

U.S. DEPARTMENT OF TRANSPORTATION
 FEDERAL AVIATION ADMINISTRATION
 NORTHWEST MOUNTAIN REGION
 AIRPORT IMPROVEMENT PROGRAM

MODIFICATION OF AIRPORT DESIGN STANDARDS

BACKGROUND		
1. AIRPORT:	2. LOCATION(CITY,STATE):	3. LOC ID:
4. EFFECTED RUNWAY/TAXIWAY:	5. APPROACH (EACH RUNWAY): <input type="checkbox"/> PIR <input type="checkbox"/> NPI <input type="checkbox"/> VISUAL	6. AIRPORT REF. CODE (ARC):
7. DESIGN AIRCRAFT (EACH RUNWAY/TAXIWAY):		
MODIFICATION OF STANDARDS		
8. TITLE OF STANDARD BEING MODIFIED (CITE REFERENCE DOCUMENT): Advisory Circular 150/5370-10G, Standards for Specifying Construction of Airports, Item L-108 Underground Power Cable for Airports, Section 108-2.4 Cable Connections.		
9. STANDARD/REQUIREMENT: AC 150/5370-10G, Item L-108, Section 108-2.4 Cable Connections:		
10. PROPOSED: Add subparagraph e. to the above with the following: “e. The Heat-Shrinkable Sleeve. Each lighting cable connector shall be furnished with a flexible polyolefin heat-shrinkable sleeve with factory-applied sealant coating the entire length of the tube. Heat-shrink kit shall be designed for L-823 connectors. Both primary leads at each isolation transformer location shall use one complete heat-shrink sleeve, covering the entire cable connector, without cutting or modifying the factory supplied length. Crouse-Hinds HSK, ADB, Raychem APL or equal.”		
11. EXPLAIN WHY STANDARD CANNOT BE MET (FAA ORDER 5300.1E): This modification to standard is requested to prevent water intrusion into primary airfield lighting connectors due to high ground water within the airfield environment at Port of Portland Airports. There is a greater occurrence of water intrusion into connectors when installers use a half- length sleeve or a sleeve with sealant only on the ends to prevent water intrusion into primary airfield lighting connectors. While manufacturers have both half and a full length sleeve available for procurement, the Port has found that the use of full length sleeves with full length factory applied sealant is best method to prevent water intrusion into L-823 connectors.		
12. DISCUSS VIABLE ALTERNATIVES (FAA ORDER 5300.1E): This modification to standard is requested to require the use of full length heat shrinkable sleeves with a full length factory applied sealant on primary connectors. Use of half sleeve/ half sealant would be cost prohibitive to the Port for complete repair or replacement of cable connectors and down time of airfield lighting circuits due to water intrusion.		

Appendix 2

13. STATE WHY MODIFICATION WOULD PROVIDE ACCEPTABLE LEVEL OF SAFETY, ECONOMY, DURABILITY, AND WORKMANSHIP (FAA ORDER 5300.1E):

Full length heat shrinkable sleeves with full length sealant installed on L-823 connectors have historically been proven to be well suited to withstand water intrusion. This modification to standard will clarify to installers that full length heat shrinkable sleeves with factory applied sealant shall be installed on all primary circuit L-823 connectors as recommended by airfield lighting manufacturers. Full length heat shrinkable sleeves will conform to quality standards and durability to provide greater level of protection for airfield lighting conductors immersed in water at Port of Portland Airports.

ATTACH ADDITIONAL SHEETS AS NECESSARY – INCLUDE SKETCH/PLAN

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MODIFICATION:		LOCATION:		PAGE 2 OF 2	
14. SIGNATURE OF ORIGINATOR:		15. ORIGINATOR'S ORGANIZATION:		16. TELEPHONE:	
17. DATE OF LATEST FAA SIGNED ALP:					
18. ADO RECOMMENDATION:		19. SIGNATURE:		20. DATE:	
21. FAA DIVISIONAL REVIEW (AT, AF, FS):					
ROUTING SYMBOL	SIGNATURE	DATE	CONCUR	NON-CONCUR	
COMMENTS:					
22. AIRPORTS' DIVISION FINAL ACTION:					
<input type="checkbox"/> UNCONDITIONAL APPROVAL		<input type="checkbox"/> CONDITIONAL APPROVAL		<input type="checkbox"/> DISAPPROVAL	

Appendix 2

DATE:	SIGNATURE:	TITLE:
CONDITIONS OF APPROVAL:		

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ITEMS 1-17 ARE TO BE COMPLETED BY THE AIRPORT SPONSOR(ORIGINATOR). ALL OTHER ITEMS WILL BE COMPLETED BY THE FAA.

THE COMPLETED FORM WILL BE TRANSMITTED BY THE ORIGINATOR TO THE APPLICABLE ADO/AFO. THE ADO/AFO WILL TRANSMIT THE FINAL FAA DETERMINATION TO THE ORIGINATOR.

MODIFICATION TO AIRPORT DESIGN STANDARDS REQUESTS SHOULD INCLUDE SKETCHES OR DRAWINGS WHICH CLEARLY ILLUSTRATE THE NONSTANDARD CONDITION.

ITEMS

1. LEGAL NAME OF AIRPORT.
2. ASSOCIATED CITY.
3. AIRPORT LOCATION IDENTIFIER (SEE APPROACH PLATES/AIRPORT FACILITY DIRECTORY).
4. IDENTIFY THE RUNWAY(S), TAXIWAY(S) OR OTHER FACILITIES EFFECTED BY THE PROPOSED MODIFICATION TO STANDARDS REQUEST.
5. IDENTIFY THE MOST CRITICAL APPROACH FOR EACH RUNWAY IDENTIFIED IN #4.
6. AIRPORT REFERENCE CODE - SEE PARAGRAPH 2, PAGE 1 AC 150/5300-13(CHANGE 4) - I.E. C-II, B-II, A-I (SMALL).
7. NOTE THE DESIGN AIRCRAFT (ARC OR SPECIFIC AIRCRAFT) FOR EACH FACILITY IDENTIFIED IN #4. A DESIGN AIRCRAFT MUST MAKE REGULAR USE OF THE FACILITY. NORMALLY, FAA CONSIDERS REGULAR USE TO BE 500 OR MORE ANNUAL INTINERANT OPERATIONS.

IF THE AIRPORT SERVES A WHOLE FAMILY OF AIRCRAFT IN A PARTICULAR GROUP, THE ARC (I.E. B-II) SHOULD BE SPECIFIED. IF, HOWEVER, THE AIRPORT IS USED BY ONLY 1 OR 2 OF A FAMILY OF AIRCRAFT (IX- BEECH KING AIR C90), THE MOST DEMANDING (APPROACH SPEED, WINGSPAN) AIRCRAFT SHOULD BE SPECIFIED.
8. IDENTIFY THE SPECIFIC NAME OF THE STANDARD THAT IS PROPOSED TO BE MODIFIED FOR THE SUBJECT LOCAL CONDITION.
9. DESCRIBE (WORDS AND NUMBERS) THE DIMENSIONS AND REQUIREMENTS OF THE STANDARD AS PROVIDED IN AC 150/5300-13.
10. STATE THE PROPOSED MODIFICATION TO THE STANDARD.
11. DISCUSS THE LOCAL CONDITIONS THAT MAKE IT IMPRACTICAL OR IMPOSSIBLE TO MEET THE STANDARD.
12. IDENTIFY ALTERNATIVES TO THE SUBJECT PROPOSED MODIFICATION, AND SHOW WHY THESE ALTERNATIVES ARE NOT VIABLE.

Appendix 2

13. DISCUSS HOW THE PROPOSED MODIFICATION WOULD IMPACT AIRPORT SAFETY AND EXPLAIN WHY AN ACCEPTABLE LEVEL OF SAFETY, ECONOMY, DURABILITY, AND WORKMANSHIP WOULD STILL EXIST.

14. TYPED NAME AND SIGNATURE OF AIRPORT AUTHORITY REPRESENTATIVE.

15. SELF-EXPLANATORY.

16. SELF-EXPLANATORY.

17. SELF-EXPLANATORY.

18. TO BE COMPLETED BY FAA