ARCHITECTURAL AND BUSINESS PLANS FOR A MULTI-SPECIES MEAT PROCESSING, AGGREGATION, STORAGE, AND DISTRIBUTION FACILITY IN AN URBAN AREA

INTRODUCTION

In 2014, while trying to acquire Michigan-grown chicken for a small farm fundraiser in Ann Arbor, it became evident that locally grown and processed poultry is all but extinct in SE Michigan. And, it eventually became clear that this is not because there is a lack of farmers who wish to grow and sell local poultry, or because there is a lack of consumers who wish to purchase and consume local poultry. Instead, the lack of local poultry in SE Michigan is an infrastructure problem, largely caused by a bottleneck at the slaughter and processing step.

In 2015 Mighty Fine Poultry Processing LLC was incorporated, and won a USDA Local Food Promotion Program (LFPP) award to assess the feasibility of opening a new USDA-inspected poultry processing facility in SE Michigan to serve independent farmers. This was the first step in a process that was intended to end with construction of a new USDA-inspected processing facility in a rural part of Washtenaw County. Instead, the feasibility study demonstrated that this vision of a poultry processing business is not feasible: there is simply not enough revenue from poultry processing alone to cover the costs of a business that does only that. However, work from the 2015 grant also revealed that demand for local, Michigan-grown poultry is high and almost completely unmet. This suggested that instead of giving up on small-scale poultry processing based on poor feasibility study results, that new business models are needed that incorporate poultry processing within a larger business effort that is itself financially feasible.

In 2016 a second planning grant from the USDA LFPP program was applied for, this time to draw up architectural and business plans for a multi-species meat processing, storage, aggregation, and distribution facility. The goals of this plan were to increase the number of revenue streams to support the overall business in a number of ways. First, the plan includes an attached retail space so that some of the meat products can be sold directly to consumers; importantly, this led to the assumption that this business should be built in an urban rather than a rural area in Washtenaw County. Second, the plan includes capacity for the parting out of large animal carcasses on non-poultry processing days, to maximize use of the facility. Finally, the plan includes a small cannery, so stocks, broths, and other products can be made from parts of the carcasses that would otherwise be wasted.

Now in 2018 the architectural and business plans funded by the 2016 LFPP Award are complete, and can be found in the following pages. They are made publicly available here in the hopes that some part of this work will benefit other efforts across the country to strengthen the meat slaughter and processing infrastructure that small farmers require if they are to bring their products to market, and if fresh, local meat products are to be made widely available to consumers.

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Mighty Fine Poultry Processing - Final Report

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executive summary

EXECUTIVE SUMMARY

The Small Poultry Processing Facility Planned by Mighty Fine Poultry Processing (MFPP) was in answer to the ever increasing demand for locally grown poultry in Michigan. The study was to develop plans for a USDA inspected poultry processing facility to meet this demand.

A conceptual facility engineering design was developed to address MFPP Business Plan objectives. The study addresses the lack of adequate USDA inspected poultry processing options for independent producers in Michigan, and how other locally produced meat products can be further processed.

The plant as designed is capable of harvesting poultry: 240 broilers per hour, 144 turkey hens per hour or 96 toms per hour; further process: 1,000 broilers per day, 600 turkey, or 26 half carcasses of beef or pork per day. The conceptual design meets USDA processing requirements for both poultry slaughtering as well as further processing of poultry, beef and pork on alternate days.

USDA has established "Facility Guidelines for Meat Processing Plants". The design of the MFPP facility follows those guidelines and meets the requirements for producing a product under sanitary conditions.

The design of the processing plant is divided into a harvesting area (stunning, kill/bleed, scalding, feather picking), a separate evisceration area, and an air blast chill room. The poultry exits the blast cell directly into the fabrication room where it is processed.

A separate 34 degree carcass cooler receives half or quarter carcasses of beef and pork on meat rails and is capable of holding 26 half carcasses. The meat rails are designed to extend into the fabrication room and a carcass dropper lowers the meat onto a landing table.

The fabrication and further processing areas are designed to handle poultry one (1) day and beef/pork the balance of the week. The temperature in both rooms is designed for 40 degrees.

The plant contains separate employee amenities' (locker rooms, break rooms, rest rooms) for personnel working in the harvesting and finished product area. Separate areas for USDA employees; accessory areas for coolers, freezers, shipping and receiving docks, and waste (offal) are provided.

Storage of all meat products will be stored in a 28 degree cooler or -10 degree freezer. The cooler can hold 12 pallets (48" x 48") floor stacked, one high, or 24,000 lbs. If push back racks (3 high x 3 deep x 4 wide) are used in the freezer during November when 6,000 turkeys are processed, then 3,456 whole turkey carcasses can be stored in the freezer and 192 whole turkey carcasses can be floor stacked one high in the 28 degree cooler. The cooler and freezer as designed based on floor stacking pallets 6 boxes high can hold one week of meat production.

Stainless steel floor drains with baskets; stainless steel hand and process sinks; wash down hose stations meeting USDA minimum requirements will be installed in all harvesting and further processing rooms. All wall, floor and ceiling material finishes together with physical requirements for each room is shown on the Room Criteria Matrix.

The facility as designed consists of 8,285 square feet. Poultry harvesting, evisceration, blast cell, welfare, USDA (2,688 sf); fabrication, further processing, finished product welfare (1,591 sf); carcass 34 degree cooler, 28 degree cooler, -10 degree freezer and shipping dock (1,041 sf); retail space (1,495 sf); poultry receiving dock canopy (1,120 sf); and mechanical and electrical support space (350sf).

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conceptual process narrative

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Products to be produced

Products produced at the facility will include poultry, beef, and pork meat products, all grown by local farmers, and all processed, stored, aggregated, and distributed by this USDA inspected facility. In addition, excess bones from the processed poultry, beef, and pork will be used to produce chicken stock, beef bone broth, and pork bone broth. Value-added products including smoked and ground meat products will also be produced. Finally, food products such as soups and sandwiches will be prepared and served on-site.

Product flows

The plant will harvest broilers one day per week except during November where turkeys will be harvested all 5 days per week or 20 days per the month. The balance of the week, with the exception of November, the plant will be designed to fabricate and further process quarters and half size beef and pork carcasses. The non-retail part of the facility is designed to work with one animal type exclusively on any given day, and for example will slaughter and further process poultry on Mondays, will further process beef carcasses on Tuesdays and Thursdays, and will further process pork carcasses on Wednesdays and Fridays. On poultry processing days the rest of the facility will be closed, but for the remainder of the week the Retail part of the facility will be open to sell all products produced by the facility, and the Shipping area will be available to receive and distribute all products.

Chickens will be introduced as live birds in the poultry receiving part of the facility one day per week, and will move through kill and evisceration spaces to an air chill chamber. Whole birds can remain in the air chill chamber overnight, but will normally be moved to the fabrication room later the same day. In the fabrication room whole and cut up chickens will be produced and weighed. Some will be packaged and sent to the 28 degree cooler for later sale in the retail space, some will be packaged and sent to the 28 degree cooler or freezer for later sale via the shipping space, some will move to the further processing space for the production of smoked and ground poultry products, and some will be used in the kitchen for the production of food products to be served in the retail space.

Beef will be introduced via a hanging rail system as half-carcasses in the 34 degree carcass receiving cooler. On beef processing days, half carcasses will be moved to the fabrication room where they will be processed into conventional cuts and weighed. Some will be packaged and sent to the 28 degree cooler for later sale in the retail space, some will be packaged and sent to the 28 degree cooler or freezer for later sale via the shipping dock, some will move to the further processing space for the production of ground beef products, and some will be used in the kitchen for the production of food products to be served in the retail space.

Pork will be introduced via a hanging rail system as half-carcasses in the 34 degree carcass receiving cooler. On pork processing days, half carcasses will be moved to the fabrication room where they will be processed into conventional cuts and weighed. Some will be packaged and sent to the 28 degree cooler for later sale in the retail space, some will be packaged and sent to the 28 degree cooler or freezer for later sale via the shipping dock, some will move to the further processing space for the production of ground pork products, and some will be used in the kitchen for the production of food products to be served in the retail space.

Chicken, beef, and poultry bones will be roasted in the further processing space on the day that they are produced, and then stored in the 28 degree cooler or freezer until used for the making of stocks or broths. Stocks and broths will be produced in the further processing area using a steam kettle to cook and a retort to sterilize the product in glass jars. Finished product will be sold from shelves in the retail space, will be held for later sale via the shipping dock, or will be used in the kitchen for the production of food products to be served in the retail space.

During the month of November the facility will dedicate as many days as needed for the processing of turkeys. Turkeys will be introduced as live birds in the poultry receiving part of the facility for as many as five days per week, and will move through kill and evisceration spaces to an air chill chamber. Whole turkeys can remain in the air chill chamber overnight, but will normally be moved to the fabrication room later the same day. In the fabrication room whole turkeys will be weighed and packaged. In the early part of the month whole turkeys will be stored in the freezer or distributed via the shipping dock. In the latter part of the month, packaged whole turkeys will be stored in the chiller. By the Wednesday before Thanksgiving, all turkeys will be sold and removed via the retail space or shipping space.

Production

The facility is expected to produce the following products, assuming 50 weeks of production per year for all products except turkeys, which are all assumed to be produced in November.

Chicken: 1,000 chicken broilers one day per week, or 50,000 birds per year.

Turkey: 6,000 Thanksgiving turkeys per year.

Beef: 1200 lb/week over two days per week, or 60,000 pounds per year.

Pork: 1200 lb/week over two days per week, or 60,000 pounds per year.

Chicken Stock: 67 gallons per week or 3,350 gallons per year.

Beef Bone Broth: 67 gallons per week or 3,350 gallons per year.

Pork Bone Broth: 67 gallons per week or 3,350 gallons per year.

Packaging

Fabricated (Secondary Process) and further processed items will be packed into initial packaging, before the cone line if poultry, and then into secondary containers. Basic types of packaging that will be used include foam trays with plastic covers, plastic bags, re-sealable pouches, shrink-wrap bags, and paper cartons.

Polystyrene form trays with stretch film for parts and deboned meats are common packaging material that will be used. Vacuum packaging will be used for whole carcasses (bags) or for deboned meats. The vacuum packaging will extend the shelf-life of the product to a limited degree and will be used when the product is to be stored.

The packaging will be done by hand but may consider automated weighting and bagging equipment for smaller items.

Regardless of the pack method once the initial package, multiple units are placed into secondary containers, typically a cardboard box. The boxes will be stacked and palletized on pallets in preparation for storage and shipment.

Labels will be placed on the both initial and secondary packaging, depending on the end use of the product. The labels will contain the product name, net weight, manufacturer name and address and safe handling instructions and the plant (P) number assigned by USDA. MFPP will use barcodes showing the farm where the product was grown.

Sanitation

The design of the plant will address the physical separation of harvesting of raw material from the fresh finished product. It will also address how personnel and operations are separated into work areas and how the product will flow through the plant while maintaining sanitary conditions in each area.

The design will address air flow, traffic patterns throughout the plant, temperature requirements in critical process and storage spaces, handling of waste, separation of raw and further processed products, location of hand wash sinks and drinking fountains, location of high pressure wash stations at recommended 140 degree water, the materials of

construction required for wash down and the type and location of floor drains, and the design of the support spaces: welfare, toilets, showers and lockers.

All personnel working in the harvesting and evisceration areas will have separate entrances and welfare areas including showers and dressing rooms with lockers. These personnel will have no access to other parts of the plant.

Maintenance

All equipment will be maintained and kept in operation and checked before the start of each day's operation. The Freon refrigeration and HVAC systems will be maintained per the operation instructions of the manufacturer.

Security

The plant will have a fence installed around the property starting at the employee entrance and will include all receiving docks and outside mechanical equipment. The customer parking area will not be fenced but will be equipped with security cameras. The customer and employee parking will have light standards installed for site lighting and for security. The truck receiving area will have security lights mounted on the building.

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Process and Facility Design

Introduction

The Small Meat Processing Facility Planned by Mighty Fine Poultry Processing (MFPP) was in answer to the ever increasing demand for locally grown meat products in Michigan. The study undertaken by ONEsource Facility Solutions, Inc. (OFS) was to develop plans for a USDA inspected meat processing facility to meet this demand.

OFS was commissioned to provide a conceptual engineering design for the small meat processing facility. The plant will harvest 1,000 broilers one day per week except during November where turkeys will be harvested all 5 days per week or 20 days per the month. The balance of the week, with the exception of November, the plant will be designed to fabricate and further process quarters and half size beef and pork carcasses. The conceptual design must meet USDA processing requirements for both poultry slaughtering as well as further processing of poultry, beef and pork on alternate days.

The USDA no longer makes prior approval decisions for plants however they have established "Facility Guidelines for Meat Processing Plants". The design of the MFPP facility follows those guidelines and meets the requirements for producing a product under sanitary conditions. The layout of the facility dealt with the placement of rooms and equipment, product flow, air flow and people traffic patterns. The temperature of the spaces was critical to the handling of meat product through each step of the process from harvesting, evisceration, processing and finished product storage. From a product flow standpoint, all raw meat and poultry products being processed by MFPP flows progressively from the highest potential exposure to contamination to the least potential exposure to contamination, with intervening processes designed to remove or otherwise reduce the contaminants. The flow of air and people moves from the cleanest areas progressively toward less clean areas. The design of the plan also addressed the State of Michigan code and regulatory compliance issues.

The requirements of the process considered product and people flow as critical to the overall design from the time the live poultry or the beef and pork carcasses arrive on site, through the holding dock, stunning operation, kill/bleed, scalding, feather removal, evisceration, handling of offal and chilling, and further processing.

The design of the processing plant is divided into a **harvesting area** (stunning, kill/bleed, scalding, and feather picking), a separate **evisceration area**, and an **air chilling** area. The **fabrication and further processing areas** are designed to handle poultry one (1) day per week and beef/pork the balance of the week. In addition to the processing areas (fabrication, further processing and kitchen), the plant contains **separate employee amenities** (locker rooms, break rooms, rest rooms) for personnel working in the harvesting and finished product area. **Separate areas for USDA** employees; accessory **areas for coolers, freezers, shipping and receiving docks**, and **waste** (offal) are provided. The harvesting of poultry will occur in one section of the plant and the finished chilled whole bird will exit the blast chiller directly into the fabrication area of the plant. The beef and pork will be received in the 34 degree carcass cooler and drop from an overhead rail directly into the fabrication area. The plant personnel have separate entrances and welfare areas in the plant. Personnel working in the harvesting area cannot access the further processing area.

Process Flow and Equipment Selection

Receiving: Poultry broilers will be received from 10 to 20 poultry farms, ranging in size from 4.5 to 6 pounds per bird. All coops will be delivered between 6:00 am and 8:00 am and will be placed in the order of how the poultry will be processed. Each individual farm will have their coops tagged with their name or bar code. The average size load per farmer will be 15 coops or 150 birds per load. The farmer will provide

MFPP at the time of delivery instructions on how they want their birds processed. What percentage of whole birds, further processed or what percentage they want MFPP to distribute. The coops of the individual farmers will be cleaned and returned the same day. It will be the responsibility of the individual farmers to bring the coops into the plant for staging as well as retrieving the coops from the plant after they are cleaned.

For planning purposes, 10% of the birds will be processed whole birds and will be returned the same day to the farmer after chilling and packing. We further assume that 20% of all remaining poultry, with the exception of turkeys, will be whole birds with 80% further processed.

The plant is designed to harvest 240 broilers, 144 turkey hens or 96 turkey toms per hour. The equipment selection is based on these process rates with the Kill/Bleed Tunnel being the limiting factor.

Stunning: Stun Equipment (LAPS). The LAPS stunning equipment has a stunning chamber 40" wide, 48" long, and 32" high. Broiler Coops (Kuhl COOP-10) 23" wide, 38" long and 10.5" high will hold 10 broilers and 6 coops can be placed in the LAPS chamber at one time. Based on 10 minutes to load, stun and unload the chamber, 360bph can be stunned. The Turkey Coop (Kuhl Coop 16) 38.5" long, 23" wide and 16" high holds 8 hens and 4 tom turkeys. The chamber can stun 144 hens and 96 toms per hour.

Poultry Harvesting:

Kill/Bleed Tunnel (Pickwick KTCS Killing Cabinet). One person will remove birds from the Coop, which have been stunned, add a barcode tag in the wing, hang birds on a Pickwick SH-5 Multiple Bird Shackle, cut the carotid artery and place the SH-5 shackle in the bleed tunnel and allow the birds to bleed for 75 seconds. The Kill/Bleed Pickwick KTCS Killing Cabinet can hold 3 racks of poultry, 5 birds per rack. It requires 1 minute and 15 seconds for the 5 birds to bleed or 240bph. Only 3 turkey hens (144bph) and 2 tom turkeys (96bph) can be killed and bled at one time in the Killing Tunnel.

Scalding (Pickwick AD Dunkmaster and AS60 Scalder). One person will remove the SH-5 Multiple Bird Shackle from the Kill Tunnel and place the 5 Bird Shackle in the Dunkmaster. The Dunkmaster lowers the 5 shackles into the AS60 Scalder and lifts them out as many times as required, all automatically. The AS60 Scalder is set at 124-130 degrees for a soft scald. The recommended scald time for all poultry is 45 to 75 seconds. Based on a scald rate of 5 birds per 75 second, 240bph can be processed. One advantage of the AD Dunkmaster is the birds are spaced so that their feathers may spread apart permitting the scald water to penetrate quickly. The spacing for turkey hens and toms are based on the bird spacing in the Kill/Bleed Tunnel.

De-feathering and Picking (Pickwick TPJ3 Spin-Pik Picker or TP2 Spin-Pik Turkey Picker). The same AD Dunkmaster operator will remove the SH-5 Bird Shackle from the scalder and dump 5 birds in the TPJ3 Spin Pik Picker. The picker will de-feather 5 broilers, 3 turkey hens or 2 turkey toms in 45 to 75 seconds. The TPJ3 has automatic controls that control the door and water. Once the pick is complete any pin feathers not removed during automatic picking will be removed by hand and the poultry will be pushed through an opening in the wall into the evisceration room.

Evisceration: Evisceration Line (Brower Equipment EV16). The EV16 evisceration line offers several advantages over table evisceration. It brings the poultry to the operators straight from the picker. It allows specialization so each operator need learn only a few steps of the process. The speed of the line can be changed from 0 to over 20 feet per minute. The speed of the line can be varied depending on broilers, hens or tom turkeys that will be processed and the amount of personnel MFPP desires to use.

Underneath the track is an 8 foot by 30 inch stainless steel water flush trough with center splash panel. Two type F flushing lung removers with 5 foot hose

and valve assembly are built in as well as a stainless steel giblet table with goose neck water spray for cleaning gizzards.

The EV16 is designed to handle 500 boilers or 150 turkeys per hour with room for 10-12 operators. An offal cart will be placed at the end of the line. A stainless steel Gizzard Peeler and giblet wrapping table will be placed along the line.

The MFPP evisceration line will be set up to eviscerate 240bph 5# broilers, 144 hens and 96 tom turkeys. The line speed will be 5 to 6 feet per minute initially. The various workers will be placed at stations along the line and each will perform different functions. Given the line speed, and with training, the number of workers required can be reduced from nine to six.

One worker will remove the feet and cut the oil glands and place the feet in barrel or cart.

A second worker will hang the bird on the shackle, hook the head, cut skin on the back of the neck and pull crop.

A third worker will open the tail and cut and pull the vent.

A fourth worker will draw entrails, separate heart, liver, and gizzard, and discard offal.

A fifth worker will separate giblets and pinch gall from liver.

A sixth worker will split, wash and trim gizzards.

A seventh worker will mechanically peel gizzards, move giblets to the chill area, and place finished racks in chiller.

An eighth worker will remove lungs with lung puller and wash the cavity.

The ninth worker will remove the head, cut the neck at base, perform a carcass wash and inspection, and hang bird on chill rack.

Blast Cell: Air Chilling (Cornerstone Farms SS Chill Racks). Air-chilled birds will be placed in chill racks that hold 150 broilers, 90 hens or 60 toms. The racks will be transported into a refrigerated blast cell, requiring a dwell time for broilers of 2.5 hours or longer and considerably longer for turkey.

The chill racks (61” long, 33” wide and 64” high) will be placed in the blast cell (20’-8” long x 9’ wide x 16 feet high). The refrigeration design will be based on 300 birds per hour or 5bpm with dwell time of 2.5 hours. The refrigeration evaporation units will be placed at the top center of the blast cell and will blow down directly onto the two wide poultry racks. The blast cell (4 wide x 3 deep) will hold 12 chill racks (1800 broilers, 1080 turkey hens and 720 toms). The blast cell has two (2) manual slide doors (6’ wide x 8’ high) for placing and retrieving the chill racks. A chill room (6’ long x 9’ wide) will be placed at one end of the blast chiller for storage of feet, giblets and other products that need to be chilled. Two cooler swing doors (3’ x 7’), one on each end of the room, will allow personnel from evisceration or fabrication to access the room to place and retrieve giblets for stuffing in poultry cavity. The blast cell will be fed from the evisceration space and will exit into the fabrication area for fabrication (secondary processing).

Beef and Pork Carcass Receiving and Storage:

Beef/Pork Carcass Cooler. Beef and pork will be delivered by truck in quarter and half carcass size and stored in a 34 degree carcass cooler on overhead meat rails. The carcasses will be transferred via overhead rail conveyor for processing to fabrication through a bi-part (6’ x 8’) cooler door.

Fabrication:

Beef and Pork Fabrication. Beef/Pork carcasses will be lowered onto a landing table via an overhead meat rail from the 34 degree carcass cooler into the fabrication room and then broken into the major primal cuts. The primal cuts will be placed on one of three trimming and cutting tables to break the

primal into the desired finished cuts. Once the cuts are ready they will be put into shrink bags and vacuum sealed. Some additional processing may be the mixing of ground product. Stuffing tubes of ground meat, forming patties and cubing the outside and inside cushion steaks. Excess beef bones will be transferred into the further processing area and made into bone broth. After vacuum packing, the cuts will be boxed and moved into the 28 degree cooler or into the -10 degree freezer to be distributed at a later date.

Poultry Fabrication. There are many potential products from poultry carcasses exiting the blast chiller. The whole carcasses may be returned to the poultry farmer or further packaged for sale with or without giblets. EIghty percent (80%) of the carcasses will be cut into parts, and in some cases meat will be deboned from the carcass. The raw carcass will be further processed into value added products.

Cut-Up operation. The carcasses will be placed on cones as they exit the chiller. Trained employees will cut the poultry into eight (8) pieces or into various portions depending on MFPP client desires. Most deboned meat will be the breast (fillets and tenders) with some thigh meat. Portioning to supply meat at a certain weight, length, and width and thickness maybe performed to satisfy certain retail markets. Grinding of boneless skinless meat (breast meat, dark meat, or both) can be coarsely ground and dry packed for retail sale.

Cooler Storage:

28 Degree Cooler. The 28 degree cooler is designed to handle a week's supply of meat products floor stacked on pallets. The whole or de-boned poultry or fabricated beef/pork will be stored in the 28 degree cooler for distribution from direct sales via the meat counter in the retail space or into the further processing area.

-10 Degree Freezer. The freezer is designed to hold a week's supply of meat products floor stacked on pallets or placed in racks. The freezer is designed to hold 3,456 whole turkey carcasses during November (96 turkeys per pallet) stacked in push back racks (3 high x 4 deep x 4 wide). The product will flow to the shipping dock from the freezer.

Further Processing:

Further processing by ingredients addition and/or heat treatment will occur in the further processing space. The plant is designed to provide the flexibility for MFPP to be able to determine which products will be handled each day of the week.

MFPP plans to further process the meat (poultry, beef and pork) to create a variety of value added products. Some of the processed products may include marinated, chopped and formed, breaded, glazed, oven roasted, and chargrilled products. Whole poultry carcasses may be further processed into rotisserie chickens or smoked. Meat scraps may be ground and sold fresh or made into sausage. Parts such as split breast, drums, thighs, and wings and beef may be marinated. A cannery will be included to allow excess chicken carcasses to be made into chicken stock, and excess beef bones to be made into bone broth.

Kitchen:

Kitchen Processing. The kitchen area will handle further processing of scraps and other meat products into prepared meals such as chicken pot pies, chicken tacos, and white bean chicken chili and sold to lunch and dinner customers in the attached café.

Retail Café:

Retail Space including Fresh Meat Counter, and Pick-Up Area. A meat counter in the Retail space will allow MFPP customers to purchase whole carcasses or any combination of fresh meat products from locally grown and processed poultry, beef or pork. All meat products will be labeled with respect to farm origin.

It is expected that the majority of the poultry processed per week will be sold fresh via the MFPP retail area, but excess product can also be stored in the freezer or sold to distributors.

Product Distribution:

The MFPP facility is designed to not only slaughter and process poultry and turkey, but to process carcasses of beef and pork grown by small independent farmers. Two types of distribution channels for those products will be provided. One distribution channel will be direct sale to consumers via the meat counter and kitchen in the retail space, and the other will be sales to distributors of local meats via the shipping dock. For those farmers wishing to instead pick up their whole processed birds, a Pick-Up area is provided in the Retail space. Barcodes inserted in each wing during fabrication will ensure that each farmer receives their own bird.

MFPP Process Flow Chart:

The process flow as described above is based on a mass balance of processing 240 poultry broilers per hour, 144 hens or 96 tom turkeys per hour. Each piece of equipment that was selected can handle the listed yield or higher.

Beef and Pork carcasses will be fabricated based on 1200 lbs. per week each. The carcass storage cooler will handle 26 half carcasses. A half beef carcasses weighs ~200 lbs. and a half carcass of pork weighs ~70 lbs.

The flow of product is either from poultry blast cell after the poultry is eviscerated or from an aged beef/pork carcass cooler directly into the fabrication room.

The process flow chart shows the process flow from raw material receiving through finished product distribution.

Site and Facility Design

Site Design:

The site purchase will be based on selection of a site with a municipal water and sewerage system adequate to handle the plant needs. A 2 acre site is adequate for the building, parking lots, truck traffic and access roads based on MFPP building layout and site design. The customer parking lot will have two light standards installed for security and as required by code. The employee parking area and truck receiving will have security lights mounted on the building.

Facility Design:

Plant Layout. The layout of the facility considers moving raw material toward fresh finished product. The receiving, and harvesting area allows personnel and product to enter the area without accessing through cleaner space.

The personnel working in the **receiving, and harvesting** area (kill/bleed, scald and de-feathering) have separate entrances from personnel working in evisceration. They share a common employee entrance to the welfare area but are not routed through work areas that they are not assigned. Harvesting is separated from evisceration by an IMP panel with an opening that allows the feather picker to discharge, through an opening in the wall, directly into evisceration. The room is under negative pressure in relation to the evisceration room but positive to the exterior of the plant. The design temperature is based on ambient temperature without air conditioning. All walls and floors are designed for wash down using high pressure cold and 140 degree hot water. The floors are concrete and slope ¼" per foot to a 6" stainless steel floor drain installed with removal baskets for daily cleaning. The ceiling is exposed insulated metal deck that follows the roof slope and varies in height from 16 feet to 20 feet. The room has a stainless steel sink for hand washing and is equipped with a hose station that supplies hot and cold water for wash down during clean up each day. The kill tunnel is equipped with a floor drain and water spray to wash blood and for cleaning. The feathers from the picker are discharged directly onto the floor where they will

be collected and moved to the offal room. The equipment is held off the wall in order to provide a rodent strip where traps can be provided.

The personnel working in the **evisceration area** enter through a separate entrance but are not allowed to access fabrication or any part of the plant where meat is further processed or stored. The evisceration room has two stainless steel floor drains with traps and baskets for the collection of any raw material that is trapped during the end of day cleaning. The evisceration line is equipped with a 30-inch stainless steel water-flush trough for the collection of offal. It is also equipped with a hose wash station for cleaning of the poultry prior to hanging on chill racks. The walls and ceiling are constructed using Insulated Metal Panels (IMP), floors are epoxy coated and slope to the floor drains ¼" per foot. The clear height is 16 feet. The room is air conditioned and is designed for 78 degrees. The room is equipped with two stainless steel sinks, one for hand washing and the other for product. All walls, floors and ceiling are designed for wash down from a hose station that supplies hot and cold water. The evisceration room is under positive pressure to all surrounding areas of the plant. All light fixtures are food grade fixtures without glass enclosures. The poultry after evisceration and washing is placed on chill racks holding 150 birds and placed in the blast cell. The offal will be transported to the offal room, having a floor drain and wash down walls, floors and ceilings, to be collected by an outside rendering company. The evisceration room and equipment will be thoroughly cleaned at the end of daily operations by washing down all walls, floors and ceilings.

The welfare area for all personnel working in either harvesting or evisceration is equipped with drinking fountain, separate toilet and shower facilities and lockers for men and women. The space is designed for 76 degrees heating and cooling.

All personnel working in the **fresh product areas** (fabrication, further processing, product storage, kitchen and retail, carcass receiving and finish product shipping) have separate entrances and welfare areas. They are not allowed to enter the harvesting or evisceration areas of the plant. The only personnel that will have access to all parts of the plant are the USDA inspector and maintenance personnel. At the entrance from raw to fresh a foot bath and hand sink is provided. The fabrication and further processing rooms have stainless steel floor drains with traps and baskets for the collection of any raw material that is collected during the process or during clean up. Both are equipped with wash stations and stainless sinks for personnel and product washing similar to what is located in the harvesting and evisceration areas of the plant. All walls, ceilings and floors located in the fabrication and further processing areas are designed for high pressure cleaning using 140 degree water. It serves for the removal of small solid parts, blood and dirt from the floors and walls as well as removal of meat and fat particles and layers of protein from tools and equipment. When needed chemicals can be added to the solutions for cleaning. The fabrication, further processing and Kitchen rooms have stainless steel sinks and provisions for wash down. All walls and ceilings are IMP, with epoxy coating and cove base on floors, and have stainless steel floor drains with baskets installed with floor slope at ¼" per foot. These spaces are refrigerated at 50 degrees. The fabrication room has positive air pressure in relation to the cooler, freezer, blast chill, passage way, and carcass cooler but negative to further processing. Further processing has positive air pressure to all surrounding rooms. All light fixtures are food grade with no glass covers and allow for wash down.

A mop sink room is provided off the passage way for easy access as required by local building code.

The storage of fabricated or further processed meat products will be stored in a **28 degree cooler or -10 degree freezer**. The floors will be concrete, all walls and ceilings 4" insulated metal panels (IMP), and have either manual freezer or cooler doors as shown on the door schedule. No provisions for floor drains are provided. The finished 6" slabs will be installed over 6" floor insulation that sets on a 3" concrete

sub slab that contains electrical underfloor heating cables. The rooms will be installed with 4" x 12" concrete curbs along all IMP walls. The rooms will be refrigerated using Freon packaged units with the evaporation units placed in each room. The clear height is 16 feet. All wall, ceiling and floor finishes together with physical requirements are shown on the "MFPP Room Criteria Matrix" schedule.

The **34 degree carcass receiving cooler and 34 degree shipping dock** are designed using vertical lift cooler dock doors (8" x 10') and equipped with in floor dock levelers and door seals. All walls and ceiling are 4"IMP, with concrete curbs similar to the storage cooler and freezer for wall protection. The clear height is 16 feet. The carcass cooler will have an overhead meat rail installed that will extend into the meat trailer and through bi-parting manual cooler door (6' x 10') into fabrication. The carcass cooler meat rail is designed to hold 26 whole carcasses of beef. A stainless steel floor drain will be installed in the carcass cooler equipped with a removal screw plug for use during weekly clean up.

The **Retail Café** is designed to serve various daily functions. Distribution of fresh product will be from the meat counter or lunch and dinner service. The floor is installed with vinyl tile over a 4" concrete slab. The ceiling is FRP or (2'x 2') acoustical tile with lay-in light fixtures. The exterior walls will be full height insulated window wall with (6'x 8') entrance tempered glass doors. The clear height is 10 feet. The area will be heated and cooled to 78 degrees.

The **mechanical design** of the plant is based on Freon refrigeration to maintain temperatures at 34 degrees at all meat receiving or shipping docks, 40 degrees at all processing areas, 28 degrees for the storage coolers and -10 degrees for the freezer. The blast cell using Freon refrigeration is designed to allow 1000 whole broilers to reach a cavity temperature of 38 degrees in less than four hours or the turkey cavity to reach 38 degrees in less than 8 hours, from the time the poultry is killed. The refrigeration condensers will be located at ground level outside the building with the evaporation units placed inside of the various rooms as required. The HVAC system that will serve the retail and welfare areas will be designed to maintain 78 degrees.

All utility serves are located in the electrical or mechanical room and will house all electrical gear, and water heaters for supplying hot water to all wash stations and equipment. All knife sharping equipment will be located in the mechanical room.

A compactor/dumpster will be placed on a concrete slab outside of the receiving dock for the collection of packaging materials and other waste. The offal room for waste will have wash down surfaces and be provided with a floor drain.

Building Square Footage based on final design:

The facility as designed consists of 8,285 square feet. Poultry harvesting, evisceration, blast cell, welfare and USDA (2,688 sf); fabrication, further processing, fresh product welfare (1,591 sf); carcass 34 degree cooler, 28 degree cooler, -10 degree freezer, shipping dock (1,041 sf); retail/kitchen (1,495 sf); the poultry receiving canopy (1,120 sf); and the mechanical and electrical support space (350sf).

Room Criteria Matrix and Door Schedule:

The "Room Criteria Matrix" shows wall, floor and ceiling finishes; physical requirements for all spaces in the plant including room size, and together with the "Door Schedule" shows door locations, type and size, as based on the plant requirements and business plan for MFPP.

The final layout of the facility considered USDA "Guidelines for Meat Processing Plants", MFPP process flow and mass balance, and the State of Michigan's code and regulatory compliance issues. The attached site plan, plant layout and isometric view of the plant was a result of the facility planning study that ONEsource Facility was commissioned to perform.

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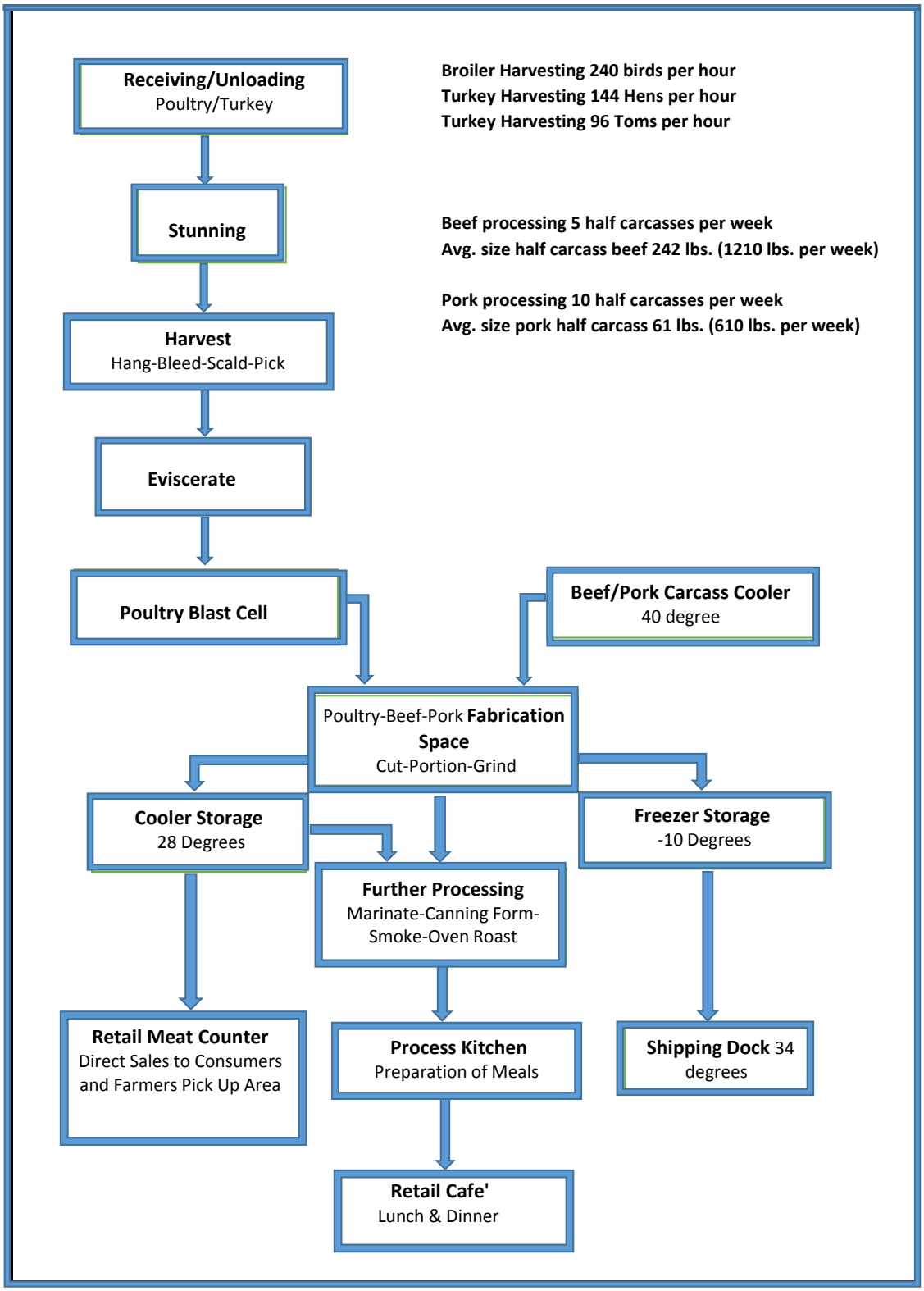
Process Flow Chart



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room criteria-door schedule

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Room Criteria Matrix

		PHYSICAL REQUIREMENTS							Wall & Ceiling Material Finish					
Rm #	Room Name	Room Area	Clear Height	Design Temp	Vent/ HVAC	Light Level	Floor Finish	Base	North	South	East	West	Ceiling	Floor Drain
Receiving/Kill Area														
38	Poultry Receiving	387	16'-0"	AMB	Vent	65-75	Conc	Conc	4"IMP	4"IMP	4"IMP	4"IMP	Exposed	1
37	Kill-Scald-Pick	472	16'-0"	AMB	Vent	65-75	Conc	Conc	4"IMP	4"IMP	4"IMP	4"IMP	Exposed	1
Evisceration Area														
36	Evis-Clean-Hang	465	16'-0"	65-75	HVAC	65-75	Epoxy	Epoxy	4"IMP	4"IMP	4"IMP	4"IMP	4"IMP	1
Chill Poultry Area														
81	Blast Cell	183	16'-0"	20	Refrig	15-25	Conc	Conc	5"IMP	5"IMP	5"IMP	5"IMP	5"IMP	
91	Air Chill Room	57	16'-0"	28	Refrig	15-25	Conc	Conc	4"IMP	4"IMP	4"IMP	4"IMP	4"IMP	1
Fabrication Area														
30	Poultry-Beef-Pork	435	16'-0"	50	Refrig	65-75	Epoxy	Epoxy	4"IMP	4"IMP	4"IMP	4"IMP	4"IMP	1
Further Processing														
6	Poultry-Beef-Pork	387	16'-0"	50	Refrig	65-75	Epoxy	Epoxy	4"IMP	4"IMP	4"IMP	4"IMP	4"IMP	1
Beef-Pork Carcass														
93	Carcass Receiving	189	16'-0"	34	Refrig	15-25	Conc	Conc	4"IMP	4"IMP	4"IMP	4"IMP	4"IMP	1
Holding Cooler														
53	Cooler	256	16'-0"	28	Refrig	15-25	Conc	Conc	4"IMP	4"IMP	4"IMP	4"IMP	4"IMP	1
Holding Freezer														
55	Freezer	281	16'-0"	-10	Refrig	15-25	Conc	Conc	5"IMP	5"IMP	5"IMP	5"IMP	5"IMP	
Shipping Dock														
29	Poultry-Beef-Pork	286	16'-0"	34	Refrig	55-65	Conc	Conc	4"IMP	4"IMP	4"IMP	4"IMP	4"IMP	
84	Offal	86	16'-0"	34	Refrig	30-40	Epoxy	Conc	4"IMP	4"IMP	4"IMP	4"IMP	4"IMP	1
Retail Area														
33	Retail Space	1109	10'-0"	78	HVAC	65-75	Vinyl	Vinyl	WW	4"IMP	WW	WW	2x2 FRP	
82	Kitchen	243	10'-0"	65-75	HVAC	65-75	Epoxy	Epoxy	4"IMP	4"IMP	4"IMP	4"IMP	2x2 FRP	1
89	Pick-up	132	10'-0"	78	HVAC	65-75	Vinyl	Vinyl	4" IMP	4"IMP	4"IMP	WW	2x2 FRP	
86	Toilets Men	31	10'-0"	78	HVAC	20-30	Conc		8" Mas	8" Mas	8" Mas	4"IMP	Gyp	
88	Toilets Women	31	10'-0"	78	HVAC	20-30	Conc		8" Mas	8" Mas	8" Mas	8" Mas	Gyp	
Fresh Welfair Area														
87	Toilets Men	43	10'-0"	78	HVAC	20-30	Conc		8" Mas	8" Mas	8" Mas	8" Mas	Gyp	
90	Toilets Women	43	10'-0"	78	HVAC	20-30	Conc		8" Mas	8" Mas	8" Mas	4"IMP	Gyp	
85	Office	91	10'-0"	78	HVAC	55-65	Vinyl	Vinyl	8" Mas	8" Mas	8" Mas	8" Mas	ACT	
51	Break Area	131	10'-0"	78	HVAC	20-30	Conc	Vinyl	8" Mas	8" Mas	8" Mas	4"IMP	ACT	
35	Passage	376	10'-0"	78	HVAC	55-65	Conc	Vinyl					ACT	
47	Electrical Room	101	16'-0"	AMB	Vent	20-30	Conc	Conc	8" Mas	8" Mas	8" Mas	8" Mas	Exposed	
46	Mechanical Room	236	16'-0"	AMB	Vent	20-30	Conc	Conc	8" Mas	8" Mas	8" Mas	8" Mas	Exposed	
Raw Welfair Area														
31	USDA	77	10'-0"	78	HVAC	55-65	Vinyl	Vinyl	8" Mas	8" Mas	8" Mas	4"IMP	ACT	
41	Men Toilet	147	10'-0"	78	HVAC	20-30	Conc		8" Mas	8" Mas	8" Mas	4"IMP	Gyp	
42	Women Toilet	141	10'-0"	78	HVAC	20-30	Conc		8" Mas	8" Mas	8" Mas	4"IMP	Gyp	
40	Break Area	238	10'-0"	78	HVAC	20-30	Conc	Vinyl	8"Mas	4"IMP	4"IMP	4"IMP	ACT	
92	Mop Room JC	17	10'-0"	Amb	Vent	20-30	Conc		4" IMP	4"IMP	4"Mas	4"IMP	Gyp	

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Door Schedule

Rm #	Room Name	Door Type	Qty	Material	Width	Height	Thk.	Remarks
Receiving/Kill Area								
38	Poultry Receiving	F	1	Steel	8'-0"	8'-0"	2"	Manual Operated Vert. Lift Sectional Door
		F	1	Steel	6'-0"	8'-0"	2"	Manual Operated Vert. Lift Sectional Door
		B	1	H.M.	3'-0"	7'-0"	1 3/4"	Hollar Metal Swing Door
37	Kill-Scald-Pick	B	1	H.M.	3'-0"	7'-0"	1 3/4"	Hollar Metal Swing Door
		L	2	Polyethylene/ CLR.PVC	6'-0"	8'-0"	1 3/4"	Double Acting Impact Doors w/24" x 36" Vision Panels
Evisceration Area								
36	Evis-Clean-Hang	P	1	FRP/Acrylic	3'-0"	7'-0"	1 3/4"	24" X 36" Acrylic Glazing
Chill Poultry Area								
81	Blast Cell	H	2	Metal Clad	6'-0"	8'-0"	6"	Manual Single Insulated Slide Door
91	Air Chill Room	D	2	Metal Clad	3'-0"	7'-0"	4"	Cooler Personnel Door
Fabrication Area								
30	Poultry-Beef-Pork	D	1	Metal Clad	3'-0"	7'-0"	4"	Cooler Personnel Door
Further Processing								
6	Poultry-Beef-Pork	P	2	FRP/Acrylic	3'-0"	7'-0"	1 3/4"	24" X 36" Acrylic Glazing
		L	1	Polyethylene/ CLR.PVC	6'-0"	8'-0"	1 3/4"	Double Acting Impact Doors w/24" x 36" Vision Panels
Beef-Pork Carcass								
	Receiving Area	M	1	Metal Clad	8'-0"	8'-0"	4"	Manual Vertical Rise Cooler Door
		R	1	Metal Clad	8'-0"	8'-0"	4"	Bi-Part Insulated Cooler Door
Holding Cooler								
53	Cooler	H	1	Metal Clad	6'-0"	8'-0"	4"	Manual Single Insulated Slide Door
		D	2	Metal Clad	3'-0"	7'-0"	4"	Cooler Personnel Door
Holding Freezer								
55	Freezer	H	2	Metal Clad	6'-0"	8'-0"	6"	Manual Single Insulated Slide Door
Shipping Dock								
29	Poultry-Beef-Pork	M	1	Metal Clad	8'-0"	8'-0"	4"	Manual Vertical Rise Cooler Door
84	Offal	L	1	Polyethylene/ CLR.PVC.	6'-0"	8'-0"	1 3/4"	Double Acting Impact Doors w/24" x 36" Vision Panels
		P	1	FRP/Acrylic	3'-0"	7'-0"	1 3/4"	FRP Swing Door
Retail Area								
33	Retail Space	A	3	Alum/Glass	6'-0"	8'-0"	2'	Alum. Double Swing with Full Temper Glass
82	Kitchen	P	1	FRP/Acrylic	3'-0"	7'-0"	1 3/4"	FRP Swing Door
86	Toilets Men	B	1	H.M.	3'-0"	7'-0"	1 3/4"	Hollar Metal Swing Door
88	Toilets Women	B	1	H.M.	3'-0"	7'-0"	1 3/4"	Hollar Metal Swing Door
Fresh Welfare Area								
87	Toilets Men	B	1	H.M.	3'-0"	7'-0"	1 3/4"	Hollar Metal Swing Door
	Shower Door	S	1	Alum/Glass	2'-6"	7'-0"	3/4"	Full Tempered Glass
90	Toilets Women	B	1	H.M.	3'-0"	7'-0"	1 3/4"	Hollar Metal Swing Door
	Shower Door	S	1	Alum/Glass	2'-6"	7'-0"	3/4"	Full Tempered Glass
85	Office	B	1	H.M.	3'-0"	7'-0"	1 3/4"	Hollar Metal Swing Door
51	Break Area	B	1	H.M.	3'-0"	7'-0"	1 3/4"	Hollar Metal Swing Door
35	Passage	B	3	H.M.	3'-0"	7'-0"	1 3/4"	Hollar Metal Swing Door
47	Electrical Room	B	2	H.M.	3'-0"	7'-0"	1 3/4"	Hollar Metal Swing Door
46	Mechanical Room	B	1	H.M.	3'-0"	7'-0"	1 3/4"	Hollar Metal Swing Door
		J	1	Steel	8'-0"	8'-0"	3/4"	Manually Operated Coiling Door
Raw Welfare Area								
31	USDA	B	2	H.M.	3'-0"	7'-0"	1 3/4"	Hollar Metal Swing Door
41	Men Toilet	B	2	H.M.	3'-0"	7'-0"	1 3/4"	Hollar Metal Swing Door
42	Women Toilet	B	2	H.M.	3'-0"	7'-0"	1 3/4"	Hollar Metal Swing Door
40	Break Area	B	1	H.M.	3'-0"	7'-0"	1 3/4"	Hollar Metal Swing Door

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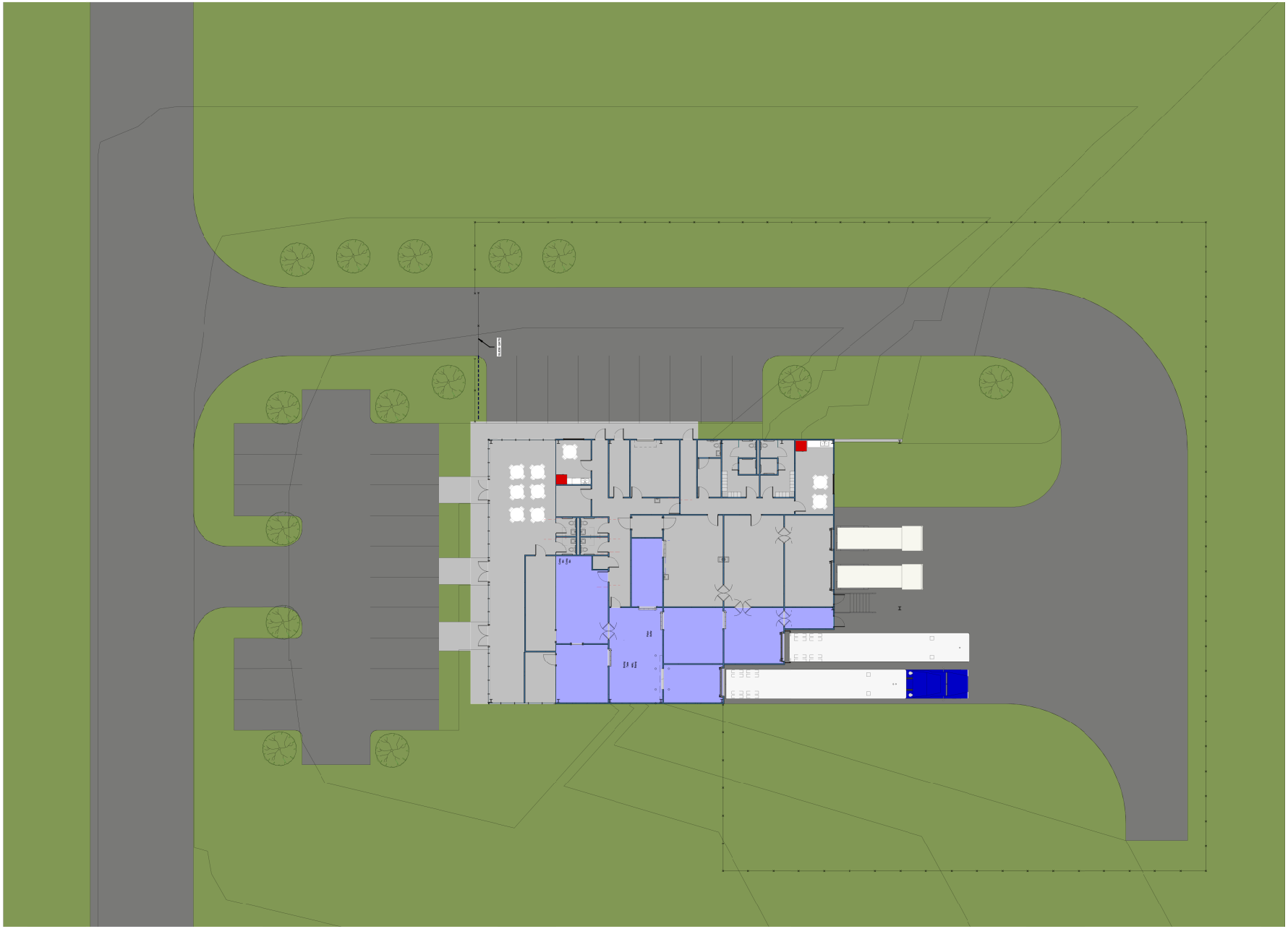
site and facility design drawings



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PROPOSED BEEF, PORK AND POULTRY PROCESSING PLANT

MIGHTY FINE POULTRY

SHEET STATUS

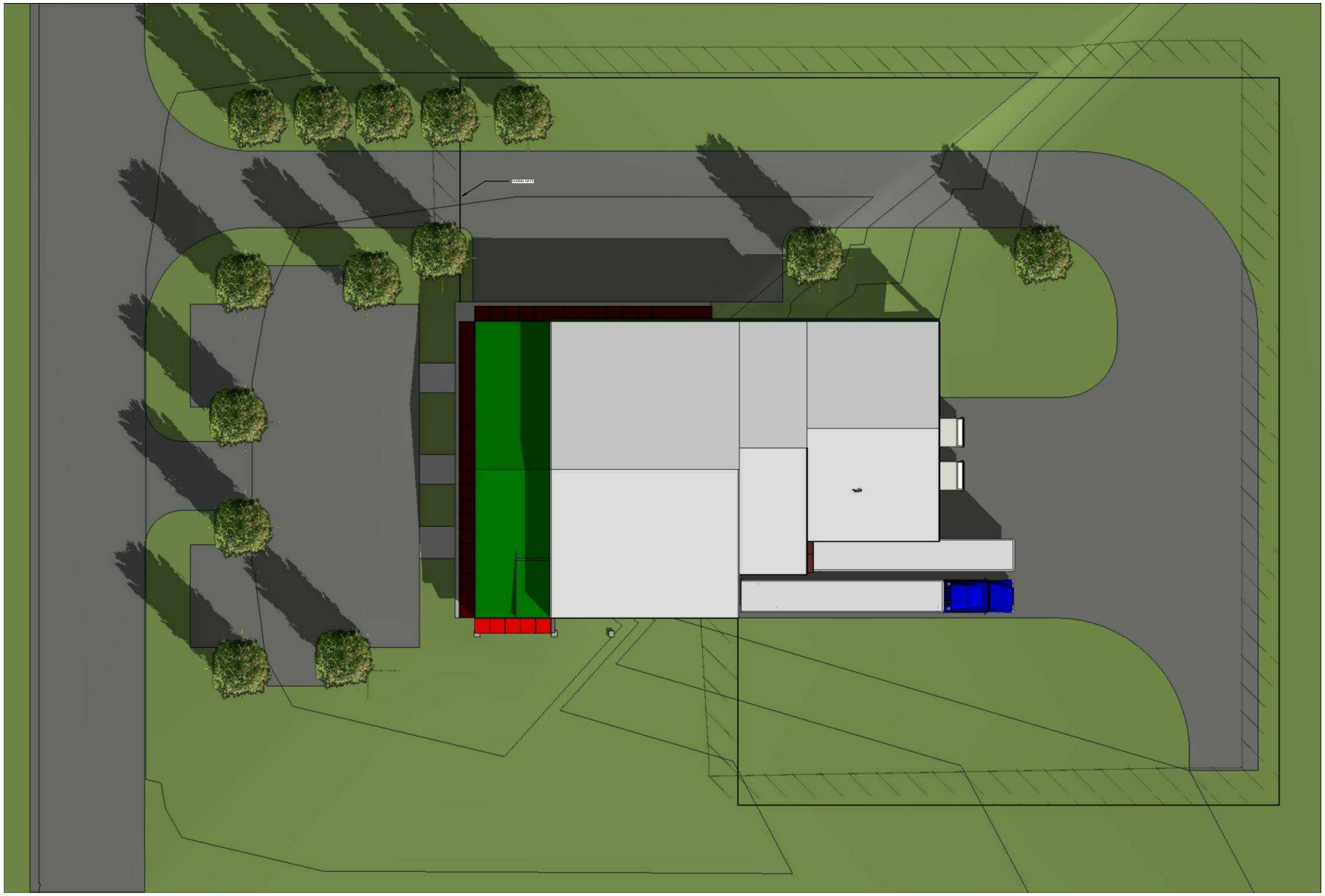
MARK	DATE	BY	MGR	RELEASE

SHEET TITLE

SITE PLAN

PROJECT NO. **201605**

SHEET NO. **SP-100**



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PROPOSED BEEF, PORK AND POULTRY PROCESSING PLANT

MIGHTY FINE POULTRY

SHEET STATUS

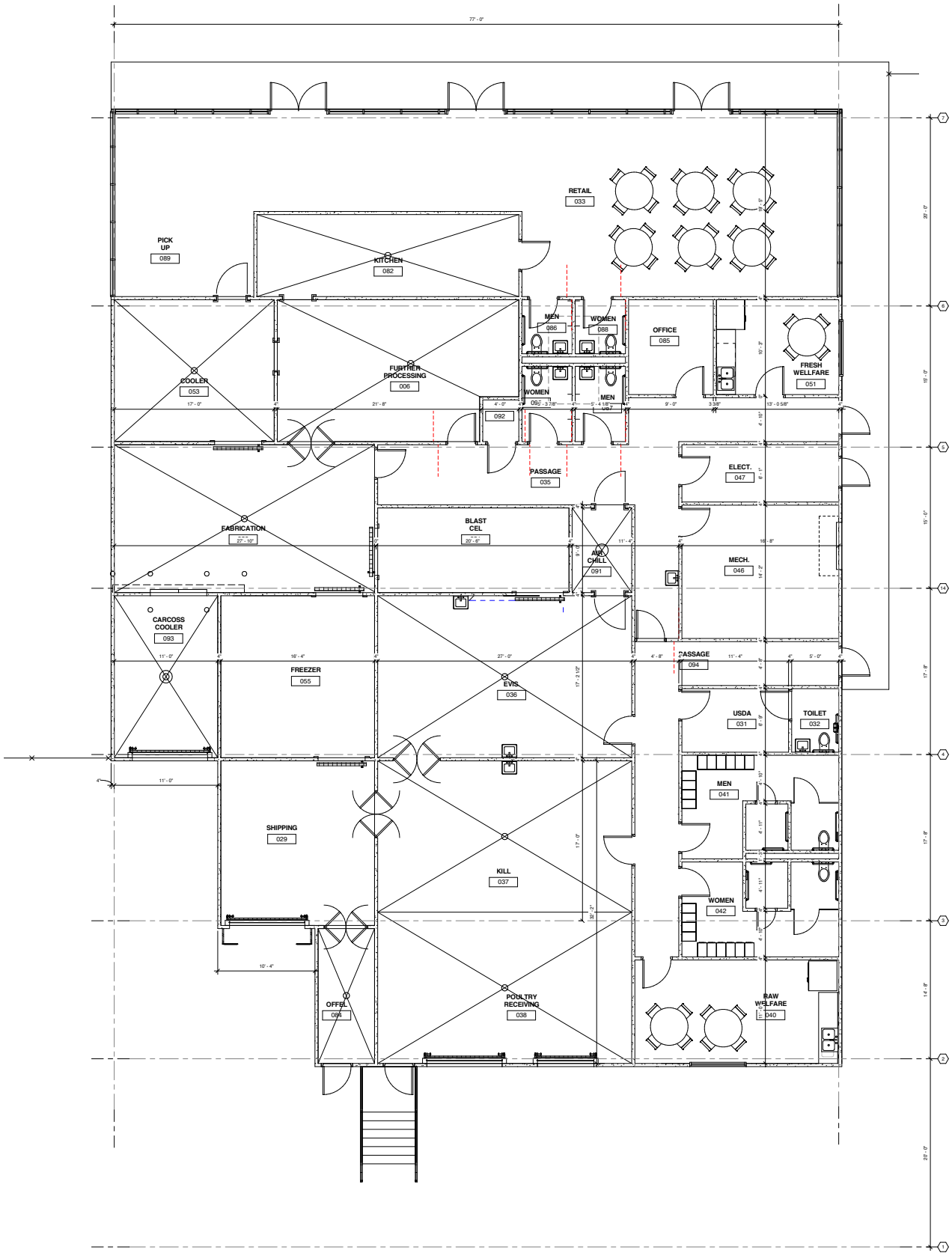
MARK	DATE	BY	MGR	RELEASE

SHEET TITLE

SITE PLAN

PROJECT NO. **201605**

SHEET NO. **SP-101**



PROJECT NO. 201605

SHEET NO. A-100

SHEET TITLE

FLOOR PLAN

MARK	DATE	BY	SHEET STATUS
			RELEASE

PROPOSED BEEF, PORK AND POULTRY PROCESSING PLANT

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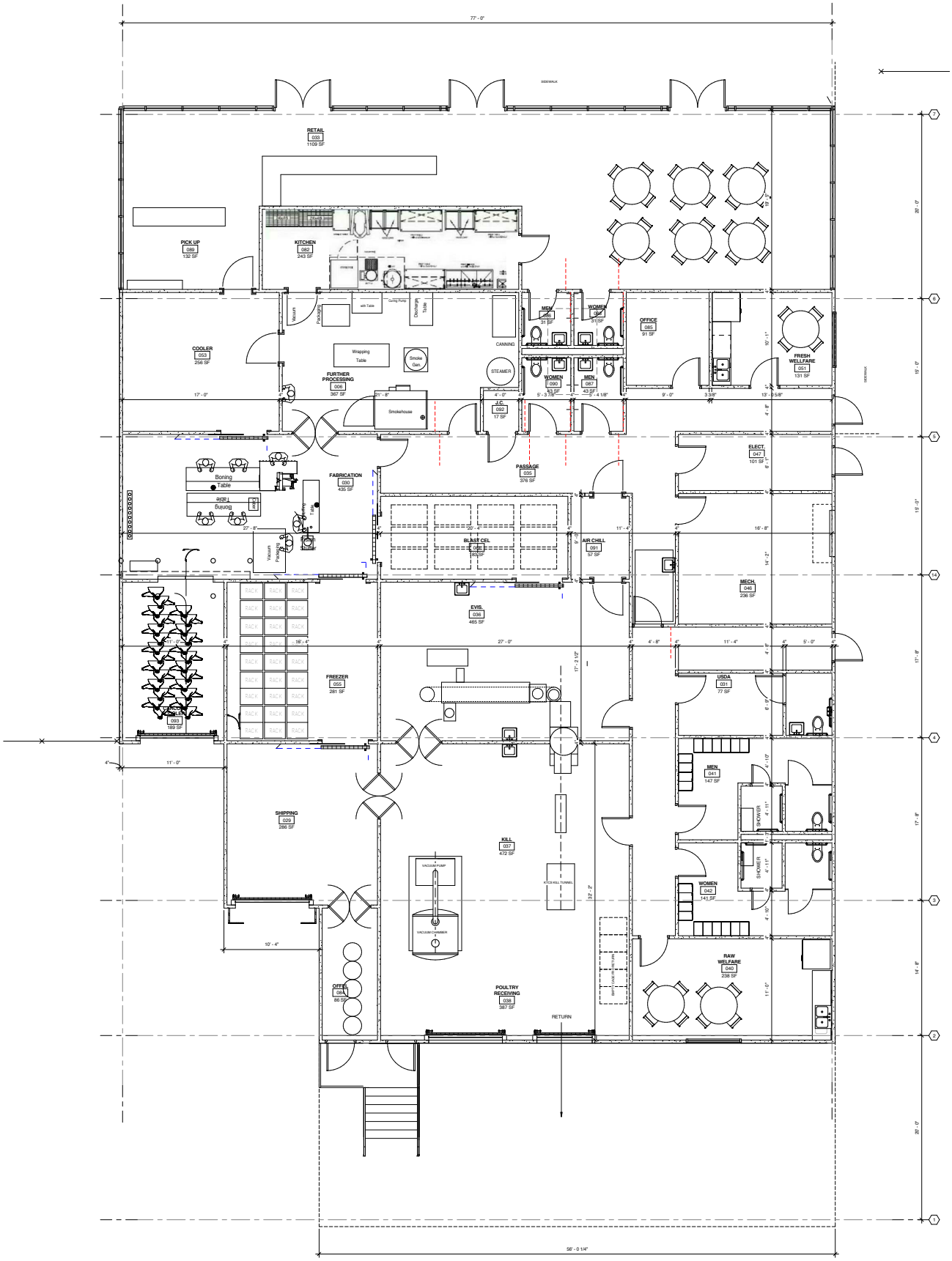

1 A-101 FLOOR PLAN
SCALE: 1/4" = 1'-0"

PROJECT NO. 201605
SHEET NO. A-101

SHEET TITLE
MAJOR EQUIPMENT LAYOUT

SHEET STATUS
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PROJECT NO. 201605

SHEET NO. A-102

SHEET TITLE

FLOOR DRAINS

SHEET STATUS

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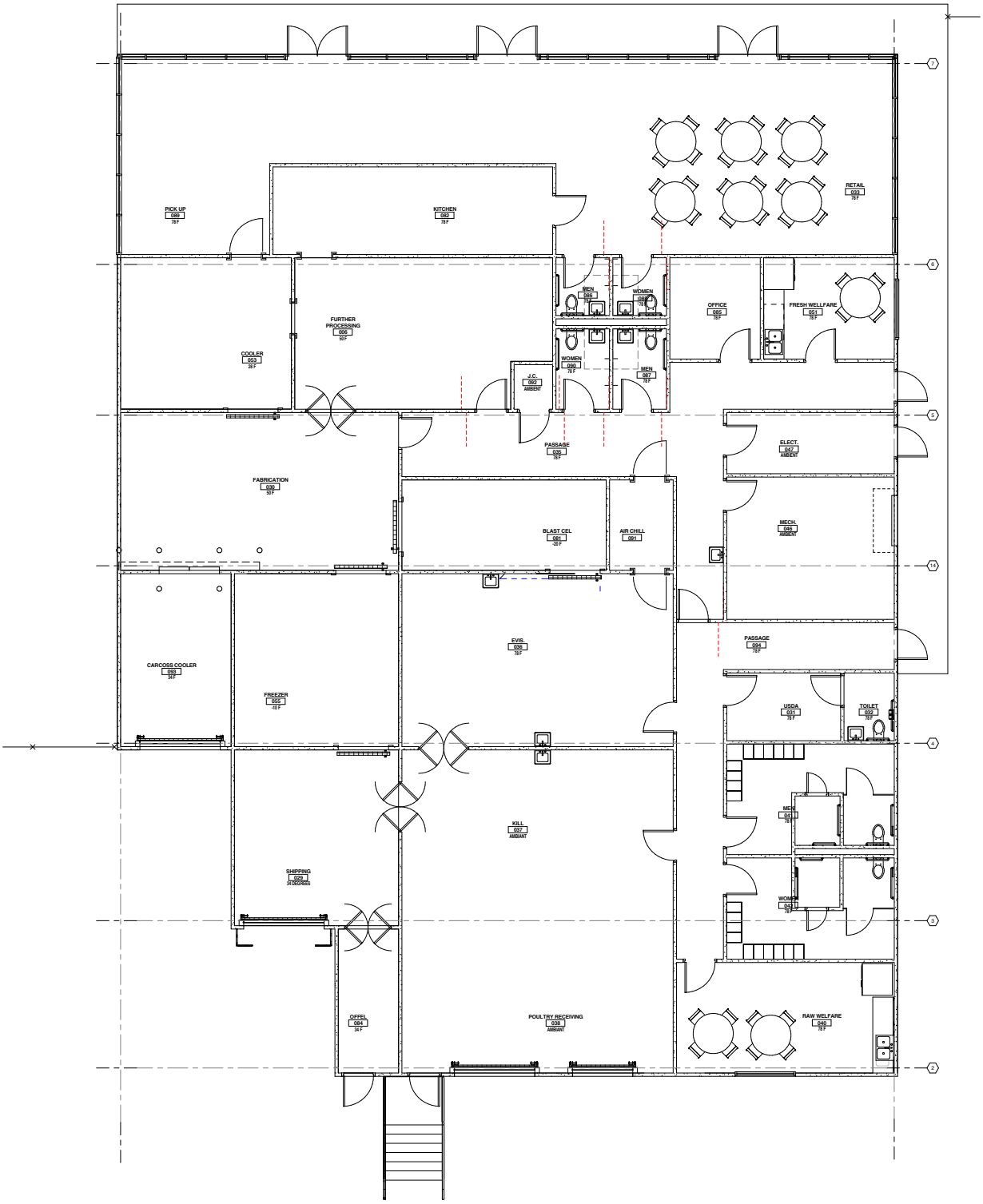

PROJECT NO. 201605

SHEET NO. A-102

SHEET TITLE

TEMPERATURE PLAN

SHEET STATUS

MARK	DATE	BY	MGR	RELEASE

PROPOSED BEEF, PORK AND POULTRY PROCESSING PLANT

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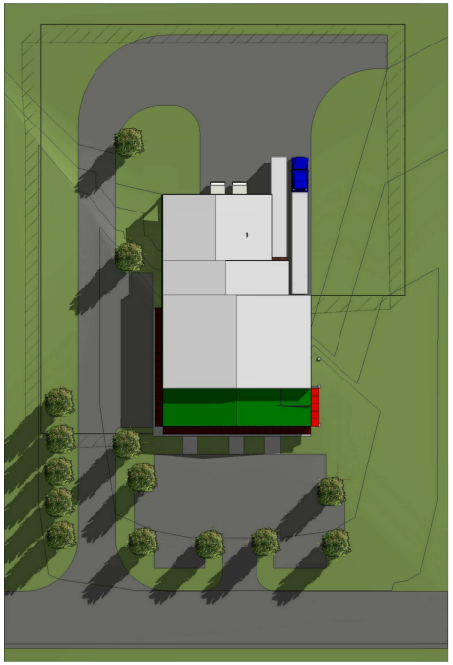

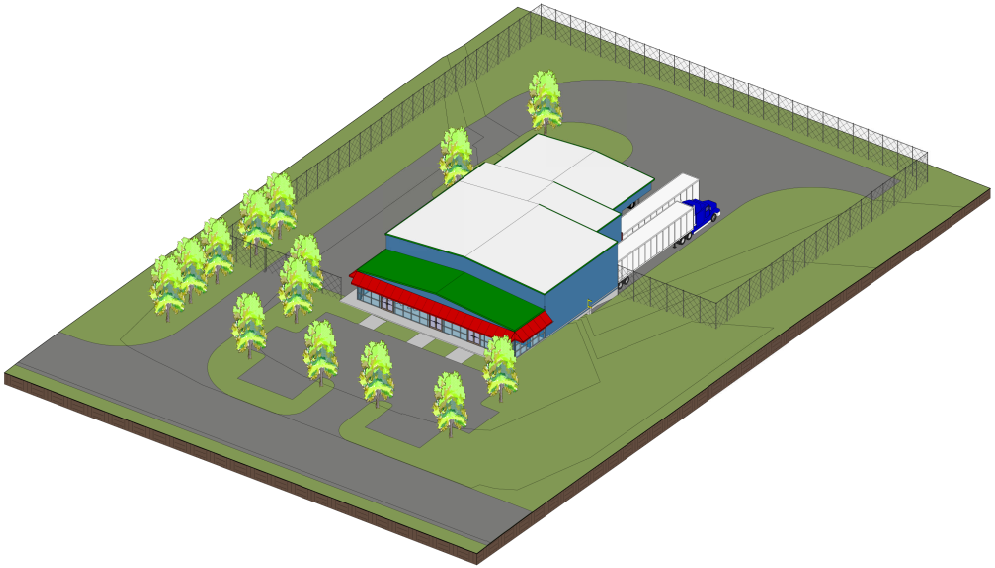

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PROPOSED BEEF, PORK AND POULTRY PROCESSING PLANT

MIGHTY FINE POULTRY

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ISOMETERIC VIEWS

PROJECT NO. **201605**

SHEET NO. **A-103**

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process equipment selection

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ONEsource Collaborative Approach™ (OSCA)

Process Equipment Selection & Cost

Equipment Information					Cost Information			
Rm No.	Description	Location	Equipment Information	Utilities	Budget Cost	QTY	Total Capital Cost	Cost per Area
Receiving/Kill Area								$109,444.00
38	LAPS 5'x4' Unit	Receiving	TechnoCatch Vacuum Chamber 5' diam.x 4' deep		$59,500.00	1	$59,500.00	
	Broiler Coop		Kuhl Corp. COOP-14 (38"Lx23"Wx10 1/2"H)		$115.00	100	$11,500.00	
	Turkey Coop		Kuhl Corp. COOP-16 (38 1/2"Lx23"Wx16"H)		$143.00	100	$14,300.00	
37	Pickwick Kill Tunnel	Kill Area	Pickwick KTCS Bleeding Tunnel		$2,774.00	1	$2,774.00	
	Poultry Killing Knife		Brower S128 SS Blade		$21.00	4	$84.00	
	Knife Sterilizer		Knife Sterilizer		$225.00	1	$225.00	
	Pickwick Bird Shackles		SH-5 Multipkle Bird Shackle		$168.00	10	$1,680.00	
	Pickwick Dunk		Pickwick AD Dunkmaster	1 hp air comp.	$4,642.00	1	$4,642.00	
	Pickwick Scalder		Pickwick AS60 Gas-Fired Scalder	250 CF/Hr gas	$5,885.00	1	$5,885.00	
	Pickwick Picker		Pickwick SOJ3 Spin-Pik Picker	1hp, 120v, 60hz.	$8,854.00	1	$8,854.00	
Evisceration Area								$16,567.00
36	Offal Cart	Evisceration	Brower Offal Cart (34 1/2"Lx23"Wx32"H)			1	$0.00	
	Offal Cart Insert		Brower Offal Cart Insert Model No. 28BG			2	$0.00	
	Evisceration Line		Brower Model No. EV16 (16'Lx26 1/2"W) w/vari-speed drive, water flush trough, giblet station, (34 shackle spaces).	110v, 60hz, single phase. 4GPM water	$10,020.00	1	$10,020.00	
	Evisceration Shackles		Brower ESSSR Shackles (8 3/4"W x 23"L)		$48.00	34	$1,632.00	
	6" Boning Knife		Brower 6" boning Knife Model 726		$21.00	24	$504.00	
	Knife Sterilizer		Knife Sterilizer		$225.00	1	$225.00	
	Pinning Knife w/SS Blade		Brower SS Blade Model S130		$21.00	24	$504.00	
	Gizzard Peeler		Brower SS Gizzard Peeler SSAK450 (33"Lx19"Wx40 1/2"H)		$2,004.00	1	$2,004.00	
	Venting Shears		Brower Gizzard and Venting Shears		$50.00	6	$300.00	
	Aprons		Brower Heavy Duty Aprons Model 475		$11.00	24	$264.00	
	Lung Remover		Brower Lung Remover Clung Model		$38.00	3	$114.00	
	Stainless Table		Stainless Steel Giblet Table		$1,000.00	1	$1,000.00	
Blast Cell Area								$15,200.00
81	Stainless Steel Chill Rack	Blast Cell	Cornerstone Farm SS Chill Rack (61"L x 33"W x 64"L)	7.5 Tons refrig	$1,900.00	8	$15,200.00	
Beef-Pork Receiving Area								$0.00
	Meat Rail	Receiving	Meat Rail	Manual				
Fabrication Area								$23,709.00
30	Bagging Unit	Fabrication	Brower Bagging Unit BVS40 Model		$4,380.00	1	$4,380.00	
	Special Poultry Bags		Brower Special Bagging Plastic Bag (1,000 bags) BAG35 Model		$60.00	10	$600.00	
	Vinyl Coated Wire		Brower 2000' Vinyl Coated Wire (6400 Ties)		$50.00	2	$100.00	
	S S Deboning Table		Stainless Steel deboning Table		$1,090.00	2	$2,180.00	
	SS Deboning Cone		Stainless Steel deboning Cone		$65.50	8	$524.00	
	Rail Scale		Rail Scale for Beef and Pork Carcass		$2,065.00	1	$2,065.00	
	Carcass Dropper		Carcass dropper for Beef and Pork		$1,485.00	1	$1,485.00	
	Carcass Landing Table		Stainless Landing Table for beef and Pork		$1,685.00	1	$1,685.00	
	Cutting/Boning Table		Cutting/Boning Table for Beef and Pork		$1,315.00	1	$1,315.00	
	Band Saw		Band Saw for Beef and Pork		$5,000.00	1	$5,000.00	
	Trimming Table		Trimming Table for Beef and Pork		$1,000.00	1	$1,000.00	
	Steak Cube Table		Steak Cube Table		$1,500.00	1	$1,500.00	
	Electronic Bench Scale		Electronic Bench Scale		$1,625.00	1	$1,625.00	
	Knife Sterilizer		Knife Sterilizer		$250.00	1	$250.00	
Further Processing Area								$152,132.00
6	Grinder	Further Process	Grinder		$7,290.00	1	$7,290.00	
	Patty Former		Patty Former		$5,390.00	1	$5,390.00	
	Smoke House		Smoke House		$29,500.00	1	$29,500.00	
	Canning Equipment		Retort/Autoclave- Dixie Canner		$101,788.00	1	$101,788.00	
	Commercial Oven		48" Vulcan 48SS-8BN	286,000BTU/Hr		1	$0.00	
	Steam Jacketed Kettle		40 gal jacketed kettle 901K40DL	Steam 10PSIG	$8,164.00	1	$8,164.00	
								$317,052.00

ONEsource facility solutions

ONEsource Collaborative Approach™ (OSCA)

MFPP project cost budget

ONEsource facility solutions

ONEsource Collaborative Approach™ (OSCA)

Project Cost

Mighty Fine Poultry Project Cost Budget	
Site Work	$112,052
Concrete	$108,051
Masonry	$29,132
Metals	$95,299
Thermal	$135,767
Doors/Windows	$174,725
Finishes	$38,115
Specialties	$21,565
Mechanical	$139,576
Refrigeration	$119,952
Electrical	$88,813
General Requirements	$105,768
Builders Risk Insurance	$13,690
Engineering	$118,022
Builders Estimated Fee	$68,449
	$1,368,976
Process Equipment Budget	$317,052
	$1,686,028

ONEsource
facility solutions

ONEsource Collaborative Approach™ (OSCA)

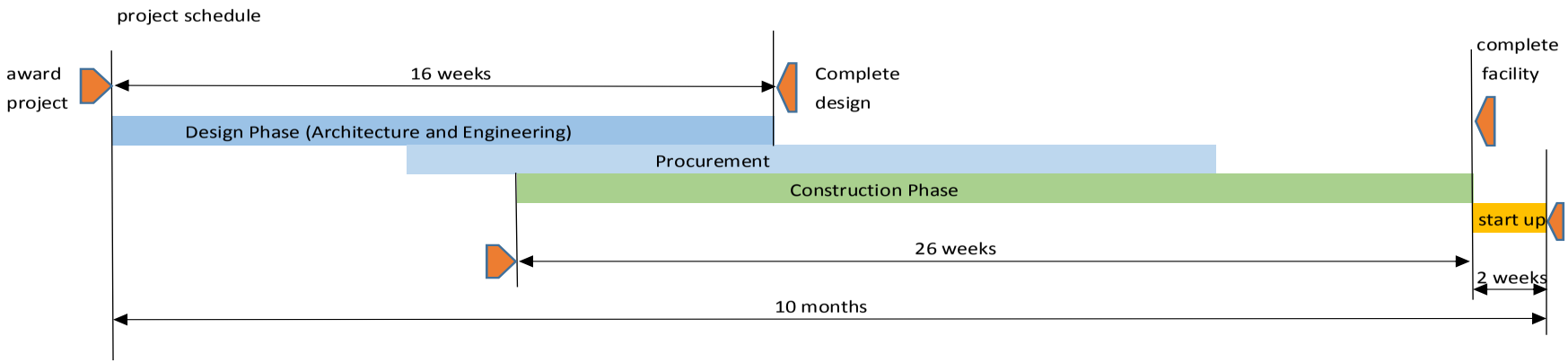
project implementation schedule

ONEsource facility solutions

ONEsource Collaborative Approach™ (OSCA)

Design-Engineering-Procurement-Construction Schedule

Mighty Fine Poultry Processing



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Mighty Fine

Poultry Processing

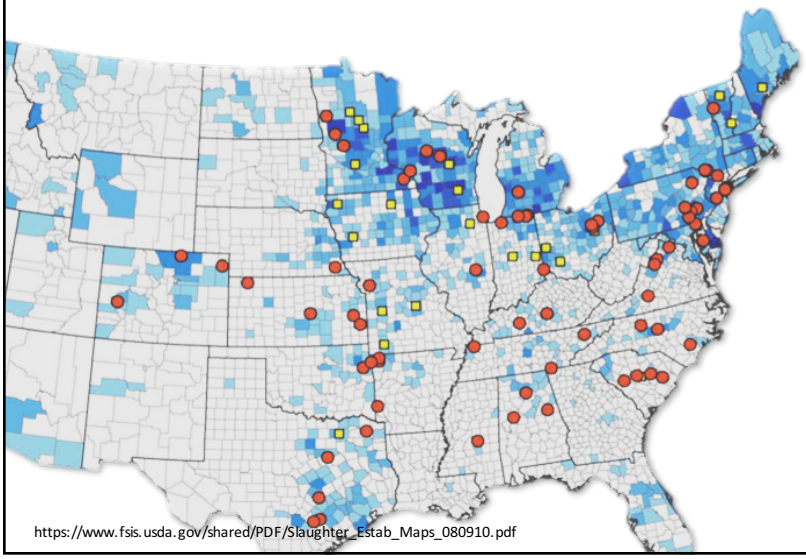
A business plan for a processing and distribution facility designed to bring locally grown and processed meats to SE Michigan markets

Mighty Fine Poultry Processing Company Purpose

1. To build a processing facility with capacity to accept live poultry and large animal carcasses from small independent farmers, and process them into fresh and cooked meat products for area consumers.

2. To create a poultry processing business model with sufficient revenue streams to be financially feasible in the long term.

Problem: the poultry processing infrastructure that serves small independent farms is in decline



- The availability of local poultry is limited by a small and declining processing infrastructure.
- Feasibility tests for new poultry processing businesses often fail.
- Despite this, the demand for locally grown poultry is high and growing.

Solution: a poultry processing business model that includes direct sales and multiple revenue streams

- Build a USDA-inspected poultry processing facility near a populated area where customers interested in purchasing local meats live and shop.
- Include a large animal processing area where beef, pork, and other large animal carcasses can be parted out and packaged on non-poultry days.
- Include a cannery to prepare and package chicken stock and bone broth from excess bones.
- Include a retail space that includes a meat counter for direct sales of fresh local meat, and a commercial kitchen for direct sales of prepared meals.
- Include a loading dock to facilitate wholesale distribution of fresh or frozen local meat and cannery products.

Mighty Fine Poultry Processing: Why Now

- SE Michigan has ~8 million residents, but only one USDA-inspected poultry processer that serves the needs of small independent farmers.
- Even where this USDA-processing infrastructure exists, there is no distribution infrastructure to help bring local poultry to market.
- As a result, little or no fresh local poultry grown by independent farmers and processed under USDA inspection is available in SE Michigan.
- Demand for fresh local poultry is large and growing, suggesting that the time is right to restore the poultry processing infrastructure for small farmers in Michigan, to facilitate the movement of fresh local meat products to area consumers.

Mighty Fine Poultry Processing: Market Potential and Size

- Poultry Processing in SE Michigan: 50,000 birds per year are currently processed under USDA-inspection, indicating that 50,000 birds is the minimum market size in SE Michigan for processing.
- Poultry Consumption in SE Michigan: One local grocery chain with 15 stores in SE Michigan reports sales of 5,000 lb per store of "Amish" boneless-skinless chicken breasts grown and processed in Indiana, or 75,000 lb/week. This demand far exceeds the 2,000 lb per week of fresh Michigan grown and processed boneless skinless chicken breast expected to be produced at Might Fine Poultry Processing.
- Similarly, demand is high for other local poultry, beef, and pork products, and will be available fresh every day at Mighty Fine Poultry Processing.

Mighty Fine Poultry Processing: Competition

- Munsell's Poultry Processing processes ~50,000 birds/year, and is the only direct competitor for USDA-inspected poultry processing in the area. Since demand for processing is high it is expected that the addition of MFPP will allow more farmers to access a USDA-inspected facility.
- There is little or no competition in the Ann Arbor area for fresh local poultry; "local" poultry alternatives are generally not fresh or are not grown by independent Michigan farmers. In the absence of fresh Michigan-grown poultry, the fresh "local" poultry niche has largely been filled by Miller Poultry from Indiana, which grows and processes 500,000 birds/wk.
- Fresh poultry outlets in Ann Arbor include Sparrow Market, Arbor Farms, Produce Station, Eat Local Eat Natural, Mid-Michigan Meats, and Whole Foods Market.

Mighty Fine Poultry Processing: Products

- From Retail Meat Counter
  - Fresh Local Poultry
  - Fresh Local Beef, Pork, Lamb
  - Canned Chicken Stock, Beef Bone Broth, Pork Bone Broth
- From Retail Kitchen Counter
  - Soups, sandwiches, other prepared foods
  - Coffee and other drinks
- From Processing Counter
  - Freshly processed poultry returned to farmer
- From Wholesale Distribution Counter
  - Fresh or Frozen Local Poultry, Beef, Pork, and Lamb
  - Canned Chicken Stock, Beef Bone Broth, Pork Bone Broth

Mighty Fine Poultry Processing: Business Plan/How we will thrive

- Build near Ann Arbor, a populated area with many potential customers
- Include multiple revenue streams to support the investment:
  - Process and sell a variety of local meats: Poultry, Beef, Pork, Lamb
  - Sell fresh local meats in a variety of ways: Fresh Meat Counter, Prepared Meals
  - Sell using multiple distribution streams: Retail, Wholesale
  - Sell ancillary products in high demand: Chicken Stock, Bone Broth, Coffee
- Ensure Full Facility Use
  - USDA-inspected Poultry Slaughter — Monday
  - USDA-inspected Processing — Tuesday - Friday
  - Retail + Wholesale Sales — Tuesday - Sunday
- Full Carcass Use
  - Meat scraps will be used in prepared soups and meals
  - Stocks and Broths will be made from excess bones

Mighty Fine Poultry Processing: Founder

Wendy Lockwood Banka started Mighty Fine Poultry Processing LLC after becoming aware that the lack of processing infrastructure is a significant impediment to the availability of local poultry in SE Michigan.

The company has won two planning grants from the USDA which resulted in professionally-designed plans for a USDA-inspected multi-species processing facility with attached retail space. In addition, an award from the Michigan Good Food Fund is currently supporting Site Plan work for this project, on a site just south of the Ann Arbor, Michigan city limits.

Wendy Banka has completed training and is a Preventive Controls Qualified Individual (PCQI), as required by the Food Safety and Modernization Act for food processing establishments. Wendy also holds a PhD in Cell, Developmental, and Neural Biology and an MPP in Public Policy.

Start-up Expenses

Fixed Assets	Amount	(years)	Notes
Real Estate-Land	265,000	ot Depreciated	Actual Cost/Owner Equity
Real Estate-Buildings	1,368,976	20	ONEsource Estimate
Leasehold Improvements	-	7	-
Equipment	317,052	7	ONEsource Estimate
Furniture and Fixtures	40,000	5	Estimate
Vehicles	25,000	5	Estimate
Other	8,972	5	Estimate
Total Fixed Assets	$ 2,025,000		

Operating Capital	Amount	Notes
Pre-Opening Salaries and Wages	20,000	Estimate
Prepaid Insurance Premiums	20,000	Estimate
Inventory	20,000	Estimate
Legal and Accounting Fees	12,000	Estimate
Rent Deposits	6,000	Estimate
Utility Deposits	20,000	Estimate
Supplies	20,000	Estimate
Advertising and Promotions	5,000	Estimate
Licenses	5,000	Estimate
Other Initial Start-Up Costs	10,000	Estimate
Working Capital (Cash On Hand)	100,000	Estimate
Total Operating Capital	$ 238,000	
Total Required Funds	$ 2,263,000	

Sources of Funding	Percentage	Totals	Loan Rate	Term in Months	Monthly Payments	Notes
Owner's Equity	11.71%	265,000				
Outside Investors	22.09%	500,000				
Additional Loans or Debt						
Commercial Loan	0.00%	-	7.00%	84	-	
Commercial Mortgage	65.09%	1,473,000	7.00%	360	9,800	
Credit Card Debt	0.00%		7.00%	60	-	
Vehicle Loans	1.10%	25,000	6.00%	60	483	
Other Bank Debt	0.00%		5.00%	36	-	
Total Sources of Funding	100.00%	$ 2,263,000	ell D 42 must equal cell C2		$ 10,283	
Total Funding Needed		$ -	You are fully funded (Balanced)			

This and all other financial spreadsheets were created from a template provided by the Michigan Small Business Development Center (SBDC).

Payroll Year 1

Employee Types	Number of Owners /Employees	Average Hourly Pay (to 2 decimal places, ex. $15.23)	Estimated Hrs./Week (per person)	Estimated Pay/Month (Total)	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Annual Totals
Owner(s)	3	25.00	20	$ 6,500	6,500	6,500	6,500	6,500	6,500	6,500	6,500	6,500	6,500	6,500	6,500	6,500	$ 78,000
Full-Time Employees	5	13.00	40	$ 11,267	11,267	11,267	11,267	11,267	11,267	11,267	11,267	11,267	11,267	11,267	11,267	11,267	$ 135,200
Part-Time Employees	4	12.00	20	$ 4,160	4,160	4,160	4,160	4,160	4,160	4,160	4,160	4,160	4,160	4,160	4,160	4,160	$ 49,920
Independent Contractors	1	70.00	4	$ 1,213	1,213	1,213	1,213	1,213	1,213	1,213	1,213	1,213	1,213	1,213	1,213	1,213	$ 14,560
Total Salaries and Wages	13	$ 120.00	84	$ 23,140	$ 23,140	######	$ 23,140	$ 23,140	$ 23,140	$ 23,140	$ 23,140	$ 23,140	$ 23,140	$ 23,140	$ 23,140	$ 23,140	$ 277,680

Payroll Taxes and Benefits	Wage Base Limit	Percentage of Salary/Wage		Estimated Taxes & Benefits/Month (Total)	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Annual Totals
Social Security	$ 110,111	6.20%		$ 1,359	1,359	1,359	1,359	1,359	1,359	1,359	1,359	1,359	1,359	1,359	1,359	1,359	$ 16,313
Medicare	--	1.45%		$ 318	318	318	318	318	318	318	318	318	318	318	318	318	$ 3,815
Federal Unemployment Tax (F	$ 7,000	0.60%		$ 46	46	46	46	46	46	46	46	46	46	46	46	46	$ 546
State Unemployment Tax (SU	$ 7,000	3.45%		$ 262	262	262	262	262	262	262	262	262	262	262	262	262	$ 3,140
Employee Pension Programs	--	0.00%		$ -	-	-	-	-	-	-	-	-	-	-	-	-	$ -
Worker's Compensation	--	0.00%		$ -	-	-	-	-	-	-	-	-	-	-	-	-	$ -
Employee Health Insurance	--	0.00%		$ -	-	-	-	-	-	-	-	-	-	-	-	-	$ -
Other Employee Benefit Prog	--	0.00%		$ -	-	-	-	-	-	-	-	-	-	-	-	-	$ -
Total Payroll Taxes and Benefits		11.70%		$ 1,985	$ 1,985	$ 1,985	$ 1,985	$ 1,985	$ 1,985	$ 1,985	$ 1,985	$ 1,985	$ 1,985	$ 1,985	$ 1,985	$ 1,985	$ 23,814
Total Salaries and Related Expenses				$ 25,125	$ 25,125	######	$ 25,125	$ 25,125	$ 25,125	$ 25,125	$ 25,125	$ 25,125	$ 25,125	$ 25,125	$ 25,125	$ 25,125	$ 301,494

Sales Forecast Year 1

Product Lines	Units	Sales Price Per Unit	COGS Per Unit	Margin Per Unit
Chicken	lb	$ 6.00	$ 4.00	$ 2.00
Beef	lb	$ 11.50	$ 8.07	$ 3.43
Pork	lb	$ 9.50	$ 6.60	$ 2.90
Turkey Processing	each	$ 10.00	$ 4.00	$ 6.00
Stock and Broth	gal	$ 5.00	$ 2.00	$ 3.00
Processing, Coffee, Stock,	each	$ 5.00	$ 2.00	$ 3.00

Product Lines	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Annual Totals	Breakdown	Category / Total
Chicken															
lb Sold	9,000	9,000	9,000	9,000	9,000	9,000	9,000	9,000	9,000	9,000	4,500	9,000	103,500		45.3%
Total Sales	54,000	54,000	54,000	54,000	54,000	54,000	54,000	54,000	54,000	54,000	27,000	54,000	$ 621,000	100.0%	34.0%
Total COGS	36,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000	18,000	36,000	$ 414,000	66.7%	34.4%
Total Margin	18,000	18,000	18,000	18,000	18,000	18,000	18,000	18,000	18,000	18,000	9,000	18,000	$ 207,000	33.3%	33.3%
Beef															
lb Sold	4,500	4,500	4,500	4,500	4,500	4,500	4,500	4,500	4,500	4,500	2,000	4,500	51,500		22.5%
Total Sales	51,750	51,750	51,750	51,750	51,750	51,750	51,750	51,750	51,750	51,750	23,000	51,750	$ 592,250	100.0%	32.5%
Total COGS	36,315	36,315	36,315	36,315	36,315	36,315	36,315	36,315	36,315	36,315	16,140	36,315	$ 415,605	70.2%	34.6%
Margin	15,435	15,435	15,435	15,435	15,435	15,435	15,435	15,435	15,435	15,435	6,860	15,435	$ 176,645	29.8%	28.4%
Pork															
lb Sold	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	2,000	4,000	46,000		20.1%
Total Sales	38,000	38,000	38,000	38,000	38,000	38,000	38,000	38,000	38,000	38,000	19,000	38,000	$ 437,000	100.0%	24.0%
Total COGS	26,400	26,400	26,400	26,400	26,400	26,400	26,400	26,400	26,400	26,400	13,200	26,400	$ 303,600	69.5%	25.2%
Margin	11,600	11,600	11,600	11,600	11,600	11,600	11,600	11,600	11,600	11,600	5,800	11,600	$ 133,400	30.5%	21.5%
Turkey Processing															
each Sold	100	100	100	100	100	100	100	100	100	100	6,000	100	7,100		3.1%
Total Sales	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	60,000	1,000	$ 71,000	100.0%	3.9%
Total COGS	400	400	400	400	400	400	400	400	400	400	24,000	400	$ 28,400	40.0%	2.4%
Margin	600	600	600	600	600	600	600	600	600	600	36,000	600	$ 42,600	60.0%	6.9%
Stock and Broth															
gal Sold	292	292	292	292	292	292	292	292	292	292	100	292	3,307		1.4%
Total Sales	1,458	1,458	1,458	1,458	1,458	1,458	1,458	1,458	1,458	1,458	500	1,458	$ 16,533	100.0%	0.9%
Total COGS	583	583	583	583	583	583	583	583	583	583	200	583	$ 6,613	40.0%	0.5%
Margin	875	875	875	875	875	875	875	875	875	875	300	875	$ 9,920	60.0%	1.6%
ssing, Coffee, Stock, Other															
each Sold	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	750	1,500	17,250		7.5%
Total Sales	7,500	7,500	7,500	7,500	7,500	7,500	7,500	7,500	7,500	7,500	3,750	7,500	$ 86,250	100.0%	4.7%
Total COGS	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	1,500	3,000	$ 34,500	40.0%	2.9%
Margin	4,500	4,500	4,500	4,500	4,500	4,500	4,500	4,500	4,500	4,500	2,250	4,500	$ 51,750	60.0%	8.3%
Total Units Sold	19,392	19,392	19,392	19,392	19,392	19,392	19,392	19,392	19,392	19,392	15,350	19,392	228,657		
Total Sales	$ 153,708	$ 153,708	$ 153,708	$ 153,708	$ 153,708	$ 153,708	$ 153,708	$ 153,708	$ 153,708	$ 153,708	$ 133,250	$ 153,708	$ 1,824,033		
Total Cost of Goods Sold	$ 102,698	$ 102,698	$ 102,698	$ 102,698	$ 102,698	$ 102,698	$ 102,698	$ 102,698	$ 102,698	$ 102,698	$ 73,040	$ 102,698	$ 1,202,718		
Total Margin	$ 51,010	$ 51,010	$ 51,010	$ 51,010	$ 51,010	$ 51,010	$ 51,010	$ 51,010	$ 51,010	$ 51,010	$ 60,210	$ 51,010	$ 621,315		

Profit and Loss

Revenue	2019		2020		2021	
Chicken	621,000		807,300		888,030	
Beef	592,250		769,925		846,918	
Pork	437,000		568,100		624,910	
Turkey Processing	71,000		92,300		101,530	
Stock and Broth	16,533		21,492		23,641	
Processing, Coffee, Stock, Other	86,250		112,125		123,338	
Total Revenue	**$ 1,824,033**	**100%**	**$ 2,371,242**	**100%**	**$ 2,608,366**	**100%**
Cost of Goods Sold						
Chicken	414,000		538,200		592,020	
Beef	415,605		540,287		594,315	
Pork	303,600		394,680		434,148	
Turkey Processing	28,400		36,920		40,612	
Stock and Broth	6,613		8,597		9,457	
Processing, Coffee, Stock, Other	34,500		44,850		49,335	
Total Cost of Goods Sold	**1,202,718**	**66%**	**1,563,533**	**66%**	**1,719,887**	**66%**
Gross Margin	621,315	**34%**	807,709	**34%**	888,480	**34%**
Payroll	301,494		307,762		314,163	
Operating Expenses						
Advertising	2,400		2,472		2,546	
Car and Truck Expenses	2,400		2,472		2,546	
Commissions and Fees	1,200		1,236		1,273	
Insurance (other than health)	4,200		4,326		4,456	
Office Expense	1,200		1,236		1,273	
Rent or Lease -- Vehicles, Machinery, Equipment	-		-		-	
Rent or Lease -- Other Business Property	24,000		24,720		25,462	
Repairs and Maintenance	3,600		3,780		3,969	
Supplies	12,000		12,360		12,731	
Utilities	18,000		18,540		19,096	
Total Operating Expenses	**$ 69,000**	**4%**	**$ 71,142**	**3%**	**$ 73,352**	**3%**
Income (Before Other Expenses)	**$ 250,820**	**14%**	**$ 428,805**	**18%**	**$ 500,965**	**19%**
Other Expenses						
Amortized Start-up Expenses	39,333		39,333		39,333	
Depreciation	128,536		128,536		128,536	
Commercial Mortgage	102,636		97,540		100,394	
Vehicle Loans	1,380		1,107		818	
Total Other Expenses	**$ 271,885**	**15%**	**$ 266,517**	**11%**	**$ 269,082**	**10%**
Net Income Before Income Tax	**$ (21,065)**		**$ 162,288**		**$ 231,883**	
Income Tax	$ 3,930		$ 40,546		$ 54,407	
Net Income/Loss	**$ (24,995)**	**-1%**	**$ 121,742**	**5%**	**$ 177,476**	**7%**

Balance Sheet

ASSETS	2019	2020	2021
Current Assets			
Cash	218,391	485,735	808,232
Accounts Receivable	15,371	19,982	21,980
Inventory	20,000	20,000	20,000
Prepaid Expenses	72,000	36,000	-
Other Initial Costs	6,667	3,333	-
Total Current Assets	**$ 332,428**	**$ 565,051**	**$ 850,212**
Fixed Assets			
Real Estate -- Land	265,000	265,000	265,000
Real Estate -- Buildings	1,368,976	1,368,976	1,368,976
Leasehold Improvements	-	-	-
Equipment	317,052	317,052	317,052
Furniture and Fixtures	40,000	40,000	40,000
Vehicles	25,000	25,000	25,000
Other	8,972	8,972	8,972
Total Fixed Assets	**$ 2,025,000**	**$ 2,025,000**	**$ 2,025,000**
(Less Accumulated Depreciation)	$ 128,536	$ 257,073	$ 385,609
Total Assets	$ 2,228,892	$ 2,332,977	$ 2,489,602
LIABILITIES & EQUITY			
Liabilities			
Accounts Payable	10,270	13,351	14,686
Commercial Mortgage Balance	1,458,037	1,441,993	1,424,788
Vehicle Loans Balance	20,580	15,887	10,905
Total Liabilities	**$ 1,488,887**	**$ 1,471,231**	**$ 1,450,379**
Equity			
Common Stock	765,000	765,000	765,000
Retained Earnings	(24,995)	96,747	274,224
Dividends Dispersed/Owners Draw	-	-	-
Total Equity	**$ 740,005**	**$ 861,747**	**$ 1,039,224**
Total Liabilities and Equity	$ 2,228,892	$ 2,332,977	$ 2,489,602
Balance sheet in or out of balance?	$ -	$ -	$ -
	Balanced!	Balanced!	Balanced!

Cash Flow

	Year 1 Totals	Year 2 Totals	Year 3 Totals
Beginning Balance			
Cash Inflows			
Cash Sales	**$ 1,641,629**	**$ 2,134,118**	**$ 2,347,530**
Accounts Receivable	**$ 167,033**	**$ 232,513**	**$ 258,838**
Total Cash Inflows	**$ 1,808,662**	**$ 2,366,631**	**$ 2,606,368**
Cash Outflows			
Investing Activities			
New Fixed Asset Purchases	**$ -**	**$ -**	**$ -**
Additional Inventory	**$ -**	**$ -**	**$ -**
Cost of Goods Sold	**$ 1,192,448**	**$ 1,560,452**	**$ 1,718,552**
Operating Activities			
Operating Expenses	**$ 69,000**	**$ 71,142**	**$ 73,352**
Payroll	**$ 301,494**	**$ 307,762**	**$ 314,163**
Taxes	**$ 3,930**		**$ 54,407**
Financing Activities			
Loan Payments	**$ 123,399**	**$ 119,384**	**$ 123,399**
Owners Distribution	**$ -**	**$ -**	**$ -**
Line of Credit Interest	**$ -**	**$ -**	**$ -**
Line of Credit Repayments	**$ -**	**$ -**	**$ -**
Dividends Paid	**$ -**	**$ -**	
Total Cash Outflows	**$ 1,690,271**	**$ 2,058,741**	**$ 2,283,872**
Net Cash Flows	**$ 118,391**	**$ 307,890**	**$ 322,496**
Operating Cash Balance			
Line of Credit Drawdown	**$ -**	**$ -**	**$ -**
Ending Cash Balance			
Line of Credit Balance			

Capitalization Table

Capitalization Table Summary					
Shareholder	**Series A**	**Common**	**Options**	**Total**	**%**
Founder		600,000		600,000	60%
Investor A	100,000			100,000	10%
Investor B	100,000			100,000	10%
Option Holder C			100,000	100,000	10%
Option Holder D			100,000	100,000	10%
Total	**200,000**	**600,000**	**200,000**	**1,000,000**	**100%**

Mighty Fine Poultry Processing: Vision

- For farmers, Mighty Fine will provide a new USDA-inspected poultry slaughter and processing facility, a large animal carcass processing facility, and a retail and wholesale outlet in an urban area that they can easily access and benefit from.
- For consumers, Mighty Fine will be a destination venue that consumers in SE Michigan will seek for fresh local poultry, beef, pork, and lamb, as well as prepared meals, six days per week.
- For the neighboring community Mighty Fine will be a local market and food venue that will also provide space to meet for coffee and meals.