

**FEDERAL AVIATION ADMINISTRATION  
FLIGHT STANDARDS SERVICE  
RNAV (GPS) STANDARD INSTRUMENT APPROACH PROCEDURE**

**TITLE 14 CFR PART 97.33**

Bearings, headings, courses, tracks and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated.  
Ceilings are in feet above airport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or feet RVR.

<u>AIRPORT</u> RONALD REAGAN WASHINGTON NATIONAL	<u>AIRPORT ID</u> KDCA	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 33	<u>ORIGINAL/AMENDMENT</u> 1B	<u>CITY</u> WASHINGTON	<u>STATE</u> DC
<u>AIRPORT ELEVATION</u> 14	<u>TDZE</u> 13	<u>SUPERSEDED</u> RNAV (GPS) RWY 33	<u>ORIGINAL/AMENDMENT</u> 1A	<u>DATED</u> 03/29/2018	<u>MAG VAR</u> 11W
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u>	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>	

**TERMINAL ROUTES**

FROM	FIX TYPE	TO	FIX TYPE	LEG TYPE	FO/FB	RNP	COURSE	DISTANCE	ALTITUDE
JANIV	IF	PADVE		TF	FB	1.00	333.73	6.00	1400
PADVE	FAF	RW33	MAP	TF	FO	0.30	333.68	4.19	
RW33	MAP	287 MSL		CA			333.68		
287 MSL		GTN NDB		DF	FO	1.00			2200

**MISSED APPROACH**

**MAP:**

LPV: DA  
LNAV/VNAV: DA  
LNAV: RW33

**MISSED APPROACH INSTRUCTIONS:**

CLIMB TO 2200 DIRECT GTN NDB AND HOLD, CONTINUE CLIMB-IN-HOLD TO 2200.

**ALTERNATE MISSED APPROACH INSTRUCTIONS:**

**PROFILE:**

1. PT      **SIDE OF COURSE**                      **OUTBOUND**                      **FT WITHIN**                      **MILES OF (IAF)**
2. PROFILE STARTS AT JANIV
3. **FAC:** 333.68      **FAF:** PADVE                      **DIST FAF TO MAP:** 4.19                      **DIST FAF TO THLD:** 4.19
4. **MIN ALT:**    JANIV 2100, PADVE 1400
5. **DIST TO THLD FROM OM:**                      **MM:**                      **IM:**                      **150 HAT:**                      **274 HAT:** 0.69                      **GS ANT:**
6. **MIN GP INCPT:** 1400                      **GP ALT AT FAF :** PADVE 1400                      **OM:**                      **MM:**                      **IM:**
7. **GP ANGLE:** 3.00                      **34:1:** IS CLEAR                      **20:1:** IS CLEAR                      **TCH:** 55.0
8. **MSA FROM:** RW33 2500



**PBN REQUIREMENTS NOTE:**

RNP APCH.

**NOTES:**

CHART NOTE: CIRCLING NA NE OF RWY 15-33.  
 CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -11°C OR ABOVE 54°C.  
 CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).  
 CHART PLANVIEW NOTE: NOTE: PROHIBITED AREA (P-56) 1.5 NM NORTH OF DCA - AVOID SURFACE TO 18000 MSL.

**ADDITIONAL FLIGHT DATA:**

CHART CIRCLING ICON.  
 CHART P-56 A AND B  
 CHART P-73  
 CHART VDP AT 2.10 NM TO RW33\*  
 \*LNAV ONLY  
 WAAS CHANNEL #90123  
 REFERENCE PATH ID: W33A  
 CHART FAS OBST: 451 ANTENNA 384813N/0765944W.  
 HOLD NW, RT, 147.00 INBOUND  
 LTP HAE: -29 M

**MINIMUMS:**

TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT

**ALTERNATE:** NA  STANDARD - CAT C 900-2 1/2, CAT D 900-3

<b>CATEGORY:</b>	<b>A</b>			<b>B</b>			<b>C</b>			<b>D</b>			<b>E</b>		
<b>FINAL TYPE</b>	<b>DA/MDA</b>	<b>VIS</b>	<b>HAT/HAA</b>	<b>DA/MDA</b>	<b>VIS</b>	<b>HAT/HAA</b>	<b>DA/MDA</b>	<b>VIS</b>	<b>HAT/HAA</b>	<b>DA/MDA</b>	<b>VIS</b>	<b>HAT/HAA</b>	<b>DA/MDA</b>	<b>VIS</b>	<b>HAT/HAA</b>
LPV DA	287	7/8	274	287	7/8	274	287	7/8	274	287	7/8	274			
LNAV/VNAV DA	609	2	596	609	2	596	609	2	596	609	2	596			
LNAV MDA	720	1	707	720	1	707	720	2	707	720	2	707			
CIRCLING	720	1	706	720	1	706	840	2 1/2	826	900	3	886			

**CHANGES - REASONS**

1. DELETED NOTE: DME/DME RNP-0.3 NA. - ADDED PBN REQUIREMENTS NOTE: RNP APCH.
2. DELETED NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -9°C (16°F) OR ABOVE 54°C (130°F). - ADDED FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -11°C OR ABOVE 54°C.
3. CHANGED ALL REFERENCES OF FIX CROFT TO PADVE. - FIX RENAMED DUE TO DUPLICATE USAGE.
4. ADDED 20:1 IS CLEAR TO PROFILE SECTION. - TARGETS EVALUATION.
5. CHANGED ADDITIONAL FLIGHT DATA CHART VDP AT 2.09 NM TO RW33\* TO CHART VDP AT 2.10 NM TO RW33\*. - TARGETS EVALUATION.
6. CHANGED LPV ALL CATS VISIBILITY FROM 3/4 SM TO 7/8 SM. - UPDATED VISCHECK CALCULATION.
7. CHANGED LPV ALL CATS DA/HAT FROM 263/250 TO 287/274. - INCORPORATE NOTAM FDC 9/9771.
8. FAS OBST CHANGED FROM 469 AAO TO 451 ANTENNA - TARGETS EVALUATION.



**AIRPORT**

RONALD REAGAN WASHINGTON NATIONAL

**AIRPORT ID**

KDCA

**PROCEDURE NAME**

RNAV (GPS) RWY 33

**ORIGINAL/AMENDMENT**

1B

**CITY**

WASHINGTON

**STATE**

DC

**COORDINATED WITH:**

**A4A**  **ALPA**  **AOPA**  **APA**  **HAI**  **NBAA**  **OTHER:** ZDC, PCT TRACON, ARPT MGR

**FLIGHT CHECKED BY**

BOB S PRESSLER

*Digitally signed by*

**WARDELL HENNING**

**OFFICE**

FICO

**DATE**

10/27/2020

**DEVELOPED BY**

WARDELL HENNING (THOR CORNELL)

*Digitally signed by*

**WARDELL HENNING**

Oct 29, 2020

**OFFICE**

AJV-A432

**DATE**

02/26/2020

**APPROVED BY**

GEORGE DAVIS

*Digitally signed by*

**WARDELL HENNING**

Oct 29, 2020

**OFFICE**

AJV-A430

**DATE**

**TITLE**  
MANAGER

Oct 29, 2020



AIRPORTRONALD REAGAN WASHINGTON  
NATIONALAIRPORT ID

KDCA

PROCEDURE NAME

RNAV (GPS) RWY 33

ORIGINAL/AMENDMENT

1B

CITY

WASHINGTON

STATE

DC

FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KDCA
RUNWAY	RW33
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W33A
LTP/FTP LATITUDE	385059.2945N
LTP/FTP LONGITUDE	0770155.9525W
LTP/FTP ELLIPSOIDAL HEIGHT	-00290
FPAP LATITUDE	385210.1855N
FPAP LONGITUDE	0770305.1665W
THRESHOLD CROSSING HEIGHT (TCH)	00055.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	1168
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0
CRC REMAINDER	96B5C4D1

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K6
LTP ORTHOMETRIC HEIGHT	+00031
FPAP ORTHOMETRIC HEIGHT	+00031

QUALITY  
10  
CHECKED

FEDERAL AVIATION ADMINISTRATION  
 FLIGHT STANDARDS SERVICE  
 STANDARD INSTRUMENT APPROACH PROCEDURE DATA RECORD

AIRPORT	AIRPORT ID	PROCEDURE NAME	AMDT NO.	CITY	STATE	AIRPORT ELEVATION	FACILITY
RONALD REAGAN WASHINGTON NATIONAL	KDCA	RNAV (GPS) RWY 33	1B	WASHINGTON	DC	14	RNAV

**PART A: OBSTRUCTION DATA SEGMENTS**

INTERMEDIATE

FROM JANIV TO PADVE

RNP	DISTANCE 6.00	PAT	MAP	HAT			HMAS					
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
1.TOWER (24-020032)	384622.44N/0765515.31W		550	50	20	2C	500				AT350	1400
2.TERRAIN	384724.00N/0765627.00W		276 (300)								AS1000	1300

**COMPUTATIONS**

ALT    KIAS    KTAS    HAA    VKTW    TR    BA    DTA    COURSE CHANGE    DVEB    VEB OCS    RF CENTER FIX/DISTANCE

**SEGMENT REMARKS:**

FINAL: LPV

FROM PADVE TO RW33

RNP	DISTANCE 4.19	PAT	MAP DA	HAT 274			HMAS					
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
								ASC			MA24	287

**COMPUTATIONS**

ALT    KIAS    KTAS    HAA    VKTW    TR    BA    DTA    COURSE CHANGE    DVEB    VEB OCS    RF CENTER FIX/DISTANCE

**SEGMENT REMARKS:**



**AIRPORT**  
RONALD REAGAN  
WASHINGTON NATIONAL

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KDC A

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RNAV (GPS) RWY 33

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1B

**CITY**  
WASHINGTON

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DC

**AIRPORT ELEVATION**  
14

**FACILITY**  
RNAV

FINAL: LNAV/VNAV

**FROM** **TO**  
PADVE RW33

**RNP** **DISTANCE** **PAT** **MAP** **HAT** **HMAS**  
4.19 DA 596

OBSTRUCTION	COORDINATES	ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
3.TREE (11-021063)	385019.06N/0770021.42W	260	20	3	1A		23.01:1				609

**COMPUTATIONS**  
**ALT** **KIAS** **KTAS** **HAA** **VKTW** **TR** **BA** **DTA** **COURSE CHANGE** **DVEB** **VEB OCS** **RF CENTER FIX/DISTANCE**

**SEGMENT REMARKS:**

FINAL: LNAV

**FROM** **TO**  
PADVE RW33

**RNP** **DISTANCE** **PAT** **MAP** **HAT** **HMAS**  
4.19 RW33 707

OBSTRUCTION	COORDINATES	ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
4.ANTENNA (11-021813)	384812.88N/0765944.26W	451	20	3	1A	250					720

**COMPUTATIONS**  
**ALT** **KIAS** **KTAS** **HAA** **VKTW** **TR** **BA** **DTA** **COURSE CHANGE** **DVEB** **VEB OCS** **RF CENTER FIX/DISTANCE**

**SEGMENT REMARKS:**



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**MISSED APPROACH : LPV**

**FROM** DA **TO** GTN NDB

RNP	DISTANCE	PAT	MAP	HAT			HMAS 85					
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
10.BUILDING (51-075951)	385125.32N/0770304.37W		366	20	3	1A		ASC				2200
5.TOWER (11-000010)	385624.20N/0770452.42W		1049	500	50	5D	1000					2100
6.TERRAIN	385418.00N/0770745.00W		463 (500)								AS1500	2000

**COMPUTATIONS**

ALT	KIAS	KTAS	HAA	VKTW	TR	BA	DTA	COURSE CHANGE	DVEB	VEB OCS	RF CENTER FIX/DISTANCE
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**SEGMENT REMARKS:**

**MISSED APPROACH : LNAV/VNAV**

**FROM** DA **TO** GTN NDB

RNP	DISTANCE	PAT	MAP	HAT			HMAS 448					
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
								ASC				2200
5.TOWER (11-000010)	385624.20N/0770452.42W		1049	500	50	5D	1000					2100
6.TERRAIN	385418.00N/0770745.00W		463 (500)								AS1500	2000

**COMPUTATIONS**

ALT	KIAS	KTAS	HAA	VKTW	TR	BA	DTA	COURSE CHANGE	DVEB	VEB OCS	RF CENTER FIX/DISTANCE
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**SEGMENT REMARKS:**



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**MISSED APPROACH : LNAV**

**FROM**  
RW33

**TO**  
GTN NDB

RNP	DISTANCE	PAT	MAP	HAT			HMAS 620			ADJUSTMENTS	MIN ALT	
<b>OBSTRUCTION</b>	<b>COORDINATES</b>		<b>ELEV MSL</b>	<b>HORZ</b>	<b>VERT</b>	<b>AC</b>	<b>ROC</b>	<b>OCS</b>	<b>CG</b>	<b>CGTA</b>	<b>ADJUSTMENTS</b>	<b>MIN ALT</b>
								ASC				2200
5.TOWER (11-000010)	385624.20N/0770452.42W		1049	500	50	5D	1000					2100
6.TERRAIN	385418.00N/0770745.00W		463 (500)								AS1500	2000

**COMPUTATIONS**

**ALT**    **KIAS**    **KTAS**    **HAA**    **VKTW**    **TR**    **BA**    **DTA**    **COURSE CHANGE**    **DVEB**    **VEB OCS**    **RF CENTER FIX/DISTANCE**

**SEGMENT REMARKS:**

**CIRCLING**     ALL CATS     CAT A     CAT B     CAT C     CAT D     CAT E     NOT AUTHORIZED

OBSTRUCTION	COORDINATES	RADIUS	HAA	ELEV MSL	HORZ	VERT	AC	ROC	OCS	ADJUSTMENTS	MIN ALT
<b>CATEGORY A</b>											
7.BLDG (51-040398)	385207.42N/0770359.54W	1.30	706	406	20	10	1B	300			720
<b>CATEGORY B</b>											
7.BLDG (51-040398)	385207.42N/0770359.54W	1.81	706	406	20	10	1B	300			720
<b>CATEGORY C</b>											
8.BLDG (51-000851)	385311.00N/0770543.00W	2.88	826	483	500	50	5D	300		AC50	840
<b>CATEGORY D</b>											
9.BUILDING (51-001361)	385041.00N/0770657.00W	3.76	886	590	50	20	2C	300			900

**CIRCLING REMARKS:**





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RNAV

**MSA**

**CENTER**  
RW33

**RADIUS**  
25

<b>SECTOR</b>	<b>OBSTRUCTION</b>	<b>COORDINATES</b>	<b>BEARING</b>	<b>DISTANCE</b>	<b>ELEV MSL</b>	<b>HORZ</b>	<b>VERT</b>	<b>AC</b>	<b>ROC</b>	<b>OCS</b>	<b>ADJUSTMENTS</b>	<b>MIN ALT</b>
360-360	TOWER (21-0916)	391642.00N/0764503.00W	038	28.8	1437	20	3	1A	1000			2500

**MSA REMARKS:**

**NOTES/EXPLANATIONS FROM PROCEDURE SEGMENTS:**

TAA NOT UTILIZED AND PROCEDURE DESIGN PER ATC REQUEST TO KEEP AS IS AS MUCH AS POSSIBLE.



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**PART B: SUPPLEMENTAL DATA**

**COMMUNICATIONS WITH**  
ZDC ARTCC, PCT APP CON, DCA TOWER

<u>WX SERVICE</u>	<u>LOCATION</u>	<u>HRS OPERATION</u>	<u>ALTIMETER SOURCE</u>	<u>DISTANCE</u>	<u>SERVICE-A</u>	<u>ADJUSTMENTS</u>
ASOS	KDC A	24	KDC A	0	Y	0

<u>BACK-UP WX SERVICE</u>	<u>LOCATION</u>	<u>HRS OPERATION</u>	<u>ALTIMETER SOURCE</u>	<u>DISTANCE</u>	<u>SERVICE-A</u>	<u>ADJUSTMENTS</u>

**WX REMARKS:**  
BACKUP ALTIMETER NA. REDUNDANT WEATHER SOURCES AVAILABLE.

<u>PRIMARY NAVAID</u>	<u>MONITOR POINT</u>	<u>HRS OPERATION</u>	<u>CAT</u>

<u>APPROACH AND RUNWAY LIGHTING SYSTEM</u>	<u>RUNWAY MARKINGS</u>	<u>RUNWAY VISUAL RANGE</u>
RW17 - PAPI-4R		
RW04 - MIRL, REIL, PAPI-4L	NPI-G	
RW15 - HIRL, REIL, PAPI-4L	NPI-G	
RW22 - MIRL, REIL, PAPI-4L	NPI-G	
RW33 - HIRL, REIL, PAPI-4L	NPI-G	
RW01 - TDZ, ALSF-2, HIRL, C/LINE, PAPI-4R	PIR-G	APPROACH, ROLL OUT
RW19 - MALSF, HIRL, C/LINE, PAPI-4L	PIR-G	APPROACH, ROLL OUT

<u>GLIDESLOPE ANGLE</u>	<u>ELEV RWY THRESHOLD</u>	<u>TCH</u>	<u>ELEV GS ANTENNA</u>	<u>DISTANCE FROM RWY</u>	<u>VGSI ANGLE</u>	<u>TCH</u>
3.00	10.3	55.0			3.00	37.0

**FINAL APPROACH COURSE AIMING**

RUNWAY THRESHOLD	<input checked="" type="checkbox"/>	FT FROM THRESHOLD	DISPLACED THRESHOLD DISTANCE
ON CENTERLINE	<input checked="" type="checkbox"/>	FT FROM CENTERLINE	



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RNAV

**CRITICAL TEMPERATURES**

**CRITICAL LOW**  
-11C

**CRITICAL HIGH**  
+54C

**ACT**  
-11C

**APT ISA**  
+14.97C

**CRITICAL TEMPERATURE REMARKS:**

AVERAGE COLD TEMPERATURE DERIVED FROM 5-YEAR HISTORY (2015-2019).  
CRITICAL LOW TEMPERATURE BASED ON ACT.  
DESCENT RATE (FPM): STANDARD TEMP 955 HIGH TEMP 1260.

**"VISUAL PORTION OF FINAL" PENETRATIONS**

**HELICOPTER 'VISUAL PORTION OF FINAL' PENETRATIONS**

and/or

**5280-FT "PROCEED VFR" SEGMENT LEVEL SURFACE AREA PENETRATIONS**

**PART C: GENERAL REMARKS:**

PRECIPITOUS TERRAIN EVALUATION COMPLETED.

ORDER 8260.3, VOLUME 1, CHAPTER 2, NEW CIRCLING CRITERIA APPLIED.



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**PART D: AIRSPACE**

**DOCKET #**

**ALL DISTANCES TO 1/100NM; ELEVATION TO NEAREST 100 FEET; COORDINATES TO 1/100 SECOND; DEG TO 1/100 DEGREE**

<b>DISTANCE FROM</b>	<b>THLD</b>	<b>TO 1000FT POINT</b>	<b>3.88</b>
<b>WIDTH OF</b>	<b>FINAL</b>	<b>SEGMENT AT 1000FT POINT</b>	<b>1.84</b>
<b>TRUE COURSE OF</b>	<b>FINAL</b>	<b>SEGMENT CONTAINING 1000FT POINT</b>	<b>322.68</b>
<b>HIGH TERRAIN IN</b>	<b>FINAL</b>	<b>SEGMENT CONTAINING 1000FT POINT</b>	<b>300</b>
<b>DISTANCE FROM</b>	<b>THLD</b>	<b>TO 1500FT POINT</b>	<b>9.59</b>
<b>WIDTH OF</b>	<b>INTERMEDIATE</b>	<b>SEGMENT AT 1500FT POINT</b>	<b>4.00</b>
<b>TRUE COURSE OF</b>	<b>INTERMEDIATE</b>	<b>SEGMENT CONTAINING 1500FT POINT</b>	<b>322.73</b>
<b>HIGH TERRAIN IN</b>	<b>INTERMEDIATE</b>	<b>SEGMENT CONTAINING 1500FT POINT</b>	<b>300</b>

**THRESHOLD  
COORDINATES  
(IF STR-IN)** 385059.29N/0770155.95W

**ARP COORDINATES** 385105.20N/0770215.80W

**RUNWAY APCH END  
AND DIST FURTHEST  
FROM ARP** RUNWAY 15 DISTANCE 0.65 NM

**FAF  
COORDINATES**

**FIX NAME  
COORDINATES**

**REMARKS**  
NO ADDITIONAL AIRSPACE REQUIRED



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CITY  
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AIRPORT ELEVATION  
14

FACILITY  
RNAV

**PART E: PREPARED BY**

NAME  
WARDELL HENNING (THOR CORNELL)

OFFICE  
AJV-A432

DATE  
02/26/2020

TITLE  
AERONAUTICAL INFORMATION SPECIALIST

QUALITY  
10  
CHECKED