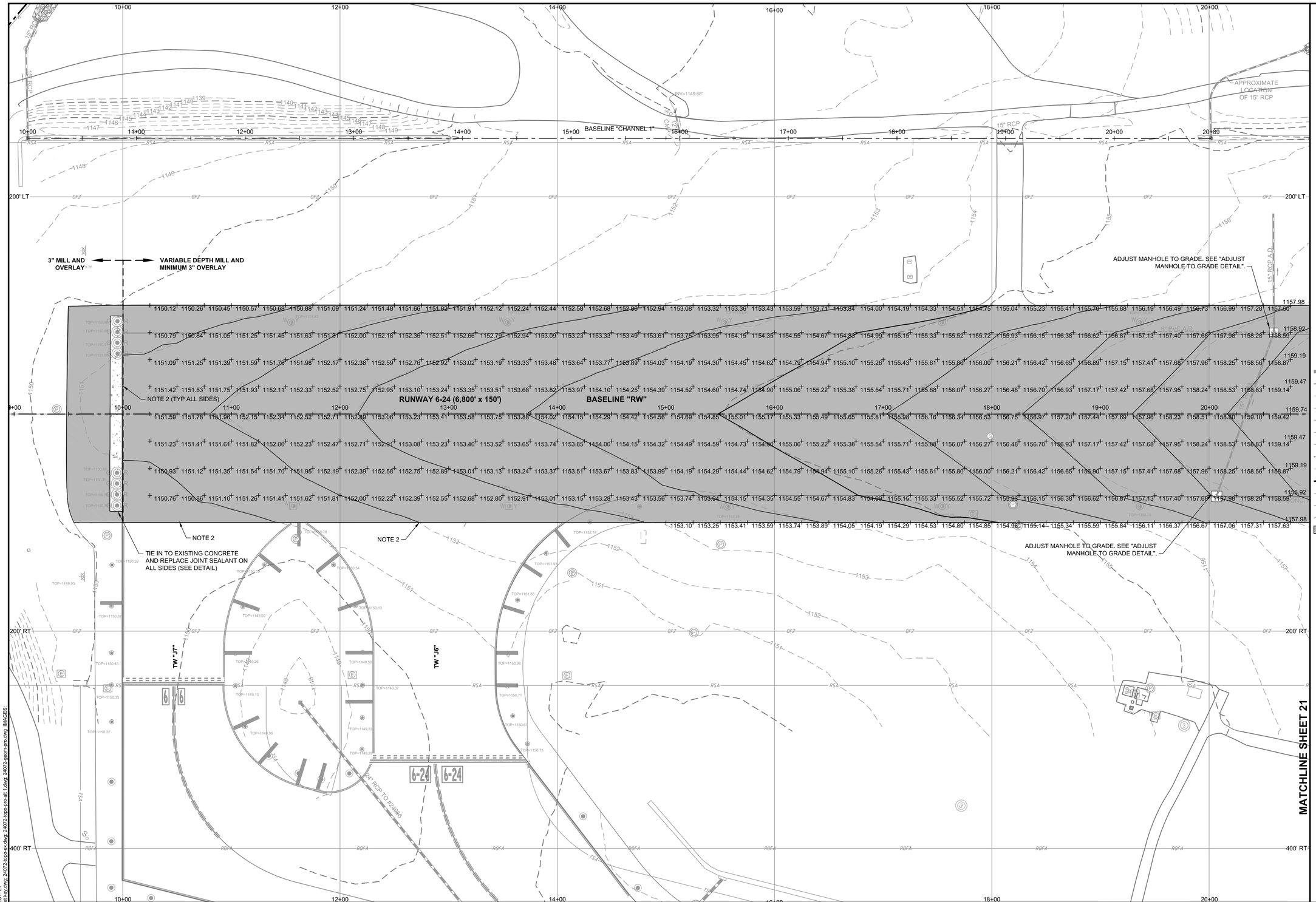

SHEET KEY

20	21	22	23	##	##

LEGEND

- 905.44 PROPOSED SPOT ELEVATION
- EXISTING DROP INLET
- EXISTING FLARED END SECTION
- EXISTING ENDWALL/HEADWALL/WINGWALL
- EXISTING STORM MANHOLE
- EXISTING UNDERDRAIN CLEANOUT
- EXISTING WIND CONE
- EXISTING TREE
- EXISTING STORM DRAIN
- EXISTING EDGE DRAIN/UNDERDRAIN
- EXISTING CONCRETE JOINT
- EXISTING DITCH
- FAA EXISTING FAA-CONTROLLED CABLE
- EXISTING FENCE
- FO EXISTING FIBER OPTIC LINE
- LOD LIMITS OF DISTURBANCE
- OFZ EXISTING OBSTACLE FREE ZONE
- EXISTING AIRPORT PROPERTY LINE
- ROFA EXISTING RUNWAY OBJECT FREE AREA
- RSA EXISTING RUNWAY SAFETY AREA
- EXISTING TREE LINE
- PROPOSED PAVEMENT (NOTE 3)

NOTE

1. ALL STATIONS AND OFFSETS ARE GIVEN WITH RESPECT TO BASELINE "RW 6-24" UNLESS OTHERWISE SPECIFIED.
2. MATCH EXISTING GRADE.
3. ALL ELECTRICAL EQUIPMENT IS TO BE PROTECTED. REFER TO THE ELECTRICAL LAYOUT FOR ELECTRICAL WORK.

40 0 40 80
SCALE: 1"=40' FEET

NO.	REVISIONS	BY	APP.	DATE

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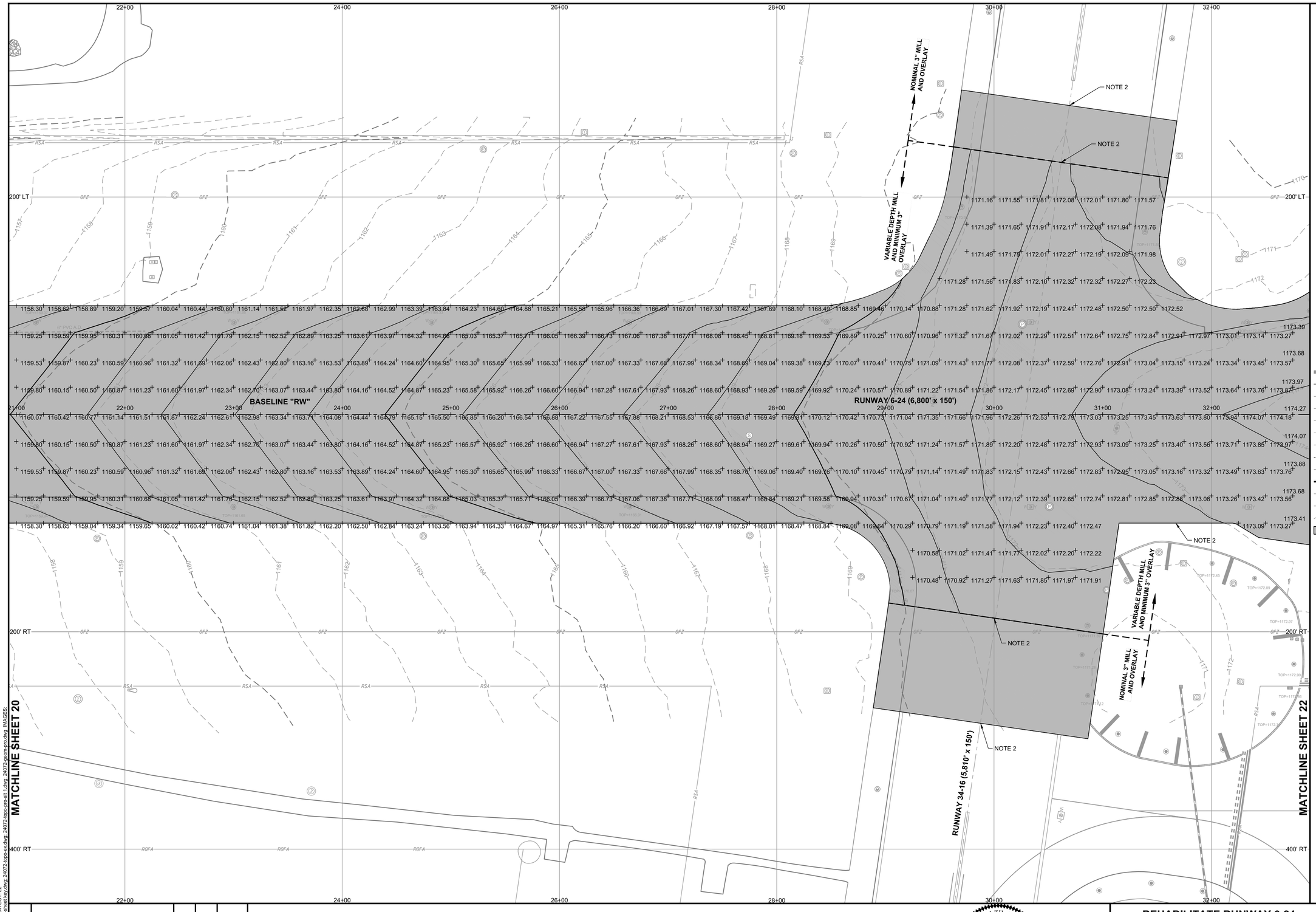
Digitally signed by William M. Eschenfelder
Date: 2026.05.19 15:57:02-04'00'

REHABILITATE RUNWAY 6-24

GRADING & DRAINAGE ALTERNATE 1

ROANOKE-BLACKSBURG REGIONAL AIRPORT

AIP NO. 3-51-0045-074-2025
JOB NO. 24072
DRAWN BY: RAS
DESIGNED BY: WME/SRS
SCALE: 1" = 40'
DATE: MAY 2026
SHEET 20 OF 58



SHEET KEY

20	21	22	23	24	25

LEGEND

- 905.44 — PROPOSED SPOT ELEVATION
- EXISTING DROP INLET
- EXISTING FLARED END SECTION
- EXISTING ENDWALL/HEADWALL/WINGWALL
- EXISTING STORM MANHOLE
- EXISTING UNDERDRAIN CLEANOUT
- EXISTING WIND CONE
- EXISTING TREE
- EXISTING STORM DRAIN
- EXISTING EDGE DRAIN/UNDERDRAIN
- EXISTING CONCRETE JOINT
- EXISTING DITCH
- FAA — EXISTING FAA-CONTROLLED CABLE
- X — EXISTING FENCE
- FO — EXISTING FIBER OPTIC LINE
- LOD — LIMITS OF DISTURBANCE
- 0FZ — EXISTING OBSTACLE FREE ZONE
- EXISTING AIRPORT PROPERTY LINE
- ROFA — EXISTING RUNWAY OBJECT FREE AREA
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- EXISTING TREE LINE
- PROPOSED PAVEMENT (NOTE 3)

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SCALE: 1"=40' (40 0 40 80 FEET)

NO.	REVISIONS	BY	APP.	DATE

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Digitally signed by William M. Eschenfelder
Date: 2026.05.19 07:03-04'00'

REHABILITATE RUNWAY 6-24	AIP NO. 3-51-0045-074-2025		JOB NO. 24072
GRADING & DRAINAGE ALTERNATE 1	DRAWN BY: RAS		SHEET 21 OF 58
	DESIGNED BY: WME/SRS		
ROANOKE-BLACKSBURG REGIONAL AIRPORT	SCALE: 1" = 40'	DATE: MAY 2026	

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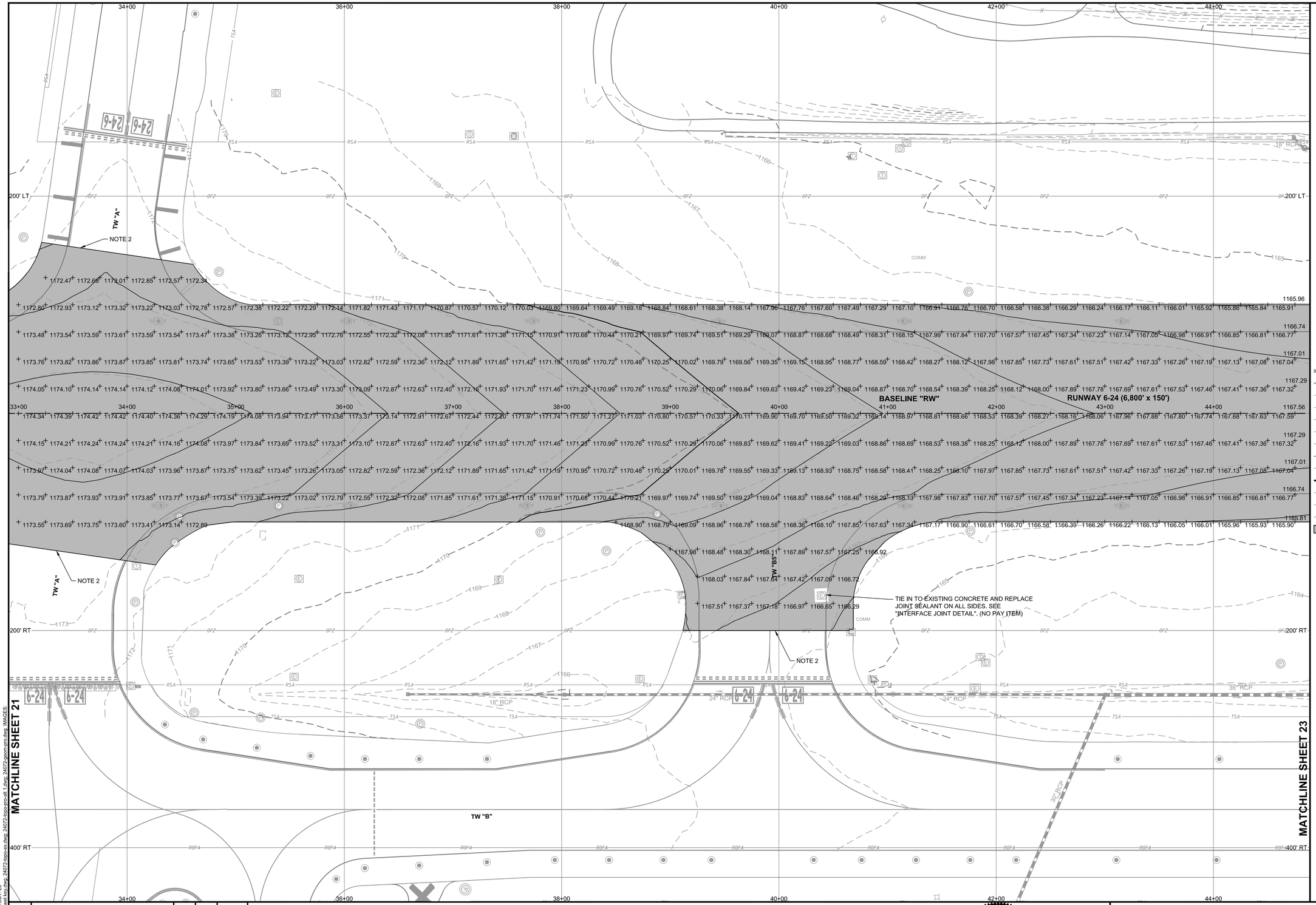

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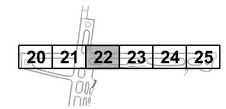

LEGEND

- 905.44 PROPOSED SPOT ELEVATION
- EXISTING DROP INLET
- EXISTING FLARED END SECTION
- EXISTING ENDWALL/HEADWALL/WINGWALL
- EXISTING STORM MANHOLE
- EXISTING UNDERDRAIN CLEANOUT
- EXISTING WIND CONE
- EXISTING TREE
- EXISTING STORM DRAIN
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- LOD LIMITS OF DISTURBANCE
- OFZ EXISTING OBSTACLE FREE ZONE
- EXISTING AIRPORT PROPERTY LINE
- ROFA EXISTING RUNWAY OBJECT FREE AREA
- RSA EXISTING RUNWAY SAFETY AREA
- EXISTING TREE LINE
- PROPOSED PAVEMENT (NOTE 3)

NOTE

1. ALL STATIONS AND OFFSETS ARE GIVEN WITH RESPECT TO BASELINE "RW 6-24" UNLESS OTHERWISE SPECIFIED.
2. MATCH EXISTING GRADE.
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40 0 40 80
SCALE: 1"=40' FEET

NO.	REVISIONS	BY	APP.	DATE

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Digitally signed by William M. Eschenfelder
Date: 2026.05.19 15:37:03-04'00'

REHABILITATE RUNWAY 6-24

GRADING & DRAINAGE ALTERNATE 1

ROANOKE-BLACKSBURG REGIONAL AIRPORT

AIP NO.	3-51-0045-074-2025
JOB NO.	24072
DRAWN BY:	RAS
DESIGNED BY:	WME/SRS
SCALE:	1" = 40'
DATE:	MAY 2026
SHEET	22 OF 58

DRAWING: 24072GRD-ALT1.dwg LAYOUT: L3
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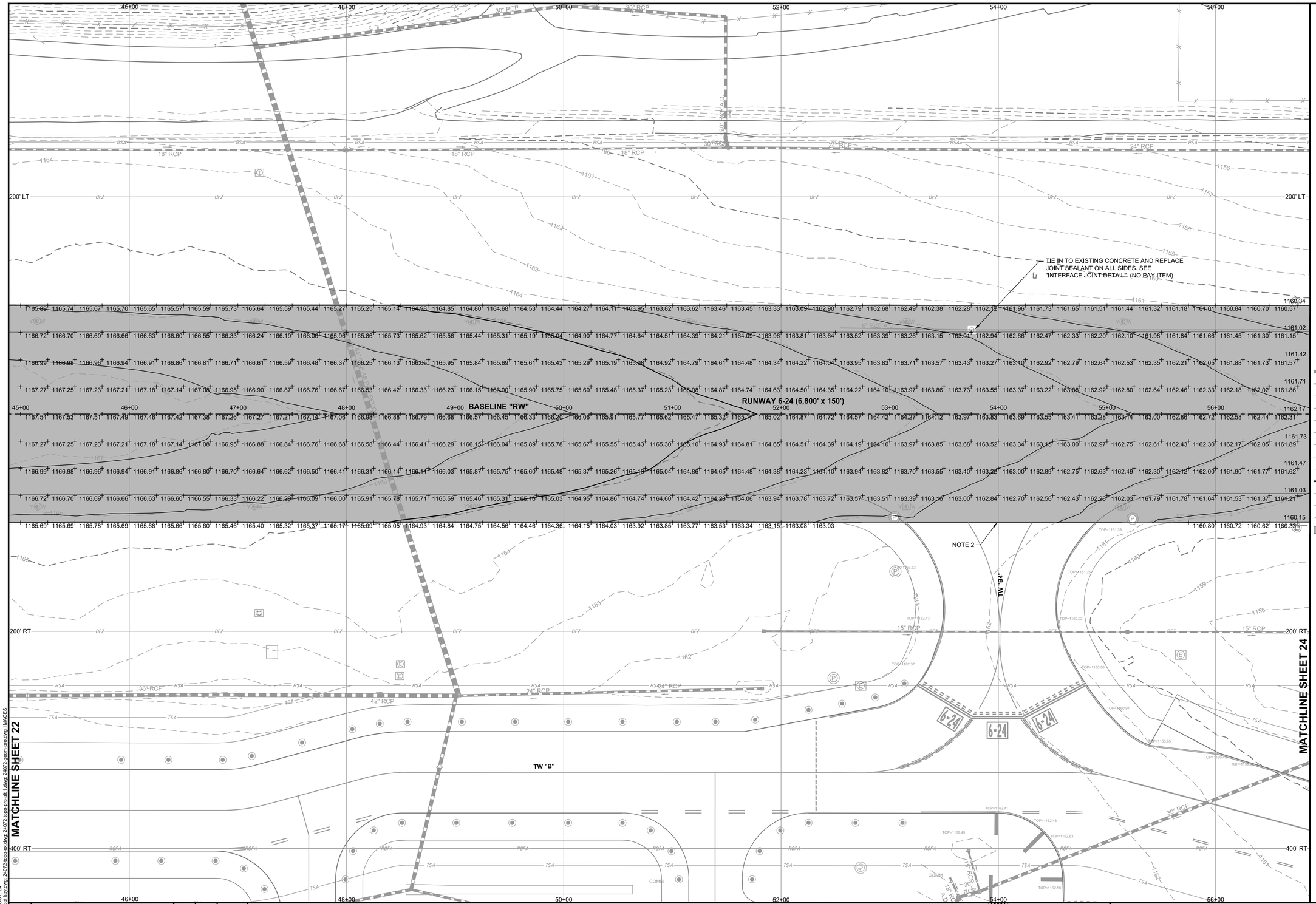

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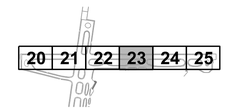

LEGEND

- 905.44 PROPOSED SPOT ELEVATION
- EXISTING DROP INLET
- EXISTING FLARED END SECTION
- EXISTING ENDWALL/HEADWALL/WINGWALL
- EXISTING STORM MANHOLE
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- EXISTING TREE LINE
- PROPOSED PAVEMENT (NOTE 3)

NOTE

1. ALL STATIONS AND OFFSETS ARE GIVEN WITH RESPECT TO BASELINE "RW 6-24" UNLESS OTHERWISE SPECIFIED.
2. MATCH EXISTING GRADE.
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40 0 40 80
SCALE: 1"=40' FEET

NO.	REVISIONS	BY	APP.	DATE

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Digitally signed by William M. Eschenfelder
Date: 2026.05.19 15:57:04-04'00'

REHABILITATE RUNWAY 6-24	AIP NO. 3-51-0045-074-2025		JOB NO. 24072
GRADING & DRAINAGE ALTERNATE 1	DRAWN BY: RAS		SHEET 23 OF 58
	DESIGNED BY: WME/SRS		
ROANOKE-BLACKSBURG REGIONAL AIRPORT	SCALE: 1" = 40'	DATE: MAY 2026	

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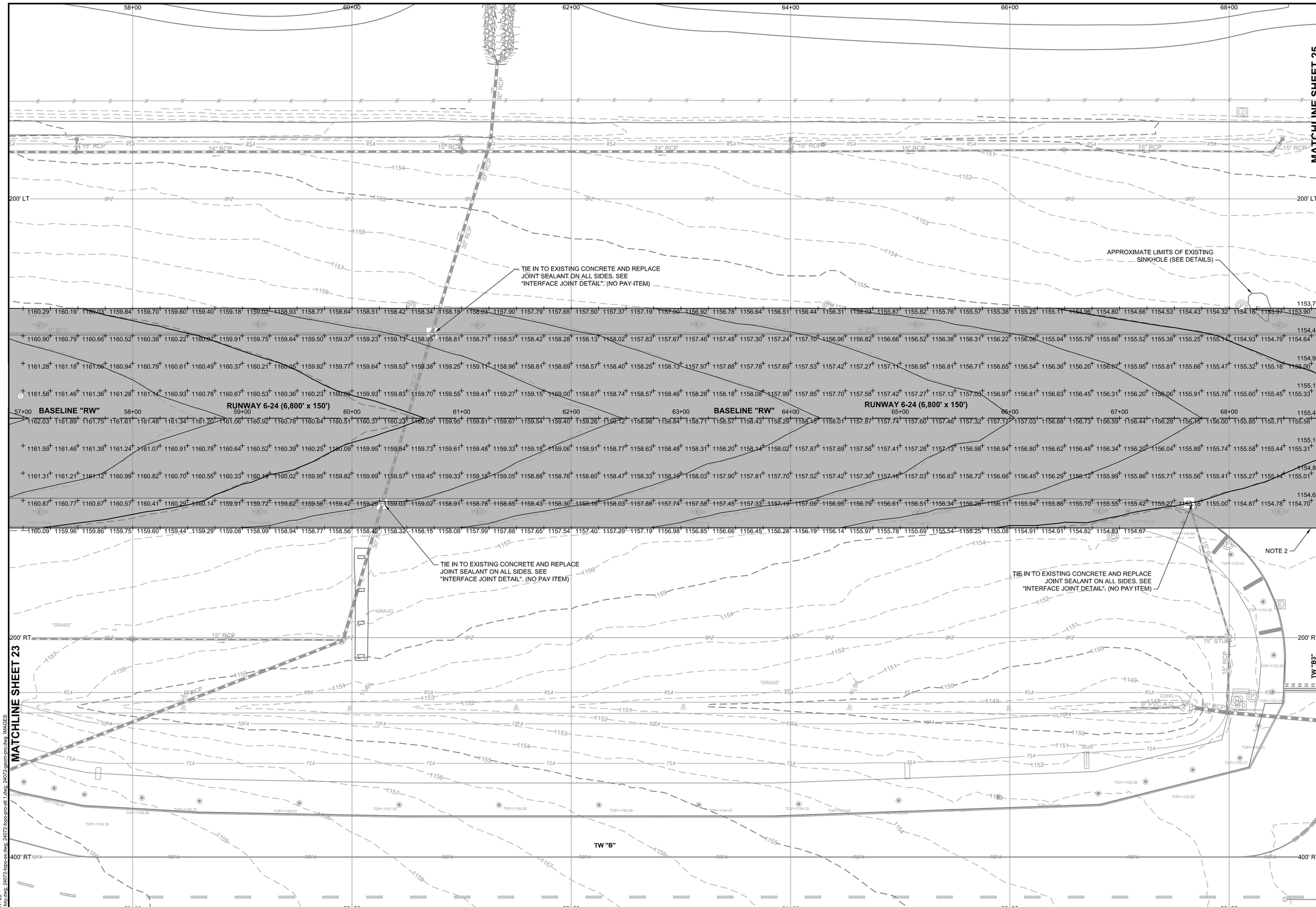

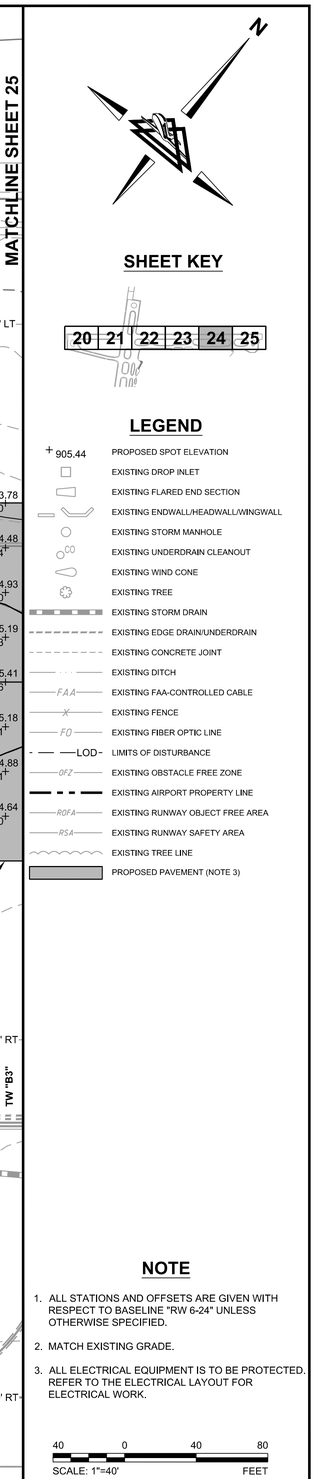

NOTE

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SCALE: 1"=40' FEET

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Digitally signed by William M. Eschenfelder
Date: 2026.05.19 11:57:04-04'00'

REHABILITATE RUNWAY 6-24

GRADING & DRAINAGE ALTERNATE 1

ROANOKE-BLACKSBURG REGIONAL AIRPORT

AIP NO. 3-51-0045-074-2025	JOB NO. 24072
DRAWN BY: RAS	SHEET 24 OF 58
DESIGNED BY: WME/SRS	
SCALE: 1" = 40'	DATE: MAY 2026

DRAWING: 24072GRD-ALT1.dwg LAYOUT: L5
XREFS: 24072-plan-ex.dwg; 24072-sheet key.dwg; 24072-topo-ex.dwg; 24072-topo-pro-alt 1.dwg; 24072-geom-pro.dwg IMAGES:
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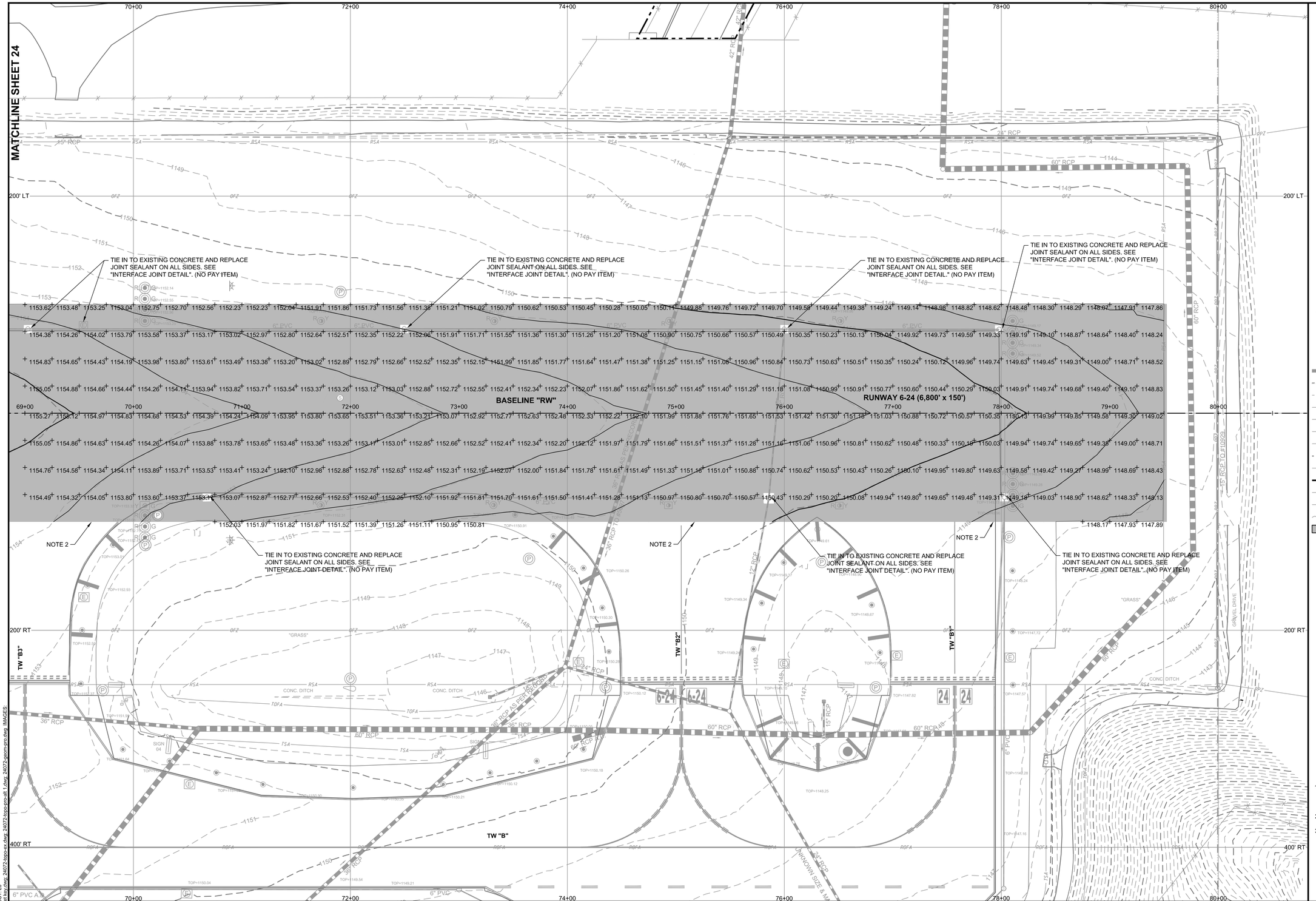

SHEET KEY

20	21	22	23	24	25

LEGEND

- 905.44 PROPOSED SPOT ELEVATION
- EXISTING DROP INLET
- EXISTING FLARED END SECTION
- EXISTING ENDWALL/HEADWALL/WINGWALL
- EXISTING STORM MANHOLE
- EXISTING UNDERDRAIN CLEANOUT
- EXISTING WIND CONE
- EXISTING TREE
- EXISTING STORM DRAIN
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- EXISTING CONCRETE JOINT
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- X EXISTING FENCE
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- LOD LIMITS OF DISTURBANCE
- OFZ EXISTING OBSTACLE FREE ZONE
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- ROFA EXISTING RUNWAY OBJECT FREE AREA
- RSA EXISTING RUNWAY SAFETY AREA
- EXISTING TREE LINE
- PROPOSED PAVEMENT (NOTE 3)

NOTE

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40 0 40 80
SCALE: 1"=40' FEET

NO.	REVISIONS	BY	APP.	DATE

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Date: 2026.05.19 15:57:05-04'00'

REHABILITATE RUNWAY 6-24

GRADING & DRAINAGE ALTERNATE 1

ROANOKE-BLACKSBURG REGIONAL AIRPORT

AIP NO.	3-51-0045-074-2025
JOB NO.	24072
DRAWN BY:	RAS
DESIGNED BY:	WME/SRS
SCALE:	1" = 40'
DATE:	MAY 2026
SHEET	25 OF 58

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XREFS: 24072-plan-ex.dwg; 24072-sheet key.dwg; 24072-topo-ex.dwg; 24072-topo-pro-alt 1.dwg; 24072-geom-pro.dwg IMAGES:

NOMINAL 3" MILL AND OVERLAY

VARIABLE DEPTH MILL AND MINIMUM 3" OVERLAY

RUNWAY 6-24 (6,800' x 150')

BASELINE "RW"

NOTE 2 (TYP ALL SIDES)

NOTE 2

NOTE 2

TIE IN TO EXISTING CONCRETE AND REPLACE JOINT SEALANT ON ALL SIDES (SEE DETAIL)

ADJUST MANHOLE TO GRADE. SEE "ADJUST MANHOLE TO GRADE DETAIL".

ADJUST MANHOLE TO GRADE. SEE "ADJUST MANHOLE TO GRADE DETAIL".

APPROXIMATE LOCATION OF 15" RCP

15" RCP

15" RCP A.D.

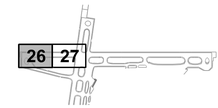
24" RCP TO #24/#6

TW "J7"

TW "J6"

MATCHLINE SHEET 27

SHEET KEY



LEGEND

- × 918.33 — EXISTING SPOT ELEVATION
- + 905.44 — PROPOSED SPOT ELEVATION
- EXISTING DROP INLET
- EXISTING FLARED END SECTION
- EXISTING ENDWALL/HEADWALL/WINGWALL
- EXISTING STORM MANHOLE
- EXISTING UNDERDRAIN CLEANOUT
- EXISTING WIND CONE
- EXISTING TREE
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- EXISTING TREE LINE
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40 0 40 80

SCALE: 1"=40' FEET

NO.	REVISIONS	BY	APP.	DATE

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Digitally signed by William M. Eschenfelder
Date: 2026.05.19 14:57:06-04'00'

REHABILITATE RUNWAY 6-24	AIP NO. 3-51-0045-074-2025		JOB NO. 24072
GRADING & DRAINAGE ALTERNATE 2	DRAWN BY: RAS		SHEET 26 OF 58
	DESIGNED BY: WME/SRS		
ROANOKE-BLACKSBURG REGIONAL AIRPORT	SCALE: 1" = 40'	DATE: MAY 2026	

DRAWING: 24072GRD-ALT2.dwg, LAYOUT: L1
XREFS: 24072-plan-ex.dwg; 24072-sheet key.dwg; 24072-topo-ex.dwg; 24072-topo-prop-alt 2.dwg; 24072-geom-pro.dwg; IMAGES:

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22+00 24+00 26+00 28+00 30+00 32+00

200' LT

200' RT

400' RT

MATCHLINE SHEET 26

BASELINE "RW"

RUNWAY 6-24 (6,800' x 150')

RUNWAY 34-16 (5,810' x 150')

NOMINAL 3" MILL AND OVERLAY

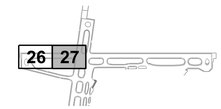
VARIABLE DEPTH MILL AND 3" MINIMUM OVERLAY

NOTE 2

TW "A"

6-24

SHEET KEY



LEGEND

- × 918.33 — EXISTING SPOT ELEVATION
- + 905.44 — PROPOSED SPOT ELEVATION
- EXISTING DROP INLET
- EXISTING FLARED END SECTION
- EXISTING ENDWALL/HEADWALL/WINGWALL
- EXISTING STORM MANHOLE
- EXISTING UNDERDRAIN CLEANOUT
- EXISTING WIND CONE
- EXISTING TREE
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- EXISTING TREE LINE
- PROPOSED PAVEMENT (NOTE 3)

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40 0 40 80
SCALE: 1"=40' FEET

NO.	REVISIONS	BY	APP.	DATE

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DELTA AIRPORT CONSULTANTS, INC.

COMMONWEALTH OF VIRGINIA
WILLIAM M. ESCHENFELDER
Lic. No. 045144
PROFESSIONAL ENGINEER
Digitally signed by William M. Eschenfelder
Date: 2026.05.19 07:06-04'00'

REHABILITATE RUNWAY 6-24	AIP NO. 3-51-0045-074-2025		JOB NO. 24072
GRADING & DRAINAGE ALTERNATE 2	DRAWN BY: RAS		SHEET 27 OF 58
	DESIGNED BY: WME/SRS		
ROANOKE-BLACKSBURG REGIONAL AIRPORT	SCALE: 1" = 40'	DATE: MAY 2026	

DRAWING: 24072GRD-ALT2.dwg, LAYOUT: L2
XREFS: 24072-plan-ex.dwg, 24072-sheet key.dwg, 24072-apps-ex.dwg, 24072-topo-pers-alt 2.dwg, 24072-geom-pers.dwg, IMAGES:
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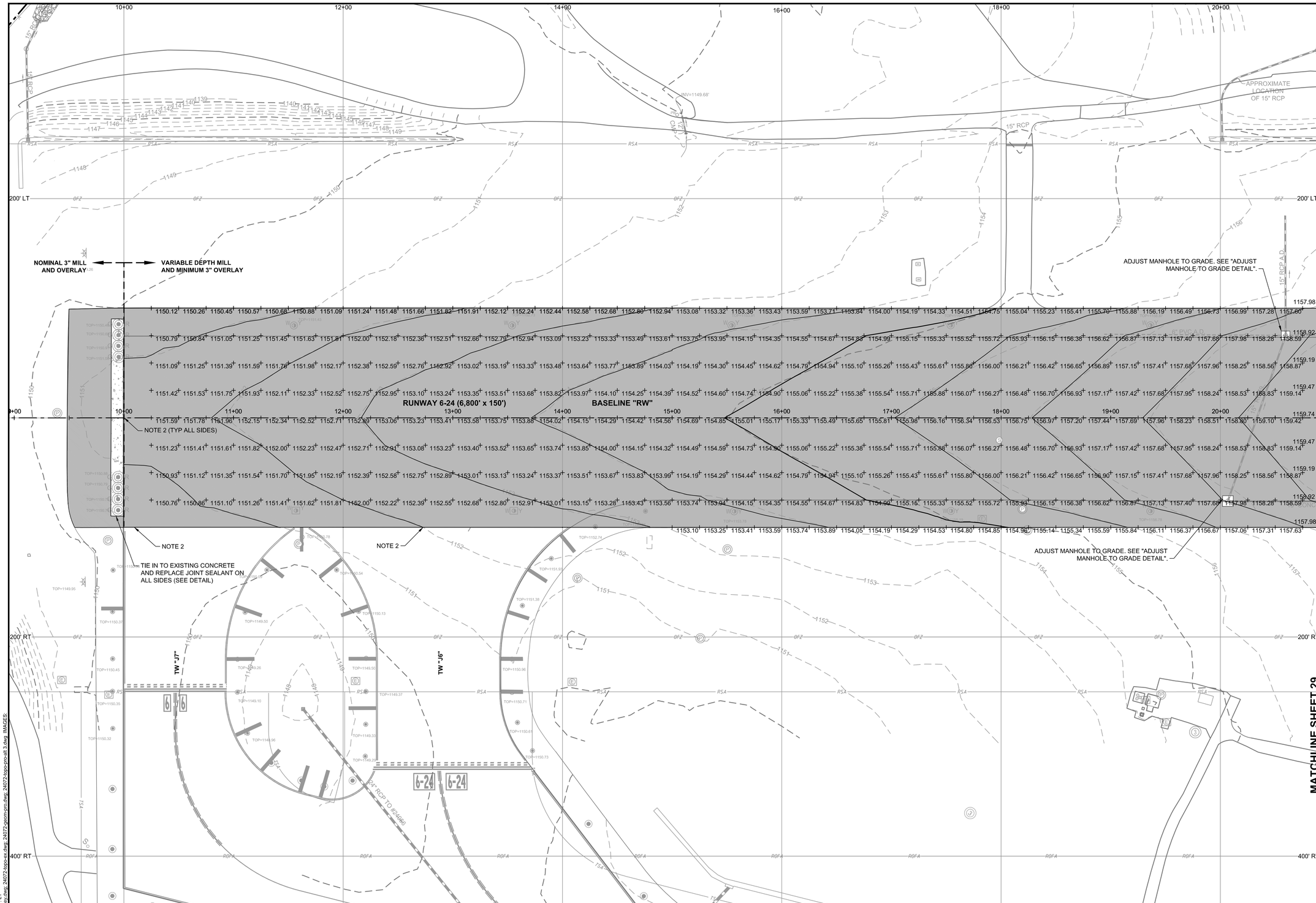

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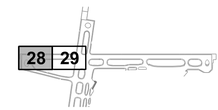

LEGEND

- × 918.33 EXISTING SPOT ELEVATION
- + 905.44 PROPOSED SPOT ELEVATION
- EXISTING DROP INLET
- EXISTING FLARED END SECTION
- EXISTING ENDWALL/HEADWALL/WINGWALL
- EXISTING STORM MANHOLE
- EXISTING UNDERDRAIN CLEANOUT
- EXISTING WIND CONE
- EXISTING TREE
- EXISTING STORM DRAIN
- EXISTING EDGE DRAIN/UNDERDRAIN
- EXISTING CONCRETE JOINT
- EXISTING DITCH
- FAA EXISTING FAA-CONTROLLED CABLE
- X EXISTING FENCE
- FO EXISTING FIBER OPTIC LINE
- LOD LIMITS OF DISTURBANCE
- OFZ EXISTING OBSTACLE FREE ZONE
- EXISTING AIRPORT PROPERTY LINE
- ROFA EXISTING RUNWAY OBJECT FREE AREA
- RSA EXISTING RUNWAY SAFETY AREA
- EXISTING TREE LINE
- PROPOSED PAVEMENT (NOTE 3)

NOTE

1. ALL STATIONS AND OFFSETS ARE GIVEN WITH RESPECT TO BASELINE "RW 6-24" UNLESS OTHERWISE SPECIFIED.
2. MATCH EXISTING GRADE.
3. ALL EXISTING ELECTRICAL EQUIPMENT IS TO BE PROTECTED. REFER TO THE ELECTRICAL LAYOUT FOR ELECTRICAL WORK.

40 0 40 80
SCALE: 1"=40' FEET

NO.	REVISIONS	BY	APP.	DATE

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REHABILITATE RUNWAY 6-24

GRADING & DRAINAGE ALTERNATE 3

ROANOKE-BLACKSBURG REGIONAL AIRPORT

AIP NO.	3-51-0045-074-2025
JOB NO.	24072
DRAWN BY:	RAS
DESIGNED BY:	WME/SRS
SCALE:	1" = 40'
DATE:	MAY 2026
SHEET	28 OF 58

DRAWING: 24072GRD-ALT3.dwg LAYOUT: L1
XREFS: 24072-plan-ex.dwg; 24072-sheet key.dwg; 24072-topo-ex.dwg; 24072-geom-pro.dwg; 24072-topo-pro-alt 3.dwg IMAGES:

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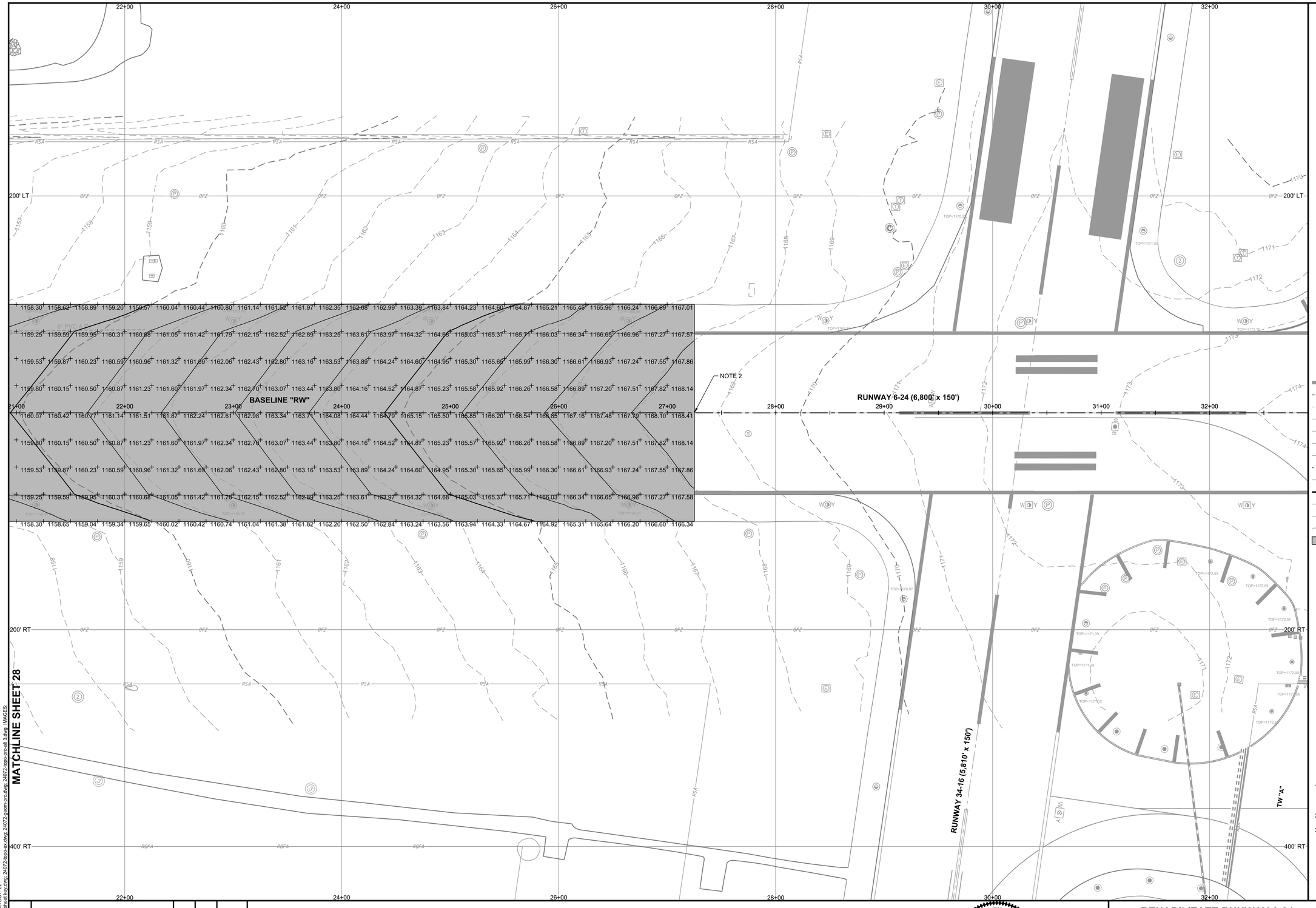

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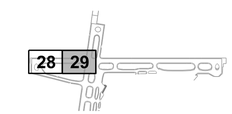

LEGEND

× 918.33	EXISTING SPOT ELEVATION
+ 905.44	PROPOSED SPOT ELEVATION
	EXISTING DROP INLET
	EXISTING FLARED END SECTION
	EXISTING ENDWALL/HEADWALL/WINGWALL
	EXISTING STORM MANHOLE
CO	EXISTING UNDERDRAIN CLEANOUT
	EXISTING WIND CONE
	EXISTING TREE
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	EXISTING CONCRETE JOINT
	EXISTING DITCH
FAA	EXISTING FAA-CONTROLLED CABLE
X	EXISTING FENCE
FO	EXISTING FIBER OPTIC LINE
LOD	LIMITS OF DISTURBANCE
OFZ	EXISTING OBSTACLE FREE ZONE
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ROFA	EXISTING RUNWAY OBJECT FREE AREA
RSA	EXISTING RUNWAY SAFETY AREA
	EXISTING TREE LINE
	PROPOSED PAVEMENT (NOTE 3)

NOTE

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REHABILITATE RUNWAY 6-24

GRADING & DRAINAGE ALTERNATE 3

ROANOKE-BLACKSBURG REGIONAL AIRPORT

AIP NO.	3-51-0045-074-2025
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DRAWN BY:	RAS
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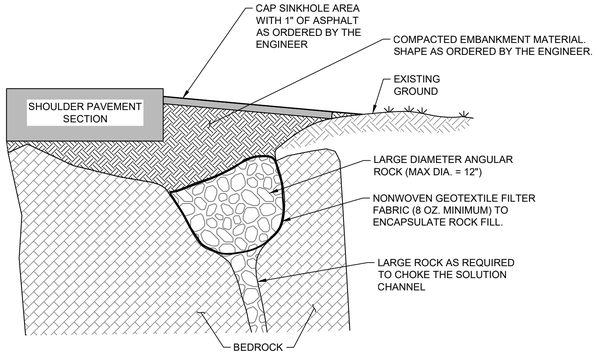
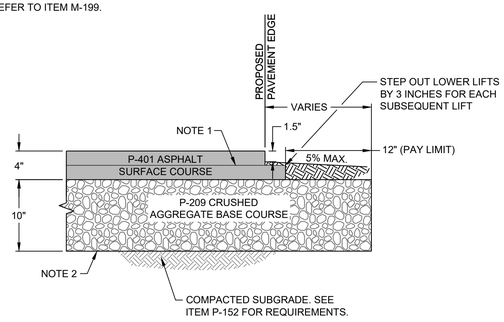


SINKHOLE TREATMENT

NTS

NOTES:

1. EXCAVATE SOIL FROM SINKHOLE TO EXPOSE ROCK THROAT
2. AREAS OF SINKHOLE REPAIR SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
3. UNDERCUT LIMITS SHOULD BE DETERMINED BY THE ENGINEER DURING SINKHOLE REPAIR.
4. TYPE AGGREGATE TO BE USED SHALL BE DETERMINED BY FIELD CONDITIONS AND RECOMMENDATIONS OF THE ON-SITE GEOTECHNICAL ENGINEER. REFER TO ITEM M-199.



SHOULDER PAVEMENT SECTION

NTS

NOTES:

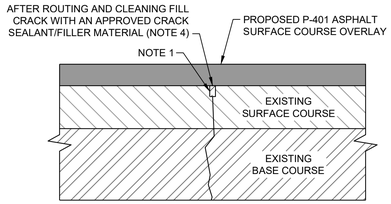
1. PLACE TACK COAT BETWEEN LIFTS OF P-401 ASPHALT SURFACE COURSE. SEE "TACK COAT APPLICATION RATES" TABLE AND ITEM P-603 OF THE SPECIFICATIONS.
2. IF ORDERED BY THE ENGINEER, THE CONTRACTOR SHALL UNDERCUT THE SUBGRADE TO REMOVE SOFT OR YIELDING MATERIAL.

SURFACE TYPE	RESIDUAL RATE, GAL/SY	EMULSION APPLICATION BAR RATE, GAL/SY
NEW ASPHALT	0.02 - 0.05	0.03 - 0.07
EXISTING ASPHALT	0.04 - 0.07	0.06 - 0.11
MILLED SURFACE	0.04 - 0.08	0.06 - 0.12

TACK COAT APPLICATION RATES

NOTE:

1. REFERENCE IS DIRECTED TO ITEM P-603 OF THE SPECIFICATIONS FOR ADDITIONAL DETAILS.

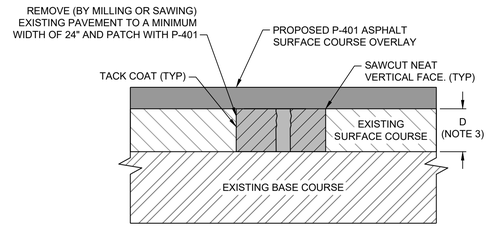


CRACK REPAIR DETAIL (TYPE A) (> 1/4" WIDTH, ≤ 1-1/2" WIDTH)

NTS

NOTES:

1. CRACKS SHALL BE ROUTED FULL DEPTH, 2" MINIMUM. MINIMUM ROUTED WIDTH 3/4".
2. CRACK PREPARATION, ROUTING (IF REQUIRED), CRACK SEALANT/FILLER, ETC. INCLUDED WITH CRACK REPAIR (P-101).
3. REMOVE ANY VEGETATION, DIRT, DAMPNESS, AND LOOSE MATERIAL FROM CRACKS. APPLY HERBICIDE BEFORE FILLING.
4. A FAST SETTING FLOWABLE NON-SHRINK, NON-METALLIC, RAPID SET GROUT SHALL BE USED. GROUT SHALL PROVIDE A MINIMUM OF 90 PERCENT FILLED VOIDS.

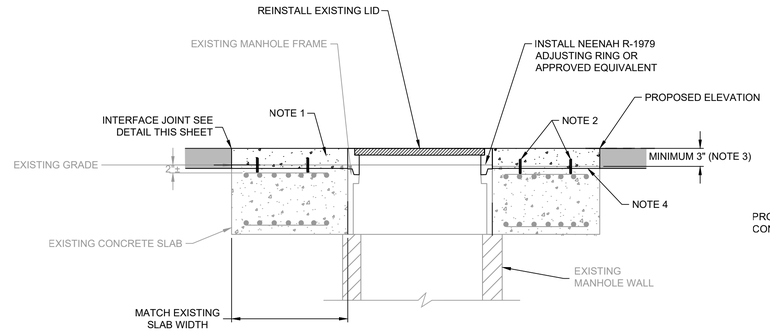


CRACK REPAIR DETAIL (TYPE B) (> 1-1/2" WIDTH)

NTS

NOTES:

1. COMPACT ASPHALT CONCRETE PATCH WITH MECHANICAL COMPACTOR (LOWER LIFTS) OR ROLLER (TOP LIFT).
2. PAVEMENT REMOVAL (MILLING) AND BITUMINOUS PATCH INCLUDED IN UNIT PRICE PER LINEAR FOOT FOR "JOINT AND CRACK REPAIR (TYPE B)".
3. DEPTH SHALL BE 6" OR THE FULL DEPTH OF THE COURSE, WHICHEVER IS LESS.
4. IF CRACK EXTENDS INTO BASE COURSE, NON-SHRINK GROUT SHALL BE USED TO FILL THE VOID.

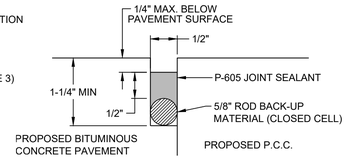


ADJUST MANHOLE TO GRADE DETAIL

NTS

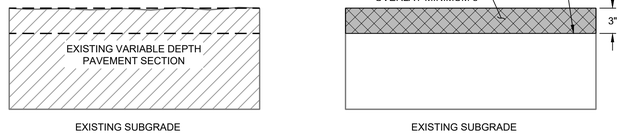
NOTES:

1. P-610 CONCRETE.
2. 4" LENGTH #3 REBAR. DRILL AND EPOXY 2" INTO EXISTING AND PROPOSED PADS, MINIMUM 12 BARS PER SLAB, SPACED EVENLY AROUND FRAME. PROVIDE MINIMUM 1.5" CONCRETE COVER OVER REBAR.
3. EXITING CONCRETE SHALL BE GRINDED 0"-1" DOWN SO THAT A MINIMUM OF 3" OF CONCRETE CAN BE PLACED OVER THE EXISTING CONCRETE PAD. DEPTH OF CONCRETE GRINDING SHALL BE VERIFIED IN THE FIELD. IF GREATER THAN 1" OF GRINDING IS REQUIRE TO REACH THE MINIMUM 3" PROPOSED DEPTH, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO BEGINNING WORK ON THE ADJUSTMENT OF STRUCTURE.
4. THOROUGHLY CLEAN AND DRY EXISTING SLAB AFTER GRINDING AND APPLY EPOXY BONDING AGENT ACCORDING TO MANUFACTURER'S INSTRUCTION PRIOR TO PLACING NEW CONCRETE.
5. ALL WORK SHOWN IS INCIDENTAL TO THE PAVEMENT MANHOLE ADJUSTMENT PAY ITEM.



INTERFACE JOINT DETAIL

NTS

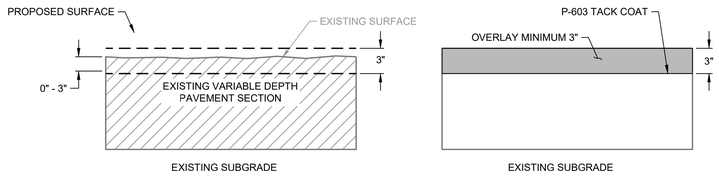


MILL AND OVERLAY PAVEMENT SECTION (3" NOMINAL)

NTS

NOTES:

1. IF SCABBING IS ENCOUNTERED, AN ADDITIONAL 1" OF MILLING MAY BE NECESSARY. ADDITIONAL MILLING SHALL BE INCIDENTAL TO THE MILLING PAY ITEM. ADDITIONAL ASPHALT SHALL BE PAID IN ACCORDANCE WITH THE P-401 SPECIFICATION.



MILL AND OVERLAY PAVEMENT SECTION (VARIABLE DEPTH)

NTS

NOTES:

1. A MINIMUM OF A 0.5" OF MILLING IS REQUIRED TO ROUGHEN THE SURFACE AND IMPROVE THE BOND BETWEEN THE OVERLAY AND THE EXISTING PAVEMENT.
2. IF SCABBING IS ENCOUNTERED, AN ADDITIONAL 1" OF MILLING MAY BE NECESSARY. ADDITIONAL MILLING SHALL BE INCIDENTAL TO THE MILLING PAY ITEM. ADDITIONAL ASPHALT SHALL BE PAID IN ACCORDANCE WITH THE P-401 SPECIFICATION.
3. THE CONTRACTOR SHALL SUBMIT A MILLING PLAN TO BE APPROVED BY THE ENGINEER PRIOR TO THE START OF MILLING OPERATIONS.

NO.	REVISIONS	BY	APP.	DATE

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Date: 2026.05.19 07:08-04'00'

REHABILITATE RUNWAY 6-24	AIP NO. 3-51-0045-074-2025		JOB NO. 24072
PAVEMENT DETAILS	DRAWN BY: RAS		SHEET 30 OF 58
	DESIGNED BY: WME/SRS		
ROANOKE-BLACKSBURG REGIONAL AIRPORT	SCALE: NONE	DATE: MAY 2026	

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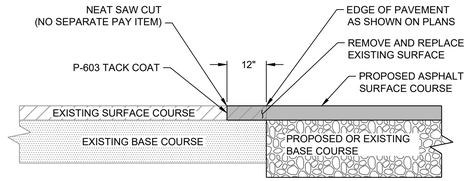
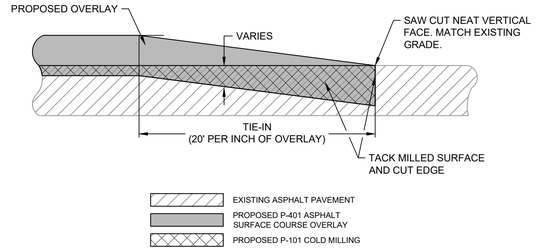


PAVEMENT TIE-IN DETAIL

NTS

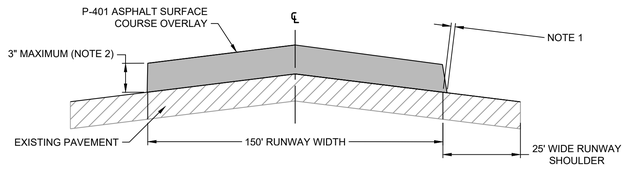


NIGHTLY VARIABLE MILLING TIE-IN DETAIL

NTS

NOTES:

1. REMOVE ALL WEDGE MATERIAL PRIOR TO NEXT PAVING TO NEXT PAVING DAY, AND PROVIDE SAW CUT WITH NEAT VERTICAL FACE FOR TIE-IN (NO SEPARATE PAY ITEM).
2. ASPHALT MATERIAL REQUIRED TO CONSTRUCT THE TRANSVERSE TIE-IN JOINT IN ORDER TO REOPEN THE RUNWAY AT THE END OF EACH WORK PERIOD IS ELIGIBLE FOR PAYMENT, TO THE LIMITS IDENTIFIED IN THIS DETAIL.

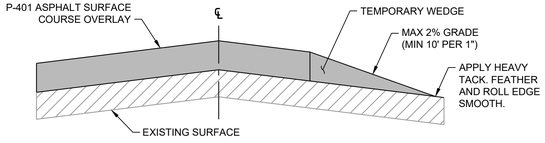


TEMPORARY RUNWAY SHOULDER OVERLAY TIE IN

NTS

NOTES:

1. EXTEND OVERLAY AS NECESSARY TO MAINTAIN THICKNESS AND COMPACTION REQUIREMENTS ON RUNWAY PAVEMENT. REMOVE ANY WEDGE MATERIAL PRIOR TO NEXT PAVING DAY OR RESUMING PAVING. PROVIDE NEAT VERTICAL FACE FOR THE TIE-IN.
2. DROP-OFF BETWEEN RUNWAY AND SHOULDER SHALL NOT EXCEED THREE INCHES.



EMERGENCY LONGITUDINAL JOINT TIE-IN DETAIL

NTS

NOTES:

1. TIE-IN MATERIAL SHALL BE CONSIDERED INCIDENTAL TO THE PROECT WITH NO MEASUREMENT.
2. REMOVE ALL WEDGE MATERIAL PRIOR TO NEXT PAVING DAY OR RESUMING PAVING. PROVIDE NEAT VERTICAL FACE FOR THE TIE-IN.
3. FOR USE IN EVENT OF EQUIPMENT BREAKDOWN, CHANGED WEATHER CONDITIONS, ETC., WHICH PRECLUDES COMPLETION OF FULL WIDTH.

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REHABILITATE RUNWAY 6-24	AIP NO. 3-51-0045-074-2025		JOB NO. 24072
PAVEMENT TIE-IN & TRANSITION DETAILS	DRAWN BY: RAS		SHEET 31 OF 58
	DESIGNED BY: WME/SRS		
ROANOKE-BLACKSBURG REGIONAL AIRPORT	SCALE: NONE	DATE: MAY 2026	

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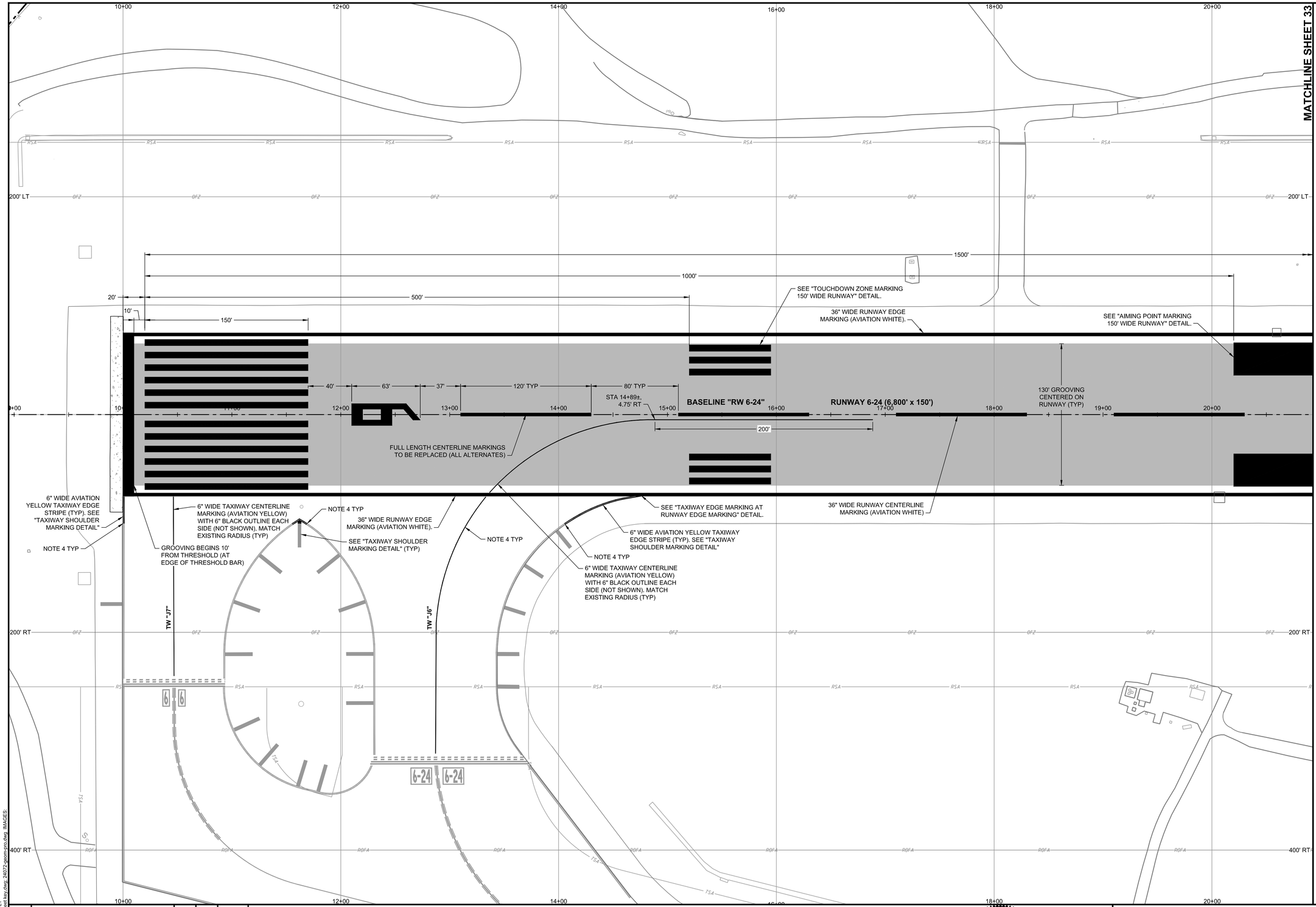

SHEET KEY

32	33	34	35	36	37

LEGEND

- EXISTING MARKING
- PROPOSED MARKING
- PROPOSED GROOVING

NOTES

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2. LOCATION OF EXISTING MARKINGS ARE APPROXIMATE AND SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR.
3. PROTECT EXISTING LIGHT FIXTURES DURING SHOULDER MARKING.
4. TIE INTO EXISTING MARKING AS ORDERED BY OWNER AND/OR OWNER'S REPRESENTATIVE.
5. TIE INTO EXISTING TAXIWAY CENTERLINE MARKING AS ORDERED BY OWNER AND/OR OWNER'S REPRESENTATIVE.
6. FINAL MARKINGS SHALL INCLUDE A 6" BLACK BORDER.
7. IN-PAVEMENT CENTERLINE LIGHTS SHALL BE PROTECTED FROM PAINT. NO PAINT SHALL BE PERMITTED ON ANY PART OF THE LIGHT CAN.

40 0 40 80
SCALE: 1"=40' FEET

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Date: 2026.05.19 11:37:09-04'00'

REHABILITATE RUNWAY 6-24

MARKING & GROOVING LAYOUT

ROANOKE-BLACKSBURG REGIONAL AIRPORT

AIP NO. 3-51-0045-074-2025	JOB NO. 24072
DRAWN BY: RAS	SHEET 32 OF 58
DESIGNED BY: WME/SRS	
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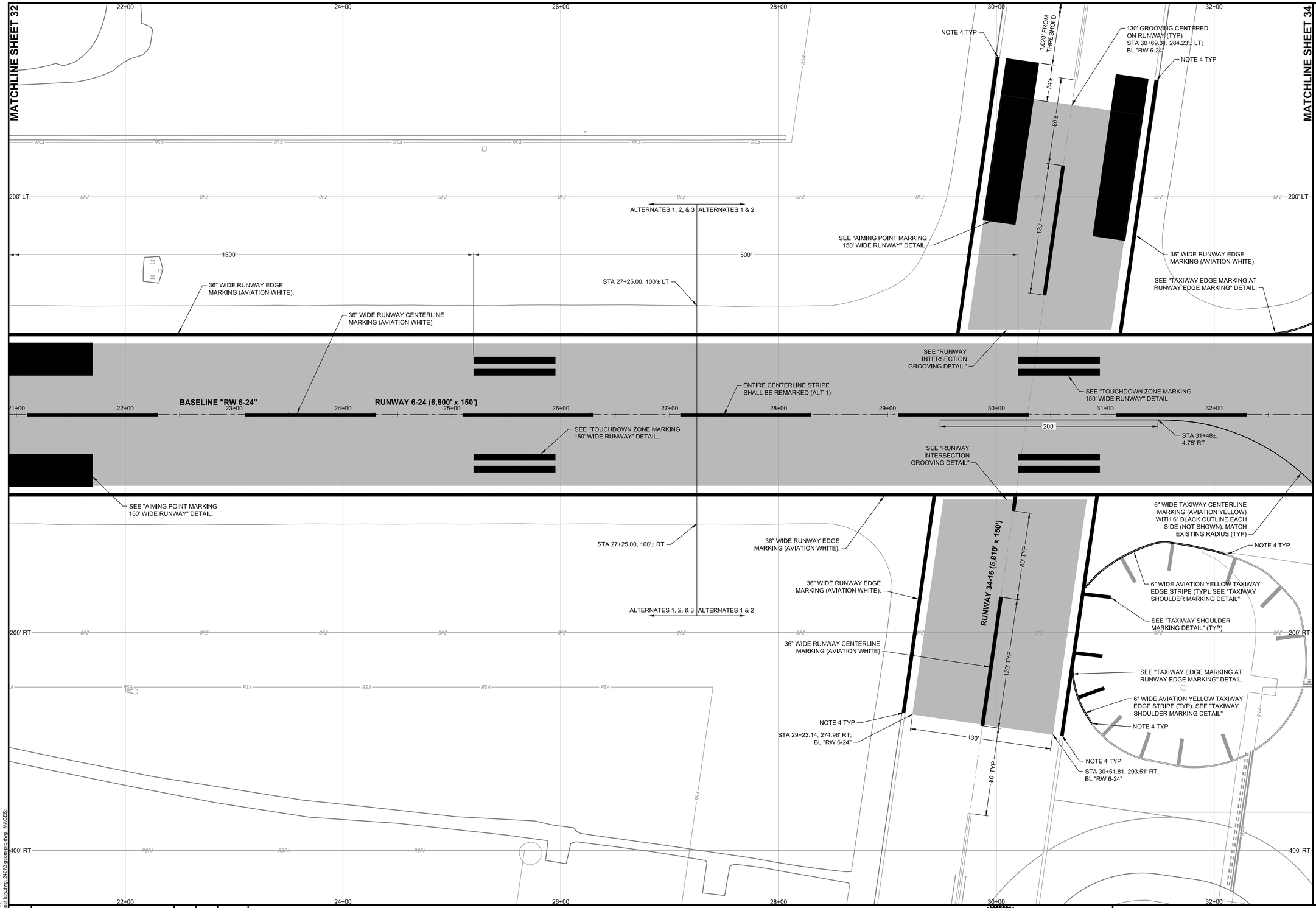

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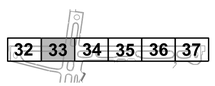

LEGEND

- EXISTING MARKING
- PROPOSED MARKING
- PROPOSED GROOVING

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MARKING & GROOVING LAYOUT

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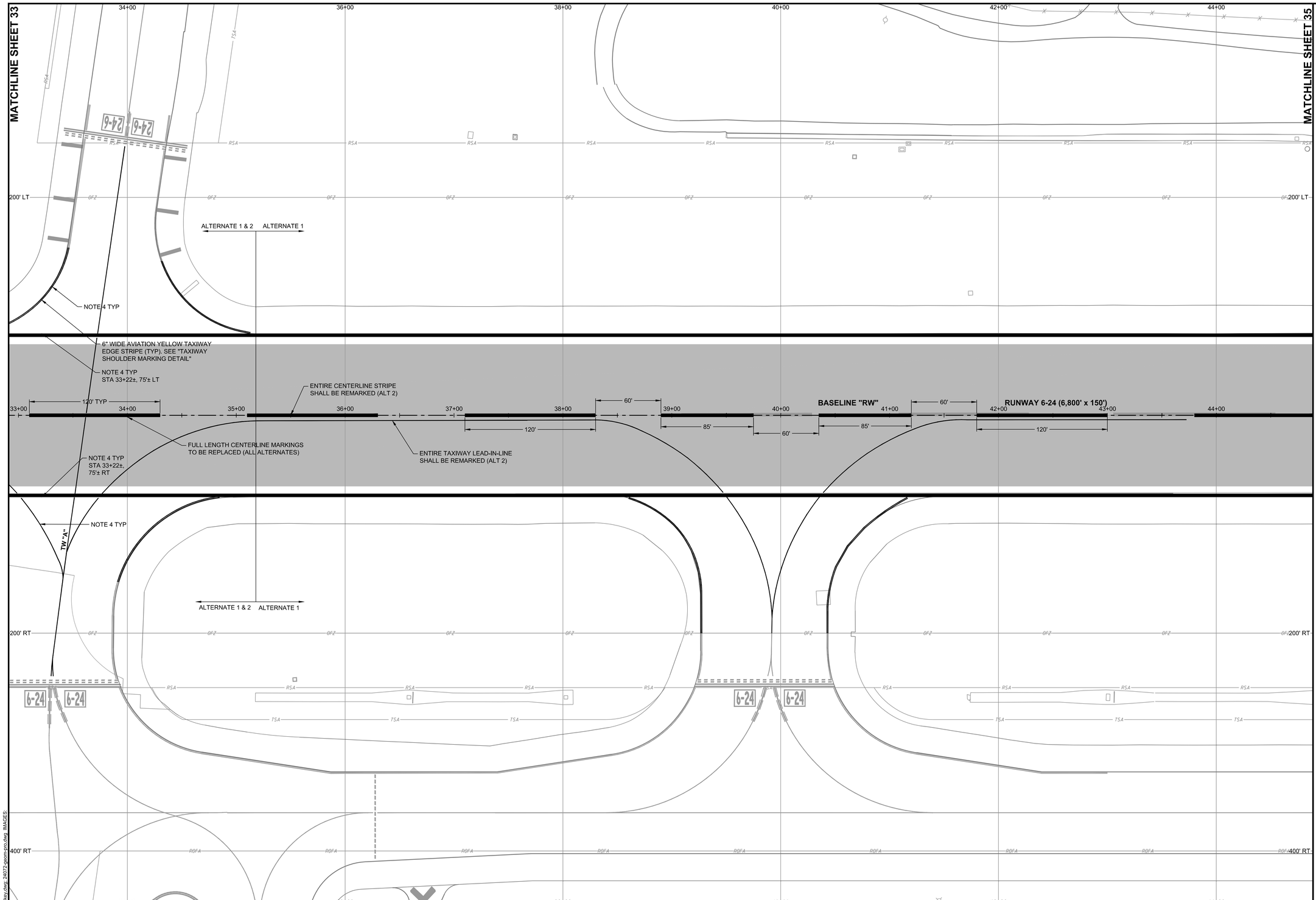

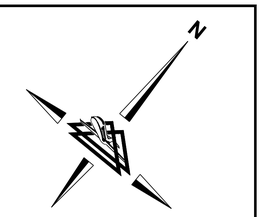

SHEET KEY

32	33	34	35	36	37

LEGEND

- EXISTING MARKING
- PROPOSED MARKING
- PROPOSED GROOVING

NOTES

1. ALL STATION AND OFFSETS ARE GIVEN WITH RESPECT TO BASELINE "RW 6-24" UNLESS OTHERWISE SPECIFIED.
2. LOCATION OF EXISTING MARKINGS ARE APPROXIMATE AND SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR.
3. PROTECT EXISTING LIGHT FIXTURES DURING SHOULDER MARKING.
4. TIE INTO EXISTING MARKING AS ORDERED BY OWNER AND/OR OWNER'S REPRESENTATIVE.
5. TIE INTO EXISTING TAXIWAY CENTERLINE MARKING AS ORDERED BY OWNER AND/OR OWNER'S REPRESENTATIVE.
6. FINAL MARKINGS SHALL INCLUDE A 6" BLACK BORDER.
7. IN-PAVEMENT CENTERLINE LIGHTS SHALL BE PROTECTED FROM PAINT. NO PAINT SHALL BE PERMITTED ON ANY PART OF THE LIGHT CAN.

40 0 40 80
SCALE: 1"=40' FEET

NO.	REVISIONS	BY	APP.	DATE

2700 Polo Parkway
Midlothian, Virginia 23113
phone: (804) 275-8301
www.deltaairport.com

DELTA AIRPORT CONSULTANTS, INC.

COMMONWEALTH OF VIRGINIA
WILLIAM M. ESCHENFELDER
Lic. No. 045144
PROFESSIONAL ENGINEER
Digitally signed by William M. Eschenfelder
Date: 2026.05.19 11:37:10-04'00'

REHABILITATE RUNWAY 6-24

MARKING & GROOVING LAYOUT

ROANOKE-BLACKSBURG REGIONAL AIRPORT

AIP NO.	3-51-0045-074-2025
JOB NO.	24072
DRAWN BY:	RAS
DESIGNED BY:	WME/SRS
SCALE:	1" = 40'
DATE:	MAY 2026
SHEET	34 OF 58

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MATCHLINE SHEET 34

MATCHLINE SHEET 36

46+00 48+00 50+00 52+00 54+00 56+00

200' LT

200' RT

RSA OFZ

36" WIDE RUNWAY EDGE MARKING (AVIATION WHITE).

NOTE 4 TYP
STA 47+47±, 75'± LT

RUNWAY CENTERLINE STRIPE (AVIATION WHITE)

BASELINE "RW 6-24"

RUNWAY 6-24 (6,800' x 150')

45+00 46+00 47+00 48+00 49+00 50+00 51+00 52+00 53+00 54+00 55+00 56+00

80' 120' TYP 80' TYP 200'

STA 52+05±, 4.75' RT

STA 52+05.40, 4.75' RT

200'

NOTE 4 TYP
STA 47+47±, 75'± RT

6" WIDE TAXIWAY LEAD-IN CENTERLINE STRIPE (AVIATION YELLOW).

6" WIDE TAXIWAY CENTERLINE MARKING (AVIATION YELLOW) WITH 6" BLACK OUTLINE EACH SIDE (NOT SHOWN). MATCH EXISTING RADIUS (TYP)

SEE "TAXIWAY EDGE MARKING AT RUNWAY EDGE MARKING" DETAIL.

6" WIDE AVIATION YELLOW TAXIWAY EDGE STRIPE (TYP). SEE "TAXIWAY SHOULDER MARKING DETAIL"

NOTE 4

SEE "TAXIWAY EDGE MARKING AT RUNWAY EDGE MARKING" DETAIL.

6" WIDE AVIATION YELLOW TAXIWAY EDGE STRIPE (TYP). SEE "TAXIWAY SHOULDER MARKING DETAIL"

TW "B4"

TW "B"

6-24 6-24 6-24

ROFA TSA

400' RT

46+00 48+00 50+00 52+00 54+00 56+00

N

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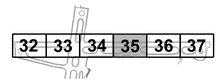

LEGEND

- EXISTING MARKING
- PROPOSED MARKING
- PROPOSED GROOVING

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40 0 40 80
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Date: 2026.05.19 09:11-04'00'

REHABILITATE RUNWAY 6-24	AIP NO. 3-51-0045-074-2025	JOB NO. 24072	
MARKING & GROOVING LAYOUT	DRAWN BY: RAS	SHEET 35 OF 58	
	DESIGNED BY: WME/SRS		
ROANOKE-BLACKSBURG REGIONAL AIRPORT	SCALE: 1" = 40'	DATE: MAY 2026	

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MATCHLINE SHEET 35

MATCHLINE SHEET 37

58+00 60+00 62+00 64+00 66+00 68+00

200' LT

200' LT

SEE "AIMING POINT MARKING 150' WIDE RUNWAY" DETAIL.

1000'

6" WIDE TAXIWAY LEAD-IN CENTERLINE STRIPE (AVIATION YELLOW).

130' GROOVING CENTERED ON RUNWAY (TYP)

BASELINE "RW 6-24"

RUNWAY 6-24 (6,800' x 150')

57+00 58+00 59+00 60+00 61+00 62+00 63+00 64+00 65+00 66+00 67+00 68+00

200'

80' TYP

120' TYP

40'

60'

40'

24

FULL LENGTH CENTERLINE MARKINGS TO BE REPLACED (ALL ALTERNATES)

36" WIDE RUNWAY EDGE MARKING (AVIATION WHITE).

RUNWAY CENTERLINE STRIPE (AVIATION WHITE)

SEE "TAXIWAY EDGE MARKING AT RUNWAY EDGE MARKING" DETAIL.

NOTE 4 TYP

6" WIDE AVIATION YELLOW TAXIWAY EDGE STRIPE (TYP). SEE "TAXIWAY SHOULDER MARKING DETAIL"

200' RT

200' RT

400' RT

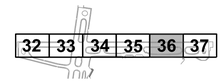
400' RT

OFZ RSA TOFA TSA CONC

58+00 60+00 62+00 64+00 66+00 68+00

N

SHEET KEY



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- EXISTING MARKING
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SCALE: 1"=40' FEET

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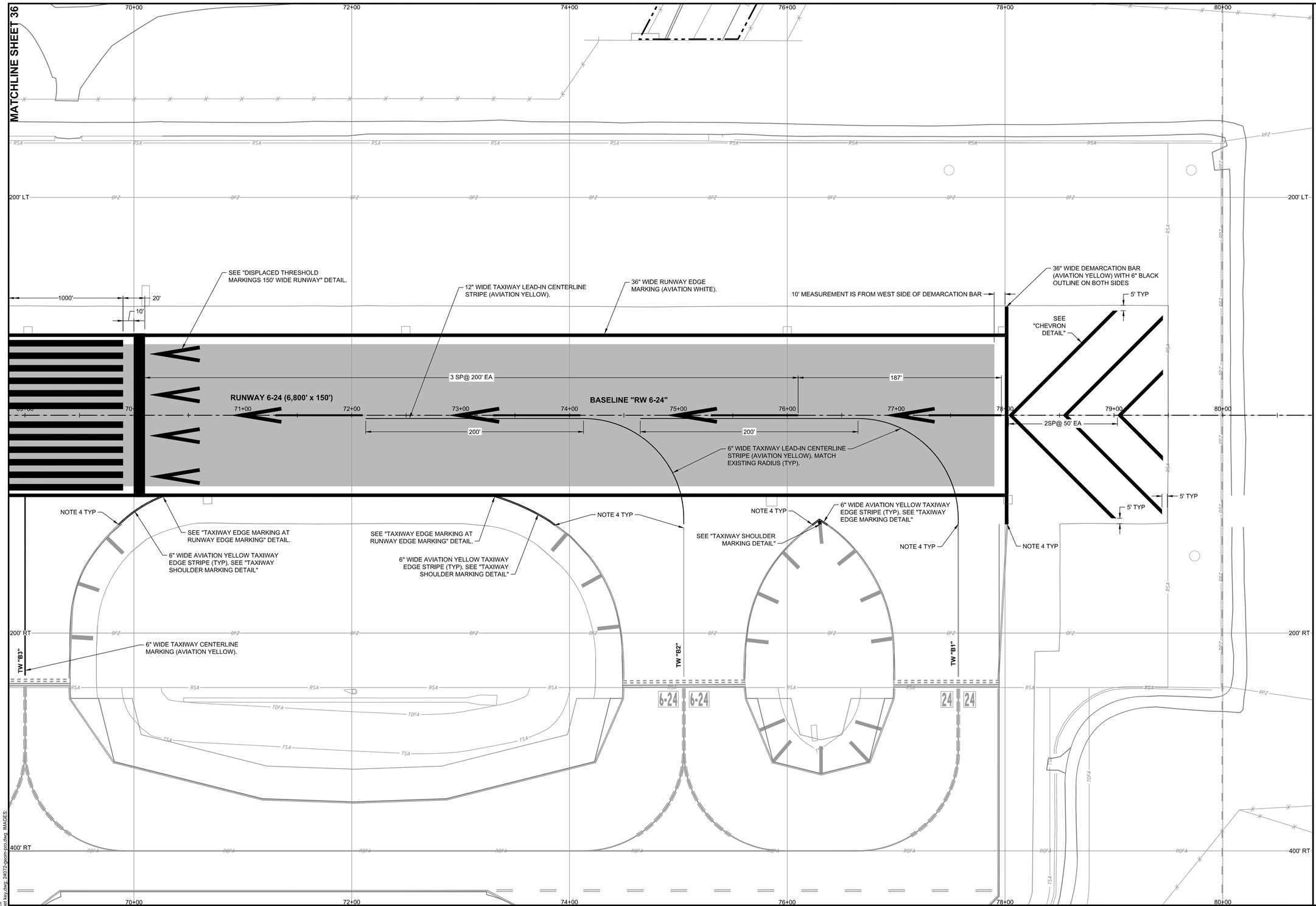
Date: 2026.05.19 07:11-04'00'

REHABILITATE RUNWAY 6-24	AIP NO. 3-51-0045-074-2025		JOB NO. 24072
MARKING & GROOVING LAYOUT	DRAWN BY: RAS	DESIGNED BY: WME/SRS	SHEET 36 OF 58
ROANOKE-BLACKSBURG REGIONAL AIRPORT	SCALE: 1" = 40'	DATE: MAY 2026	



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32	33	34	35	36	37

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PROFESSIONAL ENGINEER
Digitally signed by William M. Eschenfelder
Date: 2026.05.19 11:57:12-04'00'

REHABILITATE RUNWAY 6-24

MARKING & GROOVING LAYOUT

ROANOKE-BLACKSBURG REGIONAL AIRPORT

AIP NO.	3-51-0045-074-2025
JOB NO.	24072
DRAWN BY:	RAS
DESIGNED BY:	WME/SRS
SCALE:	1" = 40'
DATE:	MAY 2026
SHEET	37 OF 58

DRAWING: 24072MRK.dwg LAYOUT: L6
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MARKING NOTES

GENERAL:

1. THE CONTRACTOR SHALL SUBMIT DOCUMENTATION THAT THE PERSONNEL RESPONSIBLE FOR MARKING LAYOUT AND APPLICATION HAS A MINIMUM OF FIVE (5) YEARS OF SIMILAR EXPERIENCE WORKING ON AIRPORTS. THE CONTRACTOR SHALL PROVIDE REFERENCES TO SUBSTANTIATE THE REQUIRED EXPERIENCE.
2. ALL MARKINGS SHALL BE IN ACCORDANCE WITH FAA ADVISORY CIRCULAR (AC) 150/5340-1M, "STANDARDS FOR AIRPORT MARKINGS".
3. ANY MARKINGS APPLIED ON NEW BITUMINOUS PAVEMENT PRIOR TO THE THIRTY (30) DAY CURE TIME SHALL BE APPLIED AT 33 PERCENT OF THE SPECIFIED COVERAGE AND PAID FOR AS INITIAL MARKING. REFERENCE IS DIRECTED TO ITEM P-620 OF THE SPECIFICATIONS.
4. INITIAL MARKINGS SHALL BE APPLIED ON NEW PAVEMENT PRIOR TO OPENING OF PAVEMENT FOR TRAFFIC.
5. INITIAL MARKINGS SHALL INCLUDE ALL MARKINGS SHOWN ON THE PLANS OR AS COORDINATED WITH THE ENGINEER. INITIAL MARKINGS ARE NOT REQUIRED FOR BLACK OUTLINES OR BORDERS.
6. AFTER PROPER PAVEMENT CURE FOR ASPHALT PAVEMENT, ALL MARKINGS ON THE "MARKING LAYOUT" SHALL BE MARKED AT THE FULL RATE AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT FOR PERMANENT MARKING. REFERENCE IS DIRECTED TO ITEM P-620 OF THE SPECIFICATIONS.
7. REFLECTIVE MEDIA SHALL BE PROVIDED AS OUTLINED IN ITEM P-620. BLACK MARKINGS SHALL NOT BE REFLECTORIZED. MARKINGS WITHOUT BEADS MUST BE DRY PRIOR TO APPLYING MARKING WITH BEADS.
8. WHERE RUNWAY AND TAXIWAY MARKINGS INTERSECT, RUNWAY MARKINGS SHALL TAKE PRECEDENCE.
9. LAYOUT OF RUNWAY MARKINGS SHALL BE FROM EACH THRESHOLD (END OF PAVEMENT) TO CENTER OF RUNWAY. ADJUSTMENTS TO THE CENTERLINE STRIPES AND GAPS SHALL BE LOCATED AT THE MIDPOINT OF THE RUNWAY, AS SHOWN ON THE PLANS.
10. THE PAVEMENT SHALL BE THOROUGHLY CLEANED PRIOR TO THE APPLICATION OF THE MARKINGS. THE CLEANING SHALL BE ACCOMPLISHED WITH HIGH PRESSURE WATER; THE USE OF CHEMICALS WILL NOT BE PERMITTED.
11. ALL STATIONS AND OFFSETS ARE APPROXIMATE AND SHALL BE CONFIRMED IN THE FIELD BY THE CONTRACTOR.
12. ALL MARKINGS SHALL BE LAID OUT ON THE PAVEMENT BY THE CONTRACTOR FOR ACCEPTANCE BY THE ENGINEER PRIOR TO PLACEMENT.
13. PRIOR TO THE START OF WORK, A CONTROL STRIP SHALL BE APPLIED IN ACCORDANCE WITH ITEM P-620-3.7. ALL STRIPING EQUIPMENT SHALL BE CALIBRATED PRIOR TO THE TEST LINE APPLICATION. ALL TEST LINES WILL BE INSPECTED DURING DARKNESS PRIOR TO THE COMMENCEMENT OF STRIPING OPERATIONS.
14. FINAL MARKINGS SHALL BE WITHIN THE TOLERANCES OUTLINED IN ITEM P-620-3.5.
15. EXCESS GLASS BEADS SHALL BE REMOVED BY VACUUM TRUCK, FOD BOSS, OR SIMILAR EQUIPMENT; BLOWING OF BEADS IS NOT ACCEPTABLE.

MARKING REMOVAL NOTES:

16. PAINT REMOVAL SHALL BE ACCOMPLISHED WITH EQUIPMENT AND IN A MANNER THAT WILL NOT DAMAGE THE PAVEMENT. APPROVED METHODS INCLUDE HIGH PRESSURE WATERBLASTING OR SCARIFICATION (GRINDING); THE USE OF CHEMICALS IS NOT PERMITTED. BLACKING OUT OF MARKINGS IS NOT PERMITTED. SCARIFICATION (GRINDING) SHALL BE LIMITED TO UNGROOVED PAVEMENTS OR TO REMOVING PAINT ABOVE THE SURFACE.
17. ANY DAMAGE CAUSED BY THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE AND IN A MANNER APPROVED BY THE ENGINEER.
18. THE CONTRACTOR SHALL PROVIDE CERTIFICATION THAT THE CONTRACTOR'S EQUIPMENT HAS BEEN USED IN THE PERFORMANCE OF A SIMILAR CONTRACT.
19. USED OR WASTE WATER FROM PAINT REMOVAL OPERATIONS SHALL BE COLLECTED BY THE CONTRACTOR AND DISPOSED OF OFF-SITE IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL GUIDELINES.
20. ACCUMULATIONS OF WATER, DUST, OR OTHER RESIDUE RESULTING FROM THE PAINT REMOVAL SHALL BE REMOVED AS THE WORK PROGRESSES. PRIOR TO ANY PAINTING OPERATIONS, THE SURFACE SHALL BE FREE OF ANY DIRT, REMOVAL RESIDUE, OR OTHER CONTAMNIANTS THAT WOULD PREVENT THE BOND OF THE NEW COATING TO THE PAVEMENT. QUALITY CONTROL MEASURES SHALL INLCUDE A SIMPLE "PULL TEST" WITH ADHESIVE MATERIAL; EVIDENCE OF EXCESSIVE DEBRIS ON THE ADHESIVE INDICATES THAT ADDITIONAL CLEANING SHALL BE REQUIRED.

NO.	REVISIONS	BY	APP.	DATE

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Date: 2026.05.19 15:07:13-04'00'

REHABILITATE RUNWAY 6-24	AIP NO. 3-51-0045-074-2025		JOB NO. 24072
MARKING NOTES	DRAWN BY: RAS		SHEET 38 OF 58
	DESIGNED BY: WME/SRS		
ROANOKE-BLACKSBURG REGIONAL AIRPORT	SCALE: NONE	DATE: MAY 2026	

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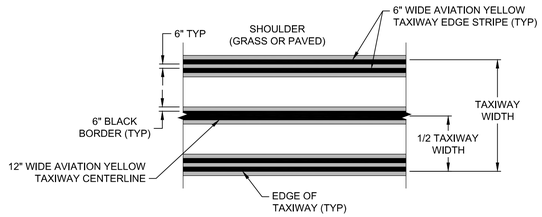
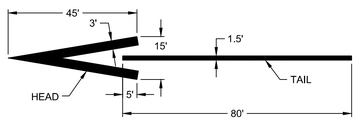


TAXIWAY EDGE MARKING (CONTINUOUS) WITH 12" TAXIWAY CENTERLINE

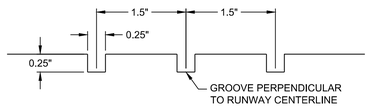
NTS



DISPLACED THRESHOLD ARROW DETAIL

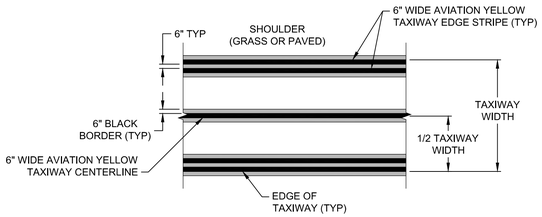
NTS

NOTE:
1. ARROW (TAIL & HEAD) SHALL BE AVIATION WHITE.



RUNWAY GROOVING DETAIL

NTS



TAXIWAY EDGE MARKING (CONTINUOUS) WITH 6" TAXIWAY CENTERLINE

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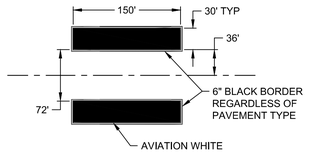
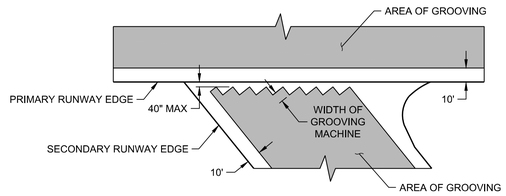


AIMING POINT MARKING 150' WIDE RUNWAY

NTS



RUNWAY INTERSECTION GROOVING DETAIL

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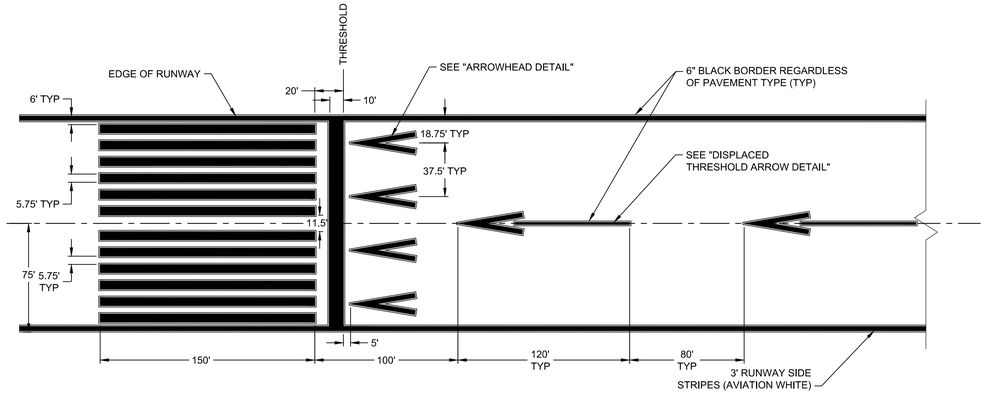
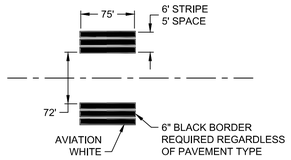


DISPLACED THRESHOLD MARKINGS 150' WIDE RUNWAY

NTS

NOTE:
1. ALL RUNWAY MARKINGS, INCLUDING THOSE IN THE DISPLACED THRESHOLD AREA, SHALL BE AVIATION WHITE.



TOUCHDOWN ZONE MARKING 150' WIDE RUNWAY

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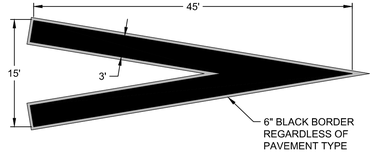

ARROWHEAD DETAIL

NTS

NOTE:
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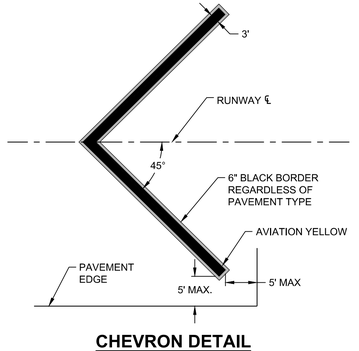

CHEVRON DETAIL

NTS

NO.	REVISIONS	BY	APP.	DATE

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REHABILITATE RUNWAY 6-24		AIP NO. 3-51-0045-074-2025		JOB NO. 24072
MARKING DETAILS		DRAWN BY: RAS		SHEET 39 OF 58
		DESIGNED BY: WME/SRS		
ROANOKE-BLACKSBURG REGIONAL AIRPORT		SCALE: NONE	DATE: MAY 2026	

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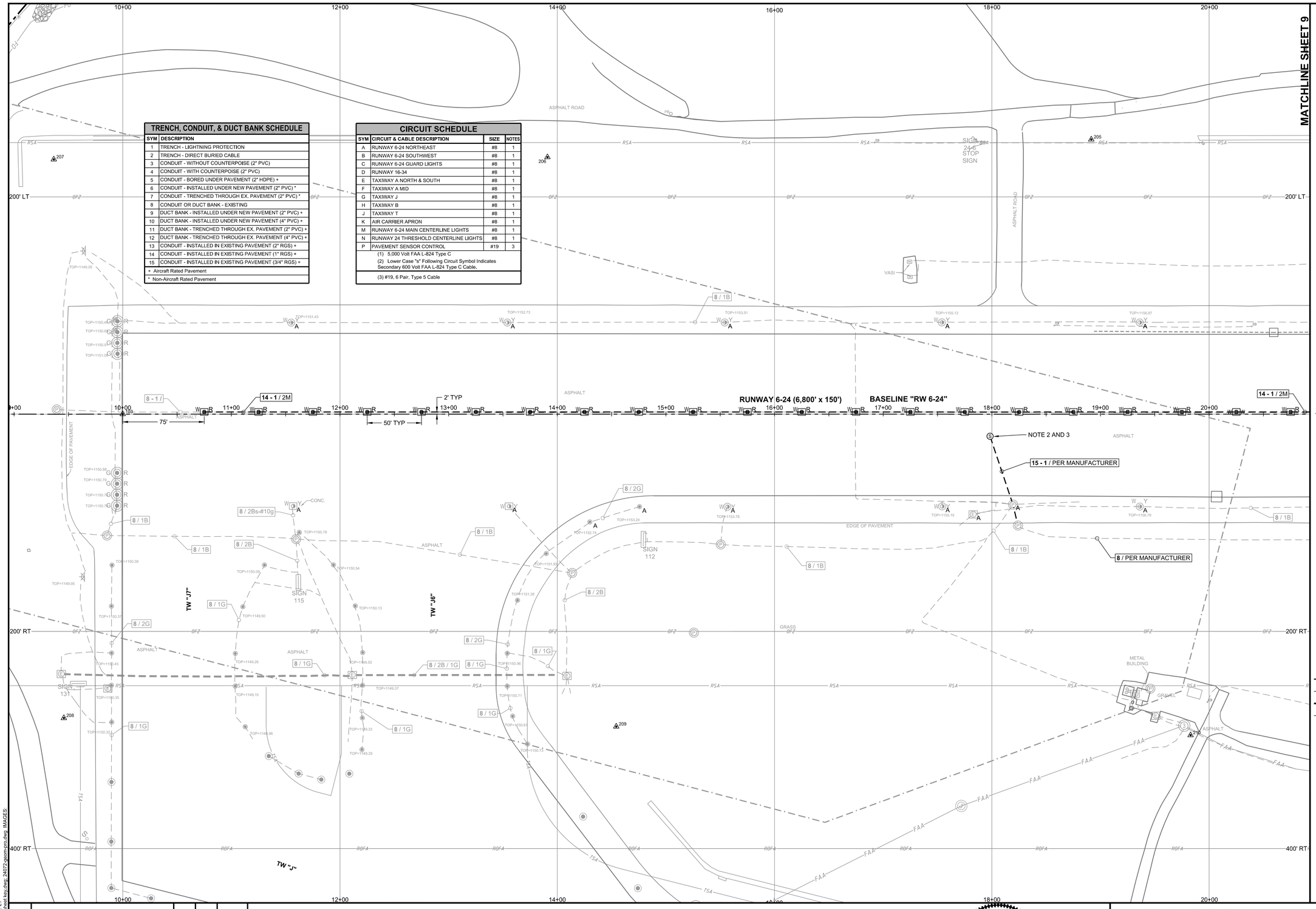


TRENCH, CONDUIT, & DUCT BANK SCHEDULE

SYM	DESCRIPTION
1	TRENCH - LIGHTNING PROTECTION
2	TRENCH - DIRECT BURIED CABLE
3	CONDUIT - WITHOUT COUNTERPOISE (2" PVC)
4	CONDUIT - WITH COUNTERPOISE (2" PVC)
5	CONDUIT - BORED UNDER PAVEMENT (2" HDPE) +
6	CONDUIT - INSTALLED UNDER NEW PAVEMENT (2" PVC) *
7	CONDUIT - TRENCHED THROUGH EX. PAVEMENT (2" PVC) *
8	CONDUIT OR DUCT BANK - EXISTING
9	DUCT BANK - INSTALLED UNDER NEW PAVEMENT (2" PVC) +
10	DUCT BANK - INSTALLED UNDER NEW PAVEMENT (4" PVC) +
11	DUCT BANK - TRENCHED THROUGH EX. PAVEMENT (2" PVC) +
12	DUCT BANK - TRENCHED THROUGH EX. PAVEMENT (4" PVC) +
13	CONDUIT - INSTALLED IN EXISTING PAVEMENT (2" RGS) +
14	CONDUIT - INSTALLED IN EXISTING PAVEMENT (1" RGS) +
15	CONDUIT - INSTALLED IN EXISTING PAVEMENT (3/4" RGS) +
+	Aircraft Rated Pavement
*	Non-Aircraft Rated Pavement

CIRCUIT SCHEDULE

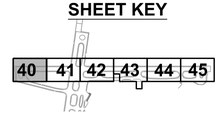
SYM	CIRCUIT & CABLE DESCRIPTION	SIZE	NOTES
A	RUNWAY 6-24 NORTHEAST	#8	1
B	RUNWAY 6-24 SOUTHWEST	#8	1
C	RUNWAY 6-24 GUARD LIGHTS	#8	1
D	RUNWAY 16-34	#8	1
E	TAXIWAY A NORTH & SOUTH	#8	1
F	TAXIWAY A MID	#8	1
G	TAXIWAY J	#8	1
H	TAXIWAY B	#8	1
J	TAXIWAY T	#8	1
K	AIR CARRIER APRON	#8	1
M	RUNWAY 6-24 MAIN CENTERLINE LIGHTS	#8	1
N	RUNWAY 24 THRESHOLD CENTERLINE LIGHTS	#8	1
P	PAVEMENT SENSOR CONTROL	#19	3

(1) 5,000 Volt FAA L-824 Type C

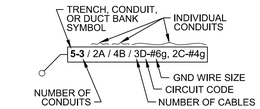
(2) Lower Case "s" Following Circuit Symbol Indicates Secondary 600 Volt FAA L-824 Type C Cable,

(3) #19, 6 Pair, Type 5 Cable

SHEET KEY



TRENCH, CONDUIT & DUCT BANK LABEL LEGEND



SIGN/LIGHT COLOR LEGEND

B - BLACK
C - CLEAR
G - GREEN
O - OBSCURED
R - RED
W - WHITE
Y - YELLOW

CHARACTER OR LENS COLOR
W/R
BACKGROUND OR LENS COLOR

ELECTRICAL SYMBOL LEGEND

SYMBOL STATUS

EXISTING	REMOVE	NEW	RELOCATE	ADJUST
	X		R	A

SYMBOL	DESCRIPTION
W R	L-850A IN-PAVEMENT RWCL LIGHT
W W	L-850C IN-PAVEMENT HIRL
	L-858 AIRFIELD GUIDANCE SIGN
	L-861 BASE MOUNTED MIRL
	L-861T BASE MOUNTED MITL
R G	L-862E BASE MOUNTED THRESHOLD LIGHT
C	CAN COVER PLATE
P	L-867 ELECTRICAL PULLCAN
#	L-867 ELECTRICAL PULLCAN PLAZA (# INDICATES NUMBER OF CANS)
H	ELECTRICAL HANDHOLE
J	ELECTRICAL JUNCTION BOX
M	ELECTRICAL MANHOLE
	L-849 REIL (UNI-DIRECTIONAL)
	PROPOSED APPROACH LIGHT, FIVE LAMP, STEADY BURNING, WHITE
S	PAVEMENT SENSOR
	COUNTERPOISE GROUND ROD
	DRAINAGE SUMP
	CONDUIT & CABLE
	PLOWED COUNTERPOISE
	CABLE IN EXISTING DUCT BANK
	DRAINAGE CONDUIT

NOTES

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2. SURFACE SENSORS SHALL BE INSTALLED ONLY IF ALT1 IS AWARDED.
3. LOCATION OF "SSI FP-2000" SURFACE SENSOR AND APPROXIMATE LOCATION OF "SSI S16UG-D" SUBSURFACE TEMPERATURE PROBE. REPLACE PAVEMENT SURFACE CONDITION SENSOR AND SUBSURFACE PROBE.
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40 0 40 80
SCALE: 1"=40' FEET

NO.	REVISIONS	BY	APP.	DATE

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phone: (804) 275-8301
www.deltaairport.com

DELTA AIRPORT CONSULTANTS, INC.

COMMONWEALTH OF VIRGINIA
WILLIAM M. ESCHENFELDER
Lic. No. 045144
PROFESSIONAL ENGINEER
Digitally signed by William M. Eschenfelder
Date: 2026.05.19 07:14-04'00'

REHABILITATE RUNWAY 6-24	AIP NO. 3-51-0045-074-2025		JOB NO. 24072
ELECTRICAL LAYOUTS	DRAWN BY: RAS		SHEET 40 OF 58
	DESIGNED BY: WME/SRS		
ROANOKE-BLACKSBURG REGIONAL AIRPORT	SCALE: 1" = 40'	DATE: MAY 2026	

DRAWING: 24072ELE.dwg, LAYOUT: L1
XREFS: 24072-plan-ex.dwg, 24072-sheet key.dwg, 24072-geom-pro.dwg IMAGES:
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MATCHLINE SHEET 8

MATCHLINE SHEET 10

TRENCH, CONDUIT, & DUCT BANK SCHEDULE

SYM	DESCRIPTION
1	TRENCH - LIGHTNING PROTECTION
2	TRENCH - DIRECT BURIED CABLE
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6	CONDUIT - INSTALLED UNDER NEW PAVEMENT (2" PVC) *
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SYM	CIRCUIT & CABLE DESCRIPTION	SIZE	NOTES
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(1) 5,000 Volt FAA L-824 Type C

(2) Lower Case "s" Following Circuit Symbol Indicates Secondary 600 Volt FAA L-824 Type C Cable.

(3) #19, 6 Pair, Type 5 Cable

RUNWAY 6-24 (6,800' x 150')

BASELINE "RW 6-24"

RUNWAY 34-16 (5,810' x 150')

TW "B"

ALTERNATES 1, 2, & 3 — ALTERNATES 1 & 2

END CENTERLINE LIGHT AND CONDUIT INSTALLATION AFTER THIS LIGHT (ALTERNATE 3)

END CENTERLINE LIGHT AND CONDUIT INSTALLATION AFTER THIS LIGHT (ALTERNATE 2)

NOTE 2 & 3

CONTRACTOR TO VERIFY LOCATION AND CONDITION OF EXISTING SENSOR CABLE RUNS

INSTALL NEW RPU SENSOR PER MANUFACTURER (RPU - 1)

8 / PER MANUFACTURER

15 - 1 / PER MANUFACTURER

14 - 1 / 2M

8 / 1B

8 / 1D

8 / 1P

8 / 2Bs-#10g

8 / 2Ds-#10g

8 / 2E

8 / 2F

8 / 1B / 2D / 2E / 2F / 2G / 2J / 2K

2' TYP

50' TYP

200' LT

200' RT

400' RT

OFZ

ROFA

RSA

GRASS

ASPHALT

EDGE OF PAVEMENT

CONC. DITCH

RIP/RAP

VASI

SIGN 116

SIGN 44

SIGN 41

SIGN 45

SIGN 49

SIGN 48

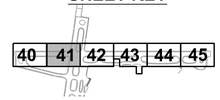
SIGN 47

SIGN 50

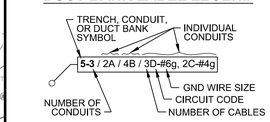
SIGN 46

22+00 24+00 25+00 26+00 27+00 28+00 29+00 30+00 31+00 32+00

SHEET KEY



TRENCH, CONDUIT & DUCT BANK LABEL LEGEND



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	DRAINAGE SUMP
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SCALE: 1"=40' FEET

NO.	REVISIONS	BY	APP.	DATE

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COMMONWEALTH OF VIRGINIA
WILLIAM M. ESCHENFELDER
Lic. No. 045144
PROFESSIONAL ENGINEER
Digitally signed by William M. Eschenfelder
Date: 2026.05.19 09:14-04'00'

REHABILITATE RUNWAY 6-24	AIP NO. 3-51-0045-074-2025		JOB NO. 24072
ELECTRICAL LAYOUTS	DRAWN BY: RAS		SHEET 41
	DESIGNED BY: WME/SRS		OF 58
ROANOKE-BLACKSBURG REGIONAL AIRPORT	SCALE: 1" = 40'	DATE: MAY 2026	

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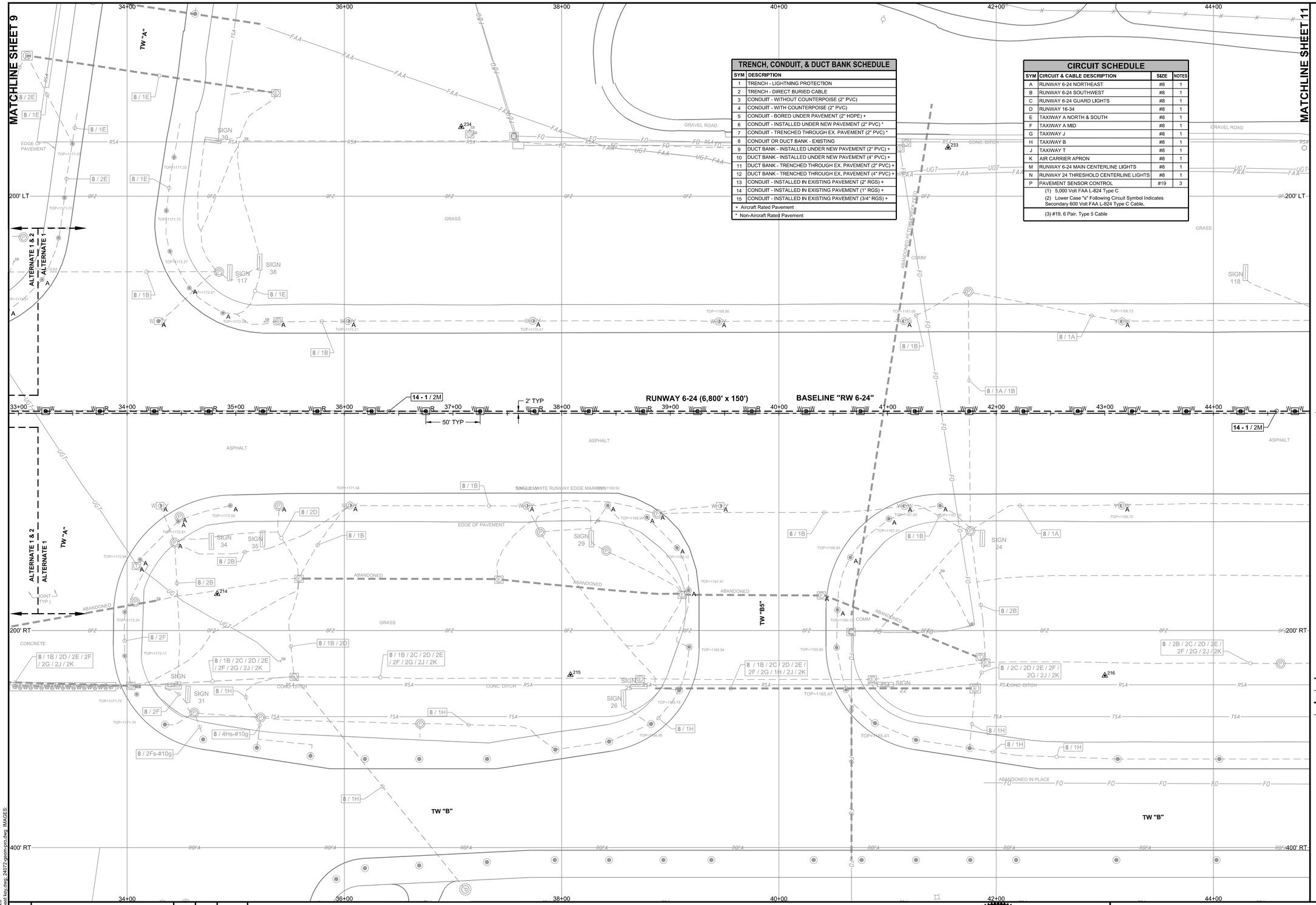

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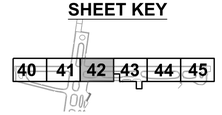
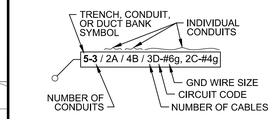


TRENCH, CONDUIT & DUCT BANK LABEL LEGEND



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ELECTRICAL SYMBOL LEGEND

SYMBOL STATUS

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Digitally signed by William M. Eschenfelder
Date: 2026.05.19 07:15-04'00'

REHABILITATE RUNWAY 6-24	AIP NO. 3-51-0045-074-2025		JOB NO. 24072
ELECTRICAL LAYOUTS	DRAWN BY: RAS	DESIGNED BY: WME/SRS	SHEET 42 OF 58
ROANOKE-BLACKSBURG REGIONAL AIRPORT	SCALE: 1" = 40'	DATE: MAY 2026	

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XREFS: 24072-plan-ex.dwg 24072-sheet key.dwg 24072-geom.pno.dwg IMAGES:
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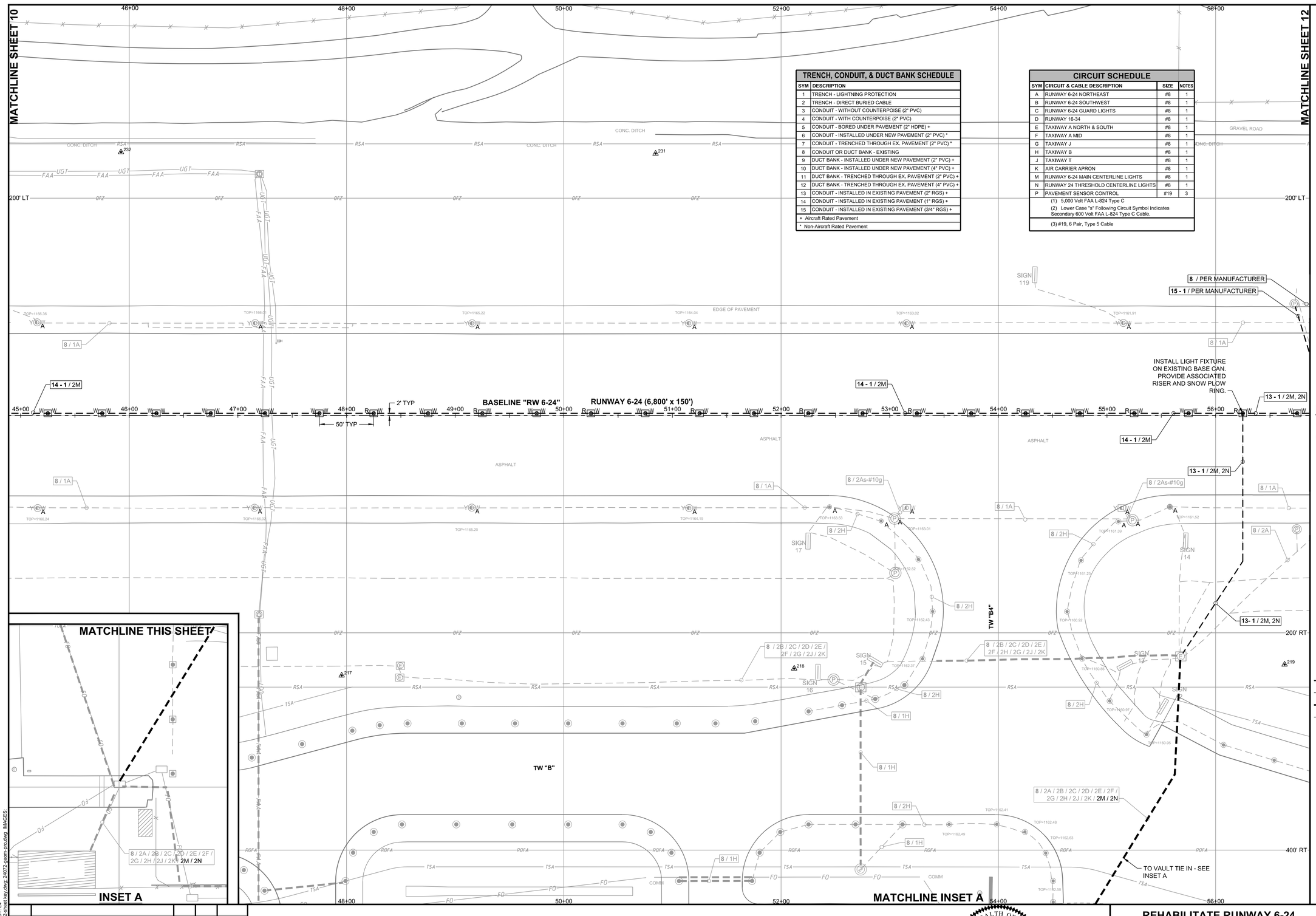

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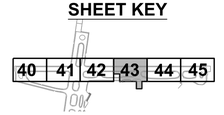
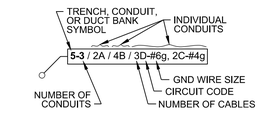


TRENCH, CONDUIT & DUCT BANK LABEL LEGEND



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40 0 40 80
SCALE: 1"=40' FEET

NO.	REVISIONS	BY	APP.	DATE

2700 Polo Parkway
Midlothian, Virginia 23113
phone: (804) 275-8301
www.deltaairport.com

DELTA AIRPORT CONSULTANTS, INC.

COMMONWEALTH OF VIRGINIA
WILLIAM M. ESCHENFELDER
Lic. No. 045144
PROFESSIONAL ENGINEER
Digitally signed by William M. Eschenfelder
DN: cn=2026.05.19 07:16-04'00'

REHABILITATE RUNWAY 6-24	AIP NO. 3-51-0045-074-2025		JOB NO. 24072
ELECTRICAL LAYOUTS	DRAWN BY: RAS		SHEET 43 OF 58
	DESIGNED BY: WME/SRS		
ROANOKE-BLACKSBURG REGIONAL AIRPORT	SCALE: 1" = 40'	DATE: MAY 2026	

DRAWING: 24072ELE.dwg LAYOUT: L4
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MATCHLINE SHEET 11

MATCHLINE SHEET 13

TRENCH, CONDUIT, & DUCT BANK SCHEDULE

SYM	DESCRIPTION
1	TRENCH - LIGHTNING PROTECTION
2	TRENCH - DIRECT BURIED CABLE
3	CONDUIT - WITHOUT COUNTERPOISE (2" PVC)
4	CONDUIT - WITH COUNTERPOISE (2" PVC)
5	CONDUIT - BORED UNDER PAVEMENT (2" HDPE) +
6	CONDUIT - INSTALLED UNDER NEW PAVEMENT (2" PVC) *
7	CONDUIT - TRENCHED THROUGH EX. PAVEMENT (2" PVC) *
8	CONDUIT OR DUCT BANK - EXISTING
9	DUCT BANK - INSTALLED UNDER NEW PAVEMENT (2" PVC) +
10	DUCT BANK - INSTALLED UNDER NEW PAVEMENT (4" PVC) +
11	DUCT BANK - TRENCHED THROUGH EX. PAVEMENT (2" PVC) +
12	DUCT BANK - TRENCHED THROUGH EX. PAVEMENT (4" PVC) +
13	CONDUIT - INSTALLED IN EXISTING PAVEMENT (2" RGS) +
14	CONDUIT - INSTALLED IN EXISTING PAVEMENT (1" RGS) +
15	CONDUIT - INSTALLED IN EXISTING PAVEMENT (3/4" RGS) +
+	Aircraft Rated Pavement
*	Non-Aircraft Rated Pavement

CIRCUIT SCHEDULE

SYM	CIRCUIT & CABLE DESCRIPTION	SIZE	NOTES
A	RUNWAY 6-24 NORTHEAST	#8	1
B	RUNWAY 6-24 SOUTHWEST	#8	1
C	RUNWAY 6-24 GUARD LIGHTS	#8	1
D	RUNWAY 16-34	#8	1
E	TAXIWAY A NORTH & SOUTH	#8	1
F	TAXIWAY A MID	#8	1
G	TAXIWAY J	#8	1
H	TAXIWAY B	#8	1
J	TAXIWAY T	#8	1
K	AIR CARRIER APRON	#8	1
M	RUNWAY 6-24 MAIN CENTERLINE LIGHTS	#8	1
N	RUNWAY 24 THRESHOLD CENTERLINE LIGHTS	#8	1
P	PAVEMENT SENSOR CONTROL	#19	3

(1) 5,000 Volt FAA L-824 Type C

(2) Lower Case "c" Following Circuit Symbol Indicates Secondary 600 Volt FAA L-824 Type C Cable.

(3) #19, 6 Pair, Type 5 Cable

58+00 60+00 62+00 64+00 66+00 68+00

RUNWAY 6-24 (6,800' x 150') BASELINE "RW 6-24"

TW "B" TW "B5"

200' LT 200' RT 400' RT

8/ PER MANUFACTURER

15 - 1 / PER MANUFACTURER

NOTE 2 & 3

13 - 1 / 2M, 2N

8 / 1A 8 / 2A

50' TYP 2' TYP

INSTALL NEW RPU SENSOR PER MANUFACTURERS (RPU - 2)

8 / PER MANUFACTURER

TIE INTO EXISTING CONDUIT

6 - 1 / 1A

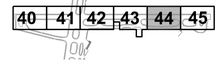
EXISTING FIXTURE ON NEW BASE (SEE EXISTING 24" LED HIGH INTENSITY RUNWAY EDGE LIGHT ON NEW BASE DETAIL)

SIGN 120 SIGN 10 SIGN 08 SIGN 09

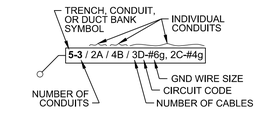
GRAVEL ROAD CONC. DITCH EDGE OF PAVEMENT GRAVEL ASPHALT GRASS

220 221 228

SHEET KEY



TRENCH, CONDUIT & DUCT BANK LABEL LEGEND



SIGN/LIGHT COLOR LEGEND

B - BLACK
C - CLEAR
G - GREEN
O - OBSCURED
R - RED
W - WHITE
Y - YELLOW

CHARACTER OR LENS COLOR

W/R

BACKGROUND OR LENS COLOR

ELECTRICAL SYMBOL LEGEND

SYMBOL STATUS

EXISTING	REMOVE	NEW	RELOCATE	ADJUST
	X		R	A

SYMBOL	DESCRIPTION
W R	L-850A IN-PAVEMENT RWCL LIGHT
W W	L-850C IN-PAVEMENT HIRL
	L-858 AIRFIELD GUIDANCE SIGN
	L-861 BASE MOUNTED MIRL
	L-861T BASE MOUNTED MITL
R G	L-862E BASE MOUNTED THRESHOLD LIGHT
C	CAN COVER PLATE
P	L-867 ELECTRICAL PULLCAN
#	L-867 ELECTRICAL PULLCAN PLAZA (# INDICATES NUMBER OF CANS)
H	ELECTRICAL HANDHOLE
J	ELECTRICAL JUNCTION BOX
E	ELECTRICAL MANHOLE
	L-849 REIL (UNI-DIRECTIONAL)
	PROPOSED APPROACH LIGHT, FIVE LAMP, STEADY BURNING, WHITE
S	PAVEMENT SENSOR
	COUNTERPOISE GROUND ROD
	DRAINAGE SUMP
	CONDUIT & CABLE
	PLOWED COUNTERPOISE
	CABLE IN EXISTING DUCT BANK
	DRAINAGE CONDUIT

NOTES

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REHABILITATE RUNWAY 6-24	AIP NO. 3-51-0045-074-2025		JOB NO. 24072
ELECTRICAL LAYOUTS	DRAWN BY: RAS		SHEET 44
	DESIGNED BY: WME/SRS		OF 58
ROANOKE-BLACKSBURG REGIONAL AIRPORT	SCALE: 1" = 40'	DATE: MAY 2026	

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MATCHLINE SHEET 12

70+00 72+00 74+00 76+00 78+00 80+00

TO DETAIL "E" SEE SHEET 8

TO DETAIL "F" SEE SHEET 8

1422264 Sq. Feet
32.651 Acres

RSA CONC. DITCH RPZ OFZ TOFA ROFA TSA FAA

200' LT 200' RT 400' RT

8 / PER MANUFACTURER
8 / 1A
PROTECT EXISTING ELECTRICAL STRUCTURE
15 - 1 / PER MANUFACTURER
NOTE 2 & 3
13 - 1 / 2M, 2N
14 - 1 / 2N
RUNWAY 6-24 (6,800' x 150')
BASELINE "RW 6-24"
50' TYP
2' TYP
75'
8 - 1 /
8 / 2H
8 / 2A
SIGN 06
SIGN 05
SIGN 04
SIGN 03A
SIGN 03
SIGN 03B
SIGN 03C
SIGN 01
GRASS
ASPHALT
CONC. DITCH
EDGE OF PAVEMENT
GRAVEL ROAD
TW "B3"
TW "B2"
TW "B1"
TW "B"

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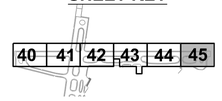

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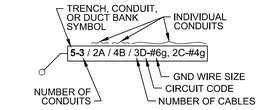

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	L-861T BASE MOUNTED MITL
R G	L-862E BASE MOUNTED THRESHOLD LIGHT
C	CAN COVER PLATE
P	L-867 ELECTRICAL PULLCAN
#	L-867 ELECTRICAL PULLCAN PLAZA (# INDICATES NUMBER OF CANS)
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Date: 2026.05.19 07:17-04'00'

REHABILITATE RUNWAY 6-24	AIP NO. 3-51-0045-074-2025		JOB NO. 24072
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	DESIGNED BY: WME/SRS		
ROANOKE-BLACKSBURG REGIONAL AIRPORT	SCALE: 1" = 40'	DATE: MAY 2026	

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ELECTRICAL NOTES:

GENERAL:

1. CONTRACTOR SHALL MAINTAIN ELECTRICAL SERVICE TO ALL AIRFIELD EQUIPMENT WITHIN THE SCOPE OF THE PROJECT. ANY REQUIREMENTS FOR TEMPORARY ELECTRICAL POWER SHALL BE THE CONTRACTOR'S RESPONSIBILITY AND IS INCIDENTAL TO THE COST OF THE PROJECT.

2. THE CONTRACTOR SHALL HAVE A TONE GENERATOR TYPE CABLE TRACER ON SITE AT ALL TIMES. NO SEPARATE PAY ITEM

3. ALL ELECTRICAL WORK SHALL BE COMPLETED IN ACCORDANCE WITH LOCAL CODE AND CURRENT NEC HANDBOOK.

5. THE CONTRACTOR SHALL LOCATE EXISTING DUCTS WHICH WILL BE UTILIZED FOR THIS PROJECT. APPROXIMATE "AS-BUILT PLAN" LOCATIONS ARE SHOWN UNLESS OTHERWISE NOTED.

6. THE EXISTING AND NEW FIXTURE I.D. NUMBERS SHALL BE ASSIGNED BY THE ENGINEER / OWNER UNLESS OTHERWISE NOTED.

7. RUNWAY AND/OR TAXIWAY LIGHTS SHALL BE DE-ENERGIZED OR PROPERLY COVERED ON ALL CLOSED SEGMENTS OF RUNWAY(S) AND TAXIWAY(S) IN A MANNER APPROVED BY THE ENGINEER. (NO SEPARATE PAY ITEM). REMOVING THE LAMP FROM ITS FIXTURE IS NOT ALLOWED.

8. THE CONTRACTOR SHALL CONFIRM FIXTURE TAG LABELS WITH ENGINEER PRIOR TO ORDERING AND INSTALLATION.

9. CONTRACTOR SHALL CONFIRM RUNWAY CENTERLINE LIGHT COLORS WITH THE ENGINEER PRIOR TO ORDERING FIXTURES.

10. ALL EXISTING ELECTRICAL EQUIPMENT REMOVED SHALL BECOME PROPERTY OF THE CONTRACTOR AND BE REMOVED OFF-SITE.

MATERIALS:

11. ALL CABLES SHALL BE TAGGED AT EACH CONNECTION AND AT EACH ENTRANCE TO DUCTS, HANDHOLES, AND SPLICE CANS. CABLE MARKERS SHALL BE ALMETEK "MINI-TAGS" KIT WITH BLACK STAMPED YELLOW POLYETHYLENE LETTERS OR APPROVED EQUIVALENT. ATTACH MARKERS WITH CABLE TIES. NO SEPARATE PAY ITEM

12. ALL UNDERGROUND CONDUITS SHALL BE PVC, SCHEDULE 40, UNLESS OTHERWISE NOTED. ALL UNDERGROUND CONDUIT BENDS SHALL BE UL APPROVED LONG RADIUS.

13. WHERE PROPOSED CONDUIT IS TO BE CONNECTED TO EXISTING CONDUIT, THE CONTRACTOR SHALL MAKE THE CONNECTION USING MANUFACTURED COUPLINGS. NO SEPARATE PAY ITEM.

14. EACH L-830 ISOLATION TRANSFORMER, L-823 CONNECTOR KIT, AND 5KV, TYPE "C" CABLE INSTALLED ON THIS PROJECT AS A COMPLETE OR PARTIAL CIRCUIT SHALL BE TESTED AS AN OPERABLE CIRCUIT SYSTEM AND SHALL MEET THE REQUIREMENTS OF SECTION L-108-3.10 OF THE SPECIFICATIONS. THE INSULATION RESISTANCE OF THE L-830 ISOLATION TRANSFORMERS SHALL TESTED IN ACCORDANCE WITH THE LATEST ADDITION OF FAA AC 150/5345-47. THE CONTRACTOR SHALL PROVIDE A LETTER INDICATING THAT THE L-830 TRANSFORMERS COMPLY WITH THE REQUIREMENTS OF THE ADVISORY CIRCULAR.

15. ALL PULLCANS SHALL HAVE A 3/8-INCH (MIN.) GALVANIZED STEEL COVER, UNLESS OTHERWISE NOTED AND SHALL BE INCIDENTAL TO THE CAN.

PRIOR TO CONSTRUCTION:

16. THE LOCATION OF ALL UTILITIES SHOWN ARE APPROXIMATE ONLY AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR BEFORE BEGINNING CONSTRUCTION. NOT ALL UTILITIES ARE NECESSARILY SHOWN.

17. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL INVENTORY ALL LIGHTS, FIXTURES, SIGNS, ETC. WITHIN THE PROJECT LIMITS. THE CONTRACTOR SHALL ADVISE THE ENGINEER, IN WRITING, OF ANY DAMAGED LIGHT FIXTURES, SIGNS, OR UTILITIES PRIOR TO CONSTRUCTION. SEE SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION.

18. THE CONTRACTOR SHALL MEGGER THE EXISTING LIGHTING SYSTEMS PRIOR TO COMMENCING WORK ON THE EXISTING LIGHTING SYSTEMS. THIS WORK SHALL BE PERFORMED IN THE PRESENCE OF THE RESIDENT PROJECT REPRESENTATIVE AND LOGGED IN THE DAILY REPORT (NO SEPARATE PAY ITEM).

19. AT THE BEGINNING OF THE PROJECT, THE CONTRACTOR SHALL FURNISH THE ENGINEER WITH TWO (2) COPIES OF ALL MANUFACTURERS' INSTALLATION INSTRUCTIONS FOR ALL EQUIPMENT ASSOCIATED WITH THE PROJECT (NO SEPARATE PAY ITEM).

CONSTRUCTION:

20. CONTRACTOR SHALL COORDINATE (AT LEAST 48 HOURS IN ADVANCE) INTERRUPTION OF ELECTRICAL SERVICE TO ACTIVE LIGHTING CIRCUITS WITH THE ENGINEER / OWNER. ANY DAMAGE TO EXISTING AIRPORT CIRCUITS CAUSED BY THE CONTRACTOR'S EQUIPMENT OR PERSONNEL SHALL BE PROMPTLY REPAIRED TO THE ENGINEER'S SATISFACTION, BY THE CONTRACTOR, AT THE CONTRACTOR'S EXPENSE. ALL LIGHTING SYSTEMS FOR OPEN AIRCRAFT OPERATIONAL AREAS SHALL REMAIN READY FOR OPERATION DURING IFR WEATHER CONDITIONS AND FROM DUSK TO DAWN.

21. THE CONTRACTOR SHALL MANUALLY LOCK-OUT EACH CIRCUIT IN THE VAULT WHEN WORK IS BEING PERFORMED ON THAT CIRCUIT. THE CONTRACTOR SHALL GIVE 48 HOURS NOTICE PRIOR TO ANY CIRCUIT LOCK-OUT. THE CIRCUIT SHALL BE TAGGED AND THE CONTRACTOR'S NAME SHALL BE CLEARLY IDENTIFIED ON EACH TAG. THE CONTRACTOR SHALL HAVE A LOCK-OUT KIT ON SITE AT ALL TIMES. THE OWNER'S REPRESENTATIVE SHALL BE NOTIFIED (AT LEAST 48 HOURS IN ADVANCE) EACH TIME A CIRCUIT IS SECURED AND EACH TIME THE CIRCUIT IS RETURNED TO REMOTE CONTROL. THE CONTRACTOR MUST BE CERTIFIED AND TRAINED BY THE OWNER PRIOR TO PERFORMING WORK OR LOCK-OUTS IN THE ELECTRICAL VAULT.

23. ALL PROPOSED HANDHOLES/PULLCAN PLAZAS SHALL BE PLACED AS SHOWN ON THE PLANS. THE CONTRACTOR SHALL FIELD STAKE ALL LOCATIONS FOR ACCEPTANCE BY THE ENGINEER PRIOR TO INSTALLATION. ANY DISCREPANCIES IN ALIGNMENT OR LOCATION SHALL BE RESOLVED WITH THE ENGINEER PRIOR TO INSTALLATION.

29. CONTRACTOR SHALL BE REQUIRED TO CONNECT TO EXISTING CONDUIT, MANHOLES, HANDHOLES, JUNCTION BOXES, PULLCANS, SIGNS, AND LIGHT FIXTURES, ETC. DURING CONSTRUCTION. ALL WORK NECESSARY TO COMPLETE THE CONNECTION SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.

30. ALL WORK ASSOCIATED WITH CONNECTING A NEW PULLCAN, FIXTURE, SIGN, ETC. TO AN EXISTING CONDUIT WILL BE CONSIDERED INCIDENTAL TO THE PULLCAN, FIXTURE, ETC. PAY ITEM.

32. THE CONTRACTOR SHALL BE REQUIRED TO CONNECT PROPOSED CIRCUITS TO THE EXISTING CIRCUITS AS ORDERED BY THE ENGINEER. ALL WORK REQUIRED TO MAKE THE CONNECTIONS TO EXISTING CIRCUITS SHALL BE INCIDENTAL TO THE PROJECT (I.E., PUNCHING INTO EXISTING MANHOLES FOR CONDUITS).

33. EXISTING CIRCUITS SHALL BE REPLACED FROM HANDHOLE TO HANDHOLE OR PULLCAN OR NEAREST LIGHT FIXTURE.

34. THE CONTRACTOR SHALL CLEAN/SWAB OUT EXISTING DUCTS BEING USED ON THIS PROJECT. THE USE OF SEWER TAPE TO CLEAR OBSTRUCTIONS WITHIN CONCRETE ENCASED DUCTS SHOULD BE ANTICIPATED. (NO SEPARATE PAY ITEM)

35. ALL GROUND RODS AND OTHER UNDERGROUND GROUNDING CONNECTIONS SHALL BE EXOTHERMICALLY WELDED. EXOTHERMIC CONNECTIONS SHALL BE IN ACCORDANCE WITH MANUFACTURER'S GUIDELINES. THE PROPOSED COUNTERPOISE SYSTEM SHALL BE CONNECTED WITH THE EXISTING SYSTEM AT ALL CROSSING POINTS.

36. FOR SITUATIONS IN WHICH ENCOUNTERING ROCK DOES NOT PERMIT DRIVING A GROUND ROD THE FULL DISTANCE REQUIRED, A GROUNDING PLATE MAY BE SUBSTITUTED AS APPROVED BY THE ENGINEER.

COMPLETION OF CONSTRUCTION:

37. ALL ELECTRICAL EQUIPMENT RESULTING FROM ELECTRICAL DEMOLITION SHALL BE DISPOSED OF BY THE CONTRACTOR OFF OF AIRPORT PROPERTY UNLESS OTHERWISE NOTED BY THE ENGINEER.

38. AT PROJECT COMPLETION, THE CONTRACTOR SHALL PROVIDE A TWO (2) HOUR MINIMUM TRAINING SESSION FOR AIRPORT MAINTENANCE PERSONNEL. THE SESSION SHALL COVER ALL INSTALLED EQUIPMENT (NO SEPARATE PAY ITEM).

39. AT PROJECT COMPLETION, THE CONTRACTOR SHALL PROVIDE COMPLETE MAINTENANCE MANUALS BOUND IN THREE-RING NOTEBOOKS (NO SEPARATE PAY ITEM). THE MANUALS SHALL CONTAIN THE FOLLOWING AS A MINIMUM:

- AS-BUILT WIRING SCHEMATICS
- EQUIPMENT SHOP DRAWING SUBMITTALS
- MANUFACTURER'S EQUIPMENT INSTALLATION INSTRUCTIONS
- MANUFACTURER'S MAINTENANCE INSTRUCTIONS
- WARRANTIES
- SPARE PARTS LIST
- AS-BUILT WIRING SCHEMATICS

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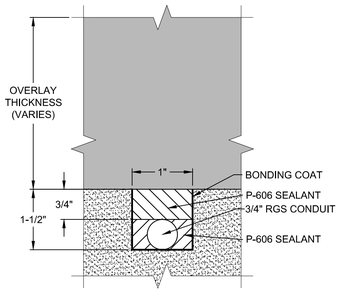


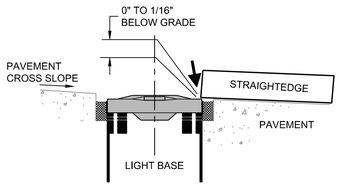
TRENCH 15

SAW KERF WIREWAY

NTS

NOTES:

1. CONTRACTOR SHALL VERIFY EXISTING FIELD CONDITIONS PRIOR TO CONSTRUCTION.
2. VERIFY INSTALLATION WITH MANUFACTURER.
3. P-606 SHALL BE INCIDENTAL TO THE TRENCH.



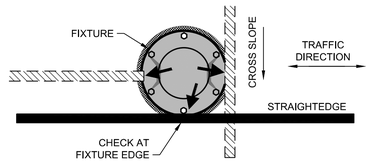
ELEVATION VIEW

TRANSVERSE HEIGHT MEASUREMENT FOR FIXTURE TOLERANCE

- 2' MINIMUM STRAIGHTEDGE RECOMMENDED.
- 1/16" ALLEN WRENCH IS USEFUL TO CHECK.

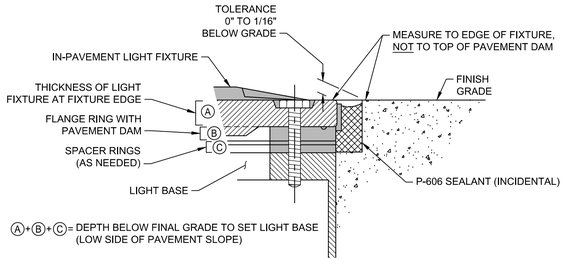
PAVEMENT VARIATION CHECK

- 8' MINIMUM STRAIGHTEDGE RECOMMENDED.
- CHECK BOTH WAYS FOR SURFACE CONSISTENCY IN PROXIMITY TO LIGHT BASE.



PLAN VIEW

MEASURING HEIGHT TOLERANCE AT AN IN-PAVEMENT LIGHT



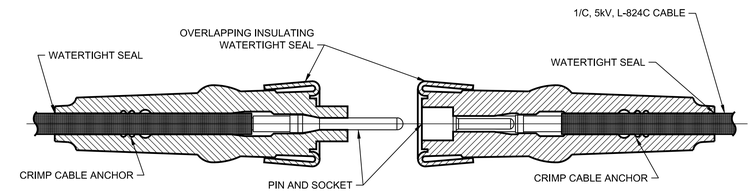
DETERMINING HEIGHT FOR SETTING LIGHT BASE

SEMI-FLUSH - FLUSH FIXTURE HEIGHT TOLERANCE DETAIL

NTS

NOTES:

1. THE TOTAL HEIGHT OF FIXTURE SHALL BE A MAXIMUM OF 1/4" ABOVE GRADE. ALL FIXTURES SHALL BE FAA APPROVED FOR THEIR INTENDED USE AND BE LISTED IN FAA AC 150/5345-53 "AIRPORT LIGHTING EQUIPMENT CERTIFICATION PROGRAM", LATEST EDITION.
2. FIXTURES SHALL BE INSTALLED IN ACCORDANCE WITH FAA AC 150/5340-30, LATEST ADDITION, AND IPRF REPORT 01-G-002-03-1 "CONSTRUCTING IN-PAVEMENT LIGHTING IN PORTLAND CEMENT CONCRETE PAVEMENT" (WHILE INTENDED FOR PCC PAVEMENT THIS DOCUMENT PROVIDES INFORMATION RELATIVE TO INSTALLATION IN ASPHALT PAVEMENT).
3. ALL FIXTURES SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURES INSTRUCTIONS INCLUDING ELEVATION REQUIREMENTS FOR BASE CANS TO ACCOMMODATE THE LIGHT FIXTURE.



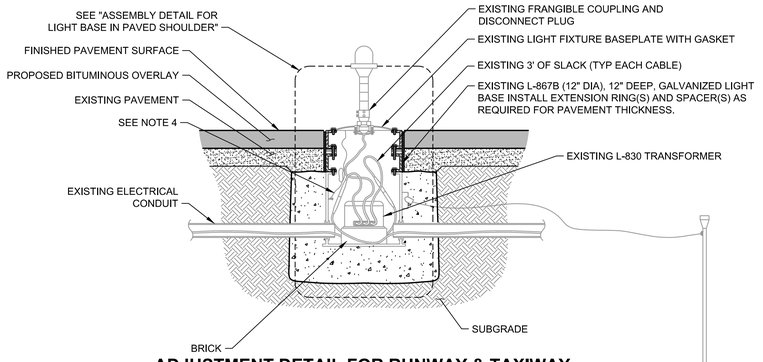
PLUG (FAA L-823 STYLE 3) ASSEMBLY **RECEPTACLE (FAA L-823 STYLE 10) ASSEMBLY**

L-823 SUPER KIT FIELD ATTACHED PLUG-IN SPLICE CONNECTOR

NTS

NOTES:

1. FOLLOW ALL CONNECTOR KIT MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS FOR ENTIRE ASSEMBLY
2. ASSEMBLY SHALL NOT REQUIRE TAPING OR COLD/HEAT SHRINK SEALING TO MAINTAIN WATERPROOF LISTING
3. CABLE SHALL ONLY BE PREPARED WITH MANUFACTURER RECOMMENDED PENCILING TOOL.
4. CABLE CONNECTOR SHALL ONLY BE INSTALLED WITH MANUFACTURER RECOMMENDED CRIMPING TOOL.
5. EXISTING PRIMARY CONNECTOR KITS ARE AMERACE 54 SUPER D4-D4 AND NEW KITS MUST BE COMPATIBLE.
6. MEGGER READINGS WILL BE RECORDED FOR ALL CIRCUITS BEFORE AND AFTER WORK IS PERFORMED. MEGGER READINGS TAKEN AFTER THE PROJECT IS COMPLETE ARE TO BE CONSISTENT WITH THOSE TAKEN BEFORE.

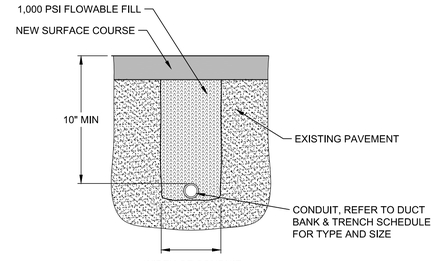


ADJUSTMENT DETAIL FOR RUNWAY & TAXIWAY EDGE LIGHT IN PAVED SHOULDER

NTS

NOTES:

1. MECHANICALLY BOND FIXTURE BASE USING MANUFACTURER-PROVIDED LUGS WITH #6 COPPER GROUND (600V RATING) WITH GREEN XHHW INSULATION (BRAIDED GROUND STRAP OF EQUAL RATING ACCEPTABLE) WITH LENGTH SUFFICIENT TO EASILY REMOVE LIGHT BASE FOR MAINTENANCE.
2. ALL IN-PAVEMENT LIGHTS ARE TO BE INSTALLED WITH SNOW PLOW RINGS (NOT SHOWN FOR CLARITY).



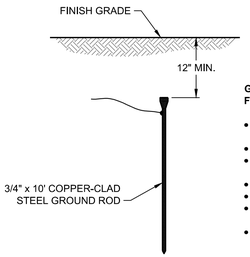
TRENCH 13/14

SAW KERF WIREWAY

NTS

NOTES:

1. CONTRACTOR SHALL VERIFY EXISTING FIELD CONDITIONS PRIOR TO CONSTRUCTION.
2. THERE IS AN EXISTING 3" GRS CONDUIT FOR CENTERLINE LIGHTS AND A 1/2" GRS CONDUIT FOR COUNTERPOISE RUNNING FULL LENGTH OF THE RUNWAY. THE CONTRACTOR IS TO EXPOSE THESE CONDUITS AND DETERMINE IF THEY ARE USABLE PRIOR TO CONSTRUCTING A NEW TRENCH. THE COST OF THE INVESTIGATION IS INCIDENTAL TO THE RUNWAY CENTERLINE LIGHTS.



GROUND RODS SHALL BE INSTALLED AT THE FOLLOWING LOCATIONS:

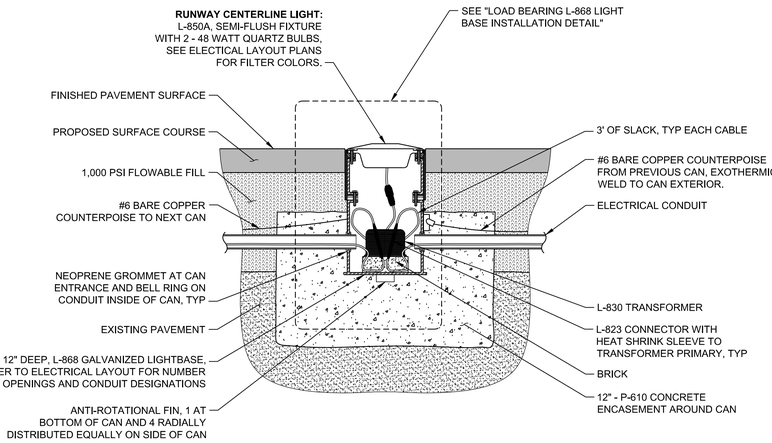
- 500' INTERVALS OR FRACTIONS THEREOF ALONG ENTIRE LENGTH OF TRENCHES AND DUCT BANKS
- END OF TRENCHES AND DUCT BANKS
- PAVEMENT EDGE OF DIRECTIONALLY BORED CONDUITS
- CHANGE IN TRENCH AND DUCT BANK DIRECTION
- AT TRENCH AND DUCT BANK INTERSECTIONS
- LIGHT FIXTURES AND PULLCANS / PULLCAN PLAZAS
- AS NOTED ON THE PLANS

GROUND ROD INSTALLATION DETAIL

NTS

NOTES:

1. THE IMPEDANCE TO GROUND OF EACH GROUND ROD SHALL NOT EXCEED 25 OHMS. SHOULD THE IMPEDANCE EXCEED 25 OHMS THE CONTRACTOR SHALL INSTALL A SECOND GROUND ROD AT LEAST 10 FEET AWAY IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NEC).
2. INTERCONNECT GROUND RODS WITH #6 BARE COUNTERPOISE WITH EXOTHERMIC CONNECTION. RETEST AFTER THE SECOND GROUND ROD IS INSTALLED AND NOTIFY ENGINEER IF IMPEDANCE EXCEEDS 25 OHMS.
3. GROUND ELECTRODES SHALL BE INSTALLED IN ACCORDANCE WITH NEC 250.53. WHERE ROCK PREVENTS VERTICALLY DRIVEN RODS, OBLIQUELY DRIVEN (UP TO 45 DEGREES FROM VERTICAL) OR TRENCHED HORIZONTAL GROUND RODS SHALL BE INSTALLED IN ACCORDANCE WITH NEC 250.53(G).
4. WHERE INSTALLING TRENCHED HORIZONTAL GROUND RODS, INSTALL 30" DEEP OR BELOW FROST LINE WHICHEVER IS DEEPER. ALSO PLACE GROUND ENHANCEMENT MATERIAL (GEM) IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS WITH A MINIMUM 1" TOP AND BOTTOM COVER. GEM MUST BE PERMANENT AND MAINTENANCE-FREE AND MAINTAIN ITS EARTH RESISTANCE WITH TIME. GEM MUST SETUP FIRMLY AND NOT DISSOLVE OR DECOMPOSE, OR OTHERWISE POLLUTE THE SOIL OR THE LOCAL WATER TABLE. THE GEM MUST ALSO BE SUITABLE FOR INSTALLATION IN A SLURRY FORM. GEM SHALL NOT DEPEND ON THE CONTINUOUS PRESENCE OF WATER TO MAINTAIN ITS CONDUCTIVITY.
5. FOR SITUATIONS IN WHICH ENCOUNTERING ROCK DOES NOT PERMIT DRIVING A GROUND ROD THE FULL DISTANCE REQUIRED, A GROUNDING PLATE MAY BE SUBSTITUTED AS APPROVED BY THE ENGINEER.



RUNWAY CENTERLINE LIGHT DETAIL

NTS

NOTES:

1. USE HIGH EARLY STRENGTH CONCRETE. PROVIDE SUBMITTAL FOR APPROVAL.
2. ALL CONCRETE USED TO INSTALL RUNWAY AND TAXIWAY IN-PAVEMENT LIGHTING FIXTURES MUST ACHIEVE 2,000 PSI COMPRESHIVE STRENGTH PRIOR TO EACH SCHEDULED OPENING OF THEIR RESPECTIVE RUNWAY OR TAXIWAY. ALL FLOWABLE FILL MUST ACHIEVE 1,000 PSI COMPRESSIVE STRENGTH PRIOR TO EACH SCHEDULED OPENING OF THEIR RESPECTIVE RUNWAY OR TAXIWAY.
3. CONTRACTOR SHALL FURNISH SIX SPACER RINGS AS FOLLOWS WITH EACH EXTENSION RING: $\frac{1}{16}$", $\frac{1}{8}$", $\frac{1}{4}$", $\frac{1}{2}$" & $\frac{3}{4}$". ANY LEFT OVER SPACER RINGS SHALL BE TURNED OVER TO THE OWNER UPON COMPLETION OF THE PROJECT.
4. FOR ALTERNATE 2 AND 3, ONLY THE BASE CAN WITH A FLUSH MOUNTED STAINLESS STEEL LID AND THE CONDUIT SHALL BE INSTALLED. NO LIGHT FIXTURE, TRANSFORMER , OR CABLE SHALL BE INSTALLED.

NO.	REVISIONS	BY	APP.	DATE

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DELTA AIRPORT CONSULTANTS, INC.

COMMONWEALTH OF VIRGINIA
WILLIAM M. ESCHENFELDER
Lic. No. 045144
PROFESSIONAL ENGINEER
Digitally signed by William M. Eschenfelder
Date: 2026.05.19 07:18-04'00'

REHABILITATE RUNWAY 6-24	AIP NO. 3-51-0045-074-2025		JOB NO. 24072
ELECTRICAL DETAILS	DRAWN BY: RAS		SHEET 47 OF 58
	DESIGNED BY: WME/SRS		
ROANOKE-BLACKSBURG REGIONAL AIRPORT	SCALE: NONE	DATE: MAY 2026	

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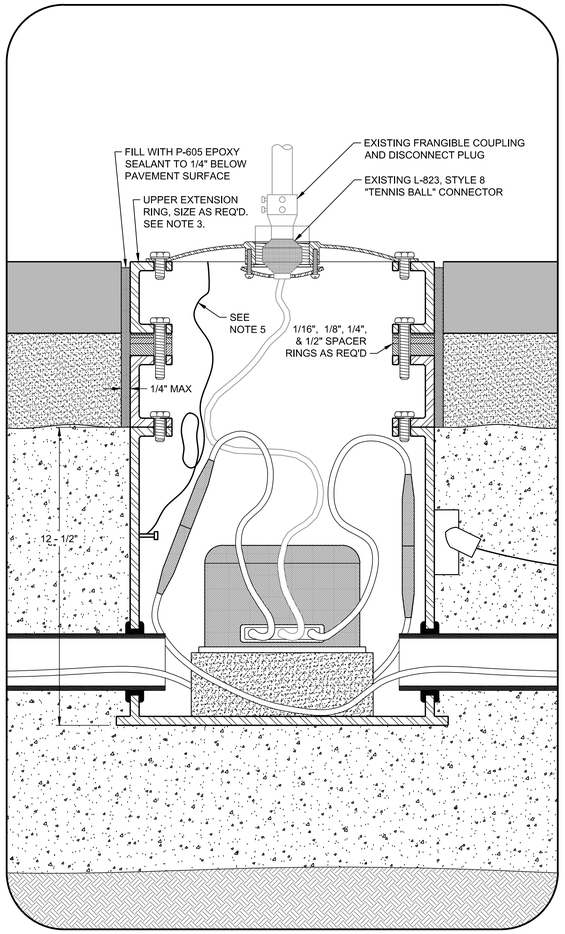
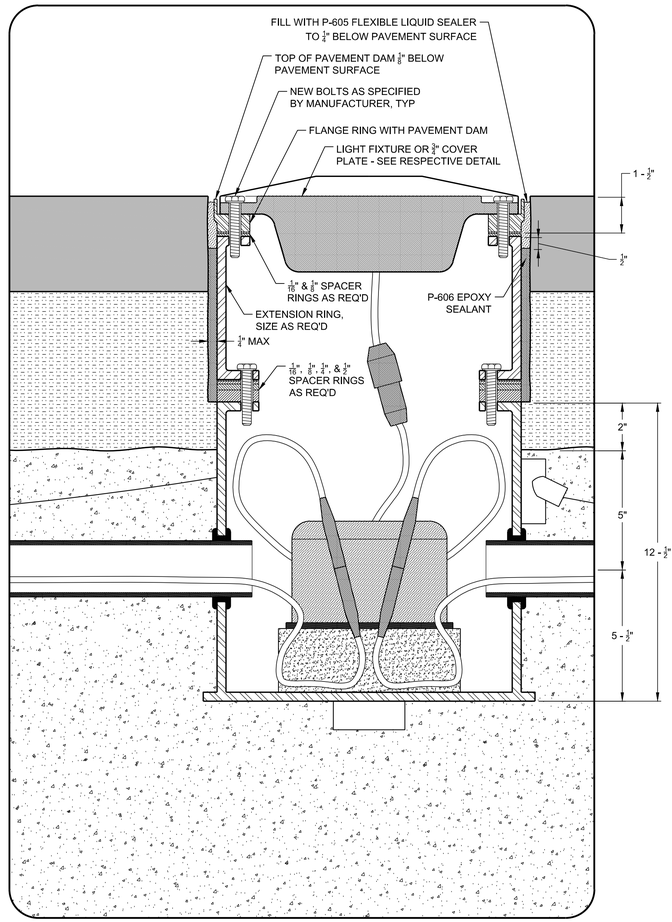


ASSEMBLY DETAIL FOR LIGHT BASE IN PAVED SHOULDER

NTS

NOTES:

1. UPPER EXTENSION RING SHALL BE SIZED SO THAT THE TOP SURFACE OF THE EXTENSION RING IS FLUSH WITH THE PAVEMENT SURFACE OF THE PRPOSED SURFACE COURSE.
2. P-605 SEALANT SHALL BE TYPE 3 COMPATIBLE WITH ASPHALT.
3. P-605 SHALL BE INCIDENTAL TO THE LIGHT BASE.
4. BOND FIXTURE BASE WITH #6 COPPER GROUND (600V RATING) WITH GREEN XHHW INSULATION (BRAIDED GROUND STRAP OF EQUAL RATING ACCEPTABLE) WITH LENGTH SUFFICIENT TO EASILY REMOVE LIGHT BASE FOR MAINTENANCE.

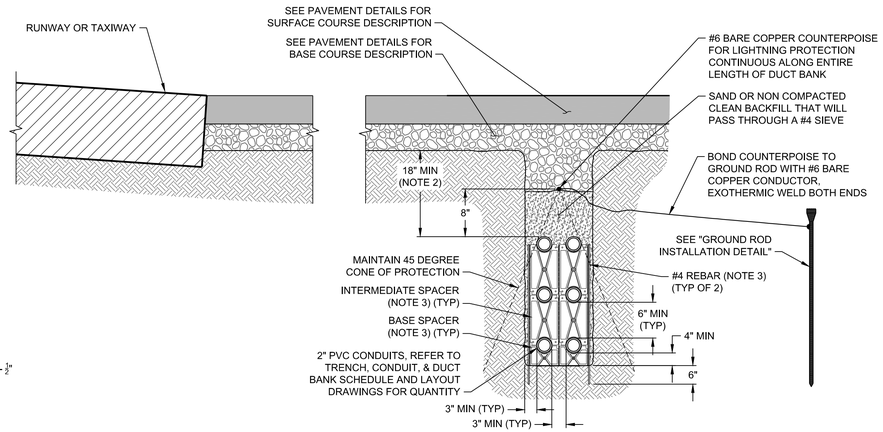


LOAD BEARING L-868 LIGHT BASE INSTALLATION DETAIL

NTS

NOTES:

1. P-605 SEALANT SHALL BE TYPE 3 COMPATIBLE WITH ASPHALT.
2. SEALANT SHALL BE APPLIED SO THAT LIGHT FIXTURE HOUSING IS NOT SEALED TO FLANGE RING.
3. PERIMETER EDGE OF FIXTURE SHALL BE FLUSH WITH RUNWAY SURFACE, SEE "LIGHT FIXTURE VERTICAL TOLERANCE (Section View) DETAIL" THIS SHEET.



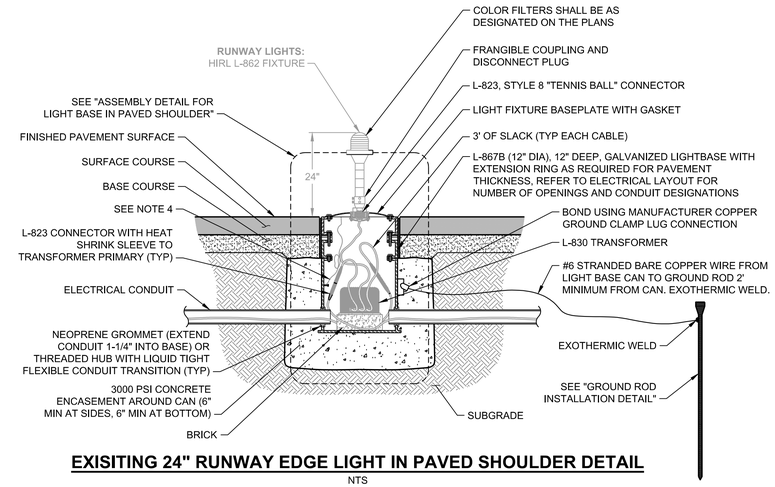
TRENCH 6 - CONDUIT - INSTALLED UNDER NEW PAVED SHOULDER (2" PVC)

Non-Aircraft Rated Pavement

NTS

NOTES:

1. THE ILLUSTRATION SHOWN ABOVE IS FOR CONFIGURATION PURPOSES ONLY. SEE TRENCH, CONDUIT, & DUCT BANK SCHEDULE AND LAYOUT DRAWINGS FOR CONDUIT QUANTITY. SEE ELECTRICAL NOTES SHEET FOR TRENCH, CONDUIT, & DUCT BANK NOTES.
2. DEPTH OF CONDUIT SHALL ALLOW FOR IT TO BE TIED INTO THE EXISTING CONDUIT SYSTEM. SEE ELECTRICAL LAYOUT FOR TIE IN LOCATIONS.
3. CONTRACTOR SHALL INSTALL CONDUIT SPACERS AT 5'-0" INTERVALS.
4. NO SEPARATE PAY ITEM. ALL WORK SHOWN SHALL BE INCIDENTAL TO THE IN-PAVEMENT RUNWAY EDGE LIGHT CAN (L867B).



EXISITING 24" RUNWAY EDGE LIGHT IN PAVED SHOULDER DETAIL

NTS

NOTES:

1. USE HIGH EARLY STRENGTH CONCRETE. PROVIDE SUBMITTAL FOR APPROVAL.
2. THE #6 STRANDED BARE COPPER GROUND AND THE GROUND ROD IS INCIDENTAL TO THE COST OF THE RUNWAY/TAXIWAY EDGE LIGHT.
3. ALL DIRECT BURIED BARE WIRE CONNECTIONS SHALL BE EXOTHERMIC WELDS ONLY. LUG CONNECTIONS SHALL BE USED FOR CONCRETE ENCASED APPLICATIONS.
4. MECHANICALLY BOND FIXTURE BASE USING MANUFACTURER-PROVIDED LUGS WITH #6 COPPER GROUND (600V RATING) WITH GREEN XHHW INSULATION (BRAIDED GROUND STRAP OF EQUAL RATING ACCEPTABLE) WITH LENGTH SUFFICIENT TO EASILY REMOVE LIGHT BASE FOR MAINTENANCE.
5. ALL IN-PAVEMENT LIGHTS ARE TO BE INSTALLED WITH SNOW PLOW RINGS (NOT SHOWN FOR CLARITY).

NO.	REVISIONS	BY	APP.	DATE

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DELTA AIRPORT CONSULTANTS, INC.

COMMONWEALTH OF VIRGINIA
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Digitally signed by William M. Eschenfelder
Date: 2026.05.19 09:19-04'00'

REHABILITATE RUNWAY 6-24	AIP NO. 3-51-0045-074-2025		JOB NO. 24072
ELECTRICAL DETAILS	DRAWN BY: RAS		SHEET 48 OF 58
	DESIGNED BY: WME/SRS		
ROANOKE-BLACKSBURG REGIONAL AIRPORT	SCALE: 1" = 40'	DATE: MAY 2026	

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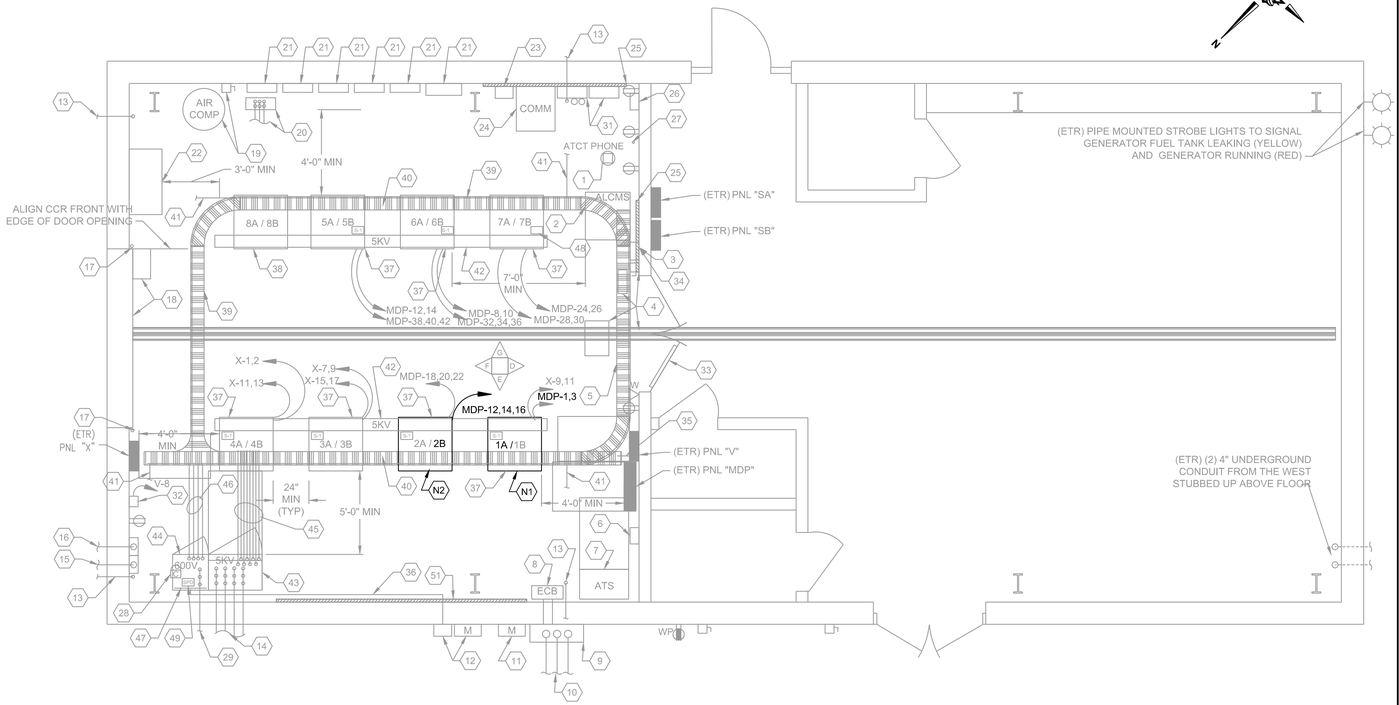
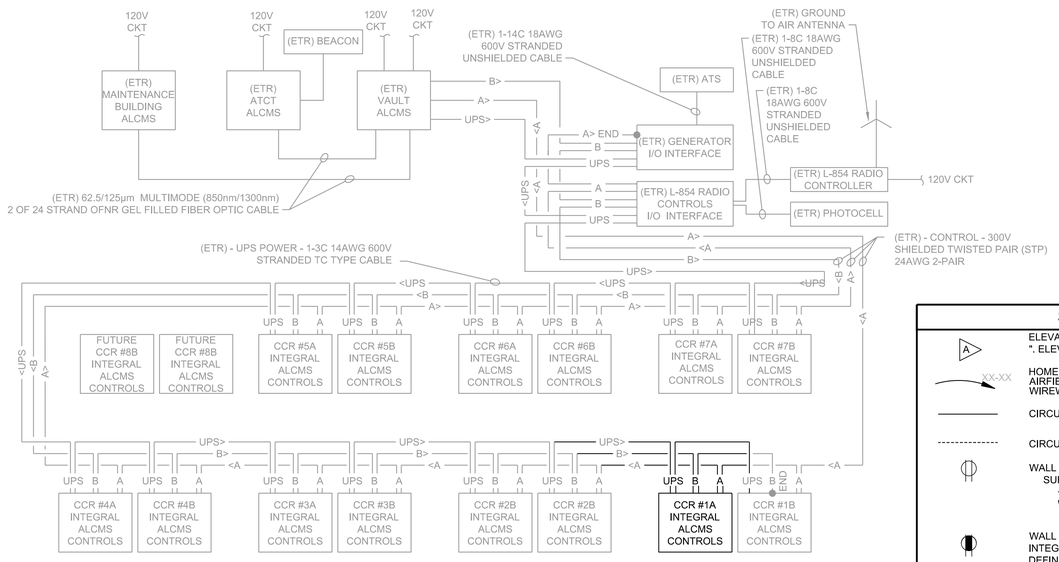


VAULT ELECTRICAL NEW WORK PLAN

NTS



ALCMS VAULT CONTROLS WIRING DIAGRAM

NTS

KEY NOTES

1. ETR - DIRECT EMERGENCY "CRASH" ATCT PHONE
2. ETR - PC BASED RACK MOUNTED ALCMS WITH TOUCHSCREEN HUMAN MACHINE INTERFACE (HMI)
3. ETR - ALCMS GENERATOR INTERFACE INTERFACE MOUNTED ON PLYWOOD BACKBOARD
4. ETR - 2-TON ELECTRIC OPERATED CRANE, DISCONNECT, AND RETRACTABLE CABLE CORD REEL, 9'-8"± TO BOTTOM OF RAIL
5. ETR - CABLE TRAY ROUTED OVER DOORWAY FOR ALCMS CONTROL CABLES AND BRANCH CIRCUIT TRAY CABLES
6. ETR - GENSET BATTERY CHARGER
7. ETR - 600A AUTOMATIC TRANSFER SWITCH
8. ETR - 600A ENCLOSED CIRCUIT BREAKER MAIN SERVICE ENTRANCE
9. ETR - VAULT CT CABINET
10. ETR - INCOMING SECONDARY SERVICE ENTRANCE CONDUCTORS FROM UTILITY XFMR
11. ETR - VAULT UTILITY METER
12. ETR - SECOND UTILITY METER AND SERVICE ENTRANCE
13. ETR - GROUNDING ELECTRODE CONDUCTOR FROM VAULT GROUND BAR (NOT SHOWN FOR CLARITY) TO BUILDING GROUND RING COUNTERPOISE (NOT SHOWN FOR CLARITY).
14. ETR - (12) 2" 5KV CONDUITS FROM AIRFIELD PULL BOX TO AIRFIELD ELECTRICAL MANHOLE.
15. ETR - PULLBOX AND 4" UNDERGROUND CONDUIT TO THE WEST
16. ETR - PULLBOX AND 4" UNDERGROUND CONDUIT TO THE WEST
17. ETR - WALL MOUNTED BUS BAR ROUTED AROUND ENTIRE PERIMETER OF ROOM. GROUND WIRE BONDED TO BUSBAR AND ROUTED UNDER DOORWAYS VIA UNDERGROUND CONDUIT (BUSBAR NOT SHOWN FOR CLARITY).
18. ETR - MOTORIZED OVERHEAD ROLLUP DOOR
19. ETR - AIR COMPRESSOR AND ASSOCIATED DISCONNECT
20. ETR - SECURITY PULL BOX WITH (6) 2" CONDUIT DUCTBANK TO TELECOM MANHOLE.
21. ETR - SECURITY ACCESS CONTROL SYSTEM
22. ETR - FLAMMABLE MATERIAL STORAGE CABINET
23. ETR - FIBEROPTIC ENCLOSURES
24. ETR - WALL MOUNTED TELECOM RACK
25. ETR - PAINTED PLYWOOD BACKBOARD
26. ETR - GENSET REMOTE ANNUNCIATOR
27. ETR - GENSET CONTROLS UNDERSLAB CONDUIT
28. ETR - WALL MOUNTED DOME SECURITY CAMERA
29. ETR - (3) 2" 600V CONDUITS FROM AIRFIELD PULL BOX TO AIRFIELD ELECTRICAL MANHOLE.
30. ETR - 2" RAMP ACCESS CONTROL V-24, 25/27
31. ETR - TELECOM PULL BOX
32. ETR - L-854 PILOT CONTROL RELAY.
33. ETR - DOUBLE DOOR. RETROFIT DOOR WITH LOCKABLE CRASH BAR PANIC HARDWARE TO COMPLY WITH NEC 110.31(A)(3).
34. ETR - ALCMS RADIO AND ELEVATED RUNWAY GUARD LIGHT (ERGL) CONTACTOR INTERFACE MOUNTED ON PLYWOOD BACKBOARD.
35. ETR - 3/4" CONDUIT WITH AIRFIELD PAVEMENT SURFACE SENSOR REMOTE POWER UNIT "RPU-4" BRANCH CIRCUIT.
36. ETR - SERVICE CONDUIT.
37. ETR - STACKED 6.6A, 5-STEP, FERRORESONANT CCR'S.
38. ETR - PREPARED LOCATION AND DEDICATED SPACE FOR STACKED FUTURE CCR'S.
39. ETR - CABLE TRAY FOR ELECTRICAL BRANCH CIRCUITS AND LOW VOLTAGE CONTROL CABLES.
40. ETR - #1/0 BARE STRANDED COPPER CONDUCTOR GROUND RING ROUTED FULL LENGTH OF NEW AND EXISTING CABLE TRAY.
41. ETR - #1/0 AWG STRANDED BARE COPPER GROUND WIRE IN 3/4" CONDUIT FROM CABLE TRAY GROUND RING TO VAULT PERIMETER GROUND BAR.
42. ETR - WIREWAY FOR 5KV L-824 CONDUCTORS WITH CONTINUOUS HINGE COVER.
43. ETR - 5KV BREAKOUT PATCH PANEL ENCLOSURE.
44 ETR - 600V AFL PULLBOX AND SURGE ARRESTOR ENCLOSURE.
45. ETR - EIGHT (8) 2" GRS CONDUITS FROM 5KV WIREWAYS TO 5KV BREAKOUT PATCH PANEL.
46. ETR - FOUR (4) 2" GRS CONDUITS FROM 600V CABLE TRAY TO 600V PULL BOX.
47. ETR - COPPER GROUND BAR PREDRILLED HOLES FOR CRIMP 2 HOLE STYLE TERMINATION LUGS.
48. ETR - INTEGRAL 5KV S-1 CUTOUTS WITH REPOSITIONABLE HANDLE, WITH CLOSED, OPEN, GROUNDED, AND TEST HANDLE POSITIONS.
49. ETR - UL 1449 4TH EDITION SURGE PROTECTION DEVICES.
50. ETR - ELECTRICAL VAULT SAFETY BOARD.
51. ETR - ONE (1) 1 ¼" ELECTRICAL CONDUIT FOR BRANCH CIRCUITS, (1) 1/2" CONTROL CABLE CONDUIT, AND (1) 1/2" GROUND CONDUCTOR CONDUIT FROM CABLE TRAY TO EACH CCR.

N1. NEW - LOCATION FOR NEW CCR #1A. REFER TO SHEET '47' FOR ADDITIONAL INFORMATION.

N2. NEW - EXISTING CCR #2B SHALL BE REPURPOSED AND RELABELED.

N3. NEW - ONE(1) 1 ¼" ELECTRICAL CONDUIT FOR BRANCH CIRCUITS, (1) ½" CONTROL CABLE CONDUIT, AND (1) ½" GROUND CONDUCTOR CONDUIT FROM CABLE TRAY TO EACH CCR.

SYMBOL SCHEDULE

- A — ELEVATION CALLOUT. SEE CORRESPONDING DETAIL ON SHEET " ". ELEVATION "A" SHOWN
- XX-XX — HOMERUN TO PANELBOARD OR EQUIPMENT AS NOTED. ROUTE AIRFIELD EQUIPMENT BRANCH CIRCUITS THROUGH 600V WIREWAY.
- ——— CIRCUIT IN SURFACE MOUNTED CONDUIT 3/4", UON.
- - - - - - CIRCUIT OR CONDUIT BELOW GRADE OR SLAB.
- WALL MOUNTED NEMA 5-20R DUPLEX RECEPTACLE, 18"AFF, UON.
  SUFFIXES 'X' (WHEN USED)
  +24 = MOUNTING HEIGHT AFF OR AFG.
  WP = INTEGRAL GFI WEATHER RESISTANT WITH IN-USE WEATHER PROOF COVER.
- WALL MOUNTED NEMA 5-20R DUPLEX RECEPTACLE WITH INTEGRAL GFCI PROTECTION. SEE ( ) FOR SUFFIX DEFINITIONS.

SHEET NOTES (INCIDENTAL, UON)

A. HALFTONE (GRAY) ITEMS ARE EXISTING TO REMAIN, UON. DARK (BLACK) ITEMS ARE NEW, UON.

B. NO NEW WALL, FLOOR OR ROOF PENETRATIONS.

C. PROVIDE WALL MOUNTED EQUIPMENT WITH 4" OFFSET FROM WALL USING GALVANIZED STEEL C-CHANNELS ANCHORED TO VAULT WALL.

D. THE AIRFIELD LIGHTING SYSTEM MUST STAY OPERATIONAL DURING ALL HOURS OF AIRFIELD OPERATIONS. ALL SYSTEM OUTAGES MUST BE COORDINATED WITH AND APPROVED BY THE OWNER AND ENGINEER.

E. AFTER NEW CCR'S ARE INSTALLED, COORDINATE A TIME TO TRANSFER POWER CABLING TO NEW CONFIGURATION AND TO RECOMMISSION AND REPROGRAM THE ALCMS. RECONFIGURE EXISTING CONTROL CIRCUITS AND CONFIGURE NEW CONTROL CIRCUITS IN ACCORDANCE WITH NEW CONTROL SCHEME.

F. ALL EQUIPMENT SHALL BE PLACED TO COMPLY WITH NEC 110.34(A) CONDITION 2 WORKING SPACE CLEARANCES FOR 5KV EQUIPMENT (5'-0"). AND PLACED TO COMPLY WITH NEC 110.26(A) CONDITION 2 WORKING SPACE CLEARANCES FOR <600V EQUIPMENT (3'-6").

G. PROVIDE TEMPORARY 5KV CIRCUIT CONDUIT PATHWAYS ABOVE CRANE BEAM DURING DEMOLITION AND CONSTRUCTION UNTIL PERMANENT PATHWAYS ARE CONSTRUCTED. 5KV CIRCUITS SHALL NOT BE LEFT LAYING ON THE FLOOR OR HANGING FROM STRUCTURE, EQUIPMENT, OR OTHER NON ELECTRICAL DEDICATED STRUCTURES.

H. ALL CCR'S SHALL FACE THE CENTER OF THE ROOM.

COMMONWEALTH OF VIRGINIA
05/15/2026
THOMAS S. WARD IV
Lic. No. 058606
PROFESSIONAL ENGINEER

Salas O'Brien
119 Norfolk Avenue Southwest, Suite 310
Roanoke, VA 24011
Salas O'Brien Project Number: 2650-00782-00

NO.	REVISIONS	BY	APP.	DATE

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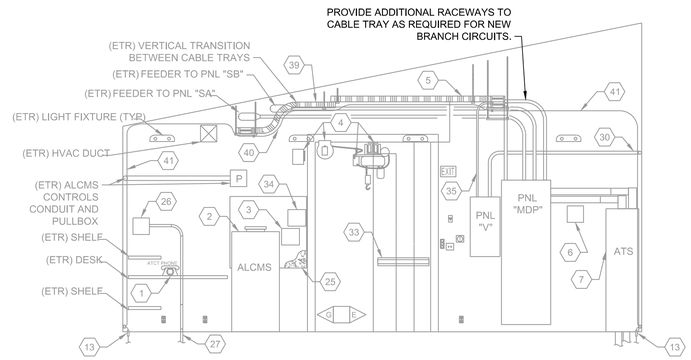
DELTA AIRPORT CONSULTANTS, INC.

REHABILITATE RUNWAY 6-24	AIP NO. 3-51-0045-074-2025	JOB NO. 19013
ELECTRICAL VAULT PLAN	DRAWN BY: JM	SHEET 49
	DESIGNED BY: TVO	OF 58
ROANOKE-BLACKSBURG REGIONAL AIRPORT	SCALE: NONE	DATE: MAY 2026

DRAWING: ELEC PLANS.dwg LAYOUT: E2
XREFS: IMAGES: Project-Sheet-Plans_Logo_Color_RGB-288221.jpg

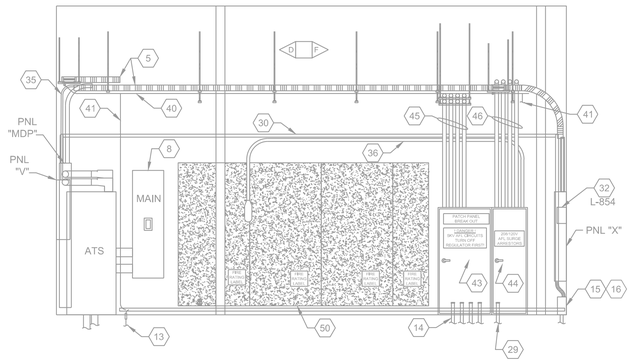


WEST WALL ELEVATION "D"

NTS

NOTES:

1. GROUND BAR, BRANCH CIRCUIT RACEWAYS, MOUNTING HARDWARE AND OTHER ANCILLARY ITEMS NOT SHOWN FOR CLARITY.
2. CCR'S NOT SHOWN FOR CLARITY.

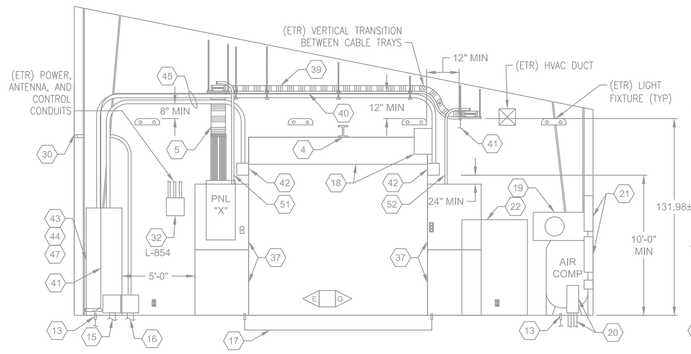


NORTH WALL ELEVATION "E"

NTS

NOTES:

1. GROUND BAR, LIGHT FIXTURES, BRANCH CIRCUIT RACEWAYS, MOUNTING HARDWARE, AND OTHER ANCILLARY ITEMS NOT SHOWN FOR CLARITY.
2. CCR'S NOT SHOWN FOR CLARITY.

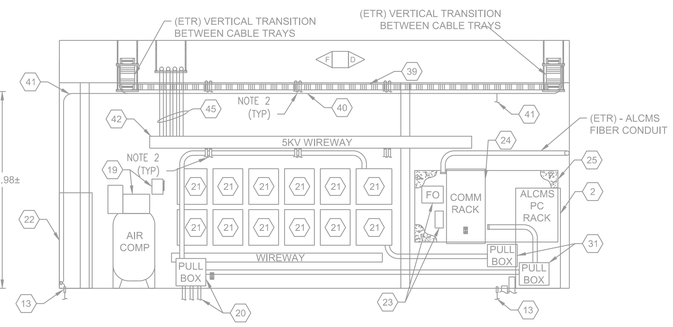


EAST WALL ELEVATION "F"

NTS

NOTES:

1. GROUND BAR, BRANCH CIRCUIT RACEWAYS, MOUNTING HARDWARE AND OTHER ANCILLARY ITEMS NOT SHOWN FOR CLARITY.

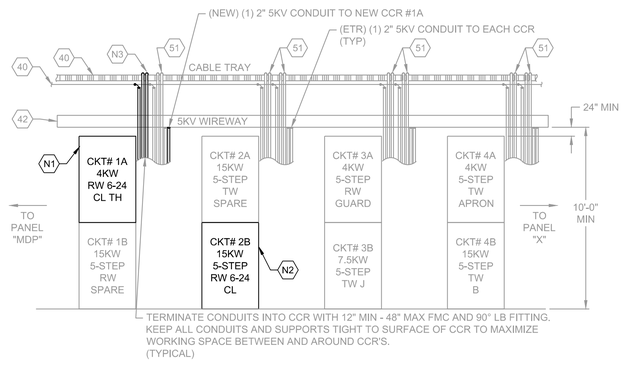


SOUTH WALL ELEVATION "G"

NTS

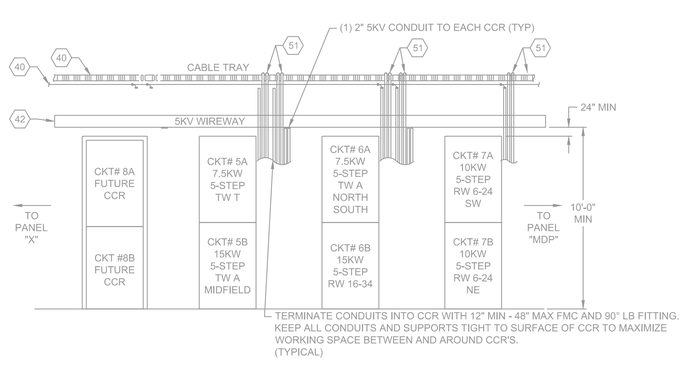
NOTES:

1. GROUND BAR, LIGHT FIXTURES, BRANCH CIRCUIT RACEWAYS, MOUNTING HARDWARE, AND OTHER ANCILLARY ITEMS NOT SHOWN FOR CLARITY.
2. CCR'S NOT SHOWN FOR CLARITY.



NORTH CCR LINEUP ELEVATION "E"

NTS



SOUTH CCR LINEUP ELEVATION "G"

NTS

KEY NOTES

1. ETR - DIRECT EMERGENCY "CRASH" ATCT PHONE
2. ETR - PC BASED RACK MOUNTED ALCMS WITH TOUCHSCREEN HUMAN MACHINE INTERFACE (HMI)
3. ETR - ALCMS GENERATOR INTERFACE INTERFACE MOUNTED ON PLYWOOD BACKBOARD
4. ETR - 2-TON ELECTRIC OPERATED CRANE, DISCONNECT, AND RETRACTABLE CABLE CORD REEL. 9'-8"± TO BOTTOM OF RAIL
5. ETR - CABLE TRAY ROUTED OVER DOORWAY FOR ALCMS CONTROL CABLES AND BRANCH CIRCUIT TRAY CABLES
6. ETR - GENSET BATTERY CHARGER
7. ETR - 600A AUTOMATIC TRANSFER SWITCH
8. ETR - 600A ENCLOSED CIRCUIT BREAKER MAIN SERVICE ENTRANCE
9. ETR - VAULT CT CABINET
10. ETR - INCOMING SECONDARY SERVICE ENTRANCE CONDUCTORS FROM UTILITY XFMR
11. ETR - VAULT UTILITY METER
12. ETR - SECOND UTILITY METER AND SERVICE ENTRANCE
13. ETR - GROUNDING ELECTRODE CONDUCTOR FROM VAULT GROUND BAR (NOT SHOWN FOR CLARITY) TO BUILDING GROUND RING COUNTERPOISE (NOT SHOWN FOR CLARITY).
14. ETR - (12) 2" 5KV CONDUITS FROM AIRFIELD PULL BOX TO AIRFIELD ELECTRICAL MANHOLE.
15. ETR - PULLBOX AND 4" UNDERGROUND CONDUIT TO THE WEST
16. ETR - PULLBOX AND 4" UNDERGROUND CONDUIT TO THE WEST
17. ETR - WALL MOUNTED BUS BAR ROUTED AROUND ENTIRE PERIMETER OF ROOM. GROUND WIRE BONDED TO BUSBAR AND ROUTED UNDER DOORWAYS VIA UNDERGROUND CONDUIT (BUSBAR NOT SHOWN FOR CLARITY).
18. ETR - MOTORIZED OVERHEAD ROLLUP DOOR
19. ETR - AIR COMPRESSOR AND ASSOCIATED DISCONNECT
20. ETR - SECURITY PULL BOX WITH (6) 2" CONDUIT DUCTBANK TO TELECOM MANHOLE.
21. ETR - SECURITY ACCESS CONTROL SYSTEM
22. ETR - FLAMMABLE MATERIAL STORAGE CABINET
23. ETR - FIBEROPTIC ENCLOSURES
24. ETR - WALL MOUNTED TELECOM RACK
25. ETR - PAINTED PLYWOOD BACKBOARD
26. ETR - GENSET REMOTE ANNUNCIATOR
27. ETR - GENSET CONTROLS UNDERSLAB CONDUIT
28. ETR - WALL MOUNTED DOME SECURITY CAMERA
29. ETR - (3) 2" 600V CONDUITS FROM AIRFIELD PULL BOX TO AIRFIELD ELECTRICAL MANHOLE.
30. ETR - 2" RAMP ACCESS CONTROL V-24, 25/27
31. ETR - TELECOM PULL BOX
32. ETR - L-854 PILOT CONTROL RELAY.
33. ETR - DOUBLE DOOR. RETROFIT DOOR WITH LOCKABLE CRASH BAR PANIC HARDWARE TO COMPLY WITH NEC 110.31(A)(3).
34. ETR - ALCMS RADIO AND ELEVATED RUNWAY GUARD LIGHT (ERGL) CONTACTOR INTERFACE MOUNTED ON PLYWOOD BACKBOARD.
35. ETR - 3/4" CONDUIT WITH AIRFIELD PAVEMENT SURFACE SENSOR REMOTE POWER UNIT "RPU-4" BRANCH CIRCUIT.
36. ETR - SERVICE CONDUIT.
37. ETR - STACKED 6.6A, 5-STEP, FERRORESONANT CCR'S.
38. ETR - PREPARED LOCATION AND DEDICATED SPACE FOR STACKED FUTURE CCR'S.
39. ETR - CABLE TRAY FOR ELECTRICAL BRANCH CIRCUITS AND LOW VOLTAGE CONTROL CABLES.
40. ETR - #1/0 BARE STRANDED COPPER CONDUCTOR GROUND RING ROUTED FULL LENGTH OF NEW AND EXISTING CABLE TRAY.
41. ETR - #1/0 AWG STRANDED BARE COPPER GROUND WIRE IN 3/4" CONDUIT FROM CABLE TRAY GROUND RING TO VAULT PERIMETER GROUND BAR.
42. ETR - WIREWAY FOR 5KV L-824 CONDUCTORS WITH CONTINUOUS HINGE COVER.
43. ETR - 5KV BREAKOUT PATCH PANEL ENCLOSURE.
44 ETR - 600V AFL PULLBOX AND SURGE ARRESTOR ENCLOSURE.
45. ETR - EIGHT (8) 2" GRS CONDUITS FROM 5KV WIREWAYS TO 5KV BREAKOUT PATCH PANEL.
46. ETR - FOUR (4) 2" GRS CONDUITS FROM 600V CABLE TRAY TO 600V PULL BOX.
47. ETR - COPPER GROUND BAR PREDRILLED HOLES FOR CRIMP 2 HOLE STYLE TERMINATION LUGS.
48. ETR - INTEGRAL 5KV S-1 CUTOUTS WITH REPOSITIONABLE HANDLE, WITH CLOSED, OPEN, GROUNDED, AND TEST HANDLE POSITIONS.
49. ETR - UL 1449 4TH EDITION SURGE PROTECTION DEVICES.
50. ETR - ELECTRICAL VAULT SAFETY BOARD.
51. ETR - ONE (1) 1 ¼" ELECTRICAL CONDUIT FOR BRANCH CIRCUITS, (1) 1/2" CONTROL CABLE CONDUIT, AND (1) 1/2" GROUND CONDUCTOR CONDUIT FROM CABLE TRAY TO EACH CCR.

N1. NEW - LOCATION FOR NEW CCR #1A. REFER TO SHEET '47' FOR ADDITIONAL INFORMATION.

N2. NEW - EXISTING CCR #2B SHALL BE REPURPOSED AND RELABELED.

N3. NEW - ONE(1) 1 ¼" ELECTRICAL CONDUIT FOR BRANCH CIRCUITS, (1) ½" CONTROL CABLE CONDUIT, AND (1) ¾" GROUND CONDUCTOR CONDUIT FROM CABLE TRAY TO EACH CCR.

COMMONWEALTH OF VIRGINIA
05/15/2026
THOMAS S. WARD IV
Lic. No. 058606
PROFESSIONAL ENGINEER

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Salas O'Brien Project Number: 2650-00782-00

NO.	REVISIONS	BY	APP.	DATE

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phone: (804) 275-8301
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DELTA AIRPORT CONSULTANTS, INC.

REHABILITATE RUNWAY 6-24

ELECTRICAL SECTION VIEWS

ROANOKE-BLACKSBURG REGIONAL AIRPORT

AIP NO. 3-51-0045-074-2025

JOB NO. 19013

DRAWN BY: JM

DESIGNED BY: TVO

SCALE: NONE

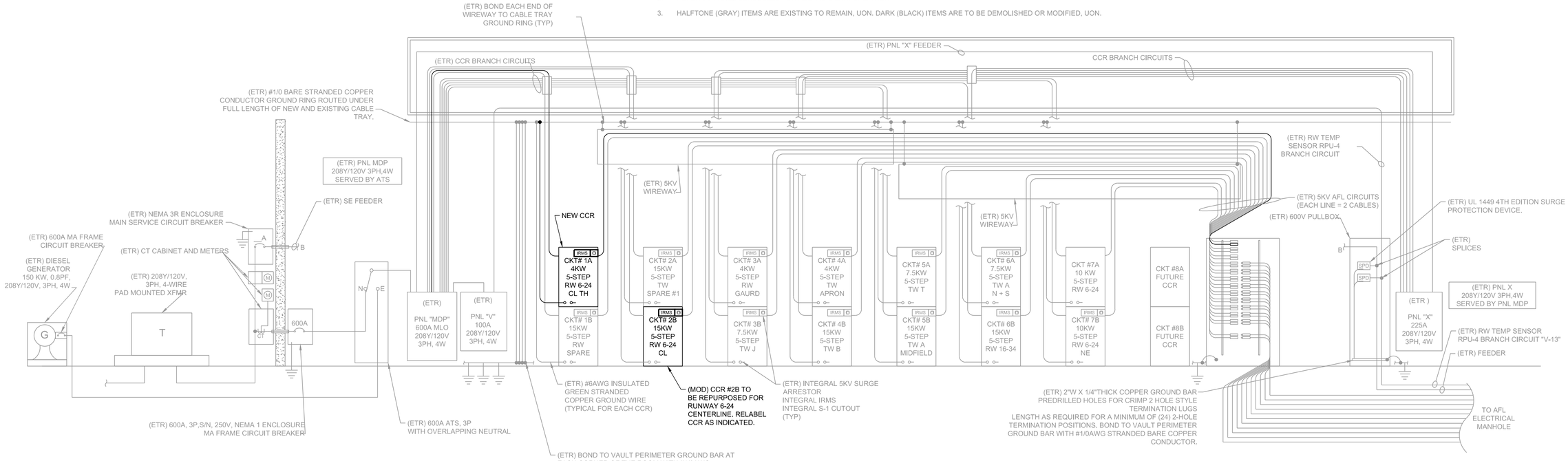
DATE: MAY 2026

SHEET 50 OF 58

DRAWING: ELEC PLANS.dwg LAYOUT: E3
XREFS: IMAGES: Project-Data-Block-Logo_Color_RGB-288221.jpg;

NOTES:

1. CONTROL CABLING NOT SHOWN FOR CLARITY
2. REFER TO PANEL SCHEDULES FOR ADDITIONAL INFORMATION
3. HALFTONE (GRAY) ITEMS ARE EXISTING TO REMAIN, UON. DARK (BLACK) ITEMS ARE TO BE DEMOLISHED OR MODIFIED, UON.



NOTES:

1. CONTROL CABLING NOT SHOWN FOR CLARITY
2. REFER TO PANEL SCHEDULES FOR ADDITIONAL INFORMATION
3. HALFTONE (GRAY) ITEMS ARE EXISTING TO REMAIN, UON. DARK (BLACK) ITEMS ARE NEW, UON.

ELECTRICAL RISER DIAGRAM - NEW WORK

NTS

COMMONWEALTH OF VIRGINIA
05/15/2026
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REHABILITATE RUNWAY 6-24

ELECTRICAL RISER DIAGRAM

ROANOKE-BLACKSBURG REGIONAL AIRPORT

AIP NO. 3-51-0045-074-2025
JOB NO. 19013
DRAWN BY: JM
DESIGNED BY: TVO
SCALE: NONE
DATE: MAY 2026
SHEET 51 OF 58

DRAWING: ELEC PLANS.dwg LAYOUT: E4
XREFS: IMAGES: Project-Sales\Shea_Logo_Color_RGB_280221.jpg

Branch Panel: MDP

Location: ELECTRIC VAULT
Supply From: UTILITY
Mounting: Surface

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: EXISTING
Enclosure: Type 1
Mains: 600A

Phase in kVA

Note	CKT	Circuit Description	Wire	Breaker		A	B	C	Breaker	Wire	Circuit Description	CKT	Note
A	1	AFL CCR #1B RW SPARE	#1	125	2	0.0 / 10.8						2	
	3						0.0 / 0.0		3	100	PNL V	4	
	5	EXISTING		60	2			0.0 / 0.0				6	
	7					0.0 / 10.4			2	70	#1 AFL CCR #6A RUNWAY 16-34	8	
A	9	AFL CCR #1A RW 6-24 CENTERLINE...	#1	125	2		2.0 / 10.4					10	B
	11							2.0 / 0.0				12	
	13					18.4 / 10.4			3	125	#1 AFL CCR #2B RW 6-24 CENTERLINE	14	A
	15	PNL X		225	3		16.0 / 10.4					16	
	17							18.4 / 0.0				18	
	19					0.0 / 0.0			3	125	#1 AFL CCR #2A TW SPARE	20	A
	21						0.0 / 0.0					22	
	23							0.0 / 10.4	2	90	#1 RW 6-24 SW (CCR #7A)	24	C
	25					0.0 / 10.4						26	
	27	PNL SA STORAGE ROOM		225	3		0.0 / 10.4		2	125	#1 AFL CCR #7B TW ALPHA - MIDFIELD	28	C
	29							0.0 / 10.4				30	
	31					0.0 / 5.2						32	
	33						0.0 / 5.2		3	125	#4 AFL CCR #6B TW ALPHA-NORTH + SOUTH	34	A
	35							0.0 / 0.0				36	
	37					0.0 / 7.0						38	
	39	PNL SB STORAGE ROOM		225	3		0.0 / 7.0		3	125	#2 AFL CCR #5B RUNWAY 6-24 SW (6 END)	40	A
	41							0.0 / 0.0				42	
			Total Load:			72.6 kVA	61.4 kVA	41.2 kVA					
			Total Amps:			631 A	537 A	343 A					

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Lighting	4.0 kVA	125.00%	5.0 kVA		
Spare	171.2 kVA	100.00%	171.2 kVA	**Total Conn. Load:**	175.2 kVA
				Total Est. Demand:	176.2 kVA
				Total Conn. Current:	486 A
				Total Est. Demand Current:	489 A

Notes:
A. 1 1/4" CONDUIT SIZE
B. 3/4" CONDUIT SIZE
C. 1" CONDUIT SIZE

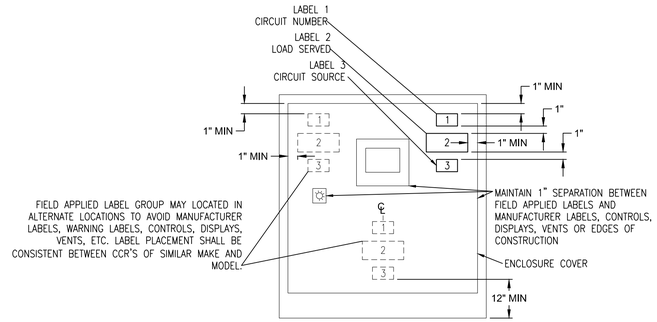
Abbrevations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE
M - PROVIDE METERING DEVICE

GENERAL NOTES:
1. ALL NEW BREAKERS SHALL BE COMPATIBLE WITH EXISTING PANELBOARD AND MATCHING EXISTING PANEL AIC RATING.
2. REUSE EXISTING BREAKERS FROM REMOVED LOADS WHERE POSSIBLE.
3. ONLY NEW LOAD TABULATED. MORE LOAD REMOVED THAN ADDED.
4. PROVIDE NEW MACHINE PRINTED PANEL SCHEDULE INSERT AT PROJECT COMPLETION.
5. LOAD FROM PANEL X INCLUDES 0KVA REDUNDANT SPARE CCR LOAD REMOVED FROM THIS PANEL TOTALS.
6. CCRS ASSUMED RUNNING AT 100% CAPACITY

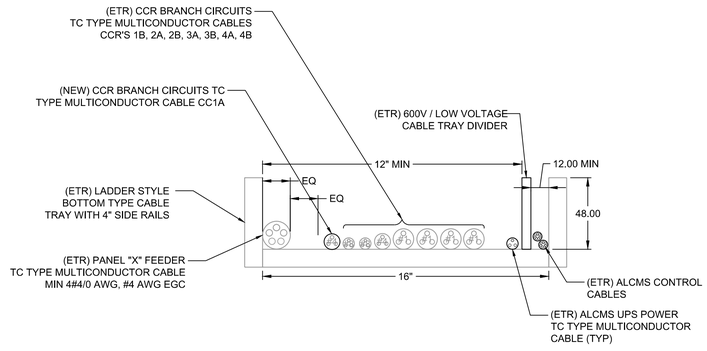
5KV AFL CIRCUIT PHASING AND LABELING

CCR POSITION (NOTE 2)	SIZE	AMPS	STEPS (NOTE 3)	BRANCH CIRCUIT 208V, 1PH	LOAD SERVED	CCR LABEL 1 TEXT (NOTE 4)	CCR LABEL 2 TEXT	CCR LABEL 2 COLOR	CCR LABEL 3 TEXT	CCR LABEL 3 COLOR	CABLE TAG LINE SIDE PATCH PNL	CABLE TAG LOAD SIDE PATCH PNL	CABLE TAPE ID COLOR(S) (NOTE 5)
# 1A	4 KW	6.6 A	5 (NOTE 3)	MDP-9,11	RW 6-24 CL TH	CCR # 1A	RW 6-24 CL TH	WHITE ON RED	FED BY CKT MDP-9,11	WHITE ON GREEN	#1A=RW 6-24 CL TH	RW 6-24 CL TH	ORANGE + WHITE
# 2B	15 KW	6.6 A	5 (NOTE 3)	MDP-12,14,16	RW 6-24 CL	CCR # 2B	RW 6-24 CL	WHITE ON RED	FED BY CKT MDP-12,14,16	WHITE ON GREEN	#2B=RW 6-24 CL	RW 6-24 CL	YELLOW + WHITE

NOTES:
1. ALL NEW LABELS SHALL BE INDOOR/OUTDOOR UV STABLE WITH SELF-ADHESIVE BACKING
2. NEW CCR POSITION SUFFIX A INDICATES ABOVE AND SUFFIX B INDICATES BELOW
3. ALL CCR'S SHALL BE CAPABLE AND FIELD MODIFIABLE FOR 3 STEP OR 5 STEP OPERATION. PROVIDE REPLACENT FRONT COVER SWITCH FOR CONVERSION FROM 3-STEP TO 5-STEP OR VICE VERSA.
4. LABEL 1 SHALL BE WHITE TEXT ON BLACK BACKGROUND
5. FIELD APPLY COLOR CODED ELECTRICAL TAPE TO EACH CABLE ENTERING AND EXITING PULLING STRUCTURES WITH MULTIPLE CIRCUITS. APPLY AT LEAST 5 FULL WRAPS AROUND CABLE.
6. VERIFY FINAL COLOR SELECTIONS WITH OWNER PRIOR TO ORDERING.

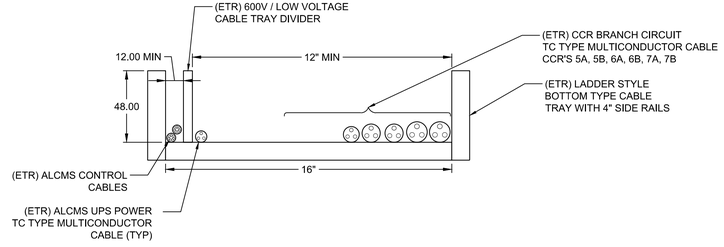


CCR LABEL LAYOUT DETAIL
NTS



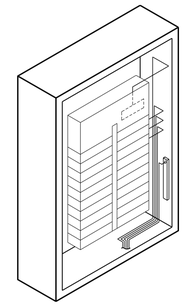
EXISTING NORTH CABLE TRAY SECTION
NTS

NOTES:
1. BOND ALL EXISTING AND NEW SECTIONS TO MAINTAIN CONTINUOUS GROUND PATH OF ALL METALLIC SECTIONS.
2. CABLE TRAY AND CONDUIT SHALL NOT BE USED AS SOLE MEANS OF EQUIPMENT GROUNDING CONDUCTOR
3. TIE WRAP CONDUCTORS AT REGULAR INTERVALS TO FIX CABLES TO CABLE TRAY. AVOID EXCESSIVE USE OF TIE WRAPS.
4. FINISHED CABLE TRAY INSTALLATION AND CABLE INSTALLATION SHALL PRESENT CLEAN, NEAT AND ORDERLY APPEARANCE.



EXISTING SOUTH CABLE TRAY SECTION
NTS

NOTES:
1. BOND ALL EXISTING AND NEW SECTIONS TO MAINTAIN CONTINUOUS GROUND PATH OF ALL METALLIC SECTIONS.
2. CABLE TRAY AND CONDUIT SHALL NOT BE USED AS SOLE MEANS OF EQUIPMENT GROUNDING CONDUCTOR
3. TIE WRAP CONDUCTORS AT REGULAR INTERVALS TO FIX CABLES TO CABLE TRAY. AVOID EXCESSIVE USE OF TIE WRAPS.
4. FINISHED CABLE TRAY INSTALLATION AND CABLE INSTALLATION SHALL PRESENT CLEAN, NEAT AND ORDERLY APPEARANCE.



TYPICAL PANEL BOARD WIRING
NTS

NOTES:
1. ALL BENDS IN CONDUCTORS #10 & SMALLER SHALL BE 90° STRAIGHT AND TRUE. BENDS IN LARGER SIZE CONDUCTORS SHALL HAVE A UNIFORM RADIUS.
2. BEND CONDUCTORS TOWARD THE BACK CORNER OF THE PANEL CAN AND THEN FORWARD TO CONNECT TO CIRCUIT BREAKERS.
3. TIE WRAP CONDUCTORS AT REGULAR INTERVALS TO FORM NEAT AND ORDERLY WIRE BUNDLES. AVOID EXCESSIVE USE OF TIE WRAPS.
4. NO CONDUCTORS SHALL TOUCH PANEL CAN.
5. FINISHED PANEL SHALL PRESENT CLEAN, NEAT AND ORDERLY APPEARANCE.

COMMONWEALTH OF VIRGINIA
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DELTA AIRPORT CONSULTANTS, INC.

REHABILITATE RUNWAY 6-24
AIP NO. 3-51-0045-074-2025
JOB NO. 19013

ELECTRICAL DETAILS & SCHEDULES
DRAWN BY: JM
DESIGNED BY: TVO
SHEET 52 OF 58

ROANOKE-BLACKSBURG REGIONAL AIRPORT
SCALE: NONE
DATE: MAY 2026

DRAWING: ELEC PLANS.dwg, LAYOUT: E10
XREFS: IMAGES: Project Sales\Delta_Logo_Color_RGB-288221.jpg

GENERAL ELECTRICAL SPECIFICATIONS

GENERAL NOTES AND ELECTRICAL SPECIFICATIONS

CODE INFORMATION
APPLICABLE CODES INCLUDE BUT ARE NOT LIMITED TO: NATIONAL ELECTRICAL CODE (NFPA 70), INTERNATIONAL BLDG CODE, LIFE SAFETY CODE (NFPA 101), AMERICANS WITH DISABILITIES ACT, AND ALL LOCAL CODES AND AMENDMENTS.

BASIC ELECTRICAL REQUIREMENTS
PERMITS AND CODES: OBTAIN AND PAY FOR ALL NECESSARY PERMITS AND REQUIRED INSPECTIONS. COMPLY WITH ALL NATIONAL, STATE AND MUNICIPAL LAWS, CODES AND ORDINANCES RELATING TO BUILDING AND PUBLIC SAFETY. PROVIDE ANY REQUIRED TEMPORARY POWER AND UTILITIES FOR ALL TRADES AND ALL CONSTRUCTION TRAILERS. PROVIDE TEMPORARY CONSTRUCTION LIGHTING AND POWER. ELECTRICAL CONTRACTOR SHALL INCLUDE TEMPORARY ELECTRIC: ALL TEMPORARY ELECTRIC SHALL BE IN ACCORDANCE WITH OSHA CONSTRUCTION STANDARDS 29FCR, PART 1926 AND ARTICLE 590 OF THE NATIONAL ELECTRICAL CODE. TEMPORARY LIGHTING AND POWER SHALL BE PROVIDED IN ACCORDANCE WITH OSHA STANDARDS. THE OSHA MINIMUM ILLUMINATION IS 5 FOOTCANDLES IN GENERAL CONSTRUCTION AREAS, AND 10 FC IN MECHANICAL / ELECTRICAL ROOMS AND WORKROOMS. INCLUDED ARE CONNECTIONS TO ALL CONSTRUCTION TRAILERS. THE COST OF THIS WORK IS TO BE INCLUDED IN THE BASE ELECTRICAL BID FOR THE PROJECT.

VISITING THE JOB SITE
VISIT THE SITE OF THE PROPOSED CONSTRUCTION IN ORDER TO FULLY UNDERSTAND THE FACILITIES, DIFFICULTIES AND RESTRICTIONS ATTENDING THE EXECUTION OF THE WORK. NO ADDITIONAL COMPENSATION WILL BE ALLOWED THIS CONTRACTOR FOR WORK OR ITEMS OMITTED FROM HIS ORIGINAL PROPOSAL DUE TO HIS FAILURE TO INFORM HIMSELF REGARDING SUCH MATTERS AFFECTING THE PERFORMANCE OF THE WORK IN THIS CONTRACT OR NECESSARY FOR THE INSTALLATION AND COMPLETION OF THE WORK INCLUDED HEREIN.

DRAWINGS
DRAWINGS ARE DIAGRAMMATIC, CONFIRM DIMENSIONS & LOCATIONS IN THE FIELD. IF CONFLICTING DIMENSIONS ARE SHOWN, USE LARGER DIMENSIONS AND VERIFY WITH ARCHITECT. SEE ARCHITECTURAL PLANS AND ELEVATIONS FOR EXACT LOCATIONS OF FIXTURES AND WALL MOUNTED DEVICES.

MATERIAL
ALL MATERIALS SHALL BE NEW, MADE IN USA AND U.L. LISTED. MATERIAL INSTALLATION SHALL COMPLY WITH NEC REQUIREMENTS AND PERFORM BY CRAFTSMEN SKILLED IN THIS PARTICULAR WORK.

EQUIPMENT PROTECTION
PROTECT EQUIPMENT AND WORK FROM DAMAGE DURING HANDLING AND INSTALLATION UNTIL COMPLETION OF CONSTRUCTION.

COOPERATION WITH OTHER TRADES
COOPERATION WITH TRADES OF ADJACENT, RELATED OR AFFECTED MATERIALS OR OPERATIONS, AND WITH TRADES PERFORMING CONTINUATIONS OF THIS WORK UNDER SUBSEQUENT CONTRACTS, IS CONSIDERED A PART OF THIS WORK IN ORDER TO EFFECT TIMELY AND ACCURATE PLACING OF WORK AND TO BRING TOGETHER, IN PROPER AND CORRECT SEQUENCE, THE WORK OF SUCH TRADES. PROVIDE OTHER TRADES, AS REQUIRED, ALL NECESSARY TEMPLATES, PATTERNS, SETTING PLANS AND SHOP DETAILS FOR THE PROPER INSTALLATION OF THE WORK AND FOR THE PURPOSE OF COORDINATING ADJACENT WORK. ELECTRICAL POWER CONNECTIONS FOR MECHANICAL AND PLUMBING EQUIPMENT ARE IN THIS DIVISION UNLESS NOTED OTHERWISE. VERIFY ELECTRICAL CHARACTERISTICS OF ALL EQUIPMENT WITH OTHER DIVISIONS BEFORE ROUGHING IN THE ELECTRICAL CONNECTIONS AND ENERGIZING THE EQUIPMENT.
MECH/PLUMBING/SPECIAL EQPT ACCESS AND CLEARANCE AREAS: REMOVE ANY IMPROPERLY INSTALLED ELECTRICAL EQPT AND CONDUIT THAT ARE LIMITING PROPER ACCESS FOR EQPT SERVICE AND MAINTENANCE.

LOSS OR DAMAGE TO FACILITIES
THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOSS OR DAMAGE TO THE FACILITIES CAUSED BY HIM AND HIS WORKMEN, AND SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING SUCH LOSS OR DAMAGE. THE CONTRACTOR SHALL SEND PROPER NOTICES, MAKE NECESSARY ARRANGEMENTS, AND PERFORM OTHER SERVICES REQUIRED FOR THE CARE, PROTECTION AND IN-SERVICE MAINTENANCE OF ALL ELECTRICAL SERVICES FOR THE NEW FACILITIES. THE CONTRACTOR SHALL ERECT TEMPORARY BARRICADES, WITH NECESSARY SAFETY DEVICES, AS REQUIRED TO PROTECT PERSONNEL AND THE GENERAL PUBLIC FROM INJURY, REMOVING ALL SUCH TEMPORARY PROTECTION UPON COMPLETION OF THE WORK.
THE CONTRACTOR SHALL MODIFY, REMOVE AND/OR REPLACE ALL MATERIALS AND ITEMS SO INDICATED ON THE DRAWINGS OR REQUIRED BY THE INSTALLATION OF NEW FACILITIES. SALVAGE MATERIALS SHALL REMAIN THE PROPERTY OF THE OWNER AND SHALL BE DELIVERED TO SUCH DESTINATION AS DIRECTED BY THE OWNER. DISPOSE OF SALVAGE MATERIAL IF NOT RETAINED BY OWNER. WHERE EXISTING CONSTRUCTION IS REMOVED TO PROVIDE WORKING AND EXTENSION ACCESS TO EXISTING FACILITIES, CONTRACTOR SHALL REMOVE CEILING GRIDS, TILES, DOORS, PIPING, AIR CONDITIONING DUCTWORK AND EQUIPMENT, ETC., TO PROVIDE THIS ACCESS AND SHALL REINSTALL SAME UPON COMPLETION OF WORK IN THE AREAS AFFECTED.

WORK IN OCCUPIED AREAS
WORK IN, ABOVE, BELOW OR NEAR OCCUPIED AREAS SHALL BE AT OWNER'S CONVENIENCE AND MAY BE DURING EVENINGS OR WEEKENDS. SCHEDULE ALL REQUIRED POWER OUTAGES A MINIMUM OF 7 DAYS IN ADVANCE WITH FACILITY ENGINEER. DO NOT TURN OFF ANY POWER SOURCES. ONLY FACILITY ENGINEER OR HIS AUTHORIZED REPRESENTATIVE MAY DO SO.

CLEAN UP
A) PROVIDE FOR ISOLATION OF WORK AREAS AND DAILY REMOVAL OF DEBRIS.
B) CLEAN ALL EQUIPMENT AND FIXTURE LENSES.
C) REPLACE ALL BURNED OUT LAMPS.
D) TOUCH UP WITH PAINT WHERE REQUIRED.

SUBMITTAL DATA
SUBMITTALS ARE REQUIRED BUT NOT LIMITED TO THE FOLLOWING EQUIPMENT:
BRANCH CIRCUIT PANELBOARDS, TRANSFORMERS, SWITCHES, CONDUIT/FITTINGS, WIRES, DEVICES, LIGHTING FIXTURES, ETC. ALTERNATE EQUIPMENT SHALL BE APPROVED BY ARCHITECT/OWNER.

SHOP DRAWINGS
SHOP DRAWINGS AS REQUIRED SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR AT NO ADDITIONAL COST TO THE ARCHITECT. THESE SHOP DRAWINGS SHALL BE PREPARED TO INDICATE INSTALLATION AT MAJOR EQUIPMENT WHERE SPECIAL COORDINATION PROBLEM EXIST. OVERCURRENT & SAFETY DISCONNECT DEVICES FOR HVAC EQPT: OVERCURRENT (OC) & DISCONNECT DEVICES SHOWN ON PLANS ARE BASED ON A SPECIFIC HVAC EQUIPMENT MANUFACTURER. HVAC CONTRACTOR MAY SUBMIT OTHER MANUFACTURERS, DIFFERENT MODELS OR RATINGS. IT IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO COORDINATE OC/DISCONNECT DEVICES WITH THE HVAC CONTRACTOR PRIOR TO SUBMITTING SUCH DEVICES FOR ENGINEER'S REVIEW. ANY DEVIATIONS FROM SIZES SHOWN ON DRAWINGS MUST BE NOTED IN THE SUBMITTALS. THE ELECTRICAL CONTRACTOR MUST CERTIFY THAT HE HAS REVIEWED AND COORDINATED WITH THE HVAC CONTRACTOR AND THAT ALL OC/DISCONNECT DEVICES SUBMITTED MATCH THE HVAC EQPT REQUIREMENTS. SHOP DRAWINGS WITHOUT SUCH CERTIFICATION WILL BE RETURNED TO THE CONTRACTOR. ONLY SUBMITTALS WITH SUCH CERTIFICATION WILL BE REVIEWED.

COMPLETE SYSTEMS
ALL SYSTEMS SHALL BE COMPLETE AND WORKING AT COMPLETION OF CONSTRUCTION.

FINAL INSPECTION & OPERATING TESTS
ALL ELECTRICAL SYSTEMS MUST BE CHECKED FOR PROPER POLARITY AND SEQUENCE, ALL MOTORS MUST BE CHECKED FOR PROPER ROTATION AND ALL EQUIPMENT (INCLUDING HVAC, ELEVATOR AND SPECIAL EQUIPMENT) CHECKED FOR PROPER VOLTAGE AND PHASING REQUIREMENTS. PRIOR TO THE APPLICATION OF ANY POWER, THE CONTRACTOR MUST CERTIFY THAT ALL CONNECTED EQUIPMENT MATCH THE CHARACTERISTICS OF THE SUPPLY CIRCUIT VOLTAGE, PHASING AND FEEDER REQUIREMENTS.
AT THE TIME DESIGNATED BY THE ARCHITECT, THE ENTIRE SYSTEM SHALL BE INSPECTED BY THE ARCHITECT AND THE ENGINEER. THE CONTRACTOR OR HIS REPRESENTATIVE SHALL BE PRESENT AT THIS INSPECTION.
AFTER ALL SYSTEMS HAVE BEEN COMPLETED AND PUT INTO OPERATION, SUBJECT EACH SYSTEM TO AN OPERATING TEST UNDER DESIGN CONDITIONS TO ENSURE PROPER SEQUENCE AND OPERATION THROUGHOUT THE RANGE OF OPERATION. MAKE ADJUSTMENTS AS REQUIRED TO ENSURE PROPER FUNCTIONING OF ALL SYSTEMS. SPECIAL TESTS ON INDIVIDUAL SYSTEMS ARE SPECIFIED UNDER INDIVIDUAL SECTIONS.
THE CONTRACTOR SHALL PROVIDE A SET OF AS-BUILT DRAWINGS IN PDF FORMAT TO THE ARCHITECT. AFTER THE INSPECTION, ANY ITEMS WHICH ARE NOTED AS NEEDING TO BE CHANGED OR CORRECTED IN ORDER TO COMPLY WITH THESE SPECIFICATIONS AND THE DRAWINGS SHALL BE ACCOMPLISHED WITHOUT DELAY.

GUARANTEE
GUARANTEE ALL WORK AND MATERIALS FURNISHED UNDER THIS CONTRACT FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE BY THE TENANT AND ARCHITECT. GUARANTEE SHALL INCLUDE: ALL LABOR, PARTS, TRAVEL/SUBSISTENCE, SOFTWARE CHANGES / RE-PROGRAMMING, ETC.

SHORT CIRCUIT CALCULATION, PROTECTIVE DEVICE COORDINATION AND ARC FLASH STUDIES
PROVIDE SHORT CIRCUIT CALCULATION, PROTECTIVE DEVICE COORDINATION AND ARC FLASH HAZARD STUDIES. STUDIES SHALL ENCOMPASS ELECTRICAL DISTRIBUTION SYSTEM FROM NORMAL POWER SOURCE OR SOURCES TO AND INCLUDING {BRANCH BREAKERS IN EACH PANELBOARD}. PREPARE STUDY PRIOR TO ORDERING DISTRIBUTION EQUIPMENT TO VERIFY EQUIPMENT RATINGS REQUIRED. SUBMIT REPORT WITH EQUIPMENT SUBMITTALS FOR ENGINEER'S REVIEW. PERFORM STUDY WITH AID OF COMPUTER SOFTWARE PROGRAMS. REPORT SHALL INCLUDE: (A) CALCULATION METHODS AND ASSUMPTIONS, (B) ONE LINE DIAGRAM, (C) STATE CONCLUSIONS AND RECOMMENDATIONS. STUDIES AND REPORT SHALL BE PREPARED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE IN WHICH THE PROJECT IS PERMITTED.
CONTRACTOR SHALL PROVIDE WARNING LABELS ON ELECTRICAL EQUIPMENT INDICATING INCIDENT ENERGY LEVEL, LEVEL OF HAZARD AND THE REQUIRED PERSONAL PROTECTION EQUIPMENT. EQUIPMENT SHALL INCLUDE, BUT NOT LIMITED TO, SWITCHBOARDS, DISTRIBUTION PANELS, MOTOR CONTROL CENTERS, PANELS, CONTACTORS, DISCONNECT SWITCHES AND MOTOR STARTERS.

CONDUIT
CONDUIT: SHALL BE RIGID GALVANIZED STEEL (RGS) OR ELECTRICAL METALLIC TUBING (EMT) AS MANUFACTURED BY ALLIED, TRIANGLE OR WHEATLAND.
INDOORS ABOVE GRADE: EMT OR RGS.
OUTDOORS ABOVE GRADE, STUB-UPS, OR ON ROOF: RGS, IMC.
BELOW GRADE: SCHEDULE 40 OR 80 PVC OR RGS. PROVIDE TRANSITION FITTINGS FROM PVC SCH 40 OR 80 TO RGS FOR ALL ABOVE GRADE CONDUIT. ALL UNDERGROUND METALLIC CONDUIT SHALL HAVE 40-MIL THICK EXTERNAL PVC COATING FOR CORROSION PROTECTION. UNDERGROUND CONDUIT MINIMUM SIZE 3/4". MINIMUM 24" BURIAL DEPTH FROM FINISHED GRADE TO TOP OF CONDUIT, PROVIDE DEEPER BURIAL DEPTH IF REQUIRED BY LOCAL CODES. PROVIDE CONCRETE ENCASEMENT FOR ALL INCOMING SERVICE CONDUIT UNLESS SPECIFICALLY NOTED OTHERWISE. PROVIDE RED DETECTABLE WARNING TAPE OVER ENTIRE RUN OF SERVICE AND MAJOR CONDUIT RUNS.
UNDER SLAB: RGS, SCHEDULE 80 PVC.
INSTALL GROUND WIRES WHERE SHOWN ON THE DRAWINGS. COMPRESSION OR SET-SCREW TYPE FITTINGS MAY BE USED FOR EMT. MINIMUM CONDUIT SIZE 1/2 INCH, HOWEVER HOMERUN TO PANEL SHALL BE MINIMUM 3/4 INCH. TYPE "MC" METAL CLAD CABLE IS ACCEPTABLE ONLY IF APPROVED BY THE OWNER IN WRITING AND THE LOCAL AUTHORITY.
MC CABLE, IF APPROVED, HOWEVER, MAY BE USED ONLY FOR DROPS FROM CEILING PLENUM JUNCTION BOXES TO RECEPTACLES AND LIGHT SWITCHES IN WALLS. MC CABLE MAY ALSO BE USED AS FIXTURE WHIPS FROM CEILING PLENUM JUNCTION BOXES TO LIGHT FIXTURES, WHIPS MUST BE 6-FT OR LESS. HOMERUN CIRCUITS TO PANELS SHALL BE IN CONDUIT, MC HOMERUN TO PANELS ARE NOT ACCEPTABLE.

TYPE "AC" ARMORED CABLE (COMMONLY REFERRED TO AS "BX") IS NOT ACCEPTABLE AND SHALL NOT BE USED. ELECTRICAL NONMETALLIC TUBING (ENT, NEC ARTICLE 362) SHALL NOT BE USED UNLESS SPECIFICALLY APPROVED BY THE ENGINEER. FLEXIBLE CONDUIT SHALL BE UTILIZED AS FINAL CONNECTIONS (3'-5' ONLY) AT THE FOLLOWING EQUIPMENT: MOTORS, LIGHTING FIXTURES, HEATER, POWER SUPPLIES, AND ANY OTHER VIBRATION PRODUCING EQUIPMENT. UTILIZE 1/2" FLEXIBLE METALLIC CONDUIT MINIMUM AND INCLUDE A GREEN GROUND WIRE. USE SEALTITE IN WET LOCATIONS SUCH AS OUTDOOR CONDENSING UNITS, WALK-IN COOLER/FREEZER, KITCHEN, ROOFTOP HVAC EQPT, ETC. CONDUIT SHALL BE SUPPORTED FROM STRUCTURE EVERY 5 FEET AND WITHIN 3 FEET OF ALL BOXES. USE LOCKNUTS INSIDE AND OUT AT BOXES. MAINTAIN MINIMUM 12" SEPARATION FROM ALL HIGH TEMPERATURE PIPES. ALL CONDUIT RUNS SHALL BE INSTALLED EITHER PARALLEL OR PERPENDICULAR TO BUILDING LINES. ROUTE CONDUIT AS DIRECTLY AS POSSIBLE WITH LARGEST RADIUS BENDS POSSIBLE. MAKE BENDS WITH STANDARD ELLS OR BENDS PER NEC. PROVIDE EXPANSIONS FITTINGS IF CONDUIT CROSSES STRUCTURAL EXPANSION JOINT. ALL CONDUIT ON ROOF SHALL BE SUPPORTED BY AN ENGINEERED, PREFABRICATED PORTABLE PIPE SYSTEM SPECIFICALLY DESIGNED TO BE INSTALLED ABOVE FINISHED ROOF WITHOUT ROOF PENETRATIONS, FLASHINGS OR DAMAGE TO ROOF MEMBRANE. PROVIDE MANUFACTURED PIPE HANGER SYSTEMS SIMILAR TO PHP. PROVIDE SS8-C FOR CONDUIT UP TO 2 1/2", FOR CONDUIT 3 1/2" AND SMALLER PROVIDE PP10 WITH STRUT, FOR CONDUIT 4" AND LARGER PROVIDE PSE-CUSTOM OR PPH-D. SUPPORT AT INTERVAL NOT TO EXCEED 10' ON CENTER, AND WITHIN 5' OF ANY DEFLECTION OF CONDUIT. CLEAN CONDUIT INTERIOR AFTER INSTALLATION; COAT SCRATCHES WITH ZINC PAINT. PROVIDE PULL WIRE IN ALL CONDUIT (POWER, FIRE ALARM, TELEPHONE AND OTHER COMMUNICATION CONDUIT). PULL WIRE ALSO REQUIRED IN ALL SPARE CONDUIT.
PROJECT RECORD DOCUMENTS: ACCURATELY RECORD ACTUAL ROUTING OF ALL UNDERSLAB AND UNDERGROUND CONDUITS; INCLUDE DIMENSIONS FROM KEY BUILDING POINTS AND DEPTH OF COVER.

BOXES
OUTLET BOXES: SHALL BE GALVANIZED STEEL SUITABLE FOR LOCATION. CEILING OUTLET BOXES SHALL BE 4" OCTAGON. WALL OUTLET BOXES SHALL BE PROPER DESIGN TO ACCOMMODATE THE DEVICES REQUIRED - 4 INCH SQUARE WITH RAISED COVER. PROVIDE RACO, STEEL CITY OR APPLETON. ALL J-BOXES / SPLICE BOXES MUST BE ACCESSIBLE.

JUNCTION /PULL BOXES: (A) FOR EACH CONDUIT RUN: PROVIDE ONE JUNCTION/PULL BOX FOR EACH_EQUIVALENT THREE QUARTER BENDS (270°). (B) UNDERGROUND FEEDERS: MINIMUM ONE PULL BOX FOR EACH 350 FEET <500 FEET> OF CONDUIT RUN.

BUILDING WIRE AND CABLE
WIRE: (TRIANGLE, AMERICAN INSULATED CABLE CO., OR CABLEC)
ALL WIRING SHALL BE IN CONDUIT (EXCEPT PLENUM RATED LOW VOLTAGE CABLES). ALL WIRES MUST BE 75°C RATED OR BETTER, 60°C RATED WIRE SHALL NOT BE USED. 90°C RATED WIRE MAY BE USED BUT ONLY AT 75°C AMPACITY.

A.) MINIMUM SIZE #12 EXCEPT CONTROLS MAY BE #14. USE #10 CONDUCTORS FOR 20 AMPERE, 120 VOLT BRANCH CIRCUITS LONGER THAN 100 FEET. USE #10 CONDUCTORS FOR 20 AMPERE, 277 VOLT BRANCH CIRCUITS LONGER THAN 200 FEET.
B.) TYPE THHN/THWN STRANDED COPPER THERMOPLASTIC IN DRY LOCATIONS.
C.) TYPE THWN IN WET LOCATIONS (OUTDOOR, UNDERGROUND, ON ROOF, ...).
D.) ALL WIRE SHALL BE 98% CONDUCTIVITY COPPER, 600 VOLT. NO ALUMINUM WIRES.
E.) WIRE #10 AND SMALLER MAY BE SOLID OR STRANDED, #8 OR LARGER SHALL BE STRANDED.
F.) COMMUNICATION WIRES (FIRE ALARM, TELEPHONE, HVAC THERMOSTAT, DATA ETC.): PLENUM RATED LOW-SMOKE CABLE MAY BE USED IN LIEU OF WIRE/CONDUIT TYPE INSTALLATION. ALL PLENUM RATED CABLE SHALL BE PROPERLY SUPPORTED BY BRIDAL RINGS, CABLE TIES, CLIPS ETC MADE BY ERICO (CADDY COMMUNICATION FASTENERS) OR EQUAL. DO NOT USE SCRAP WIRE TO WRAP AND SUPPORT COMMUNICATION WIRES. HOMEMADE SUPPORT DEVICES ARE NOT ACCEPTABLE. DO NOT LAY COMMUNICATION CABLE DIRECTLY ON TOP OF CEILING TILES, INSTALL CABLES A MINIMUM OF 12" ABOVE CEILING TILES AND 12" FROM HVAC DUCTWORK. PROVIDE MINIMUM 6" SEPARATION BETWEEN POWER CONDUIT AND COMMUNICATION WIRINGS.

FIELD INSULATION TESTING
INSULATION RESISTANCE OF ALL CONDUCTORS SHALL BE TESTED. EACH CONDUCTOR SHALL HAVE ITS INSULATION RESISTANCE TESTED AFTER THE INSTALLATION IS COMPLETED AND ALL SPLICES, TAPS AND CONNECTIONS ARE MADE EXCEPT CONNECTION TO OR INTO ITS SOURCE AND POINT (OR POINTS) OF TERMINATION. INSULATION RESISTANCE OF CONDUCTORS WHICH ARE TO OPERATE AT 600 VOLTS OR LESS SHALL BE TESTED BY USING A BIDDLE MEGGER OF NOT LES THAN 1000 VOLTS DC. INSUALTION RESISTANCE OF CONDUCTORS RATED AT 600 VOLTS SHALL BE FREE OF SHORTS AND GROUNDS AND HAVE A MINIMUM RESISTANCE PHASE-TO-PHASE AND PHASE-TO-GROUND OF AT LEAST 10 MEGOHMS. CONDUCTORS THAT DO NOT EXCEED INSULATION RESISTANCE VALUES LISTED ABOVE SHALL BE REMOVED AT CONTRACTOR'S EXPENSE AND REPLACED AND TEST REPEATED. THE CONTRACTOR SHALL FURNISH ALL INSTRUMENTS AND PERSONNEL REQUIRED FOR TESTS, SHALL TABULATE READINGS OBSERVED, AND SHALL FORWARD COPIES OF THE TEST READINGS TO THE ARCHITECT. THESE TEST REPORTS SHALL IDENTIFY EACH CONDUCTOR TESTED, DATE AND TIME OF TEST AND WEATHER CONDITIONS. EACH TEST SHALL BE SIGNED BY THE PARTY MAKING THE TEST.

WIRING DEVICES
WIRING DEVICES: FURNISH AND INSTALL WHERE INDICATED ON DRAWINGS. ALL DEVICES SHALL BE LEVITON "DECORA" TYPE (CONFIRM W/ ARCHITECT) OR APPROVED EQUAL UNLESS SPECIFIED OTHERWISE BY ARCHITECT.
GROUND FAULT CIRCUIT INTERRUPTER (GFCI) RECEPTACLE SHALL COMPLY WITH 2006 UL 943 SAFETY STANDARD. GFCI RECEPTACLE SHALL HAVE INTEGRAL END-OF-LIFE LED INDICATOR LIGHT, AND CONTINUOUS SENSING AND SELF-TESTING EVERY 60 SECONDS. PROVIDE HUBBELL GFR5352 OR APPROVED EQUAL.
COVER PLATES: STAINLESS STEEL (CONFIRM W/ ARCHITECT).
PROVIDE CIRCUIT NUMBER LABEL ON ALL DEVICE PLATES.

ELECTRICAL IDENTIFICATION
IDENTIFICATION: LABEL ALL JUNCTION AND PULL BOXES WITH PANELS AND CIRCUIT NUMBERS. FURNISH MARKERS OR PAINT BAND FOR EACH CONDUIT LONGER THAN 6 FEET, SPACING 20 FEET ON CENTER. COLOR OF PAINT BAND (CONFIRM COLOR MATCHES EXISTING FACITITY COLOR CODE.): (A) 480 VOLT SYSTEM - BLACK, (B) 208 VOLT SYSTEM - BLACK W/BLUE STRIPES, (C) FIRE ALARM SYSTEM - RED, (D) TELEPHONE SYSTEM - YELLOW, (E) OTHER SYSTEM - BY SPECIFIC LETTER DESCRIPTION. LABEL ALL HOMERUN AND MAJOR CONDUIT WITH HOME PANELS/SWITCHES, ETC. AT EVERY 10-FT. INTERVAL IF ACCESSIBLE AND/OR VISIBLE, EXAMPLE: PANEL "X", SW. "X", COND UNIT XXX, XFMR DISC. SW., FEEDER XXX, ETC. MARK ALL BRANCH CONDUIT WITH CIRCUIT NUMBERS AT EACH SURFACE MOUNTED PANEL LOCATION. FOR RECESSED PANELS, MARK BRANCH CONDUIT IN CEILING PLENUM JUST ABOVE PANELS. COLOR CODE: CONDUCTORS SHALL BE COLOR CODED AS FOLLOWS.

	480Y/277V 3 Ph, 4W	208Y/120V 3 Ph, 4W	240/120V 3 Ph, 4W	120/240V 1 Ph, 3W
Phase A	Brown	Black	Black	Black
Phase B	Purple	Red	Orange (High Leg)	Red
Phase C	Yellow	Blue	Blue	--
Neutral	Gray or White	White	White	White
Ground	Green	Green	Green	Green

COMMONWEALTH OF VIRGINIA
05/15/2026
THOMAS S. WARD IV
Lic. No. 058606
PROFESSIONAL ENGINEER

Salas O'Brien
119 Norfolk Avenue Southwest, Suite 310
Roanoke, VA 24011
Salas O'Brien Project Number: 2650-00782-00

NO.	REVISIONS	BY	APP.	DATE

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DELTA AIRPORT CONSULTANTS, INC.

REHABILITATE RUNWAY 6-24
ELECTRICAL SPECIFICATIONS
ROANOKE-BLACKSBURG REGIONAL AIRPORT

AIP NO. 3-51-0045-074-2025
JOB NO. 19013
DRAWN BY: JM
DESIGNED BY: TVO
SCALE: NONE
DATE: MAY 2026

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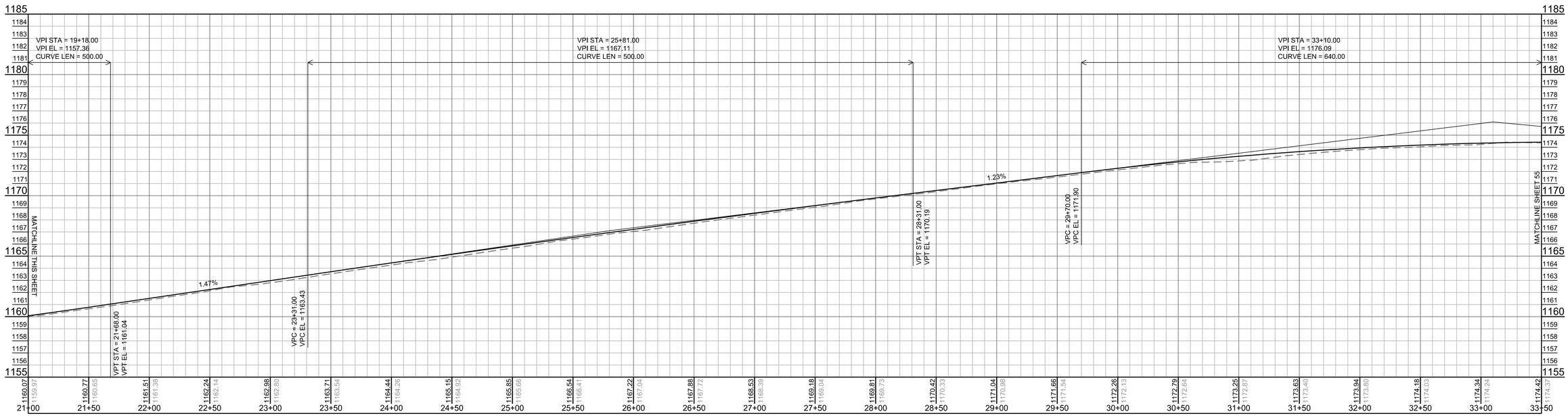

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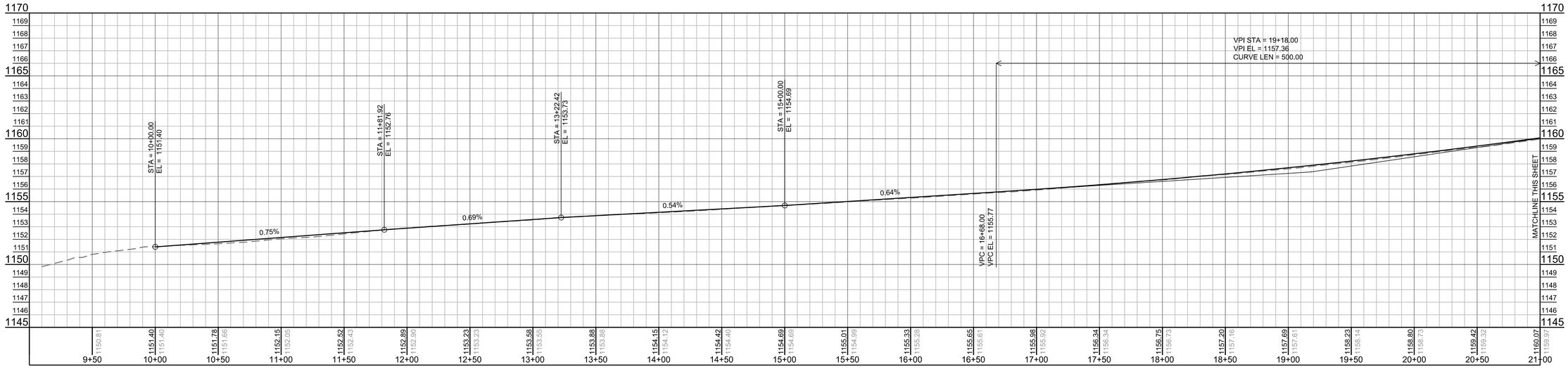

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COMMONWEALTH OF VIRGINIA
WILLIAM M. ESCHENFELDER
Lic. No. 045144
PROFESSIONAL ENGINEER
Digitally signed by William M. Eschenfelder
Date: 2026.05.19 07:19-04'00'

REHABILITATE RUNWAY 6-24	AIP NO. 3-51-0045-074-2025		JOB NO. 24072
CENTERLINE PROFILES ALTERNATE 1 ONLY	DRAWN BY: RAS		SHEET 54 OF 58
	DESIGNED BY: WME/SRS		
ROANOKE-BLACKSBURG REGIONAL AIRPORT	SCALE: HORIZ: 1" = 40' VERT: 1" = 4'	DATE: MAY 2026	

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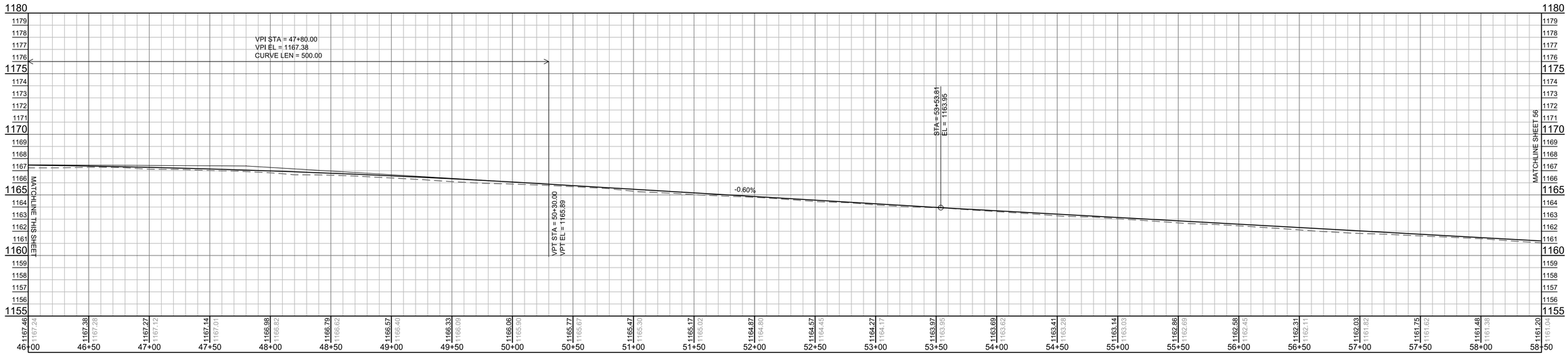

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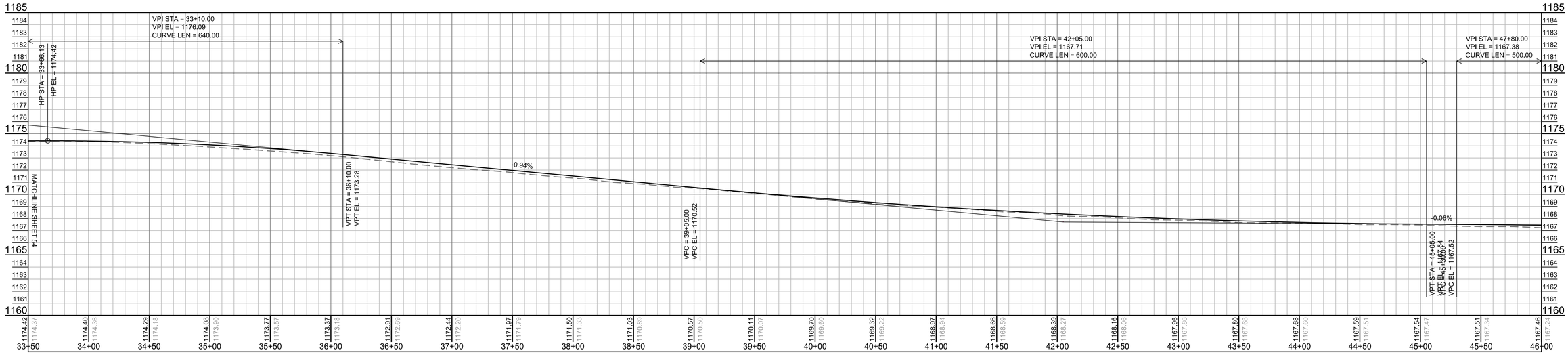

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REHABILITATE RUNWAY 6-24	AIP NO. 3-51-0045-074-2025		JOB NO. 24072
CENTERLINE PROFILES ALTERNATE 1 ONLY	DRAWN BY: RAS		SHEET 55 OF 58
	DESIGNED BY: WME/SRS		
ROANOKE-BLACKSBURG REGIONAL AIRPORT	SCALE: HORIZ: 1" = 40' VERT: 1" = 4'	DATE: MAY 2026	

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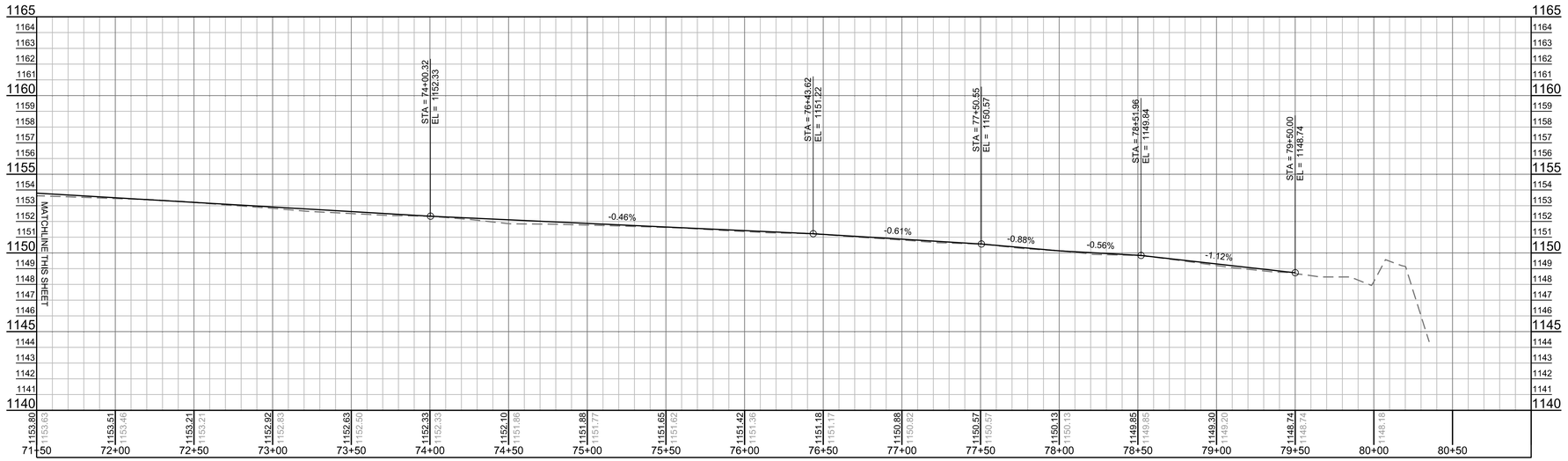

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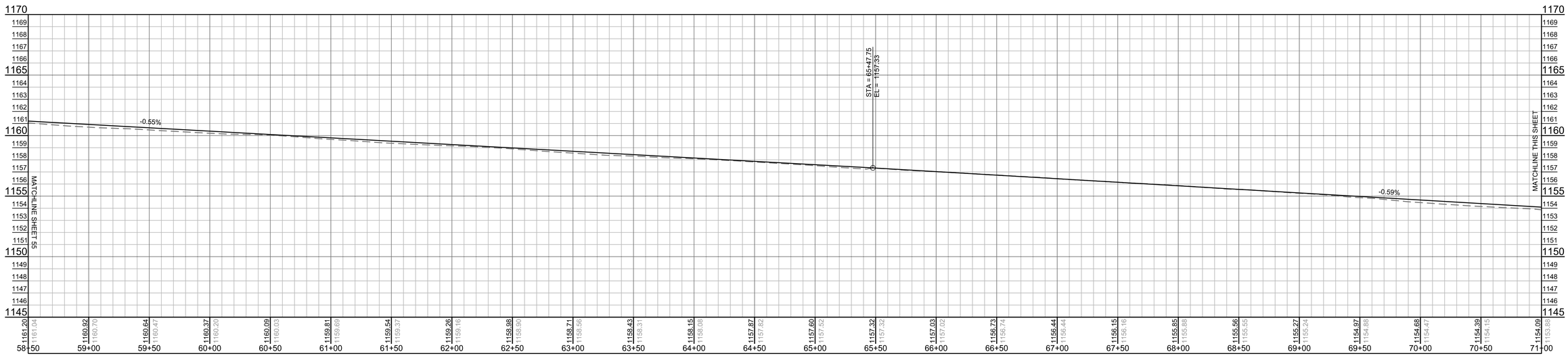

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REHABILITATE RUNWAY 6-24	AIP NO. 3-51-0045-074-2025		JOB NO. 24072
CENTERLINE PROFILES ALTERNATE 1 ONLY	DRAWN BY: RAS		SHEET 56 OF 58
	DESIGNED BY: WME/SRS		
ROANOKE-BLACKSBURG REGIONAL AIRPORT	SCALE: HORIZ: 1" = 40' VERT: 1" = X'	DATE: MAY 2026	

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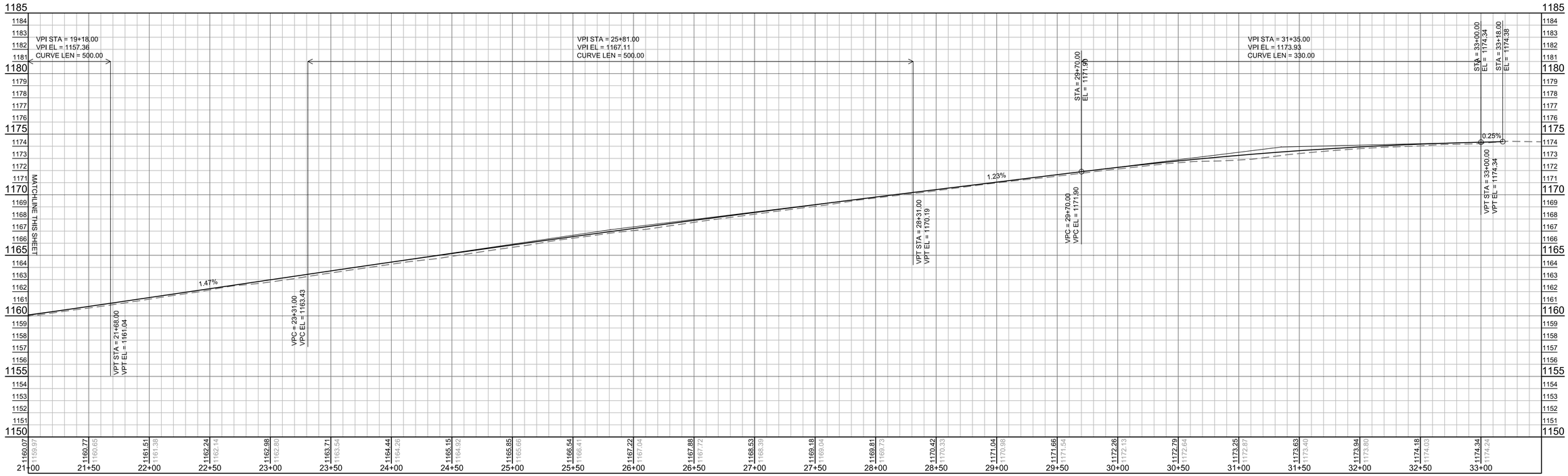

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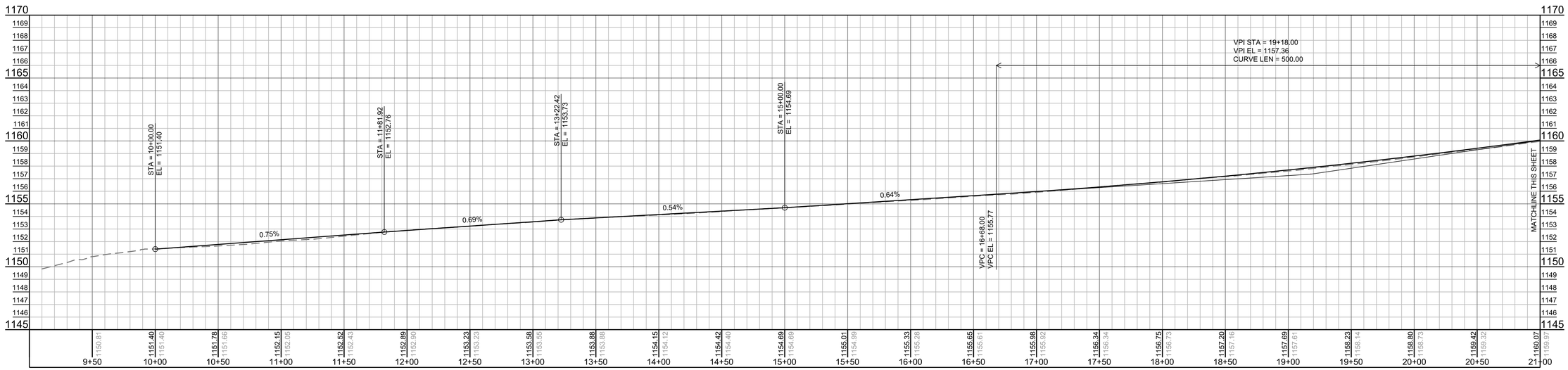

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PROFESSIONAL ENGINEER
Digitally signed by William M. Eschenfelder
Date: 2026.05.19 07:21-04'00'

REHABILITATE RUNWAY 6-24	AIP NO. 3-51-0045-074-2025		JOB NO. 24072
CENTERLINE PROFILES ALTERNATE 2 ONLY	DRAWN BY: RAS		SHEET 57 OF 58
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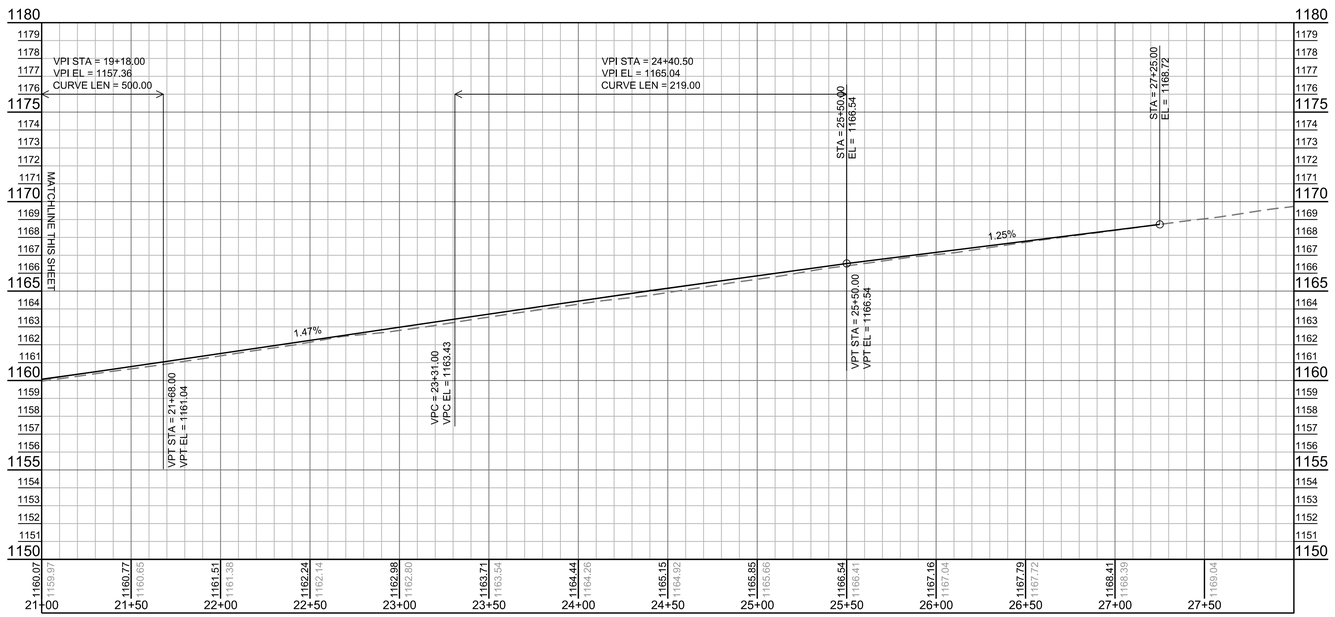
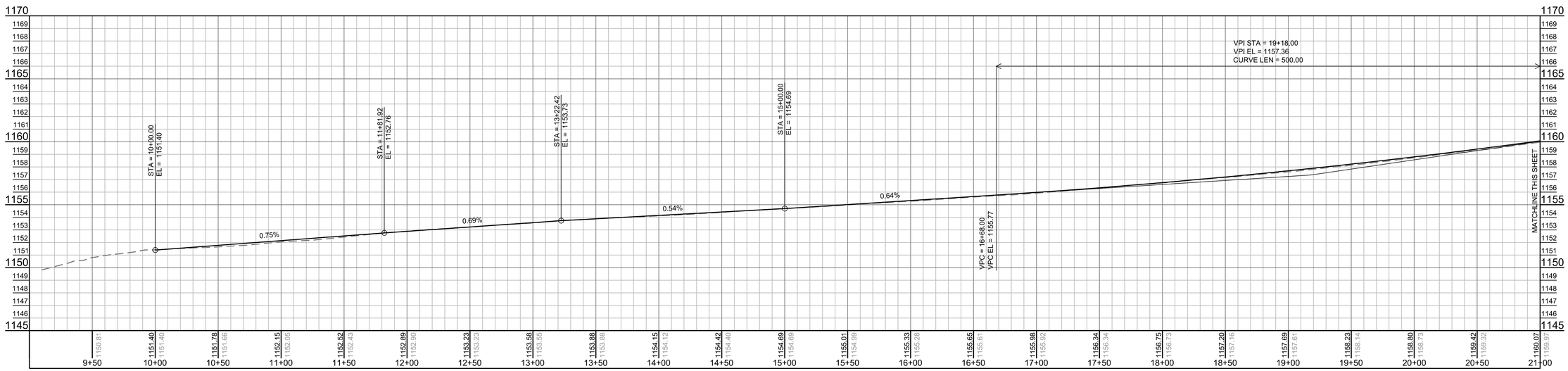


BASELINE "RW 6-24"



BASELINE "RW 6-24"

NO.	REVISIONS	BY	APP.	DATE

DRAWING: 24072CLP.dwg LAYOUT: L5
XREFS: 24072-profiles.dwg IMAGES:

C:\Users\rjatha\DC\ACCDocs\DAC\24072\Project Files\24072CLP.dwg, L5, 5/19/2026 4:55:25 PM, rjatha

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PROFESSIONAL ENGINEER
Digitally signed by William M. Eschenfelder
Date: 2026.05.19 07:21-04'00'

REHABILITATE RUNWAY 6-24	AIP NO. 3-51-0045-074-2025		JOB NO. 24072	
CENTERLINE PROFILES ALTERNATE 3 ONLY	DRAWN BY: RAS		SHEET 58	
	DESIGNED BY: WME/SRS		OF 58	
ROANOKE-BLACKSBURG REGIONAL AIRPORT	SCALE: HORIZ: 1" = 40' VERT: 1" = X'	DATE: MAY 2026		