

Laura Meadows
COMMISSIONER
Roy E. Barnes
GOVERNOR

Industrialized Buildings Compilation of Information Bulletins to date, December 3, 2002

Number 1

Date: September 27, 2001

Subject: Information Bulletin No. 110-2-1 Revised

Applications - When Required

A completed Application Form (IB-01 dated January 1, 2002 or later) shall be submitted for all requests (except insignia) or submissions to this office. This includes but is not limited to: Building System approval or revision; model approval or Filing For Record; additions to or revision of existing documentation.

Both the Manufacturer's Agent and the Third Party Agency agent must sign all applications. Signatures may be original or electronic.

Model plans Filed For Record will be accepted only from an approved Design Approval Agency.

Number 2

Date: September 27, 2001

Subject: Information Bulletin No. 110-2-2 Revised

Filing Fees - When Required -- Building System Types

Each of the occupancy classifications described in the National Fire Protection Association publication 101-1997 (Chapter 4) supplemented by the building code occupancies in Chapter 3 of the Georgia State Minimum Standard Building Code (ICC), 2000 Edition, will be considered a separate building system for which filing fees (as specified in Rule 110-2-13.01) shall be required.

Occupancies: Assembly new (A),

Business new (B), Day Care new (DC), Educational new (E),

Hazardous (H includes H1 to H5),

Institutional (I) includes Detention and Correctional,

Factory & Industrial (F includes F1 & F2),

Mercantile (M),

Hotels, motels, dormitories (R1),

Apartments (R2), One & two family (R3),

Board and Care (R4) (effective January 1, 2002),

Storage (S includes S1 & S2)

Building systems are approved for a period of 2 years and then must be renewed for the next 2-year period. Filing fees are not required for *revisions* to building systems or plans.



Laura Meadows
COMMISSIONER
Roy E. Barnes
GOVERNOR

Number 3

Date: September 27, 2001

Subject: Information Bulletin No. 110-2-3 Revised

Details of Submittal Documents

Approvals issued to manufacturers are based on four classes: (1) Quality Control Procedures, (2) Building Systems, (3) Model Plans approved by the Department, and (4) Model Plans approved by an Approved Design Approval Agency.

QUALITY CONTROL MANUAL: Includes the manufacturer's process and procedures for maintaining conformance to the approvals and codes; record maintenance system; inspection procedures; transportation procedures; installation procedures; qualifications of responsible personnel; application and control of insignia; application of labels.

The evaluation agency shall evaluate the manufacturer's quality control submittal and subsequent revisions before submittal to the Department. The agency shall submit three (3) copies to DCA.

BUILDING SYSTEM: Consists of descriptive specifications for all materials, equipment and devices to be used; descriptive specifications and typical details for methods of incorporation materials, equipment and devices into a building; calculations and/or tests as required by the codes or to substantiate any variance from the prescriptive requirements of the codes; and typical details complying to the requirements of the calculation and/or tests.

MODEL PLANS: Consist of elevations, architectural, electrical, plumbing, heating and air conditioning floor plans, and foundation plans for a particular model and any details peculiar to the specific model which are not contained in the building system documentation. The plans shall reference typical details and other documentation in the building system package, which applies.

All model plans must be approved by the manufacturer's design approval agency before construction. The design approval agency shall submit one record copy to the Department. The Department reserves the right to review and require changes as deemed necessary.

In the event the manufacturer's agency is not approved as a design approval agency, all model plans must be reviewed by the evaluation agency and approved by the Department before construction.

Number 4

Date: September 27, 2001 (Re-issued)
Subject: Information Bulletin No. 110-2-4

Distribution of Approved Documents

Unless otherwise instructed by the Third Party Agency, the documentation submitted in hard copy to the Department for approval, upon approval, will be distributed as follows:



Laura Meadows
COMMISSIONER

Roy E. Barnes GOVERNOR

one set will be retained by the Department,

one set will be returned to the agency,

one set will be forwarded to the manufacturer,

any additional sets of hard copy will be distributed as directed by the agency. In the absence of directions, the additional sets will be forwarded to the manufacturer. Electronic submittals will be distributed by e-mail or compact disc.

Number 5

Date: September 27, 2001

Subject: Information Bulletin No. 110-2-5 Re-titled and Reissued

Accessibility Requirements

Georgia Law (Official Code of Georgia Annotated, Title 30, Chapter 3) requires certain buildings installed in the State of Georgia to be made accessible. This law also requires a reasonable number of facilities (drinking fountains, toilet rooms, etc.) within the buildings to be made accessible.

Section 30-3-3 of this law allows for an exemption from the accessibility requirements under certain circumstances. If the manufacturer feels that an exemption is justified and that a waiver of these requirements can be obtained from the authority having jurisdiction (Georgia Safety Fire Commissioner, Board of Regents, or the local government), this office will approve plans without requiring compliance, providing the following certification appears on the plans:

"This building is not designed to be accessible to the handicapped. The use of this building is subject to the approval of the authority having jurisdiction."

Signature of the Designer

Number 6

Date: September 27, 2001

Subject: Information Bulletin No. 110-2-6 Revised

Plumbing Facilities, Missing

Although plumbing facilities are required for occupants of nearly all buildings, the authority having jurisdiction may deem this requirement met where adequate facilities are provided within a reasonable



Laura Meadows
COMMISSIONER

Roy E. Barnes GOVERNOR

distance of a building. Therefore, this office will not require minimum plumbing facilities in buildings, other than residential, where the following note appears on the plans and on the data plate of each unit: Buildings constructed without the required minimum plumbing facilities cannot be installed in jurisdictions that do not have code enforcement capability.

"The use of this building, without the required minimum plumbing facilities, is subject to approval of the local jurisdiction having authority."

Number 7

Date: September 27, 2001

Subject: Information Bulletin No. 110-2-7 Revised

Accessibility Requirements – Reciprocal State Units

All states that presently participate in the reciprocal program with the State of Georgia have handicapped requirements dictated by their state laws. These state law requirements cannot be modified or negotiated away by state agencies. Therefore, Industrialized Buildings must be constructed to comply with the handicapped requirements of the state in which the building is to be installed. Georgia is currently reciprocal with Pennsylvania for Residential (R3) only.

In order for this office to certify code compliance for a building intended for installation in *a reciprocal state* without requiring compliance with the Georgia handicapped requirements, the following certification must be provided on the plans and data plate:

"I certify that this building is designed in accordance with	the	handicapped
accessibility requirements of (name of state of installation)."		

Signature of Designer

Number 8

Date: September 27, 2001

Subject: Information Bulletin No. 110-2-8 Revised

Local Government Inspection

The Official Code of Georgia Annotated, Section 8-2-112(a)(1), requires that all Industrialized Buildings which are sold, offered for sale, or installed within Georgia must bear the insignia issued by the commissioner. The only exception to this requirement is units intended for installation within the state



Laura Meadows
COMMISSIONER

Roy E. Barnes GOVERNOR

that have been inspected, at the request of the manufacturer, at the manufacturing facility by the local government having jurisdiction over the installation site.

In order to qualify for the exemption, the manufacturer must provide the Third Party Inspection Agency and this Department with a copy of an inspection report from the local government. This report must show the unit model number, serial number, inspection compliance with the codes and standards contained in the Georgia Rules of the Commissioner for Industrialized Buildings, the name and address of the official performing the inspection.

Third Party Inspection Agencies shall report any violation of this exception to the Department.

Number 9

Date: September 27, 2001

Subject: Information Bulletin No. 110-2-9 Revised

Wood Roof and Floor Trusses

All wood trusses used in designs submitted for approval shall be accompanied by the engineer's calculations. Truss sketches and calculations shall be stamped by a Georgia Registered engineer.

Where wood trusses are submitted as part of the building system package, the truss identification name or number shall be shown on the cross section drawing of the model plans.

At the manufacturing site, each truss or group of identical trusses shall be identified with the truss design number corresponding to the engineer's calculations.

All lumber used in the manufacture of wood trusses shall be graded and bear a lumber grade mark of a recognized lumber grading agency. Realizing that this mark may be cut off in sizing the material to length, a certificate of inspection for each truss or for a bundle of trusses may be attached to the truss or bundle. A bundle must remain intact until imminent use in order for the certificate to remain valid. Other methods for substantiating lumber grade, as approved by the Department may be used.

Wood trusses built by the manufacturer shall be inspected by the Third Party Inspection Agency for compliance with the approved designs and use on a particular model.

Number 10

Date: September 27, 2001

Subject: Information Bulletin No. 110-2-10 Revised

Procedures for Filing Plans and Data by Electronic Means

Technology improvements have made it possible to transfer data by electronic means economically with speed and security. We have made preparations to receive and transmit submissions in electronic format.



Laura Meadows
COMMISSIONER

Roy E. Barnes GOVERNOR

We therefore are offering all manufacturers and third party agencies the opportunity to take advantage of this method of submitting data to this office.

The requirements for electronic submissions are as follows:

- 1. Plans must be submitted in a ".dwf", ".dwg", or ".pdf" formatted file. Most CAD systems can do this. ".cpc" files are also acceptable.
- 2. Other data must be submitted in ".rtf", ".doc" or ".pdf" formatted files.
- 3. Required Engineer, Architect and Agency signatures and stamps must be affixed to the document in a secure manner using electronic format. We will not be keeping track of "keys" for secured documents. The required stamps may be on the cover sheet only if it contains a Table of Contents including the page/sheet number and date.
- 4. The DCA Application form must be signed, secured and included with all submissions.
- 5. Data will first be transmitted to the Third Party Agency for review and comments as is required. After review and approval, the Third Party Agency will stamp and send the data to the following addresses: jhurdsmi@dca.state.ga.us or jwatts@dca.state.ga.us for filing by DCA.
- 6. The data will then be recorded on to a Compact Disc (CD) for filing by DCA.
- 7. Any filing fees due will be invoiced directly to the manufacturer at the end of the month. Failure to pay invoices promptly will result in holding up approvals and Insignia.

It is expected that this process will save all parties time and money. If you have any questions, please call Jerry Hurd-Smith at 404-679-3102 or John Watts at 404-679-5246 or e-mail your comments to the above e-mail addresses.

Number 11

Date: September 27, 2001

Subject: Information Bulletin No. 110-2-11 - Re-issued

Items to be completed at the building installation site.

All building plans submitted to the Department must have a section on the front cover sheet reserved for Notes. These Notes will list items required by the construction codes and laws but not completed in the

manufacturing plant. This will alert local code officials to items needing permitting and inspection.

These Notes shall be labeled "Building Site Installation Requirements." Following are examples of the type of Notes to be placed in this new section.

- 1. Footings, foundation walls, piers and tie-downs.
- 2. Utility connections and plumbing lines to be installed.
- 3. List of electrical, gas, plumbing or HVAC systems to be installed or connected.
- 4. Include notification of buildings using height or area expansion provisions of the code.



Laura Meadows
COMMISSIONER
Roy E. Barnes
GOVERNOR

5. Include notice of handicapped provisions to be installed on site.

6. Include a list of required items, such as sprinkler systems, fire alarms, fire extinguishers to be furnished or installed on site.

Number 12

Date: September 27, 2001

Subject: Information Bulletin No. 110-2-12

Buildings Needing An Architect's Seal

Listed By Occupancy Use:

Assembly Institutional

Business over 5000 sq. ft.

Daycare

Educational

Mercantile over 5000 sq. ft.

Hotels/Lodging facilities

Apartments/Dormitories

High Hazard Care/Residential Care/Assisted Living

Reference the Official Code of Georgia Annotated Title 43 Chapter 4 Article 1 (43-4-1) for the complete text.

Where required by Law or Code, the Engineer's stamp shall also be shown on plan documents.

Number 13

Date: May 17, 2002

Subject: Information Bulletin No. 110-2-13

Foundation Design

Industrialized Building Rule 110-2-8-.06 requires a foundation design be included in the model plans submitted for approval. The following will provide guidance for Industrialized Building plans.

In lieu of data for a particular installation site, the bearing capacity for foundation design may be assumed to be 2500 pounds per square foot (For SI: 1 pound per square foot = 0.0479 kpa). This value may not be sufficient for all situations but is to be used only for general, non specific design.

Section 1811.2 of the International Building Code, 2000 Edition lists minimum dimensions for isolated pier foundations. Please add to this section an **Exception 4** to read as follows:

Engineered pier designs using the loads and requirements listed in this Chapter may alter the height and width requirements.

The local authority having jurisdiction is the final authority for all foundation designs and installations.



Laura Meadows COMMISSIONER Roy E. Barnes GOVERNOR

If you have any questions, please call Jerry Hurd-Smith at 404-679-3102 or John Watts at 404-679-5246 or e-mail your comments to: jhurdsmi@dca.state.ga.us or jwatts@dca.state.ga.us.



Mike Beatty
COMMISSIONER
Sonny Perdue
GOVERNOR

MEMORANDUM

TO: Industrialized Building Manufacturers; Third Party Agencies

and Interested Parties

FROM: Ted Miltiades, Director of Construction Codes and Industrialized

Buildings

DATE: April 15, 2010

SUBJECT: Information Bulletin No. 110-2-14

Permissible Architectural Work That Can Be Performed By Engineers

Construction documents submitted for buildings of Educational Occupancy, Apartments, and Hotels and Motels are required to have an Architect's Seal; however, if submitted under the following circumstances they may be accepted with the Seal of an Engineer:

- Educational Occupancy---- The plans of each building must not exceed 1700 square feet in area, must be single story in height, must not have more than two classrooms, and must have a minimum of two exits from each classroom, opening directly to the outside.
- Apartments----The plans of each building must not exceed 3,000 square feet in area, must be single story in height, and must not have more than four (4) units.
- Hotels & Motels----The plans of each building must not exceed 1,000 square feet in area, must be single story in height, and must not have more than four (4) bedrooms.



FOUAL HOUSING

Recycled Paper



Mike Beatty
COMMISSIONER
Nathan Deal
GOVERNOR

MEMORANDUM

TO: Industrialized Building Manufacturers; Third Party Agencies

and Interested Parties

FROM: Ted Miltiades, Director of the Industrialized Buildings Program

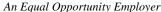
DATE: December 29, 2011

SUBJECT: Information Bulletin No. 110-2-15

Industrialized building closed components

- 1) If an industrialized building (IB) is manufactured or assembled in more than one location, the closed construction IB components shall receive Georgia IB component insignias and the constructed IB modular shall also receive a Georgia IB insignia; In-plant inspections of manufacturing facilities and products shall be in accordance with IB Rule 110-2-6-.03.
- 2) IB components of the closed construction type shall receive a GA IB component insignia or;
 - shall be listed and labeled for the specific purpose or use intended by an IAS or ANSI accredited Product Certification Agency (PCA) that conforms to ISO Guide 65-1996, General requirements for bodies operating product certification systems, and;
 - shall be tested and found suitable for the purpose or use intended by an IAS or ANSI accredited testing laboratory that conforms to ISO/IEC 17025-2005, General requirements for the competence of testing and calibration laboratories, and;
 - shall be inspected by an IAS or ANSI accredited inspection agency that conforms to ISO/IEC 17020-1998, General criteria for the operation of various types of bodies performing inspection.
 - Final approval of IB components shall be determined by the Georgia Industrialized Building Program.
- 3) After January 1, 2012 all new third party inspection agencies shall be required to be an IAS accredited Inspection Agency.

60 Executive Park South, N.E. • Atlanta, Georgia 30329-2231 • (404) 679-4940







Industrialized Building Manufacturers; Third Party Agencies and Interested Parties
Page 2
December 29, 2011

- 4) All documentation submitted to DCA shall be in English and all submitted plans shall be in English.
- 5) All dimensions included in submitted documentation and plans shall include U.S. Standard measurements.
- 6) In foreign language applications there must be an interpreter fluent in English and also fluent in English technical terminology available for DCA staff and the third party inspection agency staff during all inspection processes.
- 7) All payments to DCA must be in U.S. currency.
- 8) Manufacturers will incur all cost of any required out of state visits by DCA staff members.

TO: Industrialized Building Manufacturers; Third Party Agencies

and Interested Parties

FROM: Ted Miltiades, Director of the Industrialized Building Program

DATE: January 5, 2012, Revised July 1, 2018

SUBJECT: Information Bulletin No. 110-2-16

Shipping Containers

Georgia Industrialized Building Insignias shall be affixed to shipping containers and shipping container building modules which are intended for manufacture and remanufacture as commercial or residential industrialized (factory-built) buildings in accordance with Chapter 110-2 of the current Rules of the Commissioner of the Department of Community Affairs (DCA).

Shipping containers and shipping container building modules which are intended for manufacture and remanufacture are included under the scope of the Georgia Industrialized Buildings (IB) Program. This also applies to any new and used shipping containers or shipping container building modules which are intended for use as Construction Site Office Buildings, with or without storage.

[Ref. IB Rule 110-2-2-.02 Definitions; IB Bulletins Nos. 18 and 19.]





TO: Industrialized Building Manufacturers and Third Party Agencies

FROM: Ted Miltiades, Director of the Industrialized Buildings Program

DATE: December 18, 2012

SUBJECT: Information Bulletin 110-2-17

Plans Filed for Record

Effective January 1, 2013, all model plans submitted for renewal or revisions shall be considered as 'File for Record' and subject to the payment of the current 'File for Record' fee of \$20.00.

If you have questions or need further assistance, please contact the Industrialized Buildings Office at (404) 679-3118 or by email at industrializedbuildings@dca.ga.gov.





TO: Industrialized Building Manufacturers; Third Party Agencies

and Interested Parties

FROM: Ted Miltiades, Director of the Industrialized Building Program

DATE: July 1, 2018

SUBJECT: Information Bulletin No. 110-2-18

Shipping Containers, General Requirements

All new and used steel cargo shipping containers which are intended for manufacture or remanufacture and use as commercial or residential industrialized buildings shall comply with the following requirements:

- New steel shipping containers shall comply with the International Standards Organization (ISO) Standard 1496-1 and shall have a valid Container Safety Convention (CSC) plate affixed to them.
- Used steel shipping containers shall comply with following additional requirements:
 - 1. Used containers shall be a minimum Grade A or Grade B in accordance with the Institute of International Container Lessors (IICL) Guide for Container Equipment Inspection, 5th edition (IICL-5) or equivalent, and shall be certified as cargo worthy (CWO) as required by appropriate ISO, CSC, ABS or equivalent classification society, and shall have a legible and valid CSC plate affixed to them. A copy of the certification certificate shall be obtained from the certification company and shall be verified for authenticity and retained by the third party inspection agency.
 - 2. Used containers shall not have been manufactured more than 48 months prior to the date of the third party agency approval.
 - 3. Containers shall not have been previously designated or used for transportation or storage of any hazardous materials. Entire container shall be sanitized, free of asbestos and any toxic or deleterious residues. Containers suspected of having harmful levels of toxicity present, e.g. fumigants, pesticides, formaldehyde, styrene, benzene, toluene, or any other toxic chemicals or contaminants shall be properly tested for toxicity as required by appropriate hygienic standards.
 - 4. Used containers shall be in good condition, free from excessive dents and other severe visual or structural defects, undamaged and have no previous repairs. Containers showing signs of wear, such as, small rust spots, holes, peeling or flaking paint, etc. shall be properly evaluated, sanded and repaired, resealed and repainted to meet with current approved industry repair standards.
 - 5. Existing preservative treated wood flooring shall be evaluated and if deemed necessary, may be encapsulated per current EPA remediation guidelines or entirely removed and replaced with new flooring to comply with the current code requirements for interior finishes.
 - 6. Used containers shall not have been painted with any lead paint. If lead paint is found, the paint shall be removed and remediated per current EPA remediation guidelines for lead based paint.
- Model plans shall be submitted for container buildings which include any structural modifications and load calculations for clear spans, cut wall openings, etc. The model plans and structural calculations shall be approved by the third party agency and stamped by a GA registered Professional Engineer.

TO: Industrialized Building Manufacturers; Third Party Agencies

and Interested Parties

FROM: Ted Miltiades, Director of Codes and Industrialized Buildings

DATE: July 1, 2018

SUBJECT: Information Bulletin No. 110-2-19

Quality Control and Inspection Protocols for Shipping Container Building Modules

The third party agency shall be responsible for the evaluation, inspection and approval of all new and used shipping containers and shipping container building modules as defined in accordance with IB Rule 110-2-2-.02. The following quality control and inspection protocols shall apply:

Quality Control and Inspection Protocols for Shipping Container Building Modules.

- 1) New and used containers shall be certified to comply with the current International Organization for Standardization (ISO) Standard ISO-1496.1 and the International Commission for Safe Containers (CSC) regulations. Containers shall be general purpose or dry bulk cargo type with a valid CSC safety approval plate. Containers which do not have a valid safety approval plate shall not be permitted for manufacture or remanufacture as factory industrialized buildings. Containers previously designated to transport hazardous materials, dangerous or toxic substances shall not be permitted for manufacture or remanufacture as factory industrialized buildings.
- Used containers shall be a minimum Grade A or Grade B in accordance with the Institute of International Container Lessors (IICL) Guide for Container Equipment Inspection, 5th edition (IICL-5) or an equivalent grading standard and shall be certified as cargo worthy (CWO) as required by ISO, CSC, ABS or an equivalent classification society and shall have a legible and valid CSC plate affixed to them. A copy of the valid certification certificate shall be obtained from the certification company and shall be verified for authenticity and retained for record by the third party inspection agency, or
- 3) Used containers shall comply with one of the following evaluation, testing and inspection protocols:
 - a) Acceptance based on an ICC-Evaluation Service Report (ESR) or equivalent evaluation report from an approved accredited testing and evaluation agency which conforms to AC-462 'Acceptance Criteria for Shipping Container Building Modules,' or
 - b) Acceptance based on current International Organization for Standardization (ISO) or International Convention for Safe Containers (ICSC) or Institute of International Container Lessors (IICL) or American Bureau of Shipping (ABS) or equivalent certification organizations which perform the evaluation, testing and inspection of existing shipping containers, or
 - c) Acceptance based on an equivalent alternative protocol approved by the Department.

TO: Industrialized Building Manufacturers; Third Party Agencies

and Interested Parties

FROM: Ted Miltiades, Director of Industrialized Buildings Program

DATE: July 1, 2018

SUBJECT: Information Bulletin No. 110-2-20

Tiny Houses

New tiny house residential industrialized buildings (IB) shall comply with the following requirements:

- 1. They shall not exceed 400 square feet in total area of habitable floor space, excluding loft spaces. Habitable spaces are for living, sleeping, eating or cooking. Bathrooms, toilet rooms, closets, halls, storage or utility spaces and similar areas are not considered habitable spaces.
- 2. They shall comply with the current State Minimum Standard Residential Code(s) with Georgia State Amendments. This includes the: International Residential Code (IRC), International Plumbing Code (IPC), International Energy Conservation Code (IECC) and National Electrical Code (NEC).
- 3. They shall be allowed to conform to the requirements of Appendix S entitled 'Tiny Houses' of the current IRC code as adopted and amended by the Department of Community Affairs.
- 4. They shall not contain a permanent metal chassis and shall be affixed to permanent load-bearing foundation. Tiny houses on wheels (THOWs) do not fall under scope of the IB program.
- 5. Each dwelling shall have at least one principle means of egress or doorway with a clear opening width of at least 32 inches and a clear height of at least 78 inches. [IRC R311]
- 6. Habitable lofts and every sleeping room shall have at least one operable means of emergency escape and rescue opening (door or window) that complies with the current code. An approved operable egress skylight or roof access window shall be allowed in habitable lofts. [IRC R310]
- 7. The dwelling shall be capable of maintaining a minimum room temperature of 68 degrees at three feet above the floor and two feet from the exterior walls (excludes the use of portable heaters).
- 8. Smoke alarms are required in each sleeping room, in the immediate vicinity of the bedrooms and on each additional story or loft of the dwelling including basements and habitable attics. [IRC R314]
- 9. A carbon monoxide alarm is required in every dwelling unit having fuel fired or electric appliances. [IRC R315]
- 10. Model plans submitted for approval or file for record shall be stamped by a GA licensed registered engineer and shall be reviewed, approved and stamped by a DCA approved third party agency.
- 11. Manufactured (mobile) homes constructed under the requirements of the U.S. Department of Housing and Urban Development (HUD) do not fall under the scope of the IB program.
- 12. Recreational vehicles, motor homes, park trailers, travel trailers, built in accordance with the National Fire Protection Association (NFPA) Standard on Recreational Vehicles, NFPA 1192 or the Park Model Recreational Vehicle Standard, ANSI A119.5 do not fall under the scope of the IB program.
- 13. All approved factory built IB tiny houses shall have a DCA insignia affixed to each module or unit which certifies the unit complies with the current state's construction codes and IB program rules.



- 14. Local governments shall retain full control over all matters relating to site installation, including subdivision controls, zoning issues, site grading, foundation installations and utility hook-ups.
- 15. See attached drawing for clarification on the requirements for handrails on ships ladders.

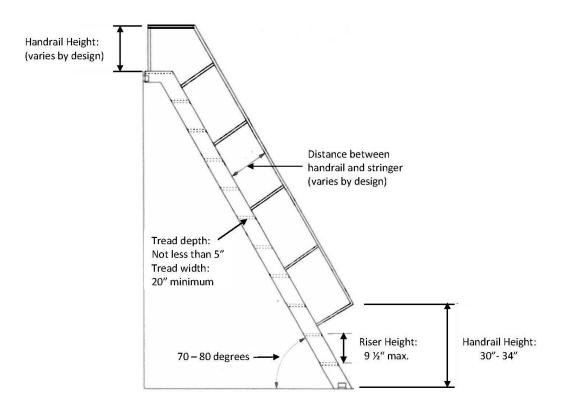


Figure 1 - Ships Ladders [AS104.2.3]