

Feasibility Study for a Poultry Abattoir in Frontenac County, Ontario

Executive Summary

POULTRY ABATTOIR REVIEW COMMITTEE

April 20, 2011



Expansion Stratégies inc.

Contents

Mandate

Methodology

Survey Results

Market\Supply Evaluation

Abattoir Locations

Sharbot Lake Plant Scenario

Financial Analysis

Conclusions and Recommendations



Mandate

- **To establish if there is a place where an abattoir could be established that is not much farther than a one hour drive from the majority of the users**
- **To establish if there are a sufficient number of birds to put this abattoir on a profitable basis.**



Methodology

- **Survey the farmers in the region**
- **Select a preferred location**
- **Design a layout adapted to the needs**
- **Perform the financial analysis**
- **Discuss the alternatives**
- **Make recommendations**



Survey: Poultry Production - 2011

What is your expected production of poultry in 2011 ?

Description	Total Chicken	Total	Total Ducks	Total Others*
Production	4,035	333	82	882
Slaughtered by farmer	591	20	50	80
Slaughtered at an abattoir	3,444	313	32	802

*Layers, Geese, Guinea Hens etc.

Survey: Poultry Sales - 2011

Slaughter Calendar

Description	Chicken	Turkey
January - March	3 %	
April - June	13 %	
July-September	49 %	30 %
October - December	35 %	70 %

Sales By Type

Description	Chicken	Turkey
Fresh - whole	100 %	100 %
Frozen – whole	88 %	100 %
Frozen – cut	12 %	



Survey: Interest for an Abattoir

Level of Interest	Definitely	70 %
	Likely	6 %
	Probably	9 %

Future Production

Chicken			Turkey		
Now	Future	%	Now	Future	%
4,035	7,365	83 %	333	726	118 %

Sales By Type

Description	Chicken		Turkey	
	Now	With Abattoir	Now	With Abattoir
Fresh - whole	100 %	94 %	100 %	95 %
Fresh - cut		6 %		5 %
Frozen – whole	88 %	85 %	100 %	99 %
Frozen – cut	12 %	15 %		1 %



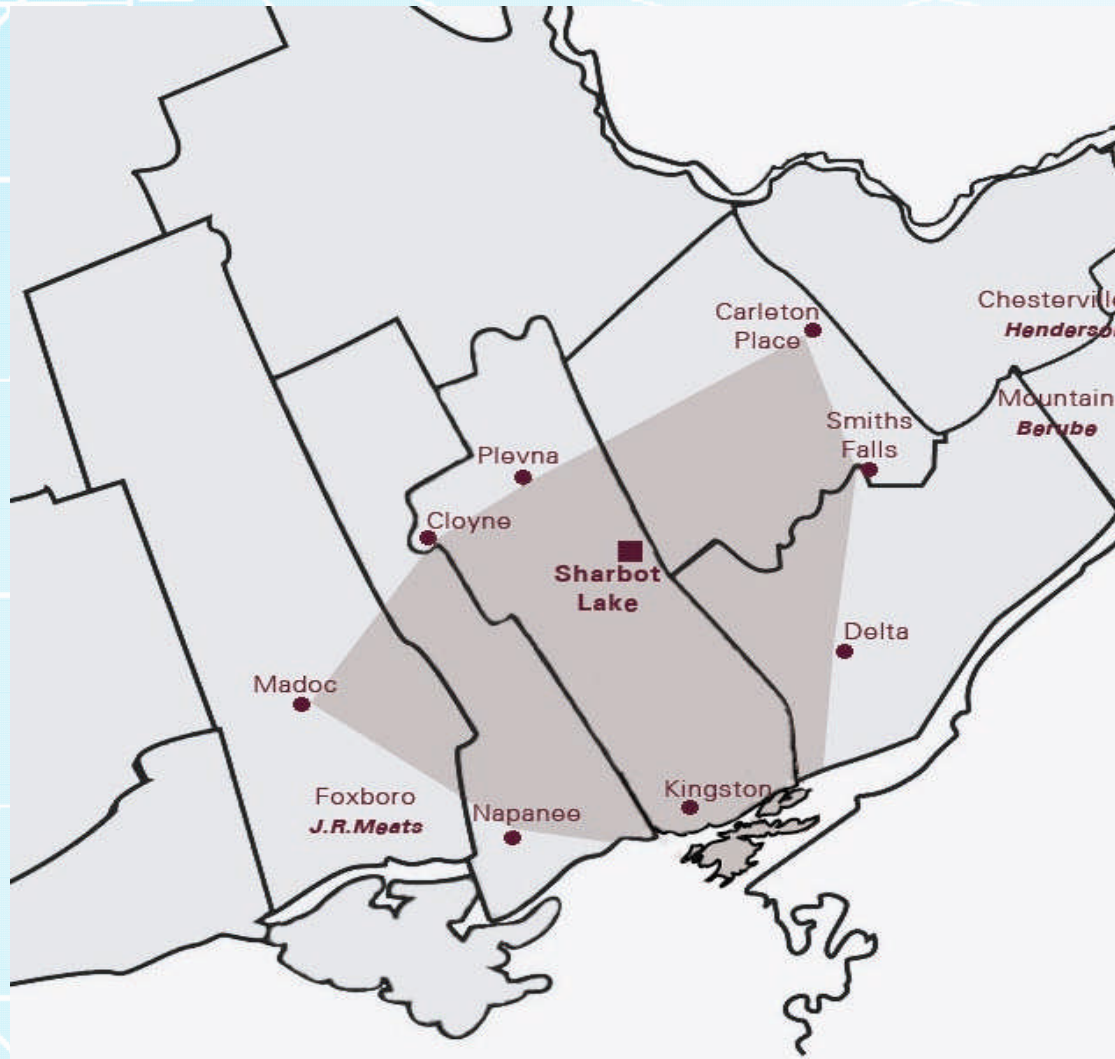
Survey: Expected Services

Services	Percentage
Scheduling appointments	94 %
Cut up birds	73 %
Customized packaging	53 %
Blast freezing	45 %
Conventional freezing	65 %
Weighing	83 %
Pricing & Labelling	68 %

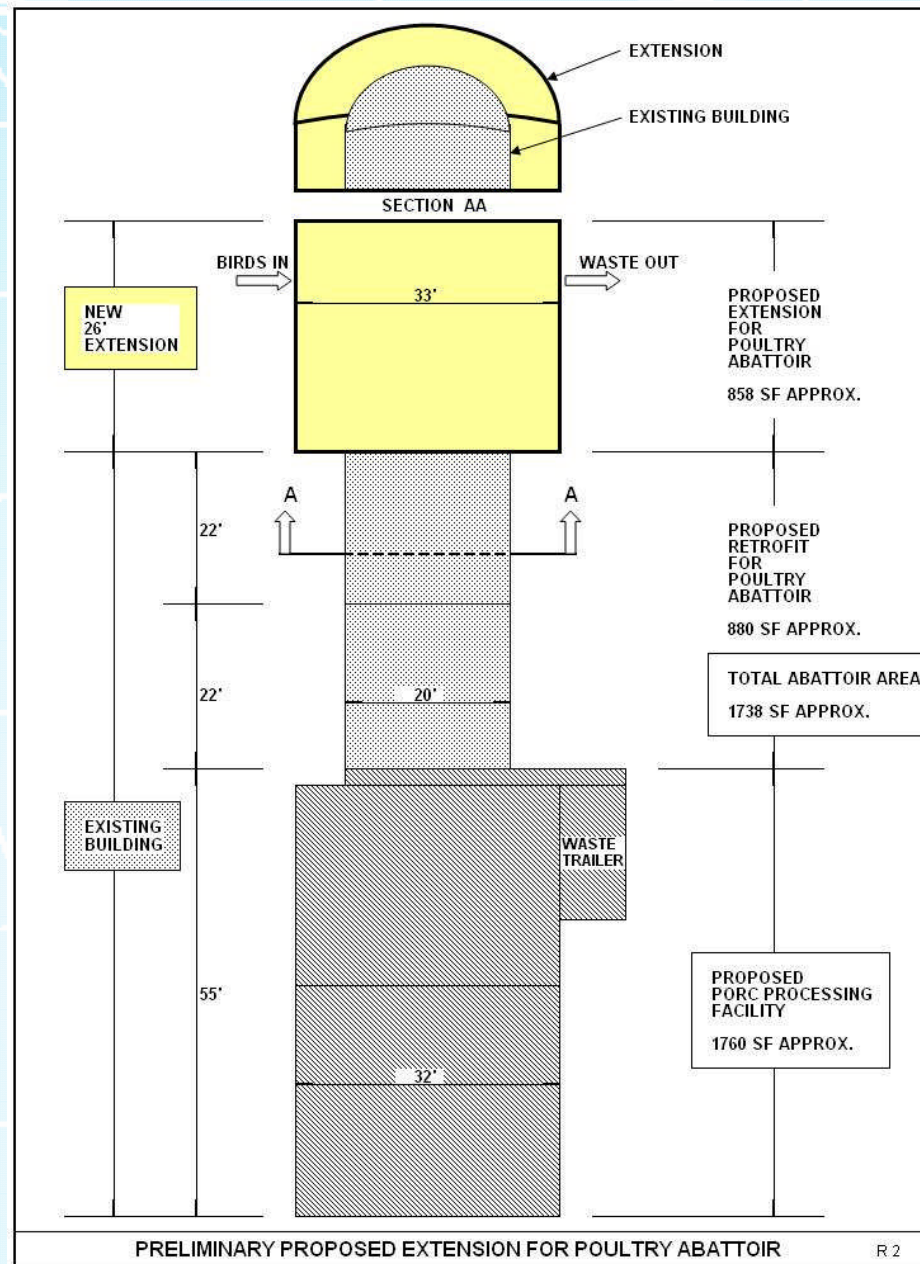
Market Potential

Numbers	Evaluation of Present Volume	Evaluation of Present Potential	Estimate of Future Volume	Estimate of Future Potential
Farms	200	200	300	300
Chickens	28,800	60,000	55,200	90,000
Turkeys	2,400	10,000	5,400	15,000
Ducks	79	Not included	2100	Not included
Others	882	Not included	3,938	Not included
Birds total	32,802	70,000	66,638	105,000

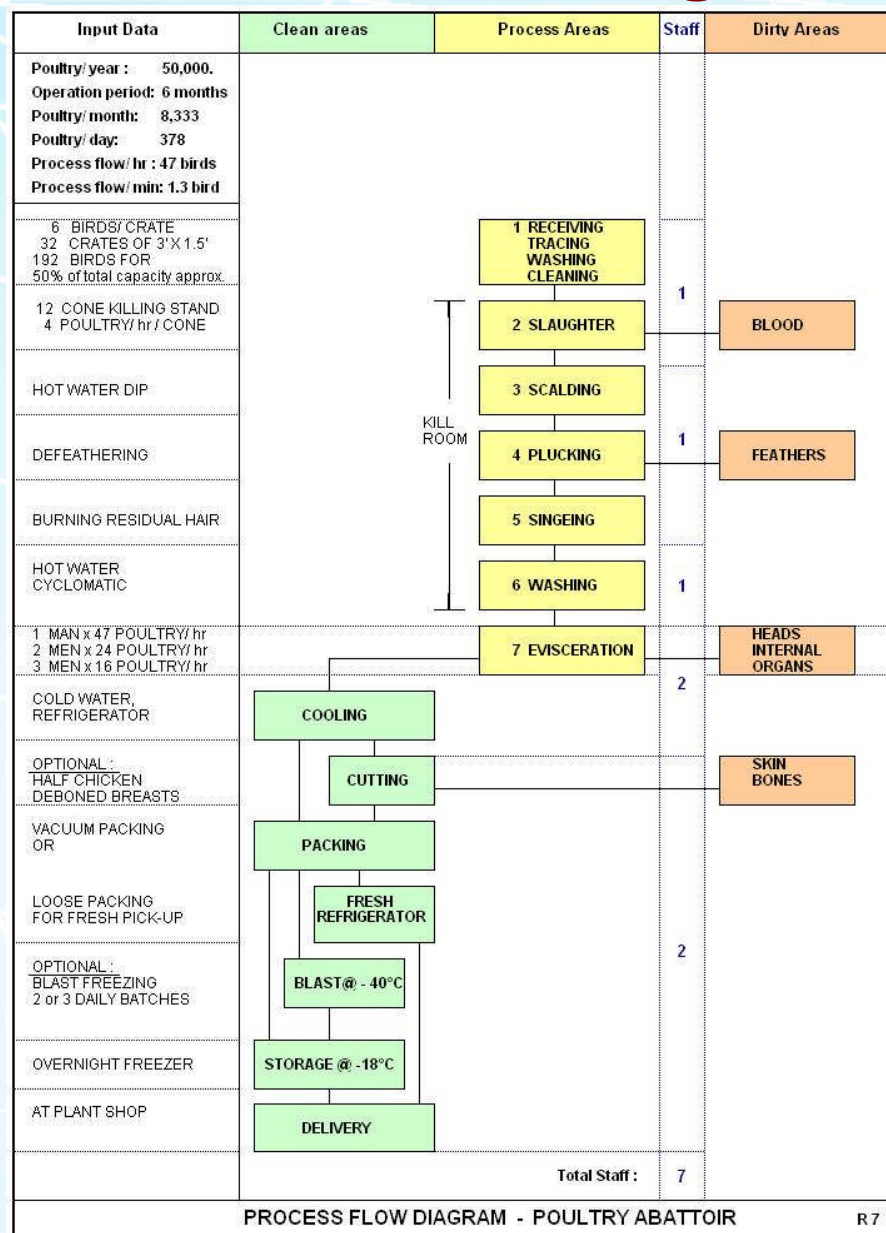
Primary Market Area and Competition



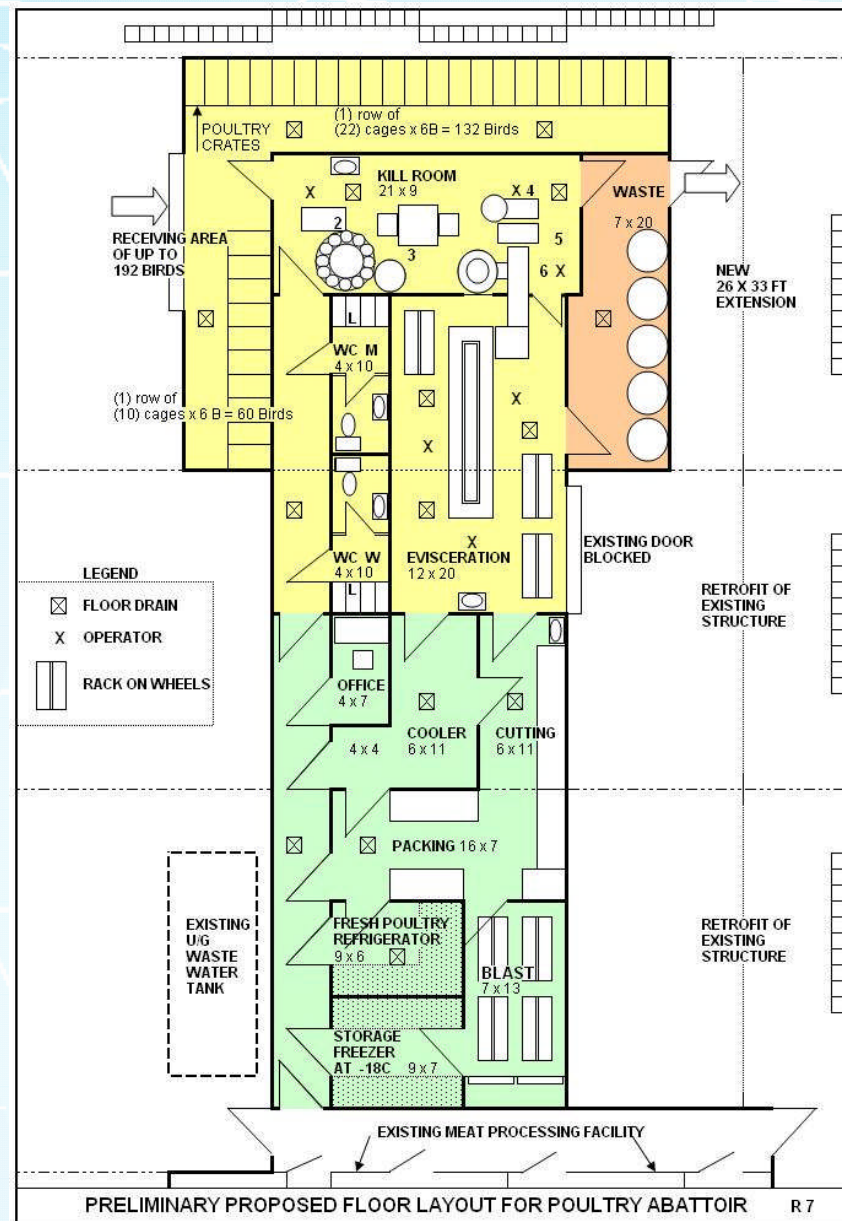
Proposed Extension



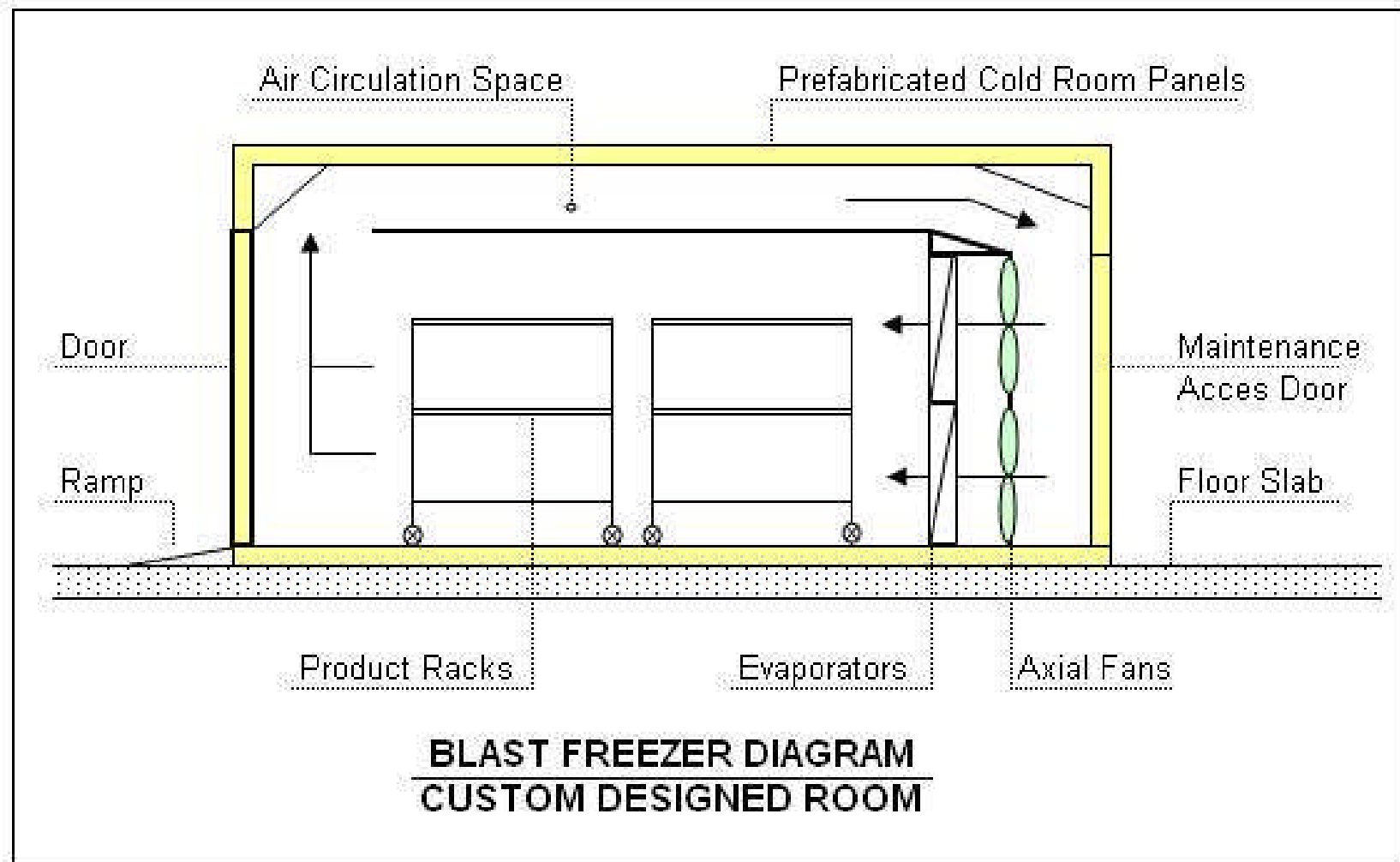
Process Flow Diagram



Proposed Floor Layout



Blast Freezing Diagram



Construction Budget – Sharbot Lake

CONSTRUCTION BUDGET (SHARBOT LAKE, 1738 Sq. ft.)		Budget \$	Total \$
Architecture, Structure, internal retrofit			
	Prefabricated steel extension, slab on grade, retrofit of existing areas	74,500	
	Sub-total		74,500
Plumbing			
	New floor drains, sinks, WCs, hot & cold water outlets	40,500	
	Sub-total		40,500
HVAC			
	Air conditioning of Kill Room, office, corridor	5,052	
	Ventilation of ceiling space, receiving area, WCs	6,408	
	Sub-total		11,460
Electrical			
	Lighting and services, power distribution, upgrade of electrical entrance	24,856	
	Sub-total		24,856
Process Fit-up			
	Prefabricated cold rooms panels + air-cooled refrigeration compressors and condensers for the following rooms: Waste, Evisceration, Cooler, Cutting, Packing, Fresh Fridge, Blast and Storage Freezer at -18C	119,100	
	Process equipment and furnishings for: kill room, Evisceration, Waste, bird crates, work benches, portable product racks, bins, etc.	49,150	
	Sub-total		168,250
Subtotal for Extension and Retrofit of Existing Areas			319,566
Contingencies, Design Fees and Contractor Overhead & Profit			
	Contingency 30%	95,870	
	Design 7%	29,081	
	Contractor General Conditions 5%	22,226	
	Contractor Overhead and Profit 3%	14,002	
			161,178
Grand Total (excluding HST)			480,744
Cost per square foot for 1738 Sq. ft. of expansion			277



Construction Budget – New Site

CONSTRUCTION BUDGET (NEW SITE, 2000 Sq. ft.)		Budget \$	Total \$
Architecture, Structure, internal partitions			
	Land cost, (2) acres minimum (87,120 SF)	87,120	
	Prefabricated steel structure shell & slab on grade	100,000	
	Paved accesses, landscaping, fencing, signage	170,240	
	Architectural internal fit-up, partitions and hardware	30,150	
Sub-total			387,510
Plumbing			
	New floor drains, sinks, WCs, hot & cold water outlets	40,500	
	Liquid waste pump-out, potable water well	20,000	
Sub-total			60,500
HVAC			
	Air conditioning of Kill Room, office, corridor & lobby	6,252	
	Ventilation of ceiling space, receiving area, WCs, dry storage room	7,680	
Sub-total			13,932
Electrical			
	Lighting and services, power distribution, upgrade of electrical entrance	28,000	
Sub-total			28,000
Process Fit-up			
	Prefabricated cold rooms panels + air-cooled refrigeration compressors and condensers for the following rooms: Waste, Evisceration, Cooler, Cutting, Packing, Fresh Fridge, Blast and Storage Freezer at -18C	119,100	
	Process equipment and furnishings for: kill room, Evisceration, Waste, bird crates, work benches, portable product racks, bins, etc.	49,150	
Sub-total			168,250
Subtotal			658,192
Contingencies, Design Fees and Contractor Overhead & Profit			
	Contingency 30%	197,458	
	Design 7%	59,895	
	Contractor general conditions 5%	45,777	
	Contractor overhead and profit 3%	28,840	
			331,970
Grand Total (excluding HST)			990,162
Average cost per square foot of 2000 Sq. ft. of building including a property of 2 acres			495



Operating Budget – Sharbot Lake

Operating Budget (Sharbot Lake Site Extension only)						R 7	
ITEMS	Details	Units	Unit Cost	Area Sq.ft.	Cost \$ / year	Total \$ / year	Cost / Sq. ft.
General Exopenses							
Municipal Taxes	Assumed, to be validated				2,500		
School Taxes							
General insurance					1,500		
Sub-total						4,000	
Maintenance of Building Shell							
Doors and windows						500	
Metal siding							
Caulking							
Roof Maintenance							
Outdoor Maintenance							
Snow removal and maintenance of paved access roads						500	
Maintenance of landscaping						500	
Environmental							
Disposal of animal waste						3,000	
Disposal of liquid waste						3,000	
Hydro							
Heating and hot water			1	1,738	1,738		
Lighting, services, and process	(6) month operation		6	1,738	10,428		
Sub-total						12,166	
Management							
Manager for administration and marketing	By Owner of Sharbot Lake				included		
Manpower : (7) workers	6 months x 22 d/m x 8h/d @ \$ 14/hr				103,488		
Marketing Tools (15% of annual turnover)	50,000 chicken x \$5. average	250,000	15%		37,500		
Packing Products		50,000	0.10		5,000		
Other Products: cleaning agents, waste disposal bins, etc.					3,000		
Plumber, electrician, refrigeration technician (8 hre/m x 12 m/a x 45 \$/hre)	on call				3,240		
Repair costs					3,000		
Annual financial statement					1,000		
Sub-total						156,228	
GRAND TOTAL						179,894	103.51



Operating Budget – New Site

Operating Budget		(New Site)			R 7		
ITEMS	Details	Units	Unit Cost	Area Sq.ft.	Cost \$ / year	Total \$ / year	Cost / Sq. ft.
General Exopenses							
Municipal Taxes	Assumed, to be validated				5,000		
School Taxes							
General Building Insurance					1,500		
Sub-total						6,500	
Maintenance of Building Shell							
Doors and windows						500	
Metal siding							
Caulking							
Roof Maintenance							
Outdoor Maintenance							
Snow removal and maintenance of paved access roads						500	
Maintenance of landscaping						500	
Environmental							
Disposal of animal waste						3,000	
Disposal of liquid waste						3,000	
Hydro							
Heating and hot water			1	2,000	2,000		
Lighting, services, and process	(6) month operation		6	2,000	12,000		
Sub-total						14,000	
Management							
Manager for administration and marketing	By Owner				20,000		
Manpower : (7) workers	6 months x 22 d/m x 8h/d @ \$ 14/hr				103,488		
Marketing Tools (15% of annual turnover)		250,000	15%		37,500		
Packing Products		50,000	0.10		5,000		
Other Products: cleaning agents, waste disposal bins, etc.					3,000		
Plumber, electrician, refrigeration technician (6 hre/m x 12 m/a x 45 \$/hre)	on call				3,240		
Repair costs					3,000		
Annual report					1,000		
Sub-total						176,228	
GRAND TOTAL						204,228	102.11



Estimation of Revenues

An average price of \$ 4.75/chicken is used

Year	Number of birds	Revenues
1	25,000	\$118,750
2	30,000	\$142,500
3 and after	50,000	\$237,500



Financing Scenario - Sharbot Lake Site

Equity Investment		Grant		Loan	Total
20%	\$ 96,149	0	-	\$ 384,595	\$ 480,744
20%	\$ 96,149	20%	\$ 96,149	\$ 288,446	\$ 480,744
20%	\$ 96,149	40%	\$ 192,298	\$ 192,298	\$ 480,744



Profit (Loss) Situation – Sharbot Lake

	Grant level	Year 1	Year 2	Year 3 +
Revenues		\$ 118,750	\$ 142,500	\$ 237,500
Operating Cost		\$ 109,400	\$ 123,4998	\$ 179,894
Loan repayment	0	\$ 38,945	\$ 38,945	\$ 38,945
	20%	\$ 29, 209	\$ 29, 209	\$ 29, 209
	40%	\$ 19,473	\$ 19,473	\$ 19,473
Profit (loss)	0	\$ (29,595)	\$ (19,944)	\$ 18,6611
	20%	\$ (19,859)	\$ (10,208)	\$ 28,397
	40%	\$ (10,123)	\$ (472)	\$ 38,133



Break-even Situation – Sharbot Lake

Break-even price at 25,000 birds - Sharbot Lake Site

Grant Level	0	20%	40%
Operating Cost + loan repayment	\$ 148,345	\$ 138,609	\$ 128,873
Break-even Price	\$ 5.93	\$ 5.54	\$ 5.15

Economic and Social Impact

Direct employment of seven (7) new jobs for 26 weeks at the plant with possibility for additional jobs depending on the other birds to be slaughtered and processed

Increased revenues for the farmers. After three years, the volume of sales at the farm level could reach approximately one million dollars

Response to the growing demand for locally grown poultry

A strong contribution to the National Farmers Union Local 316 to its objective of strengthening the local food system in the Kingston Area

An image building initiative to promote the Frontenac County development effort



Conclusions and Recommendations

Conclusions

The viability of the Sharbot Lake Site is established on the premise:

- a) that this abattoir would be the primary server to the farmers of the region
- b) that the major portion of the chickens in its vicinity would be slaughtered there
- c) that there would be a minimum of 30,000 chickens available to the abattoir

Recommendations

Sharbot Lake Plant should also be used to slaughter other birds for other markets

The Plant should consider the use of the new addition to supply chicken meat to augment its line of processed products

