

AERONAUTICAL CHARTING MEETING
Charting Group
Meeting 22-02 – October 25-27, 2022

RECOMMENDATION DOCUMENT

FAA Control #22-02-376



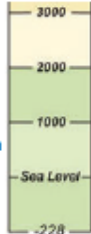



Subject: Distinction to be made for Known Abandoned Unlit Structures on VFR Sectional Charts to enhance pilot awareness.

Background/Discussion:

The NAS currently has numerous obstacles above 200 FT AGL that had previous lighting plans that are now abandoned and are no longer lit for conspicuity AGL. A frequent reason for an obstacle to be unlit is simply that it is abandoned due to decommissioning and the proponent no longer ensures the obstacle remains lit.

Currently in the Chart Users Guide, a VFR sectional chart annotates obstacles above 200 FT AGL, but does not indicate if these obstacles are lit or unlit unless equipped with a high intensity strobe lighting system.

FAA Chart Users' Guide - VFR Terms and Symbols

<p><i>Obstacles less than 1000' AGL.</i></p> <p><i>Obstacles 1000' AGL or greater.</i></p>	 	<p>Sectional Charts, Terminal Area (TACs) and Caribbean Charts (CACs) typically show man-made obstacles extending more than 200' Above Ground Level (AGL), or more than 299' AGL in yellow city tint. Features considered to be hazardous obstacles to low-level flight are; smokestacks, tanks, factories, lookout towers, and antennas, etc.</p>	
<p><i>5540 (650)</i></p> <p>DAIRFIELD STAGE</p>		<p>Man-made features used by FAA Air Traffic Control as checkpoints use a graphic symbol shown in black with the required elevation data in blue. The elevation of the top of the obstacle above Mean Sea Level (MSL) and the height of the structure (AGL) is also indicated (when known or can be reliably determined by a Specialist). The AGL height is in parentheses below the MSL elevation. In extremely congested areas, the FAA typically omits the AGL values to avoid confusion.</p>	
<p><i>4977 (1452)</i></p> <p><i>Group Obstacle Symbol</i></p>		<p>Whenever possible, the FAA depicts specific obstacles on charts. However, in high-density areas like city complexes, only the highest obstacle is represented on the chart using the group obstacle symbol to maximize legibility.</p>	
<p><i>Obstacles under construction are indicated by placing the letters UC adjacent to the obstacle type.</i></p>	<p><i>5000 (1900) UC</i></p>	<p>Obstacles under construction are indicated by placing the letters UC adjacent to the obstacle type.</p>	<p><i>If space is available, the AGL height of the obstruction is shown</i></p>
<p><i>Obstacles with high-intensity strobe lighting systems may operate part-time or by proximity activation and are shown as follows:</i></p> <p><i>Guy wires may extend outward from obstacles.</i></p>		<p>Obstacles with high-intensity strobe lighting systems may operate part-time or by proximity activation and are shown as follows:</p>	

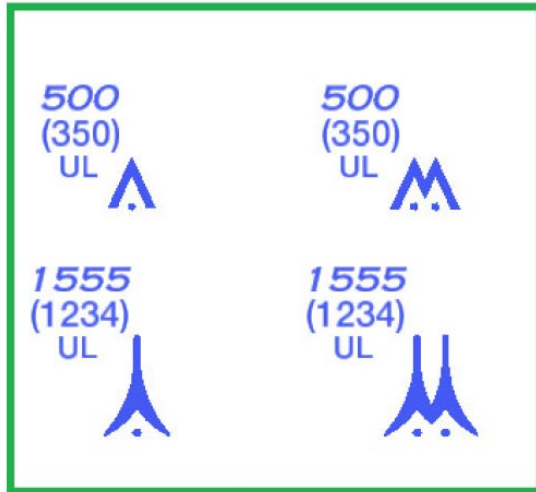
Pilots, particularly flying under VFR, are expecting to see obstacles, which are lit on sectional charts. An unlit obstruction greater than 200 FT AGL in the NAS may be a potential Hazard to VFR Navigation if pilots are not made properly aware.

In addition, there are a number of NOTAMS in the FAA system of Known Abandoned Unlit Structures. A distinct annotation of an unlit obstacle on a sectional chart would reduce the number of NOTAMS required to be maintained for these obstacles.

Recommendations:

This submission is to propose a distinction be made on VFR sectional charts to annotate which obstacles are Known Abandoned Unlit Structures.

We recommend the following distinction made in the charting annotation to denote which towers are Known Abandoned Unlit Structures by adding a "UL" symbology next to/below the MSL and AGL height to indicate permanently unlit.



UL Symbol using original size of .06

Comments:

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MEETING 22-02

Matthew A. Leaser, FAA/AFS-420, [briefed](#) the new recommendation. He explained that the National Airspace System (NAS) currently has numerous obstacles above 200' AGL that had previous lighting plans that are now abandoned and are no longer lit. [Advisory Circular \(AC\) 70/7460-1M](#) explains the rules regarding the marking and lighting of obstacles. Current charting specifications for VFR sectional charts state that obstacles above 200' AGL will be charted, but does not indicate if these obstacles are lit or unlit unless equipped with a high intensity strobe lighting system. Matthew explained that pilots, particularly those flying under Visual Flight Rules (VFR), expect that the obstacles that are portrayed on the sectional charts are lit. An unlit obstruction greater than 200' AGL in the NAS may be a potential hazard to navigation if pilots are not made properly aware. He said Notices to Air Missions (NOTAMs) are issued when there is a lighting outage, but those notices are meant to be temporary. Currently there are a number of permanent NOTAMs in the system for unlit obstacles. Matthew said his team proposes that known abandoned unlit structures, i.e., those with permanent NOTAMs issued, be denoted by adding a "UL" to the chart next to/below the MSL and AGL height ([slide 10](#)). Matthew said the symbol is for known abandoned unlit towers only. He said unlit structures that were never assigned a lighting plan aren't included in this proposal.

John Warner, FAA/AJV-A360, asked if the permanent NOTAM will be canceled once the "UL" is published. Valerie Watson, FAA/AJV-A250, confirmed that would be the process. John asked which FAA office is responsible for these NOTAMs. He also stated that long term, he thinks there might need to be legislation on these abandoned unlit structures so that owners are accountable. Valerie said except for Chart Correction NOTAMs, the charting offices do not publish permanent NOTAMs. Jason Gibson, FAA/AJV-A322, confirmed that the Obstacle Data Team doesn't issue P-NOTAMs. He said their job is to find an owner of the structure and request that they take corrective action. It is the responsibility of the owner to call Flight Service to request a NOTAM. Debbie Milburn, FAA/AJV-A321, said her understanding of the process is that the T-NOTAMs will continue for owners who file requests while they are in the process of lighting their structures. The P-NOTAMs are for the structures for which an owner cannot be found and there is no expectation that the structure will ever be lit.

Rich Boll, NBAA, said he is concerned there are so many unlit structures in the NAS and asked what action the FAA is taking to address this problem. Matthew said there are currently about 50 P-NOTAMs for these unlit obstacles in the NAS. The FAA does not have the authority to do anything to insist they are lit or removed. Rich asked if an obstacle is abandoned, can the FAA change its classification to a hazard in order to provide more incentive to owners to light them. Additionally, Rich thinks the "UL" will be hard for pilots to see. He proposes instead of using "UL" the color of the obstacle symbol and associated text should be changed to magenta so it would stand out. Mike Stromberg, UPS-IPA, said he likes the idea of using magenta to make the symbols stand out more and he agrees the "UL" text would be easy to miss. Jim McClay, AOPA, said the "UL" is too similar to the "UC", so there is the possibility for misinterpretation. He agrees the best solution is the color change. Mike Crim, private pilot, proposed using the dot under the tower for lit and no dot as unlit. He thinks it is better to keep the chart less cluttered. Matthew said they would take these suggestions under consideration.

Roger Hughes, FAA/AFS-420, said there is a procedure in FAA Order 7400.2 for obstacles that become hazards. The hazard designation is by the authority of the Obstruction Evaluation Group (OEG). He said they will not label anything over 200' a hazard unless it penetrates a Federal Regulation 49 CFR Part 77 surface. Valerie said she understands that that this recommendation is only for a new depiction of obstacles that are over 200' and penetrate the Part 77 surface, for which a lighting plan was assigned, but they are abandoned and no longer lit. Valerie asked whether a structure could be reevaluated as a hazard if it is flagged as unlit. Roger said he doesn't know. Matthew said he will investigate that.

Diane Adams-Maturo, FAA/AFS-420, expressed concern that indicating the obstacle as unlit on the chart makes it seem as if it is acceptable that they are unlit. She sees this as a safety concern that needs to be addressed.

Rich clarified that the problem arises when the FAA has determined a structure needs a lighting plan and then the structure is abandoned and left unlit. Mike Stromberg said thousands of unlit towers have been determined not to be a hazard to the NAS and the towers depicted on the sectional charts can be lit or unlit. He agrees with charting the known abandoned unlit obstacles to reduce the NOTAMs, but agrees that further clarification is needed in the Aeronautical Information Manual (AIM) or Pilot/Controller Glossary (PCG) and Aeronautical Chart Users' Guide.

Valerie summarized that the structures addressed in the proposal are the small subset of obstacles (approximately 50) that originally received a "hazard" designation, were assigned a lighting plan to mitigate the hazard, but are now unlit. ACM consensus is not in favor of adding the proposed "UL" text, but there was support for showing these obstacle symbols and associated text in magenta. The source still needs further investigation. How these obstacles should be named in the chart legend, Chart Users' Guide and AIM will need to be established. She said the charting offices will reach out for human factors input regarding use of the magenta color change with respect to cockpit red light conditions as that concern was voiced. If the Interagency Air Committee specification change is approved, the change will also need to be defined in the AIM and the Chart Users' Guide.

STATUS: OPEN

ACTION: Jennifer Hendi, FAA/AJV-A250, will expand the guidance in the Aeronautical Chart Users' Guide to explain that today, charted obstacles on VFR sectional charts may or may not be lighted.

ACTION: Jennifer Hendi, FAA/AJV-A250, will reach out to the Volpe Human Factors Office regarding the proposed change to depict known abandoned unlit obstacles in magenta.

ACTION: Matthew Leeser, FAA/AFS-420, will reach out to the Obstruction Evaluation Group (OEG) to understand the process for identifying an unlit structure as a hazard.

ACTION: Katie Murphy, FAA/AJV-A214, will work with Matthew Leeser, FAA/AFS-420, and the Obstacle Data Team, FAA/AJV-A320, regarding the source for Known Abandoned Unlit Obstacles.

ACTION: Katie Murphy, FAA/AJV-A214, will draft an Interagency Air Committee (IAC) specification change for the color change for Known Abandoned Unlit Obstacles once a source flow is determined.

MEETING 23-01

Jennifer Hendi, FAA/AJV-A250, reported that a workgroup met to investigate the issue. The Obstacle Data Team (ODT) then completed a scrub of the Permanent NOTAMs. Out of 52 unlit obstacle Perm NOTAMS, the ODT was able to determine that 16 structures no longer existed and therefore could be removed from the database. Once removed from the database, the Perm NOTAMs could then be canceled by Flight Service. That brings the total number of Perm NOTAMs for unlit obstacles to approximately 36.

A small [change](#) was also made to the Aeronautical Chart Users' Guide to clarify that obstacles may be lit or unlit. A similar change will be added to the Visual chart legend.

Jennifer said she had spoken with Matthew Leeser, FAA/AFS-420, who was the original proponent of the issue. He does not think a color change is necessary anymore given the small and decreasing numbers of unlit obstacles remaining. He said the Chart Users' Guide and Legend updates along with a planned education and outreach piece will be sufficient to address this concern. He recommends closing this issue. There were no objections to closure.

STATUS: CLOSED