APPENDIX H
EXISTING WAIVER CORRESPONDENCE

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INDEX OF TERPS WAIVERS - CENTRAL REGION

LOCATION	TYPE SIAP	WAIVER (TERPS Para.)	APPROVED
Beatrice, NE (BIE)	VOR Rwy 13	413c	03/08/73
Cabool, MO (TVB)	VOR/DME 21	513b	09/11/79
Chadron, NE (CDR)	VOR Rwy 20	400/500	08/04/83
Clinton, IA (CWI)	ILS Rwy 3	332/935	01/18/85
Kearney, NE (EAR)	VOR Rwy 18	413c	12/03/70
Omaha, NE (OMA)	ILS 14R (CAT II)		07/26/78
St. Joseph, MO (STJ)	VOR Rwy 17	513b	12/15/71
St. Louis, MO (STL)	RNAV 06	342c(1)	08/18/83
St. Louis, MO (STL)	SIAPS Rwy 12R	332a	11/25/83
St. Louis, MO (STL)	LDA 12L	513, 992	08/30/84
St. Louis, MO (STL)	ILS Rwy 24	332, 935	04/13/87
St. Louis, MO (STL)	LDA 30L	513, 992	09/22/87
St. Louis, MO (STL)	Rwy 13/31	DENIED - 06/26/90	
Salina, KS (SLN)	ILS 35	342c, 938(b)(1)	09/24/82
Salina, KS (SLN)	NDB 35	342c	09/24/82
Sioux City, IA (SUX)	ILS 13	910d	10/28/82
Wichita, KS (ICT)	ILS 01L (CAT II)		10/23/81
Wichita, KS (ICT)	ILS 01L	287(b)(1)	
V-12	AIRWAY	MEA/MOCA	03/21/69
V-502	AIRWAY	MEA/MOCA	03/21/69
MCI MVA	RADAR MVA		09/21/78

INDEX TO INSTALLATION (AF) WAIVERS

FACILITY	STANDARD	APPROVED
MKC ILS Rwy 03	Localizer Antenna Critical Area	03/20/90
STL BKY G/S Rwy 30L	Critical Area	03/20/90
BRL MALSR Rwy 36	A/G Control	03/17/83
OTM MALSR Rwy 31	A/G Control	03/17/83
MKC VASI Rwy 36	6850.2	03/19/81
WLD MM Rwy 35	6750.16	03/15/77
TOP ALSF-1 Rwy 13	A/G Control	06/08/79
TUL ESV	ESV	
VASI (Several)	VASI/REIL	
STL MALSR Rwy 24	6850.2A	03/16/82
LBL GS Antenna	6750.16A	08/28/80

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APDO

Runway 12L-30R / Runway 12R-30L Separation Standards for Simultaneous Instrument Approaches LDA/DME

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File

FEB 21 1991

ACTION: Waiver 88-02-120, Simultaneous ILS/LDA/DME APPROACHES TO ST. Louis-Lambert,
Ref: Order 7110.65, para 5-126a and 7210.3, para 1235a

Manager, Air Traffic Division, ACE-500

Manager, St. Louis-Lambert ATCT

We are forwarding the recently issued waiver that authorizes operations for St. Louis ATCT to conduct simultaneous Instrument Landing System, Localizer Type Directional Aid, Distance Measuring Equipment (ILS/LDA/DME) approaches to parallel runways 12L/R and 30L/R with special reduced weather minimums.

Coordination must be completed with the user's organizations before the reduced ceiling minimums can be implemented. Meanwhile, continue to operate with the current weather ceiling minimums of 1500 feet Above Ground Level (AGL) until you have received approval from ACE-530 to start the demonstration with reduce weather requirements.

Please note that the new waiver carries an expiration date of January 5, 1993. Action to renew the waiver should be initiated and forwarded to ACE-530 by September 7, 1992.

Any questions may be directed to Bob Raymond, ACE-530e, FTS 867-3408 or commercial (816) 426-3408.

Clarence E. Newbern

Attachment

cc: ACE-220
ACE-542

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Waiver: 88-02-120
Date: 01/06/91

FEDERAL AVIATION ADMINISTRATION
AIR TRAFFIC DIRECTIVES
WAIVER/AUTHORIZATION

ISSUED TO:

Manager, Air Traffic Division, ACE-500, for St. Louis/Lambert Field (STL) ATCT.

AFFECTED DIRECTIVES:

Order 7210.3I, Paragraph 1235a, Simultaneous ILS/MLS Approaches.

Order 7110.65, Paragraph 5-126a, Simultaneous ILS/MLS Approaches.

OPERATIONS AUTHORIZED:

The requirement for parallel runways to be at least 4,300 feet apart is waived for STL ATCT. STL ATCT is authorized to conduct simultaneous ILS/LDA/DME approaches to parallel runways 12L/R and 30L/R at STL ATCT.

SPECIAL PROVISIONS, CONDITIONS, LIMITATIONS:

Operations conducted under this waiver are subject to the following:

1. Weather minimums:

a. Runway 12L/R: Ceiling 1,200 feet or higher and visibility 4 miles or greater.

b. Runway 30L/R: Ceiling 1,200 feet or higher and visibility 5 miles or greater.

2. Heavy aircraft are confined to runways 12R and 30R when simultaneous ILS/LDA/DME approaches are in progress.

3. Aircraft shall be informed of the instrument runway number to which they are being vectored and of the localizer frequency while on the initial vector.

4. If visual separation prescribed by Order 7110.65, paragraph 7-10, is not established by the LDA/DME runways 12L/30L missed approach point, the aircraft conducting the LDA/DME approach shall be instructed to conduct a missed approach.

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This waiver/authorization is effective from January 6, 1991, and is valid for 2 years. Request for renewal of this waiver should be made at least 120 days prior to its expiration date of January 5, 1993.

L. Lane Speck
Director, Air Traffic
Rules and Procedures Service, ATP-1

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Department of Transportation
Federal Aviation Administration

FLIGHT PROCEDURES STANDARDS WAIVER

Reports Identification Symbol RTS 8220-1

Date: October 8, 1990

Procedure Identification

LDA/DME Rwy 12L
Lambert-St. Louis International, St. Louis, MO

Waiver Required And Applicable Standard

LDA alignment does not meet criteria.
Paragraph 513, 8260.3B (TERPS)

Reason For Waiver *(Justification for nonstandard treatment)*

The final approach course is parallel to and not aligned with the runway of intended landing. The final approach course and the runway are separated by 3,236.85 feet, centerline to centerline. The missed approach point is located at FREAS 3 DME fix on the localizer course from which visual flight to the runway is conducted or a missed approach is initiated.

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Equivalent Level of Safety Provided

This approach will only be authorized when the ceiling is 1,200 feet or better and the visibility is 4 miles or better. The LDA-DME missed approach point is 2.62 NM (3.01 SM) from the runway threshold and the track from the missed approach point to the threshold is at 12° angle converging with the runway centerline. This configuration was determined by AFO-560 (AVR 210) during extensive evaluation in 1980 (see Evaluation of St. Louis LDA/DME Rwy 12L approach; Memorandum Report FAA-AFO-500-18; July 1980). Rwy 12L has Runway End Identifier Lights (REIL), VASI, runway centerline lighting, and Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights (MALSR). Configuration has been used for nearly 10 years without major incident. Pilot group acceptance has been good. This waiver changes only the operational ceiling from 1,500 to 1,200 feet.

How Relocation Or Additional Facilities Will Affect Waiver Requirement

This waiver is required by runway configuration. A lead in light system has been evaluated and funded for installation (FY-91 Budget). Installation of such a system could lower the visibility minimums.

Coordination With User Organizations *(Specify)*

AA, ALPA, APA, AOPA, and NBAA will be contacted by STL ATCT.

7. SUBMITTED BY

Office Identification	Title	Signature
ACE-220	Manager, Flight Procedures Branch	Robert L. Ravenscamp

Department of Transportation
Federal Aviation Administration

FLIGHT PROCEDURES STANDARDS WAIVER

Reports Identification Symbol FS 8220-7

Date: October 8, 1990

Procedure Identification

LDA/DME Rwy 12L
Lambert-St. Louis International, St. Louis, MO

Waiver Required And Applicable Standard

Simultaneous approaches with parallel localizer courses serving parallel runways with less than 4,300 feet of separation between runway centerlines. Chapter 9, Section 9, FAAH 8260.3B (TERPS), Paragraph 992.

Reason For Waiver (Justification for nonstandard treatment)

To allow simultaneous approaches to Rwys 12R and 12L which are separated by a distance of 1,300 ft. This procedure will improve arrival and departure acceptance rate for the airport thereby avoiding delays in the St. Louis area and throughout the system.

The existing ILS system for Rwy 12R and LDA/DME on 12L will be used. The LDA antenna siting provides a parallel final approach course to the established ILS Rwy 12R and the courses are separated 4,541.6 feet, centerline to centerline.

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Equivalent Level of Safety Provided

Simultaneous approaches will only be authorized with ceiling and visibility of 1,200 feet and 4 SM or greater. The actual minimums for the LDA/DME approach are 700 feet and 4 SM. The LDA/DME for Rwy 12L terminates at FREAS 3 DME Fix; this point is 2.62 NM (3.01 SM) from the runway threshold and the track from the missed approach point to the threshold is at a 12° angle converging to the runway centerline. Radar monitoring in accordance with the simultaneous approach criteria in FAAH 7110.65 and 7210.3 will be provided throughout both approaches by dual radar monitor positions. The missed approach track diverges from the Rwy 12R missed approach by more than 45°. Rwy 12L has Runway End Identifier Lights (REIL), VASI, runway centerline lighting, and Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights (MALSR). Users have had nearly 10 years experience using this approach without major incident. Pilot group acceptance has been good. This waiver changes only the operational ceiling from 1,500 to 1,200 feet.

How Relocation Or Additional Facilities Will Affect Waiver Requirement

This waiver is required by runway configuration. A lead-in light system has been evaluated and funded for installation (FY-91 budget). Installation of such a system could lower visibility minimums.

Coordination With User Organizations (Specify)

ATA, ALPA, APA, AOPA, and NBAA will be contacted by STL ATCT.

7. SUBMITTED BY

Office Identification	Title	Signature
ACE-220	Manager, Flight Procedures Branch	Robert L. Ravencamp

Department of Transportation
Federal Aviation Administration

FLIGHT PROCEDURES STANDARDS WAIVER

Reports Identification Symbol FS 8220-1

Date: May 26, 1988

Flight Procedure Identification

LDA/DME Rwy 12L
Lambert-St. Louis International, St. Louis, MO

Waiver Required And Applicable Standard

Simultaneous approaches with parallel localizer courses serving parallel runways with less than 4,300 feet of separation between runway centerlines. Chapter 9, Section 9, FAAH 8260.3B (TERPS), Paragraph 992.

Reason For Waiver *(Justification for nonstandard treatment)*

To allow simultaneous approaches to Rwys 12R and 12L which have a centerline separation distance of 1,300 ft. This procedure will improve arrival and departure acceptance rate for the airport thereby avoiding delays in the St. Louis area and throughout the system.

The existing ILS system for Rwy 12R will be used. An LDA/DME system will serve Rwy 12L. The LDA antenna siting provides a parallel final approach course to the established ILS Rwy 12R and the courses are separated 4,541.6 feet, centerline to centerline.

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Equivalent Level of Safety Provided

Simultaneous approaches will only be authorized with ceiling and visibility of 1,500 feet and 4 SM or greater. The actual minimums for the LDA/DME approach are 700 feet and 4 SM. The LDA/DME for Rwy 12L terminates at FREAS 3 DME Fix; this point is 2.62 NM (3.01 SM) from the runway threshold and the track from the missed approach point to the threshold is at a 12° angle converging to the runway centerline. Radar monitoring in accordance with the simultaneous approach criteria in FAAH 7110.65 and 7210.3 will be provided throughout both approaches by dual radar monitor positions. The missed approach track diverges from the Rwy 12R missed approach by more than 45°. Rwy 12L has Runway End Identifier Lights (REIL), VASI, runway centerline lighting, and Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights (MALSR).

How Relocation Or Additional Facilities Will Affect Waiver Requirement

This waiver is required by runway configuration. A lead-in or ODALS lighting system has been evaluated (see Evaluation of Lead-In Light Configurations for St. Louis LDA/DME Rwy 12L approach; Memorandum Report FAA-AFO-500-22; March 1981). Installation of such a system could lower visibility minimums.

Coordination With User Organizations *(Specify)*

ATA, ALPA, APA, AOPA, and NBAA will be contacted by STL ATCT.

7. SUBMITTED BY

Office Identification	Title	Signature
ACE-220	Manager, Flight Procedures Branch	Robert L. Ravencamp

Department of Transportation
Federal Aviation Administration

FLIGHT PROCEDURES STANDARDS WAIVER

Reports Identification Symbol FS 8220-7

Date: May 26, 1988

Procedure Identification

LDA/DME Rwy 12L
Lambert-St. Louis International, St. Louis, MO

Waiver Required And Applicable Standard

LDA alignment does not meet criteria.
Paragraph 513, 8260.3B (TERPS)

3. Reason For Waiver *(Justification for nonstandard treatment)*

The final approach course is parallel to and not aligned with the runway of intended landing. The final approach course and the runway are separated by 3,236.85 feet, centerline to centerline. The missed approach point is located at FREAS 3 DME fix on the localizer course from which visual flight to the runway is conducted or a missed approach is initiated.

4. Equivalent Level of Safety Provided

This approach will only be authorized when the ceiling is 1,500 feet or better and the visibility is 4 miles or better. The LDA/DME missed approach point is 2.62 NM (3.01 SM) from the runway threshold and the track from the missed approach point to the threshold is at 12° angle converging with the runway centerline. This configuration was determined by AFO-560 (AVN-210) during extensive evaluation in 1980 (see Evaluation of St. Louis LDA/DME Rwy 12L approach; Memorandum Report FAA-AFO-500-18; July 1980). Rwy 12L has Runway End Identifier Lights (REIL), VASI, runway centerline lighting, and Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights (MALSR).

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5. How Relocation Or Additional Facilities Will Affect Waiver Requirement

This waiver is required by runway configuration. A lead-in or ODALS type lighting system has been evaluated (see Evaluation of Lead-in Light Configurations for St. Louis LDA/DME Rwy 12L approach; Memorandum Report FAA-AFO-500-22; March 1981). Installation of such a system could lower the visibility minimums.

Coordination With User Organizations *(Specify)*

ATA, ALPA, APA, AOPA, and NBAA will be contacted by STL ATCT.

7. SUBMITTED BY

Office Identification	Title	Signature
[illegible]	[illegible] Flight Procedures Branch	Robert L. Ravencamp

TO: (Name, office symbol, room number, building, Agency/Post)	Initials	Date
1. SUBJECT: Waiver-LDA/DME RWY 12L Lambert-St. Louis International, St. Louis, MO		ACE-220
2.		
3.		
4.		
5.		

Action	File	Note and Return
Approval	For Clearance	Per Conversation
As Requested	For Correction	Prepare Reply
Circulate	For Your Information	See Me
Comment	Investigate	Signature
Coordination	Justify	

REMARKS

The attached waivers for Lambert-St. Louis International are forwarded for your files.

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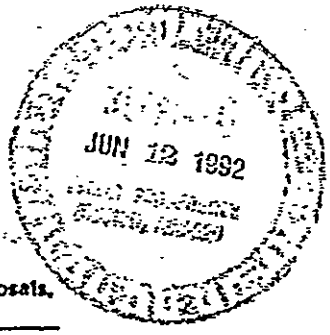

DO NOT use this form as a RECORD of approvals, concurrences, disposals, clearances, and similar actions

FROM: (Name, org. symbol, Agency/Post)	Room No.—Bldg.
Paul J. Best, Manager Flight Procedures Standards Branch	AFS-420 Phone No. 202-267-8277

5041-102

OPTIONAL FORM 41 (Rev. 7-76)
Prescribed by GSA
FPMR (41 CFR) 101-11.206

* U.S. GPO: 1988 — 241-174

US Department of Transportation
Federal Aviation Administration

FLIGHT PROCEDURES STANDARDS WAIVER

Date: October 8, 1990

1. Procedure Identification

LDA/DME Rwy 12L
Lambert-St. Louis International, St. Louis, MO

2. Waiver Required And Applicable Standard

LDA alignment does not meet criteria.
Paragraph 513, 8260.3B (TERPS)

3. Reason For Waiver *(Justification for nonstandard treatment)*

The final approach course is parallel to and not aligned with the runway of intended landing. The final approach course and the runway are separated by 3,236.85 feet, centerline to centerline. The missed approach point is located at FREAS 3 DME fix on the localizer course from which visual flight to the runway is conducted or a missed approach is initiated.

4. Equivalent Level of Safety Provided

This approach will only be authorized when the ceiling is 1,200 feet or better and the visibility is 4 miles or better. The LDA/DME missed approach point is 2.62 NM (3.01 SM) from the runway threshold and the track from the missed approach point to the threshold is at 12° angle converging with the runway centerline. This configuration was determined by AFO-560 (AVN-210) during extensive evaluation in 1980 (see Evaluation of St. Louis LDA/DME Rwy 12L approach; Memorandum Report FAA-AFO-500-18; July 1980). Rwy 12L has Runway End Identifier Lights (REIL), VASI, runway centerline lighting, and Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights (MALSR). Configuration has been used for nearly 10 years without major incident. Pilot group acceptance has been good. This waiver changes only the operational ceiling from 1,500 to 1,200 feet.

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5. How Relocation Or Additional Facilities Will Affect Waiver Requirement

This waiver is required by runway configuration. A lead-in-light system has been evaluated and funded for installation (FY-91 Budget). Installation of such a system could lower the visibility minimums.

6. Coordination With User Organizations *(Specify)*

ATA, ALPA, APA, AOPA, and NBAA will be contacted by STL ATCT.

7. SUBMITTED BY

Office Identification	Title	Signature
ACE-220	Manager, Flight Procedures Branch	Robert L. Ravencamp

FAA Form 8260-1 (6-85) Supersedes Previous Edition

8. REGIONAL/FIFO ENDORSEMENT		Not Recommended
		Not Required

ments

	Routing Symbol	Signature
-24-90	CHC FIFO	Larry L Patterson, OKC FIFO

9. AVN ENDORSEMENT	x	Approval Recommended
		Not Recommended
		Not Required

ments

N concurs with lowering the ceiling value from 1500 to 1200 feet provided the restriction paragraph 5.c.(1) of St. Louis ATCT Order 7110.65E, Simultaneous ILS/LDA Approaches, ted October 16, 1987 continues in effect.

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	Routing Symbol	Signature
2/26/92	AVN-200	Jim C. Savage, Manager, Flight Procedures and Inspection Division

10. AFO ACTION	x	Approved
		Disapproved
		Not Required

mments

This waiver is approved based on the equivalent level of safety provided in Block 4 and provided the St. Louis ATCT Order 7110.56E, Simultaneous ILS/LDA Approaches, dated October 16, 1987 remains in effect.

le	Routing Symbol	Signature
6/5/92	AFS-400	Jack Howell, Manager, Technical Programs Division

Department of Transportation
Federal Aviation Administration

FLIGHT PROCEDURES STANDARDS WAIVER

Date: October 8, 1990

Procedure Identification

LDA/DME Rwy 12L
Lambert-St. Louis International, St. Louis, MO

Waiver Required And Applicable Standard

Simultaneous approaches with parallel localizer courses serving parallel runways with less than 4,300 feet of separation between runway centerlines.
Chapter 9, Section 9, FAAH 8260.3B (TERPS), Paragraph 992.

Reason For Waiver *(Justification for nonstandard treatment)*

To allow simultaneous approaches to Rwys 12R and 12L which are separated by a distance of 1,300 ft. This procedure will improve arrival and departure acceptance rate for the airport thereby avoiding delays in the St. Louis area and throughout the system.

The existing ILS system for Rwy 12R and LDA/DME on 12L will be used. The LDA antenna siting provides a parallel final approach course to the established ILS Rwy 12R and the courses are separated 4,541.6 feet, centerline to centerline.

4. Equivalent Level of Safety Provided

Simultaneous approaches will only be authorized with ceiling and visibility of 1,200 feet and 4 SM or greater. The actual minimums for the LDA/DME approach are 700 feet and 4 SM. The LDA/DME for Rwy 12L terminates at FREAS 3 DME Fix; this point is 2.62 NM (3.01 SM) from the runway threshold and the track from the missed approach point to the threshold is at a 12° angle converging to the runway centerline. Radar monitoring in accordance with the simultaneous approach criteria in FAAH 7110.65 and 7210.3 will be provided throughout both approaches by dual radar monitor positions. The missed approach track diverges from the Rwy 12R missed approach by more than 45°. Rwy 12L has Runway End Identifier Lights (REIL), VASI, runway centerline lighting, and Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights (MALSR). Users have had nearly 10 years experience using this approach without major incident. Pilot group acceptance has been good. This waiver changes only the operational ceiling from 1,500 to 1,200 feet.

5. How Relocation Or Additional Facilities Will Affect Waiver Requirement

This waiver is required by runway configuration. A lead-in-light system has been evaluated and funded for installation (FY-91 Budget). Installation of such a system could lower visibility minimums.

6. Coordination With User Organizations *(Specify)*

ATA, ALPA, APA, AOPA, and NBAA will be contacted by STL ATCT.

7. SUBMITTED BY

Office Identification	Title	Signature
ACE-220	Manager, Flight Procedures Branch	Robert L. Ravencamp

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8. REGIONAL/AFO ENDORSEMENT		Not Required

omments

ate	Routing Symbol	Signature
10-24-90	OKC FIFO	Daisy J Patterson, OKC FIFO

9. AVN ENDORSEMENT	X	Approval Recommended
		Not Recommended
		Not Required

omments

AVN concurs with lowering the ceiling value from 1500 to 1200 feet provided the restriction in paragraph 5.c.(1) of St. Louis ATCT Order 7110.65E, Simultaneous ILS/LDA Approaches, dated October 16, 1987 continues in effect.

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2020-01-16 13:16:07 +0000

ate	Routing Symbol	Signature
12/20/90	AVN-200	Jim C. Savage, Manager, Flight Procedures and Inspection Division

10. AFO ACTION	X	Approved
		Disapproved
		Not Required

Comments

This waiver is approved based on the equivalent level of safety provided in Block 4 and provided the St. Louis ATCT Order 7110.56E, Simultaneous ILS/LDA Approaches, dated October 16, 1987 remains in effect.

Date	Routing Symbol	Signature
6/5/91	AFS-400	Jack Howell Manager, Technical Programs Division

FLIGHT PROCEDURES STANDARDS WAIVER

DATE: December 23, 1983

1. FLIGHT PROCEDURE IDENTIFICATION
Lambert-St. Louis International Airport, St. Louis, Missouri
ILS Runway 12R with side-step to Runway 12L.

2. WAIVER REQUIRED AND APPLICABLE STANDARD
Runway separation is 1,300' centerline to centerline. Flight Procedures and Airspace Handbook 8260.19, Paragraph 407d.(1) states runway centerlines should be separated 1,200' or less.

3. REASON FOR WAIVER *(Justification for nonstandard treatment)*
By providing the side-step maneuver, arrival and departure delays will be reduced because air traffic personnel are provided more flexibility to handle the aircraft.

Two of the major air carriers using this airport have a company policy restricting circling approaches to 1,000' and 3-mile visibility or higher; however, side-step procedures can be flown as charted.

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4. EQUIVALENT LEVEL OF SAFETY PROVIDED
The remaining criteria in 8260.19, Paragraph 407d. can be followed without exceeding descent gradient or authorizing a lower MDA than the present circling minima for Runway 12R.

Also, the Runway 12L threshold is 3,050' farther from the FAF than Runway 12R threshold which provides more time for identifying and aligning on Runway 12L centerline.

5. HOW RELOCATION OR ADDITIONAL FACILITIES WILL AFFECT WAIVER REQUIREMENT Installation of an ILS on Runway 12L would reduce the requirement for the side-step maneuver, but the side-step can still be utilized to provide flexibility of operation for the air traffic personnel. Even with an ILS or LOC on Runway 12L, the side-step from Runway 12R to Runway 12L will be used, especially if Runway 12L equipment is OTS. The same can apply with a side-step from Runway 12L to Runway 12, however, visibility will be increased.

6. COORDINATION WITH USER ORGANIZATIONS *(Specify)*
MKC ARTCC
Central Region Air Traffic Division
STL ATCT

7. SUBMITTED BY

OFFICE IDENTIFICATION	TITLE	SIGNATURE
	Manager, OKC FIFO	for MARC E. LE WAND

FAA Form 8260-1 (7-66)

DEPT OF TRANSPORTATION — FEDERAL AVIATION ADMINISTRATION

ILS STANDARD INSTRUMENT APPROACH PROCEDURE

FLIGHT STANDARDS SERVICE - FAR PART 97.29

...AT, HAA, and RA. Altitudes are minimum altitudes unless otherwise indicated. ...feet above airport elevation. Distances are in nautical miles unless otherwise indi... except visibilities which are in statute miles or in feet RVR.

TERMINAL ROUTES

FROM	TO	COURSE AND DISTANCE	ALT
SADEN INT (IAF)	DRAWG INT	097/4.2 (STL R-277) & 119/0.7 (I-LMR)	*5500
DRAWG INT	NAIRN INT	119/3.9 (I-LMR)	4100
NAIRN INT	~~STAFU~~ OBLIO LOM/INT	119/5.2 (I-LMR)	2400

MISSED APPROACH

ILS: at the DH, LOC: 5.4 MILES AFTER PASSING ~~STAFU LOM/INT~~ OBLIO LOM/INT

Climb to 1000 then climbing right turn to 4000 via heading 240 and FTZ R-082 to FTZ VORTAC and hold. (TACAN aircraft climb to 1000 then left turn to 3000 direct STL VORTAC continue via R-323 to HARDI INT/16 DME and hold NW, right turns, 143 inbound).

ADDITIONAL FLIGHT DATA

Hold West RT 100 inbound.

FAS Obst: 691 Tree 384538/902344

Depict I-AEW LDA.

1. PT NA SIDE OF CRS _____ OUTBND _____ FT WITHIN _____ MI. OF _____ (IAF).
2. Profile starts at DRAWG INT
3. FAC 119 FAP ~~STAFU LOM/INT~~ OBLIO LOM/INT DIST FAF TO: MAP 5.4 THLD 5.4
4. MIN ALT DRAWG INT *5500 (*4500 when authorized by ATC); NAIRN INT 4100; ~~STAFU~~ OBLIO LOM 2400
5. DIST TO THLD FROM: OM 5.4 MM 0.7 IM _____ 150 HAT ___ 100 HAT ___ GS ANT 1165
6. MIN GS INTCP 4100 GS ALT AT: NAIRN INT 4068 OM 2327 MM 806 IM _____
7. GS ANGLE 3.00 TCH 53
8. MSA FROM ~~FM~~ OBLIO LOM 090-180, 2700; 180-090, 2200

VAR 3E YR 80

TAKEOFF: ☐ STD ☒ SEE FAA FORM 8260-15 FOR THIS AIRPORT

MINIMUMS @CAT E 800-2½ #CAT E 800-2½

ALTERNATE: NA ☐ , ILS Standard@ LOC Standard#

CAT. →	A			B			C			D			E		
	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA
S-ILS 12R	789	4000	250	789	4000	250	789	4000	250	789	4000	250	789	4000	250
S-LOC 12R	960	4000	421	960	4000	421	960	4000	421	960	4000	421	960	5000	421
CIRCLING	1060	1	455	1060	1	455	1060	1¼	455	1160	2	555	1320	2½	715
SIDESTEP RWY 12L	960	1	421	960	1	421	960	1½	421	960	2	421	960	2	421

S-ILS 12R Inoperative Table does not apply to SSALR.
S-LOC 12R Category A and B visibility increased to RVR 5000 for inoperative SSALR; Category D visibility increased to RVR 5000 for inoperative MM.
Simultaneous approach authorized with Rwy 12L when weather is 1500-5 or better.

CITY AND STATE	ELEVATION AIRPORT	TDZE	FACILITY IDENT.	PROC. NO.-AMDT. NO.-EFFECTIVE DATE	SUP. ILS Rwy 12R
St. Louis, MO	605 Lambert-St. Louis Intl	539	I-LMR	~~25 DEC 80~~ ILS Rwy 12R, Amdt. ~~15~~ 16	AMDT. ~~14~~ 15
					DATED ~~21 Feb 80~~ 25 DEC 80

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STANDARD INSTRUMENT APPROACH PROCEDURE ... A RECORD

Reports Identification No. FS-8260-7

PART A – OBSTRUCTION DATA

1. APP. SEGMENT	FROM	TO	OBSTRUCTION	COORDINATES	ELEV. MSL	ROC	ALT. ADJ.	MIN. ALT.
Initial	Saden Int	Drawg Int	Trees	General	799 (4D)	1000	TCA	*5500
Intermediate	Drawg Int	Nairn Int	"	385300/903300	" "	500	"	4000
"	Nairn Int	LM LOM	"	384800/903055	" "	"	GS Inter.	2400
Final (LOC)	OBLD LM LOM/INT	TH	"	384538/902344	691 (1A)	250		960
SIDESTEP	LM LOM	TH Rwy 12L	TREES	" "	691 (1A)	250		960
FINAL (ILS)	GS	DH	Road	384519/902245	572 "	34:1 (145.36)	%	789
		*4500 when authorized by ATC						
		% GS DH 250-½ due obstruction						
		Rwy RVR not to precede DH when NALR 12L						
2. PROC. TURN	NA							
3. MISSED APPROACH	MAP TH/DH	FTZ VORTAC	Tower	384036/902409	1003 "		TCA	4000
	TACAN A/C	Hardi Int/16 DME	"	385945/903030	1058 "		Holding	3000
	ELEV: 710/644 – 3758 before TH		No penetrations of 40:1					

4. CIRCLING AREA	DISTANCE	REQUIRED HT. ABV. APT.	ACTUAL HT. ABV. APT.	OBSTRUCTION	COORDINATES	ELEV. MSL	ROC	ALT. ADJ.	MIN. ALT.
CATEGORY A	1.3 MI.	350	455	Building	384356/902354	749 "	300		1060
CATEGORY B	1.5 MI.	450	"	Tower	384359/902422	757 "	"		"
CATEGORY C	1.7 MI.	450	"	"	"	" "	"		"
CATEGORY D	2.3 MI.	550	555	Water Tower	384530/901835	773 "	"	HAA	1160
CATEGORY E	4.5 MI.	550	715	Tower	384036/902409	1003 "	"		1320

5. MINIMUM SAFE ALTITUDES — PRIMARY NAVAID: LM LOM

SECTOR	OBSTRUCTION	DIRG DIST	ELEV. MSL	MSA	SECTOR	OBSTRUCTION	BRG DIST	ELEV. MSL	MSA
360–090	Tower	048/11	1048(4D)	2100	180–270	Tower	225/22	1200(1A)	2200
090–180	"	148/19	1649(1A)	2700	270–360	"	314/24	1173 "	"

CITY AND STATE	AIRPORT AND ELEVATION 605	FACILITY	TYPE PROCEDURE AND AMENDMENT NO.	REGION
St. Louis, MO	Lambert-St. Louis Intl.	I-LMR ILS	ILS Rwy 12R, Amdt. 16	ACE

Form 8260-9 (10-67)

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Form 2800-

AVOID EP

RE

Subsc

...STRUMENT APPROACH PROCEDURE

PART B - SUPPLEMENTAL DATA

1. COMMUNICATIONS WITH: ZKC STL ATCT

SATISFACTORY ON: X VHF X UHF HF

2. WEATHER SERVICE: X ESSA OTHER; FAA; A C

3. ALTIMETER SETTING SOURCE; DISTANCE

LOCATION: On airport

HRS REMOTE OPTN

HRS OPTN: 24

ADJUSTMENT

4. MONITOR STATUS

	PRIMARY	SECONDARY
NAVAID	I-LMR ILS	LM LOM
MONITOR POINT	STL ATCT	MONITOR POINT
HRS OPTN	CAT. 1 24	CAT. 1
	CAT. 3	CAT. 3 24

5. AIR SPACE: FLOOR CONTROLLED AIRSPACE UNDER FAC; CONT ARE; X CONT ZONE 24 HRS OPTN; TRAN ARE

6. APPROACH & RUNWAY LIGHTING

X	ALS F-1 Rwy 24	X	REIL Rwys 12L & 30R *
X	~~SSALS~~ SSALR Rwy 12R		TDZ
X	MALS R Rwy 30L		C LINE
X	HIRL All Rwys		OTHER (Specify)
X	~~SALS~~ SALSF Rwy 06	X	VASI Rwys 6, 12L & 30R

7. RUNWAY MARKING

ALL WEATHER 6/24 12R/30L

INSTRUMENT 12L/30R 17/35

8. RUNWAY VISUAL RANGE

APPROACH 12R/30L/24

ROLL OUT 12R/30L

9. GLIDE SLOPE INFO: GS ANGLE 3.00; ELEV RWY THRESHOLD TDZE 539; DIST THRESH TO GPI 1165; ELEV GS ANTENNA 531 Rwy Abm; GPI 1012.35; THRESHOLD XING HEIGHT 53.06

10. FINAL APP COURSE AIMING POINT: X RUNWAY THRESHOLD FT. FROM THRESHOLD; ON CENTER LINE FT. FROM C LINE

11. WAIVERS OF STANDARDS: NUMBER OF WAIVERS ON FILE *1; DATES OF APPROVAL 6/14/79

PART C - REMARKS

*TERPS Para. 342c(1) 20:1 slope penetration.

CATEGORY	A	B	C	D

PART D - PREPARED BY: ~~Charles F. Jewell~~ [signature] DATE: 10/20/80

TITLE: Procedures Specialist OFFICE: ~~MSP~~ FIFO

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2016-01-16 13:16:

Department of Transportation
Federal Aviation Administration

FLIGHT PROCEDURES STANDARDS WAIVER

Date: July 17, 1987

Flight Procedure Identification

LDA/DME Rwy 30L
Lambert-St. Louis International, St. Louis, MO

Waiver Required And Applicable Standard

LDA Alignment does not meet criteria.
Paragraph 513, 8260.3B (TERPS)

Reason For Waiver *(Justification for nonstandard treatment)*

The final approach course is parallel to and not aligned with the runway of intended landing. The final approach course and Runway 30L Centerline are separated by 3599.14 feet. The missed approach point is located at JOESS 4.4 DME fix on the localizer course from which visual flight to the runway is conducted or a missed approach is initiated.

Equivalent Level of Safety Provided

This approach will only be authorized when the ceiling is 1,200 feet or better and the visibility is 5 miles or better. The LDA/DME missed approach point is 2.62 NM (3.01 SM) from the runway threshold and the track from the missed approach point to the threshold is at 13° angular convergence with the runway centerline. This configuration was determined by AFO-560 (Now AVN-210) during extensive evaluation in 1980 to support the LDA/DME Rwy 12L approach. The LDA/DME Rwy 30L will remain within the parameters of the evaluation conducted for the Rwy 12L approach (See Evaluation of St. Louis LDA/DME Rwy 12L approach; memorandum report FAA-AFO-500-18; July 1980). Runway 30L has SSALSR, HIRL and centerline lighting.

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How Relocation Or Additional Facilities Will Affect Waiver Requirement

This waiver is required by runway configuration. Lead-in lighting system is being evaluated in conjunction with Runway Alignment Indicator Light (RAIL) extension of 1,600 feet (4,000 total RAIL). Installation of these lighting systems could lower the visibility minimums.

Coordination With User Organizations *(Specify)*

ATA, ALPA, APA, AOPA, and NBAA will be contacted by STL ATCT.

7. SUBMITTED BY

Office Identification	Title	Signature
ACE-220	Manager, Flight Procedure Branch	Robert L. Ravencamp

FAA Form 8260-1 (6-85) Supersedes Previous Edition

Department of Transportation
Federal Aviation Administration

FLIGHT PROCEDURES STANDARDS WAIVER

July 17, 1987

Flight Procedure Identification

LDA/DME Rwy 30L
Lambert-St. Louis International, St. Louis, MO

Waiver Required And Applicable Standard

Simultaneous approaches with parallel localizer courses serving parallel runways with less than 4,300 feet of separation between runway centerlines. Chapter 9, Section 9, FAA Handbook 8260.3B (TERPS), Paragraph 992.

Reason For Waiver *(Justification for nonstandard treatment)*

To allow simultaneous approaches to Runways 30R and 30L which have a centerline separation distance of 1,300 feet. This procedure will improve arrival and departure acceptance rate for the airport thereby avoiding delays in the St. Louis area and throughout the system.

The existing ILS system for Runway 30R will be used. An LDA/DME system will serve Runway 30L. The LDA antenna siting provides a parallel final approach course to the establisheed ILS Runway 30R and the course centerlines are separated by 4,898.64 feet.

Equivalent Level of Safety Provided

Simultaneous approaches will only be authorized with ceiling and visibility of 1,200 feet and 5 SM or greater. The actual minimums for the LDA/DME approach are 617' HAT and 5SM. The LDA/DME for runway 30L terminates at JOESS 4.4 DME fix which occurs at 2.62 NM (3.01 SM) from the runway threshold. The track from the missed approach point to the threshold is at a 13° angular convergence to the runway centerline. Radar monitoring in accordance with the simultaneous approach criteria in FAA Handbook 7110.65 and 7210.3 will be provided throughout both approaches by dual radar monitor positions. The missed approach track diverges from the Runway 30R missed approach by more than 45°. Runway 30L has MALSR, HIRL and centerline lighting.

How Relocation Or Additional Facilities Will Affect Waiver Requirement

This waiver is required by runway configuration. Lead-in lighting system is being evaluated in conjunction with Runway Alignment Indicator Light (RAIL) extension of 1,600 feet (4,000 feet total RAIL). Installation of these lighting systems could lower the visibility minimums.

Coordination With User Organizations *(Specify)*

ATA, ALPA, APA, AOPA, and NBAA will be contacted by STL ATCT.

7. SUBMITTED BY

Office Identification	Title	Signature
ACE-220	Manager, Flight Procedures Branch	Robert L. Ravencamp

FAA Form 8260-1 (6-85) Supersedes Previous Edition

U.S. Department of Transportation
Federal Aviation Administration

Memorandum

Subject: ACTION: Simultaneous ILS/LDA/DME Approaches, Runways 30L/R, Lambert-St. Louis International Airport, St. Louis, Missouri

Date: SEP 28 1987

From: Director, Air Traffic Operations Service, ATO-1

Reply to Attn. of: Gausman:267-9339

To: Manager, Air Traffic Division, ACE-500

This is in reference to your request for approval of simultaneous ILS/LDA/DME approaches to Runways 30L/R at Lambert-St. Louis International Airport, St. Louis, Missouri. Based on our review of the material submitted by the region, and subsequent consultation with Flight Standards, the simultaneous ILS approach procedures in Handbook 7110.65E, paragraph 5-126 (Simultaneous ILS/MLS Approaches), and Handbook 7210.3H paragraph 1235 (Simultaneous ILS/MLS Approaches), have been amended to support this effort. Accordingly, you are authorized to conduct simultaneous IFR approaches to Runways 30L/R under the following conditions:

a. ATC procedures must be in accordance with paragraph 5-126 of Handbook 7110.65E as amended. A copy of the amended procedure is attached.

b. The requirement of two separate ILS systems and a minimum of 4,300 feet between parallel runways is amended for conduct of the subject procedure. All other requirements of Handbook 7210.3H, paragraph 1235, remain in effect.

c. All "Heavy" aircraft shall be confined to Runway 30R when simultaneous ILS/LDA/DME approaches are in progress.

d. The authorization to conduct simultaneous IFR approaches to Runways 30L/R shall not affect the provisions of standard departure separation minima for Runways 30L/R.

e. Visual separation shall be applied in accordance with appropriate paragraphs of Handbook 7110.65E.

f. Copies of facility directives, publications, and letters to airmen which are issued to support this procedure as well as records of user meetings shall be forwarded to ATO-300.

g. When applying visual separation, provisions of Handbook 7110.65E paragraph 7-10, shall be applied to aircraft passing the missed approach point on the LDA/DME Runway 30L approach.

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2020-01-16 13:15:07 UTC
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This request does not alter the present status as it pertains to the waiver and amendments to Handbook 7110.65 and 7210.3 concerning the ILS/LDA/DME Runways 12L/R at Lambert-St. Louis International Airport.

Since simultaneous ILS/LDA/DME approaches to Runways 12L/R have proven to be efficient and safe at St. Louis, we believe that the procedures and conditions outlined for the ILS/LDA/DME approaches to Runways 30L/R will further enhance the capacity and continue to improve the quality of ATC service at Lambert-St. Louis International Airport.

John R. Ryan

Attachment

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Runway 12R Obstructions

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FLIGHT PROCEDURES STANDARDS WAIVER

Reports Identification Symbol FS 6220-1

DATE: August 30, 1983

1. FLIGHT PROCEDURE IDENTIFICATION

Lambert-St. Louis International, St. Louis, Missouri
ILS Runway 12R, NDB Runway 12R, VOR Runway 12R, RNAV Runway 12R

2. WAIVER REQUIRED AND APPLICABLE STANDARD

Obstacles penetrating 20:1 slope, TERPS para. 332a.

3. REASON FOR WAIVER (Justification for nonstandard treatment)

Approval of this waiver would authorize retention of visibility credit for lights (SSALR) as applied to the instrument approach procedures to Runway 12R.

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4. EQUIVALENT LEVEL OF SAFETY PROVIDED

The obstacle preventing light credit application is a road with a hypothetical 15' vehicle which penetrates the 20:1 slope by 6'. It is located at a point 475' abeam the runway centerline 758' from the threshold. Because of the offset proximity of the obstacle in relation to the runway, aircraft in a position to execute a landing would not be affected. It is also noted that landing aircraft would be in a visual segment of the approach and that the reduction of visibility to 3/4 mile is no less than the basic precision visibility without light credit.

5. FOA RELOCATION OR ADDITIONAL FACILITIES WILL AFFECT WAIVER REQUIREMENT

Relocation or closing of Bridgeton Station so that the 20:1 slope is cleared will negate the need for this waiver. The St. Louis Airport Authority is planning to relocate or close the subject road when the County Highway Department relocates Lindbergh Boulevard.

6. COORDINATION WITH USER ORGANIZATIONS (Specify)

ATA, ALPA, APA, AOPA, NBAA, STL ATCT

7. SUBMITTED BY

OFFICE IDENTIFICATION	TITLE	SIGNATURE
MSP FIFO	Supervisor, Flight Procedures Section	JAMES R. DAVIS

FAA Form 8260-1

8. REGIONAL ENDORSEMENT		
	X	APPROVED
		DISAPPROVED
		NOT REQUIRED

COMMENTS This waiver originated in the Region. Existing waiver is in effect fo ILS RWY 12R, MDB RWY 12R, and VOR RWY 12R. The purpose of this request is to i all SIAPs to RWY 12R in one document. Previous waiver will be canceled upon appr of this request.

DATE	ROUTING SYMBOL	SIGNATURE
9/1/83	ACE-220	W. Robert Berger W. Robert Berger, Mgr., Flt. Insp. & Procedures

9. AVSNFO ENDORSEMENT		
	X	APPROVED
		DISAPPROVED
		NOT REQUIRED

AVN-220 concurs.

DATE	ROUTING SYMBOL	SIGNATURE
10/7/83	AVN-220	Harry J. Ross, Manager, Flt. Procedures Branch

10. WASHINGTON ACTION		
	X	APPROVED
		DISAPPROVED
		NOT REQUIRED

COMMENTS

Our approval is based on the equivalent level of safety stated in Item 4.

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2020-01-16 13:16:07 -0000

DATE	ROUTING SYMBOL	SIGNATURES
10-31-83	AFO-230	Manager, Flight Procedures Standards Branch Donald K. Funai
11/3/83	AFO-200	Manager, Air Transportation Division William T. Brennan

Runway 30L Glide Slope Critical Area Penetration

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NAS CHANGE PROPOSAL
(Please Type or Print Neatly)

FOR CM USE | Date Received | Number |

1. Prescreening Office	2. End Item Number	3. Scope of Change	4. Case File Number
☒ APM-150 ☐ ATR-100 ☐ APM-160 ☐ ATR-200 ☐ _____		XX Local ☐ National ☐ Test ☐ NAS Plan	STLAF-GS-008

Program Element	6. Life-Cycle Phase	7. Priority
☐ En Route ☐ Flight Service ☐ Interfacility Comm ☒ Terminal ☐ Ground-to-Air ☐ Maint & Ops Support ☐ Other _____	☐ Requirements Determination ☐ Subsystem Acquisition ☒ Operational	☐ Normal ☐ Time Critical XX Urgent

8. Supplemental Change Form	9. Supplemental Change Number	10. Baseline Document Type	11. Baseline Document Number
☐ RCP ☐ ECR ☐ Emp. Sugg. N/A ☐ _____	N/A	☐ CPFS ☐ IRD/ICD ☐ T.L ☐ EEM/PEM ☐ Spec. XX Maint. Handbk. ☐ Dwg. ☐ _____	6750.16B

12. Originator	13. Originator's Organization	14. Telephone Number	15. Date Initiated
Dave Felber	STL Nav/Com SU	314-427-4640 (Comm)	1/16/90

16. Facility/Identifier (FACID)	17. Facility Code	18. FA Type Number	19. Serial Number
CE GS BKY	314AK	Mark 1C	30

20. Title (as descriptive as possible, and if applicable, include location and runway number).

Waiver of critical area requirement. BKY GS. Rwy 30L Lambert-St. Louis IAP, MO.

21. Description: (a) identification of problem, (b) proposed change, (c) interface impact, (d) cost, (e) benefits, (f) schedule, (g) justification of time critical/urgent.

a. Order 6750.16B, change 2, dated 5/26/89, increased the length of the null reference GS critical area to 3,100 feet from the antenna. A major state highway runs through this critical area from 2,800 feet to 3,100 feet in front of the antenna.

b. Propose to waiver the critical area over the highway. The facility was flight checked on 1/9/90, with two large tractor-trailer vehicles penetrating the critical area. No signal variations were noted.

c. None.

d. The cost has already been met, with renting the trucks, and flight checking. No additional costs required.

e. Benefits - The GS can remain in service as is without conversion to capture effect.

f. None.

g. Urgent - Due to need to keep the facility in service.

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(attach additional sheets if necessary)

22. Title of Originating Office Manager	Signature	Date
MGR, STL SFO	Leo Sabata	1/19/90

Runway 24 Obstructions
Modifications to Navaid Alignment

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(Routing Symbols) TO:	FROM:	AIRWAY FACILITIES CRITERIA WAIVER REQUEST	NUMBER	IDENTIFICATION	CY	SEQUENCE	REV.
AAF-170	ACE-400		FIELD INTERIM				
			REGION INTERIM	ACE-430	82	003	
		AAF-740 USE ONLY	OFFICIAL	AF - 530	82		
			RECORD I.D. NUMBER			02160	

1-WAIVER DATA

FACILITY TYPE	LOCATION IDENTIFIER	SECTOR	COST CENTER CODE	REGION	ASSOCIATED RUNWAY	SECTOR FIELD OFFICE
MALSR	STLB	STL	38336	CE	24	STL

2. WAIVER TITLE *(Include facility, location, runway and applicable standards)* Installation of a medium intensity approach lighting system with runway alignment indicator lights (MALSR) for Runway 24, Lambert-St. Louis International Airport, St. Louis, Mo. Waive spacing requirement of Order 6850.2, Fig. 2-6 by allowing the last MALS station to be located at 13+80 instead of between 14+00 and 15+00. Waive the clearance criteria of Order 6850.2, Chapter 2A Para. ~~21b~~ 2016., at both Banshee Road and the railroad track (see attached sketch).

3. REASON FOR WAIVER *(Justification for nonstandard treatment) (Include applicable data and remarks)*

Runway 24 threshold would require a 630 ft. displacement in order to install a MALSR without a waiver. Funding would have to be made available for relocation of the existing glide slope and middle marker. A 630 ft. displacement would shorten the runway to 6,972 and render it ineffective as the only crosswind runway for Catgories C and D aircraft. The existing ALSF has more violations to Order 6850.2 siting criteria than the proposed MALSR would have and is of all-rigid construction. The city of St. Louis has agreed to lower the hill between the threshold and Station 14+00 (see attached sketch) to eliminate violations of the 50 to 1 in that area. The runway presently has minimums of 200 ft. and 1/2 mile. These minimums would change to 200 ft. and 3/4 mile without a light lane. The new MALSR would be constructed of entirely frangible structures.

4. ALTERNATIVE SOLUTIONS CONSIDERED AND REASONS NOT RECOMMENDED *(Attach additional sheets if necessary)*

(1) One alternative is to leave the existing ALSF intact. This alternative is undesirable due to the rigid construction of the light standards, frequency of maintenance, energy consumption, and the existence of more obstructions than the proposed MALSR; (2) Another alternative is to displace the threshold 630 ft. and thus allow the light plane to clear all obstructions. The effect of this option is to decrease the available runway length. Discussions between the airport authority, industrial concerns and the FAA have concluded this would be an undesirable solution; (3) Disposing of the existing ALSF and not installing a MALSR was considered; however, reinstalling the MALSR would enhance the safety of the approach; (4) Threshold displacements of less than 630 ft. were discussed in detail. Some of the things considered included additional funds for relocation of the existing glide slope and middle marker. The slope of the runway would require a substantial displacement in order to sufficiently change the amount of obstruction violations.

5A. LIST OF SUPPORTING DOCUMENTS ATTACHED *(Include project file data and anticipated commissioning date)*

Sketch (1), dtd 2/1/82 - Request for Waiver on Siting Criteria for MALSR on Runway 24

5B. DATE WAIVER REQUIRED FOR COMMISSIONING:	CATEGORY	SUB-CATEGORY	CLASS	SCOPE *(If known)*
	I	T	P	L

6. PERSON MOST FAMILIAR WITH SITUATION:	TELEPHONE NO. *(FTS/Area Code)*
James L. Blair, ACE-456	816-374-3003 (758-3003)

7-SUBMITTED BY

OFFICE IDENTIFICATION	TITLE	SIGNATURE
ACE-450	Chief, Establishment Engineering Branch	George A. Redlin

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APPROVAL DISAPPROVED NOT REQUIRED
4/81
in effect for
equest is to incl
ealed upon approv

Copy to FIFO
10-29-81

The following replaces paragraph 22a(1).

* (1) Slope Gradient. The slope gradient shall be kept as small as possible and shall not exceed two percent for a positive slope, nor one percent for a negative slope. The sloping segment shall start no closer than 200 feet from the landing threshold. Where the threshold is established at the approach end or is displaced less than 200 feet, the slope gradient shall start at approach end elevation. Where there is a displaced threshold greater than 200 feet from the approach end, the slope gradient shall start 200 feet from the displaced threshold from the elevation of the runway surface at that point. *

The following replaces paragraph 22a (5).

(5) RAIL Slope Gradient. The primary plane may have a maximum permissable slope of 2.5 percent negative (see figure 2-10) and 2.0 percent positive (see figure 2-9). The primary plane may also have one change of gradient (see figure 2-11). Additionally, consideration must be given to the clearing of obstructions above the secondary plane.

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10/29/81
Discussed underlined phrase "displaced threshold greater than 200 feet" with Diane Thomas AF0730. The intent was that even a displaced threshold of 200 feet would dictate that the slope gradient would begin at the elevation of the runway and not the displaced threshold elevation.
R. Benya ACE220

See waiver for MALSR RW 30L STL Lambert approved 6-26-81

Landing/Takeoffs by Military Aircraft

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DEPARTMENT OF TRANSPORTATION

FEDERAL AVIATION ADMINISTRATION

CERTIFICATE OF WAIVER OR AUTHORIZATION

ISSUED TO

131 FW/110 FS
MISSOURI AIR NATIONAL GUARD

ADDRESS

10800 Lambert International Blvd.
St. Louis-Lambert Airport 63044-2371

This certificate is issued for the operations specifically described hereinafter. No person shall conduct any operation pursuant to the authority of this certificate except in accordance with the standard and special provisions contained in this certificate, and such other requirements of the Federal Aviation Regulations not specifically waived by this certificate.

OPERATIONS AUTHORIZED

Execution of the St. Louis, MO LDA/DME RWY 12L and LDA/DME RWY 30L in St. Louis based F-15 Aircraft at maneuvering airspeeds not to exceed 175 KIAS (CAT E). Published CAT D procedure and minima will apply.

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LIST OF WAIVED REGULATIONS BY SECTION AND TITLE

FAR 91.175, Takeoff and Landing Under IFR

STANDARD PROVISIONS

1. A copy of the application made for this certificate shall be attached to and become a part hereof.
2. This certificate shall be presented for inspection upon the request of any authorized representative of the Administrator of the Federal Aviation Administration, or of any State or municipal official charged with the duty of enforcing local laws or regulations.
3. The holder of this certificate shall be responsible for the strict observance of the terms and provisions contained herein.
4. This certificate is nontransferable.

NOTE—This certificate constitutes a waiver of those Federal rules or regulations specifically referred to above. It does not constitute a waiver of any State law or local ordinance

SPECIAL PROVISIONS

Special Provisions Nos. 1 to 2, inclusive, are set forth on the reverse side hereof.

This certificate is effective from August 15, 1992 to until canceled, inclusive, and is subject to cancellation at any time upon notice by the Administrator or his authorized representative.

BY DIRECTION OF THE ADMINISTRATOR

Central
(Region)

(Signature)
for

August 11, 1992
(Date)

Manager, Flight Standards Division, ACE-200
(Title)

FAA Form 7711-1 (7-74)

*1975-G.P.O.-1703-M/674-862/199

Background - F260-7

DEPARTMENT OF TRANSPORTATION

FEDERAL AVIATION ADMINISTRATION

CERTIFICATE OF WAIVER OR AUTHORIZATION

ISSUED TO

McDONNELL AIRCRAFT COMPANY

ADDRESS

P. O. Box 516 - Mail Code 0017706
St. Louis-Lambert Airport, MO 63166-0516

This certificate is issued for the operations specifically described hereinafter. No person shall conduct any operation pursuant to the authority of this certificate except in accordance with the standard and special provisions contained in this certificate, and such other requirements of the Federal Aviation Regulations not specifically waived by this certificate.

OPERATIONS AUTHORIZED

Execution of the St. Louis, MO LDA/DME RWY 12L and LDA/DME RWY 30L in St. Louis based F-15 and F-18 aircraft at maneuvering airspeeds not to exceed 175 KIAS (CAT E). Published CAT D procedure and minimum will apply.

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jayhm@stlouis-mo.gov
2020.01-16 13:16:07 +0000

LIST OF WAIVED REGULATIONS BY SECTION AND TITLE

FAR 91.175, Takeoff and Landing Under IFR

STANDARD PROVISIONS

1. A copy of the application made for this certificate shall be attached to and become a part hereof.
2. This certificate shall be presented for inspection upon the request of any authorized representative of the Administrator of the Federal Aviation Administration, or of any State or municipal official charged with the duty of enforcing local laws or regulations.
3. The holder of this certificate shall be responsible for the strict observance of the terms and provisions contained herein.
4. This certificate is nontransferable.

NOTE.—This certificate constitutes a waiver of those Federal rules or regulations specifically referred to above. It does not constitute a waiver of any State law or local ordinance

SPECIAL PROVISIONS

Special Provisions Nos. 1 to 2, inclusive, are set forth on the reverse side hereof.

This certificate is effective from August 20, 1992 to until cancelled, inclusive, and is subject to cancellation at any time upon notice by the Administrator or his authorized representative.

BY DIRECTION OF THE ADMINISTRATOR

Central
(Region)

Joseph W. Hauk
(Signature)

8/18/92
(Date)

Manager, Flight Standards Division, ACE-200
(Title)

FAA Form 7711-1 (7-74)

*1975-G.P.O.-1703-M/674-862/199

1. Only St. Louis based F-15 and F-18 qualified pilots are authorized to conduct operations under authority of this waiver.

2. All pilots authorized to conduct operations under authority of this waiver will be periodically briefed on the proper execution of the maneuver, its limitations, and their responsibilities. Additionally, they should be advised of their option to refuse the approach and request another instrument approach procedure with published CAT E minimums.

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Formal Modifications to Standards

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U.S. Department
of Transportation

**Federal Aviation
Administration**

Central Region
Iowa, Kansas,
Missouri, Nebraska

901 Locust
Kansas City, Missouri 64106
(816) 329-2600

ACE#	
620B	4/14/03
620	4/14/03
600	4/15
MKC	
FPO	4/22
200	
400	4/10
ANI	
500	5/1/03
1	5/8/03
ROUTING	INITIAL
	DATE

May 8, 2003

Mr. Leonard Griggs
Airport Director
Lambert-St. Louis International Airport
P.O. Box 10212
St. Louis, MO 63145

Dear Mr. Griggs:

Lambert - St. Louis International Airport
Designation of New Runway as 11-29
Modification to Standards

The new parallel runway at Lambert-St. Louis Airport was to be designated Runway 12R-30L which would require changing Runway 12R-30L to 12C-30C. An Air Traffic facility workgroup has proposed that the new runway be designated 11-29. A regional FAA workgroup reviewed the proposal and agreed that it would be beneficial.

Reasons supporting this change are:

1. The new parallel runway will be displaced approximately ~~9000~~ 12,000 feet west of the existing outboard parallel runway. Parallel runways are normally abeam each other or have slight displacements. As a result, pilots visually acquire and mentally associate a parallel runway using the aforementioned placement. Because the new runway will be displaced such an unusual distance from the existing outboard parallel runway, pilots could easily misconstrue a clearance to the future outboard parallel runway for the existing Runway 12R-30L. This could significantly increase the potential of aircraft attempting to land on or taxi to the center runway when the runway of intent is actually the new outboard runway. Standards for Airport Markings, AC 150/5340-1H, Change 1, Paragraph 7.d.(2) supports such an arrangement where there is a distance between landing thresholds.
2. Airport signs and charting would not have to be changed for the existing airport runways when the new runway becomes operational.

To implement this change, we would issue a modification to standards to AC 150/5340-1H, Change 1, Paragraph 7.d. which says that one set of adjacent runways should be numbered to the nearest one-tenth of the magnetic azimuth and the other runway should be numbered to the next nearest one-tenth of the magnetic azimuth. Since the actual magnetic azimuth is approximately 302 degrees, the new runway would normally be designated as 13-31. However, since the airport will be decommissioning a runway 13-31 later this year and that runway is on the opposite side of the airport from the new runway, it was thought that the 13-31 designation for the new runway would be confusing.

Please advise by letter whether or not you agree with the 11-29 designation for the new runway and the modification to standards that would allow that designation.

Sincerely,

Glenn Helm
Program Manager

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2020-01-16 13:16:07 +0000

F-20

U.S. Department of Transportation
Federal Aviation Administration

Memorandum

Subject: ACTION: Proposal for the Designation of the New Runway at the Lambert-St. Louis Airport

Date: MAR 31 03

From: Air Traffic Manager, St. Louis HUB, T75-I

Reply to Attn. of: Barrett: (314) 890-1040

To: Manager, Operations Branch, ACE-530
CC: Manager, Airspace Branch, ACE-520

As you are aware, a new runway is under construction at the Lambert-St. Louis Airport, to be designated Runway as 30L/12R, which will require changing the designator of what is currently Runway 30L/12R to Runway 30C/12C. A facility workgroup developing methods and procedures for the utilization of this runway with the existing airport structure has identified potential safety related issues associated with these planned designations. This group has proposed a solution to address these concerns, which will also result in cost savings to the agency and airport authority.

The new parallel will be displaced approximately 9000 feet west of the existing outboard parallel runway. Parallel runways are normally located abeam each other or have slight displacements. As a result pilots visually acquire and mentally associate a parallel runway using the aforementioned placement. Because the new runway will be displaced such an unusual distance from the existing outboard parallel runway, pilots could easily misconstrue a clearance to the future outboard parallel runway for the existing Runway 30L/12R. This could significantly increase the potential of aircraft attempting to land on, or taxi to the center runway when the runway of intent is actually the new outboard runway. Left uncorrected these situations will increase the probability of runway incidents and increased congestion of the airport surface movement area, which could impact capacity.

To address these safety and capacity related issues we propose the new runway be designated 29/11. An additional benefit of this proposal is charting and airport signage will only be required for the new runway, in lieu of the new runway and the center runway.

We request your assistance in accomplishing the necessary line-of-business and outside agency coordination to implement this proposal.

Andi L. Ramaker

Andi L.Ramaker

July 2, 1996

Mr. Leonard L. Griggs, Jr.
Director of Airports
Lambert-St. Louis International Airport
P.O. Box 10212
St. Louis, MO 63145

Dear Mr. Griggs:

Lambert-St Louis International Airport
St. Louis, MO
Follow-up Airport Safety Review Team Report

This is in response to your telephone request of June 27, 1996, for a Modification to Standards to allow a five step regulator to be installed on the MIRL system for Runway 13/31, as recommended by the Airport Safety Review Team. We concur with the recommendation and hereby approve the modification.

Also, we are in receipt of a letter from William B. Korte, Airfield Administrator, stating that you will need until January 1, 1997 to complete the installation. Evidently this delay is necessary for the airport to ensure that the Modifications to Standards relieves the airport of liability. This recommendation of the Airport Safety Review Team, was based on the assumption that this installation would enhance safety. If this is not the opinion of the airport, you need to give serious consideration to limiting the runway to daytime use only.

If you decide to proceed with the installation of the five step regulator, please coordinate with the Air Traffic Control Tower so that they can initiate procedures for operating the regulator. Also, you will need to revise your Airport Certification Manual to reflect this modification.

If you have any questions, please contact Mike Mullen, at (816) 426-4721 or Jim Brunskill, at (816) 426-4712.

Original Signed By
Michael J. Faltermeier
for George A. Hendon
Manager, Airports Division

cc:
Bill Korte
ACE-1
ACE-200
ACE-400
ACE-500
AAS-200

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2020-01-16 13:16:07 +0000

MOD TO SIDS

U.S. Department of Transportation
Federal Aviation Administration

Memorandum

Subject: ACTION: Modifications to Standards, Lambert-St. Louis International Airport

Date: JUN 2 8 1996

From: Acting Manager, Engineering and Specification Division, AAS-200

Reply to Attn. of:

To: Manager, Safety and Standards Branch, ACE-620

We have reviewed your request for a modification to standard to allow a 5-step constant current regulator to replace the 3-step regulator presently installed on Runway 13/31 (MIRL) at Lambert-St. Louis International Airport. We concur with the recommendation of the Airport Safety Review Team and hereby approve the modification.

We appreciate the opportunity to review this request. If you have any questions, please contact Tod Lewis, on (202) 267-8743.

for John L. Rice

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JUL 1996
RECEIVED

June 7, 1996

Mr. Leonard L. Griggs, Jr.
Director of Airports
Lambert-St. Louis International Airport
P.O. Box 10212
St. Louis, MO 63145

Dear Mr. Griggs:

Lambert-St. Louis International Airport
St. Louis, Missouri
Follow-up Airport Safety Review Team Report

This is in reference to our letter of May 24, 1996 and several more recent telephone conversations regarding the installation of a 5 step regulator for controlling lights for Runway 13-31. If you decide to install the 5 step regulator, in accordance with the recommendations from the Airport Safety Review Team, please so inform us, and we will immediately arrange for the issuance of a **Modification-of-Standards**.

If you have any questions Jim Brunskill or I will be happy to discuss them with you.

Sincerely,

Original Signed By
George A. Hendon

George A. Hendon
Manager, Airports Division

cc:
Bill Korte
ACE-1
ACE-200
ACE-500
ACE-400

< CONFIRMATION REPORT >

06-07-1996(FRI) 14:59

[TRANSMIT]

NO.	DATE	TIME	DESTINATION	PG.	DURATION	MODE	RESULT
16615	6-07	14:58	3144265733	1	0°00'27"	NORM.E	OK
				1	0°00'27"		

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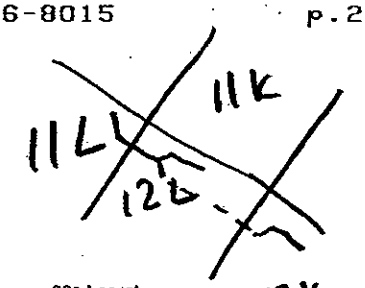

U.S. Department
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Federal Aviation Administration

Central Region
Iowa, Kansas,
Missouri, Nebraska

901 Locust
Kansas City, Missouri 64106
(816) 329-2600

December 3, 2003

Mr. Jerry Beckman
Program Management Office
13723 Riverport Dr., 4th Floor
Maryland Heights, MO 63043

Dear Mr. Beckman:

Lambert - St. Louis International Airport
LOI No. ACE-98-01
Modifications to Standards
New Runway Paving and Lighting
(Includes Deicing Systems, Access Roads, and Fencing)

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2020-01-16 13:16:07 +0000

We have reviewed and coordinated within FAA, the Modifications to Standards request you submitted on October 28, 2003 for:

- Taxiway B East of Runway 6-24
- Runway 6 and Runway 29 Extended Safety Areas
- Airfield Signage
- Runway 11-29 Nonstandard Runway Designation

The four Modifications to Standards are approved. If you have any questions, please call me at (816) 329-2617.

Sincerely,

Glenn Helm
Program Manager

U.S. Department
of Transportation

Federal Aviation Administration

Central Region
Iowa, Kansas,
Missouri, Nebraska

901 Locust
Kansas City, Missouri 64106
(816) 329-2600

03-21-04 11:45 IN

March 17, 2004

Mr. Gerald Beckmann, P.E.
Program Management Office
13723 Riverport Dr., 4th Floor
St. Louis, MO 63043

Dear Mr. Beckmann:

Lambert - St. Louis International Airport
AIP No. 3-29-0085-62/86 Rehab RW 12L-30R
AIP No. 3-29-0085-87 Reconstruction TW C(D)
LOI No ACE-801 Construct New RW 11-29
Modifications to AC 150/5370-10A

The modifications to FAA construction standards presented in Advisory Circular 150/5370-10A, STANDARDS FOR SPECIFING CONSTRUCTION OF AIRPORTS, as submitted March 17, 2004, are acceptable for use on the subject project. This approval is only for the use of Item P-620 RUNWAY AND TAXIWAY PAINTING.

- Specification as forwarded to our office on March 17, 2004 to be used on all three projects.

This approval does not imply future acceptance of these or other modifications to FAA Standards. If you have any questions you may contact me at (816) 329-2616.

Sincerely,

Douglas B. Johnson, P.E.
Regional Paving Engineer

Enclosure

cc: Raymond Freund, P.E., STL

ITEM P-620 RUNWAY AND TAXIWAY PAINTING

DESCRIPTION

620-1.1 This item shall consist of the painting of numbers, markings, and stripes on the surface of runways, taxiways, and aprons, in accordance with these specifications and at the locations shown on the plans, or as directed by the OWNER'S Representative.

MATERIALS

620-2.1 **MATERIALS ACCEPTANCE.** The Contractor shall furnish manufacturer's certified test reports for materials shipped to the project. The certified test reports shall include a statement that the materials meet the specification requirements. The reports can be used for material acceptance or the OWNER'S Representative may perform verification testing. The reports shall not be interpreted as a basis for payment. The Contractor shall notify the OWNER'S Representative upon arrival of a shipment of materials to the site.

620-2.2 **PAINT.** Paint shall be waterborne, and two-part polyester in accordance with the requirements of paragraph 620-2.2 a. & b. Waterborne paint shall be furnished in Black – 37038 and polyester paint shall be furnished in White – 37925 and Yellow 33538 or 33655, in accordance with Federal Standard No 595.

a. **WATERBORNE.** Paint shall meet the requirements of Federal Specification TT-P-1952D, Type I.

b. **POLYESTER.** Paint shall be a two component, minimum 99 percent solids type system conforming to the following:

(1) **Base.** The Base shall meet the following requirements:

(a) **Pigment.** The pigment shall be a combination of prime and extender pigments as required to produce a traffic coating meeting the color and other requirements of the finished product as specified herein. The x-ray diffraction spectrum shall match the spectra for the paint formulation that is submitted by the manufacturer for formulation approval. The percent pigment, by weight, of the base shall have a minimum 55.0% and a maximum 60.0%.

(b) **Vehicle.** The primary non-volatile component of the vehicle shall be polyester and shall match the infrared spectra for the paint formulation that is submitted by the manufacturer for formulation approval. The non-volatile vehicle of the paint shall be a minimum of 50.0% by weight of the vehicle.

(c) **Volatiles.** The volatile components of the base shall contain less than 150 grams of volatile organic matter per liter of total non-volatile paint material. The volatile portion of the base component shall consist of a reactive liquid and shall match the gas chromatogram for the paint formulation that is submitted by the manufacturer for formulation approval.

(d) **Volume Solids.** The base shall have a minimum of 65.0% solids by volume.

(e) **Total Solids.** The base shall not be less than 75% total solids by weight.

(f) **Weight Per Gallon.** The weight of the paint shall be a minimum 11.63 pounds per gallon. The weight per gallon shall not vary more than ± 0.10 pounds.

(g) **Grind.** The white paint shall have a minimum Hegman grind of 4.

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(h) **Viscosity.** The consistency of the paint shall not exceed 90 Kreb Units at 77°F when tested in accordance with AHTD Test Method 901 H.

(i) **Freeze-Thaw Stability.** The paint will show no coagulation or change in consistency greater than 5 Kreb Units, when tested in accordance with AHTD Test Method 901 V.

(j) **Heat Stability.** The paint will show no coagulation, discoloration, or change in consistency greater than 5 Kreb Units, when tested in accordance with AHTD Test Method 901 V.

(k) **Storage Stability.** After 120 days storage at 100°F in a three-quarters filled, closed container, the paint shall show no caking that cannot be readily remixed to a smooth and homogeneous state with no skinning, livering, curdling, or hard settling present. The viscosity shall not change more than 5 Kreb Units from the viscosity of the paint formulation that has been submitted by the manufacturer for formulation approval.

(l) **Flash Point.** The minimum flash point shall be 130°F when tested in accordance with AASHTO Test Method T73-89 (Flash Point by Pensky-Martens Closed Tester).

(2) **Catalyst.** The catalyst shall be non-flammable odorless dispersion in an aqueous medium meeting the current National Fire Protection Association (NFPA) 43B-1986 rating for Class IV or V.

(3) **Catalyzed Paint.** The catalyzed paint shall meet the following requirements:

(a) **Percent Solids.** The solids of the material shall be a minimum of 98.5% when tested in accordance with AHTD Test Method 901 W.

(b) **No-Tracking Time.** The catalyzed paint when applied to the roadway surface with a minimum wet film thickness of 10 mil, shall cure (dry) to a no-tracking condition under traffic in a maximum of one minute.

(c) **Dry Opacity.** A 5 mils wet film thickness shall have a minimum contrast ratio of 0.95 when tested in accordance with AHTD Test Method 901 K.

(d) **Daylight Reflectance.** The daylight directional reflectance of the white paint shall be a minimum of 84% when tested in accordance with AHTD Test Method 9011.

(e) **Hardness.** The catalyzed white paint shall have a minimum Shore Hardness of 90 minimum when tested in accordance with ASTM D2240.75.

(f) **Certification.** The manufacturer shall supply the Airport with lot certifications for all paint. These certifications shall contain actual numerical results for the specified test. Failure to supply these certifications with the material shall be cause for rejection. The Airport reserves the right to sample and test any material that is supplied to the project.

(4) Packing. All paint containers shall be new 17 H drums, lined (phenolic), and with no bungs, the following information shall be contained on a label and/or painted on the containers:

(a) Manufacturer
(b) Color
(c) Manufacturing Date
(d) Batch Number
(e) Tare Weight
(f) Base or Catalyst

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620 2.3 **REFLECTIVE MEDIA.** Glass beads shall meet the requirements of Fed. Spec. TT-B-1325, Type I–Gradation A. Glass beads shall be treated with adhesion promoting and/or flotation coatings as specified by the manufacturer of the paint.

CONSTRUCTION METHODS

620 3.1 **WEATHER LIMITATIONS.** The painting shall be performed only when the surface is dry and when the surface temperature is at least 50 degrees F (10 degrees C) and rising and the pavement surface temperature is at least 5 degrees F (2.7 degrees C) above the dew point. Painting operations shall be discontinued when the surface temperature exceeds 90 degrees F (32 degrees C).

620-3.2 **EQUIPMENT.** Equipment shall include the apparatus necessary to properly clean the existing surface, a mechanical marking machine, a bead and/or silica sand dispensing machine, and such auxiliary hand painting equipment as may be necessary to satisfactorily complete the job.

The mechanical marker shall be an atomizing spray type marking machine suitable for application of traffic paint. It shall produce an even and uniform film thickness at the required coverage and shall apply markings of uniform cross sections and clear cut edges without running or spattering and without over spray. For application of polyester paint, the mechanical marker shall be of a type designed to apply a two-part polyester pavement marking paint, meeting the requirements of the paint manufacturer, and capable of distributing glass beads immediately onto the painted surface, evenly and at the specified rate.

620-3.3 **PREPARATION OF SURFACE.** Immediately before application of the paint, the surface shall be dry and free from dirt, grease, oil, laitance, or other foreign material that would reduce the bond between the paint and the pavement. The area to be painted shall be cleaned by sweeping and blowing or by other methods as required to remove all dirt, laitance, and loose materials. Paint shall not be applied to Portland cement concrete pavement until the areas to be painted are clean of curing material. Sandblasting or high-pressure water shall be used to remove curing materials.

620 3.4 **LAYOUT OF MARKINGS.** The proposed markings shall be laid out in advance of the paint application. The locations of markings to receive glass beads shall be shown on the plans.

620-3.5 **APPLICATION.** Paint shall be applied at the locations and to the dimensions and spacing shown on the plans. Paint shall not be applied until the layout and condition of the surface has been approved by the OWNER'S Representative.

The edges of the markings shall not vary from a straight line more than 1/2 inch (12 mm) in 50 feet (15 m) and marking dimensions and spacings shall be within the following tolerances:

Dimension and Spacing	Tolerance
36 inches (910 mm) or less	+/- 1/2 inch (12 mm)
greater than 36 inches to 6 feet (910 mm to 1.85 m)	+/- 1 inch (25 mm)
greater than 6 feet to 60 feet (1.85 m to 18.3 m)	+/- 2 inches (51 mm)
greater than 60 feet (18.3 m)	+/- 3 inches (76 mm)

The paint shall be mixed in accordance with the manufacturer's instructions and applied to the pavement with a marking machine at the rate(s) shown in Table 1. The addition of thinner will not be permitted. A period of 30 days shall elapse between placement of a bituminous surface course or seal coat and application of the paint.

TABLE 1. APPLICATION RATES FOR PAINT AND GLASS BEADS

Paint Type	Paint Square feet per gallon, ft^2/gal (Square meters per liter, m^2/l)	Glass Beads, Type I, Gradation A Pounds per gallon of paint–lb./gal. (Kilograms per liter of paint–kg/l)
Waterborne (Black)	**115 ft^2/gal. maximum (2.8 m^2/l)**	**N/A**
Polyester (White and Yellow)	**90 ft^2/gal. maximum (2.2 m^2/l)**	**15 lb./gal**

Glass beads shall be distributed upon the marked areas at the locations shown on the plans to receive glass beads immediately after application of the paint. A dispenser shall be furnished which is properly designed for attachment to the marking machine and suitable for dispensing glass beads. Glass beads shall be applied at the rate(s) shown in Table 1. Glass beads shall not be applied to black paint. Glass beads shall adhere to the cured paint or all marking operations shall cease until corrections are made.

All emptied containers shall be returned to the paint storage area for checking by the OWNER'S Representative. The containers shall not be removed from the airport or destroyed until authorized by the OWNER'S Representative.

620-3.6 PROTECTION. After application of the paint, all markings shall be protected from damage until the paint is dry. All surfaces shall be protected from excess moisture and/or rain and from disfiguration by spatter, splashes, spillage, or drippings of paint.

METHOD OF MEASUREMENT

620-4.1 The quantity of runway and taxiway markings to be paid for shall be the number of square feet (square meters) of painting performed in accordance with the specifications and accepted by the OWNER'S Representative.

BASIS OF PAYMENT

620-5.1 Payment shall be made at the respective contract price per square foot (square meter) for runway and taxiway painting. This price shall be full compensation for furnishing all materials and for all labor, equipment, tools, and incidentals necessary to complete the item.

Payment will be made under:

Item P-620R-5.1	Polyester Paint, White, with Reflective Media—Per Square Foot
Item P-620R-5.2	Polyester Paint, Yellow, with Reflective Media—Per Square Foot
Item P-620R-5.3	Pavement Marking, Black Outline, without Reflective Media—Per Square Foot

TESTING REQUIREMENTS

ASTM C-146	Chemical Analysis of Glass Sand

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2020-01-06 13:16:27 +0000

ASTM C 371	Wire-Cloth Sieve Analysis of Nonplastic Ceramic Powders
ASTM D 92	Test Method for Flash and Fire Points by Cleveland Open Cup
ASTM D 711	No-Pick-Up Time of Traffic Paint
ASTM D 968	Standard Test Methods for Abrasion Resistance of Organic Coatings by Falling Abrasive
ASTM D 1652	Test Method for Epoxy Content of Epoxy Resins
ASTM D 2074	Test Method for Total Primary, Secondary, and Tertiary Amine Values of Fatty Amines by Alternative Indicator Method
ASTM D 2240	Test Method for Rubber Products-Durometer Hardness
ASTM G 53	Operating Light and Water-Exposure Apparatus (Florescent UV-Condensation Type) for Exposure of Nonmetallic Materials.
Federal Test Method Standard No. 141	Paint, Varnish, Lacquer and Related Materials; Methods of Inspection, Sampling and Testing

MATERIAL REQUIREMENTS

ASTM D 476	Specifications for Titanium Dioxide Pigments
Code of Federal Regulations	40 CFR Part 60, Appendix A 29 CFR Part 1910.1200
Fed. Spec. TT-B-1325	Beads (Glass Spheres) Retroreflective
Fed. Spec. TT-P-1952D	Paint, Traffic and Airfield Marking, Waterborne
Commercial Item Description (CID) A-A-2886A	Paint, Traffic, Solvent Based
Federal Standard 595	Colors used in Government Procurement

END OF ITEM P-620R

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U.S. Department of Transportation
Federal Aviation Administration

Central Region
Iowa, Kansas, Missouri, Nebraska

901 Locust
Kansas City, Missouri 64106
(816) 329-2600

June 1, 2004

Mr. Carl Rapp, P.E.
President
CRD & Associates, Inc.
10805 Sunset Office Dr., Suite 415
St. Louis, MO 63127

Dear Mr. Rapp:

Lambert - St. Louis International Airport
LOI No. ACE-98-01
Modifications to AC 150/5370-10A

As discussed on the phone on June 1, 2004, the proposed modifications to FAA construction standards presented in Advisory Circular 150/5370-10A, STANDARDS FOR SPECIFING CONSTRUCTION OF AIRPORTS, as submitted May 26, 2004, are acceptable for use on the subject project:

- It is acceptable to utilize MoDOT Type 5 aggregate in place of FAA P-209.

This approval does not imply future acceptance of these or other modifications to FAA Standards. If you have any questions you may contact me at (816) 329-2616.

garvin@stlouis-mo.gov
2020-01-16 13:10:07 +0000

Sincerely,

Douglas B. Johnson, P.E.
Regional Paving Engineer

Enclosure

cc: Jerry Beckmann, STL Program Management Office

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