KITCHEN EXTRACT SPECIFICATION

In support of a Planning Application by

Clients details here

For a Hot Food Takeaway offer in existing Retail Space

at

Site name and address here

Wyeth Projects Services Limited
The Cart Shed, Amberley Court, Amberley Lane, Milford, Surrey, GU8 5EB Tel: 01483 424704

1.0 GENERAL NOTES

1.1 Provide warranty to include labour and materials to repair or replace defective parts and materials as required for one year after substantial completion or owner acceptance of the completed project, whichever is later.

1.2 Completed installation shall conform to all UK building regulations.

1.3 All ductwork shall be manufactured and installed in line with BESA DW 144 and DW 172. Ductwork sizes shown indicate inside clear dimensions. All ductwork shall be insulated, except for the kitchen hood extract ductwork. Insulate all ceiling mounted diffuser backs. Vapour barrier shall be maintained continuous and all seams shall be sealed. All ductwork shall be installed above suspended ceiling where provided. All exposed ductwork shall be G90 galvanized steel.

1.4 Connect all ducts to fans and other air distribution equipment using mechanical fasteners with seals, mastic or gaskets.

1.5 Supply and return air duct connecting to fans shall be isolated from unit vibration with flexible duct connectors.

1.6 Insulated flexible duct may be used in maximum lengths of 2m from rigid metal duct to diffuser connection. Flexible duct shall be Class 1 flexible air duct with insulation and vapour barrier.

1.7 Contractor shall install floor mounted condensers on raised concrete plinths.

1.8 Provide engraved labels on all plant.

1.9 Ensure condensate drain lines are installed to all FCU's and drip trays and laid to a minimum fall of 1:80.

1.10 Follow manufacturer guidelines for required clearances around all plant.

1.11 Refer to "H" and "W" sheets in set for specific hood and fan information and field wiring diagrams. Contractor shall provide low voltage wiring from fan control panel to ventilation systems, remote sensors and smoke detectors. Contractor shall programme thermostat following Wendy's standards. Refer to programming instructions provided with modular panel system.

1.12 Contractor shall test, check, and balance all ventilation systems, kitchen canopies, dampers and grilles. Set all exhaust fans and diffusers to specified flow rates. The contractor shall complete Wendy's required test forms for all ventilation systems.

1.13 Kitchen equipment distributors shall install refrigerant piping for condensing units to food service equipment including thermostatic expansion valves, solenoid valve, temperature control wiring, sight glass, filter driers, pressure controls, crankcase heaters, low ambient controls, and weatherproof housings. Trap and slope condensate lines per manufacturer's recommendations. Provide heat tracing on condensate lines inside freezer.

1.14 Complete smoke capture test(s), as required, in accordance with DW 172, and hood manufacturer standards. Kitchen equipment shall be at operating temperatures with RTUS operational. Test using smoke candles or smoke puffers. Smoke bombs shall not be used.

1.15 For all equipment with symbol tags on plans, refer to associated equipment schedules for requirements. All tagged equipment is the responsibility of the contractor to provide unless otherwise noted.

1.16 Contractor is responsible for providing volume control dampers in all duct branches in accessible location above ceiling.

1.17 Access panels to be provided in in plastered ceiling areas to access volume control dampers. Co-ordination with project manager required. Provide diffuser mounted dampers accessible from the diffuser with remote cabling to damper in lieu of volume control dampers (VCD) where access to VCD's is not achievable.

2.0 MECHANICAL NOTES

2.1 Install kitchen extract canopies specified by kitchen consultant. Extract canopies shall be supported as per manufacturer's installation instructions. Ductwork, in compliance with DW144, shall be installed connecting the canopy collars to the kitchen extract fan. Duct sizes as shown on the drawings. Providing the ductwork runs in the same fire compartment all ductwork shall be low pressure Class A and be in accordance with BESA specification number DW/144 with a minimum thickness of 0.8mm.

2.2 Where it is not possible to immediately discharge the captured air within the confines of the kitchen fire zone, fire resistant ductwork must be used to comply with BS EN1366-1/BS 9999. All ductwork within the kitchen compartment and not discharging directly to atmosphere shall be constructed from either 1.2mm stainless steel or 1.6mm mild steel and be of fully welded construction with welded angle iron flanges and use full faced gaskets. Gaskets shall be non porous, impervious to grease and

cooking oils and capable of withstanding the higher temperatures experienced in kitchen extract systems. Mild steel ductwork should also be painted externally with 2 coats of protective paint before leaving the manufacturers works.

2.2 All interior surfaces of the ductwork shall be accessible for cleaning and inspection purposes. Access doors shall be installed at 2m centres and thereby enabling full cleaning of the system without manned entry. The access doors shall be of at least the same thickness material as the ductwork, be grease tight using a heat-proof gasket and contain minimum projections into the duct. If the access doors are part of a fire resisting duct, then it needs to be verified that any new access doors are also fire resisting and are compatible with the ductwork they are being fitted to. On vertical ducts, cleaning doors shall be provided at each floor level.

2.3 Provide combination audio/visual alarm and remote test station. Mount 1400mm above finished floor and provide label nameplate for each unit monitored.

2.4 Provide big foot plant support system for all roof mounted plant and ductwork. Secure equipment to support system in accordance with manufacturer's recommendations.

2.5 Install thermostats and remote sensors. Thermostats and remote sensors shall be monitored and adjustable from the BMS control panel. The contractor is responsible for wiring and installing remote sensors where indicated on drawings. Wall mounted sensors shall be installed 1500mm above FFL in customer areas and on wall as indicated at 1800mm above FFL in kitchen area.

2.6 Provide duct mounted smoke detector and sensing tube, and interlock to shut all ventilation plant on detection of smoke.

2.7 Provide humidity sensor interlocked with wash-up extract fan.

2.8 Provide adequate secondary structure and supporting frame for all ventilation plant in line with manufacturer's recommendations. Ensure anti-vibration hangers are installed to isolate vibration from the suspended ventilation plant.

3.0 HVAC EQUIPMENT NOTES

3.1 For details of the following equipment refer to approved vendors list : Section 8 – Equipment List.

3.2 Equipment Package:
RTU-1 and RTU-2 with accessories and plant support system.
Canopies, fans and fan support system package.

3.3 Air distribution package:
Package to include scheduled air devices and accessories, equipment and material.

3.4 Rooftop units are to be complete with the following:

a. Factory curbs for contractor to install.
b. Factory mounted and wired non-fused disconnect.
c. Weather hood with bird screen at unit outdoor air inlet.
d. Set minimum outdoor air as specified above. Outdoor air damper shall fully close on unit shutdown.
e. Single zone variable air volume control with outdoor air flow rate compensation.
f. Provide an electronic condensate control system in drain pan of unit. Interlock unit with condensate control system to shut down unit in event of condensate back-up in drain pan.
g. Factory installed non powered convenience outlet.
h. Carrier I-VU equipment touch screen (EQT1-4-CAR), with remote temperature sensors built into the modular panel system with fan/lighting control.
i. Louvered condenser coil hail guard.
j. Submittal review and approval required.
k. Refer to associated documentation for manufacturer contact information.

4.0 HVAC, FIRE PROTECTION AND PLUMBING

4.1 All new equipment, piping, etc shall be inspected and located before and after all new construction. Details of performance/condition/sizing and location shall be supplied to the engineer and owner. Air capacities for all supply and exhaust systems shall be measured at the grilles to determine if design air flows noted on the plans can be met.

4.2 Any extra work required to the above mentioned shall be determined prior to new construction. When and where necessary, or as directed, contractor to allow for the inspection in the price including x-raying, air flow measurement, scanning and camera scope to existing buried drains. No extras will be allowed once new construction starts.

4.3 Contractor to obtain latest spread sheets/shop drawings from kitchen consultant for appliance P&D and HVAC requirements prior to any rough-in work.

4.4 Contractor shall do all wiring and controls as noted on wiring notes in equipment schedule.

4.5 Contractor shall:

a) Construct entire kitchen hood exhaust system to DW 172.

b) Refer to design drawings for hood location and approved kitchen hood shop drawings for exact location of exhaust duct connections.

c) Refer to latest kitchen equipment drawings and approved shop drawings for final gas, plumbing and drainage connection sizes and locations. Contractor to refer to manufacturers installation manuals and recommendations and provide all necessary equipment, valves, piping etc. to suit. Exact location of equipment rough-ins are to be determined at site. Any changes to the kitchen equipment line up must be reported to the project manager prior to installation.

d) Use only approved Halton fan and hood package.

5.0 AIR DEVICES

5.1 For details of the following equipment refer to approved vendors list : Section 8 – Equipment List.

5.2 Air Devices to be aluminium painted to RAL 9010 (white), be round neck, duct mounted and clear anodised.

5.3 Supply diffusers at hood location use shop or field fabricated plenum boxes, which consist of perforated diffuser with no pattern controllers, and square plenum box that can accept round duct connection. 4 way diffusers are prohibited around the hoods.

5.4 Provide diffuser mounted dampers accessible from the diffuser with remote cabling to damper in lieu of volume control dampers (VCD) where access to VCD's is not achievable.

6.0 FANS

6.1 For details of this equipment refer to approved vendors list : Section 8 – Equipment List.

6.2 Fans will be supplied as part of the exhaust hood package.

6.3 Provide U.L. approved grease rating.

6.4 Exhaust fan is connected to the hood on switch. Fan shall operate at all times restaurant is open.

6.5 Fan to operate from smart breaker in FCLC system.

7.0 ELECTRIC HEATERS

7.1 For details of this equipment refer to approved vendors list : Section 8 – Equipment List.

7.2 Unit heater to be mounted overhead at entry and painted to match dining room ductwork.

7.3 Provide with unit-mounted thermostat.

8.0 EQUIPMENT INFORMATION

8.1 HVAC

Manufacturer	Unit type	Model ref.	Power (KW)	Voltage	Quantity
Carrier Elect Heat	RTU-1	50FC 045	42.4	400/3/50	1
Carrier Elect Heat	RTU-2	50FC 045	42.4	400/3/50	1

8.2 Air Devices

Manufacturer	Unit type	Model ref.	Neck Size	Quantity
Schako	PIL	Perforated	250mm dia.	14
Schako	PIL	Perforated	315mm dia.	4
Schako	PIL	Perforated	350mm dia.	8
Schako	DBB	Linear Slot	1No. 315mm dia.	7
Schako	DSC	4-Way	160mm dia.	1
Schako	SVA	Disc Valve	125mm dia.	8
Schako	SVA	Disc Valve	150mm dia.	3
Schako	SVA	Disc Valve	200mm dia.	1
Schako	AL	Linear Grille	150mm dia.	1
Schako	AL	Linear Grille	315mm dia.	1
Schako	4DF	4-Way	250mm dia.	1

8.3 Fans

Manufacturer	Model	Power (KW)	Voltage
Diffusion Mirage	---	18	415/3/50
Dimplex -Monterey	Panel Heater	0.75	240/1/50

9.0 EQUIPMENT CONTACT INFORMATION

9.1 CARRIER:

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