Modifications to FAA Standards

EXAMPLE

Federal Aviation Administration

Presented at: Workshop for the Implementation of Procedures for Initial Aerodrome Certification & Continuing Aerodrome Safety Oversight

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Date: Mexico City, MX

June 27, 2018

Session Objectives

A. Background - Example

B. MOS Process

C. Describe Mitigations

D. Lines of Business Review

Background (handout)

Background (handout)

- Airport Layout Plan shows the Runway Design Code (RDC) is a B-III
- There are (1,197 “C” Category Operations and 830 Group “III” Operations in 2017)
- Critical aircraft is the Q-400 (C-III Aircraft)
- The Runway Centerline to Parallel Taxiway Centerline distance is 300’
- Runway 9 has visual approach only
- Runway 27 RNAV (GPS) has Visibility Minimums not lower than 1 mile

Question

Airport wants to Reconstruct their Apron Pavement. They are asking for funding.

Do they need to submit a Modification to Standards?

Which Standard are they violating?

Background (handout)

Background (handout)

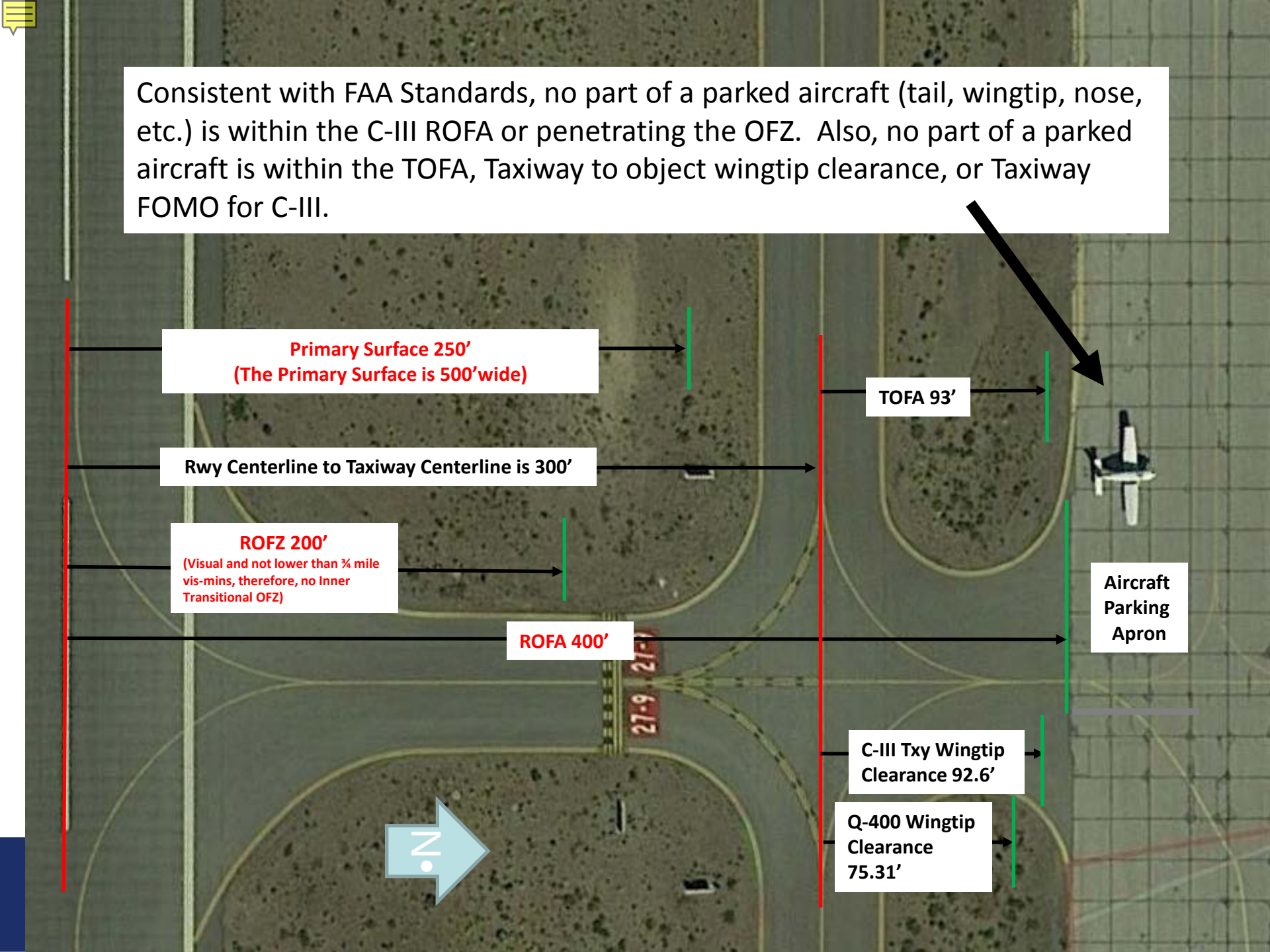
			MMH Existing Conditions	B-III Design Standards	C-III Design Standards
Visibility Minumums			Rwy 9 Visual Rwy 27 > 1 mile	Rwy 9 Visual Rwy 27 > 1 mile	Rwy 9 Visual Rwy 27 > 1 mile
Runway Design			[1]	[2]	[3]
		Runway Length*	7000		
		Runway Width	100	100	150
		Runway Shoulder	10	20	25
		Blast Pad Width	150	140	200
		Blast Pad Length	200	200	200
Runway Protection					
	Runway 9 Safety Area (RSA) (No VGSI)				
		Length beyond Departure End	600	600	1000
		Length prior to Threshold	600	600	600
		Width	300	300	500
	Runway 27 Safety Area (RSA) (VGSI = PAPI)				
		Length beyond Departure End	600	600	1000
		Length prior to Threshold	600	600	600
		Width	300	300	500
	Runway Object Free Area (ROFA)				
		Length beyond Departure End	600	600	1000
		Length prior to Threshold	600	600	600
		Width	720	800	800
	Runway Object Free Zone (ROFZ)				
		Length (beyond Each Runway End)	200	200	200
		Width	400	400	400
	Runway Protection Zone (RPZ)		[5]		
		Length	1000	1000	1700
		Inner Width	500	500	500
		Outer Width	700	700	1010
		Acres	13.77	13.77	29.465
Runway Seperation					
	Runway Centerline to:				
		Holding Position	220	200	250
		Parallel Taxiway/Taxilane Centerline	300	300	400
		Aircraft Parking Area	400	400	500
		Helicopter Touchdown Pad	NA		

Background (handout)

Table 4-1. Design standards based on Airplane Design Group (ADG)

ITEM	DIM (See Figure 3-26)	ADG I	ADG II	ADG III	ADG IV	ADG V	ADG VI
TAXIWAY PROTECTION							
TSA	E	49 ft (15 m)	79 ft (24 m)	118 ft (36 m)	171 ft (52 m)	214 ft (65 m)	262 ft (80 m)
Taxiway OFA		89 ft (27 m)	131 ft (40 m)	186 ft (57 m)	259 ft (79 m)	320 ft (98 m)	386 ft (118 m)
Taxilane OFA		79 ft (24 m)	115 ft (35 m)	162 ft (49 m)	225 ft (69 m)	276 ft (84 m)	334 ft (102 m)
TAXIWAY SEPARATION							
Taxiway Centerline to Parallel Taxiway/Taxilane Centerline [1]	J	70 ft (21 m)	105 ft (32 m)	152 ft (46.5 m)	215 ft (65.5 m)	267 ft (81 m)	324 ft (99 m)
Taxiway Centerline to Fixed or Movable Object	K	44.5 ft (13.5 m)	65.5 ft (20 m)	93 ft (28.5 m)	129.5 ft (39.5 m)	160 ft (48.5 m)	193 ft (59 m)
Taxilane Centerline to Parallel Taxilane Centerline [1]		64 ft (19.5 m)	97 ft (29.5 m)	140 ft (42.5 m)	198 ft (60 m)	245 ft (74.5 m)	298 ft (91 m)
Taxilane Centerline to Fixed or Movable Object		39.5 ft (12 m)	57.5 ft (17.5 m)	81 ft (24.5 m)	112.5 ft (34 m)	138 ft (42 m)	167 ft (51 m)
WINGTIP CLEARANCE							
Taxiway Wingtip Clearance		20 ft (6 m)	26 ft (8 m)	34 ft (10.5 m)	44 ft (13.5 m)	53 ft (16 m)	62 ft (19 m)
Taxilane Wingtip Clearance		15 ft (4.5 m)	18 ft (5.5 m)	22 ft (6.5 m)	27 ft (8 m)	31 ft (9.5 m)	36 ft (11 m)

Consistent with FAA Standards, no part of a parked aircraft (tail, wingtip, nose, etc.) is within the C-III ROFA or penetrating the OFZ. Also, no part of a parked aircraft is within the TOFA, Taxiway to object wingtip clearance, or Taxiway FOMO for C-III.



Laws and Regulations

- **Airport and Airway Improvement Act:**
  - 49 U.S. Code § 47105 – Project Grant Applications - (b)(3) requires compliance with FAA standards.
  - An application for a project grant under this subchapter may propose airport development **only** **if the development complies with standards** the Secretary prescribes or approves, including standards for site location, airport layout, site preparation, paving, lighting, and safety of approaches.
- **Airport Improvement Program:**
- **Passenger Facility Charge:**

Background (handout)

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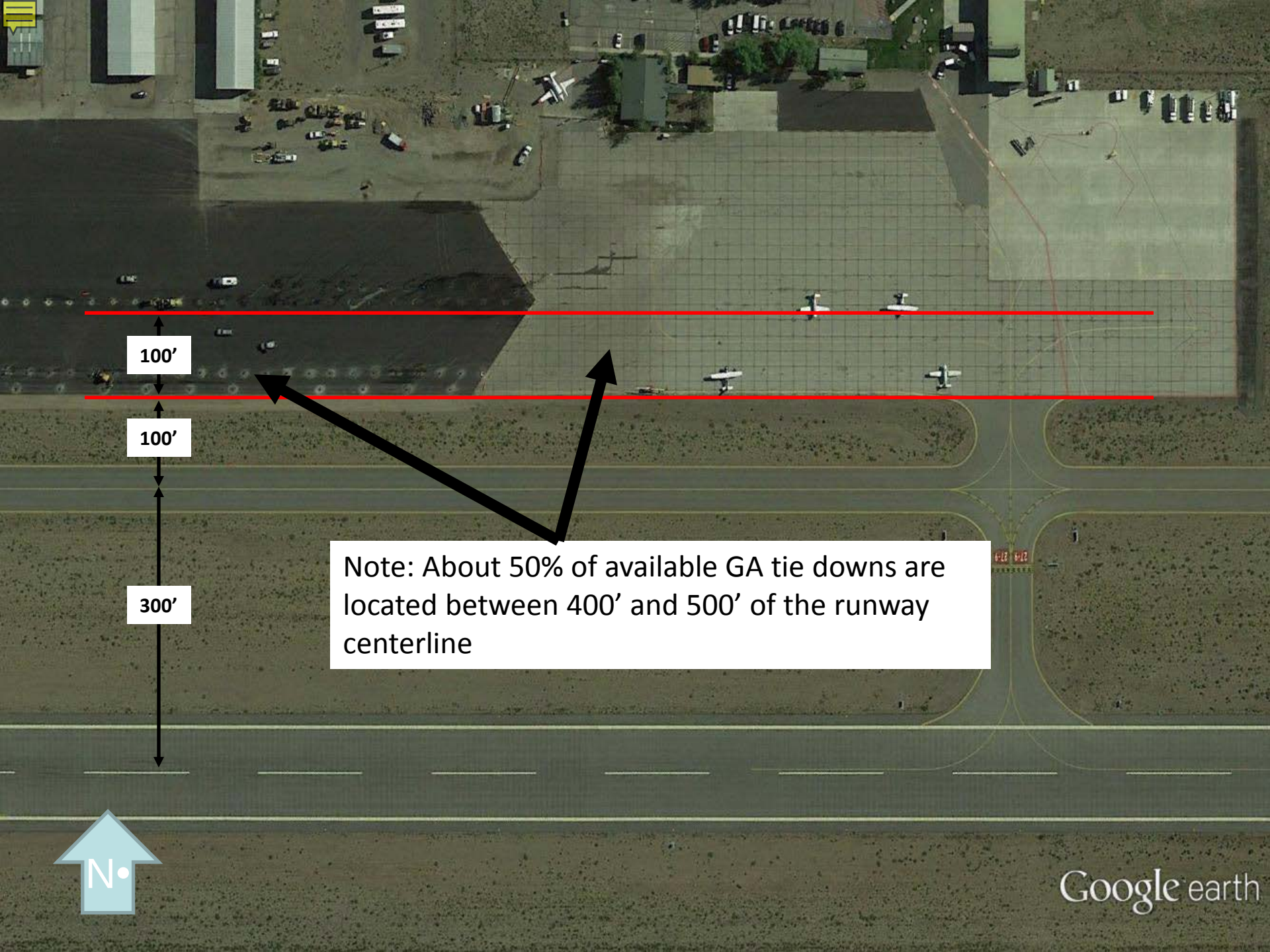
Which MOS do they need to consider?

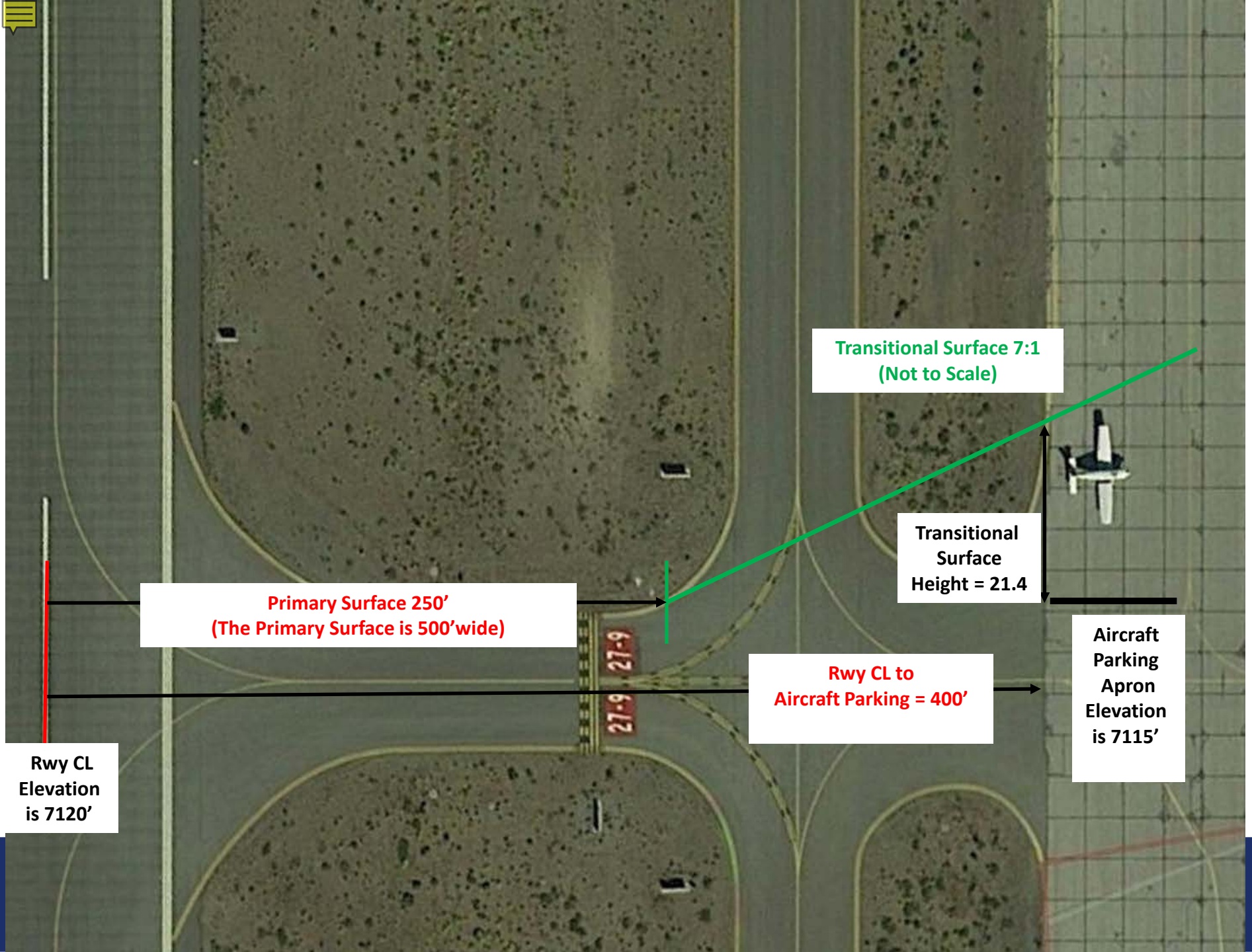
- **MOS No1:** The RW ℄ to Parallel TW ℄ distance is 300'.
  Needs to be 400'

- **MOS No2:** The RW ℄ to Aircraft Parking is 400'.
  Needs to be 500'

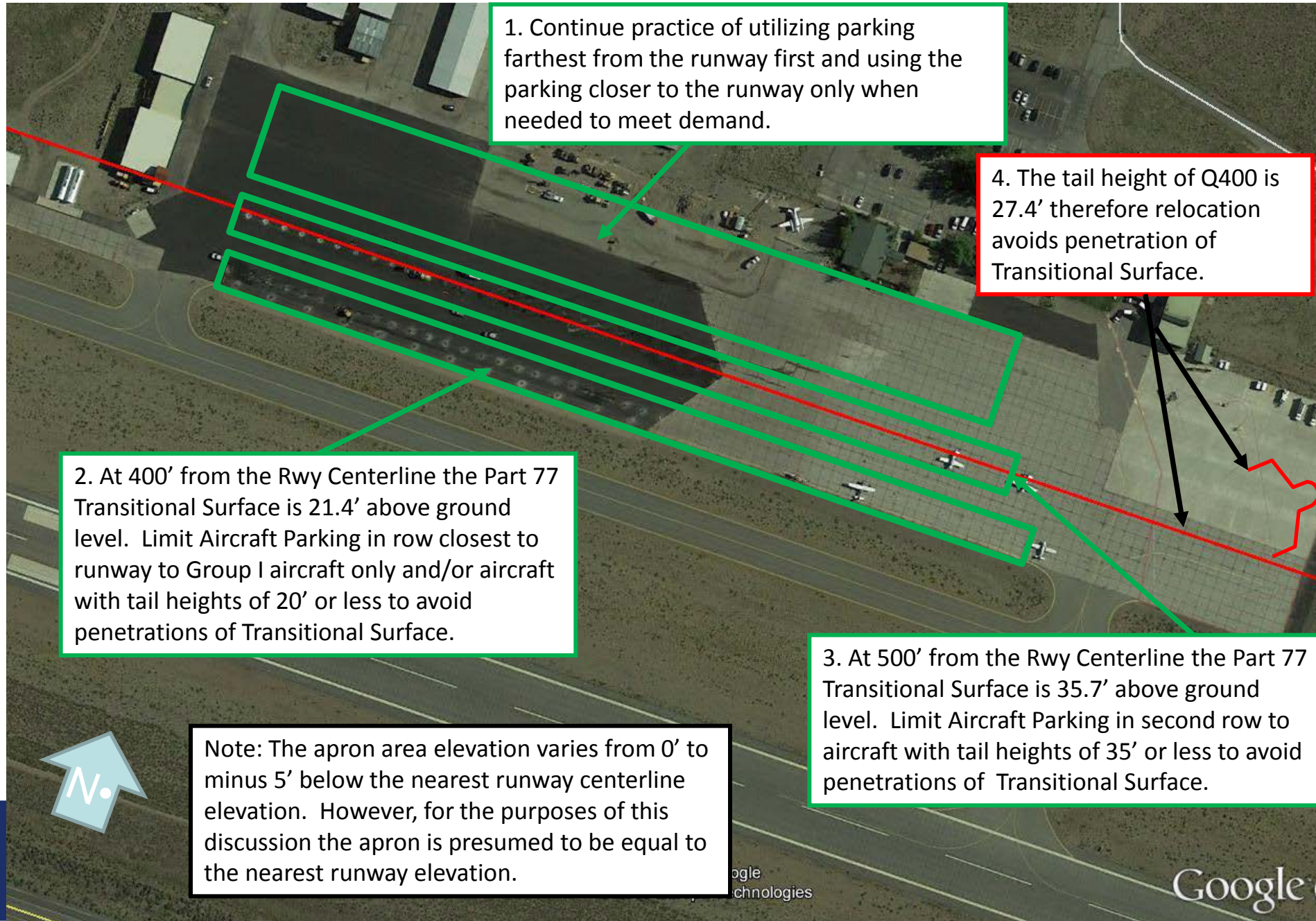
- **MOS No3:** The Runway Object Free Area Width is 720'.
  Needs to be 800'

- **MOS No4:** The Length beyond the Departure End is 600'.
  Needs to be 1000'

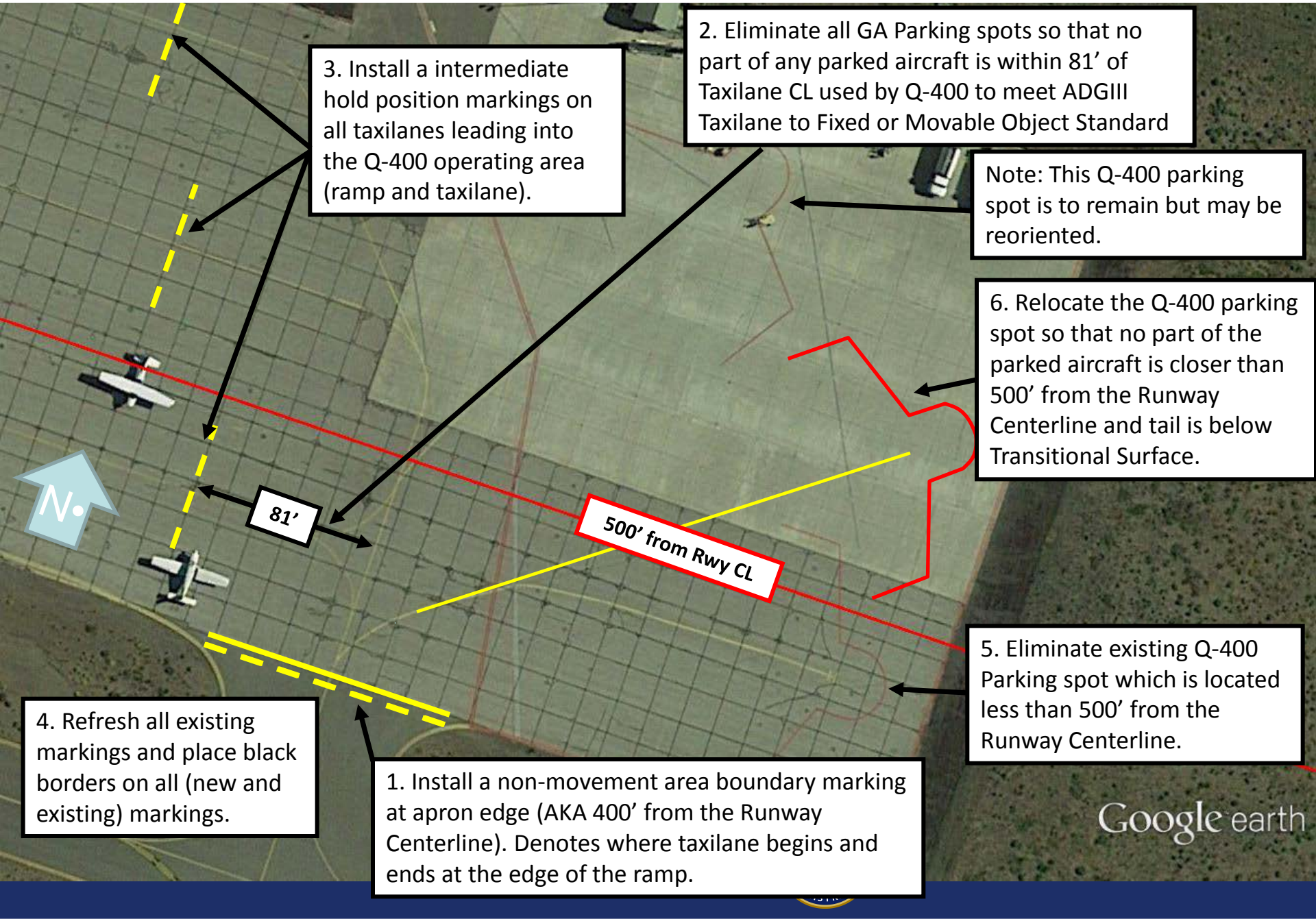

100’
100’
300’
Note: About 50% of available GA tie downs are located between 400’ and 500’ of the runway centerline
N
Google earth


Transitional Surface 7:1
(Not to Scale)
Transitional
Surface
Height = 21.4
Primary Surface 250’
(The Primary Surface is 500’wide)
Rwy CL to
Aircraft Parking = 400’
Aircraft
Parking
Apron
Elevation
is 7115’
Rwy CL
Elevation
is 7120’
27-9
27-9

Recommended Management of GA Aircraft Parking



Recommended Reconfiguration and Marking of Q-400 Apron and Adjacent Areas



Session Objectives

A. Background - Example

B. MOS Process

C. Describe Mitigations

D. Lines of Business Review (NEXT!)

Discussion