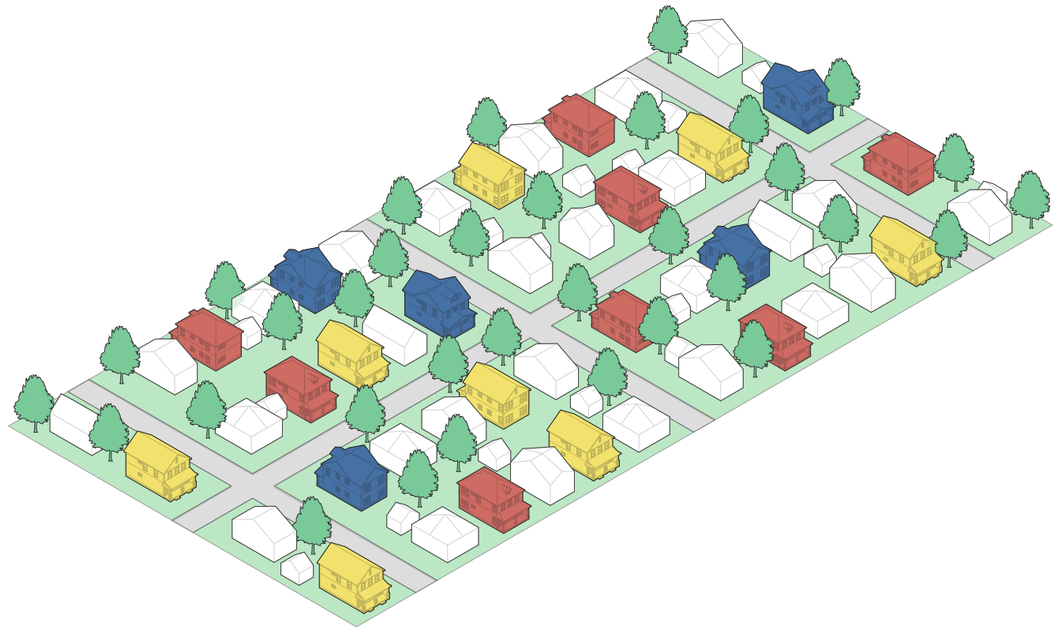
MICHIGAN PERMIT-READY HOUSING HANDBOOK

THE RETTING



MICHIGAN PERMIT-READY HOUSING HANDBOOK

The permit-ready plans are a tool to spur new infill development on existing vacant lots, especially for neighborhoods where economic factors may prove to make a new investment difficult or unattainable.

The design and scale of each home is intended to seamlessly blend into existing residential neighborhoods, filling them out and slightly increasing density while also providing a solution aimed at housing affordability.

This recognizes a shift in demographic towards smaller households that prefer walkable neighborhoods, thus encouraging more diverse housing options that can play an important role in meeting these needs and elevating the quality of neighborhood life for all residents.

MICHIGAN ECONOMIC DEVELOPMENT CORPORATION

OakStreet DESIGN

DRIVEN DESIGN

SECTIONS

TO THE OWNER

Building a home is a complex and multi-faceted process that involves careful planning, precise engineering, and adherence to local building codes and regulations. As a homeowner, it's essential to understand the various stages of construction, from site preparation and foundation work to framing, electrical and plumbing installation, and final finishing touches. Collaborating with architects, contractors, and specialists ensures that your vision is translated into a functional, structurally sound, and energy-efficient home. With attention to detail and proper project management, you can navigate the challenges of the construction process to achieve a well-built, personalized living space.

STEPS FOR THE OWNER

1. Get a site survey
2. Get a site Plan
3. Review with the Municipality
4. Choose Materials
5. Get pricing from contractors
6. Build

THE RETTING

The Retting is comprised of four units total, with two units on the main level and two on the upper level. Both levels are nearly identical, each with a one bedroom unit and a three bedroom unit. All units feature comfortable living areas, modern finishes, and covered main level porches for liveable space outdoors. Generous in-unit laundry rooms allow for convenient family living and double as mudrooms with additional storage. The hip roof design and front porch detailing are designed to blend with the vernacular of the city's varied

QUADRUPLEX

OVERALL DIMENSIONS	
Width	36′ - 0″
Depth	59′ - 0″

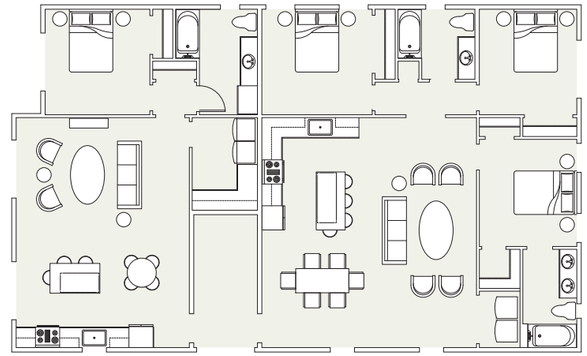
PROGRAM	
Total Building	3921 SQ. FT.
Front Porch	148 SQ.FT.
Rear Porch	216 SQ.FT.
Unit Configuration - Unit A	2 Bed | 1 Bath
Main Level Unit A	668 SQ.FT.
Upper Level Unit A	668 SQ.FT.
Unit Configuration - Unit B	3 Bed | 1.5 Bath
Main Level Unit A	1140 SQ.FT.
Upper Level Unit B	1140 SQ.FT.

LOT SIZE STANDARD	
Width (Minimum)	60 FT
Depth (Minimum)	N/A

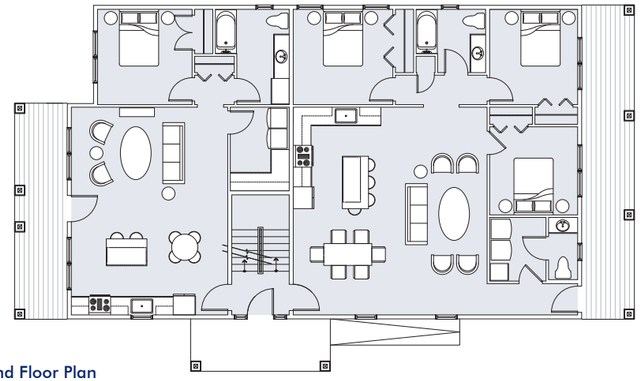
COST	
Construction Estimate*	

* Price range shows is for estimation purposes only.
Pricing cost is subject to change.

FLOOR PLANS



Second Floor Plan



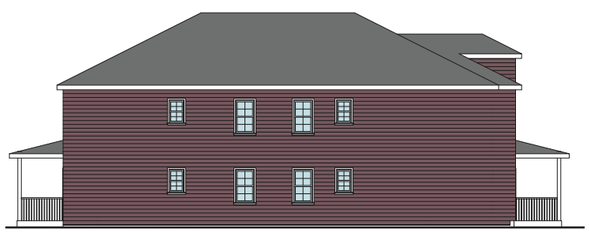
Ground Floor Plan

ELEVATIONS

Front Elevation - Hip Roof

Side Elevation - Hip Roof

Back Elevation - Hip Roof



Side Elevation - Hip Roof

MATERIALS LIST

Foundation		Sizing	Notes
	Concrete Foundation	8″ x 12″ footing 10″ Reinforced concrete wall	Concrete flooring to be 4″ slab on grade with required reinforcement
	Reinforment	Varies	
	Framework	Varies	

Framing		Sizing	Notes
	Wood 2″x4″ Framing	2″ x 4″ x 8′	Extra framing members will be required around window and door openings
OR	3 5/8 MTL stud	2″ x 4″ x Varies	

Roofing		Sizing	Notes
	Shingles	12″ x 36″ 3-Tab Asphalt shingle	Wood trusses by manufacturer
	Wood Trusses	24″ O.C.	Gutter and fascia to be prefinished
	Gutter	Standard	
	Fascia	Min 6″	

Insulation		Sizing	Notes
	1″ or 1.5″ Rigid	4′ x 8′ Board	Minimum R-13 Cavity,
	Batt Insulation	15″ x 93″	R-5 Continuous

Wrapping		Sizing	Notes
	Air and Water Barrier	9′ x 150′ Roll	

Exterior Siding		Sizing	Notes
	Cement fiber board lap siding	6″ x 8′ Board	All siding to be painted on site
OR	Cedar Lap Shingle	4″ x 4″ Shingle	
OR	Stucco	3 Coats	
OR	Shingle Fiber Cement	4″ x 4″ Shingle	

Windows		Sizing	Notes
	Casement Windows	36″ W x 48″ H, 36″ W x 36″ H, 48″ W x 60″ H	Double pane insulated glass
OR	Single Hung	36″ W x 48″ H, 36″ W x 36″ H, 48″ W x 60″ H	recommended,
OR	Double Hung	36″ W x 48″ H, 36″ W x 36″ H, 48″ W x 60″ H	0.32 U-Factor

Major systems cost	Sizing	Notes
Plumbing	Varies	Price to include system, ductwork and installation
Electrical	Varies	
Mechanical	Varies	
Solar (optional)	Varies	

** This is not a complete list of materials that will be needed for construction, this is a rough estimate.*
** Contractor to ensure 20% included for overbuild*
** Price beakdown is for estimation purposes only. Pricing cost is subject to change.*

TO THE CITY

Driven Design has worked with the MEDC to create a plan, and site plan and has been vetted by several municipalities and cities. The pre-vetted plans provide a more seamless approval process for the city and the owners. Under this approach, the municipality offers a library of construction plans that have already undergone review by the local code official and designated areas where those specific plan sets may be used. A builder may then use one of the pre-approved plansets for their project rather than incurring the time and financial expenses of having new plans drawn up and reviewed by code officials.

This does not eliminate code review, but it does provide significant savings—both on the developer's side and on the municipal administration of plan review.

SOME STEPS REMAIN

1. The builder may still need to have their copy of the plans stamped by an architect; this can either be an individual builder's responsibility or a service the municipality contracts with a designated architect to provide.

2. The placement of a pre-approved building on a specific site must still have setbacks, etc., verified.

3. Controls like wetland or steep slope protections or stormwater management requirements should be maintained.

MICHIGAN ECONOMIC DEVELOPMENT CORPORATION

TO THE CONTRACTOR

The design process and considerations endeavored to set forth a menu of options to visualize a few floorplans with a variety of interchangeable skins. While the level of detail presented is more complex, the user can peel back finish levels to result in a more pared-down version of the design without sacrificing the bones of the building.

Generally, materials selections are provided at a grade level that will not adversely affect the attainable cost approach of the model yet still have fidelity to the core belief that durable, repairable materials will last longer and be a better investment over time. Alternate exterior materials are illustrated on the Options Sheet but are not detailed comprehensively within the drawing set. Given other design sacrifices made in the modeling process, it is implied that the cheapest materials should be avoided. More explicitly, cladding choices such as HardiPlank clapboards or shingles, and/or masonry veneer are far preferable to vinyl or other low-end finishes due to their durability, repairability, and environmental impact. Roofing should be dimensional asphalt shingles. C ontractor to also verify local energy codes, climate zones, and other variations in the construction.

Similarly, the construction documents generally assume interior selections from a mid-range list of counters, floors, trim, and molding types.

The contractor is to verify and confirm site plan approval as well as building permits including mechanical, and structural. Contractor to schedule regular inspections during construction and at the end of the construction.

Buildings shall be constructed in accordance with the provions of the code. Additional criteria shall be established by the local jurisdiction and set forth in Table R301.2(1) of the 2015 Michigan Residential code.

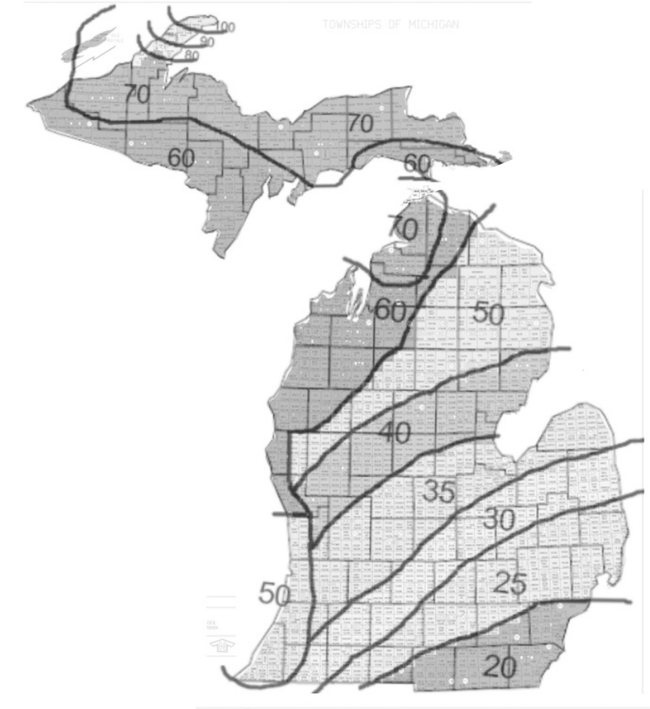
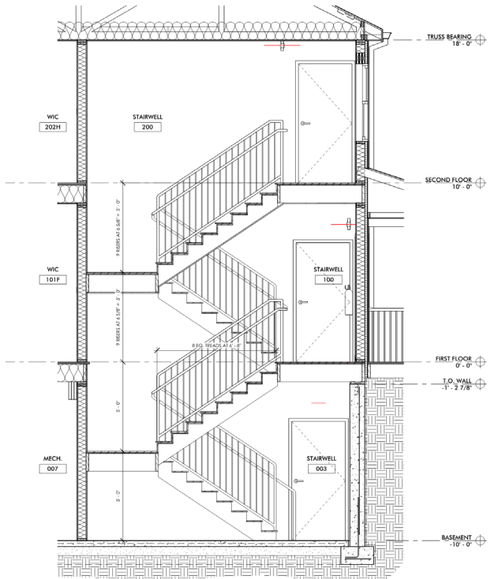


FIGURE R301.2(5) GROUND SNOW LOAD Pg FOR MICHIGAN (lb/ft2)
R 408.30515


TRUSS BEARING
18' - 0"
SECOND FLOOR
10' - 0"
FIRST FLOOR
0' - 0"
T.O. WALL
-1' - 2 7/8"
BASEMENT
-10' - 0"
WIC
202H
STAIRWELL
200
STAIRWELL
100
STAIRWELL
003
WIC
101F
MECH.
007
9 RISERS AT 7 1/2" = 5' - 0"
9 RISERS AT 7 1/2" = 5' - 0"
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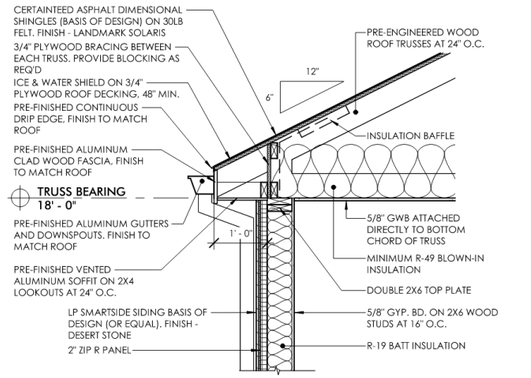
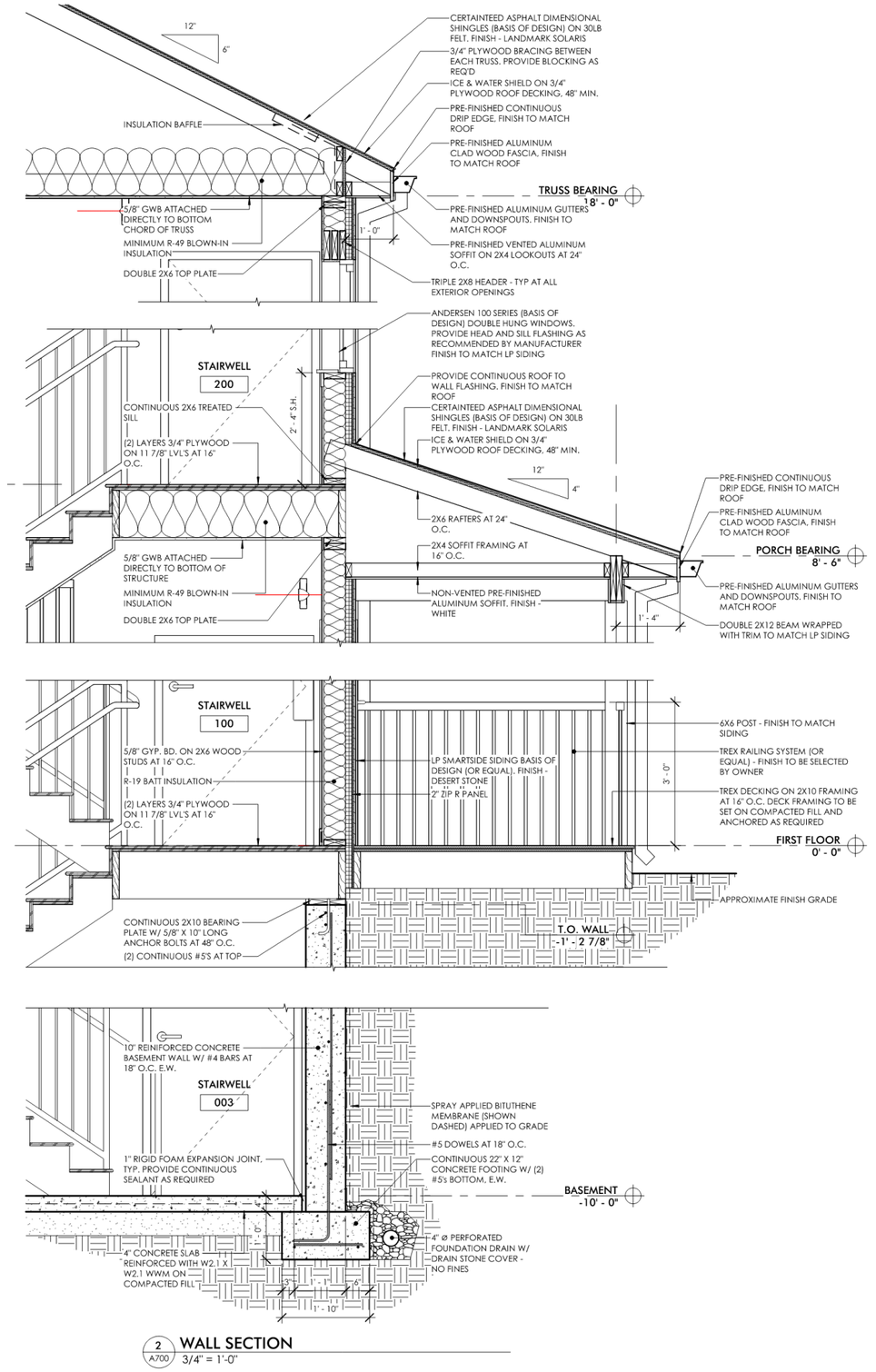


1 A700 **WALL SECTION**
3/4" = 1'-0"



2 A700 **WALL SECTION**
3/4" = 1'-0"

SUSTAINABILITY

As a way to confront climate change, Driven Design Studio will implement sustainability in their projects. All of the homes will be encouraged to use modern appliances which will reduce wasted energy and water consumption. As part of our sustainability efforts as a firm, we will also suggest at least one alternative product that has been locally produced and recycled. We also encourage each owner of the building to provide at least one electric car charger as well as the installation of solar panels on the roof of the building. Driven Design is committed to sustainability and will do everything in our power to encourage clients and projects to adhere to a higher standard.

Solar analysis and recommendations:

Interior:

Locate commonly used spaces where they will benefit the most from daylighting. Kitchens and Living spaces should be located to the south or outside walls. Buffer spaces, like closets and mechanicals to the north, South, and west-facing porches provide additional moderation of temperature swings.

Achieving the best layout may require rotating and/or mirroring the established floor plans.

Exterior:

Light-colored fences placed at the north side of the building can provide reflecting daylighting. Natural ground cover placed south of the building, instead of light-colored concrete will reduce reflected summer heat gain.

Deep overhangs block high summer sun while allowing low-altitude winter heat gain. In the cold, wet climate of the midwest, deep overhangs are paired with steeper roof pitches to serve the additional purpose of keeping runoff rain and snow away from foundations and basement windows.

Locate solar panels to the south for solar gain. If solar panels are not feasible, due to site conditions, purchasing or renting solar panels from a community solar site may be an alternative.

Elevation walls that face south (or nearly so) provide the best opportunities for daylighting and passive solar gains through south-facing windows. Reorienting the roof pitch away from mature trees and toward the sun will allow for increased active solar opportunities.

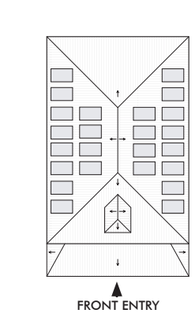
Use landscaping to protect the house from winter winds, to allow winter solar gains and daylighting, while shading and cooling in the summer. The west and south-facing elevations should be protected from summer sun and should be shaded, with plantings, porches, arbors, and other similar shading devices that can also provide elective control. Gardens, vegetation, and previous pavers help manage onsite rain runoff.

Southern exposures should be clear of any obstructions, except for deciduous trees that provide relief from the summer sun. East and west-facing windows can cause the most summertime heat and should be minimized.

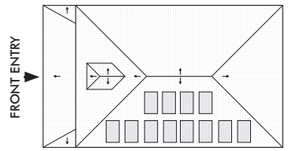
Similar to large shading structures, operable shutters are a less expensive option for controlling sunlight and radiant heat. They can be an attractive addition and can be found in a variety of styles to match the building.

LOCATION OF SOLAR PANELS ON ROOF

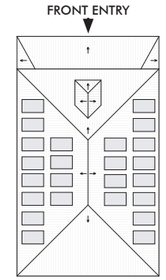
All of the options are solar ready, we recommend using solar panels to reduce the impact of climate change. Housing can be outfitted with batteries and inverters to store the energy until it is needed. More information can be found through MEDC Solar Energy Development Resources and through the RRC Green Infrastructure Guide.



BETTER



GOOD



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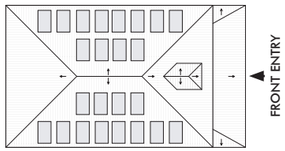

GOOD