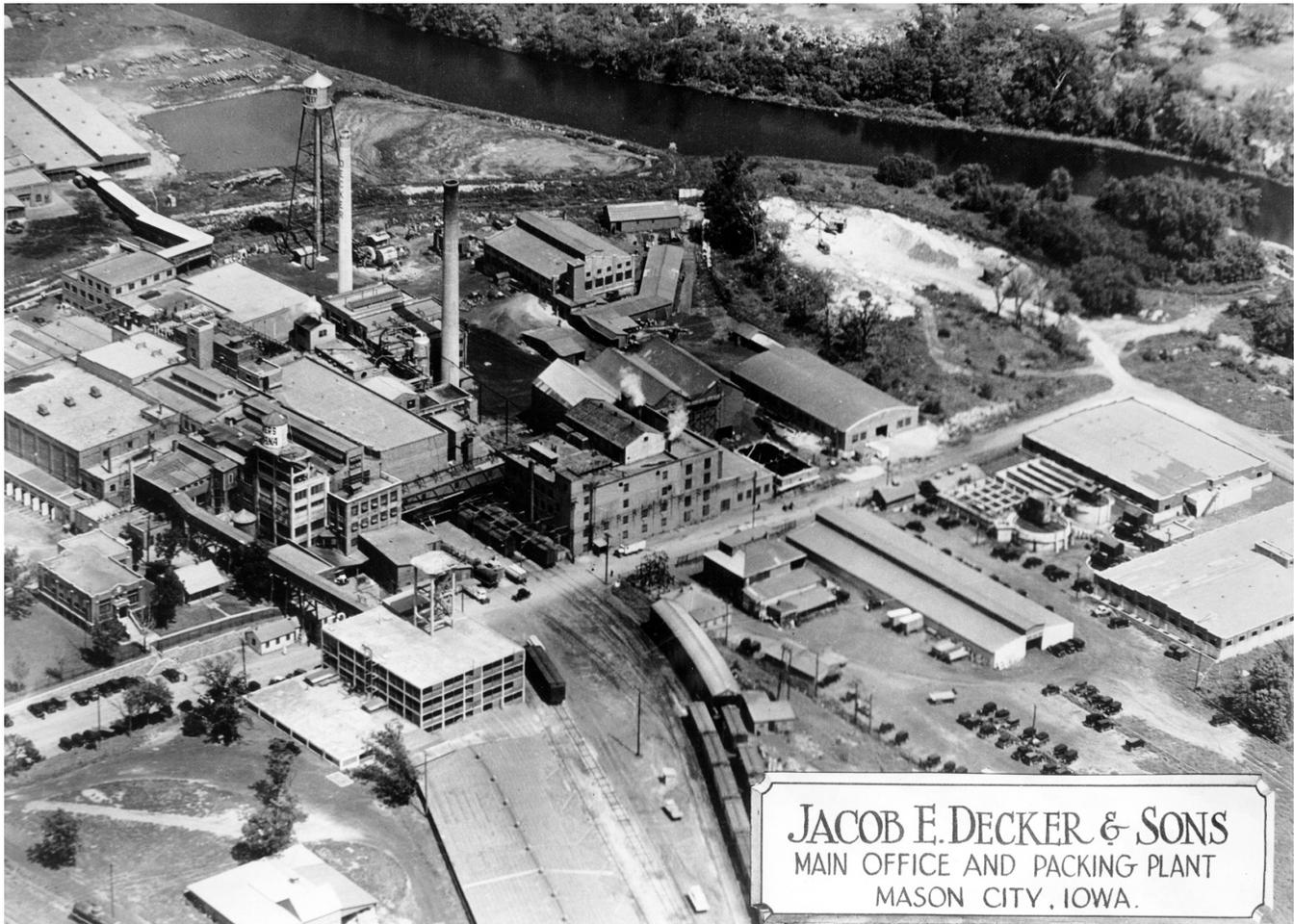


Meat Packing: Modeling, Operations, Meat Trains

Based on the Jacob E. Decker & Sons Meat Packing Plant of Mason City, Iowa

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See my articles on Meat Packing plants published in Railroad Model Craftsman – October and November 2004. Additional material on Decker reefer movements was published in the April 2005 issue of the Dispatchers Office of the OpSig.

Sources and thanks:

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Clark Propst has done extensive research on Mason City industries, including Deckers. Much of his material can be found on Lyndon Groth's website listed below. Without Clark I would never have started, let alone finished. His material is used with permission.

Terry Harrison, Archivist on staff at the Mason City Public Library, has been most helpful in my search for Decker information. Photos mark MCPL are from the Decker Collection of the Lee P. Loomis Archive of Mason City History at the Mason City Public Library.

Lyndon Groth, who's website has a wealth of information about the M&StL and Mason City <http://www.cashgroth.com/>

Steve Sandifer has an excellent website on Packing House Operations, with a focus on beef and the ATSF.

<http://users2.ev1.net/~jssand/SFHMS/Sandifer/Packing/> Material from Steve's website used with permission.

"Meat Reefers – A History" by **Martin Lofton**, Symposium on Railroad History Vol. #2, 1992 Kalmbach Memorial Library, NMRA.

Richard Hendrickson for help in identifying Decker meat reefers and providing information and photographs related to meat reefers.

The Great Yellow Fleet by **John White**, Golden West Books, covers early meat reefer development.

Pacific Fruit Express by **Tony Thompson**, Signature Press, offers important information on reefers and icing practices.

John Nehrlich covers meat reefers, stockcars, and other rolling stock at www.union.rpi.edu/railroad/images/rolling-stock/Kits/Kit-Guide.html

The Yahoo email lists for Steam Era Freight Cars (STMFC), the Op Sig and the M&StL were invaluable for seeking information, asking questions, and double checking theories. Some members who have been most helpful prefer to remain anonymous. A big thanks to all.

Kurt Stoebe, dealer, M&StL expert, and friend. Without his support the Iowa Central, and Deckers, would never have been built.

John Greedy & Jim Singer for their work on Meat Trains & Meat Traffic: as presented at Naperville & Cocoa Beach.

Car Movement at Deckers on the Iowa Central

Stockcars

Pickup Hogs, Sheep, Cattle destined for Deckers

- 1) in MC Yard
- 2) at MC&CL interchange
- 3) at MILW interchange

Hogs & Sheep to Hog/Sheep pens

Cattle to Cattle pens (note this is a separate location)

All empties to clean out track, (allow 5 minutes for each car) then back to MC yard or MC&CL or MILW interchanges.

Reefers - Upon arrival at the at Mason City each empty reefer going to Decker's receives a special instruction card (pictured) giving the switch crew specific instructions for handling each reefer. This allows the crew to check off each step in the process. The card is removed by the yardmaster when the loaded reefer is returned to the yard ready for departure on the 6:30 meat train, the DMX.

All reefers follow these instructions: (Times listed are actual time not fast time).

- 1) To URTC facility adjacent to MCCL & MILW interchanges at the south end of MC yard
all cars to be checked for clean tanks/drains and repairs – allow 10 minutes for cleaning. Repairs are a hold car, put the car card in the hold box.
- 2) To cleaning track - cleaned with hot water, inspected by USDA man
- 3) To pre cooling track at Decker's – allow 10 minutes for cooling
- 4) To icing at Ice Spot -
- 5) To Loading: Pork south end, Beef north end - allow 20 minutes for loading.
- 6) cars can be top iced in place
- 7) return loaded reefers to MC yard
- 8) Swinging meat cars to Scale at south end of MC yard to be weighed, one car at a time
- 9) To MC Yard for the 6:30pm meat train, the DMX, or other trains

*Bad Order cars: Wood reefers required regular repair, ie patching wood sides, repairing salt damage, replacing door seals, etc. But I have found nothing that tells how often. GATC had an inspection and repair facility and every reefer in their fleet went through there on a regular schedule. It may have been on every return trip back to whoever leased the car. Or perhaps every X number of trips. On the IaC we will pull the four-sided waybill after four turns and have the empty car card read "Return to URTC in Mason City". A new waybill will be inserted after one hold session at the URTC facility in Mason City.

Tank Cars

mty's to URTC for cleaning – allow two hours per car
then to tankage or lard loading spot
loads to scale house, then to MC yard
loads to By-Products or Ice House, per contents
mty's to MC yard

Gons

Coal to coal dump (pull & replace other cars on track)
Offal (guts) to By-Products track for unloading
mty's for Loading to by-products spot
return all to MC yard

Hoppers

Coal to coal dump (pull and replace other cars on track)
mty's to MC yard

Box Cars

Inbound loads to
1) unloading/team track area
2) Salt/Box spot
3) cans to can spot on track behind Decker's
Mty's (outbound loading) to:
1) By-products spot
2) canned meat loading (clean lading only)
Hide cars to hide car spot
return all boxcars to MC yard

Decker Reefers

- ___ 1) URTC Inspection
 - ___ Hold for Repair
 - ___ 2) Cleaning
 - ___ 3) Pre-cooling
 - ___ 4) Icing
 - ___ 5) Loading
 - ___ 6) Top Ice
 - ___ 7) to yard
 - ___ 8) to scale
 - ___ 9) to yard for departure
- Special Orders:

Yardmaster remove this card when car is placed on the DMX.

Car Card Insert

1941 Union Pacific Livestock Shipping Guide and Directory

Cattle per Car

Ave. Weight	300	400	500	600	700	800	900	1000	1100	1200	1300	1400
36-ft. car	60	50	42	37	33	30	27	25	23	22	21	19
40-ft car	67	56	46	40	37	33	30	27	25	23	22	21

Hogs per Car

Ave. Weight	100	125	150	175	200	225	250	275	300	325	350	400
36-ft. car	130	115	100	89	79	73	68	62	59	56	53	47
40-ft. car	145	127	110	98	88	82	76	69	65	62	59	52

Sheep and Lambs per Car

Ave. Weight	50	75	100	125	150	180
36-ft. car	155	125	105	96	85	75
40-ft. car	170	138	116	104	94	83

The above figures are for single deck cars. In loading hogs or sheep in double-deck cars the number loaded in the upper deck should be eight to ten less than that recommended for loading in lower-deck or single-deck cars, especially in hot weather.

Numbers in **bold** and *italicized* are typical market ready weights of today.

Packing House Products (PHP)

Packing houses had a variety of commodities coming in or going out, known as Packing House Products on the railroad. Below is a list of commodities and the type of car which carried them. Stockcars brought in hogs, sheep, calves and cattle. Tank cars were loaded with lard, tallow, white grease and "stick" (evaporated tank water, ie hog urine). Reefers were used for shipping fresh and cured pork, smoked meats, bacon, canned hams, beef quarters and processed meat products. Boxcars were used for shipping bone meal, tankage, dried hog hair and hides. And boxcars delivered almost everything else. Cardboard did not come into major shipping play until after WWII. Prior to that processed meat was shipped in barrels and crates, built on site. Which explains the lumber shed at Deckers, where I assume they built and assembled their boxes, crates, and barrels. Recall the photo showing use of barrels to pack turkeys for shipment in reefers at Wellman, Ia.

Commodities and types of cars going in and out of Deckers

Commodities IN	Car Type		Commodities OUT	Car Type	
hogs	stock	in	bone meal	box	out
cattle	stock	in	lard	tank	out
sheep	stock	in	tankage	box	out
calves	stock	in	tank water	tank	out
tin cans	box	in	tallow	tank	out
coal	hopper	in	hides	box	out
coal	gon	in	hanging meat	reefer	out
salt	box	in	processed meat	reefer	out
rock salt	box	in	canned meat	box	out
spices	box	in	canned meat	reefer	out
saw dust	box	in	grease	tank	out
sugar	box	in	meat scraps	box	out
soda ash	box	in	fertilizer	box	out
cardboard boxes	box	in	dried blood	box	out
lumber	box	in	manure	gon	out
wood barrels	box	in	stick	tank	out
charcoal/wood	box	in			
ammonia	tank	in			
cleaning supplies	box	in			
offal (guts)	gon	in			
machinery	box	in			
machinery	flat	in			
feed	box	in			
straw/bedding	box	in			

Here are some **Meat Packing Definitions** for some of the less familiar commodities:¹

Tallow	the white nearly tasteless solid rendered fat of cattle and sheep used chiefly in soap, candles, and lubricants
Offal	a: the waste or by-product of a process: as in trimmings of a hide b: the by-products of milling used especially for stock feeds c: the viscera and trimmings of a butchered animal removed in dressing
Tankage	dried animal residues usually freed from the fat and gelatin and used as fertilizer and feedstuff

With any operations scenario the question arises "how many cars do I need?" Steve Sandifer has calculated the following **Car Needs Ratios** for a typical packing plant that handles cattle. He writes "A typical national brand meat packer would process 2000 head a day. How many cars are needed to handle that operation?"

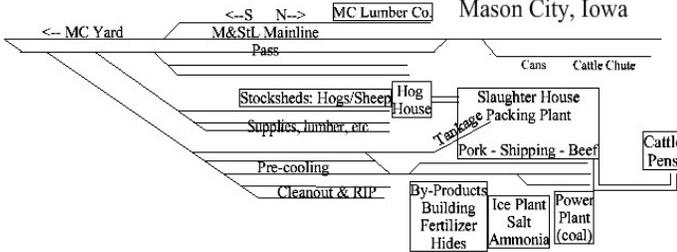
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|---------------------------------|---|
| - Stock cars: 40-50 | - Hanging meat reefer: 16-20 |
| - Other meat reefer: 0.6 | - Blood tank (if unprocessed): 1.4 |
| - Blood box (if processed): 0.2 | - Paunch (stomach contents) gondola (if by rail): 0.4 |
| - Hide box: 1.4 | - Tallow tank: 2.4 |
| - Tankage box: 0.75 | - Salt box: 0.4 (for hides) |

Decker was primarily a pork plant, slaughtering 5200 head a day. With half the hogs coming by truck, I have estimated Deckers saw 40-50 stock cars a day. And they loaded upwards of 25 Reefers per day. Up to 40 reefers might be loaded for an important weekend or holiday.

Decker Meats was not the only Meat Packing Plant around. There were literally 100's scattered across the country. Some are quite large and complex, like Deckers. Other are smaller, and hence easier to model, but just as complex to operate.

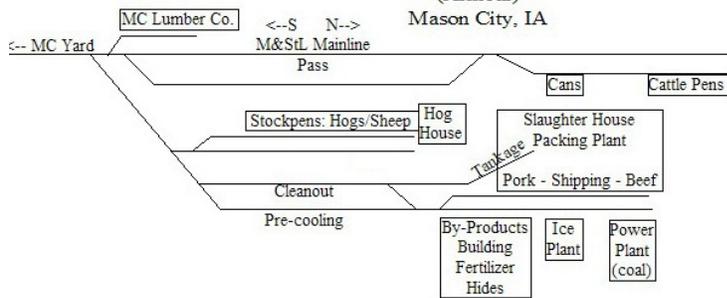
¹from: www.widowcreek.com

Jacob E. Decker & Sons
Meat Packing Plant
Mason City, Iowa

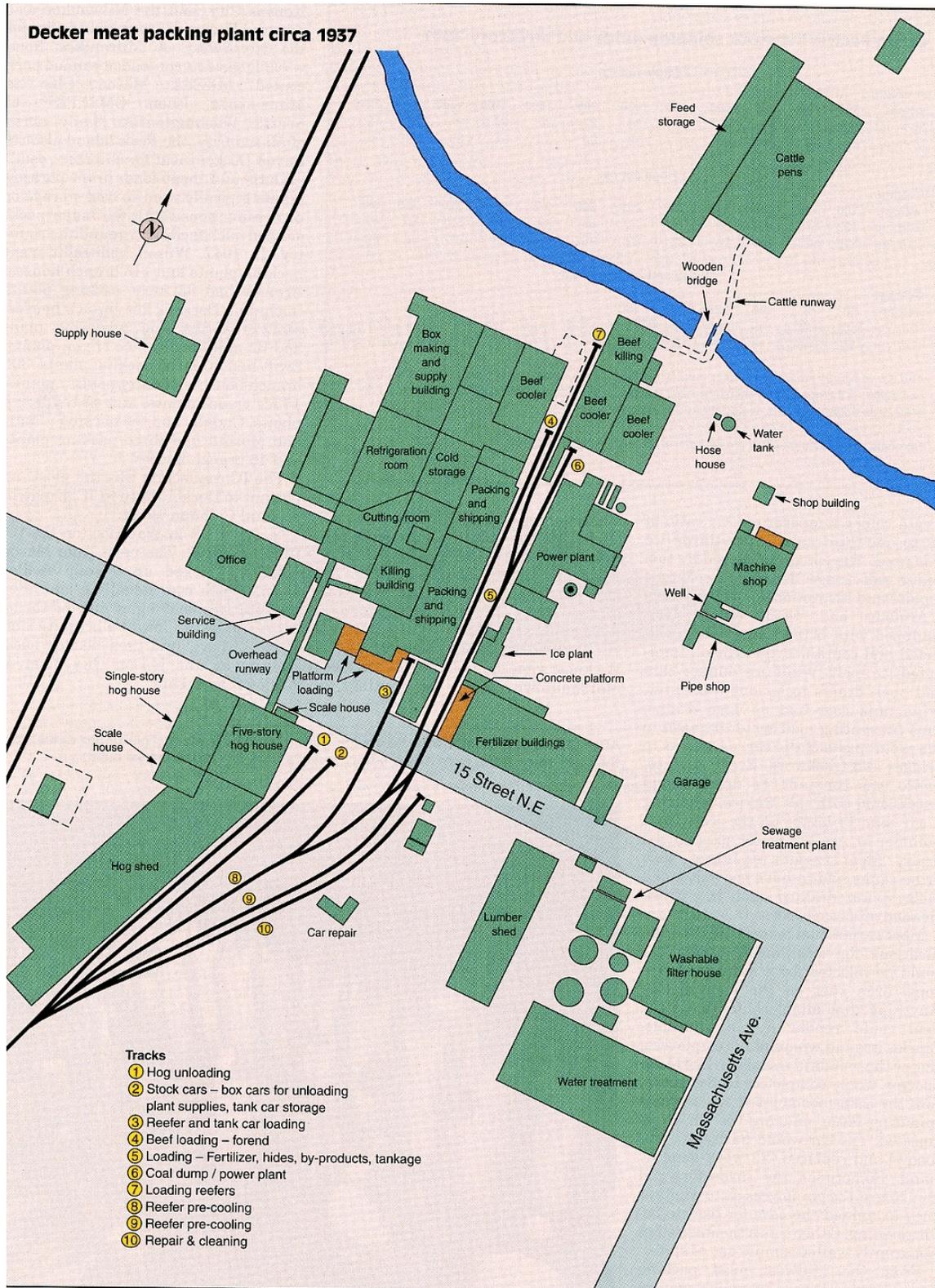


Model Track Schematic

Jacob E Decker & Sons
(Armour)
Mason City, IA



Decker meat packing plant circa 1937



- Tracks**
- ① Hog unloading
 - ② Stock cars – box cars for unloading plant supplies, tank car storage
 - ③ Reefer and tank car loading
 - ④ Beef loading – forend
 - ⑤ Loading – Fertilizer, hides, by-products, tannage
 - ⑥ Coal dump / power plant
 - ⑦ Loading reefers
 - ⑧ Reefer pre-cooling
 - ⑨ Reefer pre-cooling
 - ⑩ Repair & cleaning