**Mod3\_1 Food Safety & Refrigeration Concepts**

**Included**

**Refrigeration &**

**Certifications**

-Food Safety

-Beer/Tobacco

-HACCP Plans

**Refrigeration**

**1st Thing**

* Find your Refrigeration contractor, Electrician, and Plumber
* Warehouse can provide refrigeration help but you really want to consult with the person who will be installing and maintaining your equipment PRIOR TO finalizing your purchasing decisions
* Partner with a “General Contractor” for general construction needs

**Opening Date**

* Opening date is driven by refrigeration completion
	+ Refrigeration to temp (degrees) ~2 weeks prior to opening day
	+ Refrigeration timeline influenced by Refrigeration contractor, receiving your physical equipment, electrical and plumbing updates made to your building

**Store Layout**

* Establishes refrigeration and shelving needs
* Inventory layout tells you how many doors of
	+ Refrigerator
	+ Frozen
	+ Ice Cream
* **Template: Mod3\_2 Planning Layout**

**Refrigeration Connection to Plumbing / Electrical**

* Send them both your case specs for your refrigeration units
* They will need to come onsite to perform their analysis of what updates are needed based on your case specs
* Remember to get time and money included in their quote
	+ Time can be hard to estimate, which is fine, have them walk you through the variables that will influence their timeline
	+ Put this in writing, especially the finalized version right before they begin work

**Refrigeration Temperature Monitoring**

* VERY important to hopefully minimize inventory loss in the event you have refrigeration go down
* Manual Temp Checks
	+ **Template: Mod3\_3 Temp Check Log**
	+ Frequency of your checks depends on
		- Your required frequency for your Food Safety certification
		- More frequently if you prefer, depends on if you have Automatic monitoring or not
* Automatic 24/7 Monitoring
	+ Example: Einstein
		- Einstein system holds temperature thresholds you program for where you want each case to maintain
		- Einstein monitors the Right Now temperature on all sensors
		- Einstein trips an alarm if any of the cases step outside their temperature threshold (colder or warmer)
			* Security System Required
				+ Example: ADT

“Refrigeration” is a zone on your security system

* + - * Landline may be Required for the Security System
		- Einstein allows your refrigeration contractor to monitor your case performance remotely
			* This troubleshooting may give them enough information to walk you through a “fix” over the phone

**Refrigeration Units**

* Individual Units or Integrated System
	+ Individual units each with their own power cord and compressor
		- Pros
			* Cheaper to buy / install
			* Minimal to no building updates needed
			* Short timeline to purchase and have in place
		- Cons
			* Overtime the compressors make more and more noise and become loud
			* Older models use more electricity
			* Will add to the heat load in the store and AC has to compensate for the increased heat
			* Size and space constraints determined by the unit
			* Limited or no automatic monitoring capability
	+ Integrated Refrigeration System
		- Pros
			* Compressors can be outside or somewhere dedicated where the noise won’t be a nuisance
			* Redundancy is an option with more than one unit for walk-ins or using a compressor bank that serves the entire store
			* Size and space of refrigeration designed and built to suit the store
			* Extensive automatic monitoring and alarm capabilities
		- Cons
			* More expensive up front
			* Professional refrigeration technician required for maintenance and repair in most cases
			* Long timeline to design, purchase, and install equipment
* Used or New
	+ Used Equipment
		- Pros
			* Cheaper
			* Short timeline
		- Cons
			* Potentially need more frequent maintenance
			* Energy needs higher in older equipment
			* May not be ideally suited for the store
	+ New Equipment
		- Pros
			* More energy efficient
			* Can purchase exactly what is needed/desired for the store
		- Cons
			* More expensive up front
			* Long timeline

**Used Equipment - Where to Find**

* Facebook Groups
	+ Kansas Grocery Equipment & Supply
	+ The Rural Grocery Network
	+ Free Grocery Resources
	+ \*Search “Grocery” or “Restaurant Equipment” to find others
* Christopher Sales, and other similar companies in your area
* Restaurant Equipment resale
* Ask your Warehouse for existing stores who may be selling equipment

**Certifications**

**Licensing Guide**

* Kansas Dept of Ag [for Grocery + Retail Stores](https://www.agriculture.ks.gov/home/showpublisheddocument/1326/638596828572970000)
	+ Covers tobacco, beer, lottery, fuel, pharmacy, etc.
* Find one specific to your state and if not, the Kansas one can get you started

**Food Safety Certification**

* Define range of services
* Highly Recommend getting the highest level risk certification - preparing ready to eat food
	+ Strict hygiene protocols between raw and ready to eat
		- Surfaces, handwashing, knives, etc.
* Planning Inspection
	+ Schedule for ASAP once you have your services defined
	+ Factor planning inspection report into the requirements for your contractors so they can include in their quotes
* FREE Food Safety Training by State Dept of Ag
* Meat Grinding
	+ **Template: Mod3\_4 Grinding Log Template**

**Beer / Tobacco / Lottery / Fuel / etc. License**

* Selling regulations
	+ **See Licensing Guide by** Kansas Dept of Ag [for Grocery + Retail Stores](https://www.agriculture.ks.gov/home/showpublisheddocument/1326/638596828572970000)
		- Find one specific to your state and if not, the Kansas one can get you started

**Fire Code**

* Schedule walk through with City Fire Chief
	+ Same as Food Safety Planning Inspection, schedule ASAP to review your services with them and make sure you’re building something that will work in the end
	+ Have them make you aware of any rules / regulations your space is subject to
* Fire Extinguishers - buy / install prior to opening

**HACCP Plans**

* Vac Packing machine requires specific approval to use per food item
	+ Seafood, chicken, beef, pork, deli meats, cheeses, marinated specialty items, etc.
* Vac Packing things you don’t have a HACCP plan for will cause the food safety inspector to throw away those items automatically
	+ Vac Packing - can make people sick if it’s done wrong
* Temperature Checks - depends on Ops so check with your state licensing requirements
	+ **Template: Mod3\_3 Temp Check Log**