


> ready > set > succeed

Manufactured Homes and Industrialized Housing & Buildings

Housing & Buildings Standards Division, PA Dept. of Community and Economic Development, DCED




1

> ready > set > succeed

Program Background

- **1972** – PA Industrialized Housing Act – PA Department of Community Affairs (DCA)
- 1976 – Manufactured Housing Construction and Safety Standards
- **1982** – PA Manufactured Housing Authorization Act
- 1999 – Uniform Construction Code enacted
- 2006 – PA Manufactured Home Improvement Act
- 2012 – PA Manufactured Home Improvement Act amended to address Relocated Manufactured Homes
- 2020 – Transitioned to HUD Installation Program
- 2024 – Commercial Modular Buildings (fully implemented)

Programs managed by DCED / Hsg. & Bldgs. Standards Division.




2

> ready > set > succeed

Terminology

- **Industrialized** Housing & Buildings
 - Commonly referred to as “modular”
- **Manufactured** Housing



3

“CrossMod”?

> ready > set > succeed

pennsylvania
DEPARTMENT OF COMMUNITY
& ECONOMIC DEVELOPMENT

10

Exemption

> ready > set > succeed

Manufactured & Industrialized Housing Exemptions S901(a)

- Certified (new) **manufactured** or **industrialized** (modular) housing shipped from the factory

pennsylvania
DEPARTMENT OF COMMUNITY
& ECONOMIC DEVELOPMENT

11

Exemption

> ready > set > succeed

Manufactured & Industrialized Housing R403.1(b)(5) S901(a)

- The Uniform Construction Code does not apply to **manufactured** or **industrialized** housing shipped from the factory under section 901...as provided for §403.25

pennsylvania
DEPARTMENT OF COMMUNITY
& ECONOMIC DEVELOPMENT

12

PA L&I's Position

> ready > set > succeed

UCC Sections **not enforced** by construction code officials under Industrialized Housing Act

§ 401.3. Certification required.

- (a) A person may not perform a plan review of construction documents, inspect construction or equipment, or administer enforce the Uniform Construction Code without being currently certified or registered by the Department in the category applicable to the work that is to be performed.
- (b) A person may not approve plans or perform inspections relating to accessibility requirements without being certified by the Department as an accessibility inspector/plans examiner.

pennsylvania DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT PA

19

PA L&I's Position

> ready > set > succeed

All plan reviews and inspections with respect to the **building** as constructed **offsite** are conducted by ICC certified third party agencies, plans examiners, and inspectors under DCED's authority!

pennsylvania DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT PA

20

PA L&I's Position

> ready > set > succeed

- Since DCED is not requiring UCC certifications (do require ICC) for **any** plans examiner or inspector of the building offsite, the code administrator is also not enforcing UCC Section 401.6 or Section 401.7 with respect to certification categories or category specification.
- This applies **only** to the building while **offsite** and not for plan review or inspection onsite for those portions that are completed on-site.

pennsylvania DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT PA

21


PA L&I's Position

> ready > set > succeed

§ 401.13. List of code administrators.

The Department will maintain a list of code administrators indicating their categories of certifications on its Internet website (www.dli.state.pa.us). The Department will also make the list available to municipalities and, upon request, the public.

The Department will continue to maintain the list as required by UCC 401.13 but **will not** have information on anyone not registered with the Department, such as the ICC certified plans examiners and inspectors approved by DCED and not Commonwealth registration.




22

PA L&I's Position

> ready > set > succeed

UCC Sections **partially not enforced** by construction code officials under Industrialized Housing Act



23

PA L&I's Position


> ready > set > succeed

§ 403.42a. Permit application.

(c) A licensed architect or licensed professional engineer shall prepare the construction documents under the Architects Licensure Law (63 P. S. § 34.1—34.22), or the Engineer, Land Surveyor and Geologist Registration Law (63 P. S. § 148—158.2). An unlicensed person may prepare design documents for the remodeling or alteration of a building if there is no compensation and the remodeling or alteration does not relate to additions to the building or changes to the building's structure or means of egress.

DCED ensures that design and preparation of construction documents for construction of **offsite buildings** will be in compliance with regulations and the applicable (local) codes. It will remain the code official's responsibility to ensure compliance with this section for all onsite requirements and construction. All alterations and modifications that occur prior to the completion of the sale, the home manufacturer **MUST** provide approval to the local official.

Should any remodeling or alterations occur after the sale, the local official has the authority as it occurred on-site and without manufacturers oversight.



24

DCED / TPA Approvals

> ready > set > succeed

pennsylvania DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT

25

PA L&I's Position

> ready > set > succeed

- Utility connections shown on construction drawings shall be reviewed for compliance with applicable codes by certified electrical, plumbing, and mechanical plans examiners.
- All accessibility elements will be reviewed by the certified accessibility plans examiner retained by the BCO within their jurisdiction.
- Local officials will NOT be held accountable for factory related issues! If local official sees any issue, they have authority to stop work.

pennsylvania DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT

26

If a problem is found.....

> ready > set > succeed

".....and there's an issue with the ADA toilets in the restrooms, that was done at the factory."

pennsylvania DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT

27

PA L&I's Position

> ready > set > succeed

§ 403.45. Inspections.

(c) The permit holder or an authorized agent shall notify the construction code official when work is ready for inspection and provide access for the inspection. The work shall remain accessible and exposed for inspection. A construction code official may inspect the construction and equipment only during normal hours at the construction site unless the permit holder or agent requests or agrees to another time. Inspections may be conducted under § 403.86 (relating to right of entry to inspect).

Accessible and exposed for inspection is not applicable to **offsite** construction, but only to onsite construction and connections.

pennsylvania
DEPARTMENT OF COMMUNITY
& ECONOMIC DEVELOPMENT

28

PA L&I's Position

> ready > set > succeed

§ 403.85. Release, retention and sharing of commercial construction records.

(a) A building code official shall keep records of all applications received, permits issued, reviewed building plans and specifications, certificates issued, fees collected, reports of inspections, notices and orders issued for all commercial buildings and structures under the Uniform Construction Code. A building code official shall retain these records as long as the related building, structure or equipment remains in existence.

DCED is the repository of the building plans and specifications for review, construction, and inspection of anything occurring **offsite**. The code official **shall** retain all other records including applications, review, and inspection reports for this building at a particular location for as long as it remains in existence. There is no change to the retention of records requirement, just that DCED will retain records that are related to the **"industrialized"** portions.

pennsylvania
DEPARTMENT OF COMMUNITY
& ECONOMIC DEVELOPMENT

29

DCED's Role

> ready > set > succeed

- ✓ Enable the industry to design and construct to a uniform standard
- ✓ Provide assurance that off site construction follows an approved quality assurance program (production facilities)
 - ✓ Including plan review and inspection
 - ✓ With mechanisms to address problem
- ✓ Consumers and public protected through continual monitoring
- ✓ Provides for monitoring of QA program on behalf of the local code officials!
- ✓ Provides for continuity and cooperation with other Commonwealth agencies.

pennsylvania
DEPARTMENT OF COMMUNITY
& ECONOMIC DEVELOPMENT

30

Appropriate Use

> ready > set > succeed

Industrialized Housing and Manufactured Housing to be used only for residential applications

- **Manufactured** housing is single family only
 - Attached **manufactured** housing
- **Industrialized** housing is One & Two Family Dwellings, Townhouses and other construction under Use Group R
- **Industrialized buildings** used for other than Group R.

pennsylvania DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT

31

DCEDs Role

> ready > set > succeed

Industrialized Housing and Buildings

DCED establishes building code

- The current IRC and / or IBC
 - Generally consistent with UCC (different timeframe)
 - Local amendments may be recognized per §145.45 (buildings included)
- Provides mechanisms for building plan review and inspections
 - Through independent third-party agencies
 - DCED provides oversight
- Dialogue with local municipalities

pennsylvania DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT

32

DCEDs Role

> ready > set > succeed

Manufactured Housing (new homes only)

- HUD (federal government) establishes building code
 - Affordable, performance-based standard
- **HUD establishes installation standard**
 - *Generally, follows manufactures instructions (UCC considerations still apply)
 - HUD and DCED monitor manufacturers
 - DCED monitors retailers
 - **HUD trains and licenses installers**
 - DCED trains municipal inspectors
 - DCED engages dialogue with local municipalities

pennsylvania DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT

33

HUD INSTALLERS LICENSE

> ready > set > succeed

NEW MANUFACTURED HOME INSTALLATIONS:
 Manufactured home installers will be required to complete the HUD Form 309 for the installation of new manufactured homes.

RELOCATED MANUFACTURED HOME INSTALLATIONS:
 PA Certificate of Compliance will be limited to signify the proper installation of relocated manufactured homes only.

pennsylvania DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT PA

34

HUD INSTALLERS LICENSE

> ready > set > succeed

HUD

LICENSED MANUFACTURED HOME INSTALLER

Company Name: Office of Manufacturing Housing
 Licensee: John Doe
 License Number: IL20140001
 Address: 451 7th St SW, Washington, DC 20410

Date of Expiration: 1/31/2020

pennsylvania DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT PA

35

Limitations of the Programs

> ready > set > succeed

- Limited to **CERTIFIED/NEW MANUFACTURED** or **INDUSTRIALIZED HOMES** and BUILDINGS to first purchaser.
- Limited to initial location of the home.
- In all cases, rely on cooperation with local code enforcement.
- No special consideration for land lease communities.
- Any aspect not addressed in these programs, must follow UCC.

pennsylvania DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT PA

36

FYI

> ready > set > succeed

Other State Agencies that oversee manufactured housing:

PA Dept. of State, Vehicle Board: Issues the licenses to the manufacturers, sales locations and sales people.

PA OAG, Bureau of Consumer Protection, regulates manufactured housing communities.

pennsylvania DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT

37

No Regulatory Program for...

> ready > set > succeed

- Relocated commercial modular buildings
- Seasonal recreational park models
- Tiny Homes
- "Shed Homes"
- Shipping Container Units

NOT EXEMPT FROM UCC

pennsylvania DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT

38

No Regulatory Program for...

> ready > set > succeed



Park Models –
Constructed to ANSI 119.5



Tiny Homes –
Constructed to ?



39

AHJ may allow.....

> ready > set > succeed

Harrisburg's long-awaited tiny-home village for homeless veterans opens soon: Here's a sneak peek

Updated May 20, 2024, 1:21 a.m. | Publisher May 28, 2024, 7:34 a.m.

pennsylvania DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT PA

40

No Regulatory Program for...

> ready > set > succeed

pennsylvania DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT PA

41

Shipping Containers

> ready > set > succeed

pennsylvania DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT PA

42

Skid Units

> ready > set > succeed

pennsylvania PA
DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT

43

"Shed Homes?"

> ready > set > succeed

Tiny Home / Shed Home... Q

Tiny Home / Shed Home and Cabins

Public group · 29.6K members

Joined Invite

Reels About Photos Events Files

pennsylvania PA
DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT

44

Manufactured Home!

> ready > set > succeed

SEE ATTACHED BANK OF PERS FOR
SCHEDULED INFORMATION AND LOCATION

NIP

pennsylvania PA
DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT

45

Can you tell them apart?

> ready > set > succeed

pennsylvania PA
DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT

46

Manufactured vs. Industrialized

> ready > set > succeed

HUD Code	IRC or IBC
Vehicle Dealers	Builders
Licensed Installers	No requirement
HUD Form 309	Site Installation Inspection form & Notice of Approval
Installation to manufacturer design	Installation to manufacturer design
Permanently transportable Vehicle	Not transported once installed Real estate

pennsylvania PA
DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT

47

Manufactured vs. Industrialized

> ready > set > succeed

AS EVIDENCED BY THIS LABEL NO.:

THE MANUFACTURER CERTIFIES TO THE BEST OF THE MANUFACTURER'S KNOWLEDGE AND BELIEF THAT THIS MANUFACTURED HOME HAS BEEN INSPECTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT AND IS CONSTRUCTED IN CONFORMANCE WITH THE FEDERAL MANUFACTURED HOME CONSTRUCTION AND SAFETY STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE. SEE DATA PLATE.

INSIGNIA OF CERTIFICATION FOR INDUSTRIALIZED HOUSING

SERIAL NO. 3870 86001

This insignia certifies that the dwelling unit of industrialized housing has been manufactured from plans, specifications and other printed graphic documents under a compliance assurance program in accordance with the requirements of the Industrialized Housing Act, Title 26 of the Publicly Noted Statutes Annotated, Pennsylvania Statutes Annotated, Sections 1801.1 to 1801.12 and the regulations issued thereunder by the Department of Community and Economic Development of the Commonwealth of Pennsylvania.

Code-related problems should be reported to (717) 725-7416.

Manufactured Home **Industrialized Home**

pennsylvania PA
DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT

48

Now can you tell them apart?

> ready > set > succeed

Manufactured Home **Industrialized Home**

pennsylvania DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT PA

49

Manufactured Housing Identification

> ready > set > succeed

pennsylvania DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT PA

50

Uniform Construction Code

> ready > set > succeed

Regulations §403.25
Manufactured Housing – The UCC **DOES NOT** apply to:
 NEW (certified) **manufactured housing**

- Assembled by manufacturer
- Shipped by manufacturer
- Installation in conformance with manufacturers designs

Construction or processes not addressed by approved design, (HUD code) must comply with UCC

pennsylvania DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT PA

51

Federal Law - Preemption

> ready > set > succeed

NEW MANUFACTURED HOMES ONLY

No state or local authority may establish any standards regarding construction or safety which is not identical to the Manufactured Home Construction and Safety Standards

Applies to NEW home sales to the first purchaser, no longer applies once home is resold or relocated.

pennsylvania DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT PA

52

Federal Law - Preemption

> ready > set > succeed

Examples of Preemption

- Arch Fault Protection – addressed under Sec. 801(b), says, “not required”. **PREEMPT**
- Roof Live Load – addressed under Sec 305(c)(3)(C), 20Lb roof load minimum in PA. **PREEMPT**
- Fire Suppression* - **NOT PREEMPT** (must follow local requirements, cannot be discriminative)

pennsylvania DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT PA

53

Uniform Construction Code

> ready > set > succeed

Regulations §403.25

Manufactured Housing – The UCC applies to:

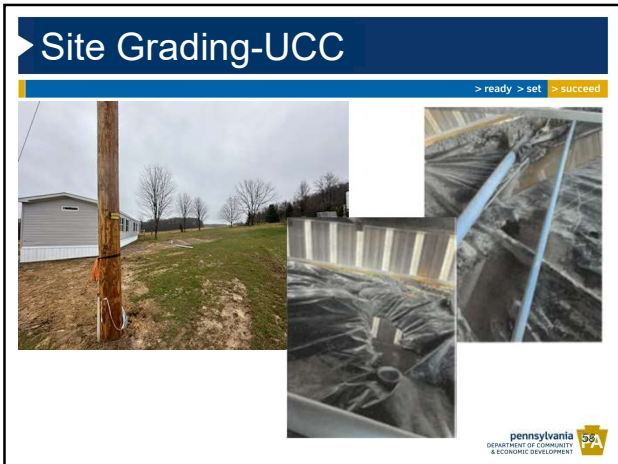
- Utility Connection & Site Grading

pennsylvania DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT PA

54



55




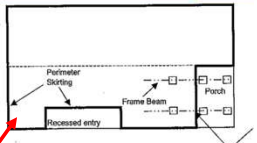
56




57

Recessed Porches

> ready > set > succeed



Configure skirting. Run the skirting along the perimeter of the home's heated, conditioned space. Do not enclose with skirting areas under recessed entries, porches or decks (whether constructed as part of the home or added on site) unless skirting is of the fully vented type and installed so as to allow water to freely flow out from under the home.



58

Recessed Porches – PROBLEM

> ready > set > succeed

59


Uniform Construction Code

> ready > set > succeed

Regulations §403.25

Manufactured Housing – The UCC applies to:


- Utility Connection & Site Grading
- Alteration or repair outside of the Manufactured Home Construction and Safety Standard



60

Alteration Outside of the Manufactured Home Construction and Safety Standards

> ready > set > succeed



Verify correction to approved design.

pennsylvania DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT

61

Uniform Construction Code

> ready > set > succeed

Regulations §403.25

Manufactured Housing – The UCC applies to:

- Utility Connection & Site Grading
- Alteration or repair outside of the Manufactured Home Construction and Safety Standard
- Additions to the unit after delivery

pennsylvania DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT

62

Modifications

> ready > set > succeed

Manufactured Housing

- Site built structures must be independently supported (unless the home was manufactured to accept the additional loads)
- HVAC, electrical, DWV systems not designed to serve anything beyond the home
- May not obstruct either of the 2 exit doors
- Performance based building code
 - Designs often maximize material use
 - Any alterations or repair must recognize manufacturers design of the home
 - Transportation components must remain intact

pennsylvania DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT

63

Factory constructed or site-built attached carports.

> ready > set > succeed



24 CFR Part 3280.213

(a) When a manufactured home is designed for factory construction with an attached carport or is designed for construction of an attached site-built carport, the manufacturer must design the manufactured home to accommodate all appropriate live and dead loads from the attached carport structure that will be transferred through the manufactured home structure to the home's support and anchoring systems.

(b) The design, including the home's installation instructions, must specify the following home and carport characteristics including maximum width, maximum sidewall height, live and dead loads, and other design limitations or restrictions.

If the home was not designed to accept the additional loads, the structure must be "free standing".



64

Factory constructed or site-built garages.

> ready > set > succeed



24 CFR Part 3280.212

(a) When a manufactured home is designed for factory construction with an attached garage or is designed for construction of an attached site-built garage that is not self-supported, the manufacturer must design the manufactured home to accommodate all appropriate live and dead loads from the attached garage structure that will be transferred through the manufactured home structure to the home's support and anchoring systems.

(b) The design must specify the following home and garage characteristics including maximum width, maximum sidewall height, maximum roof slope, live and dead loads, and other design limitations or restrictions using loads provided by this Code.

(c) When a manufactured home is factory constructed with an attached garage or is constructed for the attachment of a site-built garage, provisions must be made to provide fire separation between the garage and the manufactured home.

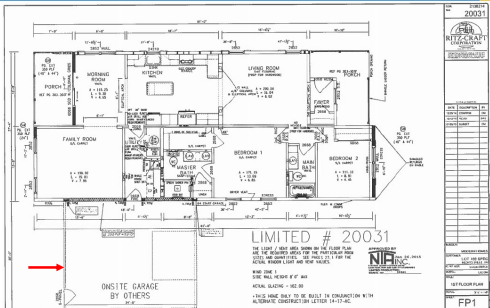
If the home was not designed to accept the additional loads, the structure must be separated and "free standing".



65

Approved Floor Plan

> ready > set > succeed



Garage **MUST** be identified on the approved floor plan!



66

Approved Floor Plan

> ready > set > succeed



pennsylvania
DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT

67

Outside of the Manufactured Home Construction and Safety Standards

> ready > set > succeed



inria PA
PHEED
1001001001

68

Uniform Construction Code

> ready > set > succeed

Regulations §403.25

Manufactured Housing – The UCC applies to:

- Utility Connection & Site Grading
- Alteration or repair outside of the Manufactured Home Construction and Safety Standard
- Additions to the unit after delivery
- Construction, alteration, repair or change of occupancy if resold or relocated

pennsylvania
DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT

69

Change of Occupancy

> ready > set > succeed

pennsylvania DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT PA

70

Uniform Construction Code

> ready > set > succeed

Regarding **Manufactured Housing** the UCC applies to issues such as:

- Soil issues
 - Frost heave protection, bearing capacity, site grading...
- Basement/Masonry Crawl Space design/construction
- Stair geometry-railings-guards
- Porches, decks, garages, etc.
- Connection to utilities
- After market alterations

pennsylvania DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT PA

71

Act 40 of 2012

> ready > set > succeed

RELOCATED (used) Manufactured Housing

"Relocated manufactured home." A manufactured home which has been transported to a site other than its original installation site."

Act of May. 8, 2012, P.L. 257, No. 40

pennsylvania DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT PA

72

Act 40 of 2012

> ready > set > succeed

RELOCATED (used) Manufactured Housing

- Federal & State programs end with first purchaser
 - Manufacturers no longer certify
- Not exempt from UCC (Deemed to Comply)
 - Habitability
- Local authority still has jurisdiction
- In terms of installation:
 - Manufacturers installation instructions
 - PHRC – Field Guide for Relocated Manufactured Housing
 - DCED Guidelines

pennsylvania DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT 72A

73

Installer is required.....

> ready > set > succeed

RELOCATED (used) Manufactured Housing

- Before issuing a building permit for a relocated manufactured home, have permit applicant provide the name and HUD licensed installer.

DCED website has partial list of installers on website.
www.dced.pa.gov/mh

pennsylvania DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT 72A

74

Habitability Guidelines

> ready > set > succeed

HABITABILITY GUIDELINES FOR RELOCATED MANUFACTURED HOMES
October 2023

DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT

- ✓ Permit applicant or agent completes Habitability Checklist to "certify" the home meets this guideline.
- ✓ Provides code official some guidance as well as legal path to permit.
- ✓ Allows for repairs to be made (Appendences for floor, wall and ceiling repairs provided)
- ✓ Speaks to manufactured homes (June 1976 or later) and specific to time of construction.

pennsylvania DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT 72A

75



85



86



87

Manufactured Homes

> ready > set > succeed

Display Model at Sales Center

- Considered NEW until sold to the first purchaser
 - Exemption from UCC intact
- No Person may sell or offer for sale a **manufactured home** with a known defect
- If damage or a defect is suspected, the validity of the certification can be reaffirmed
 - Manufacturer & the appropriate program inspection agency

pennsylvania DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT

88

Permitting

> ready > set > succeed

NEW Manufactured Housing

- Required documents specific to the manufactured home:
 - Approved manufacturer installation instructions

pennsylvania DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT

89

Design Approval Primary Inspection Agencies (DAPIA)

> ready > set > succeed



pennsylvania DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT

90

Permitting

> ready > set > succeed

- Required documents specific to the manufactured homes:
 - Approved manufacturer installation instructions
 - Pertinent sections, tables, charts highlighted
 - Blank "Installation Checklist"
 - BCO should request completed checklist prior to Certificate of Occupancy

pennsylvania DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT

106

Permitting

> ready > set > succeed

- Required documents specific to the manufactured homes:
 - Approved manufacturer installation instructions
 - Pertinent sections, tables, charts highlighted
 - Blank "Installation Checklist"
 - BCO should request completed checklist prior to Certificate of Occupancy
 - Manufacturer & DAPIA approval for any alternate systems proposed

pennsylvania DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT

107

Manufacturer & DAPIA approval for alternate systems

> ready > set > succeed

Eagle River Homes

Other Acceptable Tie Down Systems

Eagle River Homes, LLC allows the use of other approved Anchoring/Stabilizing systems if the following conditions are met:

1. Allowed by the Local Jurisdiction.
2. Installed in accordance with Manufacturer's instructions.
3. Approved by Registered Professional Engineer.

Such systems are manufactured by:

1. The Down Engineering, Atlanta, Ga.
2. Other Technology, Milwaukee, WI
3. Munroe Man Products, East Flat Rock, NC

It is important that the Anchoring/Stabilizing system being used is rated for the wind load in which the home is placed.

Addendum to Set-Up Manual

Manufacturer	Date	Signature
The Down Engineering, Atlanta, Ga.		
Other Technology, Milwaukee, WI		
Munroe Man Products, East Flat Rock, NC		

09-10-2020

ADD


pennsylvania DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT

108

Permitting

> ready > set > succeed

- Required documents specific to the manufactured homes:
 - Approved manufacturer installation instructions
 - Pertinent sections, tables, charts highlighted
 - Blank "Installation Checklist"
 - BCO should request completed checklist prior to Certificate of Occupancy
 - Manufacturer & DAPIA approval for any alternate systems proposed
 - HUD installer identification




109

Questions to ask at Manufactured Housing Permit Application

> ready > set > succeed

- Who will be the responsible installer?
- Foundation type?
 - Piers-basement-crawl space
- Soil Bearing Capacity
 - Method used to determine
- Footing size & depth (frost)?
- Pier type-spacing, location, perimeter?
- Anchor type?
- Decks, porches, etc...




110


Shallow Frost Foundations

> ready > set > succeed

- ▶ Rely on heat loss from home into crawl space.
- ▶ **Manufactured homes** floors are insulated from crawl space
- ▶ Designs place burden of acceptance on code official.
- ▶ Generally, floating slabs or shallow frost foundations should not be accepted.



Cannot apply IRC or ASCE 32-01 to a manufactured home.



111

Devil is in the Details

> ready > set > succeed

Notes:

1. Site only on well drained soil with moisture content of 25%.
2. -
3. Final determination of appropriate application...is by local authority having jurisdiction familiar with actual soil conditions...

pennsylvania
DEPARTMENT OF COMMUNITY
& ECONOMIC DEVELOPMENT

112



113

Protected from frost


> ready > set > succeed

114

Inspections

> ready > set > succeed

- Foundation Inspections
 - Site grading
 - Crowned
- IRC R401.3 Lots shall be graded so as to drain surface water away from foundation ways.



pennsylvania DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT PA 18

118

No Exceptions!

> ready > set > succeed



pennsylvania DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT PA 18

119

Considerations for Pier Foundation

> ready > set > succeed

- Soil Bearing Capacity
- Load per pier
- Footing size & spacing
- Pier capacity
- Pier construction
 - Single – double
 - Cap blocks
 - Shims
- Perimeter and marriage line piers
 - Openings 4' wide or wider (unless noted adjacent to data plate).

pennsylvania DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT PA 18

120

Piers

> ready > set > succeed

pennsylvania
DEPARTMENT OF COMMUNITY
& ECONOMIC DEVELOPMENT

121

Piers

> ready > set > succeed

Side wall and marriage line openings (recessed porches, large windows, doors and interior wall open areas, 4' or wider require supports at both sides of the opening.

Any exception to this rule will be evident during inspection inside the home.
Look for the label or decal.

122

122

Manufactured Housing Unusual Installations

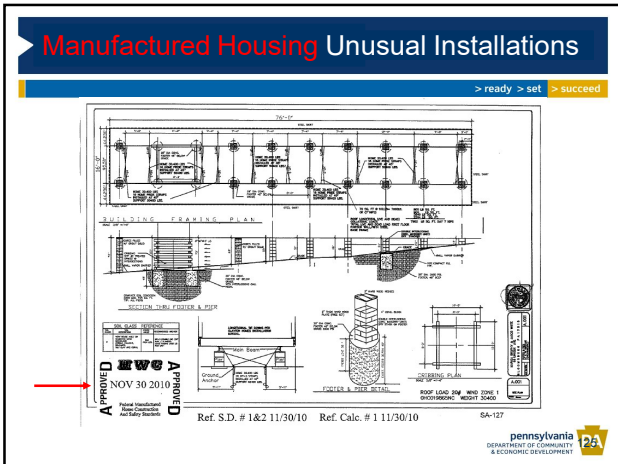
> ready > set > succeed

- All installation methods must be approved by the manufacturer and the Design Approval Agency (DAPIA).
- Professionals outside of the manufactured housing program may not override manufacturers approved designs.
- Accountability-Performance-Consumer protection & warranty.
- Always require the manufacturer to approve any variation.

pennsylvania
DEPARTMENT OF COMMUNITY
& ECONOMIC DEVELOPMENT

123







Basement or Crawl Space

> ready > set > succeed

- Is the home compatible with a perimeter foundation? [Perimeter vs. Standard Frame](#)
- Foundation construction consistent with IRC Chapter 4
- Structural connection needed between floor of the home and sill plate.
- Manufacturer supplied details for anchoring and support of the home.
- Floor of the home (insulation, bottom board) to remain intact.

pennsylvania DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT 2A

127

Manufactured Home - Basements

"Standard Frame" "Perimeter Frame"

128

No Structural Connections

> ready > set > succeed

129

No Structural Connections

> ready > set > succeed

pennsylvania
DEPARTMENT OF COMMUNITY
& ECONOMIC DEVELOPMENT

130

IRC Chapter 4

> ready > set > succeed

- **R404.1.7 Backfill Placement**
- Backfill shall not be placed against the wall until the wall has sufficient strength and has been anchored to the floor above or has been sufficiently braced to prevent damage by the backfill.

pennsylvania
DEPARTMENT OF COMMUNITY
& ECONOMIC DEVELOPMENT

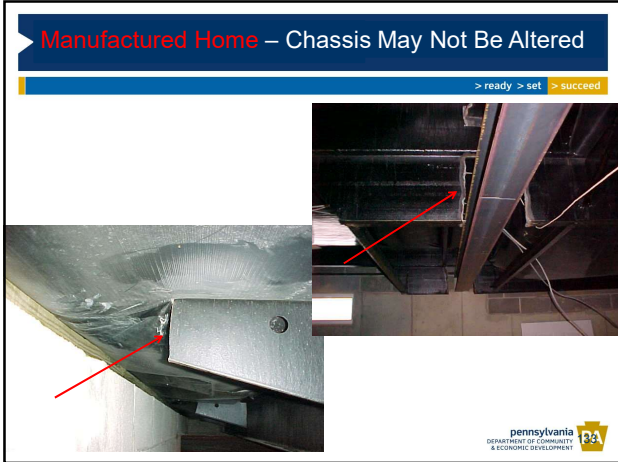
131

No Structural Connection

> ready > set > succeed

pennsylvania
DEPARTMENT OF COMMUNITY
& ECONOMIC DEVELOPMENT

132







Inspections - Manufactured Housing

> ready > set > succeed



pennsylvania DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT PA

139

Anchoring – Manufactured Housing

> ready > set > succeed



pennsylvania DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT PA

140

Anchoring – Manufactured Housing

> ready > set > succeed

- Anchors should be maximum 12' apart.
- Within 2' of the ends of the home.
- Anchors must not be embedded into concrete footings.
- Protected from frost and above water table.
- Strap angle 20°-45°.
- Stabilizing plates required.
- Higher roof pitches require more anchors!
- Anchoring equipment = 3,150 lbs. x 1.5 = 4,725 lbs.


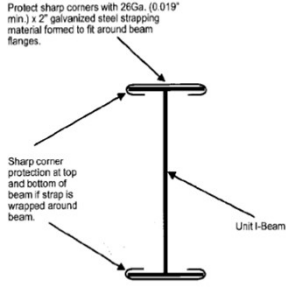
pennsylvania DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT PA

141

Anchoring – Manufactured Housing

> ready > set > succeed

- Strap protection

Protect sharp corners with 26Ga. (0.019\" min.) x 2\" galvanized steel strapping material formed to fit around beam flanges.

Sharp corner protection at top and bottom of beam if strap is wrapped around beam.

Unit I-Beam

pennsylvania PA
DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT

142

Anchoring – Manufactured Housing

> ready > set > succeed

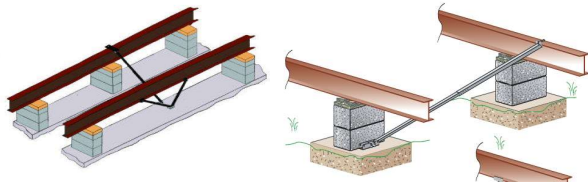
- Alternative Anchoring Systems
 - Oliver (OTI)
 - Minute Man (Xi2)
 - Tie Down Engineering
- Must be specifically DAPIA approved by manufacturer
- Critical pier height limits
 - Generally 3 to 4 feet
- Often requires ground anchors at corners
 - Instructions should be part of permit application

pennsylvania PA
DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT

143

Anchoring - Manufactured Housing

> ready > set > succeed



pennsylvania PA
DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT

144

Anchoring - Manufactured Housing

> ready > set > succeed

To get instructions for the alternative anchoring methods go online at:


- www.tiedown.com
- www.olivertechnologies.com
- www.minutemanproducts.com



145


Final Inspection- Certificate of Occupancy

> ready > set > succeed



For **RELOCATED MANUFACTURED HOMES ONLY**

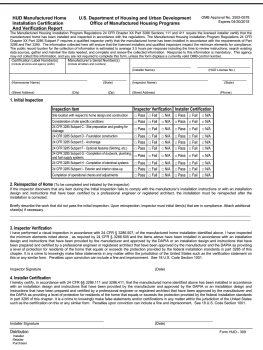
- Completed Installation Checklist
- Certificate of Compliance



146

Final Inspection- Certificate of Occupancy


> ready > set > succeed



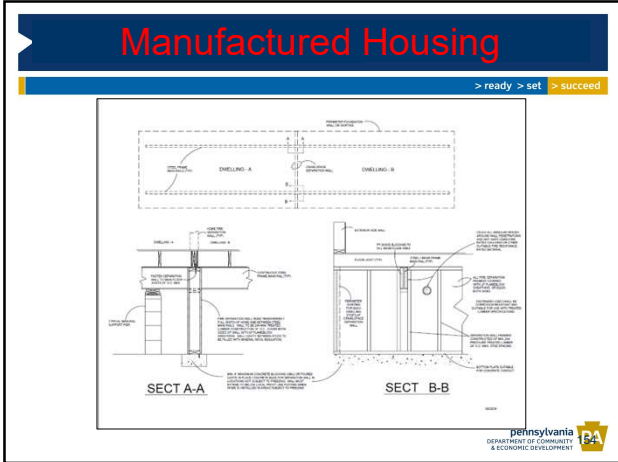
For **NEW MANUFACTURED HOMES ONLY**

Along with the Completed Installation Checklist

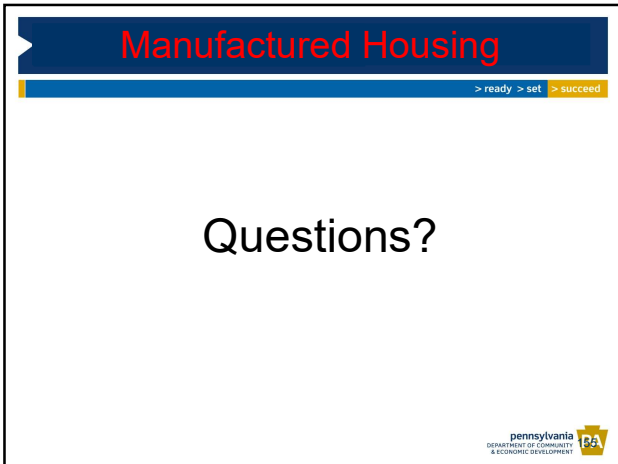
DOES NOT APPLY TO INDUSTRIALIZED HOUSING!



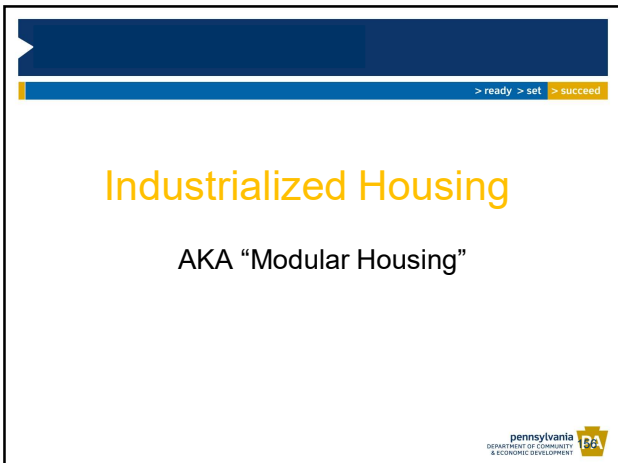
147



154



155



156



157

Uniform Construction Code

> ready > set > succeed

UCC Regulations §403.25
Industrialized Housing – The UCC applies to:

- Site preparation
- Foundation construction
- Utility connection
- Construction, alteration, repair after delivery
- Construction, alteration, repair or change of occupancy if resold or relocated

pennsylvania DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT

158

Uniform Construction Code

> ready > set > succeed

For example, regarding Industrialized Housing the UCC applies to:

- Soil issues
 - Frost heave protection, bearing capacity, site grading...
- Basement/Masonry crawl space design/construction
- Connection to utilities
- After market alterations

pennsylvania DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT

159

Plan Review

> ready > set > succeed

- Evaluation Agency stamp is evidence of plan review for compliance with applicable standard in effect at date of manufacturer.
 - See data plate
- Local Plan review for:
 - Plot plan
 - Details for decks, garages, porches, etc.
 - Any work beyond the Industrialized Home and installation

166



IRC Home

> ready > set > succeed

167

IRC Home

> ready > set > succeed

168

Industrialized Housing on Display at Sales Center

> ready > set > succeed

- Consider NEW (even after August 15, 2022) until sold to the first purchaser
 - Exemption from UCC intact
- No person may sell or offer for sale Industrialized Housing with a known defect
- If damage or a defect is suspected, the validity of the certification can be reaffirmed
 - Manufacturer & the appropriate program inspection agency

pennsylvania DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT

169

Industrialized Housing Identification

> ready > set > succeed

Kitchen Sink Base Cabinet

pennsylvania DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT

170

Industrialized SIP's

> ready > set > succeed

Structural Insulated Panels

Code-related problems should be reported to (717) 720-7416

171

Inspections

> ready > set > succeed

- Foundations
 - Industrialized (modular) housing to be only placed on a permanent foundation – per IRC Chapter 4 or designed by P.E.
 - Attachment points to anchor & stabilize the home and transfer all loads to the underlying soil...
 - Vertical and lateral stability
 - Masonry or Pressure Treated lumber
 - Does not include any manufactured home foundation systems or components
 - In most cases, masonry basement or crawl space

pennsylvania DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT 78

178

Inspections

> ready > set > succeed

- Inspections to the designs provided for permit application
- Completed "Site Installation Inspection Form"
- In the event that a manufacturing defect is observed, inform DCED
 - Possible other homes are affected
 - May indicate breakdown in QA or inspection process
- Only the manufacturer can authorize the repair
 - Unauthorized repairs can void homeowner's warranty/protections

pennsylvania DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT 79

179

Modification of Industrialized Housing

> ready > set > succeed

- Until "Certificate of Occupancy" is issued by AHJ, industrialized (modular) housing may **NOT** be modified unless the modification is approved in advance by manufacturer.
- After the AHJ issues a "Certificate of Occupancy" the industrialized home may be modified subject to local enforcement of the UCC.
 - Industrialized housing designed and constructed to model building codes

pennsylvania DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT 80

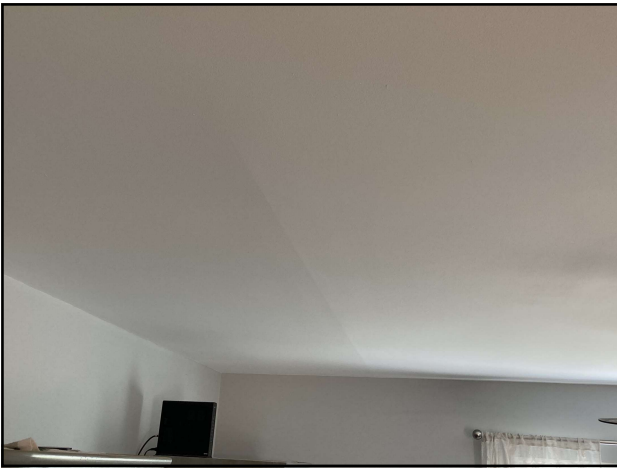
180



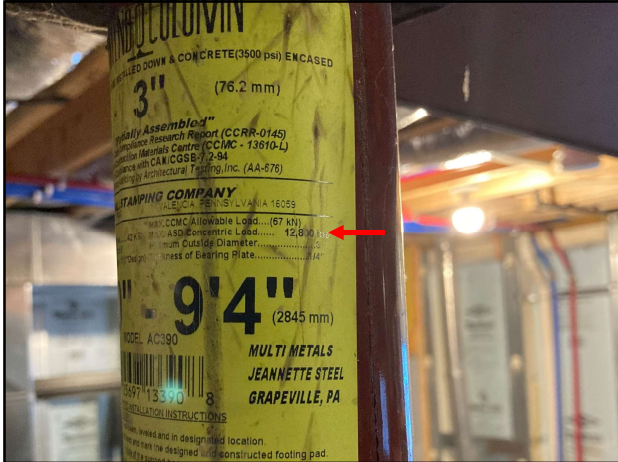
181



182



183



187



188



189

Industrialized Housing and Buildings

> ready > set > succeed

The PA Industrialized Housing Act at §145.81:

(b) Site inspections of industrialized housing and housing components which a local enforcement agency performs under this chapter shall include, and be limited to, any type of visual exterior inspection and monitoring of tests performed by other persons during installation in accordance with the installation requirements in the Building System Approval Report. Destructive disassembly of the industrialized housing, housing components, industrialized buildings or building components may not be performed, and nondestructive disassembly may not be performed in the course of an inspection except to the extent of opening access panels and cover plates.

pennsylvania
DEPARTMENT OF COMMUNITY
& ECONOMIC DEVELOPMENT

193

Industrialized Housing and Buildings:

> ready > set > succeed

The PA Industrialized Housing Act at §145.82:

(b) The local enforcement agency may not withhold the issuance of a building permit for certified industrialized housing or a housing structure in which will be installed certified housing components, industrialized buildings or structures containing industrialized building components if the applicant submits the documents required by this section, and the application for a building permit complies with applicable locally-enacted codes and ordinances with regard to set-up and site details, and land use.

pennsylvania
DEPARTMENT OF COMMUNITY
& ECONOMIC DEVELOPMENT

194

Industrialized Housing and Buildings:

> ready > set > succeed

The PA Industrialized Housing Act at §145.83:

The local enforcement agency may not withhold the issuance of a certificate of occupancy or other similar permit for certified industrialized housing or a housing structure in which has been installed certified housing components, industrialized buildings or structures containing building components if the properly completed Site Installation Inspection Checklist is submitted and the structure was constructed and installed on the site under a validly issued building permit and in other respects complies with applicable locally-enacted codes and ordinances not pre-empted by the act and this chapter.

pennsylvania
DEPARTMENT OF COMMUNITY
& ECONOMIC DEVELOPMENT

195

Industrialized Commercial Buildings

> ready > set > succeed

199

Industrialized Commercial Buildings

> ready > set > succeed

200

Panelized Industrialized Commercial Buildings


> ready > set > succeed

201

Relocatable (Fleet) Commercial Modulars

> ready > set > succeed

INSERT PHOTOS HERE OF DATA PLATE, THIRD PARTY INSPECTION STICKER, AND ANY OTHER STATE SEALS APPLIED



"The national average is as many as 8 state labels/insignias, depending on the market in the US. When the unit returns from the first location, it will be quickly dispatched again, on another lease order. Units transfer routinely between states to fulfill lease orders."

pennsylvania PA
DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT

205

Relocatable (Fleet) Commercial Modulars

> ready > set > succeed

- DCED Regulations: "Intended for sale, lease or installed in Pennsylvania"
- Presently DCED will not issue approval for fleet units when shipped to other states.
 - If initially shipped and sited in PA will be approved.
- These units have the possibility to be used in the state where shipped and after being used be brought into PA for use.
 - Manufacturer loses control of these units.
 - Possible alterations.

pennsylvania PA
DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT

206

How to Handle Relocatable (Fleet) Mod's

> ready > set > succeed

- The unit (s) should be inspected and verified for habitability
- Connections to foundation systems must comply with the IBC and more specifically, the manufacturer's installation instructions
- Any site-built features or accessories such as stairs and ramps must be code compliant
- The unit (s) and the site must comply with PA Accessibility provisions
- Any alterations or repairs must comply to 2018 code requirements
- Certificates of occupancy would be based on the code under which the unit was originally designed and constructed

pennsylvania PA
DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT

207

Industrialized Housing & Buildings

> ready > set > succeed

Questions ?

pennsylvania
DEPARTMENT OF COMMUNITY
& ECONOMIC DEVELOPMENT

211

Contact Information

> ready > set > succeed

Mike Moglia, Chief 717-720-7416
mmoglia@pa.gov

pennsylvania
DEPARTMENT OF COMMUNITY
& ECONOMIC DEVELOPMENT

212
