



*International Civil Aviation Organization*

**The Seventh Meeting of the Asia/Pacific Aeronautical Information Services –  
Aeronautical Information Management Implementation Task Force  
(AAITF/7)**

Ha Noi, Viet Nam, 13 – 16 March 2012

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**Agenda Item 4: AIS-AIM Updates**

**AIRPORT MAPPING IN SUPPORT OF GRAPHICAL NOTAMS**

(Presented by the United States of America)

**SUMMARY**

This paper presents the development of airport mapping in support of graphical NOTAMS in the United States.

This paper relates to –

**Strategic Objectives:**

*A: Safety – Enhance global civil aviation safety*

**Global Plan Initiatives:**

GPI-18 Aeronautical information

**1. INTRODUCTION**

1.1 This paper addresses the progress made by the United States in developing airport mapping data and graphics in support of digital NOTAMS of airport movement construction areas.

**2. DEVELOPMENT OF THE DIGITAL NOTAM SYSTEM**

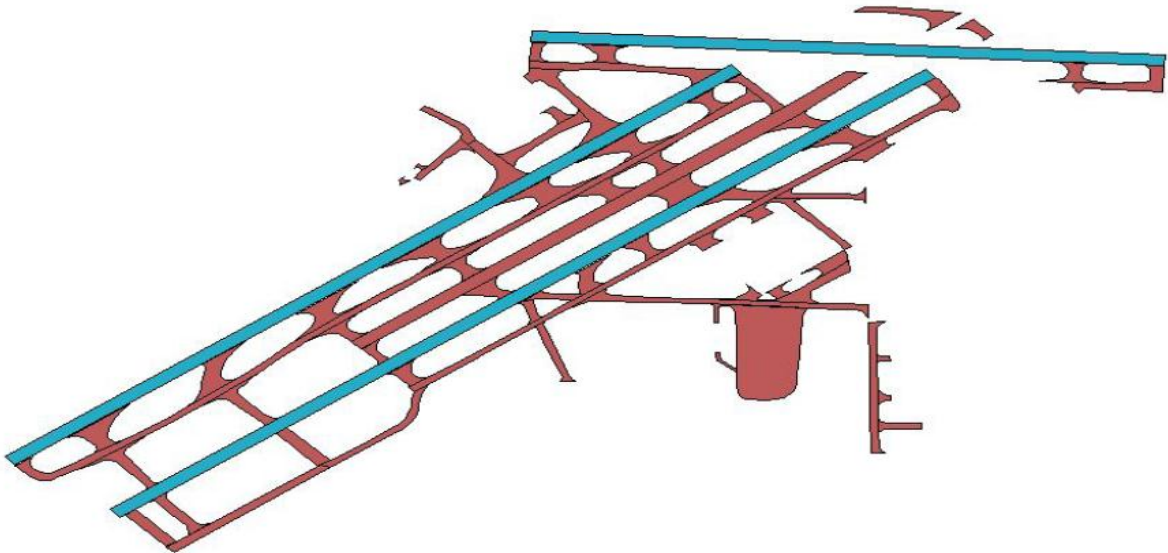
2.1 The United States has developed and is enhancing capabilities for automating NOTAM origination; ensuring NOTAM quality; eliminating time-consuming third party review - review which can cause nonstandard language and typographical mistakes; displaying NOTAM in native FAA and ICAO plain language; and enabling precise filtering, sorting and querying. These capabilities will provide for customized pre-flight information briefings that will increase pilot situational awareness.

2.2 As of January 2012, digital NOTAM entry capability has been deployed at 50 aerodromes across the country. In the near future, digital NOTAM entry capability is planned to be deployed at all FAA 30 core aerodromes and metroplex areas.

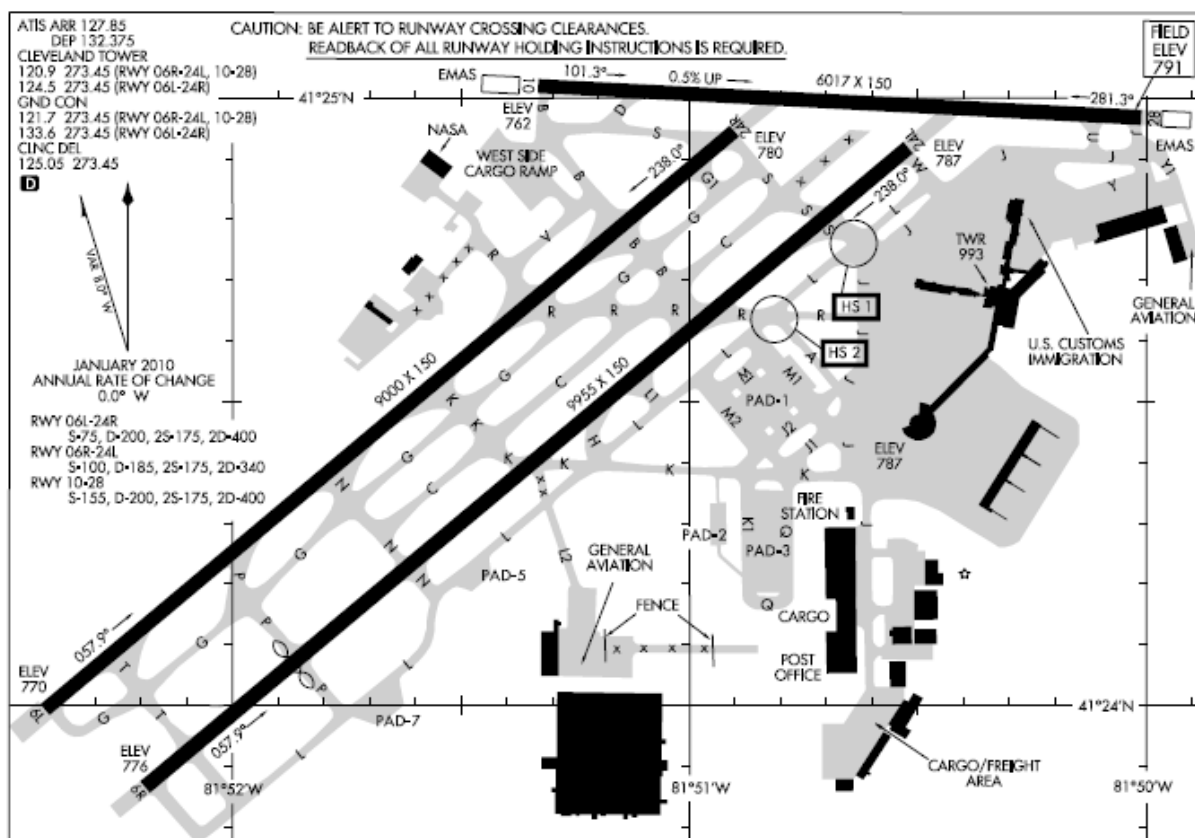
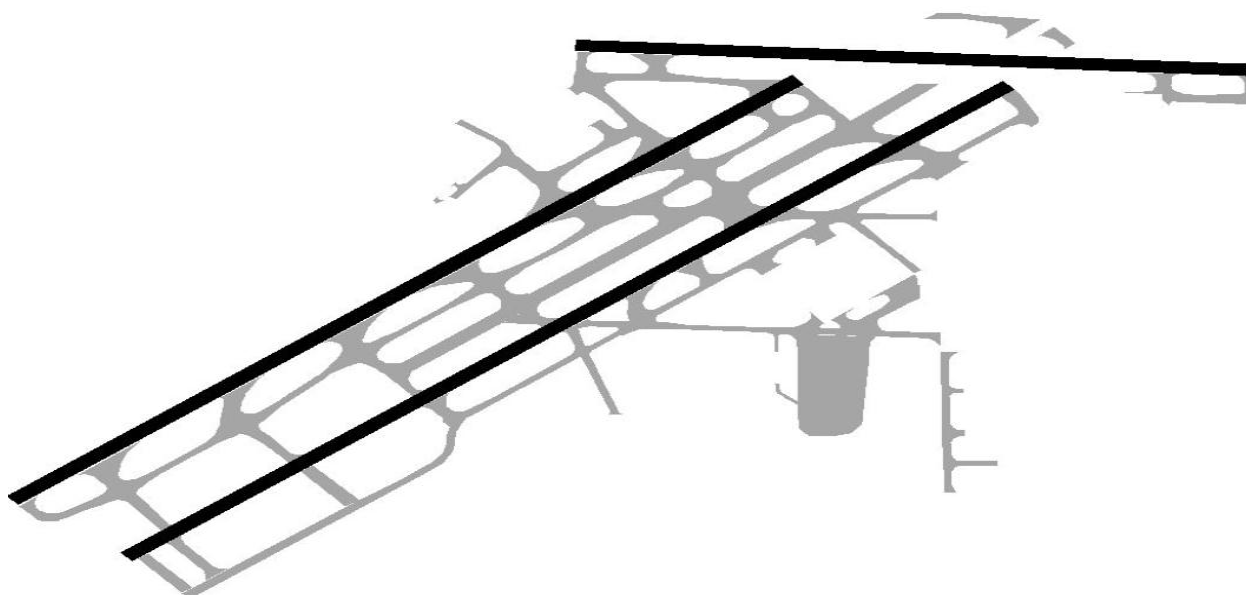
2.3 Despite these advances, a textual description of aerodrome movement area construction is difficult to interpret with out the means of visual display. To create a graphical display of the airport movement area construction NOTAM, the FAA has created airport mapping data in support of this effort.

### 3. DEVELOPMENT OF THE CONSTRUCTION GRAPHIC

3.1 Airport mapping data has been acquired from commercial and State sources which were derived from aerial imagery. The data is of medium to coarse accuracy, suitable for the purposes of graphical NOTAM display. The data was integrated using a commercially available GIS application from which shape files are created:



3.2 For consistency, these shape files are then formatted to appear very similar to the standard FAA airport diagram and form the basis of the construction diagram.



#### 4. APPLICATION OF NOTAM

4.1 The NOTAM system is monitored daily by FAA personnel for new aerodrome construction notices. This monitoring is facilitated by using the online digital NOTAM system which has the ability to search by aerodrome and sort by keyword:

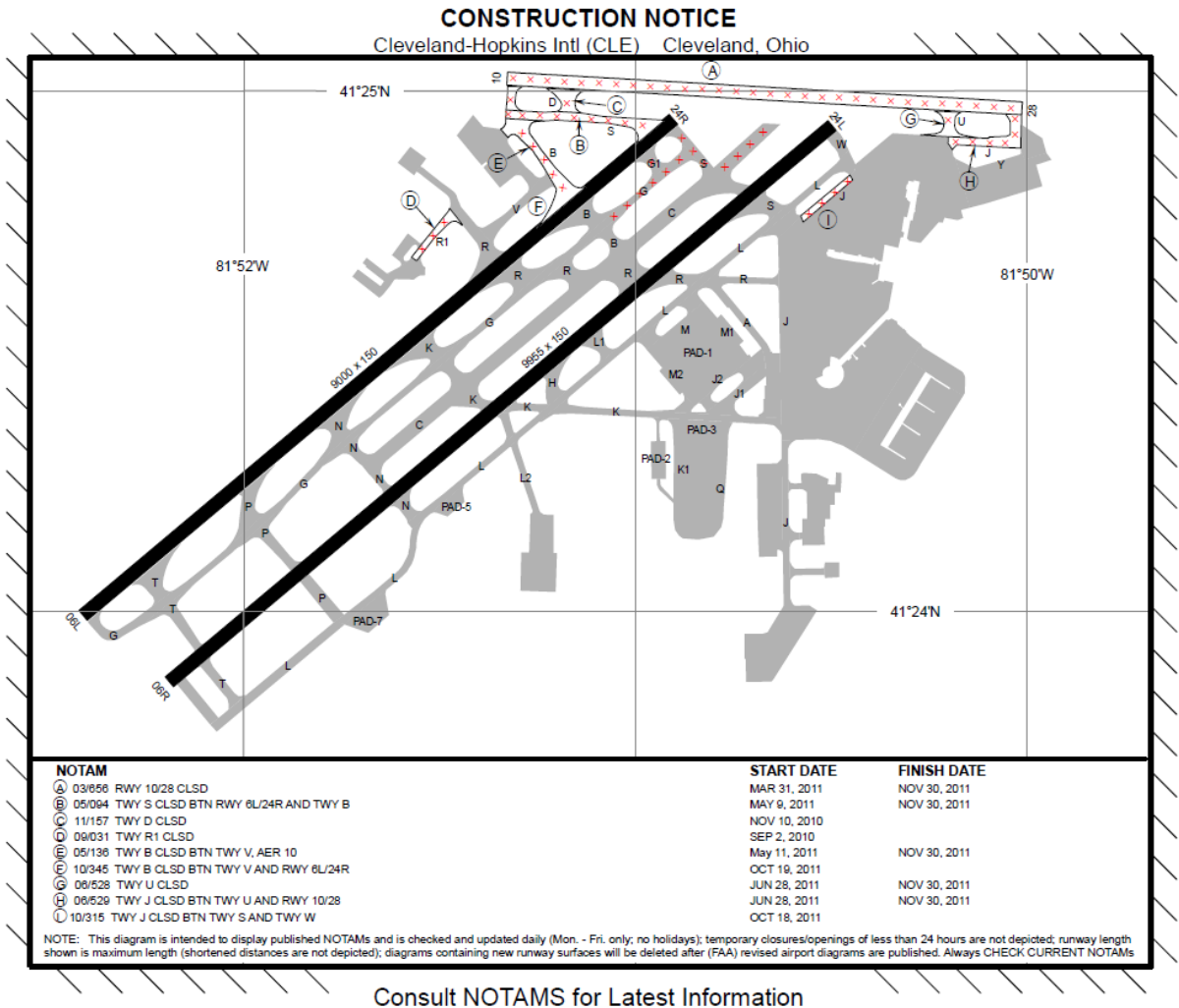
<http://notams.aim.faa.gov/notamSearch/>

4.2 In the following example, the keyword “CLSD” typed in the “Condition Word” entry box displays all the closed surface movement areas for Cleveland-Hopkins Intl (CLE).

The screenshot shows the FAA NOTAM Search interface. The search criteria are set to Location: CLE and Condition Word: CLSD. The results table shows 17 filtered NOTAMs for Cleveland-Hopkins Intl (CLE). The NOTAM counts summary shows 54 total NOTAMs for CLE.

Location	NOTAM #	Class	Start Date UTC	End Date UTC	NOTAM Condition
CLE	10/315	Aerodrome	10/18/2011 1741		TWY J <b>CLSD</b> BTN TWY S,W
CLE	11/157	Aerodrome	11/10/2010 1249		TWY D <b>CLSD</b>
CLE	09/031	Aerodrome	09/02/2010 2215		TWY R1 <b>CLSD</b>
CLE	10/345	Aerodrome	10/19/2011 2318		TWY B <b>CLSD</b> BTN TWY V AND RWY 6L/24R
CLE	07/145	Aerodrome	07/08/2011 1222		APRON PAD 3 BAY 6 <b>CLSD</b> ACFT WINGSPAN OVR 94 FT
CLE	07/147	Aerodrome	07/08/2011 1227		APRON AREA N CONCOURSE D BTN GATES D1/D28 <b>CLSD</b> ACFT WINGSPAN O
CLE	07/141	Aerodrome	07/08/2011 1215		APRON FSS APRON <b>CLSD</b>
CLE	08/578	Aerodrome	08/31/2011 1539		APRON CONCOURSE D TAXI LANE NORTH, SOUTH AND EASTSIDES OF THE
CLE	07/144	Aerodrome	07/08/2011 1222		APRON PAD 3 BAYS 1-5 <b>CLSD</b> ACFT WINGSPAN OVR 134 FT
CLE	07/146	Aerodrome	07/08/2011 1227		APRON CONCOURSE C RAMP TAXI LANE BTN SPOT 2 AND SPOT 5 <b>CLSD</b> TO
CLE	07/140	Aerodrome	07/08/2011 1213	12/23/2011 2100	APRON UPS APRON WEST EDGE 35 FT <b>CLSD</b> BARRICADED TIL 1112232100
CLE	04/191	Aerodrome	04/14/2011 0225	11/30/2011 2100	TWY Y <b>CLSD</b> TO WINGSPAN OVER 79 FEET TIL 1111302100
CLE	03/656	Aerodrome	03/31/2011 1917	11/30/2011 1000	RWY 10/28 <b>CLSD</b> TIL 1111301000
CLE	06/529	Aerodrome	06/28/2011 2014	11/30/2011 1000	TWY J <b>CLSD</b> BTN TWY U, RWY 10/28 TIL 1111301000
CLE	06/528	Aerodrome	06/28/2011 2008	11/30/2011 1000	TWY U <b>CLSD</b> TIL 1111301000
CLE	05/094	Aerodrome	05/09/2011 1443	11/30/2011 1000	TWY S <b>CLSD</b> BTN RWY 6L/24R, TWY B TIL 1111301000
CLE	05/136	Aerodrome	05/11/2011 1522	11/30/2011 1000	TWY B <b>CLSD</b> BTN TWY V, RWY 10 AER TIL 1111301000

4.3 FAA personnel manually interpret the sorted “CLSD” NOTAM displayed, apply the data to the construction graphic and create a corresponding text legend.



## 5. PUBLICATION OF THE CONSTRUCTION NOTICE GRAPHIC

5.1 The graphical construction notice is then uploaded to the National Flight Data Center (NFDC) website at [NFDC.FAA.gov](https://nfdc.faa.gov) under the “Services” tab, “Construction Notices” link.

**NFDC - National Flight Data Center - Windows Internet Explorer**

https://nfdc.faa.gov/portal/index.jsp

Favorites: Home - AIM Quality Manage..., IBM Blueworks Live, eLMS, FAA eCenter, IceMan WebConnect

NFDC - National Flight Data Center

**Federal Aviation Administration** << NFDC Portal

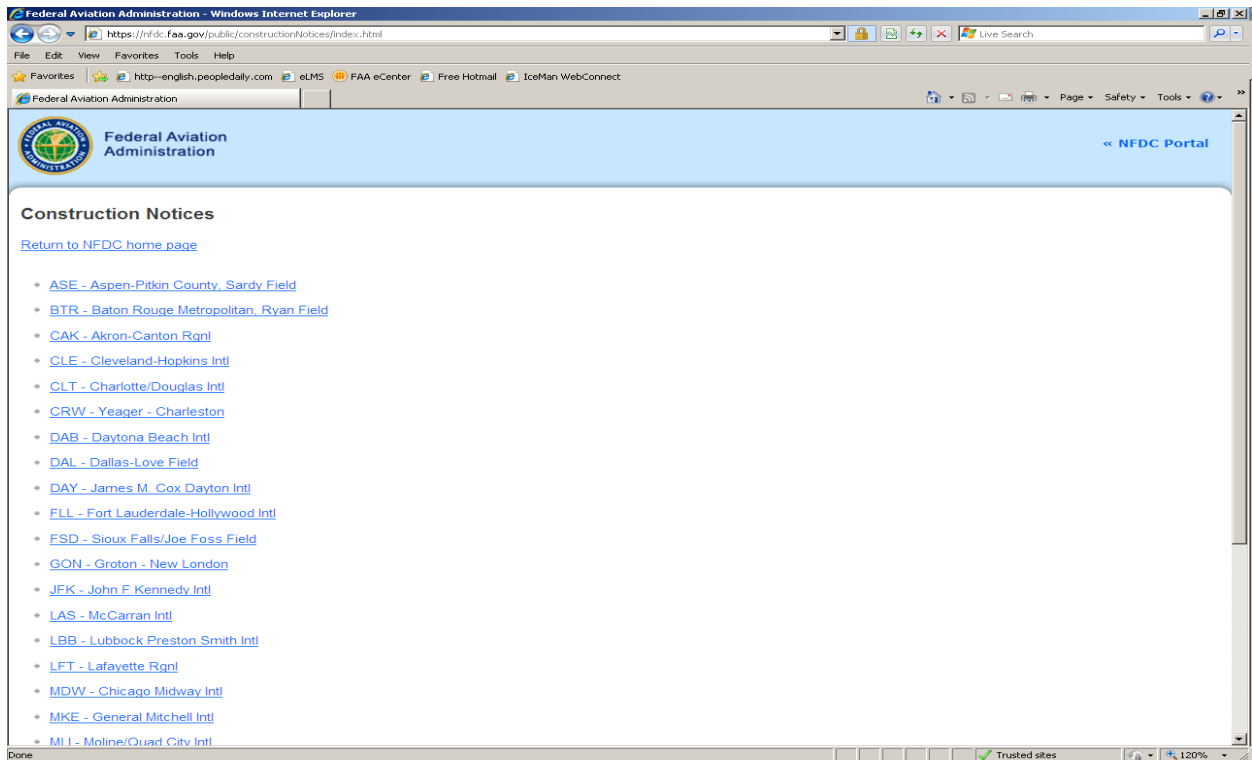
**NFDC - National Flight Data Center**

Services	Lookup Aeronautical Data	Short Cuts
<a href="#">Airport Data Changes (Public Use &amp; Military)</a> <a href="#">Aeronautical Chart Changes (Airport Diagrams, MTR's, etc.)</a> <a href="#">Aeronautical Data Inquires</a> <a href="#">Construction Notices</a> <a href="#">'Special' Procedures</a> <a href="#">View Validated UDDF files</a> <a href="#">Terrain and Obstacles Data</a> <a href="#">Telephony Call Sign Requests (Coming soon)</a>	All data is provided by National Airspace System Resources (NASR). <a href="#">U.S. &amp; Territories Airport Lookup</a> <a href="#">Caribbean/Bermuda Airport Lookup</a> <a href="#">Extended Operations (ETOPS) Airport Lookup</a> <a href="#">FAA Airspace Fix Lookup</a>	Links <a href="#">Login to NFDC</a> <a href="#">FAA Home</a>
Applications	ISO 9001:2008 Certified	Contact Information
<a href="#">Facility Aeronautical Data Distribution System (FADDS) - National Flight Data Center Login Required</a> <a href="#">Third Party Survey System (TPSS) - Separate Login Required</a> <a href="#">Airports GIS Program (AGIS) - Separate Login Required</a> <a href="#">NFDC Apps - (FAA internal use only)</a>	 Certification/Registration Number 78Q11145	HelpDesk <a href="#">National Flight Data Center Support Desk</a> Phone #: 202-580-7500 (8:00am - 4:30pm ET) FAA Contact Federal Aviation Administration 800 Independence Avenue, SW Washington, DC 20591 1-866-TELL-FAA (1-866-835-5322) Feedback (To AIS/NFDC) Send email to: <a href="mailto:9-AWA-ATOR-AIS-FEEDBACK@FAA.GOV">9-AWA-ATOR-AIS-FEEDBACK@FAA.GOV</a> (Do not use to submit Airport Data Changes)

[Login to NFDC](#) | [New User Registration](#) | [Accessibility](#) | [Privacy Policy](#)

Trusted sites 130%

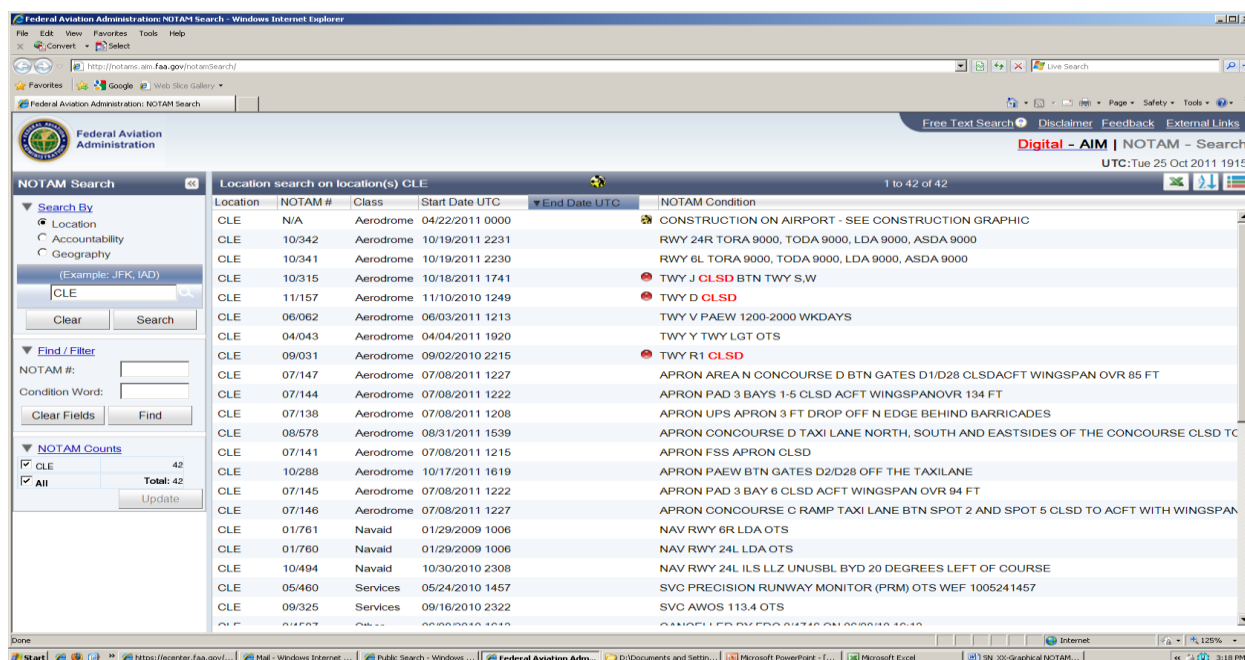
5.2 All current graphical construction diagrams are listed, maintained daily, and available to the public. As of 1 October 2011, digital Construction Notice graphics based on NOTAM have been deployed at 30 (10 major and 20 medium/small) aerodromes across the country.



## 6. USER DISCOVERY OF CONSTRUCTION GRAPHICS BY NOTAM SEARCH

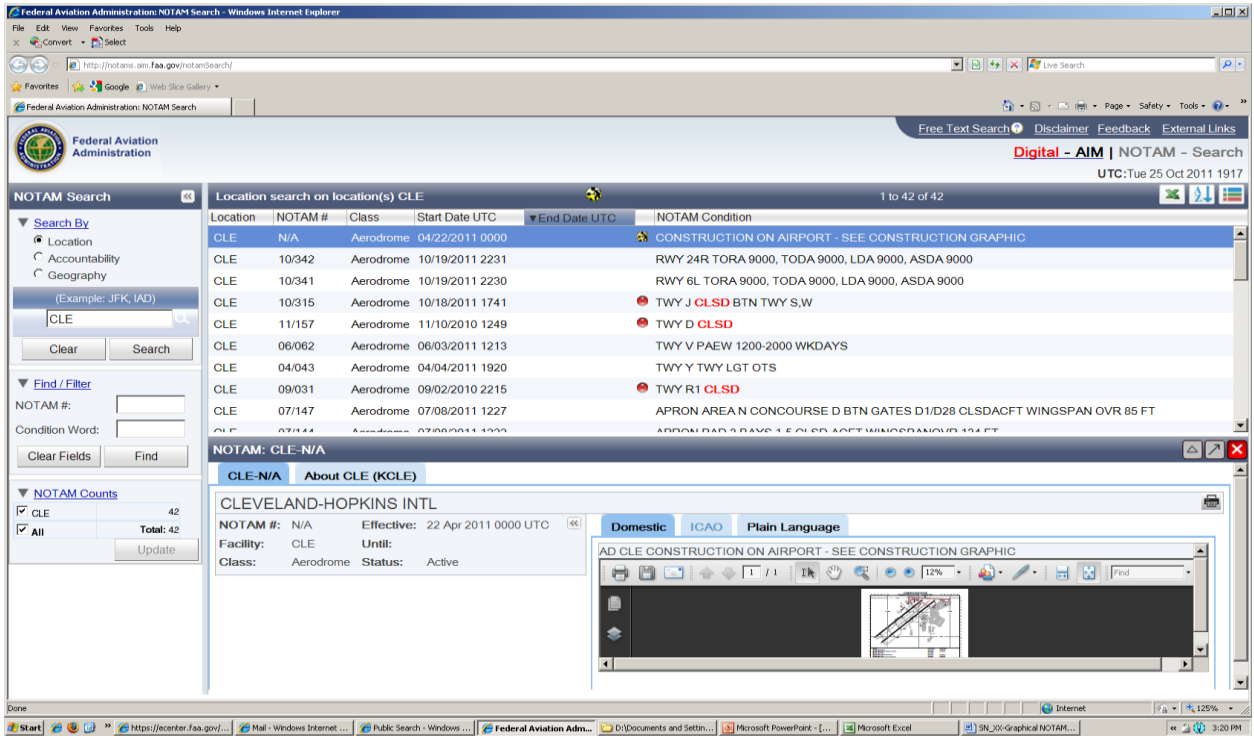
6.1 The user can discover construction graphics by NOTAM search. The example NOTAM search below for Cleveland-Hopkins Intl (CLE) displays the construction notice in the first line:

CLE	N/A	Aerodrome	04/22/2011		CONSTRUCTION ON AIRPORT - SEE CONSTRUCTION GRAPHIC
			0000		GRAPHIC

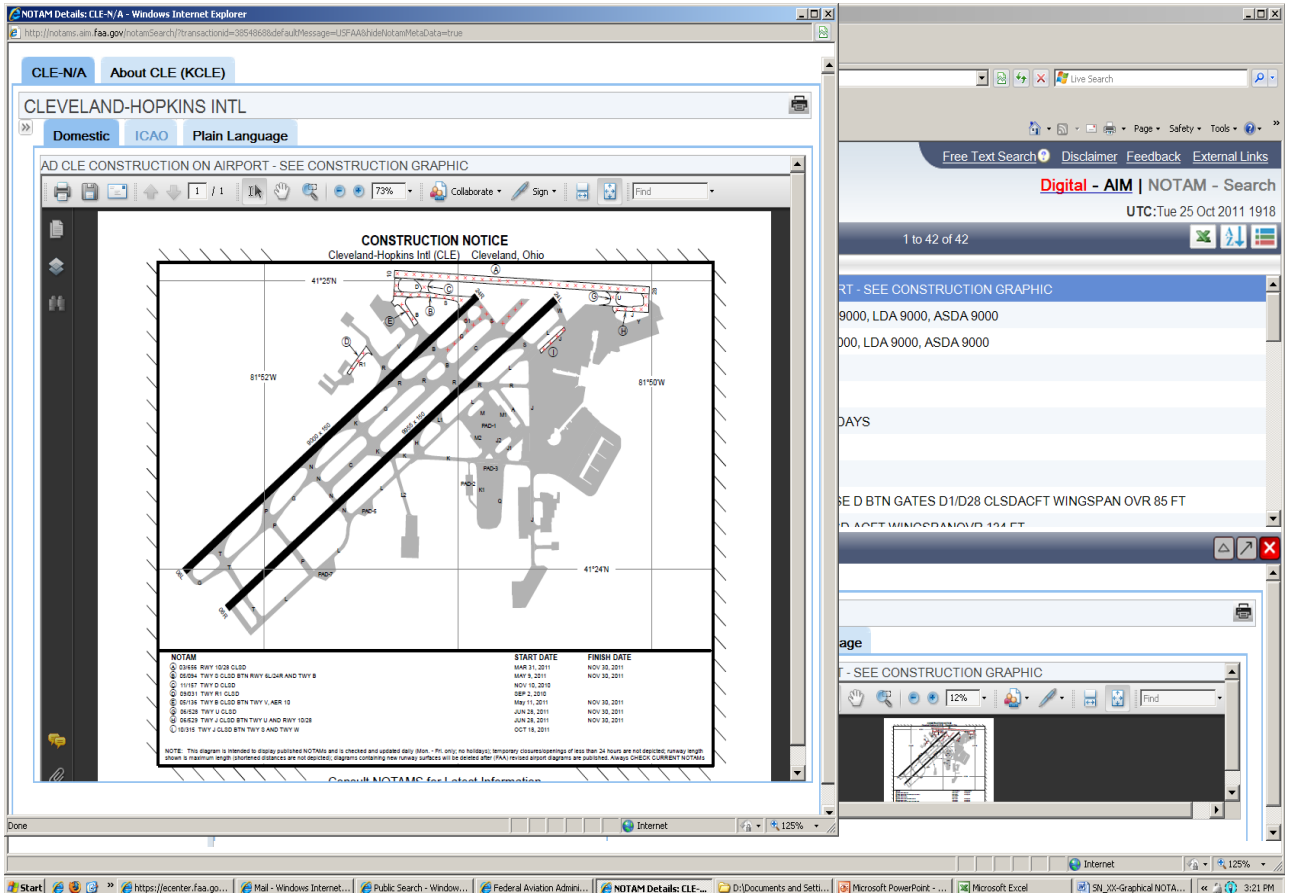


6.2 By clicking on “Construction on Airport – See Construction Graphic” – a new pane linked to the NFDC website appears with a small depiction of the construction graphic.





6.3 Next, by clicking on the “Popout NOTAM Details” arrow at the center right, a new pane appears with a larger depiction of the construction graphic.



**7. ACTION BY THE AAITF**

7.1 The meeting is invited to note the information contained in this paper and discuss any relevant matters as appropriate.

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