

Existing Conditions Report
of
Foodservice Equipment
for the
Timberlane School District

Submitted by

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February 1, 2006

Prepared for N.H. School Administrative Unit 55



School Foodservice Facility Functions

In a typical school the foodservice facility design approach should be geared toward efficient use of space, safe food handling, cooking equipment that can be used as safely as possible, and serving lines that can control the flow of students efficiently and securely.

The kitchen should be viewed much like an assembly line in a factory. The raw materials come in the back door, at an area called receiving, and the finished product flow out the front door in this case the serving line. In order to produce a product that is prepared safely and efficiently food and food related products must move through the operation in a straight line. The starting place is receiving, then storage, food preparation, cooking, and serving, and finally warewashing.

What is HACCP

HACCP stands for Hazard Analysis of Critical Control Points. It is a system for monitoring the food service process to reduce the risk of food borne illness. HACCP focuses on how food flows through the food service process - in this case from receiving through serving. There are a variety of potential hazards at each step. By identifying "critical control points" where bacteria may grow or food may be contaminated, HACCP provides managers with a framework for implementing control procedures for each hazard.

Receiving and Support

The first zone, the receiving area is the beginning of the process. The raw materials are received and distributed according to the type of storage that is required. Frozen and refrigerated foods are placed into the walk-in refrigerated rooms. Dry goods such as pasta or canned products are placed in a dry storage room. Also, located in this zone is a toilet facility for the staff, staff lockers, mop and mop bucket storage, and the kitchen manager's office. The office should be located in a central location that allows for supervision and security of the kitchen and the receiving areas.

Food Preparation

The next zone in the line is called the food preparation zone. Food moves from storage and is washed, chopped, and diced according to need. Once prepared any refrigerated food should not be placed back in the walk-in coolers. The prepared food should be placed in a prepared foods refrigerator. These coolers are upright refrigerators located near the cooking equipment. It is customary to keep prepared food separate from the bulk storage for food safety purposes. Food in its bulk form may not be washed, if insects, bacteria, etc were carried into the cooler in a box of lettuce that same unprepared product could contaminate a washed prepared product waiting to be

cooked. Additionally it is more efficient to have prepared ready to be cooked food adjacent to the cooking zone. Segregating these function are based on HACCP Plan.

Final Preparation and Cooking

The next steps would be to cook and serve the food. This zone is typically positioned between the serving lines and the prep zone. Food is cooked and held at the proper holding temperatures in anticipation of serving students. The food can be cooked in many different ways using different types of equipment. Menu and operator preference will dictates cooking method. Serving equipment is also used in a variety of ways. Heated wells keep the hot food hot and refrigerated pans keep the cold food cold. As Food Facility Planners we select the equipment that safely and efficiently meets these needs within the constraints of the budget and building envelope.

Warewashing

Warewashing is the last consideration. Food is served on a plastic compartmented tray or a disposable foam tray. If a plastic tray is used then the placement of the washing are must be convenient to having the students drop off dirty trays on the way out of the cafeteria. When trays are disposable the placement of the warewashing area is not as critical but still as important. Warewashing must also be placed in a position that is convenient to washing kitchen utensils but it must not disrupt the flow.

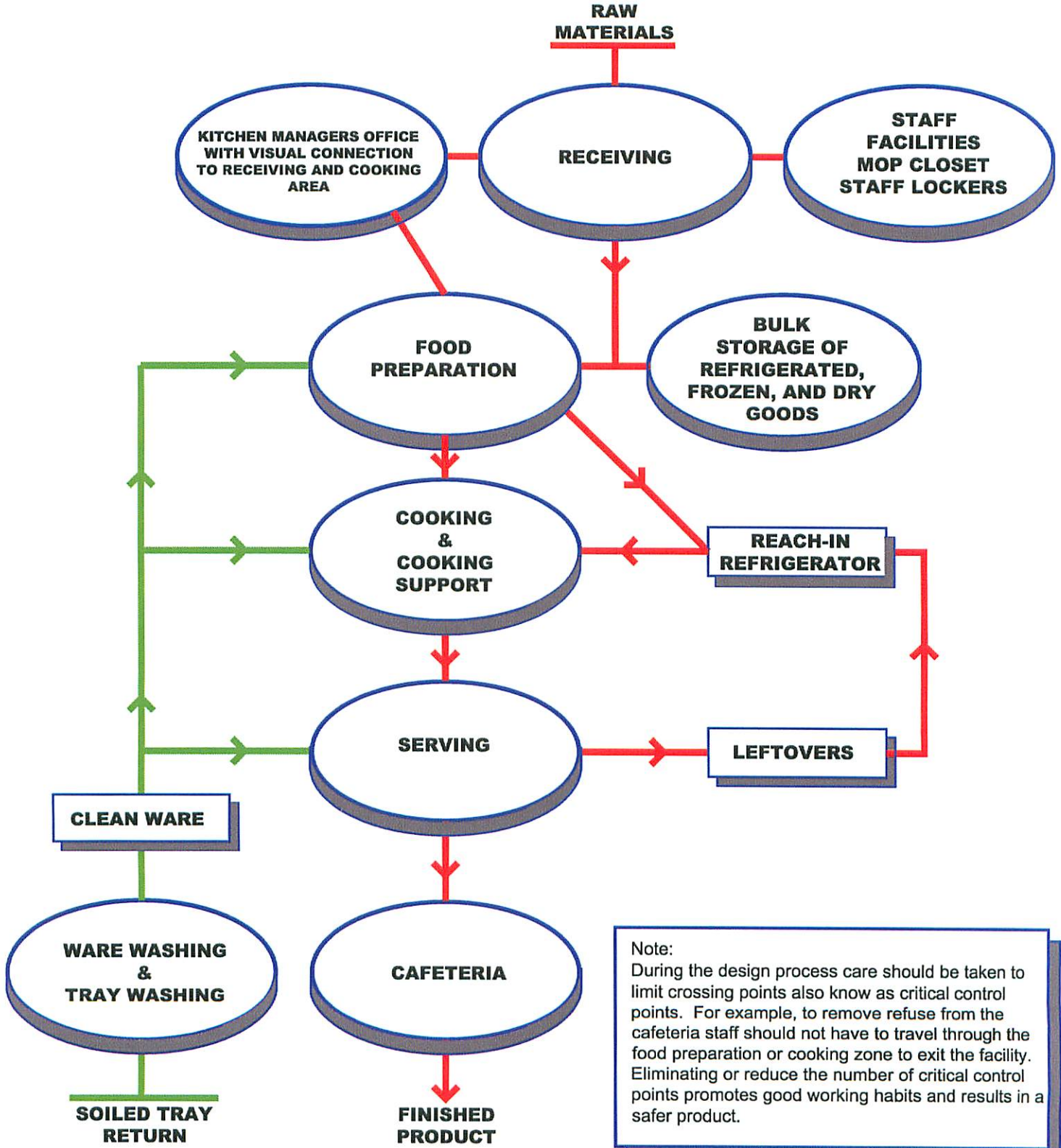
In closing, CMA has prepared a flow chart to compliment the explanations mention in this introduction. We ask that you compare this information to plans shown in this report to better understand how a facility could be improved when considering it for renovation.

Respectfully submitted,



John Sousa
Crabtree McGrath Associates, Inc.

Kitchen Flow



Note:
 During the design process care should be taken to limit crossing points also know as critical control points. For example, to remove refuse from the cafeteria staff should not have to travel through the food preparation or cooking zone to exit the facility. Eliminating or reduce the number of critical control points promotes good working habits and results in a safer product.

Atkinson Academy

New Hampshire School Administrative Unit 55



Atkinson - Existing Kitchen Plan

FIELD REPORT

PROJECT: Timberlane Regional Schools
Atkinson Elementary School

ATTENDING: John Sousa, CMA
Robert Miller, CMA

On October 4th, we visited the school and viewed the foodservice area. We were able to observe the existing conditions of the kitchen. The School operates at a capacity of five lunch waves serving a population of approximately 485 students with a participation level of roughly 62%.

In viewing the facility, we found the kitchen and related spaces to have problems with code issues and flow patterns. The kitchen has no dedicated office and the kitchen manager's desk is located within the storage room on the level below and adjacent to the kitchen. The kitchen does not have a dedicated mop sink closet or facilities for segregated detergent storage. The kitchen flooring is a vinyl tile; although this finish is acceptable, it is less durable and tends to be slippery when wet. The ceiling is a smooth non-porous washable tile and is acceptable.

Receiving, Storage and Cold Storage Rooms (Walk-in Coolers)

Storage rooms are undersized and more space is required. The walk-in cooler and freezer are filled to capacity and the use of dunnage platforms in the refrigerated rooms would be beneficial to the program.

Additional dry storage space is needed. The current dry storage room is located on a damp lower level with low ceilings and exposed waste lines running through it. The storage shelving units within the dry goods storage room are in decent shape but dunnage platforms are required so that product can be stored properly and more efficiently.

Food Preparation

The facility does not have adequate food preparation space or enough work surfaces. The two compartment pot washing sink and food preparation zones are all within the same area. These functions must be separated. Only one hand sink was seen in the kitchen and the facility is in need of prepared food reach-in refrigerators.

Cooking Equipment

The cooking equipment is in good condition, all of it can be reused and is appropriate for the application. This equipment consists of a double stack convection oven, four-burner range, and a braising pan. The only piece of equipment located under the exhaust hood is the double stack of convection ovens. Not having the range and the braising pan located under the exhaust hood is contrary to code. The equipment not under the hood generates heat and cooking fumes that are not exhausted, adding to the ambient heat of the space. The kitchen staff complained that the kitchen becomes extremely hot, and the lack of proper ventilation contributes to this condition.

The exhaust canopy is mechanically joined steel with non-code finishes and lacks a fire suppression system. This is contrary to code and must be corrected. The ductwork is of galvanized steel and is also contrary to current code. Upgrading these components is critical.

Serving Counters

The serving lines are new units and would easily fit into a reorganized facility. The deficiency with the serving component is that it is remotely located in the cafeteria and in order to secure the counters at the end of the day the staff must wheel the serving counters into the kitchen. The serving counter assembly would benefit from a stand-alone cash stand as this function is currently done on a student desk. Due to a lack of adequate power supply some components of the serving line are not used as it intended. The hot food wells cannot be powered during the serving of students. Staff is doing a great job of waiting up to the last minute to place hot food in the unheated wells but this condition should not exist.

Pot and Pan Washing

The function of washing pots, pans and trays is done in a new Hobart warewasher. This unit is of the highest quality and will continue to operate for many years to come. The soiled and clean tables that attach the warewasher are new and could be reused depending on the space configuration of a new facility. The pot-washing sink has a plumbing condition that causes waste water to back up into the sink bowl when the warewasher is being used. We think this condition exists due to the volume of water being discharged by the warewasher into the shared drain line. This is an unsanitary condition that must be corrected immediately. A dedicated floor sink for the warewasher drain is the preferred condition.

We feel the following points must be addressed:

- A general reorganization of the space is required. Additional space should be allotted for the kitchen storage, increased capacity in the freezer, a designated securable serving line area, and an increase in food preparation space. Although the desperate need for exhaust hood replacement is needed we feel that replacing the exhaust hood without a reorganization of the kitchen would be a tremendous waste.
- The receiving area should be more defined with the capability to have a clothes washer and dryer, mop sink closet with detergent storage, lockers for storing personal belongings and should include an office for the kitchen manager. These functions should be

segregated from the food preparation area. Lastly the staff should have convenient lavatory facilities.

It is our belief that the equipment here is in great condition. Most of what we observed could be reused and is of high quality. From a preliminary standpoint, we estimate that the cost of additional foodservice equipment and the addition of the necessary exhaust hood to be about \$55,000 to \$75,000. These estimates are preliminary and do not include costs related to design, construction, or permitting fees.

Lastly, we would recommend that an architect be brought in to evaluate the existing building conditions and establish a construction budget that addresses any related issues associated with remodeling the kitchen facility. Mechanical, building, and electrical codes change periodically and these upgrades must be implemented in any future renovation.

Please see the attached photos.

The washer, dryer and microwave are located within the receiving area. Additional space is required for the purpose of segregating these functions into organized spaces.

Please note that clothes washer drain actually discharges into the hand washing sink



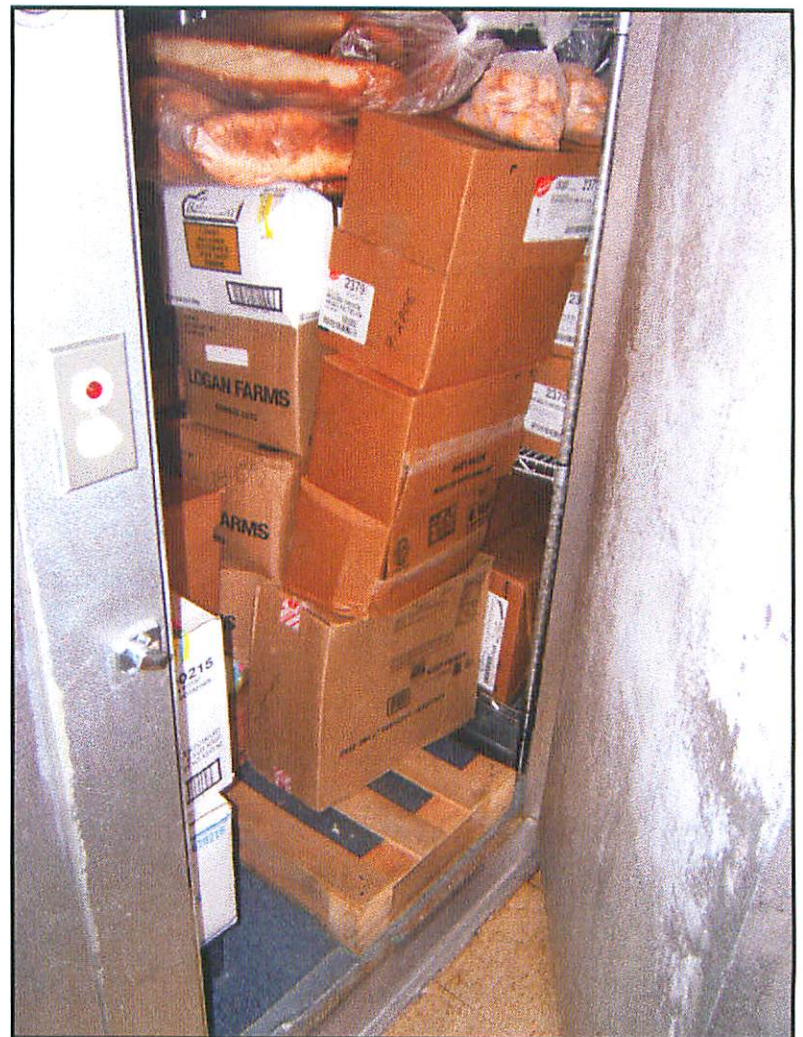
Due to a lack of space in the storage room, paper storage is placed in what available space can be found. Organized, adequate storage facilities will aid with inventory control.

Please note flour storage is located on a wood platform on the bottom left of this photo. The flour should be stored on a dunnage platform. Storage should be consolidated so that it can be controlled and the kitchen space will not have to be used to store products.

The paper storage is also stored on milk crates. The need to keep stored good off the floor is important. If these products were stored on dunnage platforms the staff would be able to sweep beneath these boxes without having to move them or lift the crates.



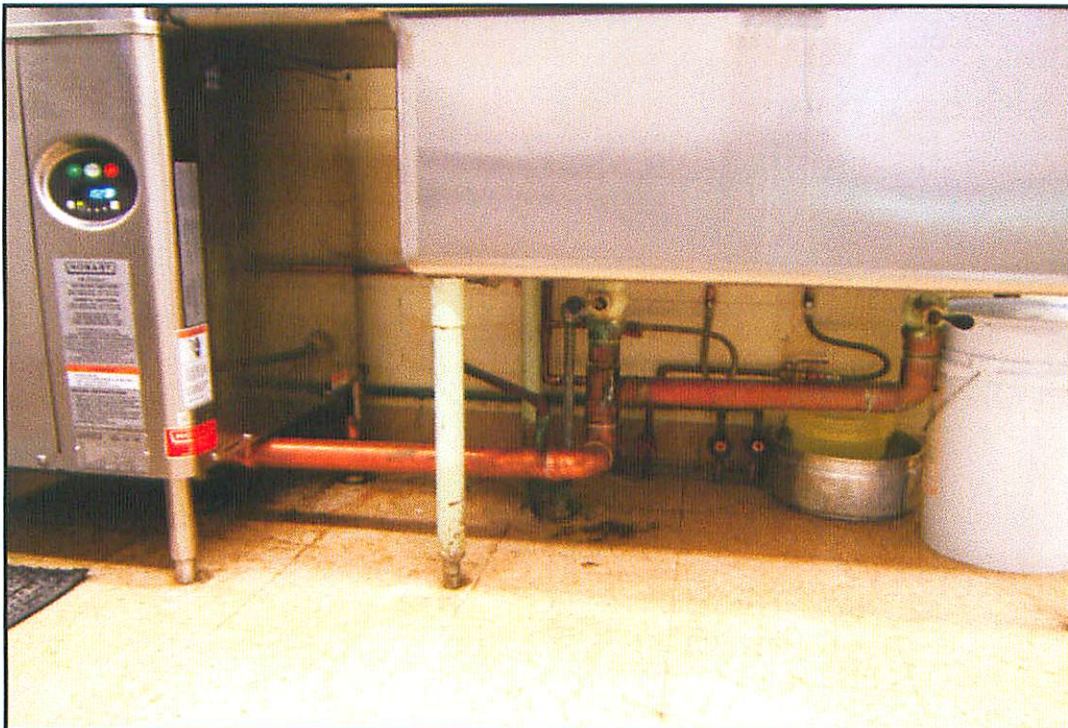
The mechanical refrigeration units for the walk-in coolers should be located outdoors. In addition to being noisy, the units discharge heat into the kitchen space. The staff did mention that the kitchen does become extremely hot and unpleasant.



The freezer is well stocked. Again, the need for dunnage platforms is evident as the stock is placed on wood pallets. A mobile dunnage platform in this instance would have the ability to roll the stock out of the way in order to reach the product behind it. A combination of correct storage equipment and a slightly larger freezer would benefit this location tremendously.



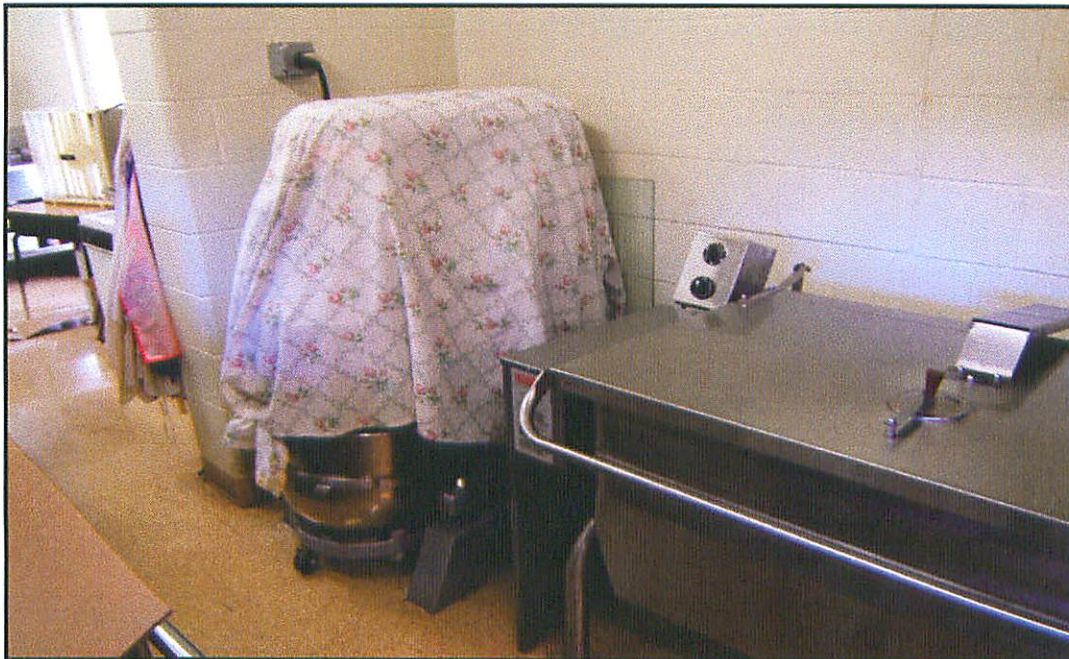
Clean ware is discharged from the warewasher onto the bowl of two compartment sink. When the machine is in use the sink cannot be used for soaking pans. This function should be separated into two areas to increase efficiency. In order to accomplish this more space is required.



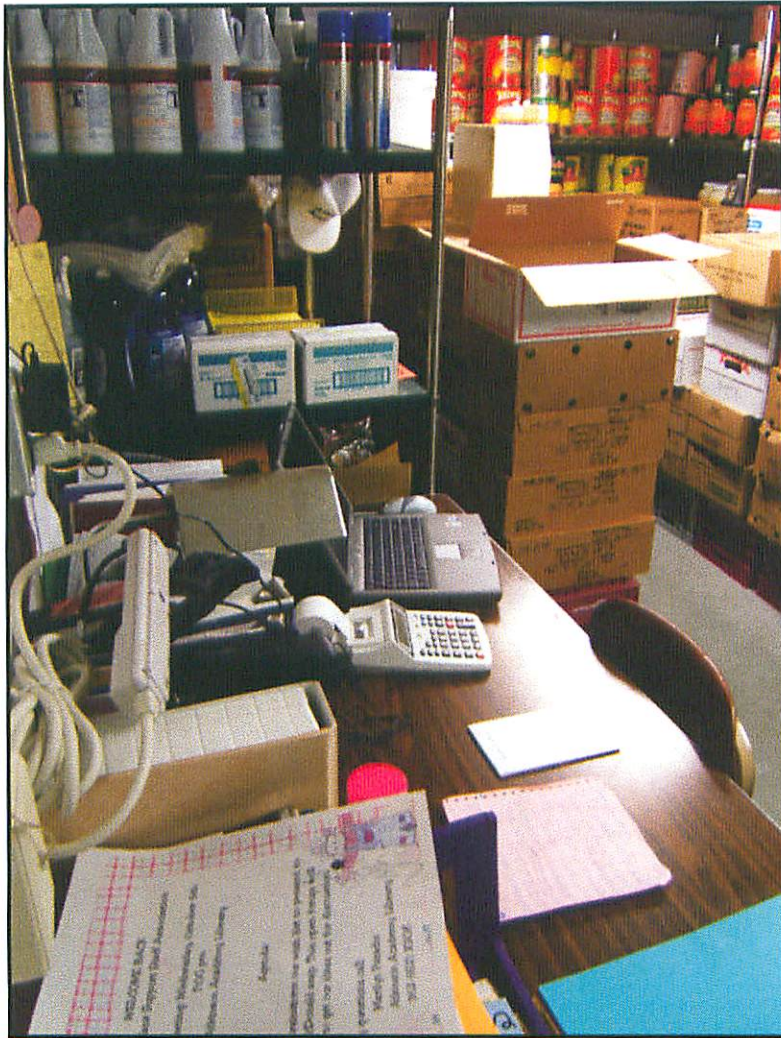
The manner in which this sink is plumbed is problematic. When the warewasher discharges waste water overflows into the sink bowls.



The exhaust hood seen here is inadequate on many levels. The most obvious is the two adjacent pieces of equipment shown below, they are not located under any type of hood. The heat, grease and fumes generated by these pieces contribute to the excessive heat in the kitchen. A fire suppression system is not present and the construction of this hood does not meet modern fire code standards.



The cooking equipment located adjacent to the braising pan is a problem. The mixer should be located closer to the baking area and not near the cooking equipment. This braising pan is not located under any type of exhaust hood or fire suppression system.

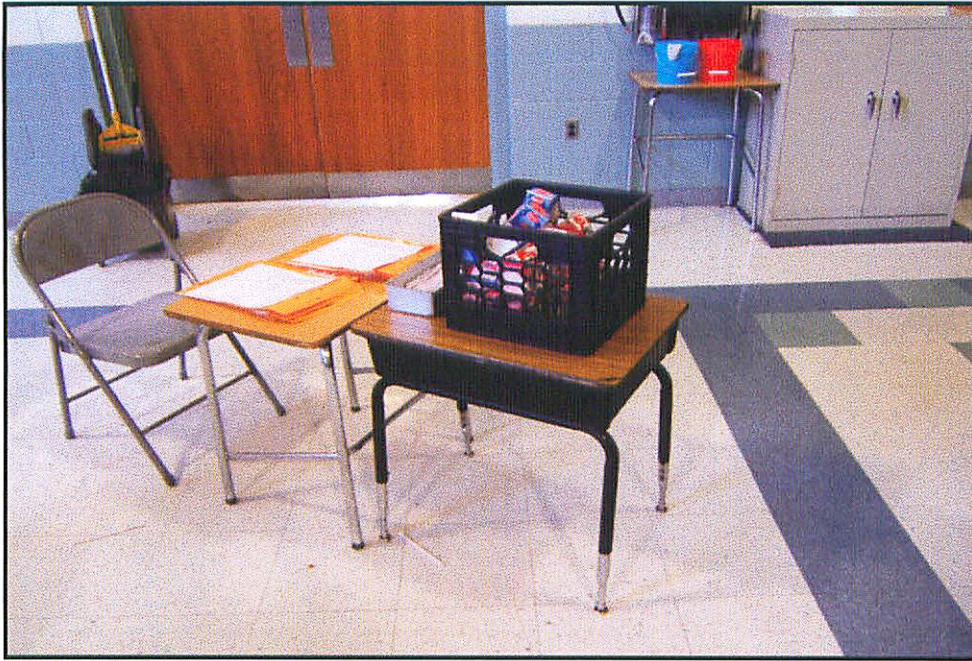


The kitchen manager's desk is located in the storage room. This function should be placed in a more convenient location so that the manager has direct contact with the kitchen at all times. Storage facilities are short here and this space could be used for other purposes.

The storage room is located in a level below the kitchen. It is inconvenient and difficult to carry boxes and other bulk material across the kitchen, through the food production area and down stairs to this location. A more efficient plan would allow food to be received, stored and cooked with minimum handling and maximum efficiency.

Waste pipes run through the storage room exposed. This is a violation of the health code. In addition, low ceiling height restricts storage, the room is damp and has had problems with mold growth in the past. Consideration should be given to moving this space in an overall re-planning of the kitchen space.

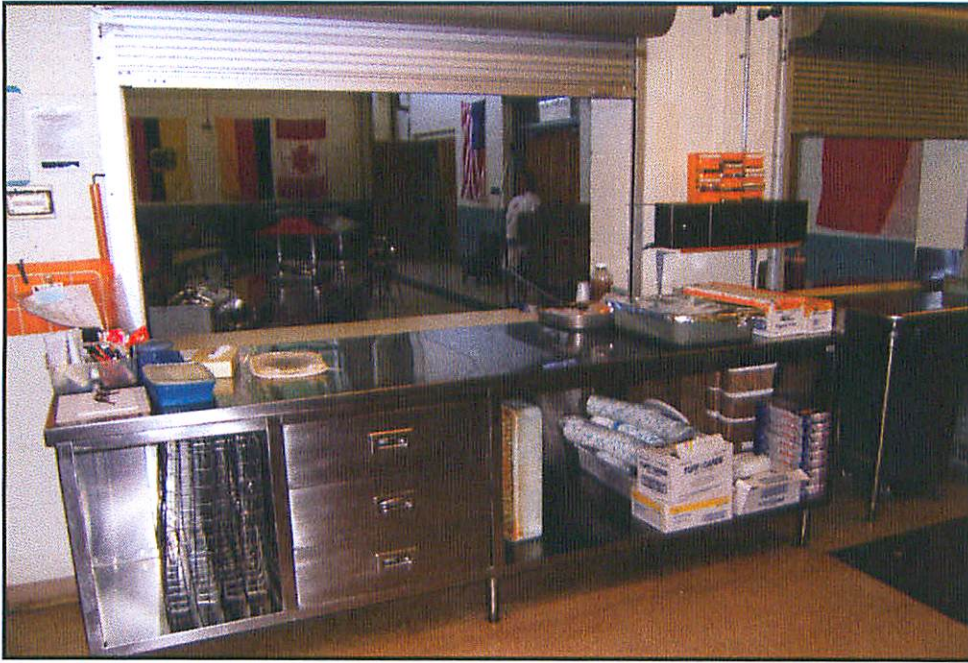




The checking station at the end of the serving line is in need of a refrigerator to keep the milk at the proper temperature. The lack of proper equipment forces the staff to have to improvise in order to create the serving counters that are needed here.



The tray collection is extremely inefficient, rather than have the students bring the trays to the drop-off window, the trays are collected and then transported to the warewashing area for processing. The students are not able to bring the tray to the window themselves because the lack of space has forced the serving line to be placed outside the kitchen space thus blocking access to the drop-off window.



Many pieces in this kitchen are new such as this stainless steel counter and the serving counters seen beyond in the cafeteria (above). The problem lies with the efficiency of the space. For example the staff passes the food through the window seen here and then places it into the serving counters. They are forced to handle the product more times that they should.



The actual serving line is located in the cafeteria. The serving line should be located within the kitchen space so that it can be accessed easily for service and secured after hours when not in used. Currently, at the end of every day, the serving lines are wheeled into the kitchen to be secured for the night.



FOOD FACILITIES PLANNERS
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KITCHEN REPORT CARD

project: **Timberlane Regional School District
Foodservice Equipment Study** date: **February 1, 2006**

EXISTING CONDITIONS

location: **Atkinson Academy**
17 Academy Avenue
Atkinson, NH 03811
grades: 1st through 5th
enrollment: 483 students
meal count: 300 meals per day

EQUIPMENT SUITABLE FOR RE-USE

equipment: washer & dryer speed racks
various food prep tables ingredient bins
utility carts double convection ovens
wire shelving units walk-in cooler
warewasher walk-in freezer
30qt. and 60qt. mixers braising pan
range with oven serving counters
existing equipment represents an approximate saving of 85,000

IMMEDIATE NEEDS

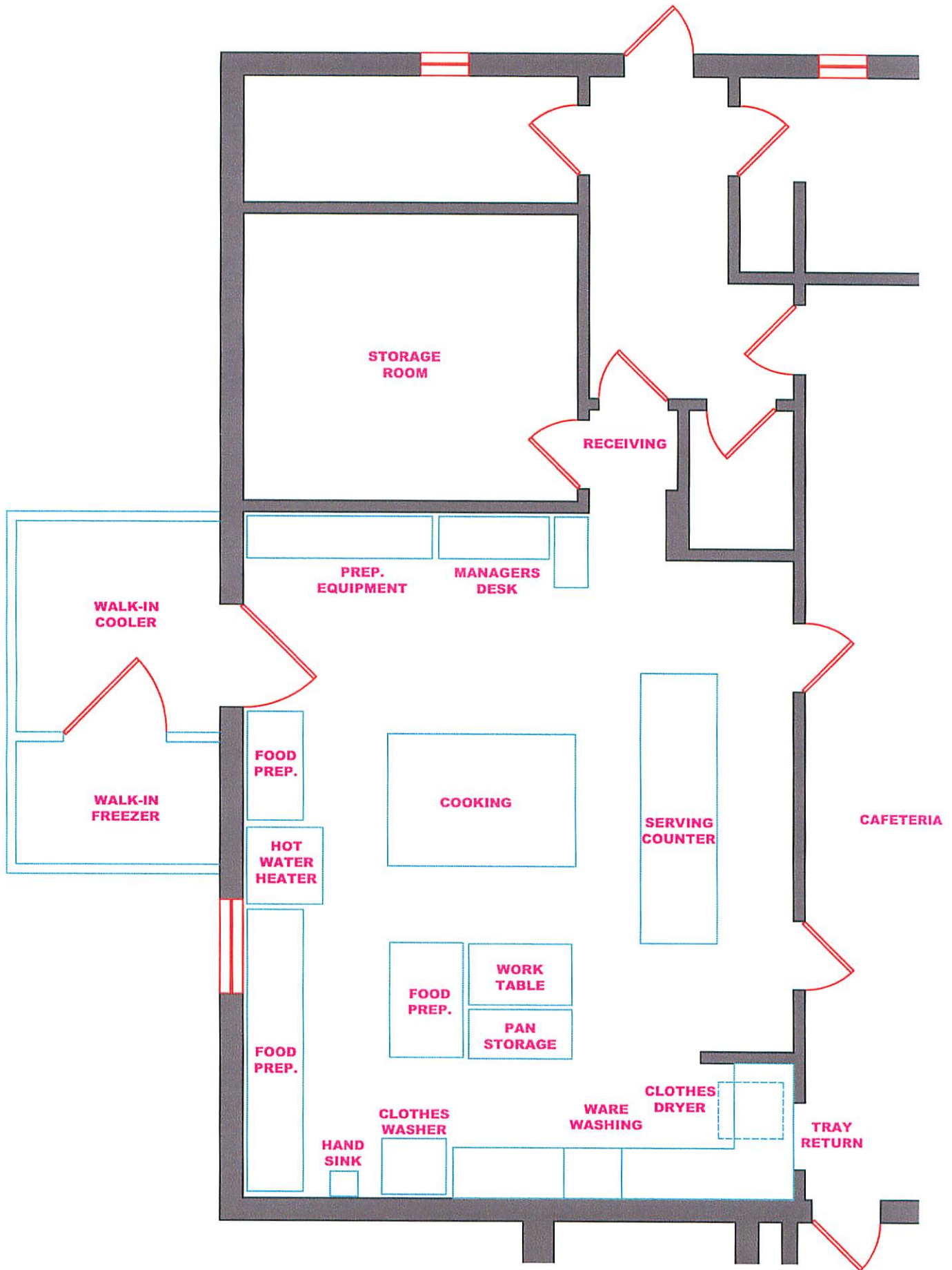
equipment: bakers table staff lockers and facilities
exhaust hood serving counters
fire suppression system pot washing sink
reorganized floor plan dedicated mop sink and detergent storage
managers office braising pan
steamer

ESTIMATED EQUIPMENT COST

budget: new 55,000 to 75,000
does not include design fees or costs associated with construction

Pollard Elementary School

New Hampshire School Administrative Unit 55



Pollard - Existing Kitchen Plan



FIELD REPORT

PROJECT: Timberlane Regional Schools
Pollard Elementary Schools

ATTENDING: Debra Waters, Kitchen Manager
John Sousa, CMA
Robert Miller, CMA

On October 4th, we visited the school and viewed the foodservice facility. We were able to observe the conditions of the kitchen. The School operates at a capacity of five lunch waves serving a population of approximately 600 students with a participation level of roughly 50%.

In viewing the facility, we found that the kitchen and related spaces has problems with code issues. The kitchen has no dedicated office and the kitchen manager's desk is located within the preparation area. The kitchen has no dedicated mop sink closet and chemical storage. A staff toilet room was not seen and the facility does not have a three-compartment scullery sink.

The hot water heater for the kitchen is located among the kitchen equipment. It should be located in some other location as this unit has no place within the kitchen space. In a kitchen that is reported to be extremely warm it only adds to the heat gain. The washer and dryer are also located among the kitchen equipment. These items and functions should be segregated in a remote location.

The kitchen flooring is in good condition and wall finishes are acceptable. The ceiling is perforated tiles (contrary to code) and should be replaced.

Receiving, Storage, and Cold Rooms (Walk-in Coolers)

The receiving area should be larger to accommodate an area for a mop sink, chemical storage, and space for placement of received goods prior to being logged and stored. This area should include enough space for the clothes washer, dryer, and office. It is best to position the office in a manner that supervision of the back door and the kitchen can be maintained simultaneously.

The dry storage room is of decent size with a large center aisle. The aisle could be more efficiently used with the addition of more storage equipment. We did observe a floor drain in this room. Floor drains should not be located in a dry storage room because these rooms tend to be dry with not many opportunities for the floor to be wet and need a drain. Floor drain traps can dry out causing for unpleasant odors to waft into the space. This is also a potential place for rodents or insects to access the room.

Food Preparation

Only one hand sink was seen in the entire kitchen, additional hand sinks are required for a kitchen of this size. Preferably one sink in the pot and pan washing area and another in the food preparation area.

The food slicer seemed to be in good shape, although the stand it was placed on should be replaced with a mobile type to make it easier to use.

Consider replacing the wood topped bakers table with a stainless steel table for ease of cleaning and maintenance. Stainless steel tops are much more forgiving while wood tops could be problematic if not cleaned properly

The planetary mixer was in good shape and should continue to run problem free for many years to come.

Cooking Equipment

The cooking equipment consists of a Market Forge steamer/kettle combination unit. The steamer section of this assembly is not working.

The existing double deck Blodgett convection oven is new and of excellent quality, it should be expected to operate for many years to come.

The cooking line also includes a two-burner range section that looks to be original to this facility. A new unit with easier to clean surfaces should be considered in place of the existing range.

The existing exhaust hood is due for replacement. The filters within it are of mesh type filters that are contrary to code and the hood lacks a fire suppression system.

Pot and Pan Washing

The function of washing pots, pans, and trays is done in a new Hobart high temp warewasher. This unit is in excellent condition and could be easily used in a remodel of this kitchen. The soiled and clean dish tables attached to the warewasher are in fair shape but the legs are showing signs of wear. The existing pot/pan storage rack is of exceptional quality and should be reused; we would recommend adding two other mobile type pot/pan racks to compliment the existing rack.

The facility lacks a three-compartment scullery sink. Although pot and pans are being washed in the warewasher, many health departments require a three compartment sink for items that cannot be passed through the warewasher.

Serving Counters

The serving lines are ready for replacement. The equipment is old and many of the wells within it are not operational. Cold food offerings are being held at room temperature. Cold food should be served in mechanically cooled pans so that proper serving temperatures can be maintained. The serving area also lacks adequate back-up cold and hot food holding cabinets to support the five waves of students.

The immediate needs of this kitchen as we see it are as follows:

- Receiving area with temporary trash holding space, modern staff toilet and lockers, mop sink, and clothes washer and dryer for washing mop heads and aprons. Thought might be given to removing the water heater from the kitchen space and placing it in this more appropriate area.
- The kitchen manager duties should be performed in an enclosed office. Currently these duties are done within the kitchen space.
- The exhaust hood needs replacement and a fire suppression system must be added to a new hood. The exhaust hood could possibly tie in with the HVAC system as the kitchen becomes very hot.
- Cooking equipment that is not working should be discarded and the older equipment should be replaced with more appropriate equipment.
- Consideration should be given to the addition of a three-compartment scullery sink.
- The serving area needs improvement so that serving can take place more efficiently. Equipment can be provided that will allow for maintaining of proper holding temperatures.

From a preliminary standpoint, we estimate that the cost of new foodservice equipment to be approximately \$85,000 to \$10,000 for a program similar to what exists today and assuming a complete reorganization of the facility. Using existing equipment when appropriate could reduce some of this equipment cost. These estimates are preliminary and do not include costs related to design, construction, or permit fees.

An estimate for only replacing the exhaust hood, cooking equipment and the addition of dunnage platforms would be approximately \$50,000. This is not recommended.

Lastly we would recommend that an architect be brought in to evaluate the existing building conditions and establish a construction budget that addresses any related issues associated with remodeling the kitchen facility. Mechanical, building, and electrical codes change periodically and these upgrades must be implemented in any future renovation.

Please see the attached photos.

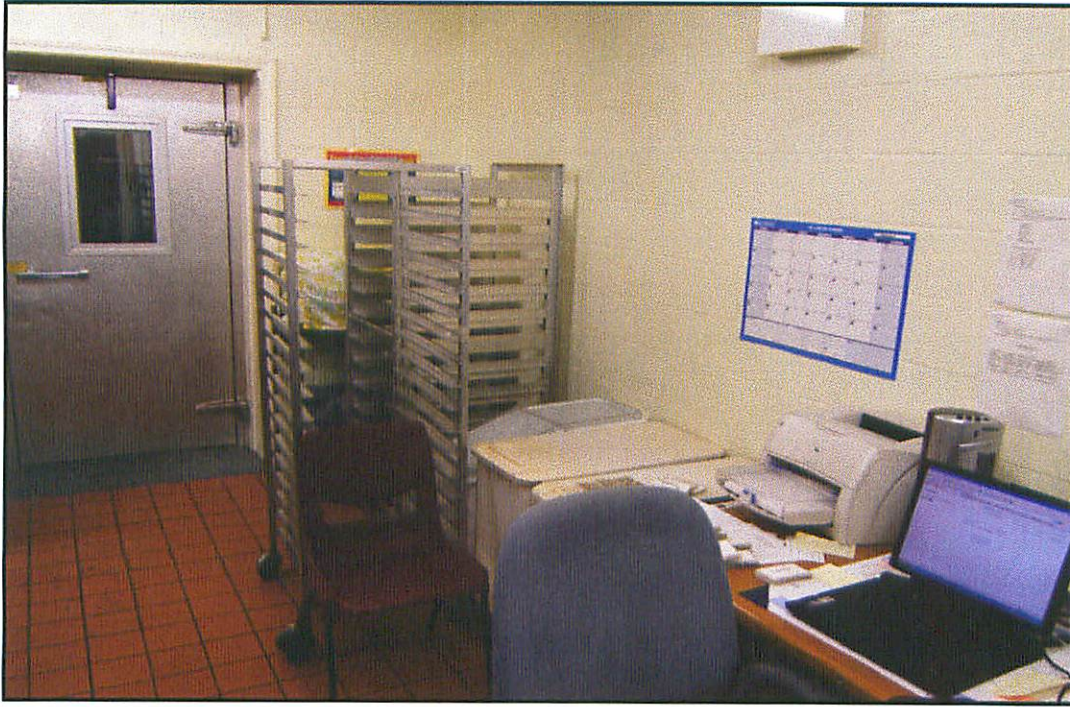


The receiving area is not large enough to handle the typical delivery. This area should be enlarged to accommodate the needs of this facility.

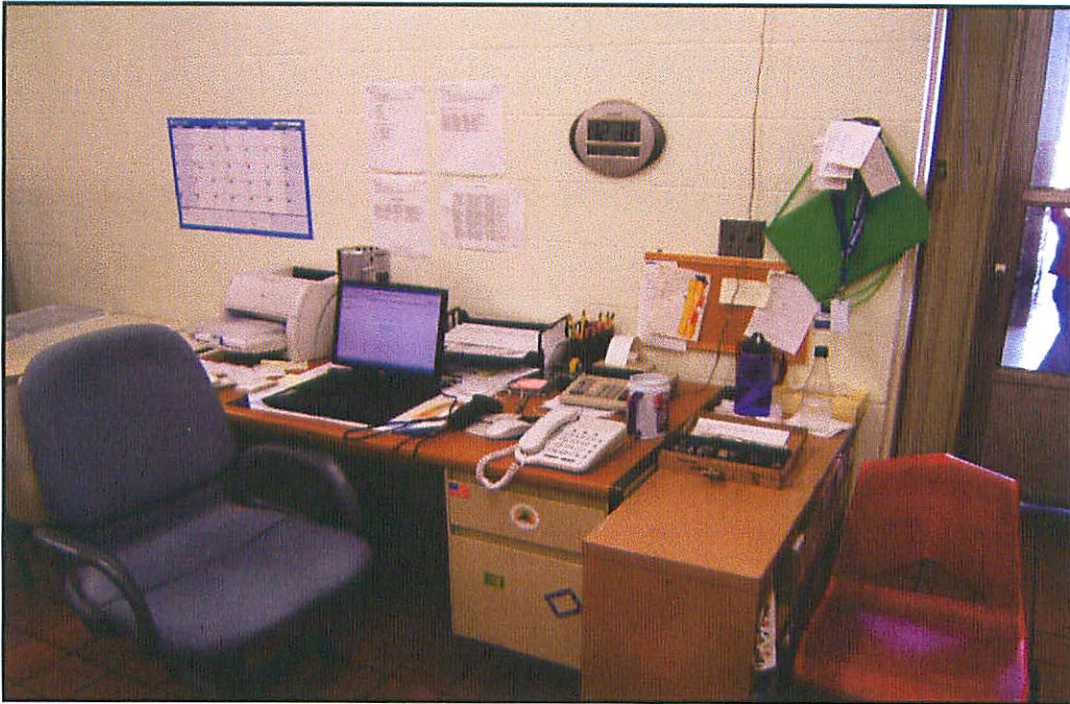
Please notice the fan, it was reported that this kitchen does become extremely hot making for an uncomfortable working environment.

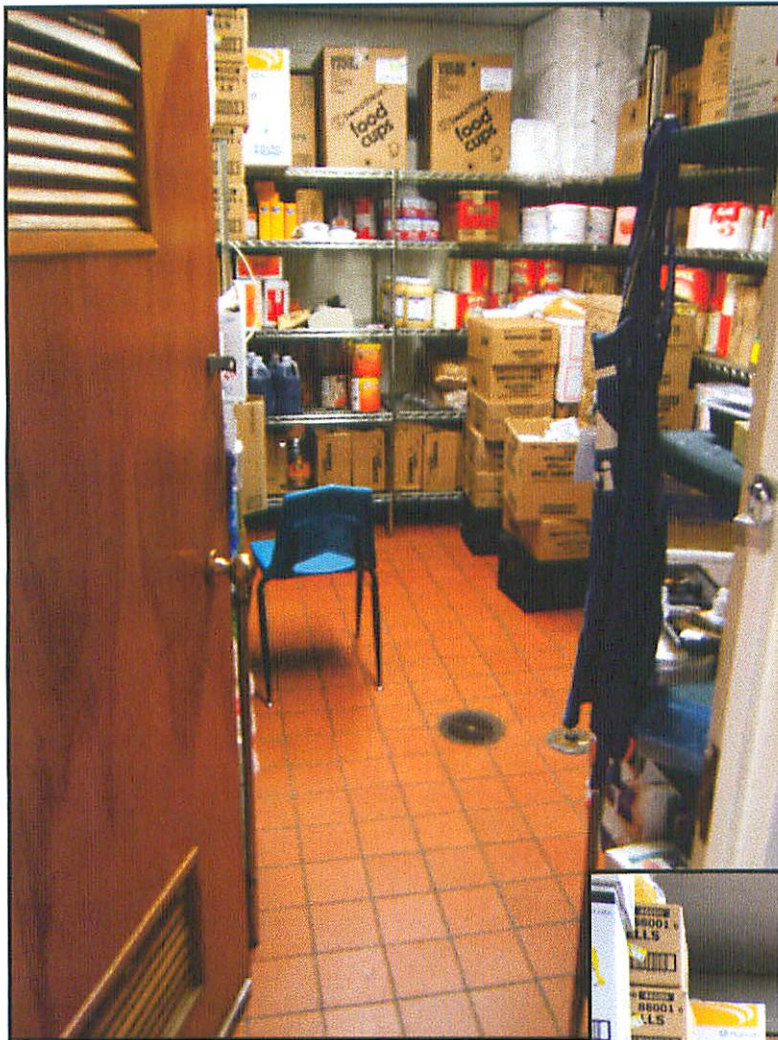
In general the floor and wall finishes in this facility are in good shape. Quarry tile floors as seen here are durable and easy to clean.

Kitchen receiving access should be a dedicated entrance into the kitchen. When possible it should not be shared with any other related spaces.

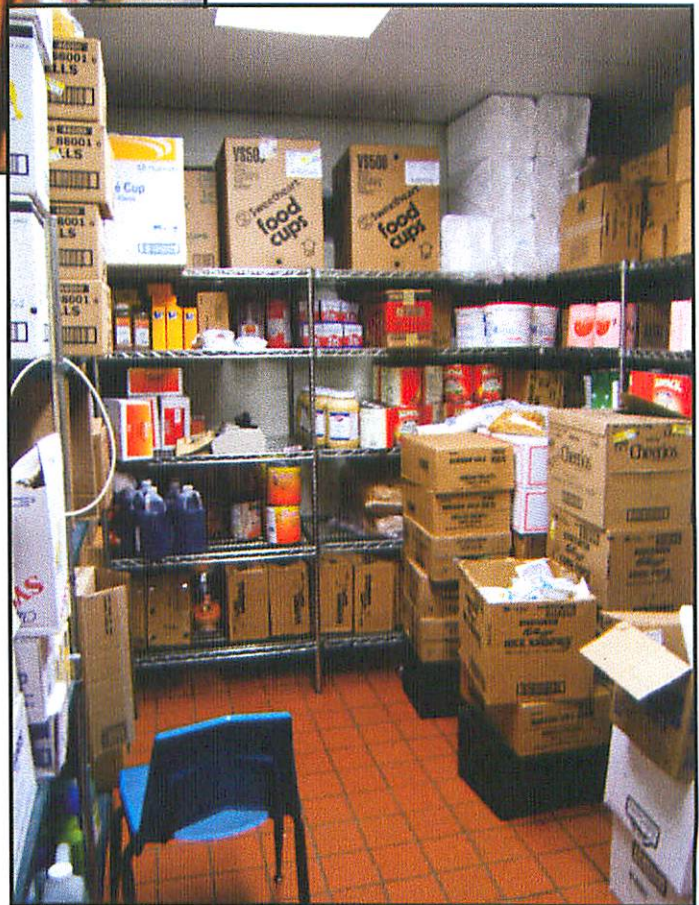


The kitchen manager's desk is located within the kitchen. It is best to locate it in its own space with visual access to the kitchen and receiving. In its present location, it meets this criteria except for being within its own space.





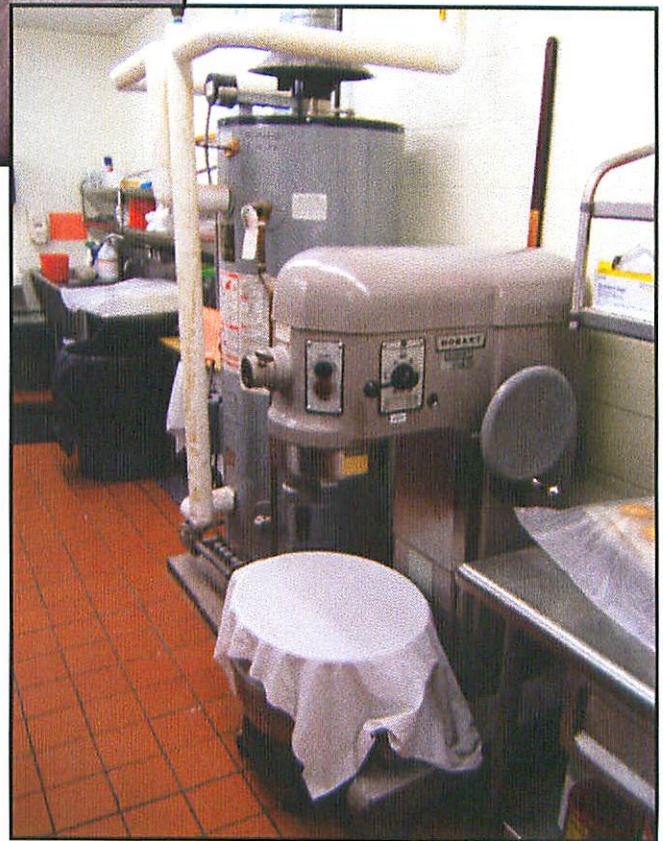
Floor drains should not be located in storage rooms. Since the floor in here is rarely wet the traps in the drains dry out allowing sewer gases to infiltrate the space. Additionally this is a conduit for insect infiltration. Whenever possible drains in storage rooms should be avoided.



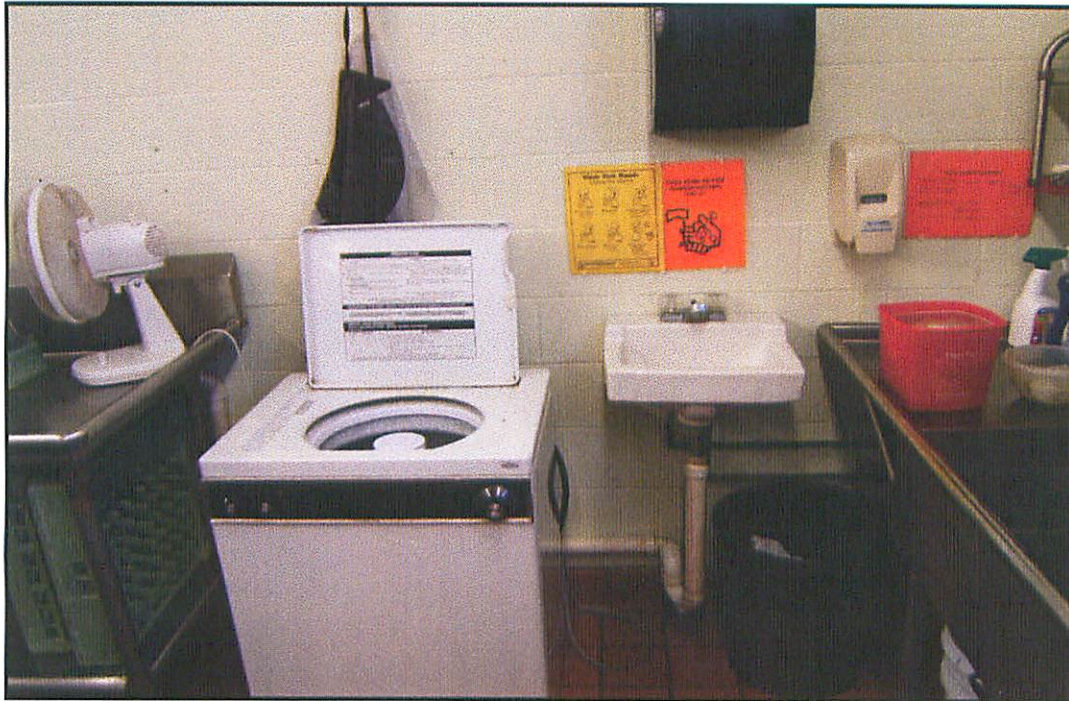
Dunnage platforms would assist in the storage of bulk items and allow the space to be used and cleaned more efficiently.



The hot water heater should not be located in the kitchen, this is a violation of the health code. The proximity of this heater to the mixer is problematic. When the mixing of flour is done the dust will work its way into the burner intake and potentially foul it.



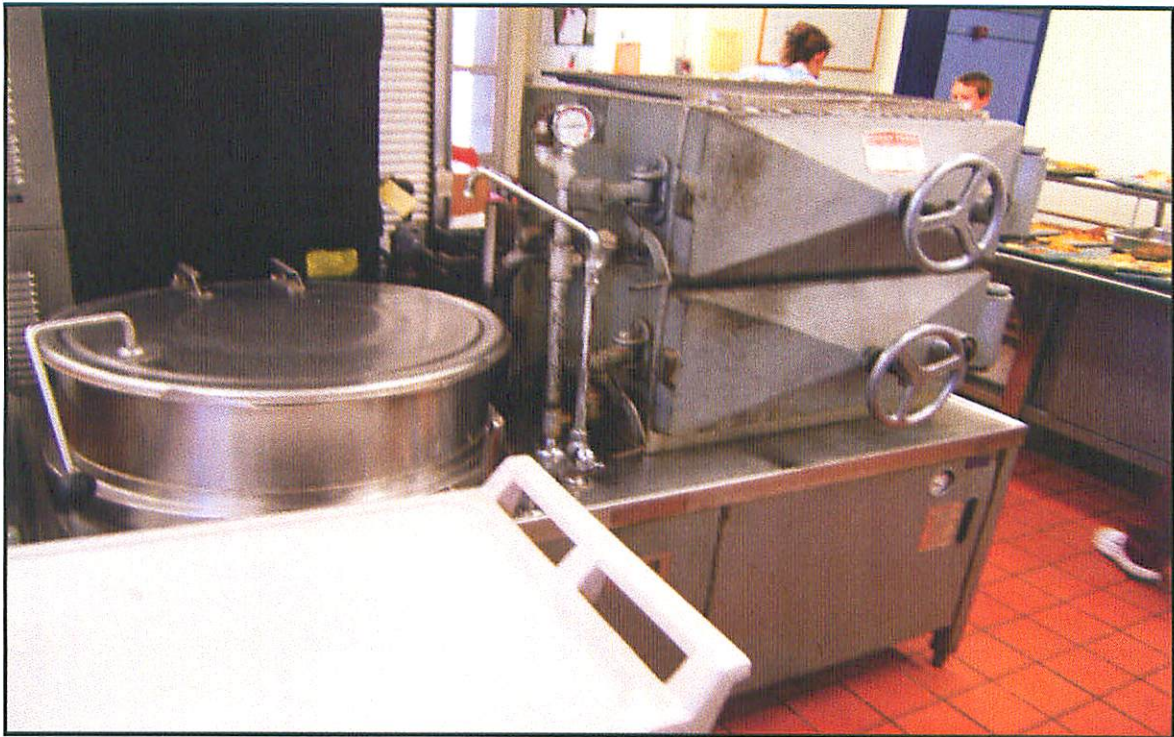
Cleaning in and around the heater is difficult. The heater itself has many crevices where dust and dirt can collect and be difficult to keep clean.



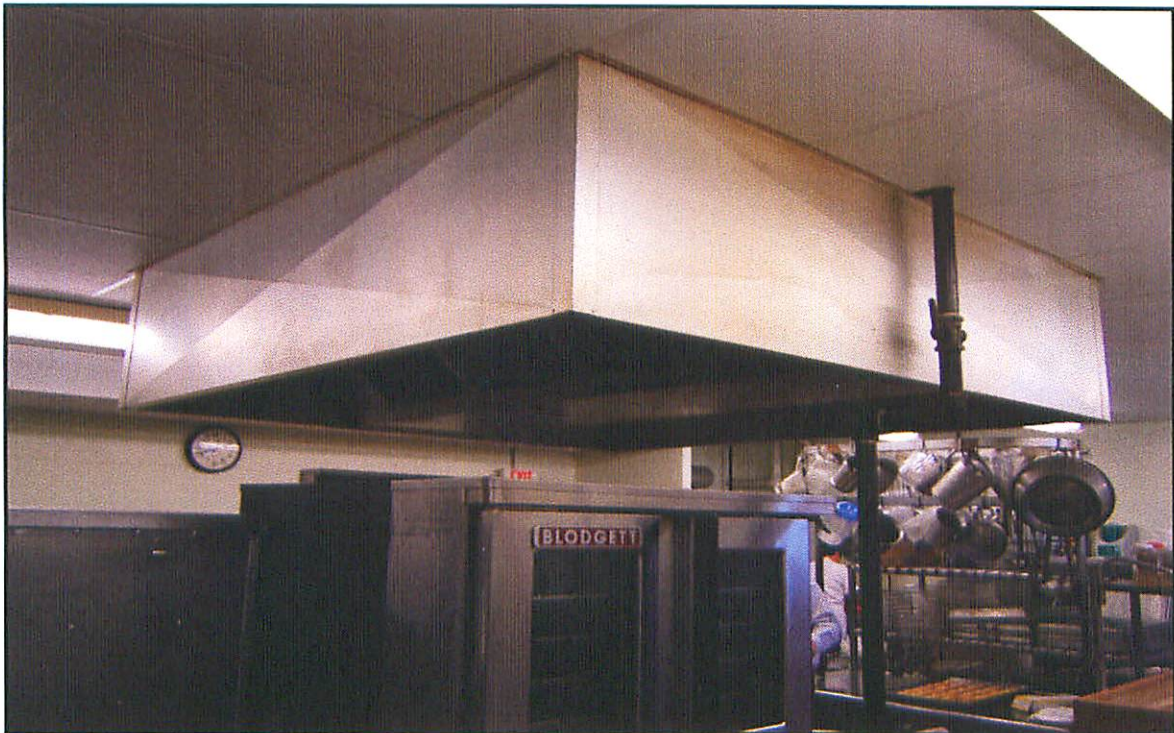
The clothes washer is located in the kitchen adjacent to a food preparation counter and the pot wash sink. In a reorganized plan this function would be segregated from food preparation and pot washing.



The buckets seen here in this photo are detergents; these detergents should not be stored adjacent to food preparation zones. In addition, this sink lacks a third bowl required by the health department for washing, rinsing, and sanitizing pots and pans.



The cooking equipment shown here is outdated and replacement is recommended.

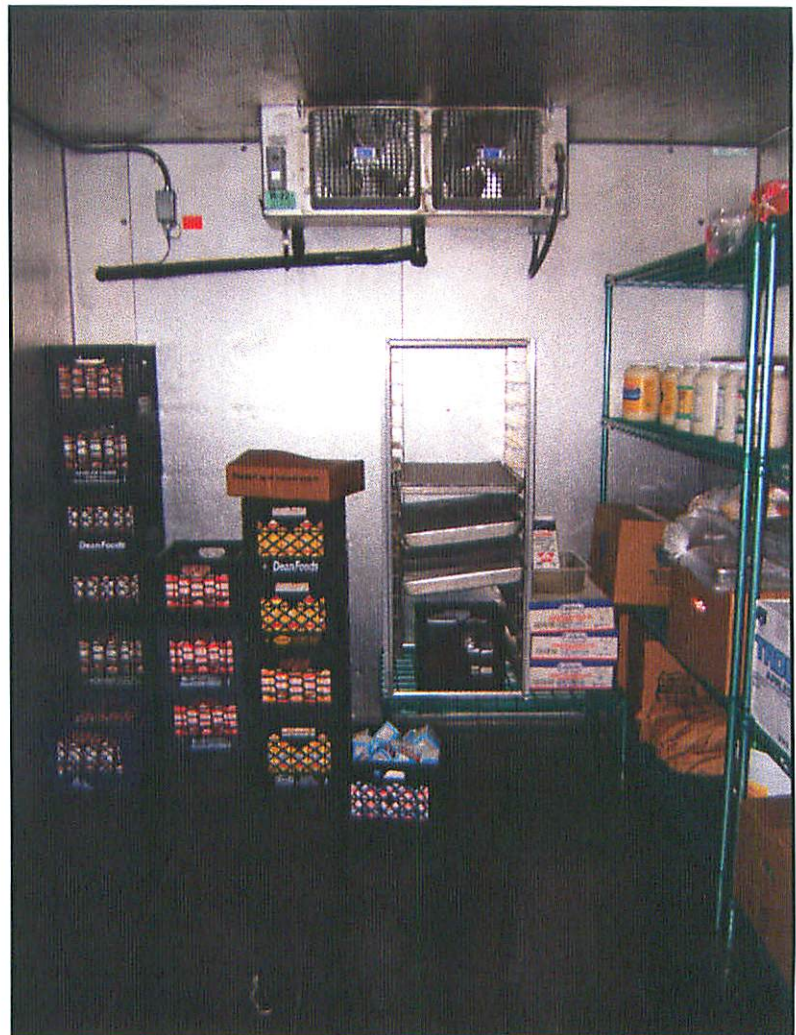


The convection oven seen here is in great condition. The exhaust hood is not code compliant and should be replaced. In addition, the ductwork and fans attached to this hood should be evaluated for code compliance.



This walk-in freezer could benefit from dunnage platforms, allowing the center aisle to be used for storage and to keep product from being placed on the floor.

Placing goods on dunnage platforms allows cold air to surround the product.



This walk-in cooler and freezer assembly is in excellent condition. It is currently located outdoors with access to it from the kitchen. This unit could remain in place or be moved should a remodel occur.

One recommendation is that additional lights be placed in both refrigerated rooms to increase visibility.



KITCHEN REPORT CARD

project: **Timberlane Regional School District
Foodservice Equipment Study**

date: **February 1, 2006**

EXISTING CONDITIONS

location: **Pollard Elementary School**
120 Main Street
Plaistow, NH 03865
grades: 1st through 5th
enrollment: 608 students
meal count: 300 meals per day

EQUIPMENT SUITABLE FOR RE-USE

equipment: washer & dryer speed racks
various food prep tables ingredient bins
utility carts double convection ovens
wire shelving units walk-in cooler
warewasher walk-in freezer
60qt. mixers
existing equipment represents an approximate saving of 55,000

IMMEDIATE NEEDS

equipment: bakers table staff lockers and facilities
exhaust hood serving counters
fire suppression system pot washing sink
reorganized floor plan dedicated mop sink and detergent storage
managers office braising pan
steamer steam kettle

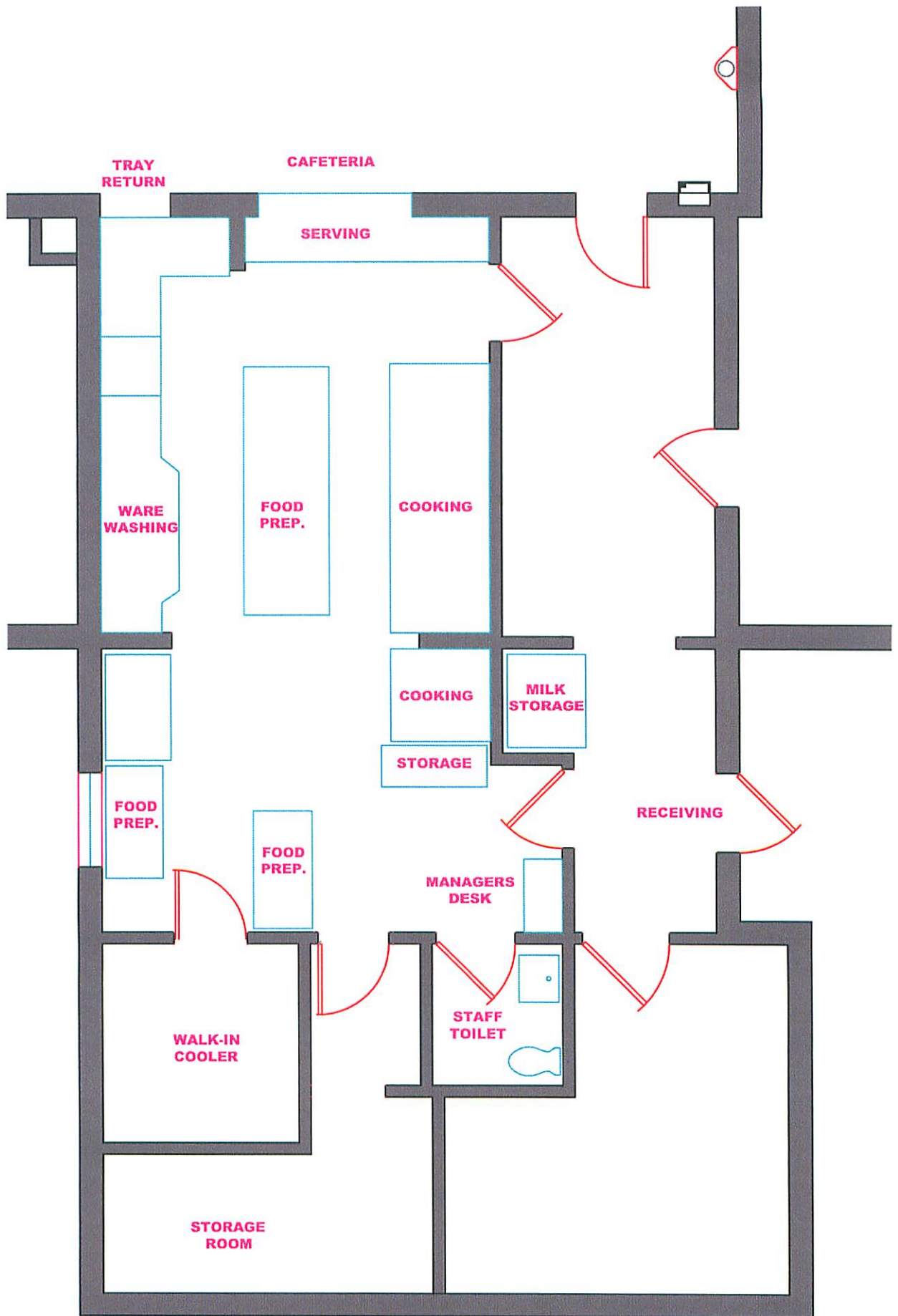
ESTIMATED EQUIPMENT COST

budget: new 85,000 to 100,000

does not include design fees or costs associated with construction

Danville Elementary School

New Hampshire School Administrative Unit 55



Danville -Existing Kitchen Plan



FIELD REPORT

PROJECT: Timberlane Regional Schools
Danville Elementary School

ATTENDING: John Sousa, CMA
Robert Miller, CMA

On October 4th, we visited the school and viewed the foodservice serving area and kitchen. We were able to observe the conditions of the kitchen and have prepared this report. The School serves a population of approximately 385 students with a participation level of roughly 52%.

In viewing the facility, we found that the kitchen and related spaces to have some problems with code issues. The kitchen had no dedicated office and the kitchen manager's desk is located within the kitchen space. The kitchen had no dedicated mop sink closet or chemical storage but did have a dedicated staff toilet.

The kitchen flooring is a patchwork of sealed concrete and an epoxy floor. In some locations the concrete is chipping and flaking but in general is intact. Wall finishes are epoxy painted concrete block and acceptable. The ceiling is perforated tiles (contrary to code) and should be replaced.

Receiving, Storage and Cold Storage Rooms (Walk-in Coolers)

The storage room is slightly undersized. Electrical equipment is present in this room, further reducing usable wall and floor space. Additional storage space would be beneficial as paper goods and dry food storage should be segregated making it more easily inventoried and available when needed. The refrigerated storage consists of a walk-in cooler that appears to be a recent addition and seems to be in good working order. The cooler would benefit from the addition of mobile dunnage platforms so that boxes could be stored off of the cooler floor. Frozen product is held in a reach-in freezer cabinet. The cabinet appears to be working well although more freezer storage is required. The facility does have a dedicated food preparation sink and an assortment of well-constructed food preparation tables. A wood wall shelf was observed over the baker's table, we recommend it be removed and replaced with a stainless steel shelf.

Food Preparation

Various pieces of existing food preparation equipment were observed and seem to be in good condition. The mixer, pot and pan storage racks, and the slicer are in good working order.

Additional preparation and work counters are required for a facility of this size.

Cooking Equipment

The cooking equipment is a mix of new and old equipment. The steamer at the cooking line is not suited for this operation. A pressureless six pan steamer would better suit the facility and would be much easier to use. The braising pan appeared to be operational but aged. A new open base braising pan should be considered. The two burner range top was aged and oxidation was beginning to take hold. A replacement of this unit is recommended. The convection oven is a high quality Blodgett and will continue to operate for many years to come.

The exhaust canopy is of better quality than some of the others found within the other schools in the system. We were not able to observe the duct work to see if it was compliant with modern codes but all indications are that the duct work is galvanized steel and it should be upgraded to current code mandates. The filters in the hood are installed in the horizontal position and should be rotated to be in the vertical position.

Pot and Pan Washing

The function of washing pots, pans, and trays is done in a warewasher. This unit seems to be in good shape but its age and service history are unknown. It is certainly older than some of the units in the other schools but it does not seem to be failing. The soiled and clean tables that attach to the warewasher are older and should be replaced in the event the space is reorganized.

A three compartment pot and pan washing sink is needed. The existing pot and pan sink is a two compartment type and is inadequate. A wood wall shelf was observed over the pot and pot sink. Replacing this with a stainless steel shelf is recommended.

Serving Counters

The serving lines are in decent shape, although we were not able to determine if all the equipment within it was operable. For the most part its construction is durable and it could be reused but we expect that it lacks some piece of equipment that would better suite the serving methods used here.

We feel the following points must be addressed:

- In general this kitchen is very clean and operational. It would benefit from floor and ceiling upgrades and a reorganization of space would benefit the staff by way of more work surfaces and storage space. The consideration should be given to an enclosed office and a place for the staff to store personal belongings.
- Additional storage for paper goods would be a benefit. Additional higher density shelving would better utilize the available space and the addition of more dunnage platforms would make the storage of bulk product more efficient.

- Typically it is found that in modern school kitchens more freezer space required than refrigerated space. In a reorganization of this facility, we feel a walk-in freezer would be a much needed addition to this facility.
- The exhaust hood needs replacement and a fire suppression system is required. Consider doing this as part of a reorganization as this tends to be one of the most expensive components in any kitchen.
- Warewashing can be improved by having a reorganized plan place it in a more segregated location and with reorganization of the clean and soiled dish tables. Adding a third bowl on the two compartment sink would add a layer of redundancy should the machine ever be out of service.

It is our belief that the spaces can be reconfigured into a much improved and more efficient facility with additional storage, preparation, and an improved warewashing assembly.

From a preliminary standpoint, we estimate that the cost of new foodservice equipment to be about \$65,000 to \$85,000 for a program similar to what exists today and assuming a complete reorganization of the facility. This estimate is preliminary and does not include costs related to design, construction, or permitting fees.

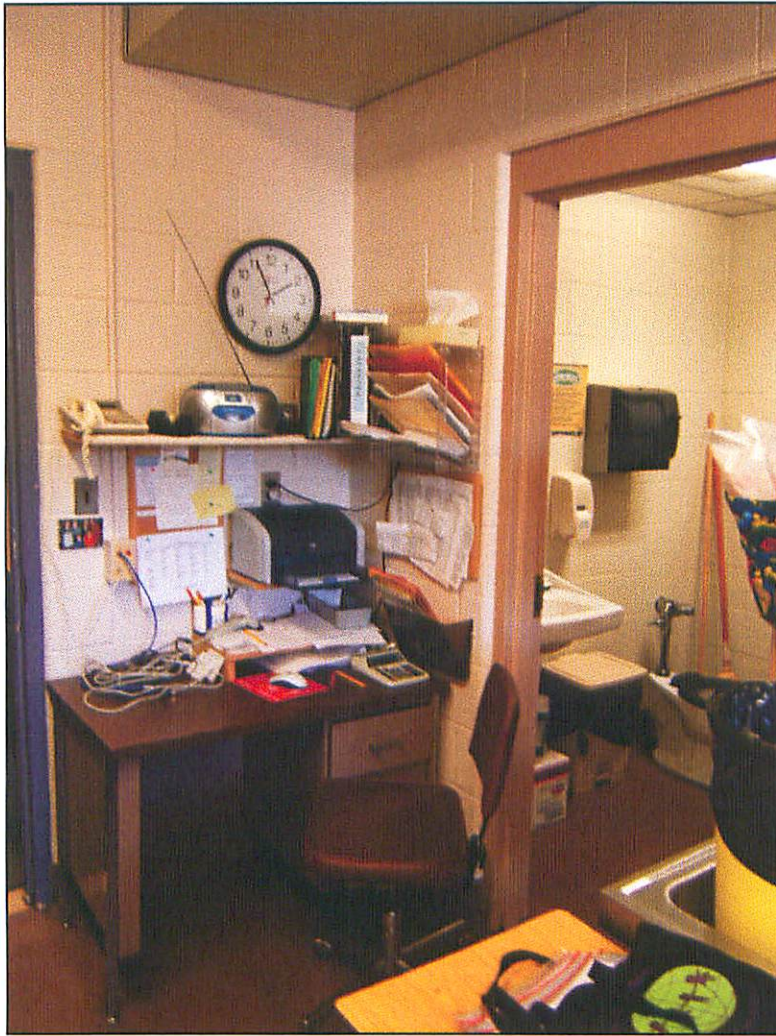
Lastly we would recommend that an architect be brought in to evaluate the existing building conditions and establish a construction budget that addresses any related issues associated with remodeling the kitchen facility. Mechanical, building, and electrical codes change periodically and these upgrades must be implemented in any future renovation.

Please see the attached photos.



The exhaust hood filters are incorrectly mounted in the horizontal position. They should be turned to the vertical position to allow grease to drain from them and flow to the collection cup located at the right end of the hood. The hood lacks a fire suppression system located over the open burner range and the tilting braising pan.



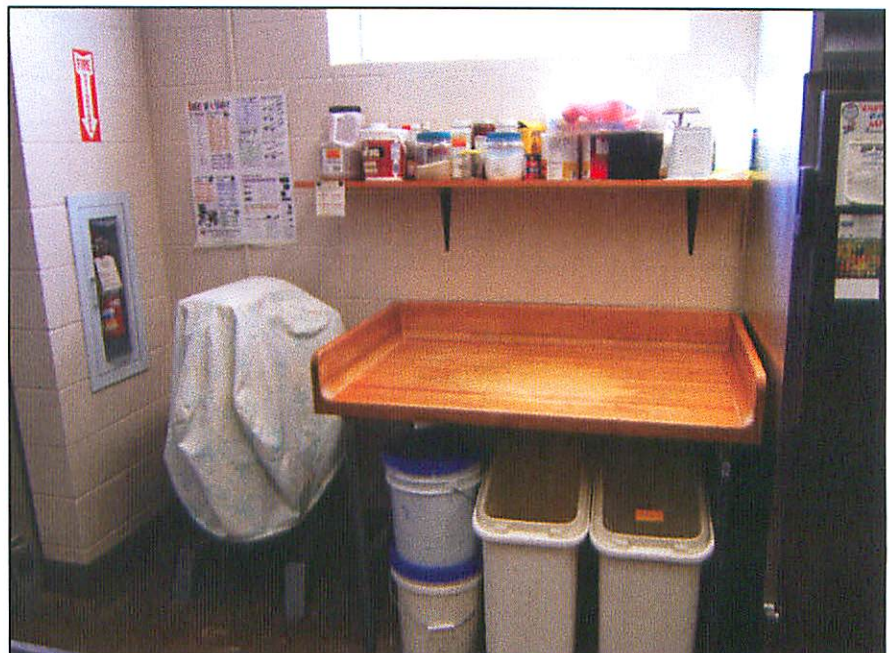


The kitchen manager's desk is located within the kitchen space. These functions should be located away from food production.

A dedicated office is needed.

The wood shelf seen above the wood topped baker's table should be replaced with a stainless steel wall shelf.

The baker's table is undersized. Consideration should be given to a larger table with a stainless steel top.





KITCHEN REPORT CARD

project: **Timberlane Regional School District
Foodservice Equipment Study**

date: **February 1, 2006**

EXISTING CONDITIONS

location: **Danville Elementary School**
23 School Street
Danville, NH 03819
grades: Preschool through 5th
enrollment: 385 students
meal count: 200 meals per day

EQUIPMENT SUITABLE FOR RE-USE

equipment:	30qt. mixers	speed racks
	various food prep tables	ingredient bins
	utility carts	double convection ovens
	wire shelving units	serving counter

existing equipment represents an approximate saving of 25,000

IMMEDIATE NEEDS

equipment:	bakers table	staff lockers and facilities
	exhaust hood	steam kettle
	fire suppression system	pot washing sink
	reorganized floor plan	dedicated mop sink and detergent storage
	managers office	braising pan
	steamer	walk-in freezer
	prep. tables	four burner range
	additional floor space	additional dry storage

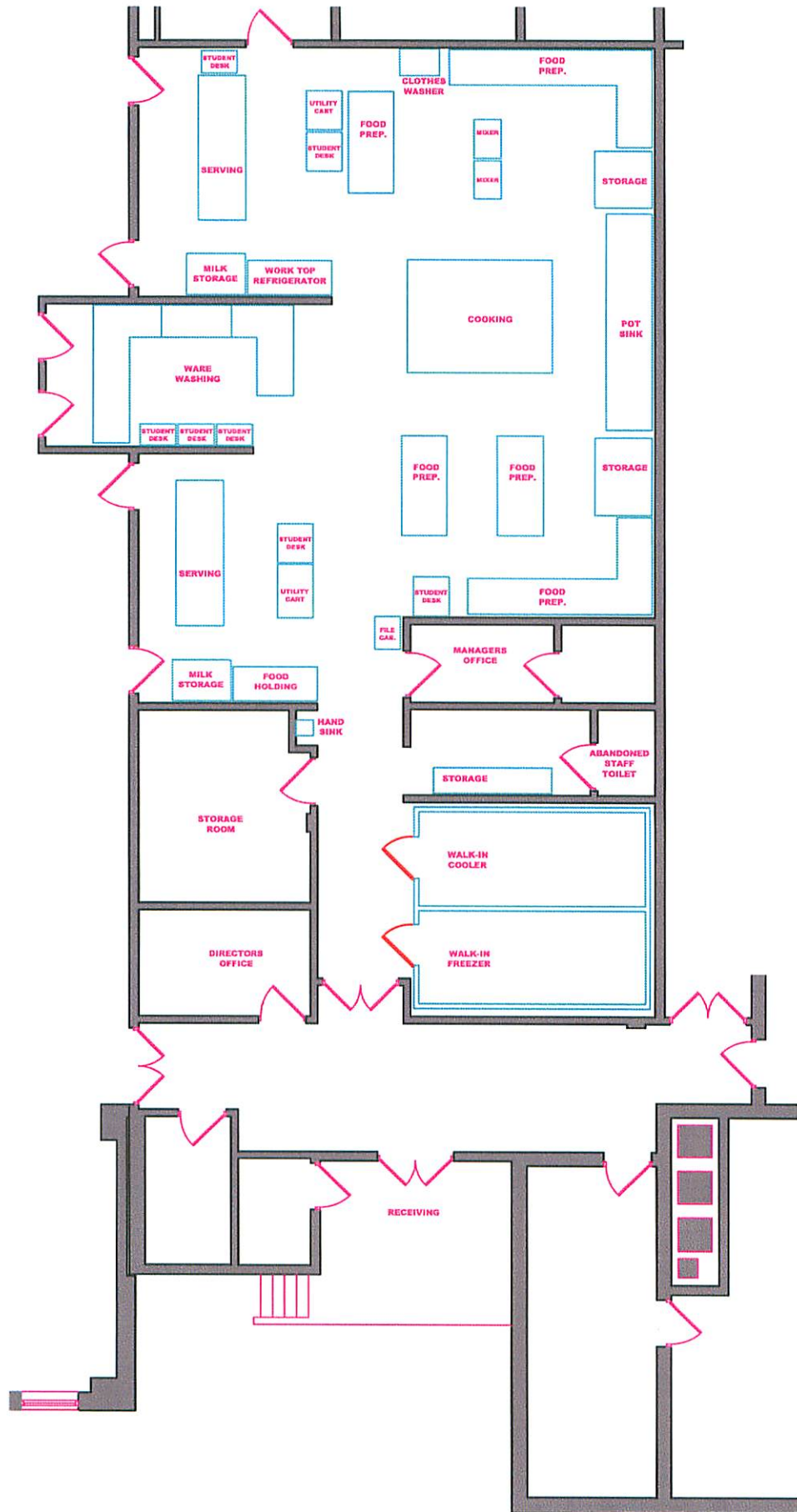
ESTIMATED EQUIPMENT COST

budget: new 65,000 to 85,000

does not include design fees or costs associated with construction

Timberlane Regional High School

New Hampshire School Administrative Unit 55



Timberlane High - Existing Kitchen Plan



FIELD REPORT

REGARDING: Timberlane Regional High School

**ATTENDING: Ms. Susan Wolf, Foodservice Director
Mr. George Stokinger, Business Administrator
John Sousa, CMA
Robert Miller, CMA**

On October 4th, we visited the school and viewed the foodservice area. We were able to observe the serving of students. The School kitchen operates at a capacity of three lunch waves serving a population of approximately 1,600 students with a participation level of roughly 60%.

In viewing the facility, we found that the kitchen and related spaces had serious problems with code issues, finishes, and suitability/age of the existing equipment. The janitor's closet is non-existent, also, a staff toilet room with a place to securely store personal belongings was not seen and the dry goods and paper storage space is not adequate. The kitchen flooring is in good condition and wall finishes are acceptable although the ceiling is perforated tiles (contrary to code) and should be replaced with a smooth and washable tile.

Receiving, Storage and Cold Storage Rooms (Walk-in Coolers)

The dry food storage room is undersized resulting in paper goods being stored in aisles and under tables throughout the facility.

The refrigerated storage rooms consist of a walk-in refrigerator and freezer, both of good quality and more recent additions to the facility, but slightly undersized and beginning to show signs of wear. The storage shelving units within these rooms are of galvanized steel. This finish is no longer considered an acceptable surface for storing food products. Also, dunnage platforms are required within these rooms so that bulk storage can be stored off the cooler/freezer floor.

Food Preparation

The kitchen's prep tables are of decent construction but from a different era. The modern worktable is constructed of all stainless steel. The existing tables do have stainless steel tops but the bases and legs are constructed of mild steel with a painted finish. Throughout the years this painted finish chips and wears off causing the mild steel beneath it to oxidize. The facility could use additional work surface space.

Food preparation equipment is generally old and should be replaced. We believe that the thirty and sixty quart mixer and the automatic slicer might be reused. Specialty equipment, such as coffeemakers can be relocated to suit should a reorganization of the facility be permitted.

Pot and Pan Washing

The function of washing pots, pans, and utensils is now done in an oversized elderly Hobart warewasher. This too is of a different era. The modern day warewasher uses half as much water than the older machines. This means less water is being wasted, less energy is being used to heat water, and fewer amounts of detergents are being used to clean the ware.

This facility serves lunch on disposable trays, therefore the existing machine is too large and a slightly smaller machine would be appropriate.

Hand washing sinks are scarce; more are needed given the size of the facility.

Cooking Equipment

The cooking equipment consists of a Market Forge steamer/kettle combination unit with two kettles, two single deck Blodgett convection ovens and one double convection oven. The cooking line also includes a two burner range section that is in need of replacement. The convection ovens are older and should be replaced. The Market Forge steamer/kettle combination unit is due for replacement, equipment that better address the modern school lunch program should be considered.

The exhaust canopy is mechanically joined steel with non-code finishes and lacks a proper fire suppression system. The current fire suppression system utilizes a dry chemical suppressant. These older systems are not UL300 compliant which is the minimum for today's commercial kitchen. Upgrading these components is critical.

Serving Counters

The serving counters are ready for total replacement. The equipment is old. Other than a couple of milk coolers there is nothing worth saving. Cold food offerings are being held at room temperature. The serving area also lacks adequate back-up cold and hot food holding cabinets to support the six waves of students during the serving times. The ultimate serving area (depending on layout) should combine the cold food serving line and hot food serving lines in a single area. The hot side should include a hot food counter with wells for the served hot meals. These wells should have manifold drain lines and be tied into a floor drain. The cold side should have the ability to keep cold food cold with the implementation of a mechanically cooled pan. Currently the cold food is served on a non-refrigerated counter top due to a lack of proper cooling equipment. These cold items should also be protected with a glass protector case.

Cashiering is poor. The main serving area has two cashiers, one of which doubles to cash out the deli-sandwich line. Both are in the serving area located on surplus student desks. Stands that are higher and offer tray slides for the students to put down what they are carrying is beneficial in speeding up cash out times. Additionally a double sided cash-out stand would

speed up cash out times allowing students more time to eat and the staff more time to recover and get ready for the next wave of students.

It is our belief that the entire facility can be reconfigured into a much improved and efficient facility. The serving area can be improved to offer wide variety of attractive foodstuffs to the students while permitting them to move much more rapidly through the area. This can be done in phases or all at once. If done in phases we would recommend that the exhaust hood and cooking equipment be addressed first.

From a preliminary standpoint, we estimate that the cost of new foodservice equipment to be about \$225,000 to \$250,000 for a program similar to what exists today and assuming a complete reorganization of the facility. Using existing equipment when appropriate could reduce some of this equipment cost. These estimates are preliminary and do not include costs related to design, construction, or permit fees.

An estimate for replacing the exhaust hood and cooking equipment only would be approximately \$85,000. Again, this does not include any of the construction costs associated with implementing this recommendation.

Lastly we would recommend that an architect be brought in to evaluate the existing building conditions and establish a construction budget that addresses any related issues associated with remodeling the kitchen facility. Mechanical, building, and electrical codes change periodically and these upgrades must be implemented in any future renovation.

Please see the attached photos.



The photographs above represent the need for adequate storage space. The staff is required to find storage where available and in some cases inappropriate locations such as these. Paper goods should be stored in a central location so that it can be monitored and dispensed efficiently.

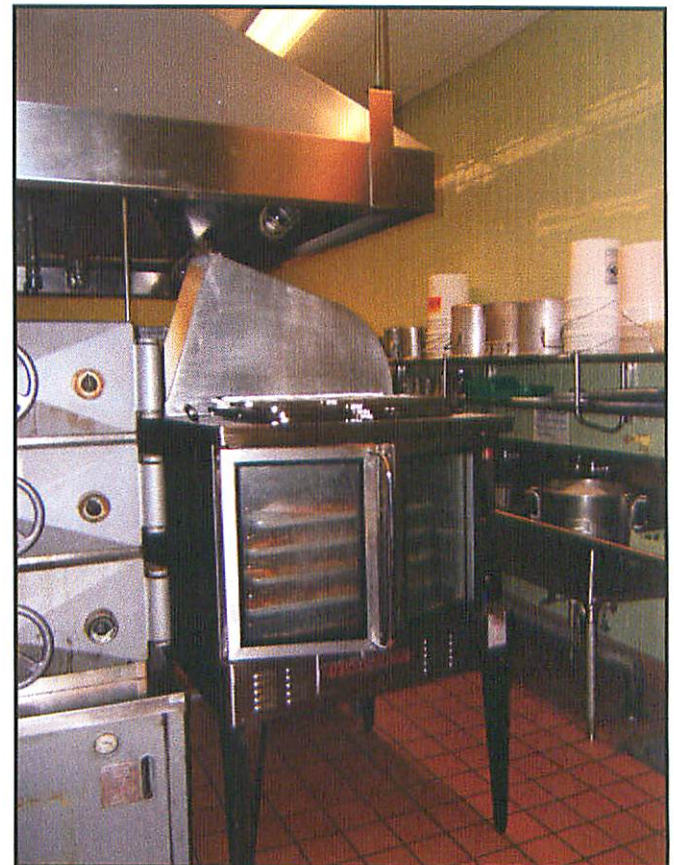


The photo on the left demonstrates the need for storage space and the lack of adequate work surfaces. A wood topped classroom desk is being used as a work surface in the kitchen.

The photo on the right demonstrates the need for additional food storage capacity. Dry goods like paper storage should be located in a central location preferable adjacent to the receiving area. Non-refrigerated food storage should be located in a central location preferably in a dry cool room that can be secured.



This exhaust hood, though made of stainless steel, is not code compliant. The modern day hood is fabricated to be a fully welded unit with no mechanical seems. The filters on the right are installed incorrectly. They should be in the vertical position so that grease can drain from the filters.



The general condition of the cooking equipment is poor. The steam equipment shown on the left is outdated and requires an upgrade. The convection oven located on the right is partially located outside the footprint of the hood requiring an oddly shaped diverter mounted to the top of it to capture the cooking and exhaust gases. A new exhaust hood and cooking equipment is needed to better address today's needs.



The serving counters need reorganization. Many of the equipment components within them are in need of replacement or are not working and other useful equipment is missing. An updated serving line would speed service and allow the foodservice staff to offer more attractive and healthy food. Too often students select the quick and easy, less healthy alternative.



The cash stand is inadequate. Moving students through this line could be made faster by updating the cash stand so that it can operate in two directions and offer the student a place to put down an item while making the cash transaction. The photo on the right is a good example of an underutilized service point. With the addition of more appropriate serving equipment the full use of the counter could be realized.

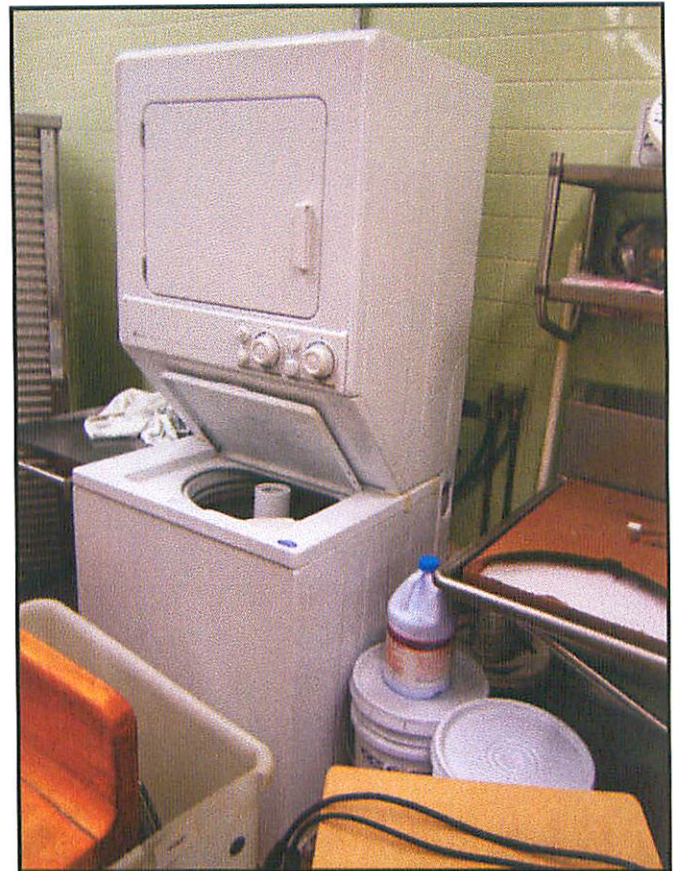


The above photos demonstrate the need for some new equipment. The unit on the left is good quality stainless steel cart that has been damaged. The unit on the right is a painted steel equipment stand that has worn and is now corroding. The finish material on most of the original equipment legs and bases is painted and is in similar condition. This type of finish is not code compliant and should be replaced with stainless steel.



The photo on the bottom right is of a wood topped baker's table. Wood baker's tables are generally accepted today but for ease of cleaning and general upkeep we recommend making this a stainless steel table. Notice the clothes washer and dryer in this shot, it is in among the baking and pan washing area. The clothes washer and dryer should be segregated from any food preparation area.

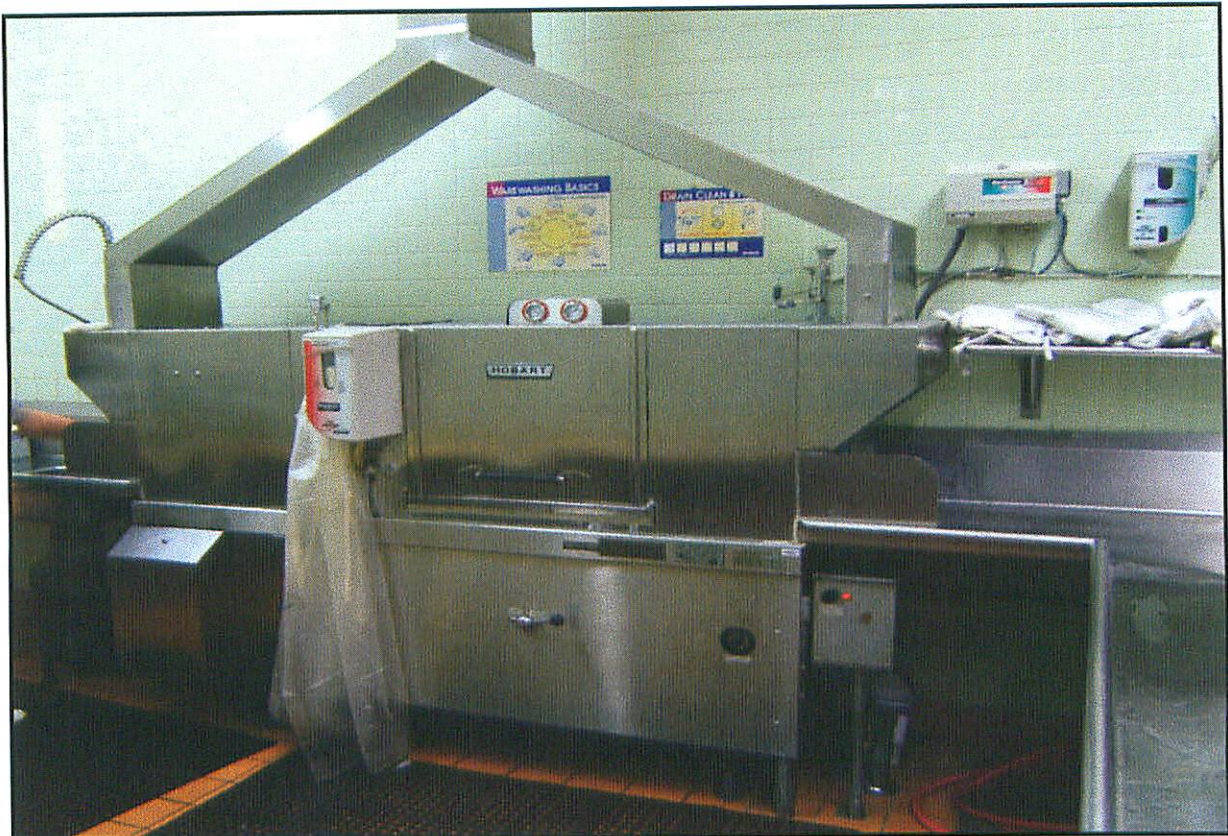
The bottom right photo demonstrates the need for adequate mobile pot and pan storage racks.



(Top Left)
Office supplies are being stored in the kitchen. Some tile repair work is needed but generally the walls and floor are in good condition.

(Top Right)
The clothes washing equipment is in among the kitchen space. More space is required near the receiving area to accommodate this function. Chemicals are stored a few feet away from where baked goods are prepared. More storage and space relocation is required.

(Bottom Right)
More securable storage space is required so that goods are not stored in aisles and under tabletops.



The warewashing area is too large for the current operation. A smaller new machine would have fewer consumption demands resulting in lower operating costs.





FOOD FACILITIES PLANNERS
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mail@crabtree-mcgrath.com

KITCHEN REPORT CARD

project: **Timberlane Regional School District
Foodservice Equipment Study**

date: **February 1, 2006**

EXISTING CONDITIONS

location: **Timberlane Regional High School**
36 Greenough Road
Plaistow, NH 03865
grades: 9th through 12th
enrollment: 1547 students
meal count: 750 meals per day

EQUIPMENT SUITABLE FOR RE-USE

equipment: 30qt. And 60qt. mixers speed racks
wire shelving units ingredient bins

existing equipment represents an approximate saving of 15,000

IMMEDIATE NEEDS

equipment: bakers table staff lockers and facilities
 exhaust hood steam kettle
 fire suppression system additional dry storage
 reorganized floor plan dedicated mop sink and detergent storage
 serving counters braising pan
 steamer smaller warewasher
 prep. tables four burner range
 serving counters

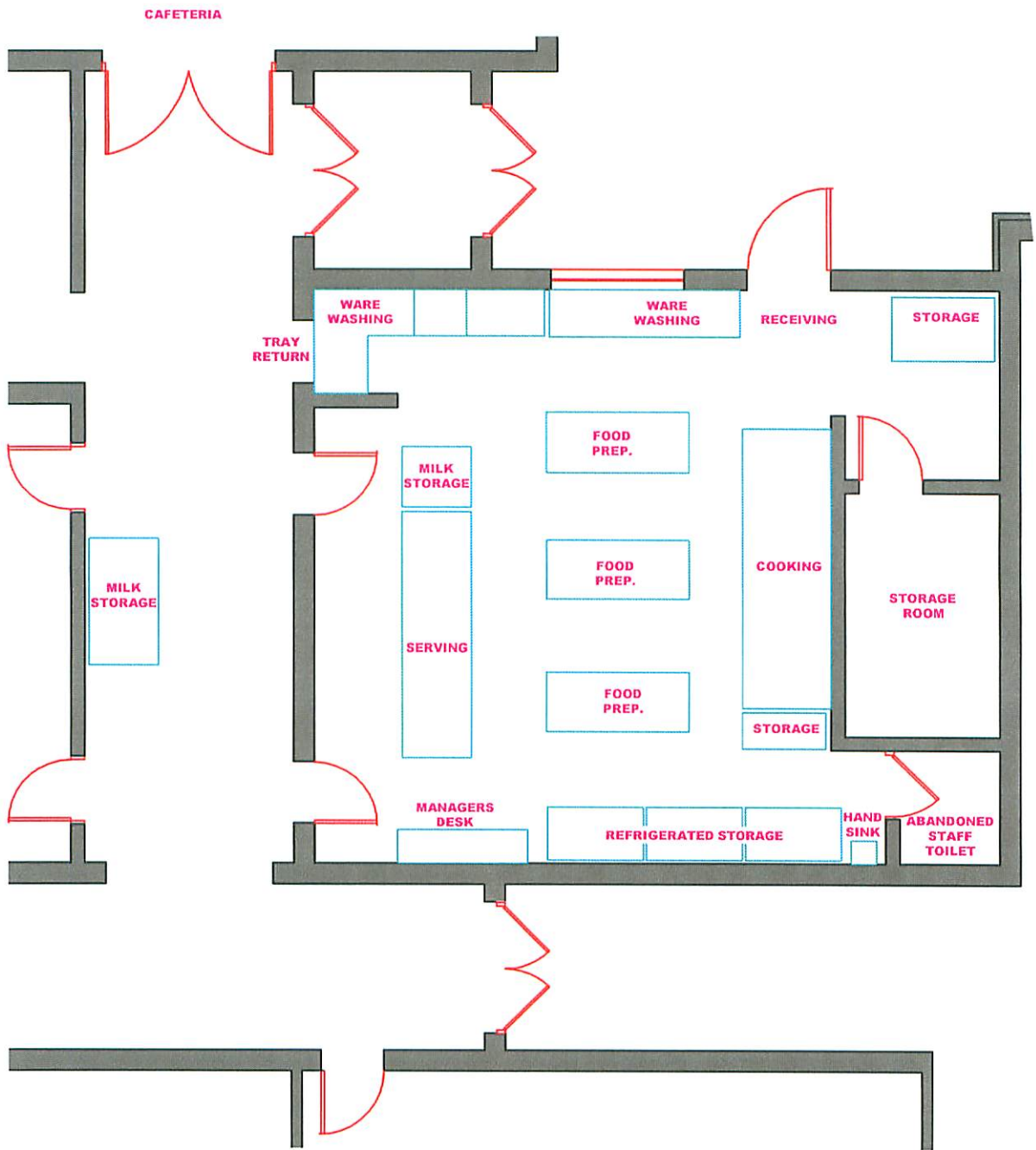
ESTIMATED EQUIPMENT COST

budget: new exhaust hood and cooking equipment 50,000 to 85,000
 new warewasher, soiled and clean tables 20,000 to 25,000
 remaining new equipment required to modernize the facility 100,000 to 125,000

does not include design fees or costs associated with construction

Sandown Elementary School

New Hampshire School Administrative Unit 55



Sandown -Existing Kitchen Plan



FIELD REPORT

PROJECT: Timberlane Regional Schools
Sandown Central Elementary School

ATTENDING: John Sousa, CMA
Robert Miller, CMA

On October 4th, we visited the school and viewed the foodservice kitchen and serving area. We were able to observe the conditions of the kitchen and have prepared this report. The School operates at a capacity of two lunch waves serving a population of approximately 183 students with a participation level of roughly 55%.

In viewing the facility, we found that the kitchen and related spaces have some problems with code issues. The kitchen has no dedicated office and the kitchen manager's desk is located within the kitchen space. The kitchen has no dedicated mop sink closet or chemical storage cabinet.

The kitchen floor is in good condition and wall finishes are acceptable. The ceiling is perforated tiles (contrary to code) and should be replaced.

Receiving, Storage and Cold Storage Rooms (Walk-in Coolers)

The storage room is undersized and could benefit from an assortment of dunnage platforms and additional space. The refrigerated and frozen storage is kept in a series of reach-in cabinets along one wall of the kitchen. A walk-in cooler would benefit the facility and allow the staff to more efficiently store bulk food products.

Food Preparation

The facility does not have a dedicated food preparation sink and is required to use the pot-washing sink to prepare food. A dedicated sink for this purpose should be considered to avoid the potential for cross contamination of food. Only one hand sink was observed in the kitchen. Additional hand sinks should be added to ease in the washing of hands and promote the practice. Various pieces of existing food preparation equipment are present and suitable for reuse. The mixer, pot and pan storage racks, and food slicer are in good working order. Many high quality worktables scattered throughout the facility could also be reused in the event of a remodel.

Cooking Equipment

The cooking equipment is a mix of new and old equipment. The steamer at the cooking line is not used, the staff informed me that the unit has had past problems with the pressure relief

valve causing a hazard with the pressure vessel in the steamer. Therefore to avoid a potential accident, the staff does not use the steamer. The Market Forge steamer/kettle combination unit is in need of replacement. The cooking equipment also consists of a kettle, braising pan, and two burner range. This assembly is antiquated and should be replaced with new equipment that is independent and sized to suite the population at this facility. The space savings could better serve other functions in the kitchen. The existing single deck Montague convection oven is in exceptionally good shape and suitable for reuse.

The exhaust canopy is of better quality if compared to what has been seen in the other school facilities. Although it is still inadequate as it lacks a fire suppression system. The exhaust ducts are galvanized steel and do not meet current code standards. The exhaust hood assembly requires total replacement.

Pot and Pan Washing

The function of washing pots, pans, and trays is done in an a new low temp warewasher. This unit is new and could easily be used in a remodel of this kitchen. The soiled and clean tables attached to the warewasher are new and could remain in place.

Serving Counters

The serving line is in decent shape although some of the equipment within it is not operable and replacement is required.

The immediate needs of this kitchen as we see it are:

- The cooking equipment needs to be upgraded with equipment that better addresses the current demand and is more ergonomically suitable.
- A new exhaust hood and fire suppression system is required. While addressing the exhaust issues consideration should be given to making the kitchen cooler and more pleasant place to work.
- The ceiling tiles should be replaced with smooth washable tiles as mandated by health codes.
- An increase in storage capacity is needed. Walk-in cooler and or a freezer would allow for more flexible storage of refrigerated products. Should walk-ins be added, the surplus reach-in cabinets could be distributed among the districts other schools.

From a preliminary standpoint, we estimate that the cost of a newly renovated facility to be approximately \$90,000 to \$110,000 for a program similar to what exists today and assuming a complete reorganization of the facility. Using existing equipment when appropriate could eliminate some of the equipment costs. These estimates are preliminary and do not include costs related to design, construction, or permit fees.

Should consideration be given to only replacing the exhaust hood, cooking equipment, and adding a walk-in freezer and cooler we estimate an equipment cost of \$45,000 to \$55,000.

This estimate does not include any of the construction costs associated with implementing this recommendation.

Lastly we would recommend that an architect be brought in to evaluate the existing building conditions and establish a construction budget that addresses any related issues associated with remodeling the kitchen facility. Mechanical, building, and electrical codes change periodically and these upgrades must be implemented in any future renovation.

Please see the attached photos.



Refrigerated storage is serviced by a series of reach-in cabinets seen here. The facility has a total four reach-ins. A more efficient use of space would be to have this function served by a walk-in refrigerated room.



The office desk is located within the kitchen space. This function should be located away from food preparation and serving. The lack of space requires that it is located here.



The exhaust hood, though made of stainless steel could be improved. The area above the hood should be sealed from the kitchen environment so that dust and grime do not collect on the front slope of the hood.

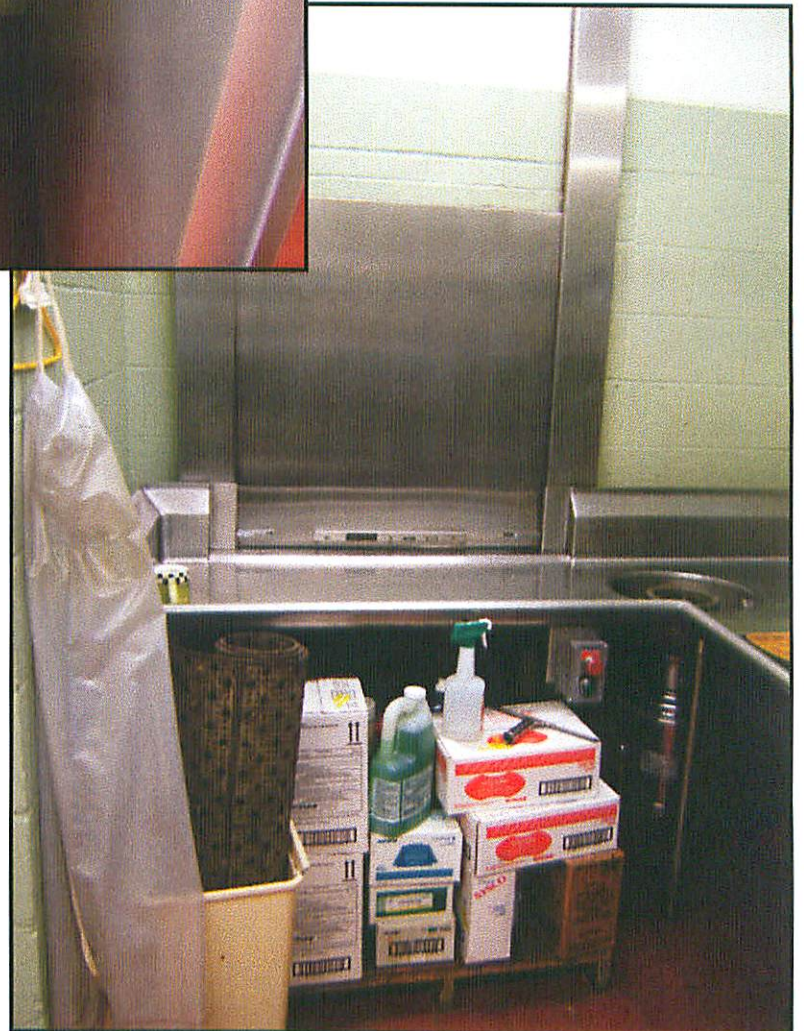


The filters shown here are installed incorrectly. They should be in the vertical position so that grease can drain from the filters and not pool inside the filter. The function of the filter is to extract airborne grease and deposit it into collection cups for disposal.



The lone hand sink in the kitchen is difficult to reach, somewhat hidden and inconvenient for use. Additional sinks are required in this facility.

Chemicals should be stored in an enclosed cabinet or in a segregated location. Currently they are stored in a wet area and on a wood pallet. Seen here it is located under the soiled ware table in the general vicinity of the cooking and food preparation equipment. This kitchen needs a dedicated mop sink and area to store chemicals.



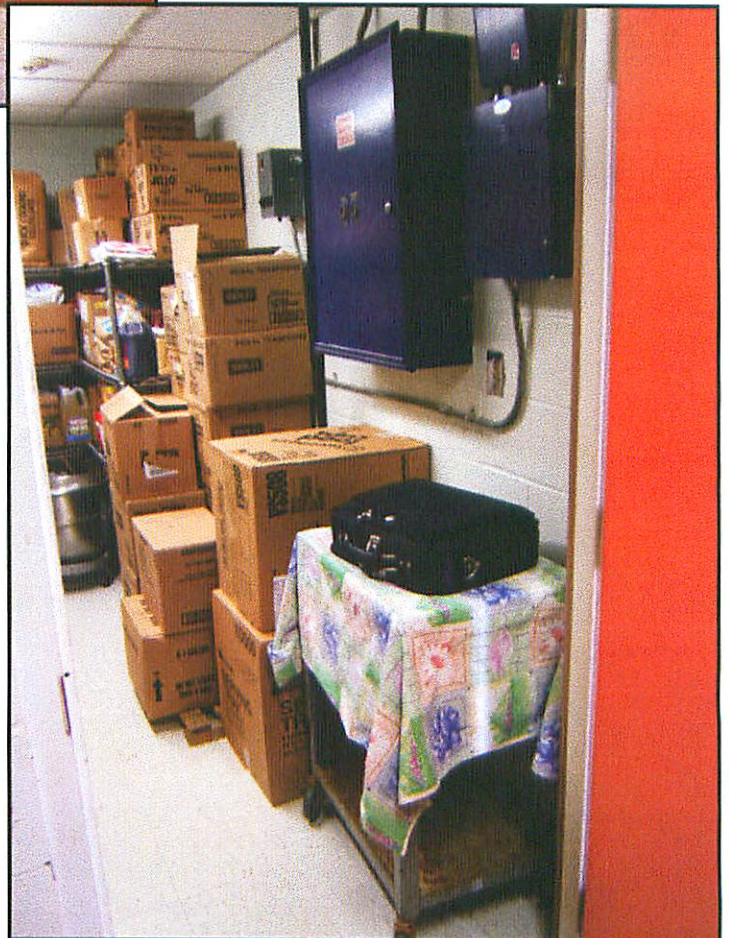


Storage space is a premium here. This photo demonstrates the need for additional storage space and dunnage platforms.

The kitchen is extremely warm and the staff must prop the door open for ventilation. As a result a jury rigged screen has been fashioned to the door in an effort to keep the insects out of the kitchen. As you can see gaps can be seen in the screen and insects are still able to come into the kitchen. Consideration should be given to air conditioning the kitchen when the exhaust hoods are replaced.

The storage room is filled to capacity; some of the stock is placed on wood pallets. Wood pallets are not an approved method for storing product off the floor. Dunnage platforms are required to increase the efficiency in the storage of goods.

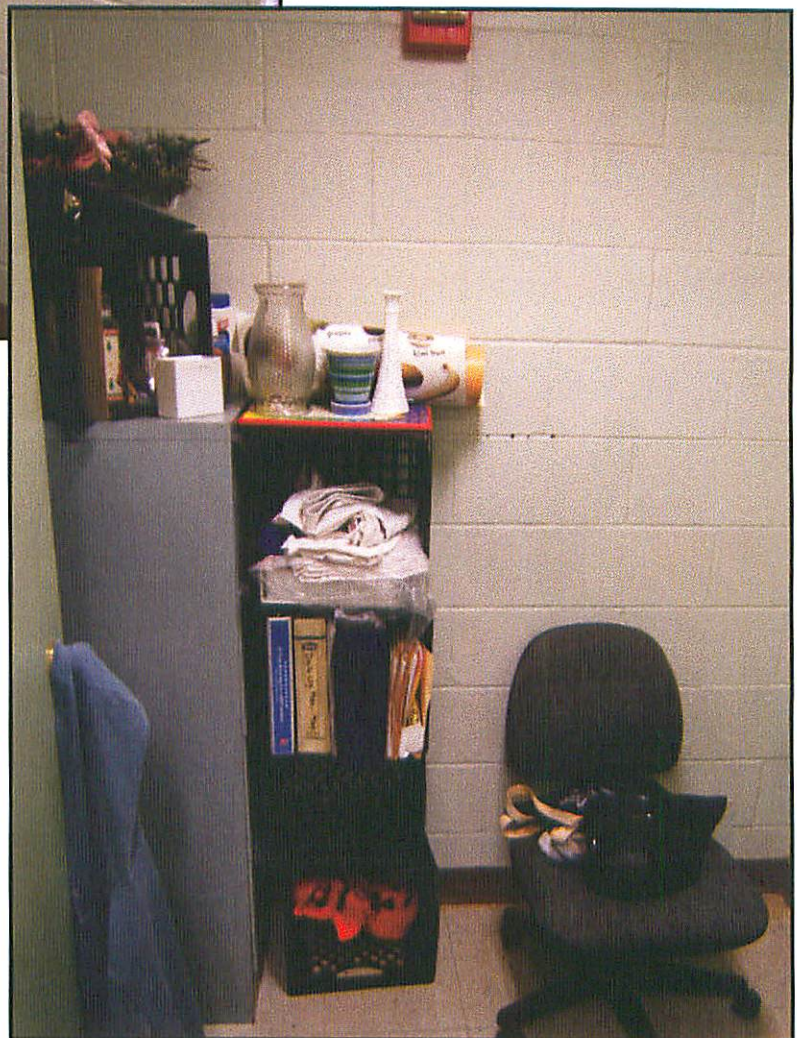
Electrical equipment is using valuable storage space within the storeroom.





Due to a lack of space what appears to be a staff toilet room has been commandeered and is in the process of being used as an office.

Additional space for dry and refrigerated storage, office, dedicated mop sink, and chemical storage room is needed.





The cooking equipment in this facility is outdated and is in need of replacement. With new equipment more production can be achieved within the existing footprint.





KITCHEN REPORT CARD

project: **Timberlane Regional School District
 Foodservice Equipment Study**

date: **February 1, 2006**

EXISTING CONDITIONS

location: **Sandown Elementary School**
 295 Main Street
 Sandown, NH 03873
 grades: 4th and 5th
 enrollment: 183 students
 meal count: 100 meals per day

EQUIPMENT SUITABLE FOR RE-USE

equipment:	30qt. mixers	speed racks
	various food prep tables	ingredient bins
	utility carts	convection ovens
	wire shelving units	serving counter
	warewasher	reach-in refrigerators
	serving counters	milk coolers

existing equipment represents an approximate saving of 85,000

IMMEDIATE NEEDS

equipment:	steamer	staff lockers and facilities
	exhaust hood	steam kettle
	fire suppression system	braising pan
	additional dry storage	dedicated mop sink and detergent storage
	managers office	four burner range

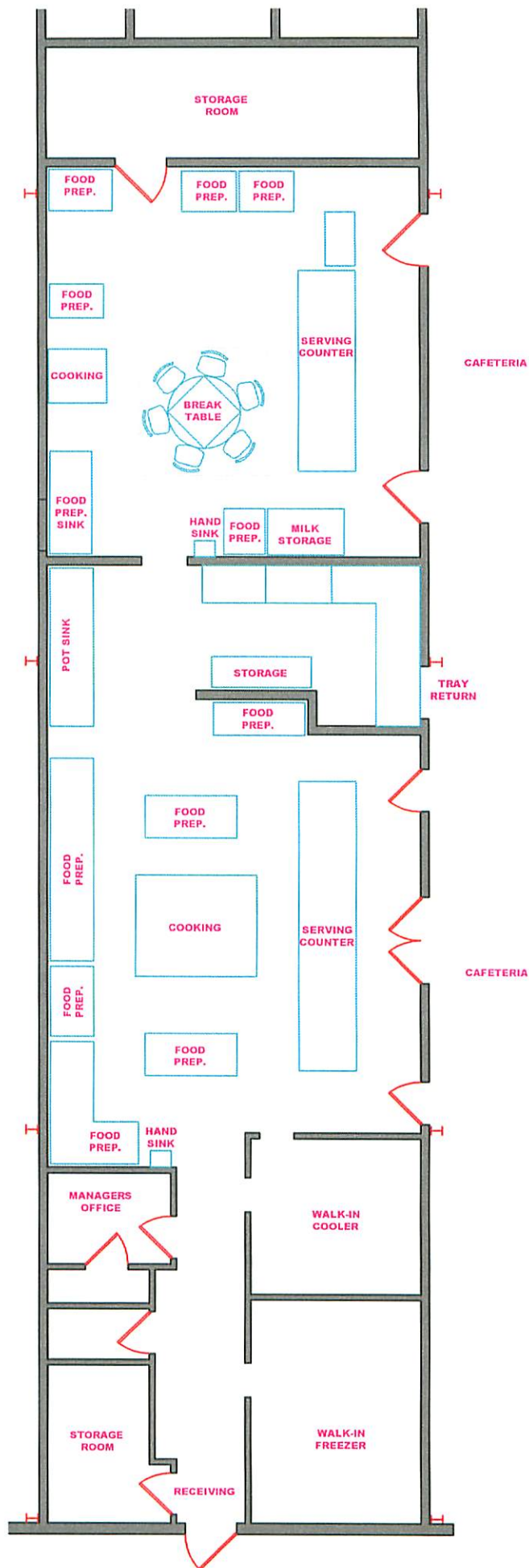
ESTIMATED EQUIPMENT COST

budget: new 45,000 to 55,000

does not include design fees or costs associated with construction

Timberlane Regional Middle School

New Hampshire School Administrative Unit 55



Timberlane Middle - Existing Kitchen Plan



FIELD REPORT

**PROJECT: Timberlane Regional Middle School
Plaistow, NH**

**ATTENDING: Ms. Susan Wolf, Foodservice Director
John Sousa, CMA
Robert Miller, CMA**

On October 4th, we visited the school and viewed the foodservice area. We were able to observe the serving of students during a lunch period. The School kitchen operates at a capacity of six lunch waves serving a population of approximately 1,165 students at a participation level of roughly 70%.

In viewing the facility, we found that the kitchen and related spaces have some problems with code issues and age of the existing equipment, but generally speaking the equipment is in fair condition. The kitchen floor is a vinyl tile material that is holding up well. The only shortfall with this type of flooring is its tendency to be very slippery. The ceiling is a perforated tile (contrary to code) and it is failing and missing in some locations.

Receiving, Storage, and Cold Rooms (Walk-in Coolers)

Receiving occurs adjacent to the cold storage rooms at one end of the kitchen but the dry storage goods are stored at the opposite end of the kitchen requiring the staff to transport goods through a food preparation zone for storage. The recommended flow of food is to receive it, store it, prepare it, and serve it. This flow prevents cooked or cleaned food from coming in contact with unprepared or unclean bulk food. When this flow is disrupted it is called a critical control point, a point at which cross contamination of food can occur. Although this is a low risk facility, it is good work practice to have proper flow of functions.

The dry food storage room is fitted with nice quality shelving units. The room is a bit undersize and plans should include additional space to address storage. The walk-in coolers are in decent shape and filled to capacity. The shelving units within them are newer but the addition of dunnage platforms are recommended as the staff is using wood pallets as platforms for storage of bulk items. This is not recommended as wood is a porous material that is not easily cleanable. In addition, wood pallets do not provide for proper airflow around the stored product.

Cooking Equipment

Cooking equipment includes two double deck convection ovens that are suitable for reuse.

The Market Forge steamer/kettle combination is in need of replacement and the existing braising pan is undersized for this operation. The convection oven placed in the recently expanded serving area is not located under an exhaust hood. The cooking fumes and heat associated with using the oven is not exhausted adding to a kitchen that is reported to be extremely hot. The convection oven is directly vented which is in general not contrary to any code, but adding an exhaust hood over the oven would assist in exhausting the generated heat, making for a much more pleasant working environment.

The existing exhaust canopy over the main bulk of cooking equipment is mechanically joined steel with non-code finishes and lacks a code compliant fire suppression system. The area above the hood should be sealed to prevent dirt and dust from collecting on it. Lastly, the filters in the hood are installed in the horizontal position; they should be rotated to be in the vertical position preventing grease from pooling within them.

Food Preparation

The preparation equipment is in good condition and no problems were reported. The twenty and sixty quart mixer is working properly and many of the carts and sheet pan racks are new and suitable for reuse.

The baker's table is in need of replacement. Some of the other tables, utility carts and pan racks are in good working order and a few are new. The prep sinks are not ergonomically friendly due to the size and depth of the sink bowls but they too are suitable for reuse.

Pot and Pan Washing

There is a pot washing sink in the kitchen that is in good condition and working well but lacks a proper detergent dispenser.

The warewasher is working and its primary function is to wash the student trays. It is appropriately sized and but its location could be improved. The warewashing machine is aged and its age is not known. The warewashing room itself is slightly undersized and is not large enough to store all of the clean ware within the space. As the kitchen was expanded around the warewashing room to accommodate a larger population the room is now land locked. The working conditions in this room are tight but the flow works efficiently. In a reorganization of the kitchen this room should be relocated so that it does not cut the kitchen area into two segments.

Serving Counters

Serving takes place in two separate areas. The newer area seems to have been an addition that was added during a remodel. This room contains a double stack oven, a hand sink, a break area, and is where all the backing for this facility takes place.

Parts of the serving lines are ready for total replacement. Other parts such as those found in the newly expanded area are suitable for reuse. The old serving counters are missing glass

sneeze shields, do not fit within the current program and could be made to be more efficient. The milk coolers are new and in good working order.

The immediate needs of this kitchen as we see it are as follows:

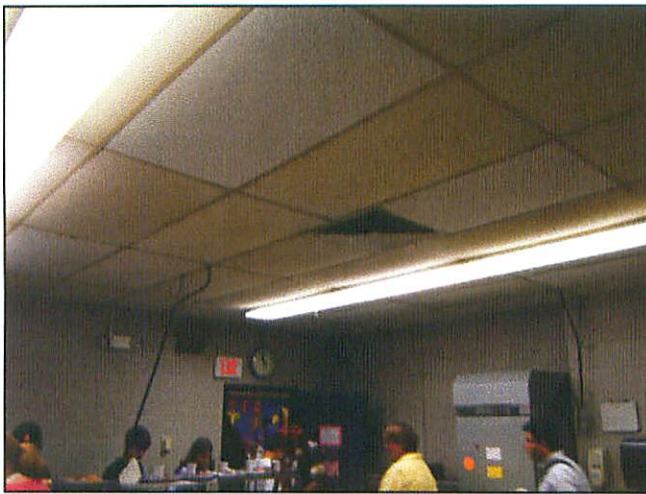
- The cooking equipment needs to be upgraded with equipment that better addresses the current demand and is more ergonomically suitable.
- A new exhaust hood and fire suppression system is required. While addressing the exhaust issues consideration should be given to making the kitchen cooler and more pleasant place to work. Additionally an exhaust hood is required over the lone convection oven located in the second Servery. This can be accomplished with a new hood that is capable of having all the cooking equipment beneath it.
- The ceiling tiles should be replaced with smooth washable tiles as mandated by health codes.
- Consideration should be given to replacing the floor with a quarry tile floor or some other nonskid surface.
- The ultimate renovation would better utilize the space so that receiving and storage is grouped in one location. Due to the way the kitchen was renovated these spaces are somewhat scattered and do not flow in an efficient manner. The ultimate design would also combine all cooking equipment under one hood, place the warewashing room in a location that does not divide the kitchen space into two zones, and combine the serving lines into one area that can be supervised and serviced more easily.

An estimate for replacing the exhaust hood and cooking equipment would be approximately \$85,000. This does not include costs associated with construction such as fans and ductwork.

To perform a complete renovation to include all of the recommendations stated above we estimate that the cost of new foodservice equipment to be about \$95,000 for a program similar to what exists today and assuming a complete reorganization of the facility. Using existing equipment when appropriate could eliminate some of these estimated equipment costs. These estimates are preliminary and do not include fees related to design, construction, or permitting.

Lastly we would recommend that an architect be brought in to evaluate the existing building conditions and establish a construction budget that addresses any related issues associated with remodeling the kitchen facility. Mechanical, building, and electrical codes change periodically and these upgrades must be implemented in any future renovation.

Please see the attached photos.



Perforated ceiling tiles should be replaced with non-pours smooth washable tiles.



The cooking battery is outdated and needs replacement so that it can better serve the modern school lunch program. The kettle and steamer is difficult to use. New equipment can address ergonomics and reduce the risk for potential injury.



This convection oven should be located under an exhaust hood. It is not in violation of code because it is directly vented but the heat generated by the oven cavity is not exhausted and adds to the overall heat present in the kitchen. This can cause temperatures to rise to 95 or 100 degrees and make it an unpleasant work environment.

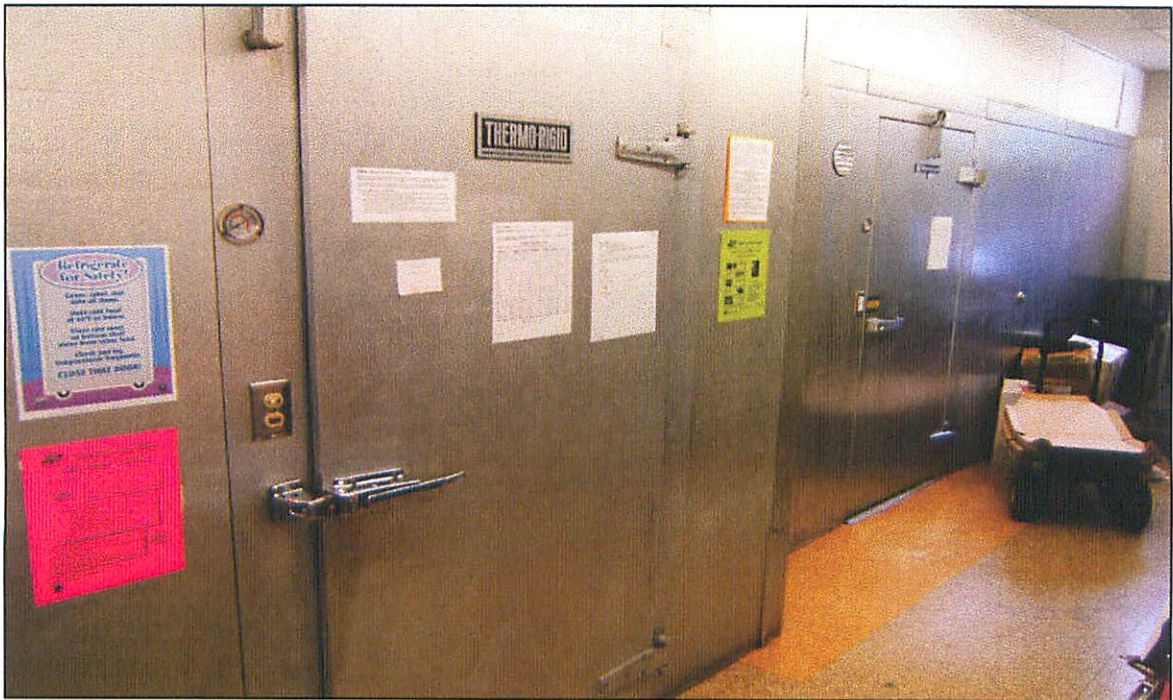
Note the degraded ceiling tile around the exhaust duct.

Exposed piping should be avoided in kitchens whenever possible. For example in this photo the horizontal pipe at the ceiling will allow dust and grease to collect on it. It is not easily cleanable.

The exhaust hood does not meet current code requirements. Additionally, the fire suppression system is non-compliant.

Note the open space above the exhaust hood. This cavity is rarely cleaned and should be sealed off from the kitchen environment to prevent the accumulation of dust and grime.





The walk-in refrigerated rooms are in working order and have many years of use left in them.



The baker's table shown here is ready for replacement. The work surface should be stainless steel. As a stainless steel surface it will be easier to clean and maintain. The ingredient bins located under the tabletop are new and suitable for reuse.



The storage room is well stocked. Notice the product that is stored on milk crates. We commend the staff for keeping the product off the floor but the need for dunnage platforms is evident. The addition of mobile dunnage platforms would allow the staff to store the product off the floor and have the ability to move it when necessary for cleaning or getting at other bulk products.

When possible, storage should be separated into two categories. The first being paper storage and second being dry food storage. Typically paper storage is shipped and stored in large boxes thus requiring more space and different types of shelves. When mixed the space tends to become cluttered.

Please note the wood pallet the bulk storage is placed on. The pallet does keep the product off the floor but does not allow for airflow, cleaning or mobility.

A dunnage platform keeps the bulk storage twelve inches off the floor. This allows the staff to see beneath it to determine if sweeping is need.





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KITCHEN REPORT CARD

project: **Timberlane Regional School District
Foodservice Equipment Study**

date: **February 1, 2006**

EXISTING CONDITIONS

location: **Timberlane Regional Middle School**
44 Greenough Road
Plaistow, NH 03865
grades: 6th through 8th
enrollment: 1165 students
meal count: 800 meals per day

EQUIPMENT SUITABLE FOR RE-USE

equipment:	60qt. And 20qt. mixers	speed racks
	various food prep tables	ingredient bins
	utility carts	double convection ovens
	wire shelving units	serving counter
	milk coolers	reach-in refrigerator
	prep sink	hand sink
	walk-in cooler and freezer	warewasher

existing equipment represents an approximate saving of 65,000

IMMEDIATE NEEDS

equipment:	bakers table	four burner range
	exhaust hood	braising pan
	fire suppression system	pot washing sink
	reorganized floor plan	dedicated mop sink and detergent storage
	steamer	steam kettle

ESTIMATED EQUIPMENT COST

budget: new 65,000 to 85,000

does not include design fees or costs associated with construction