



**BSR/ASHRAE Addendum v to  
ANSI/ASHRAE Standard 135.1-2025**

**Public Review Draft**

# **Proposed Addendum v to Standard 135.1-2025, Method of Test for Conformance to BACnet®**

**First Public Review (July 2026)  
(Draft shows Proposed Changes to Current Standard)**

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**[This foreword, the table of contents, the introduction, and the “rationales” on the following pages are not part of this standard. They are merely informative and do not contain requirements necessary for conformance to the standard.]**

## FOREWORD

The purpose of this addendum is to present a proposed change for public review. These modifications are the result of change proposals made pursuant to the ASHRAE continuous maintenance procedures and of deliberations within Standing Standard Project Committee 135. The proposed changes are summarized below.

**Change the categories to specify the reason the test was removed.**

Chris, Courtney, and Deb have volunteered to help.

Categories:

- Put back into the standard
- Deprecated functionality
- Outdated (somewhat testable point, not applied) (we will need to push one way or the other)
- Superseded
- Not a testable point

Add Segmentation to outdated.

**135.1-2025v-1 Remove Tests for Deprecated 135 Functionality, P.3.**

**135.1-2025v-2 Remove Superseded Tests, P.6.**

**135.1-2025v-3 Remove Tests Without a Testable Point, P.20.**

**135.1-2025v-4 Remove Tests That Are Too Complex To Execute, P.26.**

**135.1-2025v-5 Remove Clauses That Do Not Include a Test, P.29.**

**135.1-2025v-6 Remove Redundant Segmentation Clauses, P.30.**

In the following document, language to be added to existing clauses of ANSI/ASHRAE 135.1-2025 is indicated through the use of *italics*, while deletions are indicated by ~~strikethrough~~. Where entirely new subclauses are proposed to be added, plain type is used throughout. Only this new and deleted text is open to comment at this time. All other material in this document is provided for context only and is not open for public review comment except as it relates to the proposed changes.

The use of placeholders like XX, YY, ZZ, X1, X2, NN, x, n, ? etc. should not be interpreted as literal values of the final published version. These placeholders will be assigned actual numbers/letters only after final publication approval of the addendum.

## 135.1-2025v-1 Remove Tests for Deprecated 135 Functionality

### Rationale

Functionality has been removed or deprecated from ANSI/ASHRAE Standard 135. This proposal removes the ANSI/ASHRAE Standard 135.1 tests associated with the removed and deprecated functionality.

## 7.3 Object Functionality Tests

### ~~7.3.1.14 Process\_Identifier Tests~~

#### ~~7.3.1.14.1 Process\_Identifier Property Test~~

~~Purpose: To verify that the Process\_Identifier property correctly supports the required value range. This test shall be performed only if the Protocol\_Revision property is present in the Device object and has a value in the range of 1 through 3.~~

~~...~~

#### ~~7.3.1.14.2 Recipient\_List Test~~

~~Purpose: To verify that the Process\_Identifier contained in a Recipient\_List property correctly supports the required value range.~~

~~...~~

### ~~7.3.1.14 Deleted Clause~~

*This clause has been removed.*

## ~~8.19 ReadPropertyConditional Service Initiation Tests~~

### ~~8.19 Deleted Clause~~

*This clause has been removed.*

## ~~8.39 RequestKey Service Initiation Tests~~

### ~~8.39 Deleted Clause~~

*This clause has been removed.*

## ~~8.40 Authenticate Service Initiation Tests~~

### ~~8.40 Deleted Clause~~

*This clause has been removed.*

## 9.11 SubscribeCOVProperty Service Execution Tests

### 9.11.1 Positive SubscribeCOVProperty Service Execution Tests

#### ~~9.11.1.3 Explicit Indefinite Lifetime COV Subscriptions~~

~~Purpose: To verify that the IUT correctly responds to a SubscribeCOVProperty request to establish a subscription with an indefinite lifetime (lifetime = 0). Either confirmed or unconfirmed notifications may be used but at least one of these options must be supported by the IUT.~~

~~...~~

#### **9.11.1.3 Deleted Clause**

*This clause has been removed.*

#### **~~9.11.1.6 Implied Indefinite Lifetime COV Subscriptions~~**

~~Purpose: To verify that the IUT correctly responds to a SubscribeCOVProperty request to establish a subscription with an implied indefinite lifetime (lifetime parameter omitted). Either confirmed or unconfirmed notifications may be used, but at least one of these options must be supported by the IUT.~~

~~---~~

#### **9.11.1.6 Deleted Clause**

*This clause has been removed.*

#### **~~9.19 ReadPropertyConditional Service Execution Tests~~**

##### **9.19 Deleted Clause**

*This clause has been removed.*

#### **~~9.37 RequestKey Service Execution Test~~**

##### **9.37 Deleted Clause**

*This clause has been removed.*

#### **~~9.38 Authenticate Service Execution Tests~~**

##### **9.38 Deleted Clause**

*This clause has been removed.*

#### **~~10.3 Half Router Functionality Tests~~**

##### **10.3 Deleted Clause**

*This clause has been removed.*

#### **~~10.4 B/IP PAD Tests~~**

##### **10.4 Deleted Clause**

*This clause has been removed.*

#### **12.3 BACnet/IP Functionality Tests**

##### **12.3.5.2 Original-Broadcast-NPDU Message Which Shall Be Forwarded**

###### **~~12.3.5.2.1 Original-Broadcast-NPDU Message Which Shall Be Forwarded (One-hop Distribution)~~**

~~Configuration Requirements: The IUT shall be configured with a BDT that contains:~~

~~---~~

***12.3.5.2.1 Deleted Clause***

*This clause has been removed.*

### 135.1-2025v-2 Remove Superseded Tests

#### Rationale

This proposal removes ANSI/ASHRAE Standard 135.1 tests where the testable point of a test is covered by one or more other tests. The below table indicates what tests replace the removed tests.

| Original Test(s)       | Replacement Test(s)            |
|------------------------|--------------------------------|
| 7.3.1.11.2             | 7.3.11.1, 7.3.11.3             |
| 7.3.2.18.5             | 7.3.1.15.2                     |
| 7.3.2.19.6             | 7.3.1.15.2                     |
| 7.3.2.21.1             | 7.3.1.10.1                     |
| 7.3.2.21.2.1           | 9.4.x                          |
| 7.3.2.21.3.3           | 9.4.x                          |
| 7.3.2.21.3.8           | 7.3.2.21.3.9                   |
| 7.3.2.21.3.10          | 7.3.2.21.3.9                   |
| 7.3.2.23.10.5          | 7.3.2.23.5                     |
| 7.3.2.23.10.6          | 7.3.2.23.6                     |
| 7.3.2.24.5             | 7.3.1.7.1                      |
| 7.3.2.24.11            | 8.4.7, 8.5.7                   |
| 7.3.2.30.4             | 7.3.2.31.2, 7.3.2.31.3         |
| 7.3.2.30.9.2           | 7.3.2.31.2, 7.3.2.31.3         |
| 7.3.2.30.9.4           | 7.3.2.30.9.5                   |
| 8.4.17.8               | 8.5.17.7.1, 8.5.17.7.2         |
| 8.4.17.9               | 8.5.17.9                       |
| 8.4.17.11              | 8.5.17.7.1, 8.5.17.7.2         |
| 8.12.x                 | 9.12.x                         |
| 8.13.x                 | 9.13.x                         |
| 8.21.2, 8.21.4, 8.21.5 | 8.21.3, 8.21.8                 |
| 8.23.5                 | 8.23.1, 8.23.2, 8.23.3, 8.23.4 |
| 9.1.1.7                | 7.3.1.11.1                     |
| 9.1.1.12               | 7.3.1.11.1                     |
| 9.1.1.13               | 7.3.1.11.1                     |
| 9.2.1.3                | 8.2.10                         |
| 9.2.1.4                | 8.2.18                         |
| 9.3.2.3                | 8.3.12                         |
| 9.3.2.4                | 8.3.20                         |
| 9.10.1.6               | 9.10.1.3                       |
| 9.12.1.1               | 9.12.1.1.2                     |
| 9.12.1.2.2             | 9.12.1.2.1                     |
| 9.12.1.2.3             | 9.12.1.2.1                     |
| 9.12.1.2.4             | 9.12.1.2.1                     |
| 9.12.1.2.5             | 9.12.1.2.1                     |
| 9.12.1.2.6             | 9.12.1.2.1                     |
| 9.18.1.1               | 7.1.3                          |
| 9.18.1.2               | 9.18.1.7                       |
| 9.18.1.4               | 7.1.3                          |
| 9.22.2.5               | 7.1.2                          |
| 9.22.2.6               | 7.1.2                          |
| 9.22.2.7               | 7.2.3                          |
| 9.23.2.8               | 9.23.2.14                      |

|            |            |
|------------|------------|
| 9.23.2.9   | 9.23.2.17  |
| 9.23.2.10  | 9.23.2.15  |
| 9.23.2.11  | 9.22.2.8   |
| 10.1.2     | 10.2.6     |
| 10.2.2.6   | 10.5.2.1   |
| 12.1.1.2   | 12.1.3.17  |
| 12.1.1.4   | 12.1.3.16  |
| 12.1.1.5   | 12.1.3.5   |
| 12.1.1.6   | 12.1.3     |
| 12.1.1.7   | 12.1.3.19  |
| 12.3.1.7   | 12.3.5.2.1 |
| 12.3.2.1.1 | 12.3.5.2.1 |
| 12.3.2.2.1 | 12.3.5.2.1 |
| 12.3.9.2   | 12.3.2.3   |
| 13.4.1     | 9.15.2.1   |
| 13.4.2     | 9.21.2.3   |

### 7.3 Object Functionality Tests

#### ~~7.3.1.11.2 Aeked\_Transitions Test for Latching Objects~~

~~Purpose: To verify that the Aeked\_Transitions property tracks the acknowledgment state for a transition type.~~  
~~...~~

#### ~~7.3.1.11.2 Deleted Clause~~

~~This clause has been removed.~~

#### ~~7.3.2.18.5 Number\_Of\_States and State\_Text Size Change Test~~

~~Purpose: This test case verifies that when the value of the Number\_Of\_States property is changed, the size of the State\_Text array is changed accordingly to the same size. If the Number\_Of\_States and the size of the State\_Text arrays cannot be changed, then this test shall not be performed. If Protocol\_Revision is not present, or has a value less than 4, then this test shall not be performed.~~  
~~...~~

#### ~~7.3.2.18.5 Deleted Clause~~

~~This clause has been removed.~~

#### ~~7.3.2.19.6 Number\_Of\_States and State\_Text Size Change Test~~

~~The test to verify the Number\_Of\_States value and State\_Text array size of Multi-state Output objects are defined in 7.3.2.18.5. Run the test using a Multi-state Output object.~~  
~~...~~

#### ~~7.3.2.19.6 Deleted Clause~~

~~This clause has been removed.~~

#### ~~7.3.2.21.1 Priority Tests~~

~~Purpose: To verify that the IUT implements the functionality of the Priority property of the Notification Class object when initiating even notifications.~~

~~---~~

#### **7.3.2.21.1 Deleted Clause**

*This clause has been removed.*

#### **7.3.2.21.2 Ack\_Required Tests**

##### **7.3.2.21.2.1 Ack\_Required False Test**

~~Purpose: To verify that if the Ack\_Required property indicates that event notifications do not require acknowledgment, then the AckRequired parameter of the notification message conveys that fact. If the IUT does not support unacknowledged event notifications this test shall be omitted.~~

~~---~~

#### **7.3.2.21.2 Deleted Clause**

*This clause has been removed.*

#### **7.3.2.21.3.3 IssueConfirmedNotifications Test**

~~Purpose: To verify that ConfirmedEventNotification messages are used if the Issue Confirmed Notifications parameter has the value TRUE and UnconfirmedEventNotification messages are used if the value is FALSE. If the IUT does not support both confirmed and unconfirmed event notifications this test may be omitted. For devices that implement a read-only Recipient\_List property for all instances of Notification Class objects, and there is a value of FALSE for the Issue Confirmed Notifications parameter in all instances, this test shall be omitted.~~

~~---~~

#### **7.3.2.21.3.3 Deleted Clause**

*This clause has been removed.*

#### **7.3.2.21.3.8 Read-only Recipient\_List with internal Notification Forwarder objects**

~~Purpose: This test case verifies that a read-only Notification Class object Recipient\_List is configured with only content designed for internal Notification Forwarder objects.~~

~~---~~

#### **7.3.2.21.3.8 Deleted Clause**

*This clause has been removed.*

#### **7.3.2.21.3.10 Read-only Recipient\_List Without Notification Forwarder Test**

~~Purpose: This test case verifies that each read-only Recipient\_List for all instances of Notification Class objects, in a device that cannot contain a Notification Forwarder object, are correctly configured. This test is only applied to devices that have a read-only Recipient\_List property for all instances of Notification Class objects in a device that cannot contain a Notification Forwarder object.~~

~~---~~

#### **7.3.2.21.3.10 Deleted Clause**

*This clause has been removed.*



#### ~~7.3.2.23.10.5 Revision 4 Exception\_Schedule Restoration Test~~

~~Purpose: To verify the restoration behavior in an Exception\_Schedule.~~

~~...~~

#### ~~7.3.2.23.10.5 Deleted Clause~~

*This clause has been removed.*

#### ~~7.3.2.23.10.6 Revision 4 Weekly\_Schedule Restoration Test~~

~~Purpose: To verify the restoration behavior in an Exception\_Schedule.~~

~~...~~

#### ~~7.3.2.23.10.6 Deleted Clause~~

*This clause has been removed.*

#### ~~7.3.2.24.5 COV\_Resubscription\_Interval Test~~

~~Purpose: To verify that a Trend Log acquiring data via COV notification reissues its subscription at the interval set by COV\_Resubscription\_Interval.~~

~~...~~

#### ~~7.3.2.24.5 Deleted Clause~~

*This clause has been removed.*

#### ~~7.3.2.24.11 Notification Time Tests~~

~~Purpose: To verify that the Previous\_Notify\_Time and Current\_Notify\_Time parameters reflect the values sent in the most recent notification. This test shall be performed only if the Protocol\_Revision property is present in the Device object and has a value of 1 or 2.~~

~~...~~

#### ~~7.3.2.24.11 Deleted Clause~~

*This clause has been removed.*

#### ~~7.3.2.30.4 Confirmed And Unconfirmed Forwarding Test~~

#### ~~7.3.2.30.4 Deleted Clause~~

*This clause has been removed.*

#### ~~7.3.2.30.9.2 NULL Unfiltered Process Identifier Test~~

~~Purpose: Insure a NULL value Process\_Identifier\_Filter property allows forwarding of all event notification process identifier values.~~

~~...~~

#### ~~7.3.2.30.9.2 Deleted Clause~~

*This clause has been removed.*

#### **~~7.3.2.30.9.4 Specific Value Process Identifier Test~~**

~~Purpose: Insure a non-NULL and non-zero value Process\_Identifier\_Filter property allows forwarding of only event notifications with process identifier values matching the Process\_Identifier\_Filter value.~~

~~---~~

#### **~~7.3.2.30.9.4 Deleted Clause~~**

*This clause has been removed.*

### **8.4 ConfirmedEventNotification Service Initiation Tests**

#### **~~8.4.17.8 CHANGE\_OF\_RELIABILITY of Event Enrollment Object, Monitored Object Fault (ConfirmedEventNotifications)~~**

~~Purpose: To verify the proper operation of the Event Enrollment object's fault detection when the monitored object enters the fault state.~~

~~---~~

#### **~~8.4.17.8 Deleted Clause~~**

*This clause has been removed.*

#### **~~8.4.17.9 CHANGE\_OF\_RELIABILITY of Event Enrollment Object Fault (ConfirmedEventNotifications)~~**

~~Purpose: To verify the Event Enrollment object generates a fault event when the object enters into fault due to an internal unreliable operation.~~

~~---~~

#### **~~8.4.17.9 Deleted Clause~~**

*This clause has been removed.*

#### **~~8.4.17.11 CHANGE\_OF\_RELIABILITY with Internal Object Fault (ConfirmedEventNotifications)~~**

~~Purpose: To verify that fault conditions, unrelated to fault algorithms, are detected and reported.~~

~~---~~

#### **~~8.4.17.11 Deleted Clause~~**

*This clause has been removed.*

### **~~8.12 AtomicReadFile Service Initiation Tests~~**

#### **~~8.12 Deleted Clause~~**

*This clause has been removed.*

### **8.13 AtomicWriteFile Service Initiation Tests**

#### **~~8.13 Deleted Clause~~**

*This clause has been removed.*

## 8.21 ReadRange Service Initiation Tests

### ~~8.21.2 Reading Values with an Array Index~~

~~Purpose: To verify that the IUT can correctly initiate a ReadRange service request that specifies an ARRAY INDEX.~~

~~...~~

### ~~8.21.2 Deleted Clause~~

*This clause has been removed.*

### ~~8.21.4 Reading a Range of Values by Time~~

~~Purpose: To verify that the IUT can correctly initiate a ReadRange service request that specifies the range of values to be returned by time.~~

~~...~~

### ~~8.21.4 Deleted Clause~~

*This clause has been removed.*

### ~~8.21.5 Reading a Range of Values by Time Range~~

~~Purpose: To verify that the IUT can correctly initiate a ReadRange service request that specifies the range of values to be returned by time range.~~

~~...~~

### ~~8.21.5 Deleted Clause~~

*This clause has been removed.*

## 8.23 WritePropertyMultiple Service Initiation Tests

### ~~8.23.5 Writing Array Properties~~

~~Purpose: To verify that the IUT can initiate WritePropertyMultiple service requests that reference a specific element of an array property.~~

~~...~~

### ~~8.23.5 Deleted Clause~~

*This clause has been removed.*

## 9.1 AcknowledgeAlarm Service Execution Tests

### 9.1.1 Positive AcknowledgeAlarm Service Execution Tests

#### ~~9.1.1.7 Successful Alarm Acknowledgment of any "Offnormal" Transitions Using an "Offnormal" 'To State'~~

~~Purpose: To verify the successful acknowledgment of an alarm that indicated an "offnormal" 'To State' other than OFFNORMAL.~~

~~...~~

#### **9.1.1.7 Deleted Clause**

*This clause has been removed.*

#### **~~9.1.1.12 Successful Alarm Acknowledgment of Confirmed Event Notifications when 'To State' is an Offnormal State other than OFFNORMAL~~**

~~Purpose: To verify the successful acknowledgment of an alarm signaled by a ConfirmedEventNotification, including notification of other workstations and updating of the Acked\_Transitions status, when the 'To State' parameter is an offnormal state other than OFFNORMAL (e.g. HIGH\_LIMIT) and the 'Event State Acknowledged' parameter is OFFNORMAL.~~

~~...~~

#### **9.1.1.12 Deleted Clause**

*This clause has been removed.*

#### **~~9.1.1.13 Successful Alarm Acknowledgment of Unconfirmed Event Notifications when 'To State' is an Offnormal State other than OFFNORMAL~~**

~~Purpose: To verify the successful acknowledgment of an alarm signaled by an UnconfirmedEventNotification, including notification of other workstations and updating of the Acked\_Transitions status, when the 'To State' parameter is an offnormal state other than OFFNORMAL (e.g. HIGH\_LIMIT) and the 'Event State Acknowledged' parameter is OFFNORMAL.~~

~~...~~

#### **9.1.1.13 Deleted Clause**

*This clause has been removed.*

### **9.2 ConfirmedCOVNotification Service Execution Tests**

#### **~~9.2.1.3 Change of Value Notification from Pulse Converter Object~~**

~~Purpose: To verify that the IUT can execute ConfirmedCOVNotification requests from Pulse Converter objects.~~

~~...~~

#### **9.2.1.3 Deleted Clause**

*This clause has been removed.*

#### **~~9.2.1.4 Change of Value Notification from Load Control Object~~**

~~Purpose: To verify that the IUT can execute ConfirmedCOVNotification requests from Load Control objects.~~

~~...~~

#### **9.2.1.4 Deleted Clause**

*This clause has been removed.*

### **9.3 UnconfirmedCOVNotification Service Execution Tests**

#### **~~9.3.2.3 Change of Value Notification from Pulse Converter Object~~**

~~Purpose: To verify that the IUT can execute UnconfirmedCOVNotification requests from Pulse Converter objects.~~

~~---~~

#### ***9.3.2.3 Deleted Clause***

*This clause has been removed.*

#### **~~9.3.2.4 Change of Value Notification from Load Control Object~~**

~~Purpose: To verify that the IUT can execute UnconfirmedCOVNotification requests from Load Control objects.~~

~~---~~

#### ***9.3.2.4 Deleted Clause***

*This clause has been removed.*

### **9.10 SubscribeCOV Service Execution Tests**

#### **~~9.10.1.6 Implied Indefinite Lifetime COV Subscriptions~~**

~~Purpose: To verify that the IUT correctly responds to a SubscribeCOV request to establish a subscription with an implied indefinite lifetime (lifetime parameter omitted). Either confirmed or unconfirmed notifications may be used but at least one of these options must be supported by the IUT.~~

~~---~~

#### ***9.10.1.6 Deleted Clause***

*This clause has been removed.*

### **9.12 AtomicReadFile Service Execution Tests**

#### **~~9.12.1.1 Reading Record Based Files~~**

#### ***9.12.1.1 Deleted Clause***

*This clause has been removed.*

#### **9.12.1.2 Reading Stream Based Files**

#### **~~9.12.1.2.2 Reading Data from the Beginning of a File~~**

~~Purpose: To verify that the IUT correctly responds to a request to read data from the beginning of the file to an intermediate point before the end of the file.~~

~~---~~

#### ***9.12.1.2.2 Deleted Clause***

*This clause has been removed.*

#### **9.12.1.2.3 Reading Data from an Intermediate Point to the End of the File**

~~Purpose: To verify that the IUT correctly responds to a request to read data beginning from an intermediate point and continuing to the end of the file.~~

~~---~~

#### **9.12.1.2.3 Deleted Clause**

*This clause has been removed.*

#### **9.12.1.2.4 Reading Data Beginning from an Intermediate Point and Ending at Another Intermediate Point in the File**

~~Purpose: To verify that the IUT correctly responds to a request to read data beginning from an intermediate point and continuing to another intermediate point in the file.~~

~~---~~

#### **9.12.1.2.4 Deleted Clause**

*This clause has been removed.*

#### **9.12.1.2.5 Reading A Data Block of Size Zero**

~~Purpose: To verify that the IUT correctly responds to a request to read zero octets of file data.~~

~~---~~

#### **9.12.1.2.5 Deleted Clause**

*This clause has been removed.*

#### **9.12.1.2.6 Reading Data Past the End of the File**

~~Purpose: To verify that the IUT correctly responds to a request to read data beginning from any point and continuing past the end of the file.~~

~~---~~

#### **9.12.1.2.6 Deleted Clause**

*This clause has been removed.*

### **9.12.2 Negative AtomicReadFile Service Execution Tests**

#### **9.12.2.1 Reading Record Based Files**

##### **9.12.2.1 Deleted Clause**

*This clause has been removed.*

#### **9.12.2.2 Reading Stream Based Files**

##### **9.12.2.2.1 Attempting to Read Data from a Range of Records Outside the File Boundaries**

~~Purpose: To verify the correct execution of the AtomicReadFile service request under circumstances where the specified octets are outside of the boundaries of the file.~~

~~---~~

#### **9.12.2.2.1 Deleted Clause**

*This clause has been removed.*

### **9.18 ReadProperty Service Execution Tests**

#### **9.18.1 Positive ReadProperty Service Execution Tests**

##### **9.18.1.1 Reading the Size of an Array**

~~Purpose: To verify that the IUT can execute ReadProperty service requests when the requested property is an array and the size of the array is requested.~~

~~---~~

##### **9.18.1.1 Deleted Clause**

*This clause has been removed.*

##### **9.18.1.2 Reading a Single Element of an Array**

~~Purpose: To verify that the IUT can execute ReadProperty service requests when the requested property is an array and a single element of the array is requested.~~

~~---~~

##### **9.18.1.2 Deleted Clause**

*This clause has been removed.*

##### **9.18.1.4 Reading Entire Arrays**

~~Purpose: To verify that the IUT can execute ReadProperty service requests when the requested property is an array and the entire array is requested.~~

~~---~~

##### **9.18.1.4 Deleted Clause**

*This clause has been removed.*

### **9.22 WriteProperty Service Execution Tests**

#### **9.22.2.5 Writing To Non-Existent Objects**

~~Purpose: This test case verifies that the IUT can execute WriteProperty service requests when the object specified in the service request does not exist. This test shall only be performed if Protocol\_Revision is present and has a value greater than or equal to 4.~~

~~---~~

##### **9.22.2.5 Deleted Clause**

*This clause has been removed.*

#### **~~9.22.2.6 Writing To Non-Existent Properties~~**

~~Purpose: This test case verifies that the IUT can execute WriteProperty service requests when the property specified in the service request is not supported by the object specified in the service request. This test shall only be performed if Protocol\_Revision is present and has a value greater than or equal to 4.~~

~~---~~

#### **~~9.22.2.6 Deleted Clause~~**

*This clause has been removed.*

#### **~~9.22.2.7 Writing To Non-Writable Properties~~**

~~Purpose: This test case verifies that the IUT can execute WriteProperty service requests when the property specified in the service request is not writable. This test shall only be performed if Protocol\_Revision is present and has a value greater than or equal to 4.~~

~~---~~

#### **~~9.22.2.7 Deleted Clause~~**

*This clause has been removed.*

### **9.23 WritePropertyMultiple Service Execution Tests**

#### **~~9.23.2.8 Writing To Non-Existent Objects~~**

~~Purpose: This test case verifies that the IUT can execute WritePropertyMultiple service requests when the object specified in the service request does not exist. This test shall only be performed if Protocol\_Revision is present and has a value greater than or equal to 4.~~

~~---~~

#### **~~9.23.2.8 Deleted Clause~~**

*This clause has been removed.*

#### **~~9.23.2.9 Writing To Non-Existent Properties~~**

~~Purpose: This test case verifies that the IUT can execute WritePropertyMultiple service requests when the property specified in the service request is not supported by the object specified in the service request. This test shall only be performed if Protocol\_Revision is present and has a value greater than or equal to 4.~~

~~---~~

#### **~~9.23.2.9 Deleted Clause~~**

*This clause has been removed.*

#### **~~9.23.2.10 Writing To Non-Writable Properties~~**

~~Purpose: This test case verifies that the IUT can execute WritePropertyMultiple service requests when the property specified in the service request is not writable. This test shall only be performed if Protocol\_Revision is present and has a value greater than or equal to 4.~~

~~---~~

#### **~~9.23.2.10 Deleted Clause~~**

*This clause has been removed.*



#### **~~9.23.2.11 Writing An Object\_Name With A Value That Is Already In Use~~**

~~Purpose: This test case verifies that the IUT can execute WritePropertyMultiple service requests when an Object\_Name property is written to with a value already in use by a different object in the device. This test shall only be performed if Protocol\_Revision is present and has a value greater than or equal to 4.~~

~~---~~

#### ***9.23.2.11 Deleted Clause***

*This clause has been removed.*

### **10.1 General Network Layer Tests**

#### **~~10.1.2 Network Layer Priority~~**

~~Purpose: To verify that the IUT can process messages with all network priorities.~~

~~---~~

#### ***10.1.2 Deleted Clause***

*This clause has been removed.*

### **10.2 Router Functionality Tests**

#### **~~10.2.2.6 Execute Initialize Routing Table~~**

#### ***10.2.2.6 Deleted Clause***

*This clause has been removed.*

## **12 DATA LINK LAYER PROTOCOLS TESTS**

### **12.1 MS/TP State Machine Tests**

#### **12.1.1 MS/TP Master Tests**

#### **~~12.1.1.2 Startup Tests~~**

#### ***12.1.1.2 Deleted Clause***

*This clause has been removed.*

#### **~~12.1.1.4 State Machine Transition Tests for Token Operations~~**

#### ***12.1.1.4 Deleted Clause***

*This clause has been removed.*

#### **~~12.1.1.5 Tests to Verify Answer Data Request~~**

#### ***12.1.1.5 Deleted Clause***

*This clause has been removed.*

#### ~~12.1.1.6 Miscellaneous Non-Response Tests~~

##### *12.1.1.6 Deleted Clause*

*This clause has been removed.*

#### ~~12.1.1.7 Sole Master Tests~~

##### *12.1.1.7 Deleted Clause*

*This clause has been removed.*

### 12.3 BACnet/IP Functionality Tests

#### 12.3.1 Non-BBMD B/IP Device

##### ~~12.3.1.7 Forwarded NPDU (One-hop Distribution)~~

~~Purpose: To verify that an IUT, not configured as a BBMD, will process a Forwarded NPDU message.~~

~~...~~

##### *12.3.1.7 Deleted Clause*

*This clause has been removed.*

#### 12.3.2 BBMD B/IP Device with a Server Application

##### 12.3.2.1 Execute Forwarded-NPDU

##### ~~12.3.2.1.1 Execute Forwarded NPDU (One-hop Distribution)~~

~~Configuration Requirements: The IUT shall be configured with a BDT that contains:~~

~~...~~

##### *12.3.2.1.1 Deleted Clause*

*This clause has been removed.*

##### 12.3.2.2 Execute Original-Broadcast-NPDU

##### ~~12.3.2.2.1 Execute Original Broadcast NPDU (One-hop Distribution)~~

~~Configuration Requirements: The IUT shall be configured with a BDT that contains:~~

~~...~~

##### *12.3.2.2.1 Deleted Clause*

*This clause has been removed.*

#### 12.3.9 Initiating BVLL Service Requests Conveying an NPDU

##### ~~12.3.9.2 Initiating An Original Unicast NPDU~~

~~Purpose: This test case verifies that the IUT can issue a directed NPDU to another device.~~

~~...~~

#### **12.3.9.2 Deleted Clause**

*This clause has been removed.*

### **13.4 Malformed PDUs**

#### **13.4.1 Inconsistent Parameters**

~~Purpose: To verify that the IUT correctly responds to service requests that convey inconsistent parameters.~~  
~~...~~

#### **13.4.1 Deleted Clause**

*This clause has been removed.*

#### **13.4.2 Invalid Parameter Datatype**

~~Purpose: To verify that the IUT correctly responds to an attempt to write a property value that is an invalid datatype.~~  
~~...~~

#### **13.4.2 Deleted Clause**

*This clause has been removed.*

### 135.1-2025v-3 Remove Tests Without a Testable Point

#### Rationale

This proposal removes ANSI/ASHRAE Standard 135.1 tests where the test does not test conformance or interoperability.

### 7.3 Object Functionality Tests

#### ~~7.3.2.1.1 Input Tracking Test~~

~~Purpose: To verify the ability to track and represent the value of an analog input.~~

~~...~~

#### *7.3.2.1.1 Deleted Clause*

*This clause has been removed.*

### 7.3.2.2 Analog Output Object Tests

#### ~~7.3.2.2.1 Output Tracking Test~~

~~Purpose: To verify the ability to represent and implement a physical analog output.~~

~~Configuration Requirements: The IUT shall be configured with an analog output that can be observed with a multimeter during the test. Any scaling information that may be needed to verify that the value is reasonable shall also be provided. The Analog Output object associated with this physical output shall be configured with Out\_Of\_Service = FALSE.~~

~~...~~

#### *7.3.2.2.1 Deleted Clause*

*This clause has been removed.*

### 7.3.2.5 Binary Input Object Tests

#### ~~7.3.2.5.1 Input Tracking Test~~

~~Purpose: To verify the ability to track and represent the value of a binary input.~~

~~...~~

#### *7.3.2.5.1 Deleted Clause*

*This clause has been removed.*

### 7.3.2.6 Binary Output Object Tests

#### ~~7.3.2.6.1 Output Tracking Test~~

~~Purpose: To verify the ability to represent and implement a physical binary output.~~

~~...~~

#### *7.3.2.6.1 Deleted Clause*

*This clause has been removed.*

### **7.3.2.15 Life Safety Point Object Tests**

#### **~~7.3.2.15.1 Tracking Value Test~~**

~~Purpose: To verify that the Present\_Value and Tracking\_Value properties of a Life Safety Point object track when the object is in a NORMAL state. This test can be omitted when the optional Tracking Value property is not supported.~~

~~---~~

#### ***7.3.2.15.1 Deleted Clause***

*This clause has been removed.*

### **7.3.2.16 Life Safety Zone Object Tests**

#### **~~7.3.2.16.1 Tracking Value Test~~**

~~Purpose: To verify that the Present\_Value and Tracking\_Value properties of a Life Safety Zone object track when the object is in a NORMAL state. This test can be omitted when the optional Tracking Value property is not supported.~~

~~---~~

#### ***7.3.2.16.1 Deleted Clause***

*This clause has been removed.*

### **7.3.2.18 Multi-state Input Object Test**

#### **~~7.3.2.18.4 Input Tracking Test~~**

~~Purpose: To verify the ability to track and represent the value of a multi-state input.~~

~~---~~

#### ***7.3.2.18.4 Deleted Clause***

*This clause has been removed.*

### **7.3.2.19 Multi-State Output Object Test**

#### **~~7.3.2.19.5 Output Tracking Test~~**

~~Purpose: To verify the ability to represent and implement a physical multi-state output.~~

~~Configuration Requirements: The IUT shall be configured with a multi-state output that can be observed during the test. If the IUT cannot be configured with such an output, this test shall be omitted.~~

~~---~~

#### ***7.3.2.19.5 Deleted Clause***

*This clause has been removed.*

#### **~~7.3.2.24.12 COV Subscription Failure Test~~**

~~Purpose: To verify that a failed COV subscription causes a TO FAULT transition.~~

~~---~~

#### **7.3.2.24.12 Deleted Clause**

*This clause has been removed.*

#### **~~7.3.2.33.4 Update\_Time Reflects Change to the Count and is Updated Atomically Test~~**

~~Purpose: To verify the correct atomic operations of change to the Pulse Converter's several properties, for an inherent change in Count.~~

~~...~~

#### **7.3.2.33.4 Deleted Clause**

*This clause has been removed.*

### **9.12 AtomicReadFile Service Execution Tests**

#### **~~9.12.2.2.4 Attempting to Read Data Beginning with a Start Position Less Than Zero~~**

~~Purpose: To verify the correct execution of the AtomicReadFile service request under circumstances where the specified record range is invalid.~~

~~...~~

#### **9.12.2.2.4 Deleted Clause**

*This clause has been removed.*

### **9.13 AtomicWriteFile Service Execution Tests**

#### **9.13.2 Negative AtomicWriteFile Service Execution Tests**

##### **~~9.13.2.1 Writing to Record Access Files~~**

##### **9.13.2.1 Deleted Clause**

*This clause has been removed.*

##### **9.13.2.2 Writing to Stream Access Files**

##### **~~9.13.2.2.3 Writing to a Read Only File~~**

~~Purpose: To verify that an appropriate error is returned if an attempt is made to write to a read only file.~~

~~...~~

##### **9.13.2.2.3 Deleted Clause**

*This clause has been removed.*

### **9.18.2 Negative ReadProperty Service Execution Tests**

#### **~~9.18.2.2 Reading Array Properties with an Array Index that is Out of Range~~**

~~Purpose: To verify that the IUT can execute ReadProperty service requests when the requested property value is an array but the ARRAY INDEX is out of range.~~

~~...~~

#### **9.18.2.2 Deleted Clause**

*This clause has been removed.*

#### **~~9.23.2.4 Writing Non-Array Properties with an Array Index~~**

~~Purpose: This test case verifies that the IUT can execute WritePropertyMultiple service requests when the property value is not an array but an array index is included in the service request. This test shall only be performed if Protocol\_Revision is present and has a value greater than or equal to 4.~~

~~---~~

#### **9.23.2.4 Deleted Clause**

*This clause has been removed.*

## **11 LOGICAL LINK LAYER PROTOCOL TESTS**

### **11 Deleted Clause**

*This clause has been removed.*

## **12.3 BACnet/IP Functionality Tests**

### **12.3.3 Broadcast Distribution Table Operations**

#### **~~12.3.3.4 Write Broadcast Distribution Table (Empty)~~**

~~Purpose: To verify that the IUT, configured as a BBMD, will reject Write Broadcast Distribution Table request containing an empty table because it doesn't contain an entry for the IUT.~~

~~---~~

#### **12.3.3.4 Deleted Clause**

*This clause has been removed.*

#### **~~12.3.3.5 Write Broadcast Distribution Table (Doesn't Contain BBMD Entry)~~**

~~Purpose: To verify that the IUT, configured as a BBMD, will reject Write Broadcast Distribution Table request if the table being written doesn't contain this BBMD entry.~~

~~---~~

#### **12.3.3.5 Deleted Clause**

*This clause has been removed.*

#### **~~12.3.3.6 Verify Broadcast Distribution Table Created from the Configuration Saved During the Previous Session~~**

~~Purpose: To verify that a BBMD without an FDT will update the BDT in the local configuration database and initialize it at startup.~~

~~---~~

#### **12.3.3.6 Deleted Clause**

*This clause has been removed.*

#### **~~12.3.4 Foreign Device Table Operations (Negative Tests)~~**

##### **~~12.3.4 Deleted Clause~~**

*This clause has been removed.*

#### **12.3.5 BACnet Broadcast Management (No Foreign Device Table, No Applications)**

##### **~~12.3.5.1 Forwarded NPDU Message Which Shall Be Ignored~~**

~~Purpose: To verify that the IUT, configured as a BBMD without an FDT, will handle a Forwarded NPDU message.~~

~~---~~

##### **~~12.3.5.1 Deleted Clause~~**

*This clause has been removed.*

##### **~~12.3.5.3 Original Unicast NPDU Message Which Shall Be Ignored~~**

~~Purpose: To verify that the IUT, configured as a BBMD without an FDT, will handle an Original Unicast NPDU message.~~

~~---~~

##### **~~12.3.5.3 Deleted Clause~~**

*This clause has been removed.*

#### **12.3.6.3 Foreign Device Table Timer Operations**

##### **~~12.3.6.3.2 Zero Duration Foreign Device Timer Operations~~**

~~Purpose: To verify that the IUT will handle Foreign Device registration with Time To Live parameter equal to zero and clears FDT entry upon timer expiration.~~

~~---~~

##### **~~12.3.6.3.2 Deleted Clause~~**

*This clause has been removed.*

##### **~~12.3.6.4 Unicast Message Which Should be Ignored~~**

~~Purpose: To verify that the IUT will ignore Original Unicast NPDU message.~~

~~---~~

##### **~~12.3.6.4 Deleted Clause~~**

*This clause has been removed.*

#### **~~13.3 Character Sets~~**

##### **~~13.3 Deleted Clause~~**

*This clause has been removed.*





## **135.1-2025v-4 Remove Tests That Are Too Complex To Execute**

### **Rationale**

This proposal removes ANSI/ASHRAE Standard 135.1 tests where the test was too complex to execute or tests unspecified bounds. The testable points were added to other tests.

## **9.13 AtomicWriteFile Service Execution Tests**

### **~~9.13.1.1 Writing to Record-Based Files~~**

#### ***9.13.1.1 Deleted Clause***

*This clause has been removed.*

## **9.13.1.2 Writing to Stream-Based Files**

### **~~9.13.1.2.2 Overwriting a Portion of a File~~**

~~Purpose: To verify that the IUT correctly responds to a request to write to a file beginning at an intermediate point. If the IUT does not support files that can not be modified except by replacing the entire file, and this restriction is clearly stated in the PICS, then this test may be ignored.~~

~~---~~

#### ***9.13.1.2.2 Deleted Clause***

*This clause has been removed.*

## **9.20 ReadPropertyMultiple Service Execution Tests**

### **~~9.20.1.12 Reading Maximum Multiple Properties~~**

~~Purpose: This test case verifies that IUT does not arbitrarily restrict the number of properties that can be read using a single ReadPropertyMultiple request.~~

~~---~~

#### ***9.20.1.12 Deleted Clause***

*This clause has been removed.*

## **12.1 MS/TP State Machine Tests**

### **~~12.1.1.3 State Machine Transition Tests for Error Transitions~~**

#### ***12.1.1.3 Deleted Clause***

*This clause has been removed.*

### **~~12.1.1.8 Multiple Tokens Detected During Confirmed Service Request~~**

#### ***12.1.1.8 Deleted Clause***

*This clause has been removed.*

### **12.1.1.9 Token Usage Tests**

#### **~~12.1.1.9.1 Unconfirmed Request~~**

~~This test shall be performed only if the IUT supports the Who Is or Who Has unconfirmed services, responding with the I Am and I Have services, accordingly.~~

~~...~~

#### ***12.1.1.9.1 Deleted Clause***

*This clause has been removed.*

#### **~~12.1.1.9.2 Confirmed Request With Reply~~**

~~This test shall be performed only if the IUT is able to initiate confirmed service requests.~~

~~Purpose: To verify the correct initiation of confirmed service requests by the Master Node Finite State Machine. This verifies the transitions:~~

~~...~~

#### ***12.1.1.9.2 Deleted Clause***

*This clause has been removed.*

#### **~~12.1.1.9.3 Confirmed Request—No Reply~~**

~~This test shall be performed only if the IUT is able to initiate confirmed service requests.~~

~~Purpose: To verify the correct termination of a confirmed service request by the Master Node Finite State Machine when no reply is received. This verifies the transitions:~~

~~...~~

#### ***12.1.1.9.3 Deleted Clause***

*This clause has been removed.*

#### **~~12.1.1.9.4 Confirmed Request—Invalid Reply~~**

~~This test shall be performed only if the IUT is able to initiate confirmed service requests.~~

~~Purpose: To verify the correct handling of an invalid reply frame by the Master Node Finite State Machine. This verifies the transitions:~~

~~...~~

#### ***12.1.1.9.4 Deleted Clause***

*This clause has been removed.*

#### **~~12.1.1.9.5 Confirmed Request With Reply Postponed~~**

~~This test shall be performed only if the IUT is able to initiate confirmed service requests.~~

~~Purpose: To verify the correct termination of postponed replies by the Master Node Finite State Machine. This verifies the transitions:~~

#### ***12.1.1.9.5 Deleted Clause***

*This clause has been removed.*

### **135.1-2025v-5 Remove Clauses That Do Not Include a Test**

#### **Rationale**

This proposal removes clauses where the test was moved to another clause or the clause does not contain a test.

### **7.3 Object Functionality Tests**

#### **7.3.2 Object Specific Tests**

##### **~~7.3.2.26 Moved to 7.3.2.25.2~~**

##### ***7.3.2.26 Deleted Clause***

*This clause has been removed.*

##### **~~7.3.2.27 Moved to 7.3.2.25.3~~**

##### ***7.3.2.27 Deleted Clause***

*This clause has been removed.*

##### **~~7.3.2.28 Moved to 7.3.2.25.4~~**

##### ***7.3.2.28 Deleted Clause***

*This clause has been removed.*

### **9.21 ReadRange Service Execution Tests**

#### **~~9.21.1.12 Status/Failure logging~~**

~~Moved to 7.3.2.24.20~~

#### ***9.21.1.12 Deleted Clause***

*This clause has been removed.*

### **12.3 BACnet/IP Functionality Tests**

#### **~~12.3.6.2 Execute Permanent Foreign Device Registration~~**

~~There is no provision for permanent (indefinite) foreign device registration, so this test has been removed.  
...~~

#### ***12.3.6.2 Deleted Clause***

*This clause has been removed.*

### 135.1-2025v-6 Remove Redundant Segmentation Clauses

#### Rationale

This proposal removes the redundant segmentation clauses from ANSI/ASHRAE Standard 135.1. Segmentation is tested during a normal test cycle.

#### 13.1 Segmentation

##### ~~13.1.2 TD Initiated Unsegmented Request and Segmented Response (Non Window)~~

~~Purpose: To test the initial transmission of a segmented response.~~

~~...~~

##### *13.1.2 Deleted Clause*

*This clause has been removed.*

##### ~~13.1.3 TD Initiated Unsegmented Request and Segmented Response (Window)~~

~~Purpose: To test proper window management in a segmented response.~~

~~...~~

##### *13.1.3 Deleted Clause*

*This clause has been removed.*

##### ~~13.1.4 TD Initiated Segmented Request and Unsegmented Response (Non Window)~~

~~Purpose: To verify that the IUT can receive a simple segmented request.~~

~~...~~

##### *13.1.4 Deleted Clause*

*This clause has been removed.*

##### ~~13.1.5 TD Initiated Segmented Request and Unsegmented Response (Window)~~

~~Purpose: To verify that the IUT can accept a request that is segmented and spans a window. When the request is sent, the TD requests a window size of 2 and the IUT must respond with a window size of 2. If the IUT responds with a window size of 1, skip this test.~~

~~...~~

##### *13.1.5 Deleted Clause*

*This clause has been removed.*

##### ~~13.1.6 IUT Initiated Unsegmented Request and Segmented Response (Non Window)~~

~~Purpose: To verify the behavior for simple segmented responses.~~

~~...~~

##### *13.1.6 Deleted Clause*

*This clause has been removed.*

#### **~~13.1.7 IUT Initiated Unsegmented Request and Segmented Response (Window)~~**

~~Purpose: To verify the behavior for segmented responses that span a window. The TD specifies a window size of 2 in the initial response packet and the IUT returns with the same window size. If the window size is 1, skip this test.~~

~~...~~

#### **~~13.1.7 Deleted Clause~~**

*This clause has been removed.*

#### **~~13.1.8 IUT Initiated Segmented Request and Unsegmented Response (Non Window)~~**

~~Purpose: To verify proper generation of a segmented request. The IUT must be able to initiate a request larger than the lowest configurable value for the Max\_APDU\_Length\_Accepted of the TD.~~

~~...~~

#### **~~13.1.8 Deleted Clause~~**

*This clause has been removed.*

#### **~~13.1.9 IUT Initiated Segmented Request and Unsegmented Response (Window)~~**

~~Purpose: To verify that the IUT properly handles generating a request that will span a window. The TD specifies a value of 2 in the initial segment ACK packet. If the initial segment of the request specifies a window size of 1, skip this test.~~

~~...~~

#### **~~13.1.9 Deleted Clause~~**

*This clause has been removed.*

#### **~~13.1.10 IUT Initiated Segmented Request With Retries~~**

~~Purpose: To verify that the IUT properly handles retries when segmented requests are not acknowledged.~~

~~...~~

#### **~~13.1.10 Deleted Clause~~**

*This clause has been removed.*

#### **~~13.1.11 Segmenting Replies Only When Max\_APDU\_Length\_Accepted is Exceeded~~**

~~Purpose: To verify that the IUT responds to requests without segmentation of the reply until the size of the reply exceeds Max\_APDU\_Length\_Accepted of the receiving device.~~

~~...~~

#### **~~13.1.11 Deleted Clause~~**

*This clause has been removed.*

### **13.1.12 IUT Abort When Segmentation Not Possible**

#### **~~13.1.12.2 TD Does Not Support Segmented Response~~**

~~Purpose: To verify that the IUT returns the correct abort message when the requester does not support segmented responses and a response would be larger than one segment.~~

~~---~~

#### ***13.1.12.2 Deleted Clause***

*This clause has been removed.*

#### **~~13.1.12.3 TD's Max Segments Accepted Exceeded~~**

~~Purpose: To verify that the IUT returns the correct abort message when it supports segmented responses and a response would be larger than the number of segments requested by the TD.~~

~~---~~

#### ***13.1.12.3 Deleted Clause***

*This clause has been removed.*