



## ***Housing 2030 Submission***

**Chris Barrett**  
**ContainerSolutions, Founder and Principal**  
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### **Executive Summary**

ContainerSolutions was founded to represent the future of housing: affordable, healthy, storm-resilient, sustainable, green, and smart. Our mission and products align directly with Rhode Island's drive to solve the housing crisis through innovative, environmentally responsible design.

We share the Executive Office of Housing's vision for expanding attainable homeownership through factory-built construction that delivers quality, permanence, and speed. Our submission demonstrates how this can be achieved today through two production-ready models: the CS1-1 ("Core 40", single 40' container) and CS2-1 ("Flow 80", two 40' containers). Both are designed to meet Rhode Island's goals for high-quality, compact homes that combine long-term durability, energy efficiency, and affordability within a modern architectural framework. Each home can be optionally clad with traditional siding, other exterior finishes, or a roof to blend seamlessly into neighborhood settings, ensuring municipal design compatibility.

- **Affordable:** Core 40 and Flow 80 address the rising cost of housing and living. Priced at \$117,000 and \$195,000 delivered, they include all factory finishes and systems. Typical installed costs, including foundation and site preparation, range from \$142,000 - \$162,000 for Core 40 and \$235,000 - \$265,000 for Flow 80, bringing homeownership within reach of first-time buyers and elderly residents.
- **Healthy:** Each model is built for living well, with advanced air-quality monitoring, Energy Recovery Ventilation (ERV), and low-Volatile Organic Compounds (VOC) interior finishes.
- **Storm-Resilient:** Constructed from marine-grade steel containers and engineered for coastal wind speeds up to 130 mph, these homes provide lasting protection as storms become stronger and more frequent.
- **Sustainable:** Every build upcycles existing shipping containers, reducing embodied carbon and extending material lifecycles.
- **Green:** Factory construction minimizes environmental impact, and all homes are solar-ready and designed for efficient energy use.

- **Smart:** Integrated home automation enhances safety, comfort, and peace of mind through real-time management of air quality, security, and energy usage.
- **Speed:** Each home is completed in 10–12 weeks within the factory, while site preparation occurs in parallel. This concurrent production process enables rapid deployment and true scalability, allowing multiple homes to be completed simultaneously across the state.

Factory-built methods shorten construction time by 40–50 percent and enable true parallel development, multiple homes can be produced simultaneously in the factory while site work and foundation preparation occur in the field. This concurrent process is what transforms build speed into SCALABILITY. Achieving Rhode Island’s goal of 15,000 new homes by 2030 will require completing 8.22 homes every day for the next five years—a pace only possible through modular precision and synchronized production.

ContainerSolutions’ vision and approach are directly aligned with the goals of *Housing 2030: Your Way Home* and the state’s green initiative. Together, we can redefine what affordable housing means: smart, sustainable, and built for the future.

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## Cover Letter

October 31, 2025  
Secretary Deborah J. Goddard  
Rhode Island Executive Office of Housing  
One Capitol Hill, 3rd Floor  
Providence, RI 02908

Dear Secretary Goddard and Ms. Dube,

Thank you for the invitation to contribute to *Housing 2030: Get to Know Factory-Built Housing*. On behalf of ContainerSolutions, I am pleased to share details of our CS1-1 ("Core 40") and CS2-1 ("Flow 80"). These are affordable, sustainable, factory-built dwellings that represent Rhode Island’s potential for rapid, high-quality housing innovation.

Our homes are built to ICC IBC/IRC standards under NTA certification, combining structural strength, energy efficiency, healthy-home design, and smart-home monitoring. By leveraging factory construction, ContainerSolutions can reduce build time by 40 to 50 percent, helping Rhode Island accelerate toward its Housing 2030 goal of 15,000 new homes by 2030.

We also encourage consideration of sales-tax parity for modular and container homes built to ICC standards. Manufactured homes built to the HUD Code already receive exemption from the 7 percent sales and use tax, yet those homes are constructed to less rigorous standards.

Extending that exemption would create a fair, performance-based policy that directly supports housing affordability.

Included with this letter are our model summaries, cost estimates, and a summary of applicable code-compliance standards. We appreciate the opportunity to contribute to this initiative and welcome continued collaboration to make Rhode Island a leader in sustainable, attainable housing.

Sincerely,  
**Chris Barrett**  
Founder and Principal  
ContainerSolutions

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## Model Summaries

### A. CS1-1 ("Core 40")

The Core 40 demonstrates the affordability and efficiency of a single-container dwelling. Built from one 40' High Cube ISO container, it delivers approximately 269 square feet of conditioned interior space within a 320 sq ft footprint. Retail price is \$117,000 delivered, with total installed cost typically \$142,000 to \$162,000 depending on site conditions.



### CS1-1: Core 40 Floor Plan

- One 40' Container
- 1 bedroom, 1 bath



**CS1-1: Core 40 Floor Plan Rendering**



**CS1-1: Core 40 Elevation**

**Key Features**

- **1 Bedroom | 1 Full Bath | Galley Kitchen:** compact and efficient.



- **Solar Energy System:** fully integrated renewable power and battery storage, providing off-grid readiness and sustainable energy independence.
- **Full Smart-Home Integration:** manages lighting, climate, security, energy usage, and air quality through automated monitoring and control.
- **Healthy-Home Materials and Air Quality Monitoring:** interior finishes are selected with attention to indoor air quality. Where possible, low-VOC paints, flooring adhesives, and sealants are specified. Each home includes an integrated smart-home air-quality system that continuously tracks CO<sub>2</sub>, VOCs, formaldehyde, PM2.5, humidity, and temperature to maintain a healthy living environment.
- **Upcycled Shipping Container Structure:** repurposes marine-grade steel containers, reducing waste and embodied carbon.
- **Durable Coastal Construction:** coated in marine-grade paint and engineered for Rhode Island's ICC/ASCE 7-16 coastal wind standards (up to 130 mph).
- **Optional Exterior Siding:** available to visually integrate with neighborhood aesthetics or meet local zoning preferences.

### Core 40 and Compact Housing Alignment

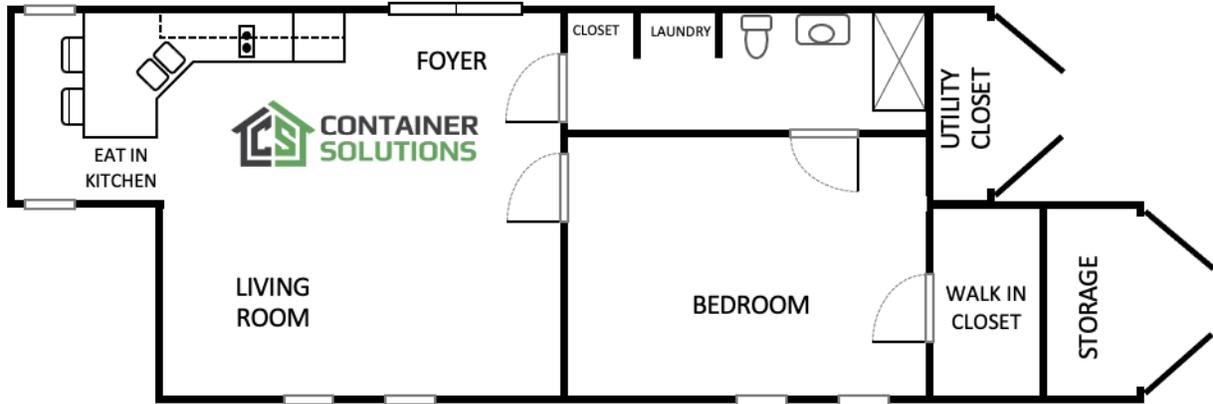
While Rhode Island's *Housing 2030: Your Way Home* program references homes between 600 and 1,200 square feet, that range reflects the limits of conventional construction rather than the full potential of factory-built innovation. The Core 40, though more compact at 320 square feet externally and 269 square feet of interior living space, delivers complete residential functionality—including kitchen, bath, living, and sleeping areas—through precision design, integrated smart-home systems, and space-efficient planning.

Smaller, permanent homes like the Core 40 are essential to addressing affordability and sustainability at scale. They reduce construction cost, embodied carbon, and energy consumption while enabling faster production and broader site deployment. The Core 40 therefore complements larger models such as the Flow 80, expanding the spectrum of attainable homeownership options for first-time buyers, elderly residents, and workforce housing within the *Housing 2030* framework.

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### B. CS2-1 ("Flow 80") — Housing 2030 Model

The Flow 80 provides approximately 530 sq ft of conditioned interior living space. Two offset 40' High Cube containers create a bright, open living zone that feels wider than a standard single-width module while retaining full factory efficiency.



### CS2-1: Flow 80 Floor Plan

- Two 40' Containers
- 1 bedroom, 1 bath
- 4'x7' Storage



### CS2-1: Flow 80 Floor Plan Rendering



## CS2-1: Flow 80 Elevation

Factory-delivered retail pricing is \$195,000 delivered ( $\approx$  \$380 per sq ft), inclusive of solar energy system, smart-home technology, healthy-home materials, and coastal-grade construction. Site-specific costs for foundation, excavation, and utility connections range from \$40,000 to \$70,000 depending on soil and access conditions. Total installed cost for a turnkey home is typically \$235,000 to \$265,000, significantly below conventional construction.

Factory construction reduces build time by 40 to 50 percent and allows multiple homes to be constructed in parallel while site preparation and inspections progress simultaneously. This alignment of production, trades, and materials creates true throughput efficiency—accelerating Rhode Island’s progress toward its 15,000-home goal. Meeting that target means producing 8.22 new homes every single day between now and 2030, a feat only possible through factory precision, parallelized production, and modular scalability.

### Key Features

- **1 Bedroom | 1 Full Bath | Eat-In Kitchen | Living Room | Laundry | Walk-In Closet | 4'x7' Storage | Utility Closet.**



- **Solar Energy System:** fully integrated renewable power and battery storage for self-sufficient operation.
- **Healthy-Home Materials and Air Quality Monitoring:** continuously tracks CO<sub>2</sub>, VOCs, formaldehyde, PM2.5, humidity, and temperature for health and comfort.
- **Smart Energy and Automation:** monitors and optimizes lighting, climate, air quality, and energy usage.
- **Upcycled Steel Structure:** repurposed marine-grade containers minimize waste and environmental impact.
- **Coastal Durability:** engineered for ICC/ASCE 7-16 coastal wind standards (up to 130 mph) and finished in marine-grade paint.
- **Optional Exterior Siding:** available to fit local architectural context and neighborhood preferences.

## 2. Cost and Efficiency Summary

Factory-delivered cost is approximately \$380 per square foot, inclusive of the solar energy system, smart-home automation, and healthy-home materials.

Total installed cost is typically \$142,000–\$162,000 for Core 40 and \$235,000–\$265,000 for Flow 80.

Factory construction reduces build time by 40–50 percent, enabling Rhode Island to accelerate toward its goal of 15,000 new homes by 2030, a pace that requires completing approximately 8.22 homes every day.

### Cost Estimates Chart

Category	Description	Estimated Cost (\$)	Notes
Product Cost	Square-foot cost excluding delivery	Core 40: \$435/sf Flow 80: \$368/sf	Built to ICC IBC/IRC standards; NTA-certified; includes solar system, smart-home integration, and healthy materials.
Electrical Site Work	Hook-ups and internal connections	\$1,500	Local RI electrician.
Plumbing Site Work	Hook-ups and internal connections	\$2,000	Licensed RI plumber.
General Carpentry Site Work	Unit integration and final finish work	\$3,000	Steps, external options.
Foundation / Excavation / Utility Trenching	Typical Rhode Island site	\$25,000–\$70,000	Cost varies by soil and access.

Category	Description	Estimated Cost (\$)	Notes
<b>Total Installed Estimate</b>	Product + site work	Core 40: \$142,000–\$162,000 / Flow 80: \$235,000–\$265,000	Turnkey estimate excluding owner-managed connections and permits.

### 3. Payment Schedule

Stage	Description	Typical % of Contract
Initial Deposit	Contract execution, reserves production slot	10%
Engineering and Materials Milestone	Upon customer approval of final drawings and release of materials for production	30%
Ready for Rough Inspections	Modules complete to framing, MEP rough-ins, insulation, and pre-drywall inspection stage	30%
Delivery and Final Acceptance	Upon delivery and placement at customer's site; factory scope complete	30%

ContainerSolutions' contractual scope concludes upon verified delivery and set-in-place of the completed unit(s). Site connections, utilities, and local inspections are managed by the customer or their licensed contractor. Escrow-based payment options are available for municipal or state projects in accordance with procurement policy.

### 4. Production Requirements and Code Compliance

- No minimum order required. A guaranteed minimum order of 10 units reduces per-unit cost by approximately 5 to 8 percent through bulk purchasing.
- Built to ICC IBC/IRC as adopted by the Rhode Island State Building Code Commission; certified under NTA Modular Home Certification.
- Engineered for ASCE 7-16 coastal design wind speeds up to 130 mph; steel ISO frames spot-welded to foundation for uplift resistance.
- Exterior materials and fasteners are corrosion-resistant; optional tie-downs meet FEMA P-361 for high-wind zones.

### 5. Summary of Key Data

Attribute	Specification
Model Code	CS1-1 ("Core 40") and CS2-1 ("Flow 80")
Retail (Delivered)	\$117,000 / \$195,000

<b>Attribute</b>	<b>Specification</b>
Installed Range	\$142,000 – \$162,000 / \$235,000 – \$265,000
Interior Area	269 sf / 530 sf
Build Time	10–12 weeks (factory, concurrent with site prep)
Code Compliance	ICC IBC/IRC via NTA Certification
Energy and Health Features	Solar energy system, ERV ventilation, closed-cell insulation, smart air-quality monitoring

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