ICAO NOTAM 101 for Airport Operators

Presented to: Airport Operators

By: Federal Aviation Administration

Date: March 2022

Federal Aviation
Administration

ICAO NOTAM Format

- The FAA is changing the format for Notice to Air Missions (NOTAM) to align with international standards. The transition to the new format will ensure U.S. NOTAMs are compliant with standards set by the International Civil Aviation Organization (ICAO).

- The implementation of the ICAO NOTAM format promotes further global harmonization among neighboring Air Navigation Service Providers (ANSPs) and compliance with ICAO standards for NOTAMs.

Benefits

- Improved accuracy and accessibility of NOTAM data for pilots, dispatchers and NOTAM consumers
- Provides NOTAM consumers with one consistent format for domestic and international operations
- Allows for enhanced search, sorting, filtering, and archiving capabilities of NOTAM data
- Promotes further global harmonization among neighboring Air Navigation Service Providers (ANSPs) and compliance with ICAO standards for NOTAMs

What is a NOTAM?

- A NOTAM is a notice containing information that is **essential** to personnel concerned with flight operations but that is **not known far enough in advance** to be publicized by other means.

- NOTAMs concern the **establishment, condition, or change** of any component (facility, service, procedure, or hazard) in the NAS. They must state the **abnormal status** of a component of the NAS — not the normal status.

FAA ICAO NOTAM Policy Order

FAA policies and procedures will be revised to incorporate the International Civil Aviation Organization (ICAO) Standards and Recommended Practices (SARPs)

The FAA will publish an updated version of the 7930.2 *Notices to Airmen* and Advisory Circular 150/5200-28 Notices to *Airmen (NOTAMs) for Airport Operators* that follow the ICAO SARPs for ICAO compliant NOTAMs.

- Annex 15, *Aeronautical Information Services*,
- *Procedures for Air Navigation Services — ICAO Abbreviations and Codes* (PANS-ABC, Doc 8400),
- *Procedure for Air Navigation Services- Aeronautical Information Management (AIM)* (DOC 10066)
- *Aeronautical Information Services Manual* (Doc 8126)

ICAO NOTAM Format

Series

Action (N,R,C)

B0667/21 NOTAMN
Q) KZAU/QMRLC/IV/NBO/A/000/999/4159N08754W005
A) KORD <Location>
B) 2106231700 <From>
C) 2106232300 <To>
D) <Schedule>
E) RWY 04L/22R CLSD
F) <Lower Limit>
G) <Upper Limit>

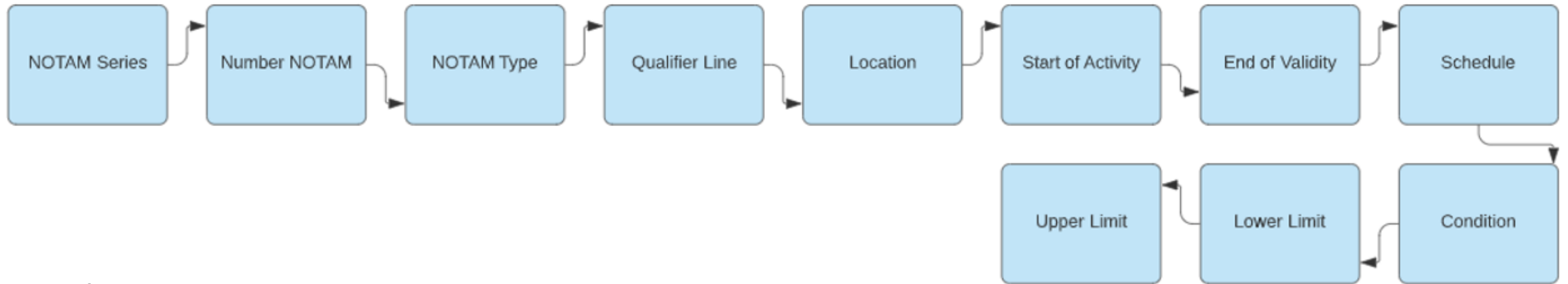The ICAO NOTAM Format is displayed on this slide.

- The content of the NOTAM will largely remain the same, the NOTAM format will change.
- The next slide will depict a comparison of the ICAO formation and Domestic NOTAM Format.

FIR

NOTAM Code

Traffic (I,V)
Purpose (N,B,O)
Scope (A,E,W)
Lower Limit
Upper Limit
Coordinates

Q) KZAU/QMRLC/IV/NBO/A/000/999/4159N08754W005

ICAO and Domestic NOTAM Format Comparison

ICAO NOTAM Format

NOTAM Series → Number NOTAM → NOTAM Type → Qualifier Line → Location → Start of Activity → End of Validity → Schedule → Condition → Lower Limit → Upper Limit

Domestic NOTAM Format

Accountability → NOTAM Number → Affected Location → Keyword → Attribute, Activity, or Surface Designator → Condition → Start of Activity → End of Validity
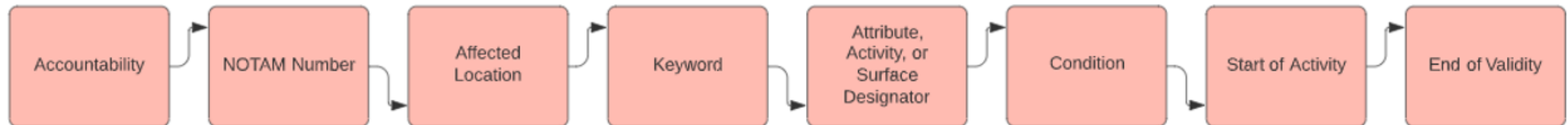
NOTAM Example

The next section of slides will define and explain the ICAO NOTAM format.

- The example NOTAM is for Runway 04L/22R Closed at Chicago O'Hare International Airport (ORD). ORD is located within the Chicago ARTCC (KZAU) Flight Information Region (FIR).
- The effective time for the NOTAM is June 23, 2021 from 1700 to 2300z.

Domestic NOTAM Format
 !ORD 06/001 ORD RWY 04L/22R CLSD 2106231700-2106232300

RWY 04L/22R is closed
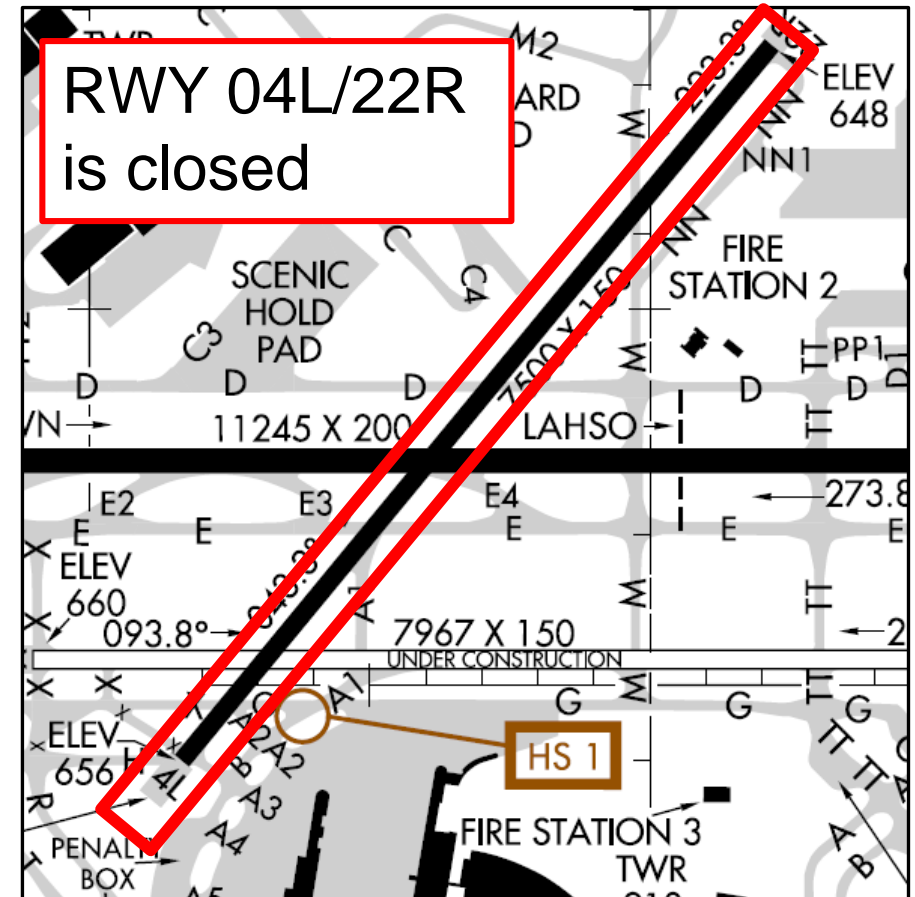
ICAO NOTAM SERIES

In the ICAO format, NOTAMs are organized by Series, with each Series covering a specific NOTAM condition.

- The Series is the first element of the NOTAM, followed by the NOTAM Number.
- The NOTAM series assist with sorting and filtering.

NOTAMs are numbered consecutively by Flight Information Region (FIR), and series beginning with S0001 each year.

- The NOTAM number and year of issuance are separated by a forward slash; for example, S0211/15, S0002/15.

```
B0667/21 NOTAMN
Q) KZAU/QMRLC/IV/NBO/A/000/999/4159N08754W005
A) KORD <Location>
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C) 2106232300 <To>
D) <Schedule>
E) RWY 04L/22R CLSD
F) <Lower Limit>
G) <Upper Limit>
```

In this example, **B** is the Series for movement areas and **0667/21** is the NOTAM Number.

ICAO NOTAM Series

Series	Name	Domestic NOTAM Subject
B	Aerodrome Movement Areas	RWY, TWY
C	Published Services	COM, WX, ATC
D	Special Activity Airspace	SAA
E	Airspace Events and Activities	PJE, Gliders, Etc.
G	Airways and Air Traffic Routes	
H	Regulatory NOTAMs	FDC, TFR, Security,
I	Apron/Ramp and Facilities	APN
J	Obstructions	OBST, Crane, BLDG, Non-FCC Tower
K	FCC Obstructions	ASR assigned
N	Ground-Based Navigational Aids	NAVAID
R	Field Condition NOTAM	RWY, TWY, APN
V	Published Instrument Procedures	IFP
Z	Satellite Based Information	GPS

The FAA will utilize 13 different series for NOTAMs.

The Department of Defense (DoD) uses F, L, M, V, W, and X Series for Military NOTAMs

NOTAM Series will replace keywords used in Domestic NOTAM Format.

**Note: Series may be updated with final publication of the ICAO NOTAM order

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ICAO NOTAM Type

B0667/21 NOTAMN
Q) KZAU/QMRLC/IV/NBO/A/000/999/4159N0875W005
A) KORD <Location>
B) 2106231700 <From>
C) 2106232300 <To>
D) <Schedule>
E) RWY 04L/22R CLSD
F) <Lower Limit>
G) <Upper Limit>

The Action indicates the type of NOTAM.

This example is a new NOTAM and the message identification indicates **NOTAMN.**

Message ID	Type of NOTAM
NOTAMN	Contains new information
NOTAMR	Replaces previous NOTAM
NOTAMC	Cancels previous non-auto cancel NOTAM

Qualifier Line – "Q" Line

FIR	NOTAM CODE	TRAFFIC	PURPOSE	SCOPE	LOWER	UPPER	COORDINATES/ RADIUS
KZAU	QMRLC	IV	NBO	A	000	999	4159N08754W005

A qualifier line contains coded information, coordinates, and radius for area for automated filtering of NOTAMs

- Used for system filtering, sorting and prioritization.
- Information may not be visible to pilot in display of NOTAM information.

Q) KZAU/QMRLC/IV/NBO/A/000/999/4159N08754W005

Example of the "Q" Line.

Qualifier Line – Flight Information Region (FIR)

FIR	NOTAM CODE	TRAFFIC	PURPOSE	SCOPE	LOWER	UPPER	COORDINATES/ RADIUS
KZAU	QMRLC	IV	NBO	A	000	999	4159N08754W005

The first field of the qualifier line is the Flight Information Region (FIR). A FIR is defined as the ICAO location indicator of the FIR in which the subject of the NOTAM is located geographically.

- In CONUS, FIR identifiers are based on the Air Route Traffic Control Centers (ARTCC) airspace boundaries and identifiers.

- Replaces the Flight Service Station accountability.

- FDC, CARF, GPS accountability not compliant in ICAO. These NOTAM categories will have a specific NOTAM Series designated.

- Three (3) letter identifier are not allowed.

Q) KZAU/QMRLC/IV/NBO/A/000/999/4159N08754W005

This example uses KZAU as the FIR.

Qualifier Line – Flight Information Region (FIR)

NOTAMs are numbered consecutively by Flight Information Region (FIR).

- The NOTAM number and year of issuance are separated by a forward slash.
- For example, S0211/21, S0002/21.

Each FIR will have a unique set of numbers for NOTAM numbering.

- Within each FIR, each series will have an unique set of beginning with S0001 each year.

Note: FIR Airspace boundaries for TJZS, KZWY, KZAK are not displayed on the map.

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Qualifier Line – Flight Information Region (FIR)

Below is the listing of FIRs for the National Airspace System (NAS):

Location	Identifier
Albuquerque	KZAB
Atlanta	KZTL
Anchorage	PAZA
Boston	KZBW
Chicago	KZAU
Cleveland	KZOB
Denver	KZDV
Fort Worth	KZFW
Guam	PGZU
Honolulu	PHZH
Houston	KZHU
Indianapolis	KZID
Jacksonville	KDJX

Location	Identifier
Kansas City	KZKC
Los Angeles	KZLA
Memphis	KZME
Miami	KZMA
Minneapolis	KZMP
New York	KZNY
Oakland	KZOA
Salt Lake	KZLC
San Juan	TJZS
Seattle	KZSE
Washington	KZDC
New York Oceanic	KZWY
Oakland Oceanic	KZAK

Qualifier Line - NOTAM Code

FIR	NOTAM CODE	TRAFFIC	PURPOSE	SCOPE	LOWER	UPPER	COORDINATES/ RADIUS
KZAU	QMRLC	IV	NBO	A	000	999	4159N08754W005

The second field of the qualifier line is the NOTAM code.

- The NOTAM Code forms the basis upon which NOTAM qualifiers TRAFFIC, PURPOSE, and SCOPE are determined for inclusion in Item Q) of the NOTAM Format, in addition to defining the abbreviated plain-language text which appears in Item E).

- All NOTAM code groups contain a total of five letters.

- The first letter is always the letter Q. The second and third letters identify the subject, and the fourth and fifth letters denote the condition of the subject being reported.

The example uses **QMRLC** as the NOTAM code.

Q) KZAU/QMRLC/IV/NBO/A/000/999/4159N08754W005

Qualifier Line - Traffic

FIR	NOTAM CODE	TRAFFIC	PURPOSE	SCOPE	LOWER	UPPER	COORDINATES/ RADIUS
KZAU	QMRLC	IV	NBO	A	000	999	4159N08754W005

This qualifier relates the NOTAM to a type of traffic and allows retrieval according to the user's needs.

- Depending on the NOTAM subject and content, the qualifier field TRAFFIC may contain the combined qualifiers.

- Where possible, the appropriate qualifier will be driven by the direct-entry digital NOTAM drop down menus.

	Type of Traffic
I	Instrument Flight Rules (IFR)
V	Visual Flight Rules (VFR)
K	NOTAM is a Checklist

Q) KZAU/QMRLC/IV/NBO/A/000/999/4159N08754W005

This example displays **IV** as the Traffic.

Qualifier Line - Purpose

FIR	NOTAM CODE	TRAFFIC	PURPOSE	SCOPE	LOWER	UPPER	COORDINATES/ RADIUS
KZAU	QMRLC	IV	NBO	A	000	999	4159N08754W005

The Purpose qualifier relates a NOTAM to certain purposes (intentions) and thus allows retrieval according to the user's requirements.

- Depending on the NOTAM subject and content, the qualifier field PURPOSE may contain combined qualifiers. This example displays **NBO** as the Purpose.

	Purpose description
N	NOTAM selected for the immediate attention of aircraft operators
B	NOTAM selected for pre-flight information briefing
O	NOTAM concerning flight operations
M	Miscellaneous NOTAM; not subject for briefing, but is available on request
K	NOTAM is a Checklist

Q) KZAU/QMRLC/IV/NBO/A/000/999/4159N08754W005

This example displays **NBO** as the Purpose.

Qualifier Line – Scope

FIR	NOTAM CODE	TRAFFIC	PURPOSE	SCOPE	LOWER	UPPER	COORDINATES/ RADIUS
KZAU	QMRLC	IV	NBO	A	000	999	4159N08754W005

The scope qualifiers are used to categorize NOTAMs.

- Depending on the NOTAM subject and content, the qualifier field SCOPE may contain combined qualifiers.
- Where possible, the appropriate qualifier will be driven by the direct-entry digital NOTAM drop down menus.

	Scope Description
A	Aerodrome
E	Enroute
W	Navigation warning
K	Checklist

Q) KZAU/QMRLC/IV/NBO/A/000/999/4159N08754W005

This example uses **A** as the scope.

Qualifier Line – Lower and Upper

FIR	NOTAM CODE	TRAFFIC	PURPOSE	SCOPE	LOWER	UPPER	COORDINATES/ RADIUS
KZAU	QMRLC	IV	NBO	A	000	999	4159N08754W005

The lower and upper limit field applies mainly to airspace related NOTAMs but are not limited to them.

- Most aerodrome-related information, qualifier scope 'A', refers to ground installations for which the insertion of lower/upper limit is not relevant.

- Therefore, such NOTAMs must include the default values of 000/999.

Q) KZAU/QMRLC/IV/NBO/A/000/999/4159N08754W005

This example uses **000** for Lower and **999** for Upper.

Qualifier Line – Coordinates and Radius

FIR	NOTAM CODE	TRAFFIC	PURPOSE	SCOPE	LOWER	UPPER	COORDINATES/ RADIUS
KZAU	QMRLC	IV	NBO	A	000	999	4159N08754W005

•The coordinates represent the point of influence, or the approximate center of a circle whose radius encompasses the whole area of influence. It is specified by an 11-character latitude and longitude accurate to one minute.

•The radius is a three-digit distance representing the radius of influence in whole nautical miles. A radius that includes a decimal will be rounded to the next higher whole nautical mile. The radius impacts the pilot briefing coverage and number of NOTAMs received in a NOTAM query, so it must be as precise as possible.

Q) KZAU/QMRLC/IV/NBO/A/000/999/4159N08754W005

This example displays **4159N0875W** as the coordinates and **005** as the radius.

ICAO NOTAM Body

The body of the ICAO NOTAM is broken into eight different items. The NOTAM content is captured in an organized compilation of specific mandatory and optional fields.

Q) KZAU/QMRLC/IV/NBO/A/000/999/4159N08754W005
A) KORD <Location>
B) 2106231700 <From>
C) 2106232300 <To>
D) <Schedule>
E) RWY 04L/22R CLSD
F) <Lower Limit>
G) <Upper Limit>

Q) A qualifier line, which contains coded information, coordinates, and radius for area for the automated filtering of NOTAMs
A) ICAO location indicator of the aerodrome or FIR in which the facility, airspace, or condition being reported is located.
B) Effective date/time (UTC)
C) Expiration date/time (UTC)
D) Schedule (optional)
E) Plain language text description of information
F) Lower altitude limit (Used with Airspace NOTAMs)
G) Upper altitude limit (Used with Airspace NOTAMs)

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NOTAM Body Item A) Location

The A) field is the ICAO location indicator of the aerodrome or FIR in which the facility, airspace, or condition being reported is located.

- Only one aerodrome designator must be entered in Item A).

- For aerodrome, activity must take place within 5 statute miles of the Airport Reference Point (ARP); and the condition/activity must have direct impact on local operations.

- No more than seven FIRs may be indicated in Item A).

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C) 2106232300 <To>
D) <Schedule>
E) RWY 04L/22R CLSD
F) <Lower Limit>
G) <Upper Limit>
```

In this example, KORD is the location and impacted aerodrome.

NOTAM Body Item B) From and Item C) To

Item B) From: This entry is the date and time that the NOTAM becomes in force which is equivalent to the date and time at which the activity or condition described in Item E) begins.

Item C) To: A date-time group must be used to annotate the time that the NOTAM is no longer in effect which is equivalent to the time at which the activity or condition described in Item E) is expected to be no longer valid.

All Times will be designated in UTC.

B0667/21 NOTAMN
Q) KZAU/QMRLC/IV/NBO/A/000/999/4159N0875W005
A) KORD <Location>
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D) <Schedule>
E) RWY 04L/22R CLSD
F) <Lower Limit>
G) <Upper Limit>

In this example, Item B) From is **2106231700** and Item C) is **2106232300**.
The effective time for the NOTAM is June 23, 2021 from 1700 to 2300z.

NOTAM Body Item C) To: NOTAM Duration

The duration of the NOTAM should not exceed **three (3) months** (90 days).

- Exceptions will be based on operational need, agreed upon between the NOTAM authority and the supervisory authority.

A NOTAM is no longer valid and will expire at the time specified in Item C) if not replaced or cancelled before the expiration time.
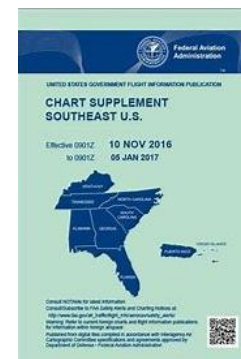
NOTAM Body Item C) To: PERM

When a NOTAM is originated for a permanent change to published aeronautical information, "PERM" must be inserted in lieu of a ten-figure date-time group.

- Prior to the issuance of a PERM NOTAM, the originator must demonstrate that the publication process has been initiated.

A NOTAM which includes PERM in Item C) must be cancelled by the originator **within fifteen (15) days** of the information being published.

Under no circumstances should a NOTAM with Item C) PERM remain in effect for **more than one (1) year** from the effective date.

NOTAM Body Item D) Schedule

The D) Schedule is an optional field.

If the hazard, status of operation, or condition of facility being reported on will be active in accordance with a specific date and time schedule between the dates times indicated in Items B) and C), insert such information under Item D).

B0667/21 NOTAMN
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D) <Schedule>
E) RWY 04L/22R CLSD
F) <Lower Limit>
G) <Upper Limit>

In this example, Item D) is not used. An example of schedule is:

D) *MON WED THU 0900-1300, TUE FRI SAT 0900-2000*

NOTAM Body Item D) Schedule

The following are approved abbreviations for use in Item D):

- **EXC** – For designating a full day or a series of full days when the NOTAM is NOT active.

- **SR** – If appropriate, to indicate sunrise.

- **SS** – If appropriate, to indicate sunset.

- **H24** – For the whole day/dates concerned. Not to be used as a single entry.

- **DLY** – Optional for a 'daily' schedule, the expression 'nightly' will not be used.

- **EVERY** – For a schedule on fixed days.

- **AND –** If used, will be included in front of the last date, group, or time period specified in Item D).
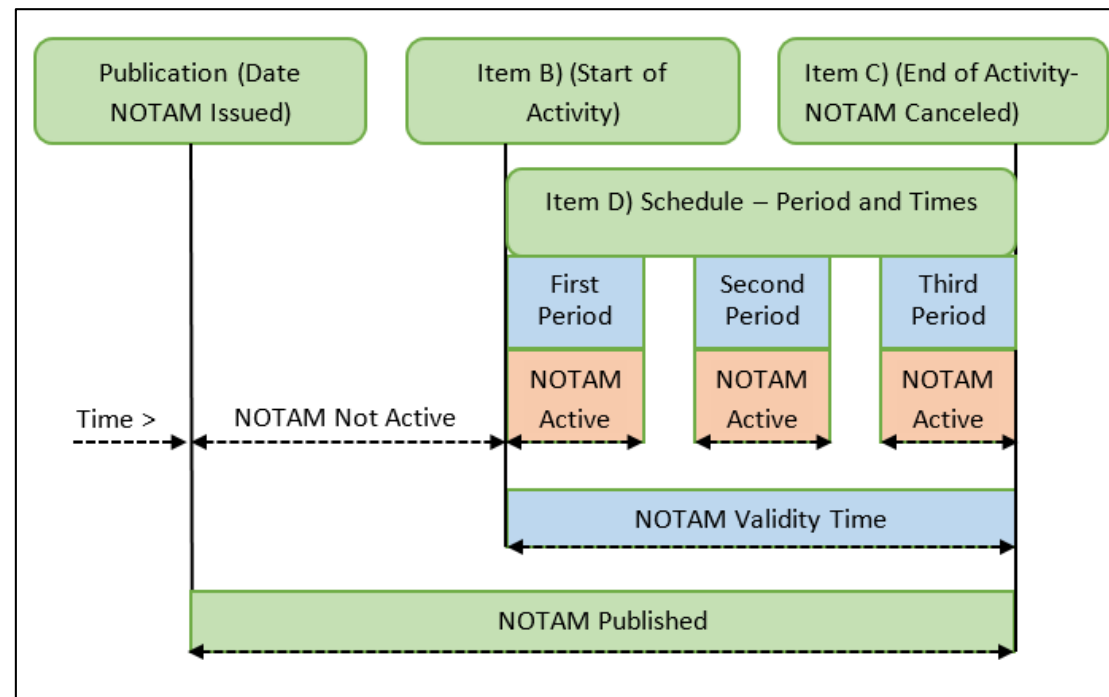
The graphic depicts multiple time frames within Item D). Example:
B) 2202100600 C) 2202292359
D) SUN 0600-1700, WED FRI H24

NOTAM Body Item E) NOTAM Text

The Item E) NOTAM Text field describes is the condition in which the NOTAM is being issued or put into force.

The text must be kept brief, yet contain all essential information needed to accurately convey the changes in condition.

- NOTAM Text must be composed of the significations/uniform abbreviated phraseology assigned to the ICAO NOTAM Code complemented by approved ICAO abbreviations, indicators, identifiers, designators, call signs, frequencies, figures and plain language.

B0667/21 NOTAMN
Q) KZAU/QMRLC/IV/NBO/A/000/999/4159N08754W005
A) KORD <Location>
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C) 2106232300 <To>
D) <Schedule>
E) RWY 04L/22R CLSD
F) <Lower Limit>
G) <Upper Limit>

In this example, RWY 04L/22R CLSD is the NOTAM text.

NOTAM Body Item E) NOTAM Text

When entering information into the NOTAM Text field:

- Avoid using local slang phrases and non-approved abbreviations to eliminate confusion.

- Plain language text may include advisories regarding the impact of the hazard on operations and anticipated delays.

- Each line must be limited to no more than 69 characters which includes spaces until the carriage return is entered.

ICAO NOTAM Contractions

NOTAMs have a unique language characterized by the use of specialized contractions.

- Contractions are imperative to the NOTAM structure because they make communication more efficient and allow computer systems to parse important words.
- The ICAO is the leading authority for standardizing contractions in the international aeronautical community.
- If there is no ICAO contraction, plain language is used.

UNL (unlimited)	TO POINT OF ORIGIN	OBSC (obscured)	UNREL (unreliable)
AVBL or NOT AVBL	CENTERED AT	UNUSABLE	CLSD
IRREGULAR SFC (lips, dips, bumps, holes, ruts, breaks, etc...)	NOW (temporary)	CHANGED TO (permanent)	UNSAFE
TO	EXC	NEAR	BTN and AND
PLUS SEE....	NOT STD	NOT LIGHTED	FLAGGED
FOR/AT (RWY)	WI AN AREA DEFINED AS	LGTD	UNUSABLE (Used in conjunction with a restriction; not by itself)
U/S (Unserviceable)	FLAGGED and LGTD	ADJ (adjacent)	NONMOVEMENT AREA
BARRICADED (means any type of barricade)	LGTD and BARRICADED	OPN or CLSD	MARKED or NOT MARKED

Reference AC 150/5200-28F, NOTAMs for Airport Operators for complete listing of NOTAM Contractions

NOTAM Body Item F) and Item G)

Items F) Lower Limit and G) Upper Limit are required for navigation warnings and airspace restrictions.

- Surface (SFC), an altitude in feet, or a flight level can be specified.

- Unlimited (UNL) may be used to describe an upper limit.

B0667/22 NOTAMN
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C) 2106232300 <To>
D) <Schedule>
E) RWY 04L/22R CLSD
F) <Lower Limit>
G) <Upper Limit>

In this example, Upper and Lower Limit are not used. An example of Lower and Upper Limit is:

**F)1500FT AGL G)17999FT AMSL**

This means from 1,500 feet AGL to 17,999 feet above mean sea level.

Best Practices for ICAO NOTAM Origination

When originating an ICAO NOTAM ask yourself the following questions:

- Is the NOTAM in ICAO format?
- Does this action require a NOTAM and/or meet NOTAM Criteria?
- Is the duration less than three months?
- Is the NOTAM Text of an appropriate length?
- Does a Qualifier-code ("Q" code) exist for the NOTAM?
- Are the proper contractions being used for the NOTAM?
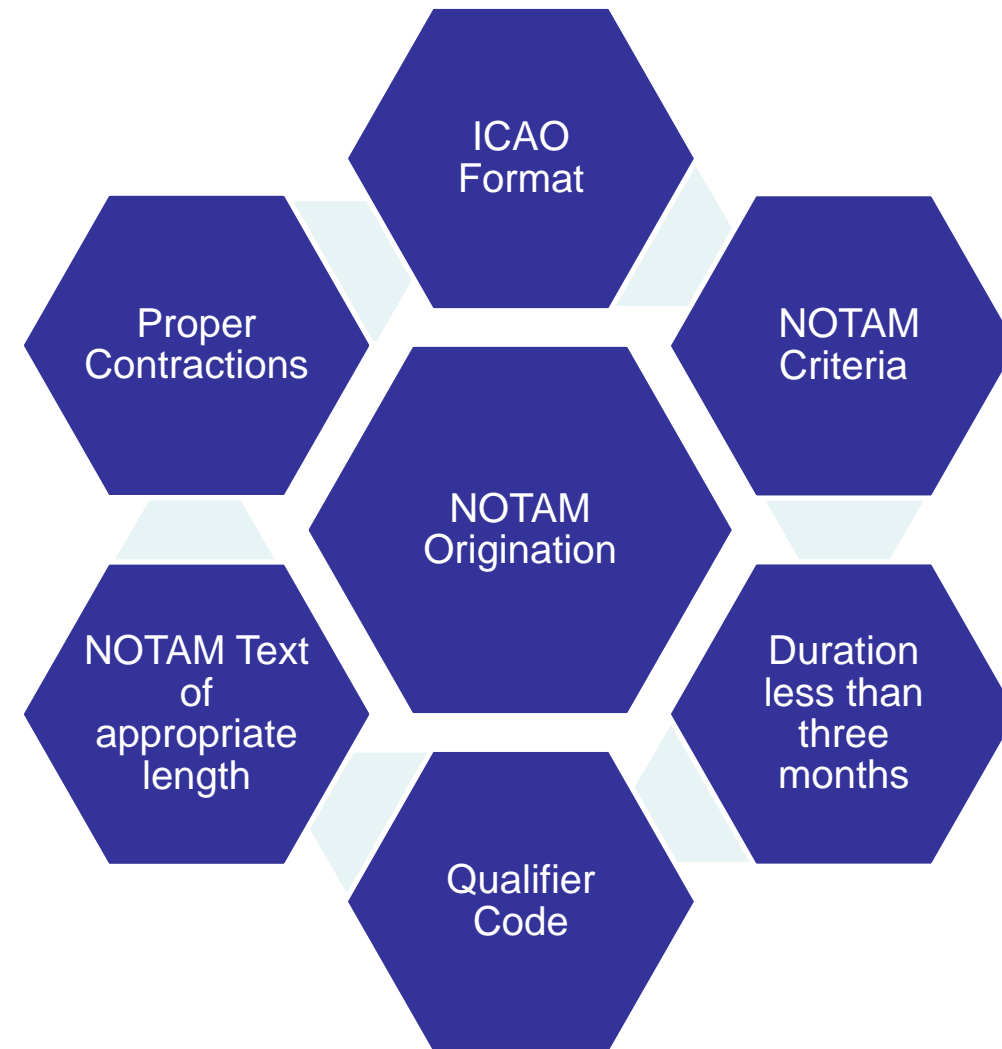
References

ICAO NOTAM Webpage: https://www.faa.gov/air_traffic/flight_info/aeronav/notams

Aeronautical Information Portal:
https://www.faa.gov/air_traffic/flight_info/aeronav/aero_data/Aeronautical_Inquiries/

NOTAM Search: https://notams.aim.faa.gov/notamSearch/

Aeronautical Information Services Homepage: https://www.faa.gov/air_traffic/flight_info/aeronav/

Flight Service Pilot Portal: https://www.1800wxbrief.com/Website/#!/