

BLOCK

673

LOT

14

QUALIFICATION CODE

C21-14

ADDRESS (SITE)

751 Brick Blvd.

PERMIT NO.

98-2779

RECEIVED

16 1998



CONSTRUCTION PERMIT APPLICATION

IV. OF INSPECTION

Application Completes: Sections I, II, III (optional), IV, VI, and VII

mail in

I. IDENTIFICATION

1. Proposed Work Site at: Comcast 751 Brick Blvd.
2. Name of Owner in Fee: SAME Tel. (932) 935-5492
Address 751 BRICK ROAD, BRICK NJ
street municipality zip code
3. Ownership in Fee: Public ☒ Private ☐
4. Principal Contractor: FINEMASTER Tel. (908) 241-2850
Address 760 PAMPFIELD AVENUE KENILWORTH NJ 07033
License No. OR, if new home, Builder Reg. No. 94-307728 Exp. Date 9/30/98
Federal Employee No. 94-307728 FAX: (908) 241-2850
5. Architect or Engineer SAME Tel. (908) 241-2850
Address 751 BRICK ROAD, BRICK NJ
6. Responsible Person in Charge of Work JOSEPH R. DIPIANESCU JR.
Tel. (908) 241-2850 FAX (908) 241-2850

V. FEE SUMMARY (for office use only)

		Update	Update
1. Building	\$		
2. Electrical	\$	35.-	
3. Plumbing	\$		
4. Fire Protection	\$	35.-	
5. Elevator Devices	\$		
6. Subtotal	\$		
7. Less 20% for State Plan Review	\$		
8. Subtotal	\$	9.-	
9. DCA Training Fee	\$		
10. Subtotal	\$		
11. Cert. of Occupancy	\$		
12. Other	\$		
13. TOTAL	\$	79.-	

VI. BUILDING/SITE CHARACTERISTICS

	(office use only)
1. Number of Stories	
2. Height of Structure	ft.
3. Area — Largest Floor	sq. ft.
4. New Building Area	sq. ft.
5. Volume of New Structure	cu. ft.
6. Construction Classification	
7. Total Land Area Disturbed	sq. ft.
8. Flood Hazard Zone	
9. Base Flood Elevation	ft.
10. Wetland Overlay	
11. Max. Flood Depth	ft.
12. Max. Occupancy Load	

COMMERCIAL

fire suppression

II. PROPOSED WORK		OPTIONAL (for office use only)							
	Est. Cost	Plans	Date	Rejection	Approval	Re-	Resubmission Dates		Re-
		Rec'd by	Rec'd	Date	Date	viewer	Approval	Rejection	viewer
1. ☐ Minor Work									
2. ☐ New Building									
3. ☐ Addition									
4. ☐ Alteration									
5. ☒ Fire Protection	11,765.00				7-23-98		1/5/99		
6. ☐ Plumbing	100				7-22-99				
7. ☒ Electrical									
8. ☐ Elevator Devices									
9. ☐ Asbestos Abat. Subch. 8									
10. ☐ Lead Hazard Abatement									
11. ☐ Demolition									
TOTAL COSTS		11,765.00							

III. DO YOU WANT: (optional)

1. ☐ Partial Releases
2. ☐ Prototype Processing

IV. DOES OR WILL YOUR BUILDING CONTAIN ANY OF THE FOLLOWING?

1. ☐ Elevators/Escalators/Lifts/
Dumbwaiters/Moving Walks
2. ☐ High Pressure Boilers
3. ☐ Pressure Vessels
4. ☐ Refrigeration Systems
5. ☐ Cross-Connections/Backflow Preventers
6. ☐ Hazardous Uses/Places of Assembly
7. ☐ Sprinklers
8. ☐ Smoke Control Systems in Open Wells
9. ☐ Underground Storage Tanks

VII. DESCRIPTION OF BUILDING USE

A. RESIDENTIAL

1. ☐ Hotels (R-1)
2. ☐ Multi-Family (R-2)
3. ☐ Two-Family (R-3) BOCA
4. ☐ Two-Family (R-4) CABO
5. ☐ One-Family (R-3) BOCA
6. ☐ One-Family (R-4) CABO

No. of dwelling units:

Before Construction

After Construction

Net Gain or Loss

B. NON-RESIDENTIAL

1. State Specific Use:

2. Use Group:

3. Change in Use Group, Indicate Former:

CERTIFICATION IN LIEU OF OATH

I. OWNER SECTION (to be completed if the applicant is the owner in fee)

I hereby certify that I am the owner in fee of the property listed on Page 1.

Mark the following applicable boxes:

- A. ☐ I further certify that a new home (private residence) will be constructed on this property for my own use and occupancy. This dwelling is to be occupied by myself and is not to be used for any purpose other than single family residential use. I attest that all construction, plumbing, or electrical work will be done, in whole or in part, by me or by subcontractors under my supervision, in accordance with all applicable laws; and, I further acknowledge that said new home is not covered under the New Home Warranty and Builders Registration Act (N.J.S.A. 46:3B-1 et seq.) and that such fact shall be disclosed to any person purchasing this property within ten years of the date of issuance of a certificate of occupancy.

I UNDERSTAND THAT IN MARKING BOX A, I ACKNOWLEDGE THAT I AM ASSUMING RESPONSIBILITY FOR THE WORK DONE ON SAID PROPERTY, THE CONDITION OF THE PROPERTY PRIOR TO, DURING, AND AFTER ANY WORK PERFORMED, AND FOR THE PERFORMANCE OF THE SUBCONTRACTORS I HIRE, EMPLOY, OR OTHERWISE CONTRACT OR WITH WHOM I MAKE AGREEMENTS TO PERFORM WORK. I AM VOLUNTARILY AND KNOWINGLY ASSUMING THIS RESPONSIBILITY.

- B. ☐ I further certify the following as required by the New Jersey Uniform Construction Code, N.J.A.C. 5:23-2.15(e)1.vii:

I personally prepared the plans submitted for: 1) the new home referred to in A.; or, 2) an addition, alteration, renovation, or repair to an existing single family residence owned and occupied by myself and located on the property listed on Page 1; or, 3) a new structure that will be physically separate from, but that will be deemed part of, an existing single family residence that is owned and occupied by myself and located on the property listed on Page 1.

- C. ☐ I further certify that I will perform or supervise the following work:

C.1. ☐ Building C.2. ☐ Fire Protection

I further certify that I will perform the following work:

C.3. ☐ Electrical C.4. ☐ Plumbing

- D. ☐ I agree to advise all contractors on this project that they are required to be registered with the New Jersey Division of Taxation and to comply with all New Jersey tax laws.

I further certify the following as required by the Uniform Construction Code, N.J.A.C. 5:23-2.15(a)5: All required State, county, and local prior approvals have been given, including such certification as the construction official may require.

I understand that if any of the above statements are willfully false, I am subject to punishment.

Signature _____ Date _____

II. AGENT SECTION (to be completed if the applicant is not the owner in fee)

I hereby certify the following as required by the Uniform Construction Code, N.J.A.C. 5:32-2.15(d): the proposed work is authorized by the owner in fee; and I have been authorized by the owner in fee to make this application as his agent.

I further certify the following as required by the Uniform Construction Code, N.J.A.C. 5:23-2.15(a)5: All required State, county, and local prior approvals have been given, including such certification as the construction official may require.

I agree to advise all contractors on this project that they are required to be registered with the New Jersey Division of Taxation and to comply with all New Jersey tax laws.

I understand that if any of the above statements are willfully false, I am subject to punishment.

☐ Check if contractor.

Agent Name FINEMASTER

Address 700 PARKFIELD AVENUE
KENILWORTH NJ 07033

Telephone (908) 741-2850

Signature [Signature] 7/10/18

- III. ☐ LEAD HAZARD ABATEMENT: Include Homeowner or Building Owner Affidavit as per N.J.A.C. 5:17.

OFFICE DATE RECEIVED: _____

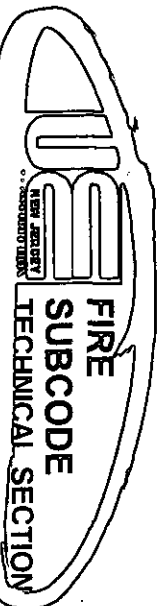
VIII. PRIOR APPROVALS CHECKLIST (office use only)	LOCAL APPROVAL		COUNTY APPROVAL		REGIONAL APPROVAL		STATE APPROVAL		COMMENTS
	Prelimin. Initial	Final Date	Prelimin. Initial	Final Date	Prelimin. Initial	Final Date	Prelimin. Initial	Final Date	
☐ Zoning Officer									
☐ Planning Board									
☐ Zoning Board									
☐ Sewer Authority									
☐ Water Authority									
☐ Police Department									
☐ Health Department									
☐ Soil Conservation									
☐ N.J. Department of Community Affairs									
☐ N.J. Department of Transportation									
☐ N.J. Department of Environmental Protection									
☐ Utility Dig No.									
☐									
☐									

IX. SUBCODES AND SPECIAL REGULATIONS APPLICABLE (office use only—optional)

Name of Code & Edition	Name of Code & Edition	Other
Building _____	Energy _____	
Electrical _____	Barrier Free _____	
Plumbing _____	Flood Hazard _____	
Fire Protection _____	As Built Elevation Cert. _____	
Mechanical _____	Other _____	

X. CERTIFICATES ISSUED (office use only)

	DATE ISSUED	DATE EXPIRED	DATE REISSUED	DATE EXPIRED
☐ Temporary Certificate of Occupancy	No. _____	_____	_____	_____
☐ Temporary Certificate of Compliance	No. _____	_____	_____	_____
☐ Continued Certificate of Occupancy	No. _____	_____	_____	_____
☐ Certificate of Compliance	No. _____	_____	_____	_____
☐ Certificate of Occupancy	No. _____	_____	_____	_____
☐ Certificate of Approval	No. _____	_____	_____	_____
☐ Lead Abatement Clearance Certificate	No. _____	_____	_____	_____



A. IDENTIFICATION—APPLICANT: COMPLETE ALL APPLICABLE INFORMATION WHEN COMPLETING CONTRACTORS, NOTIFY THIS OFFICE. CALL UTILITY DIG NO: 1-800-272-1000.

Block 673 Lot 14
Work Site Location CONCRETE

Owner in Fee SAME
Address 751 BRICK ROAD

Contractor PAVEMENT
Address 760 MONTELEONE AVENUE

Telephone (908) 241-2850 Fax (908) 241-2148

Lic. No. 94-2037728

Federal Emp. No. 94-2037728

B. FIRE PROTECTION CHARACTERISTICS

Use Group Present Proposed
Constr. Class Present Proposed
Heating Systems Present New Existing HVAC
Type: Gas Oil Electric Solar

Location: Other
Total Cost of Fire Protection Work \$ 14,765.00

JOB SUMMARY (Office Use Only)

PLAN REVIEW

Joint Plan Review Required: No Plans Required

Building Plumbing Alarm System Suppression Sys. Standpipe Fire Pump Pre-Eng. System

Electric Elevator Mechanical Smoke Control TCO Final Other

Date: 7-23-98 Approved by: [Signature]

SUBCODE APPROVAL 140A

CO CCO TCO Final Other

C. CERTIFICATION IN LIEU OF OATH

I hereby certify that I am the (agent of) owner of record and am authorized to make this application.

Signature [Signature] Date 7/14/98



D. TECHNICAL SITE DATA

DESCRIPTION OF WORK:

INSTALLATION OF FM200 FIRE SUPPRESSION SYSTEM IN TELEPHONE ROOM. Schedule date 7-23-98

Storage Tanks

Type: Flammable Liquid Combustible Liquid LPG LNG Capacity Fuel

Alarm Systems 110V Interconnected System

Alarm Devices (i.e., smoke, heat, pulls, water/flow) 7

Supervisory Devices (i.e., tamper, low/high air) 2

Signaling Devices (i.e., horns/strobes, bells) 1

Other Devices 1

TOTAL 1

Suppression Systems

Fire Pump GPM Type

Dry Pipe/Alarm Valves

Pre-action Valves

Spotting (dry and wet)

Standpipes

Fire-suppressed Systems

Rel. Chemical

CO₂ Suppression

Foam Suppression

Halon Suppression

Other FM-200

Kitchen Hood Exhaust System

Smoke Control System

Gas or Oil Fired Appliances

Other Other

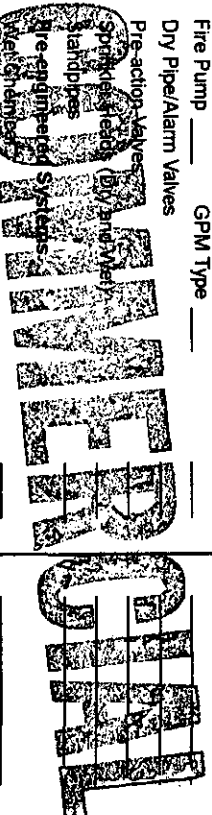
FEE (Office Use Only)

Administrative Surcharge \$

Minimum Fee \$

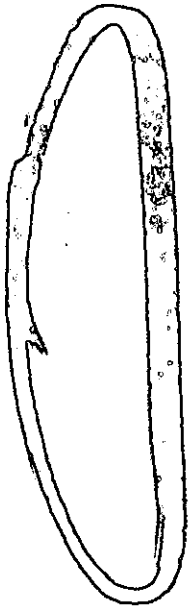
DCA Training Fee \$

TOTAL FEE \$



- FM 200 BAlenet control from ONLY
- 2 heads, head in actuator
3 more per

- Seal holes
- Self closure - over
- most end. sig



TOWNSHIP OF BRICK
401 CHAMBERS BRIDGE RD
DIVISION OF INSPECTIONS

UCC NEW JERSEY
CONSTRUCTION
PERMIT

IDENTIFICATION Block 673 Lot 14 Qual

Work Site Location 751 BRICK BLVD
SUPPRESSION SYSTEM
Owner in Fee CONCAST CABLE VISION
Address SAME
Telephone BRICK, NJ 08723-
(732)935-5492

Contractor FIREMASTER
Address 133 YELLOWBROOK RD,
FAIRFINGDALE, NJ 07127-
Telephone (908)938-3473
Lic. No. or Bldgs. Reg. No.
Federal Emp. No. 94-3077928

0002
982779*#

BLOCK	0.00
LOT	0.00
14 #	
ELECTRIC*	35.00
FIRE	35.00
D.C.A.	9.00
TOTAL	79.00
CHECK	79.00
CHANGE	0.00

08/12/98 NO. 5 0018A005 10:26

Date Issued 08/12/98
Control #
Permit # 98-2779

I hereby granted permission to perform the following work:

- ☐ BUILDING ☐ PLUMBING ☐ LEAD HAZARD ABATEMENT
☒ ELECTRICAL ☒ FIRE PROTECTION ☐ DEMOLITION
☐ ELEVATOR DEVICES ☐ ASBESTOS ABATEMENT ☐ OTHER
(Subchapter 8 only)

DESCRIPTION OF WORK:
SUPPRESSION SYSTEM

NOTE: If construction does not commence within one (1) year of date of issuance,
or if construction ceases for a period of six (6) months, this permit is void.

Estimated Cost of Work \$ 11,865

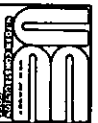
Construction Official

U.C.C. #170 (REV. 3/96)

08/12/98
Date

PAYMENTS (Office Use Only)

Building	0
Electrical	35
Plumbing	0
Fire Protection	35
Elevator Devices	0
Other	
DCA Training Fee	9
Cert. of Occupancy	0
Other	
Total	79
Check No.	4579
Cash	
Collected By	WP



**ELECTRICAL
SUBCODE**



Date Received
Date Issued
Control #
Permit #

8.12.98
98-2777

A. IDENTIFICATION—APPLICANT: COMPLETE ALL APPLICABLE INFORMATION WHEN CHANGING CONTRACTORS. NOTIFY THIS OFFICE. CALL UTILITY DIG NO: 1-800-272-1000.

Block _____ Lot _____
Work Site Location _____
Owner in Fee _____
Address _____
Tele. (____) _____
Contractor _____
Address _____
Tele. (____) _____
Lic. No. _____
Federal Emp. No. _____ or Social Security No. _____
B. ELECTRICAL CHARACTERISTICS
Use Group Present _____ Proposed _____
[] Pole/Pad # _____ [] Temporary [] Other _____
Building Occupied as _____ Utility Co. _____
Est. Cost of Elec. Work \$ _____

D. TECHNICAL SITE DATA

NO.	SIZE	ITEM
		Fixtures (1)
		Receptacles (2)
		Switches (3)
		Total 1 - 2 - 3
		Kw Range
		Kw Oven(s)
		Kw Surface Unit
		hp Dishwasher
		hp Garbage Disposal
		Kw Dryer
		Kw AC Unit
		Burglar Alarms
		Intercoms Panels
		Smoke Detectors
		hp Whirlpool/Spa
		Pool Bonding
		hp Pool Filter Motor
		Pool Lights
		Kw Water Heater(s)
		Kw Central heat:
		oil, gas or elec.
		Kw Baseboard Heat Units
		Thermostats
		hp Heat Pump
		hp Pump(s)
		Amp Motor, Compressor, Gen/Ref Panel
		Signs
		Light Standards
		hp Motors—Fractional HP
		hp Motors—All Others
		Power Transformers
		Kw Generators
		Amp Service Entrance
		Other

FEE (Office Use Only)

JOB SUMMARY (Office Use Only)

PLAN REVIEW

[] No Plans Required

Joint Plan Review Required:

[] Bldg. [] Plumb.

[] Fire [] Elevator

[] Elec. Plans Approved

Date: _____

Approved by: _____

SUBCODE APPROVAL

[] CO [] CCO [] CA

Date: _____

Approved By: _____

INSPECTIONS

Type:	Failure	Failure	Approval	Initial
Rough				
Temporary				
Constr Serv				
TCO				
Other				
Service				
Final				
Temp Cut-in-Card				
Date Issued				
Final Cut-in-Card				
Date Issued				

C. CERTIFICATION IN LIEU OF OATH

I hereby certify that I am the (agent of) owner of _____
record and am authorized to make this application
and perform the work listed on this application.

[] Licensed Electrical Contractor [] Exempt Applicant

Signature _____
Contractor Seal

Paid [] Check # _____

Collected by: _____

Administrative Surcharge \$ _____

Minimum Fee \$ _____

DCA Training Fee \$ _____

TOTAL FEE \$ _____

KIDDE FENWAL AGENT FLOW CALCS - Version 1.10
KIDDE-FENWAL, INC.
UL EX 4674 FMRC File J.I. 1Y5A2.AF Part # 90-190001-210

PROJECT INFORMATION

PREPARED FOR:

NAME: COMCAST
ADDRESS: 751 BRICK BLVD
: BRICK NJ 08732
:

PHONE: 732-935-3492

CONTACT NAME: JOE DIFRANCESCO
CONTACT TITLE: FIREMASTER REP

PREPARED BY:

DESIGNER: B. PRICE

PROJECT INFORMATION:

NAME: COMCAST
NUMBER: 075-743
LOCATION: COMPUTER ROOM & CLOSET
ACCOUNT:
DESCRIPTION:

FILE NAME: c:\flow\075-743.prj
LAST TIME CALCULATED: Jun 29, 1998 11:08 AM

COMMERCIAL

PROJECT: COMCAST

FILE NAME: c:\flow\075-743.prj

ENCLOSURE INFORMATION

ENCLOSURE NUMBER 1

ENCLOSURE NAME COMPUTER ROOM

MINIMUM DESIGN CONCENTRATION	7.00	%
ADJUSTED DESIGN CONCENTRATION	7.20	%
PREDICTED CONCENTRATION	7.19	%

MINIMUM ENCLOSURE TEMPERATURE	68.0	F
MAXIMUM ENCLOSURE TEMPERATURE	72.0	F
ELEVATION ABOVE SEA LEVEL	50	ft

ENCLOSURE VOLUME	3345	cubic feet
NON-PERMEABLE VOLUME	0	cubic feet
NUMBER OF NOZZLES	1	

AGENT REQUIRED	118.2	lbs
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ENCLOSURE NUMBER 2

ENCLOSURE NAME ELECTRICAL CLOSET

MINIMUM DESIGN CONCENTRATION	7.00	%
ADJUSTED DESIGN CONCENTRATION	7.20	%
PREDICTED CONCENTRATION	7.33	%

MINIMUM ENCLOSURE TEMPERATURE	68.0	F
MAXIMUM ENCLOSURE TEMPERATURE	72.0	F
ELEVATION ABOVE SEA LEVEL	50	ft

ENCLOSURE VOLUME	458	cubic feet
NON-PERMEABLE VOLUME	0	cubic feet
NUMBER OF NOZZLES	1	

AGENT REQUIRED	16.2	lbs
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KIDDE CI AGENT FLOW CALCS - Version K2.10
KIDDE-FENWAL, INC.
UL EX 4674 FMRC File J.I. 1Y5A2.AF Part # 90-190001-210

PROJECT: COMCAST
FILE NAME: c:\flow\075-743.prj

CONTAINER INFORMATION

CONTAINER SIZE	200 lb.
CONTAINER TYPE	Vertical
CONTAINER PART NUMBER	90-100200-001
NUMBER OF CONTAINERS	1
AGENT NAME	FM-200
AMOUNT PER CONTAINER	134.3 lbs
FILL DENSITY	46.987 lbs / cubic feet
HEIGHT OF CONTAINERS	43.6 inches
FLOOR AREA CONTAINERS	1.01 square feet
TOTAL WEIGHT	275 lbs
FLOOR LOADING	273 lbs / square feet

KIDDE CLEAN AGENT FLOW CALCS - Version K2.10

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KIDDE-FENWAL, INC.

UL EX 4674 FMRC File J.I. 1YSA2.AF Part # 90-190001-210

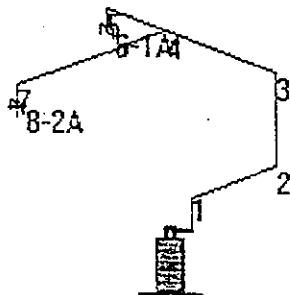
Distributor: Firemaster Corporate Contract
2684 Lacy Street
Los Angeles, CA. 90031
Rod Caveness

Project: COMCAST

File Name: c:\flow\075-743.prj

Date Calculated: Jun 29, 1998 11:08 AM

Isometric Drawing



KIDDE CE AGENT FLOW CALCS - Version K2.10

KIDDE-FENWAL, INC.

UL EX 4674 FMRC File J.I. 1Y5A2.AF Part # 90-190001-210

PROJECT: COMCAST

FILE NAME: c:\flow\075-743.prj

PIPE SPECIFICATIONS

SECTION FROM-TO	TYPE	DIAM.	LENGTH	ELEV	EL 45	EL 90	TEES T S	VALVE CHCK STOP	FLEX LOOP	UN	ADDED	EQUIV TOTAL
0	1	40t	2.000	3.63								65.0
1	2	40t	1.500	4.67		1				2	4.3	15.1
2	3	40t	1.500	8.04		1						12.3
3	4	40t	1.500	6.54		1						10.8
4	5	40t	1.250	2.63			1					4.9
5	6	40t	1.250	0.17		1						3.9
4	7	40t	0.500	9.71				1				13.1
7	8	40t	0.500	0.17		1						1.9

SECTION FROM-TO	EQUIV TOTAL	AGENT REQ.	NOZZLE NZ	ORIFICE	TYPE
0	1	65.0	134.3		
1	2	15.1	134.4		
2	3	12.3	134.4		
3	4	10.8	134.4		
4	5	4.9	118.2		
5	6	3.9	118.2	1A	0.8509 360 Degree
4	7	13.1	16.2		
7	8	1.9	16.2	2A	0.1605 180 Degree

PROJECT: COMCAST
FILE NAME: c:\flow\075-743.prj

SYSTEM DATA

LAST CALCULATION: Jun 29, 1998 11:08 AM

SYSTEM DISCHARGE TIME: 8.3

PERCENT AGENT IN PIPE: 26.52

PERCENT AGENT BEFORE 1ST TEE: 23.26

ENCLOSURE NUMBER: 1

ENCLOSURE NAME: COMPUTER ROOM

MINIMUM DESIGN CONCENTRATION: 7.00%

ADJUSTED DESIGN CONCENTRATION: 7.20%

PREDICTED CONCENTRATION: 7.2%

MAXIMUM EXPECTED AGENT CONCENTRATION: 7.2% @ 72.0F

NOZZLE	MINIMUM AGENT REQUIRED (lbs)	ADJUSTED AGENT REQUIRED (lbs)	PREDICTED AGENT DELIVERED (lbs)	NOZZLE PRESSURE (AVERAGE) (psig)
1A	114.7	118.2	117.9	157

ENCLOSURE NUMBER: 2

ENCLOSURE NAME: ELECTRICAL CLOSET

MINIMUM DESIGN CONCENTRATION: 7.00%

ADJUSTED DESIGN CONCENTRATION: 7.20%

PREDICTED CONCENTRATION: 7.3%

MAXIMUM EXPECTED AGENT CONCENTRATION: 7.4% @ 72.0F

NOZZLE	MINIMUM AGENT REQUIRED (lbs)	ADJUSTED AGENT REQUIRED (lbs)	PREDICTED AGENT DELIVERED (lbs)	NOZZLE PRESSURE (AVERAGE) (psig)
2A	15.7	16.2	16.5	133

KIDDE CL  AGENT FLOW CALCS - Version K2.10
 KIDDE-FENWAL, INC.
 UL EX 4674 FMRC File J.I. 1Y5A2.AF Part # 90-190001-210

PROJECT: COMCAST
 FILE NAME: c:\flow\075-743.prj

HARDWARE DATA

----- CONTAINER -----					
SIZE	TYPE	FILL WEIGHT	FILL DENSITY	QUANTITY	PART #
200 lb.	Vertical	134	47.0	1	90-100200-001

----- NOZZLE(S) -----					
NOZZLE TYPE	SIZE	ORIFICE AREA	HOLE DIAMETER	DRILL SIZE	PART #
1A 360 Degree	1.250	0.8509	0.3680	##	90-194026-368
2A 180 Degree	0.500	0.1605	0.1560	##	90-194013-156

----- PIPE -----			
ITEM	TYPE	SIZE	QUANTITY
PIPE	40t	0.500 inches	9.88 feet
PIPE	40t	1.250 inches	2.80 feet
PIPE	40t	1.500 inches	19.25 feet
UNION	40t	1.500 inches	2 each
ELBOW 90	CLASS 300	0.500 inches	1 each
ELBOW 90	CLASS 300	1.250 inches	1 each
ELBOW 90	CLASS 300	1.500 inches	3 each
TEE	CLASS 300	1.500 inches	1 each

KIDDE HAN AGENT FLOW CALCS - Version 1.10
KIDDE-FENWAL, INC.
UL EX 4674 FMRC File J.I. 1Y5A2.AF Part # 90-190001-210

PROJECT INFORMATION

PREPARED FOR:

NAME: COMCAST
ADDRESS: 751 BRICK BLVD
: BRICK NJ 08732

PHONE: 732-935-3492

CONTACT NAME: JOE DIFRANCESCO
CONTACT TITLE: FIREMASTER REP

PREPARED BY:

DESIGNER: B. PRICE

PROJECT INFORMATION:

NAME: COMCAST
NUMBER: 075-743
LOCATION: COMPUTER ROOM & CLOSET
ACCOUNT:
DESCRIPTION:

FILE NAME: c:\flow\075-743.prj
LAST TIME CALCULATED: Jun 29, 1998 11:08 AM

COMMERCIAL

PROJECT: COMCAST
FILE NAME: c:\flow\075-743.prj

ENCLOSURE INFORMATION

ENCLOSURE NUMBER 1
ENCLOSURE NAME COMPUTER ROOM

MINIMUM DESIGN CONCENTRATION	7.00	%
ADJUSTED DESIGN CONCENTRATION	7.20	%
PREDICTED CONCENTRATION	7.19	%

MINIMUM ENCLOSURE TEMPERATURE	68.0	F
MAXIMUM ENCLOSURE TEMPERATURE	72.0	F
ELEVATION ABOVE SEA LEVEL	50	ft

ENCLOSURE VOLUME	3345	cubic feet
NON-PERMEABLE VOLUME	0	cubic feet
NUMBER OF NOZZLES	1	

AGENT REQUIRED	118.2	lbs
----------------	-------	-----

ENCLOSURE NUMBER 2
ENCLOSURE NAME ELECTRICAL CLOSET

MINIMUM DESIGN CONCENTRATION	7.00	%
ADJUSTED DESIGN CONCENTRATION	7.20	%
PREDICTED CONCENTRATION	7.33	%

MINIMUM ENCLOSURE TEMPERATURE	68.0	F
MAXIMUM ENCLOSURE TEMPERATURE	72.0	F
ELEVATION ABOVE SEA LEVEL	50	ft

ENCLOSURE VOLUME	458	cubic feet
NON-PERMEABLE VOLUME	0	cubic feet
NUMBER OF NOZZLES	1	

AGENT REQUIRED	16.2	lbs
----------------	------	-----

KIDDE CI AGENT FLOW CALCS - Version K2.10
KIDDE-FENWAL, INC.
UL EX 4674 FMRC File J.I. 1Y5A2.AF Part # 90-190001-210

PROJECT: COMCAST
FILE NAME: c:\flow\075-743.prj

CONTAINER INFORMATION

CONTAINER SIZE	200 lb.
CONTAINER TYPE	Vertical
CONTAINER PART NUMBER	90-100200-001
NUMBER OF CONTAINERS	1
AGENT NAME	FM-200
AMOUNT PER CONTAINER	134.3 lbs
FILL DENSITY	46.987 lbs / cubic feet
HEIGHT OF CONTAINERS	43.6 inches
FLOOR AREA CONTAINERS	1.01 square feet
TOTAL WEIGHT	275 lbs
FLOOR LOADING	273 lbs / square feet

KIDDE CLEAN AGENT FLOW CALCS - Version K2.10

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KIDDE-FENWAL, INC.

UL EX 4674 FMRC File J.I. 1Y5A2.AF Part # 90-190001-210

Distributor: Firemaster Corporate Contract

2684 Lacy Street

Los Angeles, CA. 90031

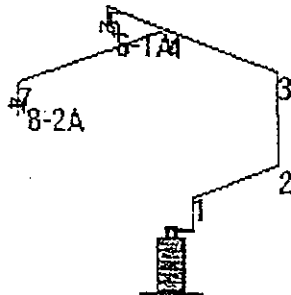
Rod Caveness

Project: COMCAST

File Name: c:\flow\075-743.prj

Date Calculated: Jun 29, 1998 11:08 AM

Isometric Drawing



PROJECT: COMCAST

FILE NAME: c:\flow\075-743.prj

PIPE SPECIFICATIONS

SECTION FROM-TO	TYPE	DIAM.	LENGTH	ELEV	EL 45	EL 90	TEES T S	VALVE CHCK STOP	FLEX LOOP	UN	ADDED	EQUIV TOTAL
0	1	40t	2.000	3.63								65.0
1	2	40t	1.500	4.00		1				2	4.3	15.1
2	3	40t	1.500	8.04		1						12.3
3	4	40t	1.500	6.54		1						10.8
4	5	40t	1.250	2.63			1					4.9
5	6	40t	1.250	0.17	-0.17	1						3.9
4	7	40t	0.500	9.71			1					13.1
7	8	40t	0.500	0.17	-0.17	1						1.9

SECTION FROM-TO	EQUIV TOTAL	AGENT REQ.	NOZZLE NZ	ORIFICE	TYPE
0	1	65.0	134.3		
1	2	15.1	134.4		
2	3	12.3	134.4		
3	4	10.8	134.4		
4	5	4.9	118.2		
5	6	3.9	118.2	1A	0.8509 360 Degree
4	7	13.1	16.2		
7	8	1.9	16.2	2A	0.1605 180 Degree

PROJECT: COMCAST
FILE NAME: c:\flow\075-743.prj

SYSTEM DATA

LAST CALCULATION: Jun 29, 1998 11:08 AM

SYSTEM DISCHARGE TIME: 8.3

PERCENT AGENT IN PIPE: 26.52

PERCENT AGENT BEFORE 1ST TEE: 23.26

ENCLOSURE NUMBER: 1

ENCLOSURE NAME: COMPUTER ROOM

MINIMUM DESIGN CONCENTRATION: 7.00%

ADJUSTED DESIGN CONCENTRATION: 7.20%

PREDICTED CONCENTRATION: 7.2%

MAXIMUM EXPECTED AGENT CONCENTRATION: 7.2% @ 72.0F

NOZZLE	MINIMUM AGENT REQUIRED (lbs)	ADJUSTED AGENT REQUIRED (lbs)	PREDICTED AGENT DELIVERED (lbs)	NOZZLE PRESSURE (AVERAGE) (psig)
1A	114.7	118.2	117.9	157

ENCLOSURE NUMBER: 2

ENCLOSURE NAME: ELECTRICAL CLOSET

MINIMUM DESIGN CONCENTRATION: 7.00%

ADJUSTED DESIGN CONCENTRATION: 7.20%

PREDICTED CONCENTRATION: 7.3%

MAXIMUM EXPECTED AGENT CONCENTRATION: 7.4% @ 72.0F

NOZZLE	MINIMUM AGENT REQUIRED (lbs)	ADJUSTED AGENT REQUIRED (lbs)	PREDICTED AGENT DELIVERED (lbs)	NOZZLE PRESSURE (AVERAGE) (psig)
2A	15.7	16.2	16.5	133

KIDDE CL  AGENT FLOW CALCS - Version K2.10
 KIDDE-FENWAL, INC.
 UL EX 4674 FMRC File J.I. 1Y5A2.AF Part # 90-190001-210

PROJECT: COMCAST
 FILE NAME: c:\flow\075-743.prj

HARDWARE DATA

----- CONTAINER -----					
SIZE	TYPE	FILL WEIGHT	FILL DENSITY	QUANTITY	PART #
200 lb.	Vertical	134	47.0	1	90-100200-001

----- NOZZLE(S) -----					
NOZZLE TYPE	SIZE	ORIFICE AREA	HOLE DIAMETER	DRILL SIZE	PART #
1A	360 Degree	1.250	0.8509	0.3680	## 90-194026-368
2A	180 Degree	0.500	0.1605	0.1560	## 90-194013-156

----- PIPE -----			
ITEM	TYPE	SIZE	QUANTITY
PIPE	40t	0.500 inches	9.88 feet
PIPE	40t	1.250 inches	2.80 feet
PIPE	40t	1.500 inches	19.25 feet
UNION	40t	1.500 inches	2 each
ELBOW 90	CLASS 300	0.500 inches	1 each
ELBOW 90	CLASS 300	1.250 inches	1 each
ELBOW 90	CLASS 300	1.500 inches	3 each
TEE	CLASS 300	1.500 inches	1 each

KIDDE HAN AGENT FLOW CALCS - Version 1.10
KIDDE-FENWAL, INC.
UL EX 4674 FMRC File J.I. 1Y5A2.AF Part # 90-190001-210

PROJECT INFORMATION

PREPARED FOR:

NAME: COMCAST
ADDRESS: 751 BRICK BLVD
: BRICK NJ 08732

PHONE: 732-935-3492

CONTACT NAME: JOE DIFRANCESCO
CONTACT TITLE: FIREMASTER REP

PREPARED BY:

DESIGNER: B. PRICE

PROJECT INFORMATION:

NAME: COMCAST
NUMBER: 075-743
LOCATION: COMPUTER ROOM & CLOSET
ACCOUNT:
DESCRIPTION:

FILE NAME: c:\flow\075-743.prj
LAST TIME CALCULATED: Jun 29, 1998 11:08 AM

COMMERCIAL

PROJECT: COMCAST
FILE NAME: c:\flow\075-743.prj

ENCLOSURE INFORMATION

ENCLOSURE NUMBER 1
ENCLOSURE NAME COMPUTER ROOM

MINIMUM DESIGN CONCENTRATION	7.00	%
ADJUSTED DESIGN CONCENTRATION	7.20	%
PREDICTED CONCENTRATION	7.19	%

MINIMUM ENCLOSURE TEMPERATURE	68.0	F
MAXIMUM ENCLOSURE TEMPERATURE	72.0	F
ELEVATION ABOVE SEA LEVEL	50	ft

ENCLOSURE VOLUME	3345	cubic feet
NON-PERMEABLE VOLUME	0	cubic feet
NUMBER OF NOZZLES	1	

AGENT REQUIRED	118.2	lbs
----------------	-------	-----

ENCLOSURE NUMBER 2
ENCLOSURE NAME ELECTRICAL CLOSET

MINIMUM DESIGN CONCENTRATION	7.00	%
ADJUSTED DESIGN CONCENTRATION	7.20	%
PREDICTED CONCENTRATION	7.33	%

MINIMUM ENCLOSURE TEMPERATURE	68.0	F
MAXIMUM ENCLOSURE TEMPERATURE	72.0	F
ELEVATION ABOVE SEA LEVEL	50	ft

ENCLOSURE VOLUME	458	cubic feet
NON-PERMEABLE VOLUME	0	cubic feet
NUMBER OF NOZZLES	1	

AGENT REQUIRED	16.2	lbs
----------------	------	-----

KIDDE CI AGENT FLOW CALCS - Version K2.10
KIDDE-FENWAL, INC.
UL EX 4674 FMRC File J.I. 1Y5A2.AF Part # 90-190001-210

PROJECT: COMCAST
FILE NAME: c:\flow\075-743.prj

CONTAINER INFORMATION

CONTAINER SIZE	200 lb.
CONTAINER TYPE	Vertical
CONTAINER PART NUMBER	90-100200-001
NUMBER OF CONTAINERS	1
AGENT NAME	FM-200
AMOUNT PER CONTAINER	134.3 lbs
FILL DENSITY	46.987 lbs / cubic feet
HEIGHT OF CONTAINERS	43.6 inches
FLOOR AREA CONTAINERS	1.01 square feet
TOTAL WEIGHT	275 lbs
FLOOR LOADING	273 lbs / square feet

KIDDE CLEAN AGENT FLOW CALCS - Version K2.10

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UL EX 4674 FMRC File J.I. 1Y5A2.AF¹ Part # 90-190001-210

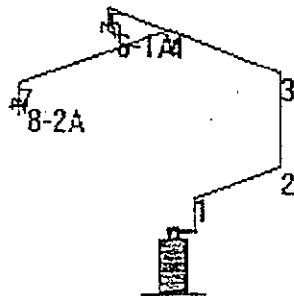
Distributor: Firemaster Corporate Contract
2684 Lacy Street
Los Angeles, CA. 90031
Rod Caveness

Project: COMCAST

File Name: c:\flow\075-743.prj

Date Calculated: Jun 29, 1998 11:08 AM

Isometric Drawing



KIDDE CE AGENT FLOW CALCS --Version K2.10

KIDDE-FENWAL, INC.

UL EX 4674 FMRC File J.I. 1Y5A2.AF Part # 90-190001-210

PROJECT: COMCAST

FILE NAME: c:\flow\075-743.prj

PIPE SPECIFICATIONS

SECTION FROM-TO	TYPE	DIAM.	LENGTH	ELEV	EL 45	EL 90	TEES T S	VALVE CHCK STOP	FLEX LOOP	UN	ADDED	EQUIV TOTAL
0	1	40t	2.000	3.63								65.0
1	2	40t	1.500	4.00		1				2	4.3	15.1
2	3	40t	1.500	8.04		1						12.3
3	4	40t	1.500	6.54		1						10.8
4	5	40t	1.250	2.63			1					4.9
5	6	40t	1.250	0.17	-0.17	1						3.9
4	7	40t	0.500	9.71			1					13.1
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SECTION FROM-TO	EQUIV TOTAL	AGENT REQ.	NOZZLE NZ	ORIFICE	TYPE
0	1	65.0	134.3		
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2	3	12.3	134.4		
3	4	10.8	134.4		
4	5	4.9	118.2		
5	6	3.9	118.2	1A	0.8509 360 Degree
4	7	13.1	16.2		
7	8	1.9	16.2	2A	0.1605 180 Degree

PROJECT: COMCAST
FILE NAME: c:\flow\075-743.prj

SYSTEM DATA

LAST CALCULATION: Jun 29, 1998 11:08 AM

SYSTEM DISCHARGE TIME: 8.3

PERCENT AGENT IN PIPE: 26.52

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ENCLOSURE NUMBER: 1

ENCLOSURE NAME: COMPUTER ROOM

MINIMUM DESIGN CONCENTRATION: 7.00%

ADJUSTED DESIGN CONCENTRATION: 7.20%

PREDICTED CONCENTRATION: 7.2%

MAXIMUM EXPECTED AGENT CONCENTRATION: 7.2% @ 72.0F

NOZZLE	MINIMUM AGENT REQUIRED (lbs)	ADJUSTED AGENT REQUIRED (lbs)	PREDICTED AGENT DELIVERED (lbs)	NOZZLE PRESSURE (AVERAGE) (psig)
1A	114.7	118.2	117.9	157

ENCLOSURE NUMBER: 2

ENCLOSURE NAME: ELECTRICAL CLOSET

MINIMUM DESIGN CONCENTRATION: 7.00%

ADJUSTED DESIGN CONCENTRATION: 7.20%

PREDICTED CONCENTRATION: 7.3%

MAXIMUM EXPECTED AGENT CONCENTRATION: 7.4% @ 72.0F

NOZZLE	MINIMUM AGENT REQUIRED (lbs)	ADJUSTED AGENT REQUIRED (lbs)	PREDICTED AGENT DELIVERED (lbs)	NOZZLE PRESSURE (AVERAGE) (psig)
2A	15.7	16.2	16.5	133

KIDDE CL  AGENT FLOW CALCS - Version K2.10
 KIDDE-FENWAL, INC.
 UL EX 4674 FMRC File J.I. 1YSA2.AF Part # 90-190001-210

PROJECT: COMCAST
 FILE NAME: c:\flow\075-743.prj

HARDWARE DATA

----- CONTAINER -----					
SIZE	TYPE	FILL WEIGHT	FILL DENSITY	QUANTITY	PART #
200 lb.	Vertical	134	47.0	1	90-100200-001

----- NOZZLE(S) -----						
NOZZLE TYPE	SIZE	ORIFICE AREA	HOLE DIAMETER	DRILL SIZE	PART #	
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2A	180 Degree	0.500	0.1605	0.1560	##	90-194013-156

----- PIPE -----			
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PIPE	40t	1.500 inches	19.25 feet
UNION	40t	1.500 inches	2 each
ELBOW 90	CLASS 300	0.500 inches	1 each
ELBOW 90	CLASS 300	1.250 inches	1 each
ELBOW 90	CLASS 300	1.500 inches	3 each
TEE	CLASS 300	1.500 inches	1 each

CUSTOMER'S AUTHORIZED SIGNATURE