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KITCHEN PLANNING  
  
The plan or layout of a kitchen should be determined by a clear catering policy, even though the plan is often limited by space available. The policy adopted and the space and layout required for the kitchen to carry out that policy will be affected by many factors like, the type of business, whether a restaurant is for resident guests or is open for the public. The type of area it is located in and one type of customer, seasonal pressured of trade and the possibility of expansion. These are the points that must be considered when the kitchen is in the project stage.  
  
There are two basic intentions that remain constant whatever the catering policy is.  
  
They are: -  
1. Receiving of commodities in various forms, either by partial of complete preparation, followed by cooling re-heating, portioning and other dispensing methods, of conversion of this food supply into meals.  
2. Regulating the supply of food in meal forms because of limitations such as economy, time, locality, and quantity but in such away that the quality of food and service is acceptable and attractive.  
  
Often when planning the layout, these main intentions are not very well understood and kept in mind, instead consideration is given more to small details which result in poor designing, subsequent operating confusing and even failure. Besides keeping in mind the basic intentions, it is also important to study the present day trends and anticipations of future developments in the catering industry.  
  
Amongst the current trends, in the food production and service industry are the following:   
  
1. Greater mechanization  
Simpler operations and increased use of convenience food. This has been brought about because of the high cost of manual labour.   
2. Selling prices are based less on the actual food cost but more upon the value to the customers, of the total food service being offered.  
3. Increasing development of specialties, either if foods, dishes, and forms of service capable of giving individuality and character to our establishment.  
  
The menu is the blueprint of the catering establishment and may be considered as the starting point when planing the kitchen layout. The points of importance in determining menu policy will depend on the type of establishment and style of the catering to be provided.  
  
One should be very clear on these points:  
(a) These for whom it is intended to cater.  
(b) The reason for their patronage.  
(c) Any service demands, which the two above points will bring about, exalt high, service, gourmet standards, and service.  
  
Once the menu form and service has been decided, then the equipment and its installation can be planned out. Food supplies can be received in many forms, convenience food are already a reality in the catering industry. Meat, fish, poultry and vegetables may be obtained frozen or in prepared form or portioned forms. Dehydrated products, bakery premixes, prepared soups etc. are all in convenient packs.  
  
Increased use of convenience foods has had a profound effect upon the layout, planing, and equipment, storage facilities even need adjustments and alteration.  
  
Modern food service and kitchen operation must be planned not only in accordance to the culinary principles and the changing modern trends, but also with the basic fundamentals of kitchen design, which is the work flow which is based on work study.  
  
To obtain continuos flow of goods from section to section, the design of each section should be considered carefully to ensure that the paths within its bounds do not cross more than its necessary.  
  
A well-planned layout largely depends on the following requirements:  
1. Ordering, receiving and storage.  
2. Preprocessing of raw material such as meats, bakery products.  
3. Cooking- soups, vegetables, sauces, meats, and bakery products.   
4. Pantry or setup section-salads, sandwiches.  
5. Service area.   
6. Crockery and cutlery wash up.  
  
Intelligent placements of sinks, machinery etc will make a great difference in the daily kitchen movement covered by the food and unnecessary travelling by the kitchen staff, so minimum of crisis crossing and backtracking. The perfect kitchen from this point of view is the one in which the raw materials and cooked materials need the minimum of movement and requires once only to cover the same route.  
  
Information required before beginning the kitchen planing is:  
1. What type of meal will be offered?  
2. How many persons will be served?  
3. Meal timings and how many sittings (turnover) (PAX)  
4. What type of service?  
5. Will convenience foods be used?  
6. Is allowance to be made for special functions?  
7. What is the floor space available?  
8. What type of service is proposed?  
  
Area requirement: It is possible that kitchen space will be reduced in size in order to provide more sitting capacity in the restaurant. Cramped inadequate kitchens will lead to delays and falls in service. This will invariably effect the turnover. Inadequate kitchen facilities will also adversely effect the staff.   
  
The kitchen areas very according to the type of and number of meals provided. Hotel restaurants require kitchens out of all proportions in size to the actual sitting capacity of the restaurant, about 40% of the area added to the dining room. A useful rule of thumb is 6sq feet of floor area per person accommodated in the dining room. Out of the kitchen areas ¼ may be required for storage and remaining for food preparation, cooking and service.   
  
KITCHEN LAY OUT AND FUNCTIONS  
  
RECEIVING AND PREPARATION AREA:  
Materials required for a food facility is numerous varied often bulky and subject to deterioration and misappropriation. Several people normally are involved with placing taking filling orders and with the delivery and receiving of good. Good communication is required between these people in order to have a smooth operation and to avoid wastage spoilage etc.  
  
RECEIVING AREA:   
The receiving area should be a large and convenient enough to receive the volume and type of good delivered. All items must be inspected before accepting by the receiving clerk. Many items need minimum inspection and merely call for package label and count. Perishable items like fish, poultry, meat, and vegetables, etc. Need thorough checking and inspection for quality. The receiving area should be located near the entrance to the storage. So that once the checked can be stored directly as soon as possible.   
  
EQUIPMENT:   
Scales, container opening tools such as crow bar, claw hammer, short bladed sharp knife, can opener etc should be available at the receiving are to help in inspection the good.  
  
DELIVERY QUAY OR LOADING BAY:   
Situated at the back of the hotel has a platform at Lorry’s platform level for easy unloading. This place should be well lighted (reflector type lights) and fitted with anti pest fans at the doors, and should be kept clean always. (A water connection with hosepipe attachments is diserable for cleaning.) To avoid work accidents, slipping etc. Trolleys and other equipment should be kept for easy unloading and carrying in the goods to stores.   
  
GAS BANK:  
If cylinders are used they must be kept outside in an open shelter opening from the outside (in case of blast the shock wave damages be decreased). In case of gas tank this one has to be at a distance of 150 yards from the main building. A daily check of gas shelter and tank is necessary as a safety measure.   
  
GARBAGE DISPOSAL:  
Wet and dry garbage should be stored separately. Wet garbage is stored in containers in an air-conditioned shelter to prevent fermentation and smell. As far as possible collect garbage in plastic fresh bags, change when they are full, tie them up and then kept them in garbage rooms. Dry garbage is sometimes incinerated. Disposal of garbage is done on daily basis and garbage shelters are thoroughly cleaned, disinfected, disordorized with phenol.  
  
CENTRAL STORES:   
Dry store: A temperature of 70oF (21oC) is ideal. Storing principles. Light weight item in height (top of the shelves). Heavy weight items in containers, which are labelled. Cases are kept either on shelves or pellets. Nothing should be kept directly on the floor. Leave about 8” height for the bottom shelf from the floor for easy cleaning and control pests and rodents. Do not keep shelves touching to the wall, leave about 2” from the walls. The different records kept in the stores for control purposes are: Bin cards, Entry Books, Issue Books, Indent Forms Orders, Deliveries, invoices, etc.  
  
FRUIT STORE:  
Ventilated common storage can be used for fruits to keep and ripen them for 2 or 3 days 50 – 60oF is ideal.  
  
COLD ROOM:  
Refrigerated and low temperature storage. Cold rooms are under the responsibility of the executive storekeeper or chef larder depending upon the hotel policy.  
  
Types of Cold Rooms  
Two types negative and positive.  
Negative cold rooms -0oC temperature (deep freezer)  
Positive cold rooms +0oC temperature (walk in cooler, or cooler.  
  
The ideal temperature: for a negative cold room is –18oC  
Positive cold room Meat 0 – 1oC  
Fish 2 – 3oC  
Dairy 4 – 5oC  
Vegetables 6 – 7oC  
& Fruits  
  
PREPARATION AREA:  
The different types of food (fish, meat, poultry, etc.) should have their appropriate preparation space. The equipment necessary for cooking the food should be sited closed to the appropriate point.   
  
VEGETABLE PREPARATION:  
The work in this section forms into three works centres. 1) Washing & Cleaning 2) Paring 3) Trimming, Cutting, Shaping, chopping, etc. Depending upon the volume of work these activities may be performed in one center or an assembly line production may be used. One centre completely separated from the other. Use of frozen and convenience in this largely determines the space and equipment required in this section. These rooms sometimes may be air-conditioned. This section has containers, shelves, sinks, and various machines for cutting, peeling, shredding, etc. In smaller hotels this section may be combined with butchery.  
  
BUTCHERY:  
Air-conditioned room for meat preparation. Boning, paring, cutting, as well as charcuterie are done in this section. Portions and cut according to specifications and controlled with scales. Poultry, fish games etc. are also prepared and portioned here.  
  
LARDER ROOM:  
For cold dishes, sauces, hors d’oeuvres and cold buffets.  
  
COOKING AREA  
The cooking section/main kitchen is generally regarded as the heart of the kitchen. The material used here are likely to be the most of us wish to work. The material used are likely to be the most expensive the work here is done by the workers who are paid the highest rates. Here semi manufactured products are turned into finished products. To ensure fast service the close relationship between cooking area and serving area is of very important. In a classical organization it is divided into partie system. This area can go from a simple kitchen to a more complex group of section or even satellites.  
  
USUAL SECTIONS OF COOKING AREA:  
Sections usually found are:-  
Main kitchens or hot kitchen, pastry, bakery, confectionery usually called bake shop  
Short order kitchen or pantry  
Pot and pans wash up  
  
MAIN KITCHEN: Heart of the kitchen.  
  
MATERIAL FLOW:  
The flow of raw materials will come from three main source:-  
1. The meat and vegetable preparation sections.  
2. From stores.  
3. Direct delivery. Food partially processed in a main kitchen may be sent to a service kitchen for final cooking as in a decentralized kitchen.  
  
COOKING FUNCTIONS:  
The variety and volume of items to be prepared will influence staff and equipment needs and the formation of work centres.  
  
EQUIPMENT NEED:  
The essential equipment for production will be a worktable, sink, and cooking equipment. Depending on the size and type of food facility the requirement differs. Study the menu to decide on the equipment requirement. Most of the cooking activities can be grouped as follows – Roasting & Baking, Boiling and Toasting, Steaming, Deep-frying, etc. to decide the number of centres. The cooks’ table is generally the core of the cooking section.  
  
SETTING THE EQUIPMENT’S:  
‘Runs’ of varied cookery apparatus parallel to and near service can eliminate unnecessary movement of staff and food from kitchen to service as well as it speeds up the service. Bain-marie and stockpot stands should be close to ranges. Adequate ventilation and canopies have to be provided wherever necessary, to clear the kitchen from smoke and steam. Modern kitchens have fresh air input supplied by a deviation of the central A/C unit.   
  
  
  
BAKE SHOP:  
Pastry, Bakery, and confectionery is usually called as the bake shop. The control of quality and cost of desserts and breads served by a hotel is very important to its successful operation. In small hotels this will be in the corner of the main kitchen whereas in big hotels, this may be a separate fully equipped dept, of its own.  
  
HOT AND COLD SECTION:  
This Bakeshop section is usually divided into two sub-sections, Hot & Cold.  
The hot section is equipped mainly with an even single double or 3 tier deck. Conventional or convection. Racks, dough mixer, food mixer and provide all the bake items, bread cakes, gateaux, etc. The cold Section is equipped mainly with refrigerated marbles, mincers, ice cream machines, freezers, & food mixer. It is usually air-conditioned and provides all cold desserts. Next to it there is the pastry cold room where mise-en-place is kept.  
  
PANTRY:  
Short order kitchen (pantry) as the name indicates this section provides for items prepared and served fast at any time. This section deals mainly with beverages, salads, sandwiches relishes, fruit juices, cold plates, dessert ice creams, milk shakes etc. Quick service cooking equipment for such a contact grill, toasters, suitable equipment for providing hot and cold drinks and shakes, ice cream can opener, slicer, chopper, juice extractor, shaker, shredder, etc. are to be provide in the pantry.   
  
The main kitchen, bakeshop, and pantry must have direct access to service counter or have each a counter of their own.  
  
POTS AND PANS WASH UP:  
These should be located near area of food preparation. The process of cleaning includes, scraping, soaking, (both usually done by hand) washing, rinsing, sanitizing, and drying may be done by hand or machine. Equipment for hand washing of pots consist of three compartment large sinks with a drain board on either side one for solid pots and one on the other side for clean pots.  
A convenient floor drain is need for the wash water from those extra large objects.   
Drain board Drain board  
Solid Washing Rinsing Sanitizing Clean pots  
It is desirable to have an overhead spray with extension can really located, to use for flousing the refuse after scraping and rinsing the pots and pans this section should include large racks for storage of utensil items can be readily seen and selected without having to move a stock in order to get an item required.  
  
SERVICE AND WASH UP AREA  
From where do the waiters pick up their orders?  
From where do they got clean cutleries?  
Service and wash up area situated exactly between the restaurant (and restaurants) and the kitchen, has the following function.  
1. Cleans dirty equipment coming from restaurants or floors.  
2. Supplies clean equipment to restaurants and service equipments to kitchens.   
3. Food orders calling out.  
4. Delivery of Food orders.   
5. Cashiering.  
6. Restaurant sections.  
1 and 2 are being the wash up area. 3,4,5,6 being the service area.  
  
SERVICE AREA:  
Issuing meal to the restaurants in carried out in this area. A kitchen counter throughout the meals service period.   
ABOYEUR’ DUTIES:  
On receipt of waiters checks ( KOT’S )be announce in a loud and clear voice the requirements of the order with any special instructions. Often he expand the time of the receiving the order of the KOT and usually has a board fitted with hooks or pins maintaining the tables or waiters stations to while the orders relate.  
The orders of the aboyeur normally consists of   
a) The designation of the chef de partie or partie address e.g.patissier, totisseur.  
b) The number of portions required.  
c) Name of the item.  
d) Style of cooking.  
e) Garnishes dressings or sauces.  
  
The parties must acknowledge the orders in returns. Usually the order or part of the order is sent first. The second part will be called the suite.  
  
When an order has been completed and has been collected by the waiter, the aboyeur removes the check (KOT) from its hook and places it through a slit into a locked box. This at the end of the service goes to the control office where the key is kept for control procedure. The aboyeur is responsible for the safety of the box.  
  
CASHIERING & BILLING  
  
The cashier prepares the bills and gives it to the waiter for presentation. The waiter present and collects the money and gives to the cashier. The cashier after receiving the money stamps the bill with ‘paid’ seal and gives back the top copy of the bill to the waiter to hand over to the guest. In the same area there is a room service section where all orders are centralized in case of centralized Room Service system. Also found in the service area is a dispense bar for drinks served in the room or in the Dinning Hall.  
  
WASH – UP (DISH WASHING)  
  
Dish washing has a high rating of importance in food service because of its significance in protecting sanitation and hygiene, utilization of labour time, saving on operational cost for power hot water and detergent and for prevention of loss and breakage of table ware.  
The wash area is composed of 3 sub sections each manned by a steward:  
a) Loading – Dirty equipment is pre-washed and loading on baskets or trays for the machine or passed to hand washing.  
b) Washing is done by machine or hand in any case the process is the same.  
Washing Rinsing Sanitizing  
c) Unloading – The clean equipment is  
- kept on racks  
- picked by waiters  
- delivered by stewards.  
The dishwashing operations includes  
a) Removal of soiled table ware from dinning areas.  
b) Receiving, scrapping, and stacking ready for washing.  
c) Washing and drying and then storing.   
  
There are 3 temperatures of water required in the washing process.  
  
PRE RINSING (WASHING):  
For the removal of coarse soil calls for a warm temperature of 120oF that will melt fat and loosen cooked food from the surfaces.  
  
THE WASHING  
The washing temperature should be 140oF to be hot enough for effective cleaning action.  
  
SANITIZING:  
Sanitizing calls for a rinse temperature of 180oC for 10 seconds. Most bacteria are killed at 170oC if held for 30 seconds or longer. At temperature higher than 180oF the water vaporizes sufficiently to interfere with the effectiveness of the rinsing action. Allow to air dry after washing and sanitizing procedure is over. To guard protection of sanitizing water temperature must be maintained and correct sanitizing and handling practices to be followed. Separate workers should be provided for handling soiled and clear dishes. In smaller hotels washing is done manually. In any case the process is the same.  
  
ANCILLARY & EMPLOYEE FACILITIES  
  
Which is the other important area in the kitchen?  
Chef’s office/cabin  
While considering in great detail factors with the kitchen itself, it should be remembered that passages to and from the kitchen must be kept clear and unobstructed, both for entry of goods exists of containers and movements of staff. Other matters to be considered are the offices, dinning room and clock room for the employees.  
  
OBJECTIVE  
Management of a food facility as discussed earlier involves planning, maintaining records of many aspects of operations, interviewing, training, placing orders, calculating pay rolls etc. etc. performance of these management functions calls for an office or offices that is suitably located and adequately equipped depending upon the size of the establishment. The office is an important section that must be planned in relationship to the food production.  
  
  
  
CRITERIA IN PLANNING OFFICES  
Criteria is based on functions to be performed which may serve as a guide while planning offices include the following.  
  
PROXIMITY  
For continual awareness and case of supervision in specific areas of responsibility. Convenient location can promote better control and utilization of management time and effort. A manager needs to know what is happening and gives timely instructions. In a remotely located office he may tend to become absorbed in his office activities.   
  
READY VISIBILITY  
Ready visibility of areas to be supervised can save many steps in keeping aware of work in progress. Office functions can be performed peacefully, if things are able to be seen as progressing well in the various work sections.﻿

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