



ADDENDA

**ANSI/ASHRAE Addendum bs to
ANSI/ASHRAE Standard 135-2016**

A Data Communication Protocol for Building Automation and Control Networks

Approved by ASHRAE and by the American National Standards Institute on August 26, 2019.

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[This foreword 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.

135-2016~~bs~~-1. Add Elevator BIBBs and Device Profiles, p. 3

In the following document, language to be added to existing clauses of ANSI/ASHRAE 135-2016 and Addenda is indicated through the use of *italics*, while deletions are indicated by ~~striketrough~~. 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.

This is a review of Independent Substantive Changes that were made since the last public review. Areas where substantive changes have been made are highlighted in gray. In these areas, text that was removed from the previous public review is provided for reference but is shown in ~~double strikeout~~ and text that that has been added is shown with double underlines. This notation allows changes between reviewed versions to be indicated while preserving the traditional meaning of italics and single strikeout to indicate changes to the standard.

Only the changes highlighted in gray are open to comment at this time. All other material in this addendum 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 X, Y, Z, X1, X2, N, 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.

135-2016bs-1 Add Elevator BIBBs and Device Profiles

Rationale

The current standard does not address the need of elevator applications regarding BIBBs and device profiles.

New elevator application specific BIBBs are added. These new BIBBs base on the existing or extended common BIBBs, exclude some requirements not relevant for elevator applications, and add specific requirements for elevator applications.

New elevator device profiles are added in new device profile families for elevator devices.

[Change **Annex A**, p. 936]

...

BACnet Standardized Device Profiles Supported (Annex L):

BACnet Cross-Domain Advanced Operator Workstation (B-XAWS)

...

BACnet Access Control Security Display (B-ACSD)

BACnet Advanced Elevator Workstation (B-AEWS)

BACnet Elevator Workstation (B-EWS)

BACnet Elevator Display (B-ED)

...

BACnet Access Control Controller (B-ACC)

BACnet Advanced Elevator Controller (B-AEC)

BACnet Elevator Controller (B-EC)

BACnet Elevator Monitor (B-EM)

...

[Add new **Clauses K.1.Y?**, p. 1052]

K.1.Y1 BIBB - Data Sharing-Elevator View-A (DS-EV-A)

The A device retrieves values from a minimum set of objects and properties, including elevator objects, and presents them to the user. Devices claiming conformance to this BIBB shall support DS-RP-A. Device A shall be capable of using ReadProperty to retrieve any of the properties listed below. Device A may use alternate services where support for execution of the alternate service is supported by Device B.

BACnet Service	Initiate	Execute
ReadProperty	x	

Devices claiming conformance to this BIBB shall be capable of reading and displaying the object properties listed in Table K-1, excluding properties of Averaging, Loop, Accumulator, Pulse Converter, Channel, Lighting Output, and Binary Lighting Output objects, and be capable of reading and displaying the object properties listed in Table K-Y1.

Table K-Y1. Elevator Object Properties for Which Presentation Is Required

Elevator Group	Lift	Escalator
Object_Name	Object_Name	Object_Name
Group_ID	Status_Flags	Status_Flags
Group_Mode	Car_Position	Operation_Direction
	Car_Moving_Direction	Escalator_Mode
	Car_Assigned_Direction	

The format of a presented property value is unrestricted; the intent of this BIBB is not to impose how, or in what form, a device displays data values. For example, enumerated values could be displayed as icons, references could be displayed using the referenced object's name, and numerical values could be displayed graphically.

Actions taken by Device A when retrieval of a value for display fails are a local matter.

Devices claiming conformance to this BIBB are not required to support presentation of objects and properties that are introduced in a Protocol_Revision newer than that claimed by the A device.

A device claiming support for this BIBB is interoperable with devices that support DS-RP-B and support one or more of the objects listed in Tables K-1 and K-Y1, except the objects excluded from this BIBB.

K.1.Y2 BIBB - Data Sharing-Elevator Advanced View-A (DS-EAV-A)

The A device retrieves property values and presents them to the user. Device A shall be capable of using ReadProperty to retrieve any standard property of any standard object type listed in Table K-1 and K-Y1, excluding Averaging, Loop, Accumulator, Pulse Converter, Channel, Lighting Output, and Binary Lighting Output objects, except for those properties listed in Table K-2 and any property defined by the standard as not readable via ReadProperty. Device A may use alternate services where support for execution of the alternate service is supported by Device B.

BACnet Service	Initiate	Execute
ReadProperty	x	

The information conveyed by the properties in Table K-2 can be otherwise determined and as such need not be read and presented by devices claiming conformance to this BIBB.

In order to ensure that products that claim support for this BIBB are capable of presenting accurate data values across the full range of values for each data type, devices claiming support for this BIBB shall be able to meet the requirements described in Table K-3.

For Character String property values, the A device shall be capable of presenting string values for specific BACnet properties with at least the number of characters, independent of their encoding, specified in Table K-4.

The above presentation requirements are not required to be applied in all circumstances, but rather shall be available for every property value in the system. This should allow a product to restrict its presentation under specific conditions yet still allow the user full access to any specific property value.

The A device shall be capable of reading and presenting all standard forms of the datatypes as defined per the A device's claimed Protocol_Revision.

Actions taken by Device A when retrieval of a value for display fails are a local matter.

Devices claiming conformance to this BIBB are not required to support presentation of objects and properties that are introduced in a Protocol_Revision newer than that claimed by the A device.

A device claiming support for this BIBB is interoperable with devices that support DS-RP-B and support one or more of the objects listed in Table K-Y1.

K.1.Y3 BIBB - Data Sharing-Elevator Modify-A (DS-EM-A)

The A device writes properties of standard objects that are generally expected to be adjusted during normal operation of the elevator system. Devices claiming support for this BIBB are not expected to be capable of fully configuring elevator controller BACnet devices, although they are not inherently restricted from doing so.

BACnet Service	Initiate	Execute
WriteProperty	x	

Devices claiming conformance to this BIBB shall be capable of commanding and relinquishing standard commandable properties at priority 8 (other priorities may also be supported) of those objects listed in Table K-5 and Table K-Y1 excluding Averaging, Loop, Accumulator, Pulse Converter, Channel, Lighting Output, and Binary Lighting Output objects, and writing the properties listed in Table K-5 and Table K-Y2, excluding Averaging, Loop, Accumulator, Pulse Converter, Channel, Lighting Output, and Binary Lighting Output objects.

Table K-Y2. Standard Properties That DS-EM-A Devices Shall Be Capable of Writing

Elevator Group	Lift	Escalator
Group_Mode	Making_Car_Call Car_Door_Command Car_Mode	Escalator_Mode

Devices claiming support for this BIBB shall be capable of writing values within the full range as defined in Table K-6.

Devices claiming conformance to this BIBB are not required to support presentation and modification of objects and properties that are introduced in a Protocol_Revision newer than that claimed by the A device.

A device claiming support for this BIBB is interoperable with devices that support DS-WP-B and support one or more of the objects listed in Table K-Y1.

K.1.Y4 BIBB - Data Sharing-Elevator Advanced Modify-A (DS-EAM-A)

The A device is able to use WriteProperty to modify any standard property of object types listed in Tables K-5 and K-Y2, excluding Averaging, Loop, Accumulator, Pulse Converter, Channel, Lighting Output, and Binary Lighting Output objects, where the property is not required to be read-only, or to which access is otherwise restricted by the standard (e.g., Log_Buffer). Device A shall be capable of commanding and relinquishing standard commandable properties at any priority. Device A may use alternate services where support for execution of the alternate service is supported by Device B.

BACnet Service	Initiate	Execute
WriteProperty	x	

Devices claiming support for this BIBB shall be capable of writing values within the full range as defined in Table K-6.

The A device shall be capable of writing all standard forms of the datatypes as defined per the A device's claimed Protocol_Revision.

Devices claiming conformance to this BIBB are not required to support presentation and modification of objects and properties that are introduced in a Protocol_Revision newer than that claimed by the A device.

A device claiming support for this BIBB is interoperable with devices that support DS-WP-B and support one or more of the objects listed in Table K-Y1.

[Add new **Clauses K.2.Y?**, p. 1062]

K.2.Y1 BIBB - Alarm and Event Management-Elevator View Notifications-A (AE-EVN-A)

Device A presents alarm and event state information for events which the A device is configured to receive, including elevator faults. Devices claiming conformance to this BIBB shall support AE-N-A and shall support presentation of faults of fault algorithm FAULT_LISTED.

A device claiming support for AE-EVN-A is interoperable with devices that support AE-N-I-B or AE-N-E-B.

K.2.Y2 BIBB - Alarm and Event Management-Elevator Advanced View Notifications-A (AE-EAVN-A)

Device A presents complete alarm and event notifications to the user, including elevator faults and alarms. Devices claiming conformance to this BIBB shall support AE-AVN-A and shall support presentation of complete fault notifications from the FAULT_LISTED fault algorithm.

A device claiming support for AE-EAVN-A is interoperable with devices that support AE-N-I-B or AE-N-E-B.

K.2.Y3 BIBB - Alarm and Event Management-Elevator View and Modify-A (AE-EVM-A)

Device A displays and modifies limits and other event parameters in event-initiating objects in Device B, including fault parameters for the FAULT_LISTED algorithm.

Device A shall support DS-RP-A and DS-WP-A. The A device shall be capable of using ReadProperty to retrieve and WriteProperty to modify any of the event and fault algorithm parameters listed below. Such parameters may be present in individual properties, in event parameter properties, or in fault parameter properties. See the respective property specifications. Device A may use alternate services where support for execution of the alternate service is supported by Device B.

BACnet Service	Initiate	Execute
ReadProperty	x	
WriteProperty	x	

Devices claiming conformance to AE-EVM-A shall be capable of reading, presenting, and writing standard properties that are configuration parameters or references to configuration parameters of standard event and/or fault algorithms, as listed in Tables K-11, K-12, and K-Y3.

Table K-Y3. Additional Fault Algorithm Parameters That Device A Shall Be Capable of Presenting and Modifying

Fault Algorithm	Fault Algorithm Parameter
FAULT_LISTED	pMonitoredList

Devices claiming support for this BIBB shall be capable of writing the full range of values as defined in Table K-6.

Actions taken by Device A when retrieval of a value for display fails are a local matter.

Devices claiming conformance to this BIBB are not required to support presentation and modification of objects and properties that are introduced in a Protocol_Revision newer than that claimed by the A device.

A device claiming support for AE-EVM-A is interoperable with devices that support AE-N-I-B or AE-N-E-B.

K.2.Y4 BIBB - Alarm and Event Management-Elevator Advanced View and Modify-A (AE-EAVM-A)

Device A configures standard event-initiating objects, Notification Class objects, and Notification Forwarder objects in Device B. Device A shall support DS-RP-A, DS-WP-A, and DM-OCD-A. The A device shall be capable of using ReadProperty to retrieve and WriteProperty to modify properties and all forms of standard properties that contain parameters, or references to parameters, of event and/or fault algorithms. Device A may use alternate services where support for execution of the alternate service is supported by Device B. Device A shall be capable of creating/deleting Event Enrollment, Notification Class, and Notification Forwarder objects in the B device.

BACnet Service	Initiate	Execute
CreateObject	x	
DeleteObject	x	
ReadProperty	x	
WriteProperty	x	

Devices claiming conformance to AE-EAVM-A are required to read, present, and modify any properties or particular forms of properties that contain parameters, or references to parameters, related to the event and fault algorithms as required by AE-AVM-A, including FAULT_LISTED algorithm parameters.

Devices claiming conformance to AE-EAVM-A shall be capable of reading, presenting, and writing all standard forms of all common properties related to event-state-detection and alarm-acknowledgement, as listed in Table K-13.

Devices claiming conformance to AE-EAVM-A shall be capable of reading, presenting, and writing all standard forms of properties that are related to event-notification-distribution, listed in Table K-14.

Devices claiming support for this BIBB shall be capable of writing the full range of values as defined in Table K-6.

Actions taken by Device A when retrieval of a value for display fails are a local matter.

Devices claiming conformance to this BIBB are not required to support presentation and modification of objects and properties that are introduced in a Protocol_Revision newer than that claimed by the A device.

A device claiming support for AE-EAVM-A is interoperable with devices that support AE-N-I-B or AE-N-E-B.

[Change ANNEX L, p. 1079]

...

BACnet device profiles are categorized into families:

- Operator Interfaces. This family is composed of B-XAWS, B-AWS, B-OWS, and B-OD.
- Life Safety Operator Interfaces. This family is composed of B-ALSWS, B-LSWS, and B-LSAP.
- Access Control Operator Interfaces. This family is composed of B-XAWS, B-AACWS, B-ACWS, and B-ACSD.
- *Elevator Operator Interfaces: This family is composed of B-XAWS, B-AEWS, B-EWS, and B-ED.*
- Controllers. This family is composed of B-BC, B-AAC, B-ASC, B-SA, and B-SS.
- Life Safety Controllers. This family is composed of B-ALSC and B-LSC.
- Access Control Controllers. This family is composed of B-AACC and B-ACC.
- *Elevator Controllers: This family is composed of B-AEC, B-EC, and B-EM.*
- Miscellaneous. This family is composed of B-RTR, B-GW, B-BBMD, B-ACDC, and B-ACCR.

...

[Change Clause L.1.1, p. 1079]

L.1.1 BACnet Cross-Domain Advanced Workstation (B-XAWS)

The B-XAWS workstation is an advanced operator workstation for all building automation domains except life safety that includes the functionality of the following device profiles:

- B-AWS, see Clause L.1.2
- B-AACWS, see Clause L.3.1
- *B-AEWS, see Clause L.X.1*

[Add new **Clause L.X**, p. 1095]

L.X Elevator Operator Interface Profiles

The following table indicates which BIBBs shall be supported by the device types of this family, for each interoperability area. The B-XAWS is not shown in this table. See Clause L.1.1

Data Sharing			Alarm & Event Management		
B-AEWS	B-EWS	B-ED	B-AEWS	B-EWS	B-ED
DS-RP-A,B	DS-RP-A,B	DS-RP-A,B	AE-N-A	AE-N-A	AE-N-A
DS-RPM-A	DS-RPM-A				
DS-WP-A	DS-WP-A	DS-WP-A	AE-ACK-A	AE-ACK-A	AE-ACK-A
DS-WPM-A	DS-WPM-A		AE-AS-A	AE-AS-A	
DS-COVM-A	DS-COVM-A		AE-EAVM-A	AE-EVM-A	
DS-EAV-A	DS-EV-A	DS-EV-A	AE-EAVN-A	AE-EAVN-A	AE-EVN-A
DS-EAM-A	DS-EM-A		AE-ELVM-A		

Scheduling			Trending		
B-AEWS	B-EWS	B-ED	B-AEWS	B-EWS	B-ED
SCHED-AVM-A	SCHED-VM-A		T-AVM-A	T-V-A	

Device & Network Management		
B-AEWS	B-EWS	B-ED
DM-DDB-A,B	DM-DDB-A,B	DM-DDB-A,B
DM-ANM-A		
DM-ADM-A		
DM-DOB-B	DM-DOB-B	DM-DOB-B
DM-DCC-A		
DM-MTS-A	DM-MTS-A	
DM-OCD-A		
DM-RD-A		
DM-BR-A		

L.X.1 BACnet Advanced Elevator Workstation (B-AEWS)

The B-AEWS is an advanced elevator operator workstation that provides full support of the elevator features of BACnet.

The B-AEWS profile is targeted at an elevator operator or technician with a higher level of technical ability. It provides support for limited configuration actions and ongoing commissioning activities.

The B-AEWS profile enables the specification of the following:

Data Sharing

- Presentation of data (i.e., reports and graphics)
- Presentation of elevator data
- Ability to monitor the value of BACnet objects relevant for elevator, including all required and optional properties
- Ability to modify setpoints and parameters

Alarm and Event Management

- Operator notification and presentation of event information, including events from elevator objects.
- Alarm acknowledgment by operators
- Alarm summarization
- Adjustment of alarm and fault conditions, including elevator alarm and fault parameters
- Adjustment of alarm routing
- Ability to create, delete and configure Event Enrollment, Notification Class and Notification Forwarder objects
- Presentation and modification of Event Logs

Scheduling

- Modification of calendars and schedules
- Display of the start and stop times (schedule) of scheduled devices
- Display of calendars
- Creation and deletion of calendars and schedules

Trending

- Modification of the parameters of a trend log
- Display of trend data
- Creation of new Trend Log objects

Device and Network Management

- Ability to find other BACnet devices
- Ability to find all objects in BACnet devices
- Ability to silence a device on the network that is transmitting erroneous data
- Ability to synchronize the time in devices across the BACnet internetwork at the request of the operator
- Ability to cause a remote device to reinitialize itself
- Ability to backup and restore the configuration of other devices

L.X.2 BACnet Elevator Workstation (B-EWS)

The B-EWS is an elevator operator interface with limited capabilities relative to a B-AEWS. The B-EWS is used for monitoring and basic control of a BACnet elevator system, but differs from a B-AEWS in that it does not support configuration activities, nor does it provide advanced troubleshooting capabilities.

The B-EWS profile is targeted at the daily elevator operator who needs the ability to monitor basic system status and to perform simple commands and modifications to the operation of the system.

The B-EWS profile enables the specification of the following:

Data Sharing

- Presentation of data (i.e., reports and graphics)
- Presentation of elevator data
- Ability to monitor the value of BACnet objects relevant for elevators, including all required and optional properties
- Ability to modify setpoints and parameters

Alarm and Event Management

- Operator notification and presentation of event information, including elevator events
- Alarm acknowledgment by operators
- Alarm summarization
- Adjustment of alarm limits and conditions, including elevator alarm and fault parameters

Scheduling

- Modification of calendars and schedules
- Display of the start and stop times (schedule) of scheduled devices
- Display of calendars

Trending

- Display and archive of trend data

Device and Network Management

- Ability to find other BACnet devices
- Ability to find all objects in BACnet devices
- Ability to synchronize the time in devices across the BACnet internetwork at the request of the operator

L.X.3 BACnet Elevator Display (B-ED)

The B-ED is an elevator interface for the indication of elevator events and status. The B-ED is used for displaying the status of an elevator system.

The B-ED profile is targeted at the elevator operator and user who needs the ability to view the basic elevator system status.

The B-ED profile enables the specification of the following:

Data Sharing

- Presentation of elevator object data
- Ability to modify setpoints and parameters

Alarm and Event Management

- Presentation of event information, including elevator events and faults.

Scheduling

- No minimum requirements

Trending

- No minimum requirements

Device and Network Management

- Ability to find other BACnet devices

[Add new **Clause L.Y**, p. 1079]

L.Y Elevator Controller Profiles

The following table indicates which BIBBs shall be supported by the device types of this family, for each interoperability area.

Data Sharing			Alarm & Event Management		
B-AEC	B-EC	B-EM	B-AEC	B-EC	B-EM
DS-RP-B	DS-RP-B	DS-RP-B	AE-N-I-B	AE-N-I-B	AE-N-I-B
DS-RPM-B	DS-RPM-B	DS-RPM-B	AE-ACK-B	AE-ACK-B	AE-ACK-B
DS-WP-B	DS-WP-B		AE-INFO-B	AE-INFO-B	AE-INFO-B
DS-WPM-B	DS-WPM-B				
DS-COV-B	DS-COV-B	DS-COV-B	AE-EL-I-B		
DS-COVM-B	DS-COVM-B	DS-COVM-B			

Scheduling			Trending		
B-AEC	B-EC	B-EM	B-AEC	B-EC	B-EM
SCHED-I-B					

Device & Network Management		
B-AEC	B-EC	B-EM
DM-DDB-A,B	DM-DDB-A,B	DM-DDB-B
DM-DOB-B	DM-DOB-B	DM-DOB-B
DM-DCC-B	DM-DCC-B	DM-DCC-B
DM-TS-B or DM-UTC-B	DM-TS-B or DM-UTC-B	
DM-OCD-B		
DM-RD-B	DM-RD-B	
DM-BR-B		

L.Y.1 BACnet Advanced Elevator Controller (B-AEC)

A B-AEC device performs control of elevators. It supports the modification and commanding of its elevator objects by another device.

Data Sharing

- Ability to contain elevator objects.
- Ability to provide the values of any of its BACnet objects
- Ability to allow creation, deletion, and modification of some or all of its BACnet objects by another device

Alarm and Event Management

- Generation of alarm / event notifications of internal objects and the ability to direct notifications to recipients.
- Maintain a list of unacknowledged alarms / events
- Notifying other recipients that the acknowledgment has been received
- Adjustment of alarm / event parameters
- Logging of event notifications of the local device in an Event Log object

Scheduling

- Ability to schedule internal values, based on date and time

Trending

- No requirements

Device and Network Management

- Ability to respond to queries about its status
- Ability to respond to requests for information about any of its objects
- Ability to respond to communication control messages
- Ability to synchronize its internal clock upon request
- Ability to perform re-initialization upon request
- Ability to upload its configuration and allow it to be subsequently restored

L.Y.2 BACnet Elevator Controller (B-EC)

A B-EC device performs elevator control. It supports limited modification of its elevator objects by another device.

Data Sharing

- Ability to contain elevator objects.
- Ability to provide the values of any of its BACnet objects
- Ability to allow modification of some or all of its BACnet objects by another device

Alarm and Event Management

- Generation of alarm / event notifications of internal objects and the ability to direct notifications to recipients.
- Maintain a list of unacknowledged alarms / events
- Notifying other recipients that the acknowledgment has been received
- Adjustment of alarm / event parameters

Scheduling

- No requirements

Trending

- No requirements

Device and Network Management

- Ability to respond to queries about its status
- Ability to respond to requests for information about any of its objects
- Ability to respond to communication control messages
- Ability to synchronize its internal clock upon request
- Ability to perform re-initialization upon request

L.Y.3 BACnet Elevator Monitor (B-EM)

A B-EM device performs monitoring of an elevator control system. It supports presentation of its elevator objects by another device, but is not required to support modifications of any of its elevator objects.

Data Sharing

- Ability to contain elevator objects.
- Ability to provide the values of any of its BACnet objects

Alarm and Event Management

- Generation of alarm / event notifications of internal objects and the ability to direct notifications to recipients.
- Maintain a list of unacknowledged alarms / events
- Notifying other recipients that the acknowledgment has been received

Scheduling

- No requirements

Trending

- No requirements

Device and Network Management

- Ability to respond to queries about its status

- Ability to respond to requests for information about any of its objects
- Ability to respond to communication control messages

[Add a new entry to **History of Revisions**, p. 1364]

HISTORY OF REVISIONS

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1	21	Addendum <i>bs</i> to ANSI/ASHRAE Standard 135-2016 Approved by ASHRAE and by the American National Standards Institute on August 26, 2019. 1. Add Elevator BIBBs and Device Profiles

POLICY STATEMENT DEFINING ASHRAE'S CONCERN FOR THE ENVIRONMENTAL IMPACT OF ITS ACTIVITIES

ASHRAE is concerned with the impact of its members' activities on both the indoor and outdoor environment. ASHRAE's members will strive to minimize any possible deleterious effect on the indoor and outdoor environment of the systems and components in their responsibility while maximizing the beneficial effects these systems provide, consistent with accepted Standards and the practical state of the art.

ASHRAE's short-range goal is to ensure that the systems and components within its scope do not impact the indoor and outdoor environment to a greater extent than specified by the Standards and Guidelines as established by itself and other responsible bodies.

As an ongoing goal, ASHRAE will, through its Standards Committee and extensive Technical Committee structure, continue to generate up-to-date Standards and Guidelines where appropriate and adopt, recommend, and promote those new and revised Standards developed by other responsible organizations.

Through its *Handbook*, appropriate chapters will contain up-to-date Standards and design considerations as the material is systematically revised.

ASHRAE will take the lead with respect to dissemination of environmental information of its primary interest and will seek out and disseminate information from other responsible organizations that is pertinent, as guides to updating Standards and Guidelines.

The effects of the design and selection of equipment and systems will be considered within the scope of the system's intended use and expected misuse. The disposal of hazardous materials, if any, will also be considered.

ASHRAE's primary concern for environmental impact will be at the site where equipment within ASHRAE's scope operates. However, energy source selection and the possible environmental impact due to the energy source and energy transportation will be considered where possible. Recommendations concerning energy source selection should be made by its members.

About ASHRAE

Founded in 1894, ASHRAE is a global professional society committed to serve humanity by advancing the arts and sciences of heating, ventilation, air conditioning, refrigeration, and their allied fields.

As an industry leader in research, standards writing, publishing, certification, and continuing education, ASHRAE and its members are dedicated to promoting a healthy and sustainable built environment for all, through strategic partnerships with organizations in the HVAC&R community and across related industries.

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IMPORTANT NOTICES ABOUT THIS STANDARD

To ensure that you have all of the approved addenda, errata, and interpretations for this Standard, visit www.ashrae.org/standards to download them free of charge.

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